APPENDIX C – PERTINENT CORRESPONDENCE

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Nasuti, Melissa A SAJ

From: Spinning, Jason J SAJ
Sent: Friday, March 25, 2016 12:24 PM
To: Taplin, Kimberley A SAJ; Hughes, Daniel B @ SAJ; Moreno, Meredith A SAJ; Nasuti, Melissa A SAJ; Ralph, Gina P SAJ
Cc: Summa, Eric P SAJ; Spinning, Jason J SAJ
Subject: FW: [EXTERNAL] Fwd: Gut Check on L28 Plug O&M and S344 Temporary Deviation

Please find the response from Big Cypress National Preserve. Mr. Clark is the Preserve's Chief of National Resources. As you see from the messages below, DOI has been coordinating internally regarding this situation.

Respectfully,

Jason Spinning
Chief, Environmental Branch(Acting)
Planning & Policy Division
USACE, Jacksonville District
Phone: 904-232-1231
Cell: 904-502-3218

-----Original Message-----
From: Clark, Ron [mailto:ron_clark@nps.gov]
Sent: Friday, March 25, 2016 12:12 PM
To: Spinning, Jason J SAJ <Jason.J.Spinning@usace.army.mil>
Subject: [EXTERNAL] Fwd: Gut Check on L28 Plug O&M and S344 Temporary Deviation

Mr. Spinning,

This email chain reflects the Big Cypress National Preserve position on the emergency L-28 proposal, and our Superintendent Tammy Whittington's response back to the DOI Ecosystem Restoration Office request. If you have questions, give me a call back.

Ron Clark

239-695-1106 - office
239-340-0198 - cell
<Blockedhttp://www.nps.gov/subjects/centennial/images/NPS-Centennial-E-Mail-Signature-with-Goal-11-24-14.jpg>

---------- Forwarded message ----------
From: Tamara Whittington <tammy_whittington@nps.gov <mailto:tammy_whittington@nps.gov> >
Date: Thu, Mar 24, 2016 at 2:07 PM
Subject: Re: Gut Check on L28 Plug O&M and S344 Temporary Deviation
To: "Estenoz, Shannon" <shannon_estenoz@ios.doi.gov <mailto:shannon_estenoz@ios.doi.gov> >
Cc: "Reynolds, Jennifer A LTC ARMY @ SAJ" <Jennifer.A.Reynolds@usace.army.mil <mailto:Jennifer.A.Reynolds@usace.army.mil> >, Pedro Ramos <pedro_ramos@nps.gov

<mailto:pedro_ramos@nps.gov> >, Bob Johnson <Robert_Johnson@nps.gov <mailto:Robert_Johnson@nps.gov> >, Robert Sobczak <robert_sobczak@nps.gov <mailto:robert_sobczak@nps.gov> >, "Williams, Larry" <larry_williams@fws.gov <mailto:larry_williams@fws.gov> >, Bob Progulske <bob_progulske@fws.gov <mailto:bob_progulske@fws.gov> >, Ron Clark <ron_clark@nps.gov <mailto:ron_clark@nps.gov> >, J D Lee <J_D_Lee@nps.gov <mailto:J_D_Lee@nps.gov> >

Shannon and all,

Thank you for forwarding this email and information. Speaking on behalf of Big Cypress National Preserve, this is something we support and will continue to work with our partners on. We understand that this will result in sending water onto the Preserve that maintains our water quality standards as an Outstanding Florida Water, and the water released will flow into the more historic flow path, assisting in making the Preserve more drought-resistant and less vulnerable to wildfires. Based upon our collaboration with the USFWS on the ERTP, it is our understanding that raising the plugs helps protect the downstream Cape Sable seaside sparrow population by reducing the drainage capacity of the L-28 borrow canal. We perceive this emergency measure as the first among the incremental steps needed to mitigate the effects of the L-38 Canal on historic sheet flow into the southern basins within the Preserve and therefore suggest that while implementing this emergency measure, we and our partners monitor the effect of raising the plugs, confirming where the water flows following construction; and determining whether and to what degree water flows either over or around the elevated plugs.

Bob, Ron, JD and I are all ready to further assist.

Thanks again!

Tammy

Sent from my iPad

On Mar 23, 2016, at 4:11 PM, Estenoz, Shannon <shannon_estenoz@ios.doi.gov <mailto:shannon_estenoz@ios.doi.gov> > wrote:

Hi Jennifer,

I am responding and copying our team, to make sure they see your note. I am not qualified to say how we feel about the proposal, particularly related to the 344. The folks on this list are the Interior folks who should be in the loop.

Thanks so much!

Shannon

On Tue, Mar 22, 2016 at 1:18 PM, Reynolds, Jennifer A LTC ARMY @ SAJ <Jennifer.A.Reynolds@usace.army.mil <mailto:Jennifer.A.Reynolds@usace.army.mil> > wrote:

Good afternoon, teammates,

The Corps is moving out quickly to respond to a request from the State (through SFWMD) to take actions to alleviate high water conditions in WCA3A and associated ecosystem impacts while mitigating for impacts to the Cape Sable Seaside Sparrow. The action is two-fold: 1) conduct O&M to return the 6 plugs in the L28 canal between S344 and S343A to their design standard and 2) seek a temporary deviation to ERTP to open S344 to pass water from WCA3A into eastern Big Cypress National Preserve. The Corps believes both actions are necessary to achieve the desired effect.

We will be coordinating with you and/or your staffs over the coming days to seek your concurrence (or objection) with this temporary measure, address any concerns and consider associated actions (such as additional activities or opportunities for data collection). We have not yet made a final decision on whether to support this action, and would appreciate your staff's input into our expedited process.

Sorry for the impersonal email but I wanted to get the little info I have so far out to you as quickly as possible.

Thanks,
Jennifer

V/r,
Jennifer A. Reynolds
Lieutenant Colonel, U.S. Army
Deputy District Commander, South Florida
Jacksonville District
U.S. Army Corps of Engineers
South Florida Restoration Office
Office: 561-472-8891
Cell: 904-322-0129
Fax: 561-683-2418

--

Shannon Estenoz, Director
Office of Everglades Restoration Initiatives
United States Department of the Interior
7500 SW 36th Street
Davie, FL 33314

Direct Office Line: (954) 377-5967
Cell Phone: (786) 350-9401

shannon_estenoz@ios.doi.gov
<Blockedhttps://webmail.eis.doi.gov/owa/redir.aspx?C=1debf9b6e7eb4b78b4a783368b10ebdf&URL=mailto%3ashannon_estenoz%40ios.doi.gov>

Blockedwww.evergladesrestoration.gov <Blockedhttp://www.evergladesrestoration.gov>

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Nasuti, Melissa A SAJ

From: Spinning, Jason J SAJ
Sent: Friday, March 25, 2016 11:17 AM
To: Stahl, Chris
Cc: Spinning, Jason J SAJ; Ralph, Gina P SAJ; Nasuti, Melissa A SAJ; Summa, Eric P SAJ
Subject: CZMA Coordination Emergency Water Control Plan Deviation L-28
Attachments: L28 canal plug location map.pdf

Chris,

Thanks for the call today. As I stated, we are awaiting additional information from the SFWMD regarding the operational strategy for S-344 to fully coordinate with your office. But, I wanted to go ahead and submit this to begin the process. I also understand that you are in the process of moving offices and may not have computer for some unknown timeframe next week. I am copying Dr. Gina Ralph and Ms. Melissa Nasuti on this message since the additional operational strategy to allow full coordination with your office may not happen until next week while I am out. Thank you for your new contact information and I provide for folks cc'd.

Mr. Chris Stahl
FDEP
Florida Clearinghouse
Office line: 850-717-9076
Cell Phone: 850-508-4161

The following is a description of the current information on the emergency action relating to L-28 and S-344. I have also attached map of the action area.

Due to the critical nature of the elevated water levels in WCA-3A and in compliance with the existing operation and emergency request by the Governor to maximize water releases, a second emergency NEPA is being prepared to discuss the proposed federal action to deviate from the current water control plan (ERTP) operations for Structure 344 (S-344) on the L-28 Levee. This deviation would open S-344 immediately instead of waiting for July 15th which is the normal opening date in the approved water control plan. The opening would allow up to 300 cfs to be released from WCA-3A into Big Cypress National Preserve and L-28 canal.

The South Florida Water Management District (District) is also seeking approval from the USACE Regulatory Division to conduct operation and maintenance to restore six canal plugs in the L-28 canal, located south of the S-344, to allow water to naturally disperse per the approved project from 1983.

An emergency NEPA is be conducted which requires the USACE to coordinate with the Tribes, State, and respective agencies just like the effort to raise the water levels in L-29 Canal. We request your comments of the proposed actions (S-344 WCP deviation to ERTP i.e. early opening and maintenance to the L-28 canal plugs) for potential operational considerations and for documentation under the emergency action. The Emergency NEPA will be amended or supplemented post S-344 opening to comply with rules and regulations.

We appreciate if you are able to respond to this email acknowledging informal coordination has occurred regarding the new action and provide any additional information you may wish to contribute. Thank you for providing comments and continued coordination is assured.

Thank you for the discussions and good luck with the move.

Respectfully,

Jason Spinning
Chief, Environmental Branch(Acting)
Planning & Policy Division
USACE, Jacksonville District
Phone: 904-232-1231
Cell: 904-502-3218

Nasuti, Melissa A SAJ

From: Taplin, Kimberley A SAJ
Sent: Monday, April 11, 2016 3:26 PM
To: Nasuti, Melissa A SAJ
Cc: Moreno, Meredith A SAJ
Subject: FW: Emergency ERTP Deviation at S-344 and L-28 canal plug maintenance.
Attachments: L28 canal plug location map.pdf

Melissa - this email summarizing discussions with James Erskine needs to be included in your correspondence for Emergency Deviation on S-344

-----Original Message-----
From: Taplin, Kimberley A SAJ
Sent: Thursday, March 24, 2016 4:17 PM
To: Erskine, James <JamesE@miccosukeetribe.com>
Cc: Armando Ramirez (aramire@sfwmd.gov) <aramire@sfwmd.gov>; Moreno, Meredith A SAJ <Meredith.A.Moreno@usace.army.mil>; Spinning, Jason J SAJ <Jason.J.Spinning@usace.army.mil>; Ralph, Gina P SAJ <Gina.P.Ralph@usace.army.mil>; Hughes, Daniel B @ SAJ <Daniel.B.Hughes@usace.army.mil>; Nasuti, Melissa A SAJ <Melissa.A.Nasuti@usace.army.mil>; Taplin, Kimberley A SAJ <Kimberley.A.Taplin@usace.army.mil>
Subject: Emergency ERTP Deviation at S-344 and L-28 canal plug maintenance.

James,

The following summarizes our initial coordination and conversations regarding the proposed emergency actions at S-344 and L-28 canal plugs for your review, comment and/or acknowledgement. I have also attached map of the action area.

Due to the critical nature of the elevated water levels in WCA-3A and in compliance with the existing operation and emergency request by the Governor to maximize water releases, a second emergency NEPA is being prepared to discuss the proposed federal action to deviate from the current water control plan (ERTP) operations for Structure 344 (S-344) on the L-28 Levee. This deviation would open S-344 immediately instead of waiting for July 15th which is the normal opening date in the approved water control plan. The opening would allow up to 300 cfs to be released from WCA-3A into Big Cypress National Preserve and L-28 canal.

The South Florida Water Management District (District) is also seeking approval from the USACE Regulatory Division to conduct operation and maintenance to restore six canal plugs in the L-28 canal, located south of the S-344, to allow water to naturally disperse per the approved project from 1983.

An emergency NEPA will be conducted which requires the USACE to coordinate with the Tribes, State, and respective agencies just like the effort to raise the water levels in L-29 Canal. Pursuant to the Corps' Trust responsibilities and in compliance with Part XIV. Deviations of the Everglades Restoration Transition Plan Programmatic Agreement, we request your comments of the proposed actions (S-344 WCP deviation to ERTP i.e. early opening and maintenance to the L-28 canal plugs) for potential operational considerations and for documentation under the emergency action. The Emergency NEPA will be amended or supplemented post S-344 opening to comply with rules and regulations.

We appreciate if you are able to respond to this email acknowledging informal coordination has occurred regarding the new action and provide any additional information you may wish to contribute. During our conversation yesterday, the issue of Tribal dance locations were discussed. These locations most likely would not be inundated or negatively impacted by the proposed action. The USACE did receive your request for relief if dance locations are negatively impacted including their access roads. This consideration will be evaluated by both USACE and District to ensure proper

controls are in place. Formal consultation regarding this action and a determination of effects will be coordinated with your office during the NEPA consultation.

Thank you for providing comments and continued coordination is assured.

Very Respectfully, Kim T.

Kimberley Taplin, P.E.
Strategic Program Manager
Programs and Project Management
US Army Corps of Engineers
Jacksonville District
Office: 561-472-8879; Mobile 561-801-0285
Email: kimberley.a.taplin@usace.army.mil

Nasuti, Melissa A SAJ

From: Moreno, Meredith A SAJ
Sent: Wednesday, March 23, 2016 2:18 PM
To: Taplin, Kimberley A SAJ; Spinning, Jason J SAJ; Ramirez, Armando
Cc: Summa, Eric P SAJ; Nasuti, Melissa A SAJ
Subject: Emergency Deviation S-344 & L-28 canal plugs (UNCLASSIFIED)

Classification: UNCLASSIFIED

CLASSIFICATION: UNCLASSIFIED

I just spoke with Fred Dayhoff about the S-344 and L-28 plugs. He supports any action that lets water out of WCA 3. Further, he does not foresee that any of the Tribal Dance locations will be inundated; however, he agrees that language should be added to the NEPA document that insures that access be maintained as James Erskine suggested. Please let me know if you need any more information.

Thanks,

Meredith A. Moreno, M.A., RPA
Archaeologist
Planning Division, Environmental Branch
USACE, Jacksonville District
701 San Marco Blvd.
Jacksonville, FL 32207

Phone: 904-232-1577
Email: meredith.a.moreno@usace.army.mil

CLASSIFICATION: UNCLASSIFIED

Nasuti, Melissa A SAJ

From: Taplin, Kimberley A SAJ
Sent: Thursday, March 24, 2016 12:48 PM
To: Erskine, James; Armando Ramirez
Cc: Moreno, Meredith A SAJ; Spinning, Jason J SAJ; Nasuti, Melissa A SAJ
Subject: RE: L28 south

Will do James. Will send email summary of our conversations shortly for your to acknowledge our coordination.

Happy Holidays

Kim T

-----Original Message-----
From: Erskine, James [mailto:JamesE@miccosukeetribe.com]
Sent: Thursday, March 24, 2016 12:44 PM
To: Armando Ramirez <aramire@sfwmd.gov>; Taplin, Kimberley A SAJ <Kimberley.A.Taplin@usace.army.mil>
Subject: [EXTERNAL] L28 south

*Plugs Got it. No new gaps &/or existing gaps performing properly.

*i will text Wildlife Officers and let them know about increased presence in area associated with this action.

*Kim -can you please touch base with Olice Williams and let him know we are talking - I don't think anyone from Tribe will be on PSC call today.

Happy holidays

Sent from my iPhone

Nasuti, Melissa A SAJ

From: Taplin, Kimberley A SAJ
Sent: Wednesday, March 23, 2016 1:07 PM
To: Moreno, Meredith A SAJ; Summa, Eric P SAJ; Spinning, Jason J SAJ; Armando Ramirez (aramire@sfwmd.gov); Nasuti, Melissa A SAJ
Subject: FW: Emergency Deviation S-344 & L-28 canal plugs

For your records

-----Original Message-----
From: Erskine, James [mailto:JamesE@miccosukeetribe.com]
Sent: Wednesday, March 23, 2016 12:38 PM
To: Taplin, Kimberley A SAJ <Kimberley.A.Taplin@usace.army.mil>
Subject: [EXTERNAL] Re: Emergency Deviation S-344 & L-28 canal plugs

Kim,
I'll take the call at 1:00 or sooner if we commit to keeping it brief. Please call my cell.

In short, I have broad support for what we've already talked about and feel it's clearly covered under the first coordination letter.

Topic of concern:
What type of operational protections could US ACE incorporate to protect the Corn Dance site, located to the west of the L28 and north of US41? In the event that Corn Dance gets flooded and it impacts the upcoming ceremonies in late April & May, is there an operations request that can be incorporated to close the gates.

This is a risk assessment, not a necessity to close the gates. In personal communication with Fred D. he stated that Corn Dance was in high ground and not in immediate danger of flooding.

Respectfully,

James

Sent from my iPhone

> On Mar 23, 2016, at 11:46 AM, Taplin, Kimberley A SAJ <Kimberley.A.Taplin@usace.army.mil> wrote:
>
> James,
>
> Are you available at 1:00 pm today to discuss emergency deviation at S-344 and maintenance of L-28 canal plugs at 1:00 pm today? The SFWMD has submitted request and would like to initiate consultation on this emergency action. If you are not available at 1:00 pm today, is there an alternate time today that could work for you?
>
> Look forward to talking with you, Kim T
>
> Kimberley Taplin, P.E.
> Strategic Program Manager
> Programs and Project Management
> US Army Corps of Engineers

> Jacksonville District
> Office: 561-472-8879; Mobile 561-801-0285
> Email: kimberley.a.taplin@usace.army.mil
>
>
>

Nasuti, Melissa A SAJ

From: Paul Backhouse <PaulBackhouse@semtribe.com>
Sent: Thursday, March 24, 2016 8:26 PM
To: Taplin, Kimberley A SAJ
Cc: Cherise Maples; Andrew Weidman; Bradley Mueller; Spinning, Jason J SAJ; Moreno, Meredith A SAJ; Armando Ramirez (aramire@sfwmd.gov); Nasuti, Melissa A SAJ; Michelle Diffenderfer; Power, Patricia; James Charles (jcharles@llw-law.com); Hughes, Daniel B @ SAJ; Ralph, Gina P SAJ; Reynolds, Jennifer A LTC ARMY @ SAJ; Jim Shore; Danny Tommie
Subject: [EXTERNAL] Re: Emergency Deviation S-344 & L-28 canal plugs

Kim,

Thanks for the summary and information, we look forward to further consultation on this proposed action. If you could ask your cultural resources staff to prepare a plain language summary of the effects of the current change of operations and the anticipated effect of the additional action it will be useful for us to analyze and brief leadership.

Best Paul

> On Mar 24, 2016, at 2:10 PM, Taplin, Kimberley A SAJ <Kimberley.A.Taplin@usace.army.mil> wrote:
>
> Sorry, forgot to attach the map! My apologies.
>
>
>
> -----Original Message-----
> From: Taplin, Kimberley A SAJ
> Sent: Thursday, March 24, 2016 2:03 PM
> To: Cherise Maples (cmaples@semtribe.com) <cmaples@semtribe.com>; Paul Backhouse <PaulBackhouse@semtribe.com>
> Cc: 'Andrew Weidman' <AndrewWeidman@semtribe.com>; Bradley Mueller <bradleymueller@semtribe.com>; Spinning, Jason J SAJ <Jason.J.Spinning@usace.army.mil>; Moreno, Meredith A SAJ <Meredith.A.Moreno@usace.army.mil>; Armando Ramirez (aramire@sfwmd.gov) <aramire@sfwmd.gov>; Nasuti, Melissa A SAJ <Melissa.A.Nasuti@usace.army.mil>; Michelle Diffenderfer <mdiffenderfer@llw-law.com>; Power, Patricia <ppower@bosepublicaffairs.com>; James Charles (jcharles@llw-law.com) <jcharles@llw-law.com>; Hughes, Daniel B @ SAJ <Daniel.B.Hughes@usace.army.mil>; Ralph, Gina P SAJ <Gina.P.Ralph@usace.army.mil>; Reynolds, Jennifer A LTC ARMY @ SAJ <Jennifer.A.Reynolds@usace.army.mil>; Taplin, Kimberley A SAJ <Kimberley.A.Taplin@usace.army.mil>
> Subject: RE: Emergency Deviation S-344 & L-28 canal plugs
>
> Cherise and Paul,
>
> As a follow-up to my prior email requesting to meet with you, below is description of emergency actions proposed and procedures. I have also attached map of the action area.
>
> Due to the critical nature of the elevated water levels in WCA-3A and in compliance with the existing operation and emergency request by the Governor to maximize water releases, a second emergency NEPA is being prepared to discuss the proposed federal action to deviate from the current water control plan (ERTP) operations for Structure 344 (S-344) on the L-28 Levee. This deviation would open S-344 immediately instead of waiting for July 15th which is the normal

opening date in the approved water control plan. The opening would allow up to 300 cfs to be released from WCA-3A into Big Cypress National Preserve and L-28 canal.
>
> The South Florida Water Management District (District) is also seeking approval from the USACE Regulatory Division to conduct operation and maintenance to restore six canal plugs in the L-28 canal, located south of the S-344, to allow water to naturally disperse per the approved project from 1983.
>
> An emergency NEPA will be conducted which requires the USACE to coordinate with the Tribes, State, and respective agencies just like the effort to raise the water levels in L-29 Canal. Pursuant to the Corps' Trust responsibilities and in compliance with Part XIV. Deviations of the Everglades Restoration Transition Plan Programmatic Agreement, we request your comments of the proposed actions (S-344 WCP deviation to ERTP i.e. early opening and maintenance to the L-28 canal plugs) for potential operational considerations and for documentation under the emergency action. The Emergency NEPA will be amended or supplemented post S-344 opening to comply with rules and regulations.
>
> We appreciate if you are able to respond to this email acknowledging informal coordination has occurred regarding the new action and provide any additional information you may wish to contribute. Formal consultation regarding this action and a determination of effects will be coordinated with your office during the NEPA consultation. The Corps additionally requests an opportunity to discuss current conditions in the system at your earliest convenience as a follow up to the Emergency Deviation of the L-29 Canal undertaken in February.
>
> Thank you for providing comments and continued coordination is assured. Armando, myself and the team are available at your convenience to answer any questions and/or discuss your concerns with this new proposed action.
>
> Very Respectfully, Kim T.
>
> -----Original Message-----
> From: Taplin, Kimberley A SAJ
> Sent: Wednesday, March 23, 2016 12:01 PM
> To: Cherise Maples (cmaples@semtribe.com) <cmaples@semtribe.com>; Paul Backhouse <PaulBackhouse@semtribe.com>
> Cc: Andrew Weidman <AndrewWeidman@semtribe.com>; Bradley Mueller <bradleymueller@semtribe.com>; Spinning, Jason J SAJ <Jason.J.Spinning@usace.army.mil>; Moreno, Meredith A SAJ <Meredith.A.Moreno@usace.army.mil>
> Subject: Emergency Deviation S-344 & L-28 canal plugs
>
> Cherise and Paul,
>
> Would you and the THPO staff be available today at 2:30 pm to discuss an additional emergency deviation from ERTP that the SFWMD has requested under the Governors Emergency Order? We would like to initiate consultation on the action. If 3:00 pm today does not work for you, can you suggest an alternate time? We can talk to THPO office individually and you Cherise separately if cannot find time mutually available.
>
> Look forward to hearing from you all,
>
> Very Respectfully, Kim T.
>
> Kimberley Taplin, P.E.
> Strategic Program Manager
> Programs and Project Management
> US Army Corps of Engineers
> Jacksonville District
> Office: 561-472-8879; Mobile 561-801-0285

> Email: kimberley.a.taplin@usace.army.mil
>
>
> <L28 canal plug location map.pdf>

From: Parsons, Timothy A.
To: Moreno, Meredith A SAJ
Cc: Aldridge, Jason H.
Subject: [EXTERNAL] RE: Emergency Deviation S-344 & L-28 canal plugs (UNCLASSIFIED)
Date: Friday, March 25, 2016 10:50:38 AM

Hi Meredith,

Thanks for notifying us of this emergency action and initiation of information consultation. I don't have any specific comments at this time.

As it happens, Mr. Jason Aldridge was recently selected to succeed me as Compliance Supervisor. He is copied on this email (hi Jason!). His official start date is Monday, but since formal consultation will begin down the road a piece we should go ahead and loop him in. Jason, happy to chat soon about ERTP as a whole (you'll get to know it VERY well!), and about this in particular once things get rolling.

Meredith, I'm glad someone is getting a long weekend! I was here early this morning...

Tim

-----Original Message-----
From: Moreno, Meredith A SAJ [mailto:Meredith.A.Moreno@usace.army.mil]
Sent: Friday, March 25, 2016 10:07 AM
To: Parsons, Timothy A.
Subject: Emergency Deviation S-344 & L-28 canal plugs (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Hi Tim,

I am following up to a message I just left on Celeste's voicemail. Due to the continued high water levels in WCA 3A, South Florida Water Management District (SFWMD) has reached out to the Corps to propose a deviation from the current water control plan (ERTP) operations for Structure 344 (S-344) on the L-28 Levee (see attached map). This deviation would open S-344 immediately instead of waiting for July 15th which is the normal opening date in the approved water control plan. The opening would allow up to 300 cfs to be released from WCA-3A into Big Cypress National Preserve and the L-28 canal. SFWMD is also seeking approval from the USACE Regulatory Division to conduct operation and maintenance to restore six canal plugs in the L-28 canal, located south of the S-344, to allow water to naturally disperse per the approved project from 1983.

An emergency NEPA will be conducted which requires the USACE to coordinate with the Tribes, State, and respective agencies just like the effort to raise the water levels in L-29 Canal. Official coordination pursuant to Part XIV (Deviations) of the ERTP Programmatic Agreement and Section 106 will be undertaken once the water quantity and trajectory discharged into Big Cypress National Preserve has been assessed; however, the Corps kindly requests your comments of the proposed actions (S-344 WCP deviation to ERTP i.e. early opening and maintenance to the L-28 canal plugs) for potential operational considerations and for documentation under the emergency action.

We appreciate if you are able to respond to this email acknowledging informal coordination has occurred regarding the new action and provide any additional information you may wish to contribute. Formal consultation regarding this action and a determination of effects will be coordinated with your office during the NEPA consultation.

I am in the process of reaching out to Big Cypress, the Seminole, Miccosukee, and the other PA signatories regarding cultural resources. Due to the early stage of this request from the SFWMD I am unable to make a determination of effects at this time. Once the Corps has received more information regarding the potential effects I will update your office. I understand that there is not currently a Compliance Review Supervisor to take your place,

so let me know if there is anyone else you would like me to keep in the loop during this additional Emergency Deviation.

Hopefully you are having a nice long weekend. Please feel free to call me with any questions or concerns.

Meredith A. Moreno, M.A., RPA
Archaeologist
Planning Division, Environmental Branch
USACE, Jacksonville District
701 San Marco Blvd.
Jacksonville, FL 32207

Phone: 904-232-1577
Email: meredith.a.moreno@usace.army.mil

CLASSIFICATION: UNCLASSIFIED

Nasuti, Melissa A SAJ

From: Spinning, Jason J SAJ
Sent: Monday, March 28, 2016 9:53 AM
To: Higgins, Jamie
Cc: Hughes, Eric H SAJ; Spinning, Jason J SAJ; Ralph, Gina P SAJ; Nasuti, Melissa A SAJ
Subject: Re: [EXTERNAL] RE: USACE Emergency NEPA - Early Opening of S-344 - Deviation to Water Control Plan

Thank you Jamie.

Respectfully,

Jason Spinning
Chief, Environmental Branch (Acting)
Planning & Policy Division
USACE, Jacksonville District
Direct 904-232-1231
Cell 904-502-3218
jason.j.spinning@usace.army.mil
Original Message
From: Higgins, Jamie
Sent: Monday, March 28, 2016 9:27 AM
To: Spinning, Jason J SAJ; Hughes, Eric H SAJ
Cc: Ralph, Gina P SAJ; Nasuti, Melissa A SAJ; Militscher, Chris; Higgins, Jamie; Mancusi-Ungaro, Philip; Pallas, Jeff; Farmer, Alan; Hughes, Eric H SAJ; Able, Tony EPA@SAD
Subject: [EXTERNAL] RE: USACE Emergency NEPA - Early Opening of S-344 - Deviation to Water Control Plan

Jason,
EPA acknowledges we received your email. We recommend you contact Aimee Hessert (Hessert.aimee@Epa.gov, 202-564-0993) of our EPA, HQ, Office of Federal Activities to notify them that you are conducting emergency NEPA. We request you provide us a copy of the emergency NEPA once you have completed it.

Please don't hesitate to contact me should you have questions.
Thanks,
Jamie

Jamie Higgins
EPA Region 4
NEPA Program Office
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303
404-562-9681
Higgins.jamie@epa.gov

-----Original Message-----
From: Spinning, Jason J SAJ [mailto:Jason.J.Spinning@usace.army.mil]
Sent: Friday, March 25, 2016 12:38 PM
To: eric.h.hughes@USACE.Army.mil; Higgins, Jamie <Higgins.Jamie@epa.gov>
Cc: Spinning, Jason J SAJ <Jason.J.Spinning@usace.army.mil>; Ralph, Gina P SAJ <Gina.P.Ralph@usace.army.mil>; Nasuti, Melissa A SAJ <Melissa.A.Nasuti@usace.army.mil>
Subject: USACE Emergency NEPA - Early Opening of S-344 - Deviation to Water Control Plan
Importance: High

Eric & Jamie,

I left you voice mails today regarding this additional emergency action. Due to the critical nature of the elevated water levels in WCA-3A and in compliance with the existing operation and emergency request by the Governor to maximize water releases, a second emergency NEPA is being prepared to discuss the proposed federal action to deviate from the current water control plan (ERTP) operations for Structure 344 (S-344) on the L-28 Levee. This deviation would open S-344 immediately instead of waiting for July 15th which is the normal opening date in the approved water control plan. The opening would allow up to 300 cfs to be released from WCA-3A into Big Cypress National Preserve and L-28 canal.

The South Florida Water Management District (District) is also seeking approval from the USACE Regulatory Division to conduct operation and maintenance to restore six canal plugs in the L-28 canal, located south of the S-344, to allow water to naturally disperse per the approved project from 1983.

An emergency NEPA is be conducted which requires the USACE to coordinate with the Tribes, State, and respective agencies just like the effort to raise the water levels in L-29 Canal. We request your comments of the proposed actions (S-344 WCP deviation to ERTP i.e. early opening and maintenance to the L-28 canal plugs) for potential operational considerations and for documentation under the emergency action. The Emergency NEPA will be amended or supplemented post S-344 opening to comply with rules and regulations.

We appreciate if you are able to respond to this email acknowledging informal coordination has occurred regarding the new action and provide any additional information you may wish to contribute. Thank you for providing comments and continued coordination is assured.

Respectfully,

Jason Spinning
Chief, Environmental Branch(Acting)
Planning & Policy Division
USACE, Jacksonville District
Phone: 904-232-1231
Cell: 904-502-3218

Nasuti, Melissa A SAJ

From: Hughes, Eric H SAJ
Sent: Monday, March 28, 2016 10:30 AM
To: Spinning, Jason J SAJ; Jamie Higgins (Higgins.jamie@epa.gov)
Cc: Ralph, Gina P SAJ; Nasuti, Melissa A SAJ; scheidt.dan@epa.gov
Subject: RE: USACE Emergency NEPA - Early Opening of S-344 - Deviation to Water Control Plan

Jason:

Thanks for the heads up.

Eric H
EPA, Jax, FL

-----Original Message-----
From: Spinning, Jason J SAJ
Sent: Friday, March 25, 2016 12:38 PM
To: Hughes, Eric H SAJ <Eric.H.Hughes@usace.army.mil>; Jamie Higgins (Higgins.jamie@epa.gov) <Higgins.jamie@epa.gov>
Cc: Spinning, Jason J SAJ <Jason.J.Spinning@usace.army.mil>; Ralph, Gina P SAJ <Gina.P.Ralph@usace.army.mil>; Nasuti, Melissa A SAJ <Melissa.A.Nasuti@usace.army.mil>
Subject: USACE Emergency NEPA - Early Opening of S-344 - Deviation to Water Control Plan
Importance: High

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I left you voice mails today regarding this additional emergency action. Due to the critical nature of the elevated water levels in WCA-3A and in compliance with the existing operation and emergency request by the Governor to maximize water releases, a second emergency NEPA is being prepared to discuss the proposed federal action to deviate from the current water control plan (ERTP) operations for Structure 344 (S-344) on the L-28 Levee. This deviation would open S-344 immediately instead of waiting for July 15th which is the normal opening date in the approved water control plan. The opening would allow up to 300 cfs to be released from WCA-3A into Big Cypress National Preserve and L-28 canal.

The South Florida Water Management District (District) is also seeking approval from the USACE Regulatory Division to conduct operation and maintenance to restore six canal plugs in the L-28 canal, located south of the S-344, to allow water to naturally disperse per the approved project from 1983.

An emergency NEPA is be conducted which requires the USACE to coordinate with the Tribes, State, and respective agencies just like the effort to raise the water levels in L-29 Canal. We request your comments of the proposed actions (S-344 WCP deviation to ERTP i.e. early opening and maintenance to the L-28 canal plugs) for potential operational considerations and for documentation under the emergency action. The Emergency NEPA will be amended or supplemented post S-344 opening to comply with rules and regulations.

We appreciate if you are able to respond to this email acknowledging informal coordination has occurred regarding the new action and provide any additional information you may wish to contribute. Thank you for providing comments and continued coordination is assured.

Respectfully,

Jason Spinning
Chief, Environmental Branch(Acting)
Planning & Policy Division
USACE, Jacksonville District
Phone: 904-232-1231
Cell: 904-502-3218

Nasuti, Melissa A SAJ

From: Donald Progulske <donald_progulske@fws.gov>
Sent: Friday, March 25, 2016 8:21 AM
To: Spinning, Jason J SAJ
Cc: Bob_Progulske@fws.gov; Nasuti, Melissa A SAJ; Larry_Williams@fws.gov; miles meyer; lori_miller@fws.gov; kevin_palmer@fws.gov; richard_fike@fws.gov; Shannon Estenoz
Subject: [EXTERNAL] Re: L-28/S-344 Emergency Action

Jason - thanks for the informative email. I discussed this action with Ernie Marks (SFWMD) yesterday. The Fish and Wildlife Service supports this emergency temporary deviation (from ERTP) as long as the opening of the S-344 is done in concert with the reconstruction of the 6 plugs in the L-28 canal, as described. In my discussions with Ernie, he asked if the Service would support start opening the S-344 as long as at least the first plug was restored. I said we would. My understanding is that the opening of the S-344 would gradually increase as more plugs were restored - essentially a metered opening. We realize that there are some answered questions at this time, but we support the overall effort and will assist the Corps in whatever way we can. We also acknowledge that this deviation is supported by the Big Cypress National Preserve as a step to restoring natural hydrology to the Preserve. Thanks.

Bob Progulske
Everglades Program Supervisor
U.S. Fish and Wildlife Service

Sent from my iPad

> On Mar 24, 2016, at 4:39 PM, Spinning, Jason J SAJ <Jason.J.Spinning@usace.army.mil> wrote:
>
> The following summarizes our initial coordination regarding the proposed emergency actions at S-344 and L-28 canal plugs for your review, comment and/or acknowledgement. I have also attached map of the action area.
>
> Due to the critical nature of the elevated water levels in WCA-3A and in compliance with the existing operation and emergency request by the Governor to maximize water releases, a second emergency NEPA is being prepared to discuss the proposed federal action to deviate from the current water control plan (ERTP) operations for Structure 344 (S-344) on the L-28 Levee. This deviation would open S-344 immediately instead of waiting for July 15th which is the normal opening date in the approved water control plan. The opening would allow up to 300 cfs to be released from WCA-3A into Big Cypress National Preserve and L-28 canal.
>
> The South Florida Water Management District (District) is also seeking approval from the USACE Regulatory Division to conduct operation and maintenance to restore six canal plugs in the L-28 canal, located south of the S-344, to allow water to naturally disperse per the approved project from 1983. This is different than discussed since the District is not proposing to take action on the existing gaps.
>
> An emergency NEPA will be conducted which requires the USACE to coordinate with the Tribes, State, and respective agencies just like the effort to raise the water levels in L-29 Canal. We request your comments of the proposed actions (S-344 WCP deviation to ERTP i.e. early opening and maintenance to the L-28 canal plugs) for potential operational

considerations and for documentation under the emergency action. The Emergency NEPA will be amended or supplemented post S-344 opening to comply with rules and regulations.
>
> We appreciate if you are able to respond to this email acknowledging informal coordination has occurred regarding the new action and provide any additional information you may wish to contribute. Thank you for providing comments and continued coordination is assured.
>
> Respectfully,
>
> Jason Spinning
> Chief, Environmental Branch(Acting)
> Planning & Policy Division
> USACE, Jacksonville District
> Phone: 904-232-1231
> Cell: 904-502-3218
>
>
> <L28 canal plug location map.pdf>

Nasuti, Melissa A SAJ

From: Ralph, Gina P SAJ
Sent: Wednesday, March 30, 2016 10:48 AM
To: Hessert.aimee@Epa.gov
Cc: 'Jamie Higgins'; 'Eric Hughes (Hughes.eric@epa.gov)'; Spinning, Jason J SAJ; Nasuti, Melissa A SAJ
Subject: FW: USACE Emergency NEPA - Early Opening of S-344 - Deviation to Water Control Plan
Attachments: L28 canal plug location map.pdf; ERTP MAP.ppt

Importance: High

Ms. Hessert,

Ms. Jaime Higgins suggested I contact you with regard to Emergency NEPA. Due to the critical nature of the elevated water levels in WCA-3A and in compliance with the existing operation and emergency request by the Governor of Florida to maximize water releases, a second emergency NEPA is being prepared to discuss the proposed federal action to deviate from the current water control plan (ERTP) operations for Structure 344 (S-344) on the L-28 Levee. This deviation would open S-344 immediately instead of waiting for July 15th which is the normal opening date in the approved water control plan. The opening would allow up to 300 cfs to be released from WCA-3A into Big Cypress National Preserve and L-28 canal.

The South Florida Water Management District (District) is also seeking approval from the USACE Regulatory Division to conduct operation and maintenance to restore six canal plugs in the L-28 canal, located south of the S-344, to allow water to naturally disperse per the approved project from 1983.

An emergency NEPA is be conducted which requires the USACE to coordinate with the Tribes, State, and respective agencies just like the effort to raise the water levels in L-29 Canal. We request your comments of the proposed actions (S-344 WCP deviation to ERTP i.e. early opening and maintenance to the L-28 canal plugs) for potential operational considerations and for documentation under the emergency action. The Emergency NEPA will be amended or supplemented post S-344 opening to comply with rules and regulations.

We appreciate if you are able to respond to this email acknowledging informal coordination has occurred regarding the new action and provide any additional information you may wish to contribute. Thank you for providing comments and continued coordination is assured.

Thank you,

Gina Paduano Ralph, Ph.D.
Chief, Restoration and Resources Section
Environmental Branch, Planning Division
US Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019
(904) 232-2336
Gina.P.Ralph@usace.army.mil

-----Original Message-----
From: Higgins, Jamie [mailto:Higgins.Jamie@epa.gov]
Sent: Monday, March 28, 2016 9:26 AM
To: Spinning, Jason J SAJ <Jason.J.Spinning@usace.army.mil>; Hughes, Eric H SAJ <Eric.H.Hughes@usace.army.mil>
Cc: Ralph, Gina P SAJ <Gina.P.Ralph@usace.army.mil>; Nasuti, Melissa A SAJ <Melissa.A.Nasuti@usace.army.mil>; Militscher, Chris <Militscher.Chris@epa.gov>; Higgins, Jamie <Higgins.Jamie@epa.gov>; Mancusi-Ungaro, Philip <Mancusi-Ungaro.Philip@epa.gov>; Pallas, Jeff <Pallas.Jeff@epa.gov>; Farmer, Alan <Farmer.Alan@epa.gov>; Hughes, Eric H SAJ <Eric.H.Hughes@usace.army.mil>; Able, Tony EPA@SAD <able.tony@epa.gov>
Subject: [EXTERNAL] RE: USACE Emergency NEPA - Early Opening of S-344 - Deviation to Water Control Plan

Jason,
EPA acknowledges we received your email. We recommend you contact Aimee Hessert (Hessert.aimee@Epa.gov, 202-564-0993) of our EPA, HQ, Office of Federal Activities to notify them that you are conducting emergency NEPA. We request you provide us a copy of the emergency NEPA once you have completed it.

Please don't hesitate to contact me should you have questions.
Thanks,
Jamie

Jamie Higgins
EPA Region 4
NEPA Program Office
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303
404-562-9681
Higgins.jamie@epa.gov

-----Original Message-----
From: Spinning, Jason J SAJ [mailto:Jason.J.Spinning@usace.army.mil]
Sent: Friday, March 25, 2016 12:38 PM
To: eric.h.hughes@USACE.Army.mil; Higgins, Jamie <Higgins.Jamie@epa.gov>
Cc: Spinning, Jason J SAJ <Jason.J.Spinning@usace.army.mil>; Ralph, Gina P SAJ <Gina.P.Ralph@usace.army.mil>; Nasuti, Melissa A SAJ <Melissa.A.Nasuti@usace.army.mil>
Subject: USACE Emergency NEPA - Early Opening of S-344 - Deviation to Water Control Plan
Importance: High

Eric & Jamie,

I left you voice mails today regarding this additional emergency action. Due to the critical nature of the elevated water levels in WCA-3A and in compliance with the existing operation and emergency request by the Governor to maximize water releases, a second emergency NEPA is being prepared to discuss the proposed federal action to deviate from the current water control plan (ERTP) operations for Structure 344 (S-344) on the L-28 Levee. This deviation would open S-344 immediately instead of waiting for July 15th which is the normal opening date in the approved water control plan. The opening would allow up to 300 cfs to be released from WCA-3A into Big Cypress National Preserve and L-28 canal.

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An emergency NEPA is be conducted which requires the USACE to coordinate with the Tribes, State, and respective agencies just like the effort to raise the water levels in L-29 Canal. We request your comments of the proposed actions (S-344 WCP deviation to ERTP i.e. early opening and maintenance to the L-28 canal plugs) for potential operational considerations and for documentation under the emergency action. The Emergency NEPA will be amended or supplemented post S-344 opening to comply with rules and regulations.

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Respectfully,

Jason Spinning
Chief, Environmental Branch(Acting)
Planning & Policy Division
USACE, Jacksonville District
Phone: 904-232-1231
Cell: 904-502-3218

Nasuti, Melissa A SAJ

From: Ralph, Gina P SAJ
Sent: Wednesday, March 30, 2016 10:16 AM
To: robert_johnson@nps.gov
Cc: Pedro Ramos; Tylan Dean; Nasuti, Melissa A SAJ; Spinning, Jason J SAJ
Subject: WCA-3A Deviation at S-344

Importance: High

Bob,

I left you a voice mail today regarding this additional emergency action. Due to the critical nature of the elevated water levels in WCA-3A and in compliance with the existing operation and emergency request by the Governor to maximize water releases, a second emergency NEPA is being prepared to discuss the proposed federal action to deviate from the current water control plan (ERTP) operations for Structure 344 (S-344) on the L-28 Levee. This deviation would open S-344 immediately instead of waiting for July 15th which is the normal opening date in the approved water control plan. The opening would allow up to 300 cfs to be released from WCA-3A into Big Cypress National Preserve and L-28 canal.

The South Florida Water Management District (District) is also seeking approval from the USACE Regulatory Division to conduct operation and maintenance to restore six canal plugs in the L-28 canal, located south of the S-344, to allow water to naturally disperse per the approved project from 1983.

An emergency NEPA is be conducted which requires the USACE to coordinate with the Tribes, State, and respective agencies just like the effort to raise the water levels in L-29 Canal. We request your comments of the proposed actions (S-344 WCP deviation to ERTP i.e. early opening and maintenance to the L-28 canal plugs) for potential operational considerations and for documentation under the emergency action. The Emergency NEPA will be amended or supplemented post S-344 opening to comply with rules and regulations.

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Thank you,

Gina Paduano Ralph, Ph.D.
Chief, Restoration and Resources Section
Environmental Branch, Planning Division
US Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019
(904) 232-2336
Gina.P.Ralph@usace.army.mil

Nasuti, Melissa A SAJ

From: Ralph, Gina P SAJ
Sent: Wednesday, March 30, 2016 12:48 PM
To: Nasuti, Melissa A SAJ
Cc: Spinning, Jason J SAJ
Subject: FW: WCA-3A Deviation at S-344
Attachments: RE: WCA-3A Deviation at S-344

FDACS response below. I have attached my response email as well.

Thanks!

Gina Paduano Ralph, Ph.D.
Chief, Restoration and Resources Section
Environmental Branch, Planning Division
US Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019
(904) 232-2336
Gina.P.Ralph@usace.army.mil

-----Original Message-----
From: Elliott, Rebecca [mailto:relliott@sfwmd.gov]
Sent: Wednesday, March 30, 2016 12:40 PM
To: Ralph, Gina P SAJ <Gina.P.Ralph@usace.army.mil>
Subject: [EXTERNAL] Re: WCA-3A Deviation at S-344

Gina,

My unofficial response is that ag lands will not be impacted by this action and we have no objection to the proposal. Do you need anything official?

Rebecca

Sent from my iPhone

> On Mar 30, 2016, at 10:22 AM, Ralph, Gina P SAJ <Gina.P.Ralph@usace.army.mil> wrote:
>
> Rebecca,
>
> I left you a voice mail today regarding this additional emergency action. Due to the critical nature of the elevated water levels in WCA-3A and in compliance with the existing operation and emergency request by the Governor to maximize water releases, a second emergency NEPA is being prepared to discuss the proposed federal action to deviate from the current water control plan (ERTP) operations for Structure 344 (S-344) on the L-28 Levee. This deviation would open S-344 immediately instead of waiting for July 15th which is the normal opening date in the approved water control plan. The opening would allow up to 300 cfs to be released from WCA-3A into Big Cypress National Preserve and L-28 canal.
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> Chief, Restoration and Resources Section
> Environmental Branch, Planning Division
> US Army Corps of Engineers
> P.O. Box 4970
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> Gina.P.Ralph@usace.army.mil
>
>
>

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 San Marco Boulevard
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

MAR 31 2016

Mr. Larry Williams, Field Supervisor
U.S. Fish and Wildlife Service
1339 20th Street
Vero Beach, FL 32960

Dear Mr. Williams,

The Jacksonville District, U.S. Army Corps of Engineers (Corps) is beginning preparation of an Environmental Assessment (EA) for a Temporary Emergency Deviation at Structure 344 (S-344) to alleviate high water levels in Water Conservation Area 3A (WCA 3A). The Corps initiated a temporary emergency deviation to the current operating constraint of 7.5 feet National Geodetic Vertical Datum (of 1929 NGVD) in the L-29 Canal for purposes of providing high water relief in WCA 3A on February 15, 2016. Informal consultation related to that action was initiated with the U.S. Fish and Wildlife Service (FWS) on March 1, 2016. Due to the continued critical nature of elevated water levels in WCA 3A and in compliance with the existing request by the Governor to maximize water releases, a second emergency EA is being prepared to deviate from the current water control plan for S-344 on the L-28 Levee.

The purpose of S-344 and associated features located along the L-28 Levee and Borrow Canal, are to restore overland flow to an area of Big Cypress National Preserve (BCNP) just south of the L-28 Tieback; prevent over drainage of the eastern BCNP under dry conditions; and provide a means of making regulatory releases from WCA 3A into BCNP. This temporary emergency deviation would open S-344 immediately instead of waiting for July 15, 2016 which is the normal opening date in the approved water control plan. The opening would allow water to be released from WCA 3A into BCNP and the L-28 Canal. The temporary emergency deviation is expected to benefit natural resources within WCA 3A and BCNP.

The water management operating criteria relating to the action affects an area within the Central & Southern Florida Project located in south Florida and includes WCA 3, eastern BCNP and western Everglades National Park. Features of the action are located in Broward, Collier and Miami-Dade Counties (**Figure 1**).

The Corps notified FWS of this action on March 24, 2016 to solicit comments regarding the action. The FWS indicated support for the effort. Pursuant to the Endangered Species Act, as amended, the Corps is requesting written confirmation of species or their critical habitat either listed or proposed for listing that may be present within the referenced project area upon receipt of this letter. The Corps has tentatively determined that the following list of threatened and endangered species may be present within the project area as illustrated in Tables 1 and 2.

If you have any questions, or need further information, please contact Melissa Nasuti by email melissa.a.nasuti@usace.army.mil or telephone 904-232-1368. Thank you for your assistance in this matter.

Sincerely,

for

Jason Spinning
Acting Chief, Environmental Branch

Enclosures

cc:
Mr. Miles Meyer, U.S. Fish and Wildlife Service, 1339 20th Street, Vero Beach, Florida 32960
Mr. Bob Progulske, U.S. Fish and Wildlife Service, 1339 20th Street, Vero Beach, Florida 32960

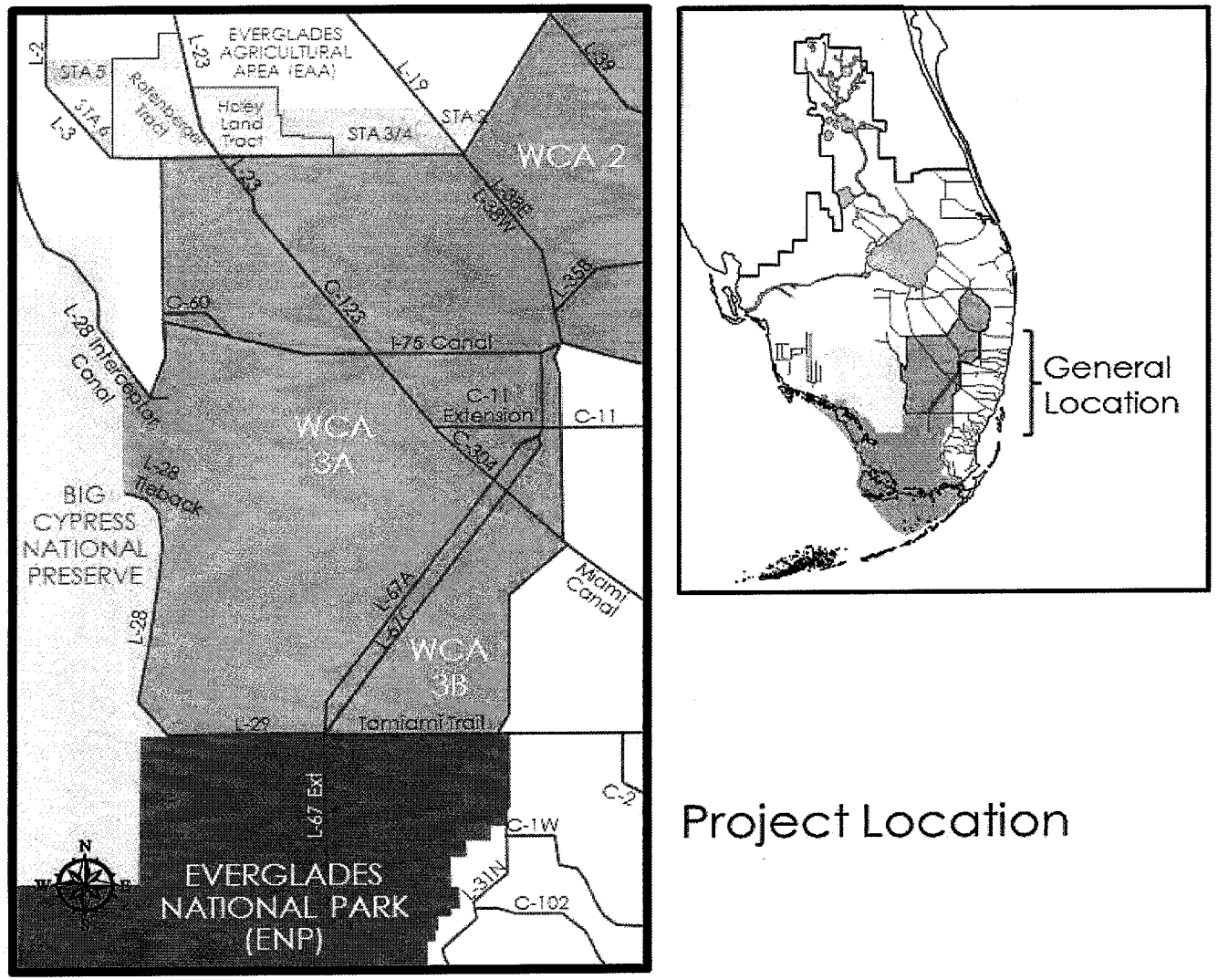

Figure 1. Project Location

Table 1. List of Federally Threatened and Endangered Species within the project area (E: Endangered, T: Threatened, SA: Similarity of Appearance, CH: Critical Habitat, C: Candidate Species)

Common Name	Scientific Name	Status
Mammals		
Florida panther	*Puma concolor coryi*	E
Florida manatee	*Trichechus manatus latirostris*	E, CH
Florida bonneted bat	*Eumops floridanus*	E
Birds		
Cape Sable seaside sparrow	*Ammodramus maritimus mirabilis*	E, CH
Everglade snail kite	*Rostrhamus sociabilis plumbeus*	E, CH
Piping plover	*Charadrius melodus*	T
Red-cockaded woodpecker	*Picoides borealis*	E
Roseate tern	*Sterna dougallii*	T
Wood stork	*Mycteria americana*	T
Reptiles		
American Alligator	*Alligator mississippiensis*	T, SA
American crocodile	*Crocodylus acutus*	T, CH
Eastern indigo snake	*Drymarchon corais couperi*	T
Gopher tortoise	*Gopherus polyphemus*	C
Invertebrates		
Bartram's hairstreak butterfly	*Strymon acis bartrami*	E
Florida leafwing butterfly	*Anaea troglodyta floridalis*	E
Miami blue butterfly	*Cyclargus thomasi bethunebakeri*	E
Schaus swallowtail butterfly	*Heraclides aristodemus ponceanus*	E
Stock Island tree snail	*Orthalicus reses* (not incl. *nesodryas*)	T
Plants		
Crenulate lead plant	*Amorpha crenulata*	E
Deltoid spurge	*Chamaesyce deltoidea* spp. *deltoidea*	E
Garber's spurge	*Chamaesyce garberi*	T
Okeechobee gourd	*Cucurbita okeechobeensis* ssp. *okeechobeenis*	E
Small's milkpea	*Galactia smallii*	E
Tiny polygala	*Polygala smallii*	E
Big pine partridge pea	*Chamaecrista lineata* var. *keyensis*	Pr E

Blodgett's silverbush	*Argythamnia blodgettii*	Pr T
Cape Sable thoroughwort	*Chromolaena frustrata*	E, CH
Carter's small-flowered flax	*Linum carteri* var. *carteri*	E, CH
Everglades bully	*Sideroxylon reclinatum* spp. *austrofloridense*	C
Florida brickell-bush	*Brickellia mosieri*	E, CH
Florida bristle fern	*Trichomanes punctatum* spp. *floridanum*	E
Florida pineland crabgrass	*Digitaria pauciflora*	C
Florida prairie-clover	*Dalea carthagenensis* var. *floridana*	C
Florida semaphore cactus	*Consolea corallicola*	E, CH
Pineland sandmat	*Chamaesyce deltoidea* ssp. *pinetorum*	C
Sand flax	*Linum arenicola*	Pr E

Table 2. List of State Listed Species within the project area (E: Endangered, T: Threatened, SC: Species of Special Concern)

Common Name	Scientific Name	Status
Mammals		
Everglades mink	*Mustela vison evergladensis*	T
Florida mouse	*Podomys floridanus*	SC
Birds		
Snowy plover	*Charadrius nivosus*	T
American oystercatcher	*Haematopus palliates*	SC
Brown pelican	*Pelecanus occidentalis*	SC
Black skimmer	*Rynchops niger*	SC
Least tern	*Sterna antillarium*	T
White-crowned pigeon	*Patagioenas leucocephala*	T
Least tern	*Sterna antillarum*	T
Limpkin	*Aramus guarauna*	SC
Little blue heron	*Egretta caerulea*	SC
Tricolored heron	*Egretta tricolor*	SC
Snowy egret	*Egretta thula*	SC
Reddish egret	*Egretta rufescens*	SC
White ibis	*Eudocimus albus*	SC
Roseate spoonbill	*Platalea ajaja*	T
Invertebrates		
Florida tree snail	*Liguus fasciatus*	SC
Plants		
Pine-pink orchid	*Bletia purpurea*	T
Lattace vein fern	*Thelypteris reticulate*	E
Eatons spikemoss	*Selaginella eatonii*	E
Wright's flowering fern	*Anemia wrightii*	E
Tropical fern	*Schizaea pennula*	E
Mexican vanilla	*Manilla mexicana*	E

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 San Marco Boulevard
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REPLY TO
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Dear Mr. Williams,

The Jacksonville District, U.S. Army Corps of Engineers (Corps) is beginning preparation of an Environmental Assessment (EA) for a Temporary Emergency Deviation at Structure 344 (S-344) to alleviate high water levels in Water Conservation Area 3A (WCA 3A). The Corps initiated a temporary emergency deviation to the current operating constraint of 7.5 feet National Geodetic Vertical Datum (of 1929 NGVD) in the L-29 Canal for purposes of providing high water relief in WCA 3A on February 15, 2016. Informal consultation related to that action was initiated with the U.S. Fish and Wildlife Service (FWS) on March 1, 2016. Due to the continued critical nature of elevated water levels in WCA 3A and in compliance with the existing request by the Governor to maximize water releases, a second emergency EA is being prepared to deviate from the current water control plan for S-344 on the L-28 Levee.

The purpose of S-344 and associated features located along the L-28 Levee and Borrow Canal, are to restore overland flow to an area of Big Cypress National Preserve (BCNP) just south of the L-28 Tieback; prevent over drainage of the eastern BCNP under dry conditions; and provide a means of making regulatory releases from WCA 3A into BCNP. This temporary emergency deviation would open S-344 immediately instead of waiting for July 15, 2016 which is the normal opening date in the approved water control plan. The opening would allow water to be released from WCA 3A into BCNP and the L-28 Canal. The temporary emergency deviation is expected to benefit natural resources within WCA 3A and BCNP.

The water management operating criteria relating to the action affects an area within the Central & Southern Florida Project located in south Florida and includes WCA 3, eastern BCNP and western Everglades National Park. Features of the action are located in Broward, Collier and Miami-Dade Counties (**Figure 1**).

The Corps notified FWS of this action on March 24, 2016 to solicit comments regarding the action. The FWS indicated support for the effort. Pursuant to the Endangered Species Act, as amended, the Corps is requesting written confirmation of species or their critical habitat either listed or proposed for listing that may be present within the referenced project area upon receipt of this letter. The Corps has tentatively determined that the following list of threatened and endangered species may be present within the project area as illustrated in Tables 1 and 2.

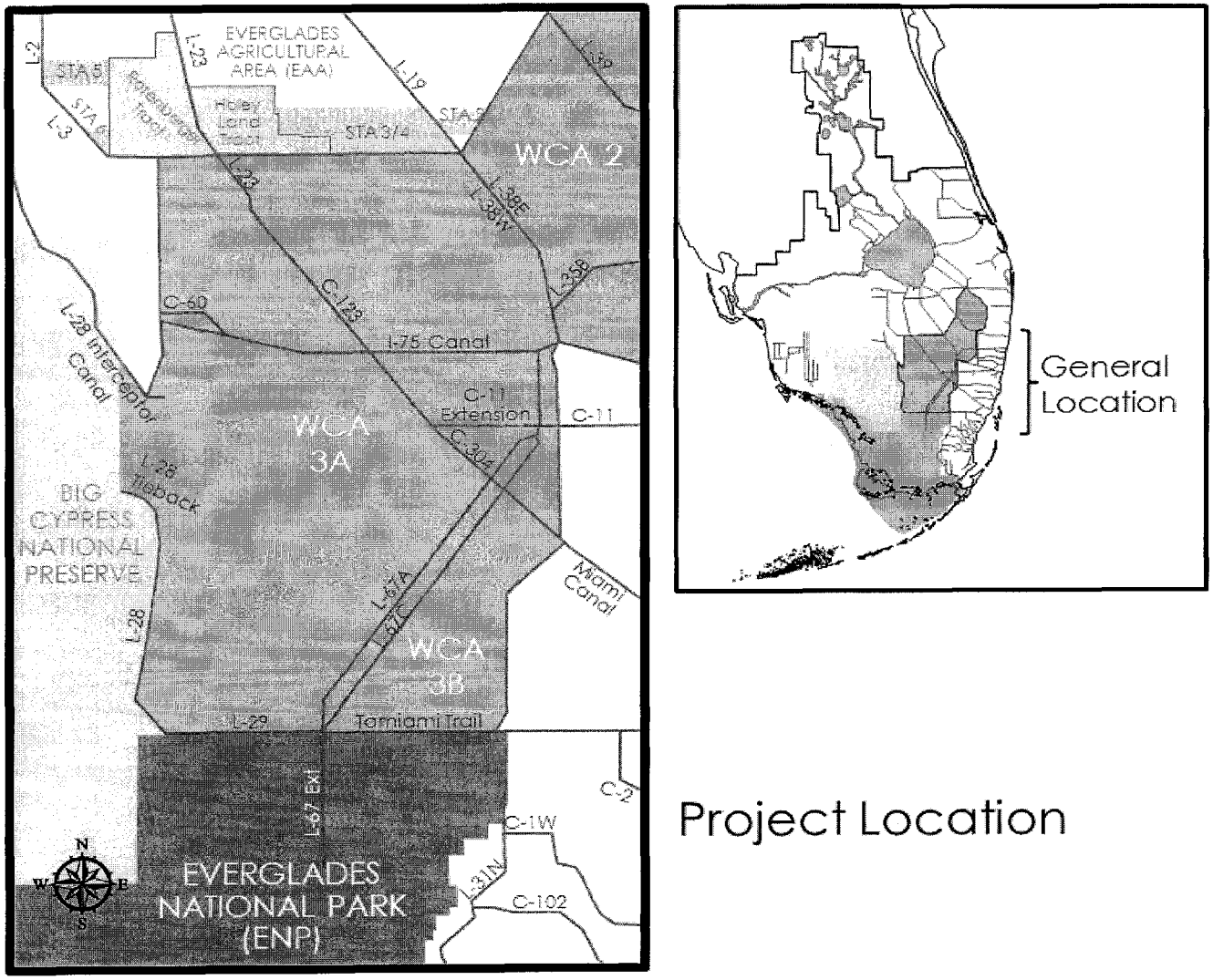
If you have any questions, or need further information, please contact Melissa Nasuti by email melissa.a.nasuti@usace.army.mil or telephone 904-232-1368. Thank you for your assistance in this matter.

Sincerely,

Jason Spinning
Acting Chief, Environmental Branch

Enclosures

cc:
Mr. Miles Meyer, U.S. Fish and Wildlife Service, 1339 20th Street, Vero Beach, Florida 32960
Mr. Bob Progulske, U.S. Fish and Wildlife Service, 1339 20th Street, Vero Beach, Florida 32960



Project Location

Figure 1. Project Location

Table 1. List of Federally Threatened and Endangered Species within the project area (E: Endangered, T: Threatened, SA: Similarity of Appearance, CH: Critical Habitat, C: Candidate Species)

Common Name	Scientific Name	Status
Mammals		
Florida panther	*Puma concolor coryi*	E
Florida manatee	*Trichechus manatus latirostris*	E, CH
Florida bonneted bat	*Eumops floridanus*	E
Birds		
Cape Sable seaside sparrow	*Ammodramus maritimus mirabilis*	E, CH
Everglade snail kite	*Rostrhamus sociabilis plumbeus*	E, CH
Piping plover	*Charadrius melodus*	T
Red-cockaded woodpecker	*Picoides borealis*	E
Roseate tern	*Sterna dougallii*	T
Wood stork	*Mycteria americana*	T
Reptiles		
American Alligator	*Alligator mississippiensis*	T, SA
American crocodile	*Crocodylus acutus*	T, CH
Eastern indigo snake	*Drymarchon corais couperi*	T
Gopher tortoise	*Gopherus polyphemus*	C
Invertebrates		
Bartram's hairstreak butterfly	*Strymon acis bartrami*	E
Florida leafwing butterfly	*Anaea troglodyta floridalis*	E
Miami blue butterfly	*Cyclargus thomasi bethunebakeri*	E
Schaus swallowtail butterfly	*Heraclides aristodemus ponceanus*	E
Stock Island tree snail	*Orthalicus reses* (not incl. *nesodryas*)	T
Plants		
Crenulate lead plant	*Amorpha crenulata*	E
Deltoid spurge	*Chamaesyce deltoidea* spp. *deltoidea*	E
Garber's spurge	*Chamaesyce garberi*	T
Okeechobee gourd	*Cucurbita okeechobeensis* ssp. *okeechobeenis*	E
Small's milkpea	*Galactia smallii*	E
Tiny polygala	*Polygala smallii*	E
Big pine partridge pea	*Chamaecrista lineata* var. *keyensis*	Pr E

Blodgett's silverbush	*Argythamnia blodgettii*	Pr T
Cape Sable thoroughwort	*Chromolaena frustrata*	E, CH
Carter's small-flowered flax	*Linum carteri* var. *carteri*	E, CH
Everglades bully	*Sideroxylon reclinatum* spp. *austrofloridense*	C
Florida brickell-bush	*Brickellia mosieri*	E, CH
Florida bristle fern	*Trichomanes punctatum* spp. *floridanum*	E
Florida pineland crabgrass	*Digitaria pauciflora*	C
Florida prairie-clover	*Dalea carthagenensis* var. *floridana*	C
Florida semaphore cactus	*Consolea corallicola*	E, CH
Pineland sandmat	*Chamaesyce deltoidea* ssp. *pinetorum*	C
Sand flax	*Linum arenicola*	Pr E

Table 2. List of State Listed Species within the project area (E: Endangered, T: Threatened, SC: Species of Special Concern)

Common Name	Scientific Name	Status
Mammals		
Everglades mink	*Mustela vison evergladensis*	T
Florida mouse	*Podomys floridanus*	SC
Birds		
Snowy plover	*Charadrius nivosus*	T
American oystercatcher	*Haematopus palliates*	SC
Brown pelican	*Pelecanus occidentalis*	SC
Black skimmer	*Rynchops niger*	SC
Least tern	*Sterna antillarium*	T
White-crowned pigeon	*Patagioenas leucocephala*	T
Least tern	*Sterna antillarum*	T
Limpkin	*Aramus guarauna*	SC
Little blue heron	*Egretta caerulea*	SC
Tricolored heron	*Egretta tricolor*	SC
Snowy egret	*Egretta thula*	SC
Reddish egret	*Egretta rufescens*	SC
White ibis	*Eudocimus albus*	SC
Roseate spoonbill	*Platalea ajaja*	T
Invertebrates		
Florida tree snail	*Liguus fasciatus*	SC
Plants		
Pine-pink orchid	*Bletia purpurea*	T
Lattace vein fern	*Thelypteris reticulate*	E
Eatons spikemoss	*Selaginella eatonii*	E
Wright's flowering fern	*Anemia wrightii*	E
Tropical fern	*Schizaea pennula*	E
Mexican vanilla	*Manilla mexicana*	E

Nasuti, Melissa A SAJ

From: Nasuti, Melissa A SAJ
Sent: Thursday, April 07, 2016 10:19 AM
To: Stahl, Chris
Cc: Ralph, Gina P SAJ
Subject: RE: CZMA Coordination Emergency Water Control Plan Deviation L-28
Attachments: Appendix A Operational Strategy2.pdf

Chris,

I spoke with Jason Spinning about following up with you. See email below. Attached is the current operational strategy for S-344. The S-344 deviation would open S-344 immediately instead of waiting for July 15, 2016 which is the normal opening date in the approved water control plan. The proposed criteria is to have full operational flexibility to partially or completely open S-344, allowing up to ~ 200 cubic feet per second (cfs) to be released from WCA 3A into BCNP and the L-28 Canal. The temporary emergency deviation is expected to benefit natural resources within WCA 3A and BCNP and would expire on July 15, 2016. The Corps is currently preparing an emergency Environmental Assessment. When complete, it is anticipated that the FONSI will be signed and the NEPA document will be posted and distributed for 30 day public review.

At this time, the Corps has determined that the proposed federal action is consistent with the Florida Coastal Management Program. We appreciate if you are able to provide concurrence and respond to this email acknowledging informal coordination has occurred regarding the new action. Please provide any additional information you may wish to contribute.

Thank you,

Melissa Nasuti
Planning & Policy Division
USACE, Jacksonville District
Phone: 904-232-1368

-----Original Message-----
From: Spinning, Jason J SAJ
Sent: Friday, March 25, 2016 11:17 AM
To: Stahl, Chris <Chris.Stahl@dep.state.fl.us>
Cc: Spinning, Jason J SAJ <Jason.J.Spinning@usace.army.mil>; Ralph, Gina P SAJ <Gina.P.Ralph@usace.army.mil>; Nasuti, Melissa A SAJ <Melissa.A.Nasuti@usace.army.mil>; Summa, Eric P SAJ <Eric.P.Summa@usace.army.mil>
Subject: CZMA Coordination Emergency Water Control Plan Deviation L-28

Chris,

Thanks for the call today. As I stated, we are awaiting additional information from the SFWMD regarding the operational strategy for S-344 to fully coordinate with your office. But, I wanted to go ahead and submit this to begin the process. I also understand that you are in the process of moving offices and may not have computer for some unknown timeframe next week. I am copying Dr. Gina Ralph and Ms. Melissa Nasuti on this message since the additional operational strategy to allow full coordination with your office may not happen until next week while I am out. Thank you for your new contact information and I provide for folks cc'd.

Mr. Chris Stahl

FDEP
Florida Clearinghouse
Office line: 850-717-9076
Cell Phone: 850-508-4161

The following is a description of the current information on the emergency action relating to L-28 and S-344. I have also attached map of the action area.

Due to the critical nature of the elevated water levels in WCA-3A and in compliance with the existing operation and emergency request by the Governor to maximize water releases, a second emergency NEPA is being prepared to discuss the proposed federal action to deviate from the current water control plan (ERTP) operations for Structure 344 (S-344) on the L-28 Levee. This deviation would open S-344 immediately instead of waiting for July 15th which is the normal opening date in the approved water control plan. The opening would allow up to 300 cfs to be released from WCA-3A into Big Cypress National Preserve and L-28 canal.

The South Florida Water Management District (District) is also seeking approval from the USACE Regulatory Division to conduct operation and maintenance to restore six canal plugs in the L-28 canal, located south of the S-344, to allow water to naturally disperse per the approved project from 1983.

An emergency NEPA is be conducted which requires the USACE to coordinate with the Tribes, State, and respective agencies just like the effort to raise the water levels in L-29 Canal. We request your comments of the proposed actions (S-344 WCP deviation to ERTP i.e. early opening and maintenance to the L-28 canal plugs) for potential operational considerations and for documentation under the emergency action. The Emergency NEPA will be amended or supplemented post S-344 opening to comply with rules and regulations.

We appreciate if you are able to respond to this email acknowledging informal coordination has occurred regarding the new action and provide any additional information you may wish to contribute. Thank you for providing comments and continued coordination is assured.

Thank you for the discussions and good luck with the move.

Respectfully,

Jason Spinning
Chief, Environmental Branch(Acting)
Planning & Policy Division
USACE, Jacksonville District
Phone: 904-232-1231
Cell: 904-502-3218

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

April 7, 2016

Jason Spinning
Acting Chief, Environmental Branch
U.S. Army Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232

Service Federal Activity Code: 41420-2016-TA-0277
Date Received: March 31, 2016
Project: WCA-3A Temporary Emergency Deviation – S-344
County: Collier, Miami-Dade, Monroe

Dear Mr. Spinning:

The U.S. Fish and Wildlife Service (Service) has reviewed the U.S. Army Corps of Engineers' (Corps) letter received on March 31, 2016, requesting confirmation of federally-listed species and their designated critical habitat and candidate species for listing that may be present within the action area of the Temporary Emergency Deviation to help alleviate high water levels in Water Conservation Area 3A (WCA-3A). The Service and Corps have previously consulted on similar actions affecting the same species, most recently in February 2016, relating to actions to the east of the project area along the L-29 Canal. The 'species list' is a National Environmental Policy Act (42 U.S. Code (U.S.C) § 4321) requirement for the environmental analysis. This species list is also provided in accordance with the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*). The project area lies within Broward, Collier, Miami-Dade and Monroe Counties.

Project Description

Due to the continued critical nature of elevated water levels in WCA-3A and in compliance with the existing request by the Governor to maximize water releases, a second emergency Environmental Assessment is being prepared to deviate from the current water control plan. This proposed deviation addresses the operation of the S-344 and associated features located along the L-28 Levee and Borrow Canal. The purpose of these structures are to restore overland flow to an area of Big Cypress National Preserve (BCNP) just south of the L-28 Tieback; prevent over drainage of the eastern BCNP under dry conditions; and provide a means of making regulatory releases from WCA-3A into BCNP. This temporary emergency deviation would open S-344 immediately instead of waiting for July 15, 2016 which is the normal opening date in the approved water control plan. The opening would allow water to be released from WCA-3A into BCNP and the L-28 Canal. The temporary emergency deviation is expected to benefit natural resources within WCA-3A and BCNP.

The water management operating criteria relating to the action affects an area within the Central & Southern Florida Project located in south Florida and includes WCA-3, eastern BCNP and western Everglades National Park.

The Corps and Service began consultation on the previous set of emergency actions for lowering water in WCA-3A on March 1, 2016. The main action proposed at that time was raising the L-29 stage limit to 8.5 Feet NGVD which facilitated increased flows through the S-333 structure into Northeast Shark River Slough. The Corps requested that the current increment of the Everglades Restoration Transition Plan (ERTP) be extended until July 15, 2016, in order to properly evaluate and include the effects of these emergency actions in the current ERTP consultation. The Service agreed, and extended the original ERTP until July 15. Since the current proposed action, also a part of the emergency deviation to lower water levels in WCA-3A, could affect sparrows in the western part of the CSSS-A it is assumed that it too will be fully evaluated and included in the Corps' plans for the next iteration of ERTP.

Threatened and Endangered Species

The Service concurs with the Corps' list of federally threatened and endangered species (Table 1) that may be found within the project area. It is the same list which was revised and approved for the emergency actions associated with L-29, except for the removal of several marine species that the Corps does not feel will be affected by the proposed action. Table 2 is a list of State Listed species that may be found in the project area. The complete species list provided in this correspondence concludes the statutory requirements set forth in 50 CFR §402.12(d) of the Act. As you are aware, verification of current accuracy of the species list is for a time period not to exceed 90 days as stated in 50 CFR §402.12(e) of the Act. The Service looks forward to reviewing the Supplemental EA regarding this action and will respond accordingly.

Thank you for your cooperation in the effort to conserve fish and wildlife resources. If you have questions concerning this consultation process, please contact the project biologist Kevin Palmer at 773-469-4280.

Sincerely yours,

for Donald (Bob) Progulske
Everglades Program Supervisor
South Florida Ecological Services Office

cc: electronic only
Corps, Jacksonville, Florida (Melissa Nasuti)

Table 1. List of Federally Threatened and Endangered Species within the project area (E: Endangered, T: Threatened, SA: Similarity of Appearance, CH: Critical Habitat, C: Candidate Species, Pr E: Proposed Endangere, Pr T: Proposed Threatened).

Common Name	Scientific Name	Status
Mammals		
Florida panther	*Puma concolor coryi*	E
Florida Manatee	*Trichechus manatus latirostris*	E, CH
Florida bonneted bat	*Eumops floridamus*	E
Birds		
Cape Sable seaside sparrow	*Ammodramus maritimus mirabilis*	E, CH
Everglade snail kite	*Rostrhamus sociabilis plumbeus*	E, CH
Piping plover	*Charadrius melodus*	T
Red-cockaded woodpecker	*Picoides borealis*	E
Roseate tern	*Sterna dougallii dougallii*	T
Wood stork	*Mycteria americana*	T
Reptiles		
American Alligator	*Alligator mississippiensis*	T, SA
American crocodile	*Crocodylus acutus*	T, CH
Eastern indigo snake	*Drymarchon corais couperi*	T
Gopher tortoise	*Gopherus polyphemus*	C
Invertebrates		
Bartram's hairstreak butterfly	*Strymon acis bartrami*	E
Florida leafwing butterfly	*Anaea troglodyta floridalis*	E
Miami blue butterfly	*Cyclargus thomasi bethunebakeri*	E
Schaus swallowtail butterfly	*Heraclides aristodemus ponceanus*	E
Stock Island tree snail	*Orthalicus reses* (not incl. *nesodryas*)	T
Plants		
Crenulate lead plant	*Amorpha crenulata*	E
Deltoid spurge	*Chamaesyce deltoidea* spp. *deltoidea*	E
Garber's spurge	*Chamaesyce garberi*	T
Okeechobee gourd	*Cucurbita okeechobeensis* ssp. *okeechobeenis*	E
Small's milkpea	*Galactia smallii*	E
Tiny polygala	*Polygala smallii*	E
Big pine partridge pea	*Chamaecrista lineata keyensis*	Pr E

Blodgett's silverbush	*Argythamnia blodgettii*	Pr T
Cape Sable thoroughwort	*Chromolaena frustrata*	E, CH
Carter's small-flowered flax	*Linum carteri* var. *carteri*	E, CH
Everglades bully	*Sideroxylon reclinatum* spp. *austrofloridense*	C
Florida brickell-bush	*Brickellia mosieri*	E, CH
Florida bristle fern	*Trichomanes punctatum* spp. *floridanum*	E
Florida pineland crabgrass	*Digitaria pauciflora*	C
Florida prairie-clover	*Dalea carthagenensis floridana*	C
Florida semaphore cactus	*Consolea corallicola*	E, CH
Pineland sandmat	*Chamaesyce deltoidea pinetorum*	C
Sand flax	*Linum arenicola*	Pr E

Table 2. List of State Listed Species, not also federally listed, within the project area (E: Endangered, T: Threatened, SC: Species of Special Concern).

Common Name	Scientific Name	Status
Mammals		
Everglades mink	*Mustela vison evergladensis*	T
Florida mouse	*Podomys floridanus*	SC
Birds		
Snowy plover	*Charadrius nivosus*	T
American oystercatcher	*Haematopus palliates*	SC
Brown pelican	*Pelecanus occidentalis*	SC
Black skimmer	*Rynchops niger*	SC
Least tern	*Sterna antillarium*	T
White-crowned pigeon	*Patagioenas leucocephala*	T
Least tern	*Sterna antillarum*	T
Limpkin	*Aramus guarauna*	SC
Little blue heron	*Egretta caerulea*	SC
Tricolored heron	*Egretta tricolor*	SC
Snowy egret	*Egretta thula*	SC
Reddish egret	*Egretta rufescens*	SC
White ibis	*Eudocimus albus*	SC
Roseate spoonbill	*Platalea ajaja*	T
Invertebrates		
Florida tree snail	*Liguus fasciatus*	SC
Plants		
Pine-pink orchid	*Bletia purpurea*	T
Lattace vein fern	*Thelypteris reticulate*	E
Eatons spikemoss	*Selaginella eatonii*	E
Wright's flowering fern	*Anemia wrightii*	E
Tropical fern	*Schizaea pennula*	E
Mexican vanilla	*Manilla mexicana*	E

From: Paul Backhouse
To: Moreno, Meredith A SAJ
Cc: Taplin, Kimberley A SAJ; Cherise Maples; Andrew Weidman; Bradley Mueller; Spinning, Jason J SAJ; Armando Ramirez (aramire@sfwmd.gov); Nasuti, Melissa A SAJ; Michelle Diffenderfer; Power, Patricia; James Charles (jcharles@llw-law.com); Hughes, Daniel B @ SAJ; Ralph, Gina P SAJ; Reynolds, Jennifer A LTC ARMY @ SAJ; Jim Shore; Danny Tommie; Anne Mullins
Subject: [EXTERNAL] Re: Emergency Deviation S-344 & L-28 canal plugs (UNCLASSIFIED)
Date: Friday, April 08, 2016 11:27:53 AM

All received. Thank you Meredith.

> On Apr 8, 2016, at 10:08 AM, Moreno, Meredith A SAJ <Meredith.A.Moreno@usace.army.mil> wrote:
>
> CLASSIFICATION: UNCLASSIFIED
>
> Paul,
>
> Thank you for your patience while the operational strategy for the Structure 344 (S-344) culvert and maintenance application for the L-28 plugs was being developed by the South Florida Water Management District (SFWMD). The SFWMD is requesting the use of the S-344 culvert to provide additional high water relief to WCA-3A during maintenance activities. This operational strategy is attached; however, a summary of this document is provided below.
>
> SFWMD is requesting the early opening of the S-344 culvert (see attached map) to provide water release during maintenance of the existing six plugs (Plugs 1-6 on the attached map) located on the L-28 borrow canal. The operational criteria will allow for full operational flexibility to partially or completely open the S-344 once the emergency NEPA is completed and the maintenance of the northernmost plug (Plug 6) is completed. The existing S-344 operational strategy calls for the opening of the culvert on July 15; therefore, the change in operation would result in the opening of the S-344 culvert approximately three months early (a maximum of 100 days).
>
> If this deviation is approved and the S-344 culvert is opened early, this will allow water to be removed from WCA 3A via gravity and flow south through the L-28 canal. Water exiting the S-344 culvert will enter the L-28 canal and will release into Big Cypress National Preserve as it encounters each rehabilitated plug. The water flow is expected to continue south as sheetflow into Lostmans Slough (see attached map). Based on the maximum amount of time the S-344 culvert would be opened early (100 days), approximately 40,000 acre feet is expected to be released into BCNP. This water is only reaching the system early and will not raise the maximum elevation of the water table throughout the system. I have reached out to BCNP managers and they do not believe the early release of water will impact cultural resources. However, restrictions on water levels and flows for the protection of endangered species will provide additional protection should water levels deviate from predicted amounts. If undesirable flows should occur, the S-344 would be restricted further ensuring the deviations ability to cause any adverse effects to resources within the APE.
>
> A second emergency NEPA regarding the proposed federal action to deviate from the current operation strategy for the S-344 culvert is currently being prepared and formal government to government correspondence is forthcoming. Additionally, a formal consultation letter with regards to effects on cultural resources and in compliance with Section 106 of the National Historic Preservation Act and in consideration of the Corps' Trust Responsibilities and the Burial Resources Agreement will also be mailed shortly; however, I wanted to make sure you are kept up to date on this action. Please feel free to call or email with any questions or concerns.
>
> Kind regards,
>
> Meredith A. Moreno, M.A., RPA
> Archaeologist
> Planning Division, Environmental Branch
> USACE, Jacksonville District
> 701 San Marco Blvd.

> Jacksonville, FL 32207
>
> Phone: 904-232-1577
> Email: meredith.a.moreno@usace.army.mil
>
>
>
>
>
> -----Original Message-----
> From: Paul Backhouse [mailto:PaulBackhouse@semtribe.com]
> Sent: Thursday, March 24, 2016 8:26 PM
> To: Taplin, Kimberley A SAJ <Kimberley.A.Taplin@usace.army.mil>
> Cc: Cherise Maples <CheriseMaples@semtribe.com>; Andrew Weidman <AndrewWeidman@semtribe.com>; Bradley Mueller <bradleymueller@semtribe.com>; Spinning, Jason J SAJ <Jason.J.Spinning@usace.army.mil>; Moreno, Meredith A SAJ <Meredith.A.Moreno@usace.army.mil>; Armando Ramirez (aramire@sfwmd.gov) <aramire@sfwmd.gov>; Nasuti, Melissa A SAJ <Melissa.A.Nasuti@usace.army.mil>; Michelle Diffenderfer <mdiffenderfer@llw-law.com>; Power, Patricia <ppower@bosepublicaffairs.com>; James Charles (jcharles@llw-law.com) <jcharles@llw-law.com>; Hughes, Daniel B @ SAJ <Daniel.B.Hughes@usace.army.mil>; Ralph, Gina P SAJ <Gina.P.Ralph@usace.army.mil>; Reynolds, Jennifer A LTC ARMY @ SAJ <Jennifer.A.Reynolds@usace.army.mil>; Jim Shore <JimShore@semtribe.com>; Danny Tommie <DannyTommie@semtribe.com>
> Subject: [EXTERNAL] Re: Emergency Deviation S-344 & L-28 canal plugs
>
> Kim,
>
> Thanks for the summary and information, we look forward to further consultation on this proposed action. If you could ask your cultural resources staff to prepare a plain language summary of the effects of the current change of operations and the anticipated effect of the additional action it will be useful for us to analyze and brief leadership.
>
> Best Paul
>
>> On Mar 24, 2016, at 2:10 PM, Taplin, Kimberley A SAJ <Kimberley.A.Taplin@usace.army.mil> wrote:
>>
>> Sorry, forgot to attach the map! My apologies.
>>
>>
>>
>> -----Original Message-----
>> From: Taplin, Kimberley A SAJ
>> Sent: Thursday, March 24, 2016 2:03 PM
>> To: Cherise Maples (cmaples@semtribe.com) <cmaples@semtribe.com>; Paul Backhouse <PaulBackhouse@semtribe.com>
>> Cc: 'Andrew Weidman' <AndrewWeidman@semtribe.com>; Bradley Mueller <bradleymueller@semtribe.com>; Spinning, Jason J SAJ <Jason.J.Spinning@usace.army.mil>; Moreno, Meredith A SAJ <Meredith.A.Moreno@usace.army.mil>; Armando Ramirez (aramire@sfwmd.gov) <aramire@sfwmd.gov>; Nasuti, Melissa A SAJ <Melissa.A.Nasuti@usace.army.mil>; Michelle Diffenderfer <mdiffenderfer@llw-law.com>; Power, Patricia <ppower@bosepublicaffairs.com>; James Charles (jcharles@llw-law.com) <jcharles@llw-law.com>; Hughes, Daniel B @ SAJ <Daniel.B.Hughes@usace.army.mil>; Ralph, Gina P SAJ <Gina.P.Ralph@usace.army.mil>; Reynolds, Jennifer A LTC ARMY @ SAJ <Jennifer.A.Reynolds@usace.army.mil>; Taplin, Kimberley A SAJ <Kimberley.A.Taplin@usace.army.mil>
>> Subject: RE: Emergency Deviation S-344 & L-28 canal plugs
>>
>> Cherise and Paul,
>>
>> As a follow-up to my prior email requesting to meet with you, below is description of emergency actions proposed and procedures. I have also attached map of the action area.

>>
>> Due to the critical nature of the elevated water levels in WCA-3A and in compliance with the existing operation and emergency request by the Governor to maximize water releases, a second emergency NEPA is being prepared to discuss the proposed federal action to deviate from the current water control plan (ERTP) operations for Structure 344 (S-344) on the L-28 Levee. This deviation would open S-344 immediately instead of waiting for July 15th which is the normal opening date in the approved water control plan. The opening would allow up to 300 cfs to be released from WCA-3A into Big Cypress National Preserve and L-28 canal.
>>
>> The South Florida Water Management District (District) is also seeking approval from the USACE Regulatory Division to conduct operation and maintenance to restore six canal plugs in the L-28 canal, located south of the S-344, to allow water to naturally disperse per the approved project from 1983.
>>
>> An emergency NEPA will be conducted which requires the USACE to coordinate with the Tribes, State, and respective agencies just like the effort to raise the water levels in L-29 Canal. Pursuant to the Corps' Trust responsibilities and in compliance with Part XIV. Deviations of the Everglades Restoration Transition Plan Programmatic Agreement, we request your comments of the proposed actions (S-344 WCP deviation to ERTP i.e. early opening and maintenance to the L-28 canal plugs) for potential operational considerations and for documentation under the emergency action. The Emergency NEPA will be amended or supplemented post S-344 opening to comply with rules and regulations.
>>
>> We appreciate if you are able to respond to this email acknowledging informal coordination has occurred regarding the new action and provide any additional information you may wish to contribute. Formal consultation regarding this action and a determination of effects will be coordinated with your office during the NEPA consultation. The Corps additionally requests an opportunity to discuss current conditions in the system at your earliest convenience as a follow up to the Emergency Deviation of the L-29 Canal undertaken in February.
>>
>> Thank you for providing comments and continued coordination is assured. Armando, myself and the team are available at your convenience to answer any questions and/or discuss your concerns with this new proposed action.
>>
>> Very Respectfully, Kim T.
>>
>> -----Original Message-----
>> From: Taplin, Kimberley A SAJ
>> Sent: Wednesday, March 23, 2016 12:01 PM
>> To: Cherise Maples (cmaples@semtribe.com) <cmaples@semtribe.com>; Paul Backhouse <PaulBackhouse@semtribe.com>
>> Cc: Andrew Weidman <AndrewWeidman@semtribe.com>; Bradley Mueller <bradleymueller@semtribe.com>; Spinning, Jason J SAJ <Jason.J.Spinning@usace.army.mil>; Moreno, Meredith A SAJ <Meredith.A.Moreno@usace.army.mil>
>> Subject: Emergency Deviation S-344 & L-28 canal plugs
>>
>> Cherise and Paul,
>>
>> Would you and the THPO staff be available today at 2:30 pm to discuss an additional emergency deviation from ERTP that the SFWMD has requested under the Governors Emergency Order? We would like to initiate consultation on the action. If 3:00 pm today does not work for you, can you suggest an alternate time? We can talk to THPO office individually and you Cherise separately if cannot find time mutually available.
>>
>> Look forward to hearing from you all,
>>
>> Very Respectfully, Kim T.
>>
>> Kimberley Taplin, P.E.
>> Strategic Program Manager
>> Programs and Project Management
>> US Army Corps of Engineers
>> Jacksonville District

>> Office: 561-472-8879; Mobile 561-801-0285
>> Email: kimberley.a.taplin@usace.army.mil
>>
>>
>> <L28 canal plug location map.pdf>
>
>
> CLASSIFICATION: UNCLASSIFIED
> <Appendix A Operational Strategy2.pdf>
> <L-28, S-344 Emergency Deviation.jpg>

Nasuti, Melissa A SAJ

From: Nasuti, Melissa A SAJ
Sent: Friday, April 08, 2016 12:35 PM
To: 'Robbins, Rick - NRCS, Gainesville, FL'
Subject: S-344 Temporary Emergency Deviation
Attachments: Farmland Conversion Impact Rating_S-344.pdf; APE.shp; APE.cpg; APE.dbf; APE.prj; APE.shx; L-28, S-344 Emergency Deviation.jpg; Everglades_Farmland_Class_Map.pdf

Mr. Robbins,

The U.S. Army Corps of Engineers (Corps) is beginning preparation of an Emergency Environmental Assessment (EA) for a temporary deviation to alleviate high water levels in Water Conservation Area 3A (WCA 3A). The Corps initiated a temporary emergency deviation to the current operating limit constraint of 7.5 feet National Geodetic Vertical Datum (of 1929 NGVD) in the L-29 Canal to release water from WCA 3A into Everglades National Park. National Environmental Policy Act (NEPA) documentation to support the temporary emergency deviation was completed on February 12, 2016 with signing of a Finding of No Significant Impact (FONSI), incorporating an EA.

Due to the continued critical nature of elevated water levels in WCA 3A, a second emergency NEPA document is being prepared to deviate from the current water control plan for Structure 344 (S-344) on the L-28 Levee. The purpose of S-344 and associated features located along the L-28 Levee and Borrow Canal, are to restore overland flow to an area of Big Cypress National Preserve (BCNP) just south of the L-28 Tieback; prevent over drainage of the eastern BCNP under dry conditions; and provide a means of making regulatory releases from WCA 3A into BCNP. This deviation would open S-344 immediately instead of waiting for July 15, 2016 which is the normal opening date in the approved water control plan. The proposed criteria is to have full operational flexibility to partially or completely open S-344, allowing up to ~ 200 cubic feet per second to be released from WCA 3A into BCNP and the L-28 Canal. The temporary emergency deviation is expected to benefit natural resources within WCA 3A and BCNP and would expire on July 15, 2016.

Conversion of prime and unique farmland within the project area is not anticipated. The attached map shows the area of potential affect as well as symbols to represent the direction of increased flow. Shape files for the area of potential effect are attached. I have filled out AD-1006, however as stated no conversion of prime and unique farmland is anticipated due to limited operational changes and due to the duration of the proposed action. The majority of lands within the area of potential affect would be native vegetation, as flow will be introduced into BCNP. And based on prior correspondence and a map that you have given me (See Everglades Farmland Class Map) - BCNP has not been mapped.

Please let me know if further information is needed for purposes of consultation and/or to ensure compliance under the Farmland Protections Policy Act. The emergency EA is expected to be released for public review next week.

Melissa Nasuti
U.S. Army Corps of Engineer
Planning Division - Jacksonville District
701 San Marco boulevard
Jacksonville, FL 32207
Office Phone: 904-232-1368

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

April 8, 2016

Jason A. Kirk, Colonel
District Commander
U.S. Army Corps of Engineers
701 San Marco Boulevard, Room 372
Jacksonville, Florida 32207-8175

Service Federal Activity Code: 41420-2016-TA-0277
Date Received: March 31, 2016
Project: WCA-3A Temporary Emergency Deviation
County: Collier, Miami-Dade, Monroe

Dear Colonel Kirk:

The Fish and Wildlife Service (Service) has reviewed the Army Corps of Engineers' (Corps) letter received on March 31, 2016 outlining plans to deviate from the current water control plan due to the continued critical nature of elevated water levels in Water Conservation Area 3A (WCA-3A) and in compliance with the existing request by the Governor to maximize water releases. This proposed deviation addresses the operation of the S-344 and associated features located along the L-28 Levee and Borrow Canal. The purpose of these structures are to restore overland flow to an area of Big Cypress National Preserve (BCNP) just south of the L-28 Tieback; prevent over drainage of the eastern BCNP under dry conditions; and provide a means of making regulatory releases from WCA 3A into BCNP. This temporary emergency deviation would open S-344 immediately instead of waiting for July 15, 2016 which is the normal opening date in the approved water control plan. The opening would allow water to be released from WCA 3A into BCNP and the L-28 Canal. The temporary emergency deviation is expected to benefit natural resources within WCA 3A and BCNP.

The Service supports this temporary emergency deviation (from ERTP) as long as the opening of the S-344 is done in concert with the reconstruction of the 6 plugs in the L-28 canal. Our understanding is that the opening of the S-344 would gradually increase as more plugs were restored - essentially a metered opening. We realize that there are some answered questions at this time, but we support the overall effort and will assist the Corps in whatever way we can. Our biggest concern is for the protection of the endangered Cape Sable seaside sparrow (CSSS) subpopulation-A. We are working with several agencies, including the South Florida Water Management District, the Big Cypress National Preserve, Everglades National Park and the Corps to develop Operational Guidelines that will be implemented if this temporary emergency deviation is approved. As part of the Operational Guidelines, we recommend that water level triggers be employed that will be used to inform adjustments to the S-344 operations if

unacceptable adverse effects to CSSS are detected. The Operational Guidelines will be provided, in detail, in a separate document. Finally, since this is an emergency action we cannot fully evaluate the effects on listed species until the action is completed; however, it is preliminary opinion of the Service that this action will not result in jeopardy to any threatened or endangered species.

Thank you for your cooperation in the effort to conserve fish and wildlife resources. If you have questions concerning this consultation process, please contact the project biologist Kevin Palmer at 773-469-4280.

Sincerely yours,

for Larry Williams
State Supervisor, Ecological Services

cc: electronic copy only
Corps, Jacksonville, Florida (Gina Ralph, Melissa Nasuti, Jason Spinning,)

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
Florida State Office
2614 NW 43rd Street
Gainesville, FL 32606

PH 352-338-9500
FX 352-338-9574
www.fl.nrcs.usda.gov

April 11th, 2016

Melissa Nasuti
U.S. Army corps of Engineers
Planning Division - Jacksonville District
701 San Marco Boulevard
Jacksonville, FL 32207

Important Farmland Assessment for the Big Cypress Indian Reservation project in Broward and Miami-Dade Counties, Florida

This letter is in response to your request on the Prime, Unique, or Locally Important Farmland assessment as part of the FPPA requirements for the S-344 Re-hydration project in Broward and Miami-Dade County, Florida. Enclosed are the Important Farmlands map and Farmland Conversion Impact Rating forms (AD-1006) for the project area.

Briefly, the USDA-NRCS is responsible for monitoring the conversion of Prime, Unique, or Locally Important Farmland to urban uses. We have determined that there are delineations of Important Farmland soils within the scope of this project.

However, based on correspondence there will be no anticipated conversion of Important Farmland within the scope of this project. Therefore, we only completed Part II of the AD-1006. There are a few small parcels of Unique Farmland within the Project footprint. However, since there will be no conversion and the project is temporal in nature, we have marked the Farmland status as "No".

If additional impacts are anticipated, please provide notification and we will re-assess the impacts to Important Farmland.

If you have any questions, please feel free to contact me.

Regards,

Rick

Rick Robbins
USDA-NRCS
Soil Scientist
Gainesville, Florida

w/ AD-1006, and map attachments

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 4/7/16
Name Of Project Temporary Deviation to Alleviate High Water Level	Federal Agency Involved U.S. Army Corps of Engineers
Proposed Land Use Rehydration of Big Cypress National Preserve	County And State Broward, Collier and Miami Dade Counties, Florida
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 4/8/16

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).*	Yes ☐	No ☑	Acres Irrigated	Average Farm Size
Major Crop*(s)*	Farmable Land In Govt. Jurisdiction Acres: %		Amount Of Farmland As Defined in FPPA Acres: %	
Name Of Land Evaluation System Used	Name Of Local Site Assessment System		Date Land Evaluation Returned By NRCS 4/11/16	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	0.0	0.0	0.0	0.0
B. Total Acres To Be Converted Indirectly	0.0	0.0	0.0	0.0
C. Total Acres In Site	0.0	0.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value				
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*				

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS	160	0	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100				
Total Site Assessment *(From Part VI above or a local site assessment)*	160	0	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	0	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection:

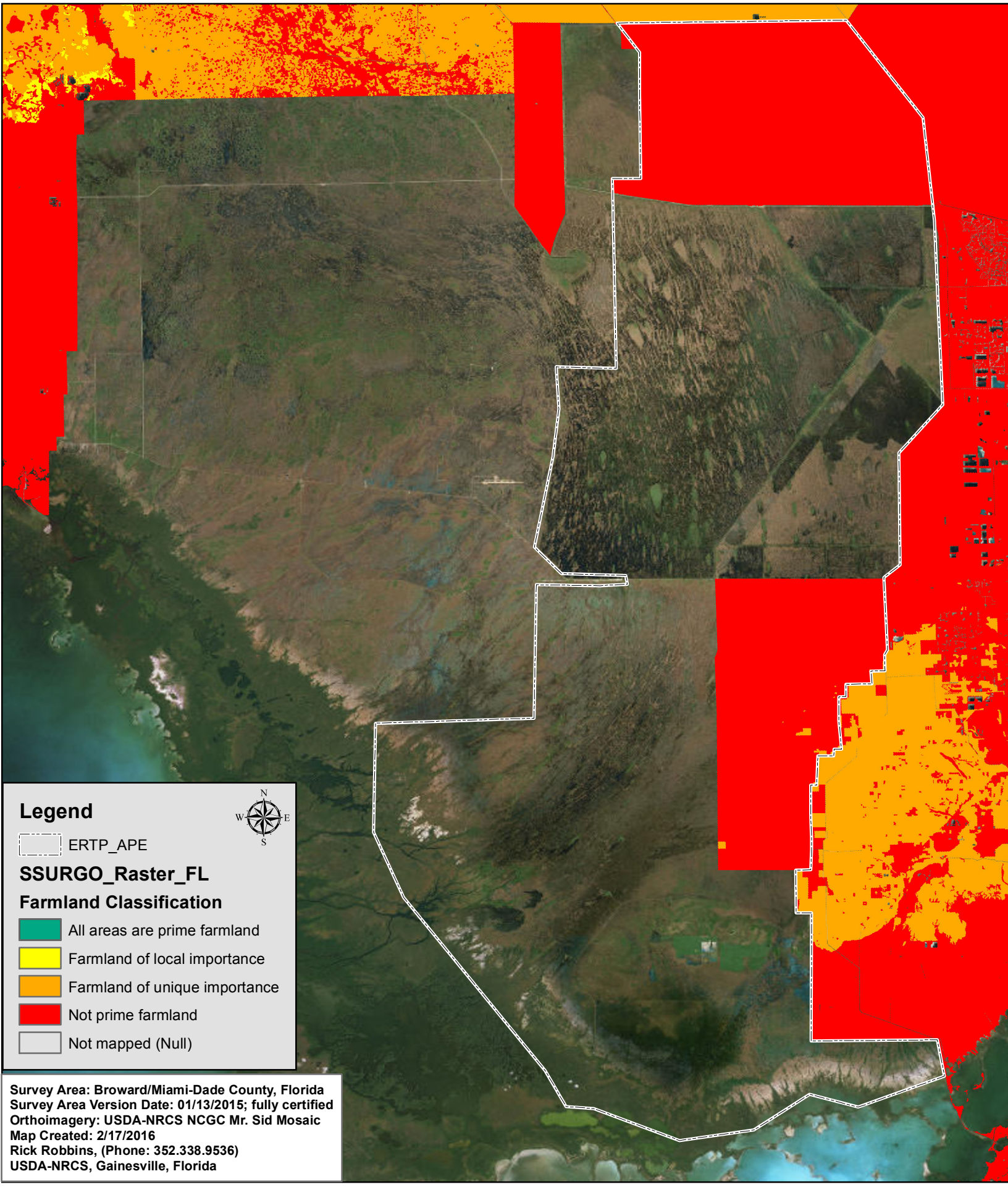
(See Instructions on reverse side)

This form was electronically produced by National Production Services Staff

Clear Form

Form AD-1006 (10-83)

Rehydration of Everglades Project: Broward/Miami-Dade



Survey Area: Broward/Miami-Dade County, Florida
Survey Area Version Date: 01/13/2015; fully certified
Orthoimagery: USDA-NRCS NCGC Mr. Sid Mosaic
Map Created: 2/17/2016
Rick Robbins, (Phone: 352.338.9536)
USDA-NRCS, Gainesville, Florida

USDA NRCS
Natural Resources Conservation Service

0 17,00034,000 68,000 102,000 136,000 170,000
Feet

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 San Marco Boulevard
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO
ATTENTION OF

APR 12 2016

Planning and Policy Division
Environmental Branch

Mr. Larry Williams, Field Supervisor
U.S. Fish and Wildlife Service
1339 20th Street
Vero Beach, FL 32960

Dear Mr. Williams:

In accordance with provisions of Section 7 of the Endangered Species Act (ESA), as amended, the U.S. Army Corps of Engineers (Corps) is hereby initiating consultation with the U.S. Fish and Wildlife Service (USFWS) for a Temporary Emergency Deviation at Structure 344 (S-344) to alleviate high water levels in Water Conservation Area 3A (WCA 3A). The Corps initiated a temporary emergency deviation to the current operating constraint of 7.5 feet National Geodetic Vertical Datum (of 1929 NGVD) in the L-29 Canal for purposes of providing high water relief in WCA 3A on February 15, 2016. Informal consultation related to that action was initiated with the USFWS on March 1, 2016. Due to the continued critical nature of elevated water levels in WCA 3A and in compliance with the existing request by the Governor to maximize water releases, a second emergency Environmental Asessment is being prepared to deviate from the current water control plan for S-344 on the L-28 Levee.

The purpose of S-344 and associated features located along the L-28 Levee and Borrow Canal, are to restore overland flow to an area of Big Cypress National Preserve (BCNP) just south of the L-28 Tieback; prevent over drainage of the eastern BCNP under dry conditions; and provide a means of making regulatory releases from WCA 3A into BCNP. This temporary emergency deviation would open S-344 immediately instead of waiting for July 15, 2016 which is the normal opening date in the approved water control plan. The opening would allow water to be released from WCA 3A into BCNP and the L-28 Canal. The temporary emergency deviation is expected to benefit natural resources within WCA 3A and BCNP.

Pursuant to the ESA, the Corps has determined that the proposed action will have the following effects on federally listed species and critical habitat as illustrated in Table 1. We request your concurrence with our determinations pursuant to the ESA within 30 days of this letter. If you have any questions concerning this project or our determination, please contact Mrs. Melissa Nasuti by email Melissa.A.Nasuti@usace.army.mil or by telephone 904-232-1368. Thank you for your assistance in this matter.

Sincerely,

Jason Spinning
Acting Chief, Environmental Branch

Enclosure

cc:
Mr. Miles Meyer, U.S. Fish and Wildlife Service, 1339 20th Street, Vero Beach, Florida 32960
Mr. Bob Progulske, U.S. Fish and Wildlife Service, 1339 20th Street, Vero Beach, Florida 32960

TABLE 1. FEDERALLY THREATENED AND ENDANGERED SPECIES WITHIN THE PROJECT AREA AND EFFECTS DETERMINATION OF THE FEDERAL ACTION

Common Name	Scientific Name	Status	May Affect, Likely to Adversely Affect	May Affect, Not Likely to Adversely Affect	No Effect
Mammals					
Florida panther	*Puma concolor coryi*	E			X
Florida manatee	*Trichechus manatus latirostris*	E, CH			X
Florida bonneted bat	*Eumops floridanus*	E		X	
Birds					
Cape Sable seaside sparrow	*Ammodramus maritimus mirabilis*	E, CH		X	
Everglade snail kite	*Rostrhamus sociabilis plumbeus*	E, CH		X	
Piping plover	*Charadrius melodus*	T			X
Red-cockaded woodpecker	*Picoides borealis*	E			X
Roseate tern	*Sterna dougallii dougallii*	T			X
Wood stork	*Mycteria americana*	T		X	
Reptiles					
American Alligator	*Alligator mississippiensis*	T, SA			X
American crocodile	*Crocodylus acutus*	T, CH			X
Eastern indigo snake	*Drymarchon corais couperi*	T			X
Gopher tortoise	*Gopherus Polyphemus*	C			X
Invertebrates					
Bartram's hairstreak butterfly	*Strymon acis bartrami*	E			X

Florida leafwing butterfly	*Anaea troglodyta floridalis*	E			X
Miami blue butterfly	*Cyclargus thomasi bethunebakeri*	E			X
Schaus swallowtail butterfly	*Heraclides aristodemus ponceanus*	E			X
Stock Island tree snail	*Orthalicus reses* (not incl. *nesodryas*)	T			X
Plants					
Crenulate lead plant	*Amorpha crenulata*	E			X
Deltoid spurge	*Chamaesyce deltoidea* spp. *Deltoidea*	E			X
Garber's spurge	*Chamaesyce garberi*	T			X
Okeechobee gourd	*Cucurbita okeechobeensis* ssp. *Okeechobeenis*	E			X
Small's milkpea	*Galactia smallii*	E			X
Tiny polygala	*Polygala smallii*	E			X
Big pine partridge pea	*Chamaecrista lineata* var. *keyensis*	Pr E			X
Blodgett's silverbush	*Argythamnia blodgettii*	Pr T			X
Cape Sable thoroughwort	*Chromolaena frustrate*	E, CH			X
Carter's small-flowered flax	*Linum carteri* var. *carteri*	E, CH			X
Everglades bully	*Sideroxylon reclinatum* spp. *Austrofloridense*	C			X
Florida brickell-bush	*Brickellia mosieri*	E, CH			X
Florida bristle fern	*Trichomanes punctatum* spp. *Floridanum*	E			X
Florida pineland crabgrass	*Digitaria pauciflora*	C			X

Florida prairie-clover	*Dalea carthagenensis* var. *floridana*	C			X
Florida semaphore cactus	*Consolea corallicola*	E, CH			X
Pineland sandmat	*Chamaesyce deltoidea* ssp. *Pinetorum*	C			X
Sand flax	*Linum arenicola*	Pr E			X

E=Endangered; T=Threatened; SA=Similarity of Appearance; CH=Critical Habitat; Candidate Species, Pr E = Proposed Endangered, Pr T = Proposed Threatened, Pr CH = Proposed Critical Habitat

TEMPORARY EMERGENCY DEVIATION TO ALLEVIATE HIGH WATER LEVELS IN WATER CONSERVATION AREA 3A (S-344 DEVIATION)

COMPLETE INITIATION PACKAGE

U.S. FISH AND WILDLIFE SERVICE

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APPENDICES

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1.0 PROJECT AUTHORITY

The Central & Southern (C&SF) Florida Project was initially authorized by the Flood control Act of 1948, Public Law 80-858, approved June 30, 1948. The remaining works of the Comprehensive Plan were authorized by the Flood Control Act of 1954, Public Law 83-780, approved September 3, 1954. Works along the L-29 and L-28 were proposed in lieu of the L-28 Extension authorized by the Flood Control Act of 1954. The L-28 Extension was to be part of the S-12 getaway system described in House Document No. 369 authorized by the Flood Control Act of 1968 (Public Law 90-483, 90th Congress, 2d Session).

2.0 LOCATION

The water management operating criteria relating to the Federal Action affects an area within the C&SF Project located in south Florida and includes Water Conservation Area 3 (WCA 3), Big Cypress National Preserve (BCNP), and western Everglades National Park (ENP). Features of the Federal Action are located in Broward, Collier and Miami-Dade Counties (Error! Reference source not found.). Structure S-344 is located on the L-28 Tieback Levee adjacent to BCNP and WCA 3A (Error! Reference source not found.).

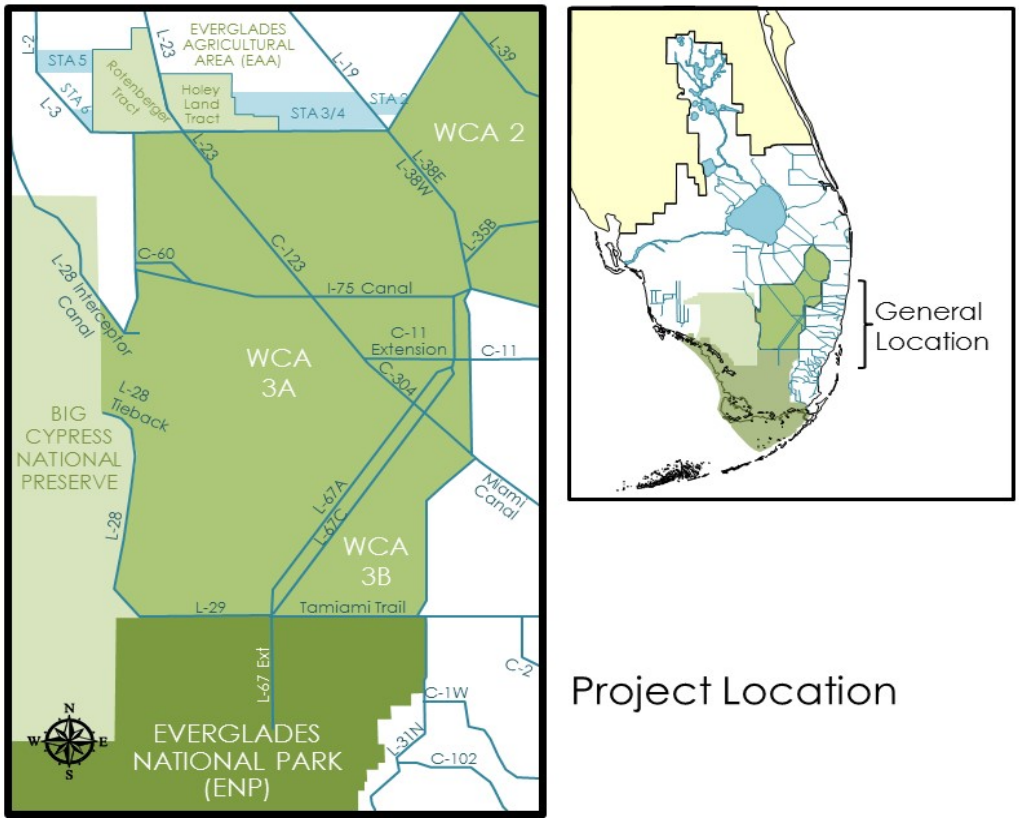

FIGURE 1. PROJECT LOCATION

3.0 PROJECT NEED OR OPPORTUNITY

The C&SF Project currently functions, and was originally authorized to function, as a multi-purpose water management system. The Congressionally-authorized purposes of the C&SF Project include flood control, agricultural irrigation, municipal and industrial water supply,

preservation of fish and wildlife, water supply to ENP, preservation of ENP, prevention of saltwater intrusion, drainage and water control, groundwater recharge, recreation, and navigation.

The highest rainfall on record has occurred within the South Florida Ecosystem during the month of January. The first half of the dry season (November 2015-January 2016) was the wettest for this period since record keeping began in 1932. Very Strong El Niño conditions are forecasted to continue for the rest of the dry season. All areas of South Florida are inundated with water restricting the ability to safely move water to alleviate the effects of flooding. The WCAs continue to be flooded in a manner that inundates tree islands and other wildlife habitat, and if sustained will negatively impact birds and mammals dependent on that habitat. Sustained flooding of natural habitat, especially tree islands, will negatively impact white-tailed deer by eliminating upland refugia and will negatively impact wading birds by eliminating foraging and nesting opportunities. These species support and encourage substantial outdoor recreational opportunities in this region. There is an immediate threat and impact to valuable natural resources that underpin local economies.

Operations in the project area have been governed by Increment 1 (G-3273 Constraint Relaxation/S-356 Field Test and S-357N Operational Strategy) which is a deviation to the 2012 WCAs, ENP and the ENP to South Dade Conveyance System (SDCS) Water Control Plan (USACE 2012). The U.S. Army Corps of Engineers (Corps), Jacksonville District, initiated a temporary emergency deviation to the current operating constraint of 7.5 feet National Geodetic Vertical Datum (of 1929 NGVD) in the L-29 Canal up to 8.5 feet NGVD for purposes of providing high water relief in WCA 3A. National Environmental Policy Act (NEPA) documentation to support the temporary emergency deviation was completed on February 12, 2016 with signing of a Finding of No Significant Impact (FONSI), incorporating an EA. Implementation of the temporary emergency deviation occurred on February 15, 2016. A Supplemental EA and Proposed FONSI is currently being provided to the public to provide further documentation of the potential environmental effects resulting from the alternatives considered and the action taken.

Due to the critical nature of elevated water levels in WCA 3A and in compliance with the existing request by the Governor to maximize water releases, a second emergency NEPA is being prepared to deviate from the current water control plan for Structure 344 (S-344) on the L-28 Levee. The purpose of S-344 and associated features located along the L-28 Levee and Borrow Canal, are to restore overland flow to an area of BCNP just south of the L-28 Tieback; prevent over drainage of the eastern BCNP under dry conditions; and provide a means of making regulatory releases from WCA 3A into BCNP. This deviation would open S-344 immediately instead of waiting for July 15, 2016 which is the normal opening date in the approved water control plan. The opening would allow up to 200 cubic feet per second (cfs) to be released from WCA 3A into BCNP and the L-28 Canal. The temporary emergency deviation is expected to benefit natural resources within WCA 3A and BCNP.

4.0 FEDERAL ACTION

The South Florida Water Management District (SFWMD) plans to rehabilitate six (6) earthen plugs in the lower L-28 Borrow Canal in conjunction with the Federal Action. The operation of the S-344 structure is expected to work in concert with the rehabilitation of the canal plugs and aid in relieving high water levels within WCA 3A on a temporary emergency basis. The proposed

temporary emergency operations at S-344 will allow flows to be removed from WCA 3 via gravity and be distributed, through the aid of rehabilitated canal plugs, as sheet flow to BCNP.

The L-28 Canal earthen plugs, which have partially eroded, were originally installed under the authority described within the *Letter Report on S-343A, S-344, and Modification of L-28 and L-67 Extension* prepared by the Corps, dated April 13, 1983. The purpose of the L-28 Borrow Canal plugs are to prevent the borrow canal from over draining the eastern portions of BCNP during dry conditions (USACE 1983). The proposed plug rehabilitation to be performed by the SFWMD, is limited to reconstruction of the plugs in compliance with the 1983 letter report. Specifically, each of the plugs will remain approximately 150 feet long, will have upstream and downstream slopes of approximately 4:1 (4 Horizontal to 1 Vertical), and will have a crest elevation not to exceed 10.0 feet NGVD. Similar to the original plug construction project, the source of fill for plug rehabilitation will be surplus fill from portions of the levee which currently lie above elevation 17.0 feet NGVD. No portion of the levee will be excavated beyond the original design prism.

The proposed criteria is to have full operational flexibility to partially or completely open S-344 until July 15, 2016. A complete description of Alternative B can be found in **Appendix A**. Rehabilitation of the earthen plugs work in conjunction with but is independent from the temporary emergency deviation to the water control plan. All required permits and/or modifications to existing permits related to the rehabilitation of the earthen plugs would be the responsibility of the State.

5.0 EFFECT DETERMINATIONS TO FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES

Effects determinations for federally threatened and endangered species within the project area are listed within **TABLE 1**. These determinations are based on the short duration of the temporary emergency deviation and the generally beneficial nature of this action.

TABLE 1. FEDERALLY THREATENED AND ENDANGERED SPECIES WITHIN THE PROJECT AREA AND EFFECTS DETERMINATION OF THE FEDERAL ACTION

Common Name	Scientific Name	Status	May Affect, Likely to Adversely Affect	May Affect, Not Likely to Adversely Affect	No Effect
Mammals					
Florida panther	*Puma concolor coryi*	E			X
Florida manatee	*Trichechus manatus latirostris*	E, CH			X
Florida bonneted bat	*Eumops floridanus*	E		X	
Birds					
Cape Sable seaside sparrow	*Ammodramus maritimus mirabilis*	E, CH		X	
Everglade snail kite	*Rostrhamus sociabilis plumbeus*	E, CH		X	
Piping plover	*Charadrius melodus*	T			X

Red-cockaded woodpecker	*Picoides borealis*	E			X
Roseate tern	*Sterna dougallii dougallii*	T			X
Wood stork	*Mycteria americana*	T		X	
Reptiles					
American Alligator	*Alligator mississippiensis*	T, SA			X
American crocodile	*Crocodylus acutus*	T, CH			X
Eastern indigo snake	*Drymarchon corais couperi*	T			X
Gopher tortoise	*Gopherus polyphemus*	C			X
Invertebrates					
Bartram's hairstreak butterfly	*Strymon acis bartrami*	E			X
Florida leafwing butterfly	*Anaea troglodyta floridalis*	E			X
Miami blue butterfly	*Cyclargus thomasi bethunebakeri*	E			X
Schaus swallowtail butterfly	*Heraclides aristodemus ponceanus*	E			X
Stock Island tree snail	*Orthalicus reses* (not incl. *nesodryas*)	T			X
Plants					
Crenulate lead plant	*Amorpha crenulata*	E			X
Deltoid spurge	*Chamaesyce deltoidea* spp. *deltoidea*	E			X
Garber's spurge	*Chamaesyce garberi*	T			X
Okeechobee gourd	*Cucurbita okeechobeensis* ssp. *okeechobeenis*	E			X
Small's milkpea	*Galactia smallii*	E			X
Tiny polygala	*Polygala smallii*	E			X
Big pine partridge pea	*Chamaecrista lineata* var. *keyensis*	Pr E			X
Blodgett's silverbush	*Argythamnia blodgettii*	Pr T			X
Cape Sable thoroughwort	*Chromolaena frustrata*	E, CH			X
Carter's small-flowered flax	*Linum carteri* var. *carteri*	E, CH			X
Everglades bully	*Sideroxylon reclinatum* spp. *austrofloridense*	C			X
Florida brickell-bush	*Brickellia mosieri*	E, CH			X
Florida bristle fern	*Trichomanes punctatum* spp. *floridanum*	E			X

Florida pineland crabgrass	*Digitaria pauciflora*	C			X
Florida prairie-clover	*Dalea carthagenensis* var. *floridana*	C			X
Florida semaphore cactus	*Consolea corallicola*	E, CH			X
Pineland sandmat	*Chamaesyce deltoidea* ssp. *pinetorum*	C			X
Sand flax	*Linum arenicola*	Pr E			X

E=Endangered; T=Threatened; SA=Similarity of Appearance; CH=Critical Habitat; Candidate Species, Pr E = Proposed Endangered, Pr T = Proposed Threatened, Pr CH = Proposed Critical Habitat

5.1 Florida Panther and "No Effect Determination"

One of 30 cougar subspecies, the Florida panther is tawny brown on the back and pale gray underneath, with white flecks on the head, neck, and shoulder. Male panthers weigh up to 130 pounds and females reach 70 pounds. Preferred habitat consists of cypress swamps, pine, and hardwood hammock forests. The main diet of the Florida panther consists of white-tailed deer, sometimes wild hog, rabbit, raccoon, armadillo, and birds. Present population estimations range from 80 to 100 individuals. Florida panthers are solitary, territorial, and often travel at night. Males have a home range of up to 400 square miles and females about 50 to 100 square miles. Female panthers reach sexual maturity at about three years of age. Mating season is December through February. Gestation lasts about 90 days and females bear two to six kittens. Juvenile panthers stay with their mother for about two years. Females do not mate again until their young have dispersed. The main survival threats to Florida panther include habitat loss due to human development and population growth, collision with vehicles, parasites, feline distemper, feline alicivirus (an upper respiratory infection), and other diseases. Habitat loss has driven the subspecies into a small area, where the few remaining animals are highly inbred, causing such genetic flaws as heart defects and sterility.

Implementation of the Federal Action would not result in significant effects to the Florida panther. Lands have been designated for panther conservation (**FIGURE 2**). These lands include the Panther Focus Area located in central and southern Florida. Preferred habitat consists of cypress swamps, pine, and hardwood hammock forests. Florida panthers presently inhabit lands within the project area (**FIGURE 3**). The temporary emergency operations at S-344 will allow flows to be removed from WCA 3 via gravity and be distributed, through the aid of rehabilitated canal plugs, as sheet flow to BCNP. This will reduce water level elevations on tree islands within the project area that may be currently used by panthers as a source of upland refugia. Implementation of the Federal Action will facilitate additional regulatory releases from WCA 3A during the current period of extreme high water. This will relieve some of the pressure on Northeast Shark River Slough (SRS) and ENP, while providing additional water to BCNP. The Federal Action is anticipated to result in the reduction of water levels within WCA 3A by approximately 0.1 feet. This estimate is based on the assumption of S-344 operating at a capacity of 200 cfs for a period of 100 days (5 April to 15 July). The resulting discharge into BCNP would be approximately 40,000 acre-feet of water over the time frame from 5 April to 15 July. The primary impact of the Federal Action within BCNP will be to lengthen the hydroperiod in the area immediately south of the L-28 Tieback Levee, aiding in the restoration of historic hydrologic conditions for the duration

of the temporary emergency deviation. The temporary emergency deviation is not expected to have any effect on Florida panther or its habitat. Elimination or modification to panther habitat within WCA 3A, BCNP, and western ENP is not expected as conversion of upland habitat is not proposed. The Corps has determined that there would be no effect on this species from implementation of the Federal Action.

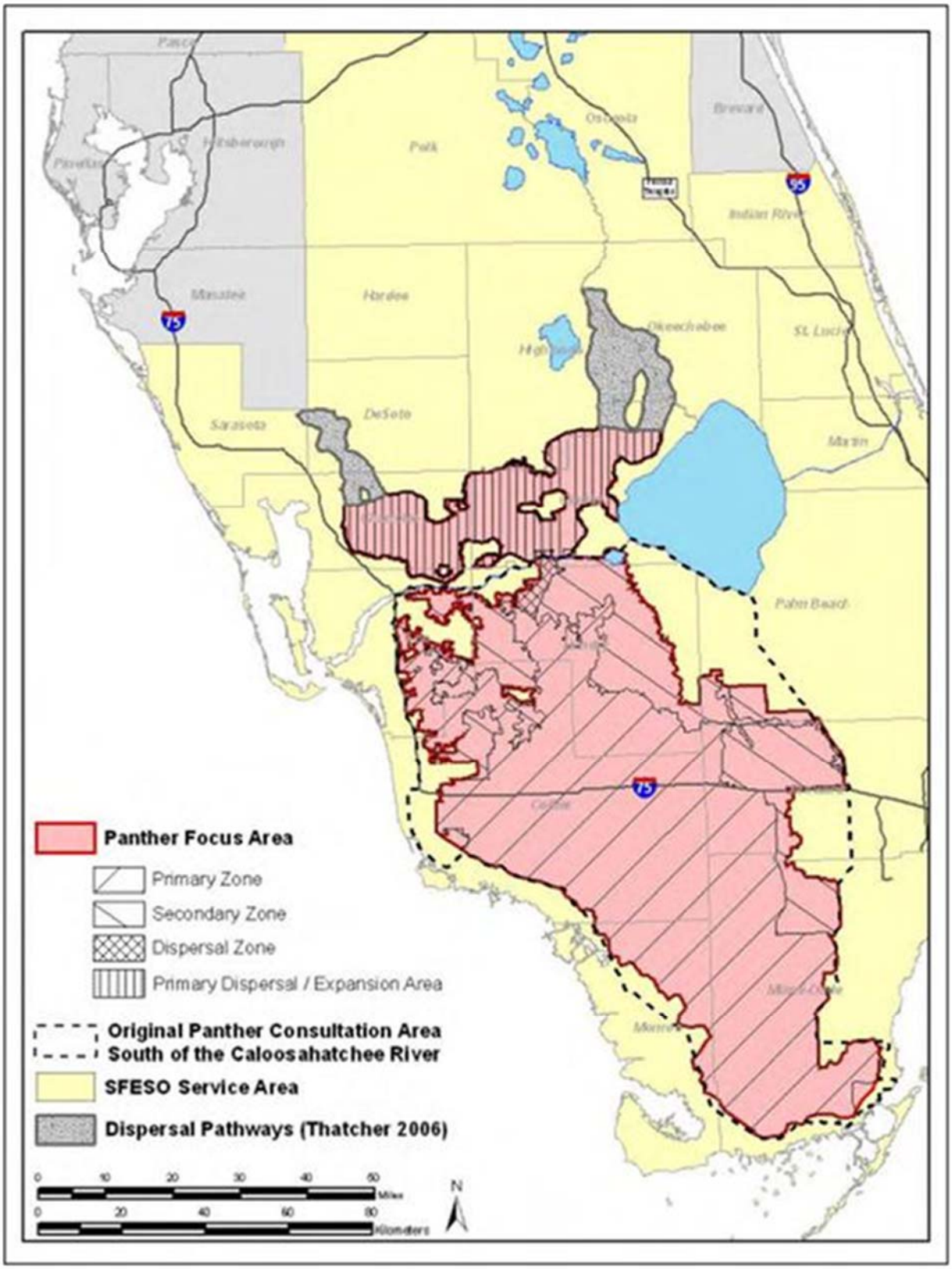

FIGURE 2. FLORIDA PANTHER ZONES IN SOUTH FLORIDA

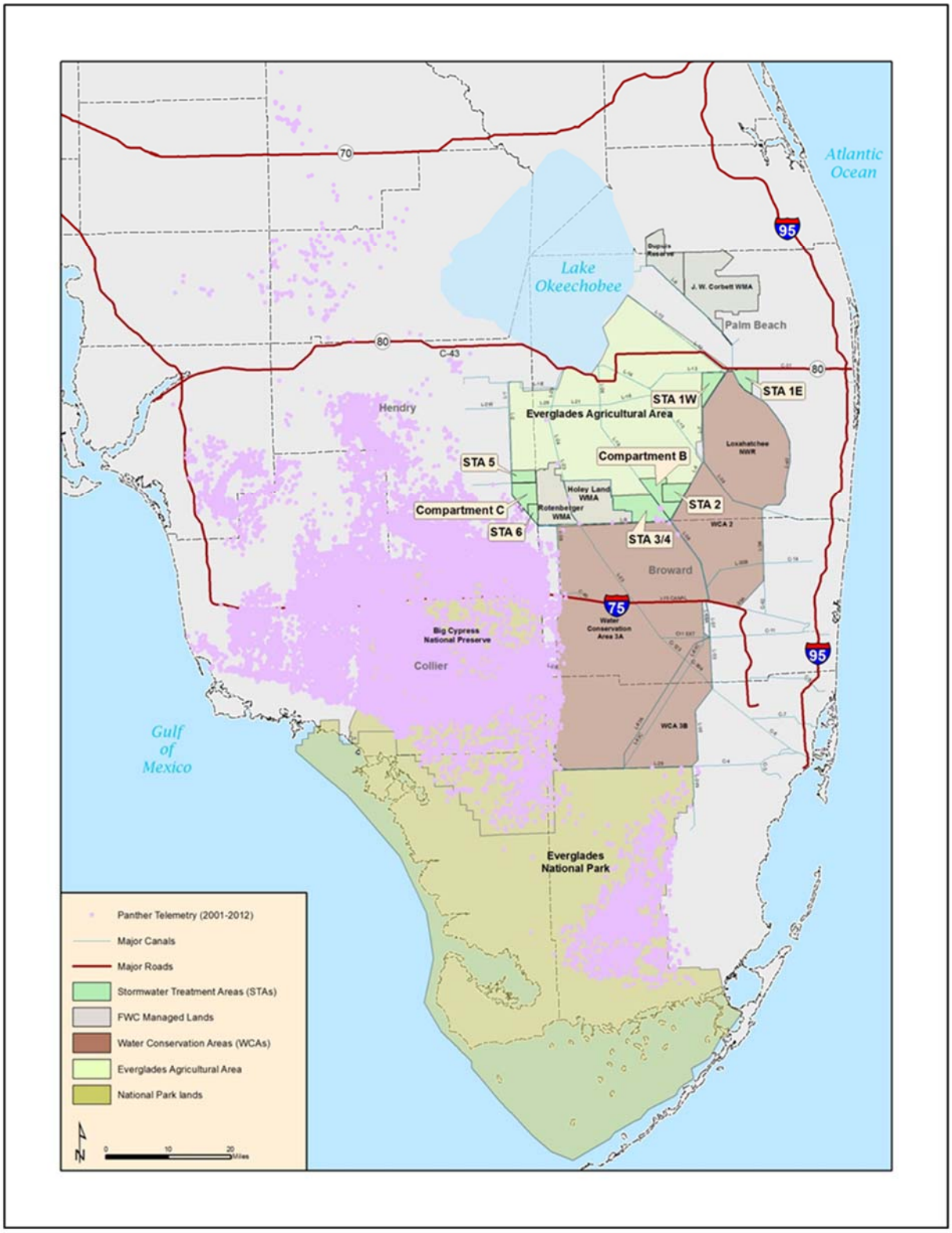

FIGURE 3. FLORIDA PANTHER TELEMETRY INFORMATION FROM 2002 TO 2012

5.2 Florida Manatee and Critical Habitat and "No Effect Determination"

The Florida manatee is a large, plant-eating aquatic mammal with a fusiform body that is compressed dorsoventrally and is grey to grey-brown in color. Florida manatees live in freshwater, brackish, and marine habitats; can move freely between salinity extremes; and are found throughout the southeastern United States. Because they are a subtropical species with little tolerance for cold, they remain near warm water sites in peninsular Florida during the winter. During periods of intense cold, Florida manatees will remain at these sites and will tend to congregate in warm springs and outfall canals associated with electric generation facilities. During warm interludes, Florida manatees move throughout the coastal waters, estuaries, bays, and rivers of both coasts of Florida and are usually found in small groups. During warmer months, Florida manatees may disperse great distances. Florida manatees have been sighted as far north as Massachusetts and as far west as Texas and in all states in between (Rathbun et al. 1982, Fertl et al. 2005). Water depths of at least three to seven feet (one to two meters) are preferred and flats and shallows are avoided unless adjacent to deeper water.

Over the past centuries, the principal sources of Florida manatee mortality have been opportunistic hunting by man and deaths associated with unusually cold winters. Today, poaching is rare, but high mortality rates from human-related sources threaten the future of the species. In general, the largest single mortality factor is collision with boats and barges. Florida manatees also are killed in flood gates and canal locks, by entanglement or ingestion of fishing gear, and through loss of habitat and pollution (Florida Power and Light 1989).

Florida manatees have been observed in conveyance canals within the project area and adjacent nearshore seagrass beds throughout Florida Bay including all waters of Card, Barnes, Blackwater, Little Blackwater, Manatee and Buttonwood sounds. The extensive acreages of seagrass beds in Florida Bay provide important feeding areas for Florida manatees. Florida manatees also depend upon canals as a source of freshwater and resting sites and as a source of cold-weather refuge. The relatively deep waters of the canals respond more slowly to temperature fluctuations at the air/water interface than the shallow bay waters. Thus, the canal waters remain warmer than open bay waters during the passage of winter cold fronts. **FIGURE 4** illustrates canals that Florida manatees have access to within south Florida.

The Florida manatee's critical habitat includes all waters of Card, Barnes, Blackwater, Little Blackwater, Manatee and Buttonwood sounds between Key Largo, Monroe County and mainland Miami-Dade County (**FIGURE 5**). Another component of designated critical habitat is defined as Biscayne Bay, and all adjoining and connected lakes, rivers, canals, and waterways from the southern tip of Key Biscayne northward to and including Maule Lake, Dade County. This was one of the first designations of critical habitat for an endangered species and the first for an endangered marine mammal. No specific primary or secondary constituent elements were included in the critical habitat designation. However, researchers agree that essential habitat features for Florida manatee include seagrasses for foraging, shallow areas for resting and calving, channels for travel and migration, warm water refuges during cold weather and freshwater for drinking (FWS 2001).

Florida manatees have the ability to access conveyance canals within the project area including portions of the L-28 Borrow Canal as depicted in **FIGURE 4**. However, the Federal Action consists of an operational change to the current water control plan and does not include construction of permanent structures or structural modifications to existing C&SF project features. The Federal Action is anticipated to result in the reduction of water levels within WCA 3A by approximately 0.1 feet. This estimate is based on the assumption of S-344 operating at a capacity of 200 cfs for a period of 100 days (5 April to 15 July). The resulting discharge into BCNP would be approximately 40,000 acre-feet of water over the time frame from 5 April to 15 July. The primary impact of the Federal Action within BCNP will be to lengthen the hydroperiod in the area immediately south of the L-28 Tieback Levee, aiding in the restoration of historic hydrologic conditions for the duration of the temporary emergency deviation. The Federal Action is not expected to affect downstream estuaries currently utilized by the by the manatee for foraging and breeding. The Corps has determined that there would be no effect on the Florida manatee and its designated critical habitat from implementation of the Federal Action.

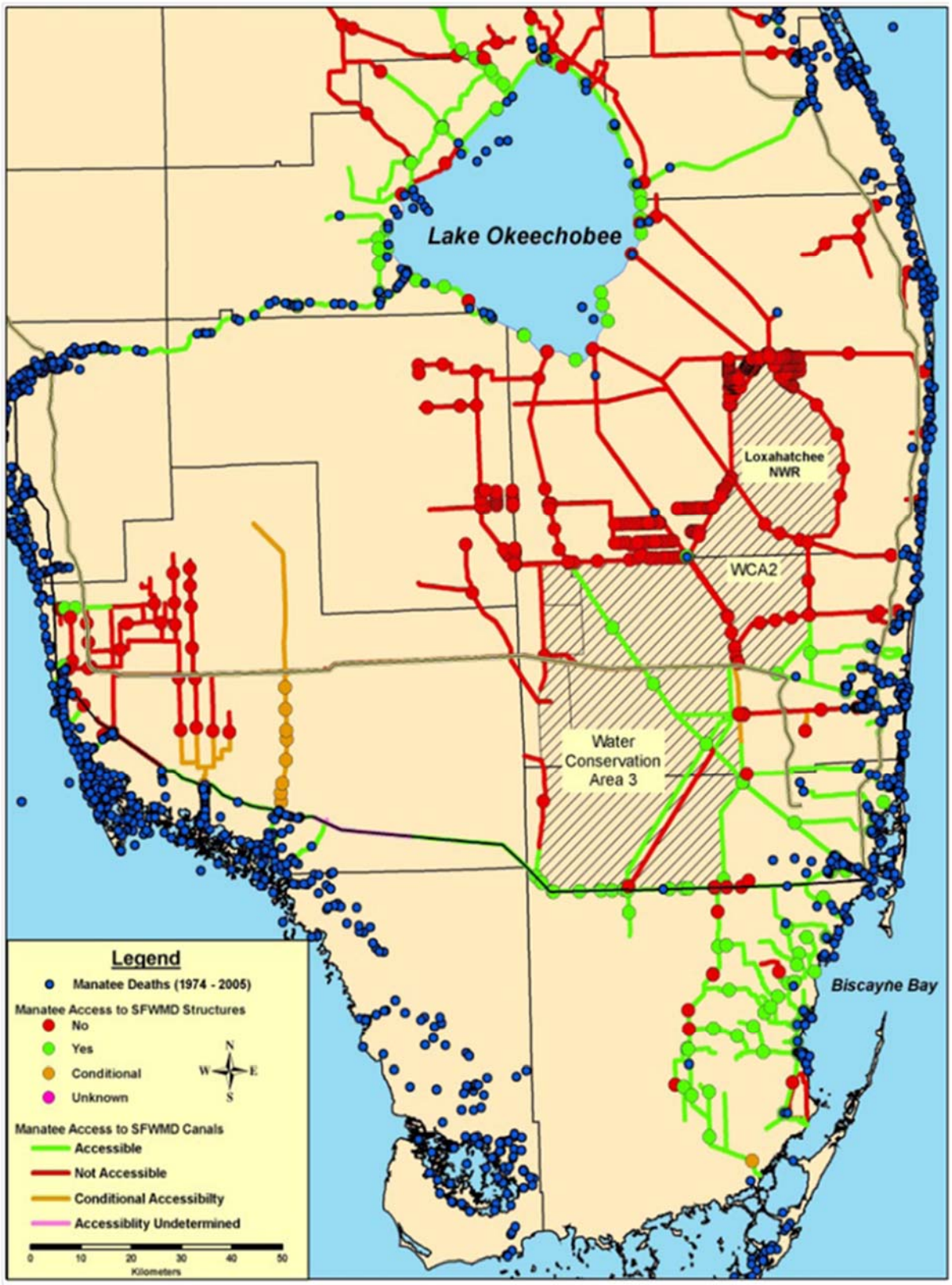

FIGURE 4. CANALS THAT FLORIDA MANATEES HAVE ACCESS TO WITHIN SOUTH FLORIDA

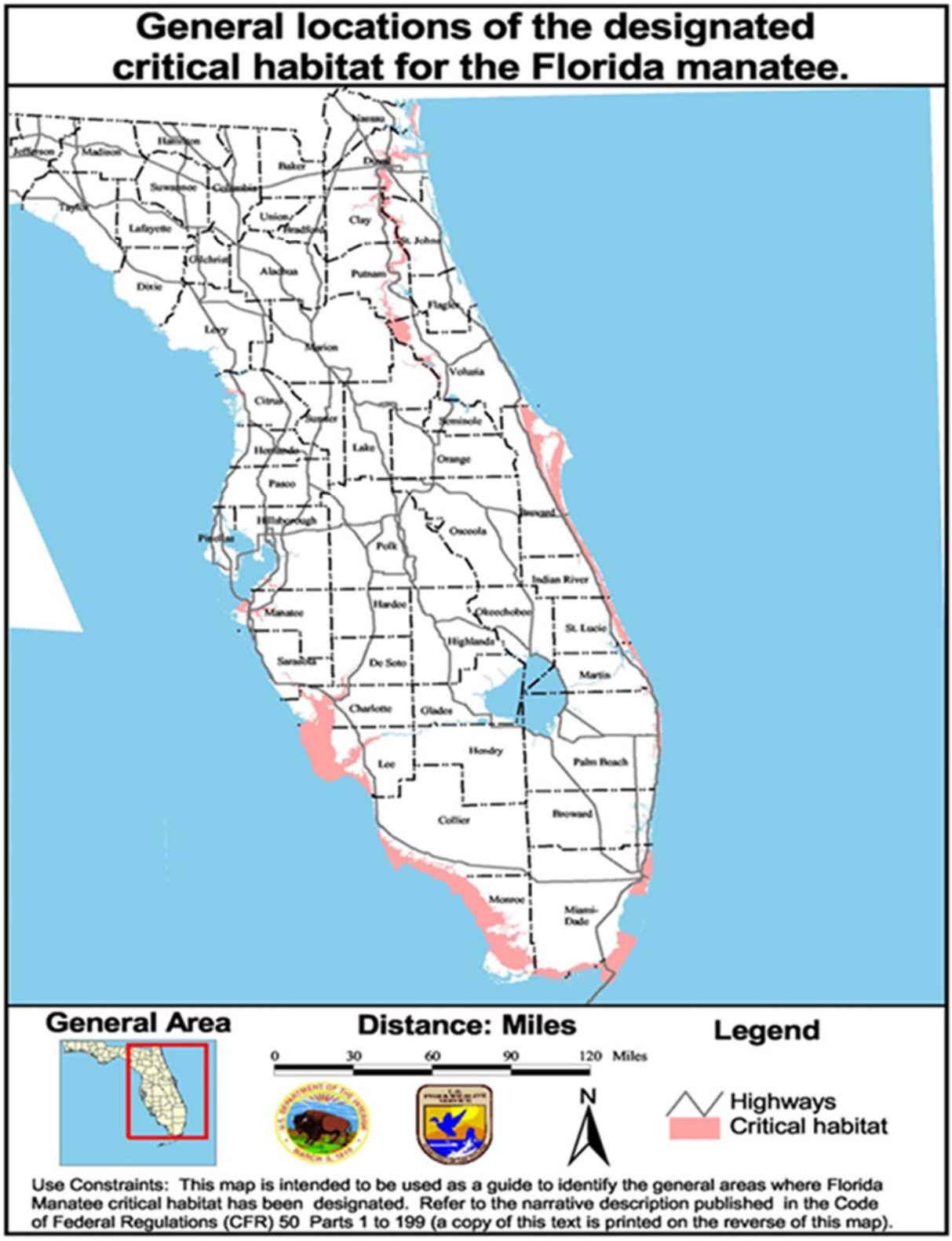

FIGURE 5. FLORIDA MANATEE CRITICAL HABITAT

5.3 Florida Bonneted Bat and "May Affect Not Likely to Adversely Affect Determination"

The Florida bonneted bat is Florida's largest bat, weighing approximately 1.1 to 2.0 ounces, with a 19 to 21 inch wingspan, and a body length of 5.1 to 6.5 inches. The species has dark brown fur and large broad ears that join together and slant forward over the eyes. Relatively little is known regarding the ecology and habitat requirements of this species. In general, bats will forage over ponds, streams and wetlands and require roosting habitat for daytime roosting, protection from predators and rearing of young (Marks and Marks 2008). Florida bonneted bats roost in tree cavities, rocky outcrops and dead palm fronds.

In residential communities, the bats roost in Spanish tile roofs, but have also been found in attics, rock or brick chimneys and fireplaces of old buildings (NatureServe 2009). Colonies are small, with the largest reported as just a few dozen individuals. The bat is a nocturnal insectivore and relies upon echolocation to navigate and detect prey. Females give birth to a single pup from June through September (Scott 2004); however limited data suggests that a female may undergo a second birthing season possibly in January or February.

The Florida bonneted bat is Florida's only endemic bat. The range of this species is limited to southern Florida, although this species was encountered in 2008 in two locations within the Kissimmee River Wildlife Management Area north of Lake Okeechobee. The Florida bonneted bat has only been documented in 12 locations within Florida, including Coral Gables, Homestead, Naples, Everglades City, and North Fort Myers. Seven of the locations are under public ownership with the Florida bonneted bat found in discrete and specific areas within Big Cypress National Preserve, Fakahatchee Strand Preserve State Park, Kissimmee River Wildlife Management Area, Babcock Ranch and Fred C. Babcock and Cecil M. Webb Wildlife Management Area. Florida bonneted bats roost in tree cavities, rocky outcrops and dead palm fronds. In residential communities, the bats roost in Spanish tile roofs, but have also been found in attics, rock or brick chimneys and fireplaces of old buildings (NatureServe 2009).

The USFWS has defined consultation areas and focal areas for the Florida bonneted bat in south Florida (**FIGURE 6**). S-344 is located outside of the defined focal area. The main action area falls within a defined consultation area. At present, no active, natural roost sites are known within the main action area. Impacts to potential roost sites are not anticipated under the Federal Action. Based on the 2013 Florida Bonneted Bat USFWS Consultation guidelines, the Corps has determined that implementation of the Federal Action may affect, but is not likely to adversely affect, this species.

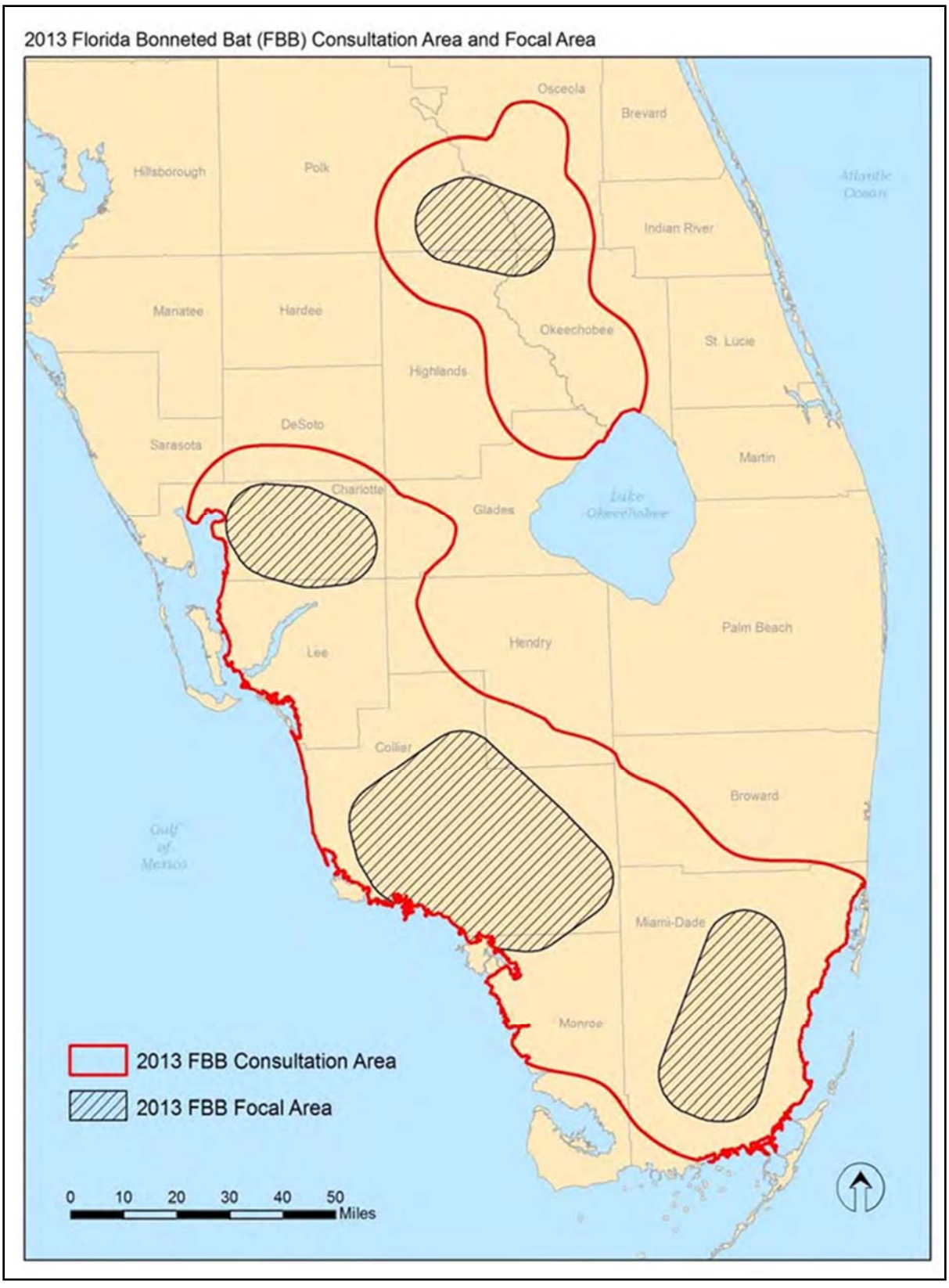

FIGURE 6. FLORIDA BONNETED BAT CONSULTATION AREA

5.4 Cape Sable Seaside Sparrow and Critical Habitat and "May Affect Not Likely to Adversely Affect Determination"

The CSSS is one of nine subspecies of seaside sparrows (Werner 1975). CSSS are non-migratory residents of freshwater to brackish marshes and their range is restricted to the lower Florida peninsula. They were originally listed as endangered in 1969 due to their restricted range (USFWS 1999). Subsequent changes in their habitat have further reduced their range and continue to threaten this subspecies with extinction.

CSSS prefer mixed marl prairie communities that include muhly grass (*Muhlenbergia filipes*) for nesting (Stevenson and Anderson 1994). Marl prairie communities have short-hydroperiods (the period of time during which a wetland is covered by water) and contain a mosaic of moderately dense, clumped grasses, interspersed with open space that permit ground movements by the sparrows (USFWS 1999). CSSS are generally not found in communities dominated by dense sawgrass, cattail (*Typha* spp.) monocultures, long-hydroperiod wetlands with tall, dense vegetative cover, spike rush marshes, and sites supporting woody vegetation (Werner 1975, Kushlan and Bass 1983). CSSS also avoid sites with permanent water cover (Curnutt and Pimm 1993). The combination of hydroperiod and periodic fire events are critical in the maintenance of suitable mixed marl prairie communities for the CSSS (Kushlan and Bass 1983).

CSSS nest in the spring when the marl prairies are dry. While the majority of nesting activities have been observed between March 1 and July 15 when Everglades marl prairies are dry, (Lockwood et al. 1997, 2001), nesting has been reported as early as late February (Werner 1975), and as late as early August (Dean and Morrison 2001). Males will establish breeding territories in early February (Balent et al. 1998) and defend these territories throughout the breeding season (USFWS 1999). Male sparrows vocalize to attract females and this particular breeding activity has been shown to decrease with increased surface water conditions (Nott et al. 1998, Curnutt and Pimm 1993).

Successful CSSS breeding requires that breeding season water levels remain at or below ground level in the breeding habitat. Nott et al. (1998) cited a "10-centimeter (cm)" rule for maximum water depth over which the CSSS will initiate nesting. This conclusion was based upon observations within the ENP range-wide survey in which no singing males were heard when water depths exceeded that level. However, Dean and Morrison (1998) demonstrated that nesting may occur when average water depths exceed this rule. CSSS construct their nests relatively close to the ground in clumps of grasses composed primarily of muhly, beakrushes (Rhynchospora spp.), and Florida little bluestem (Schizachyrium rhizomatum) (Pimm et al. 2002). The average early season nest height is 17 cm (6.7 inches) above ground, while the average late season nest height is 21 cm (8.3inches) above ground (Lockwood et al. 2001). The shift in average nest height after the onset of the wet season rainfall pattern, which typically begins in early June (Lockwood et al. 2001), appears to be an adaptive response to rising surface water conditions. In general, the CSSS will raise one or two broods within a season; however, if weather conditions permit, a third brood is possible (Kushlan et al. 1982, USFWS 1983). A new nest is constructed for each successive brood. The end of the breeding season is triggered by the onset of the rainy season when ground water levels rise above the height of the nest off the ground (Lockwood et al. 1997).

CSSS will lay three to four eggs per clutch (Werner 1978, Pimm et al. 2002) with a hatching rate ranging between 0.66 and 1.00 (Boulton et al. 2009b). The nest cycle lasts between 34 and 44 days in length and includes a 12-13 day incubation period, 9-11 day nestling period and 10-20 days of post-fledgling care by both parents (Sprunt 1968, Trost 1968, Woolfenden 1968, Lockwood et al. 1997, Pimm et al. 2002). Nest success rate varies between 21 and 60 percent, depending upon timing of nest initiation within the breeding season (Baiser et al. 2008, Boulton et al. 2009a). Substantially higher nest success rates occur within the early portion of the breeding season (approximately 60 percent prior to June 1) followed by a decline in success as the breeding season progresses to a low of approximately 21% after June 1 (Baiser et al. 2008, Boulton et al. 2009a, Virzi et al. 2009). In most years, June 1 is a good division between the early high success period and the later, lower success period (Dr. Julie Lockwood email correspondence to USFWS, October 15, 2009). Nearly all nests that fail appear to fail due to predation, and predation rates appear to increase as water level increases (Lockwood et al. 1997, 2001, Baiser et al. 2008). A complete array of nest predators has not been determined. However, raccoons (Procyon lotor), rice rats (Oryzomys palustris), and snakes may be the chief predators (Lockwood et al. 1997, Dean and Morrison 1998, Post 2007).

A dietary generalist, CSSS feed by gleaning food items from low-lying vegetation (Ehrlich et al. 1992, Pimm et al. 2002). Common components of their diet include soft-bodied insects such as grasshoppers, spiders, moths, caterpillars, beetles, dragonflies, wasps, marine worms, shrimp, grass, and sedge seeds (Stevenson and Anderson 1994). The importance of individual food items appear to shift in response to their availability (Pimm et al. 1996, 2002).

CSSS are non-migratory with males displaying high site fidelity, defending the same territory for two to three years (Werner 1975). CSSS are capable of both short-distance and longer-range movements, but appear to be restricted to short hydroperiod prairie habitat (Dean and Morrison 1998). Large expanses of deep water or wooded habitat act as barriers to long-range movements (Dean and Morrison 1998). Recent research by Julie Lockwood, Ph.D. of Rutgers University and her students have revealed substantial movements between subpopulations east of Shark River Slough (Lockwood et al. 2008, Virzi et al. 2009), suggesting that the CSSS may have the capacity to colonize unoccupied suitable habitat if it is available (Sustainable Ecosystems Institute 2007).

Presently, the known distribution of the CSSS is restricted to two areas of marl prairies east and west of Shark River Slough in the Everglades region (within ENP and BCNP) and the edge of Taylor Slough in the Southern Glades Wildlife and Environmental Area in Miami-Dade County. ENP staff first undertook a comprehensive survey of the CSSS in 1981 to identify all areas where sparrows were present. This survey, hereafter referred to as the range-wide survey, resulted in the first complete range map for the CSSS (Bass and Kushlan 1982, Kushlan and Bass 1983). From the resulting range map, Curnutt et al. (1998) divided the CSSS into six separate subpopulations, labeled as A through F (**FIGURE 7**) with subpopulation A (CSSS-A) as the only subpopulation west of Shark River Slough (SRS).

Designated critical habitat for the CSSS includes areas of land, water, and airspace in the Taylor Slough vicinity of Collier, Dade, and Monroe counties, with the following components: those portions of ENP within T57S R36E, T57S R36E, T57S R37E, T58S R35E, T58S R36E, T58S R37E, T58S R35E, T58S R36E, T59S R35E, T59S R36E, T59S R37E. Areas outside of ENP

within T55S R37E Sec. 36, T55S R38E Sec. 31, 32, T56S R37E Sec. 1, 2, 11-14, 23-26, T56S R38E Sec. 5-7, 18, 19, T57S R37E Sec. 5-8, T58S R38E Sec. 27, 29-32, T59S R38E Sec. 4 (CFR Vol. 72, No. 214 / 11-6-07). Designated CSSS critical habitat is depicted in (**FIGURE 7**). Primary constituent elements include suitable soil, vegetation, hydrologic conditions, and forage base.

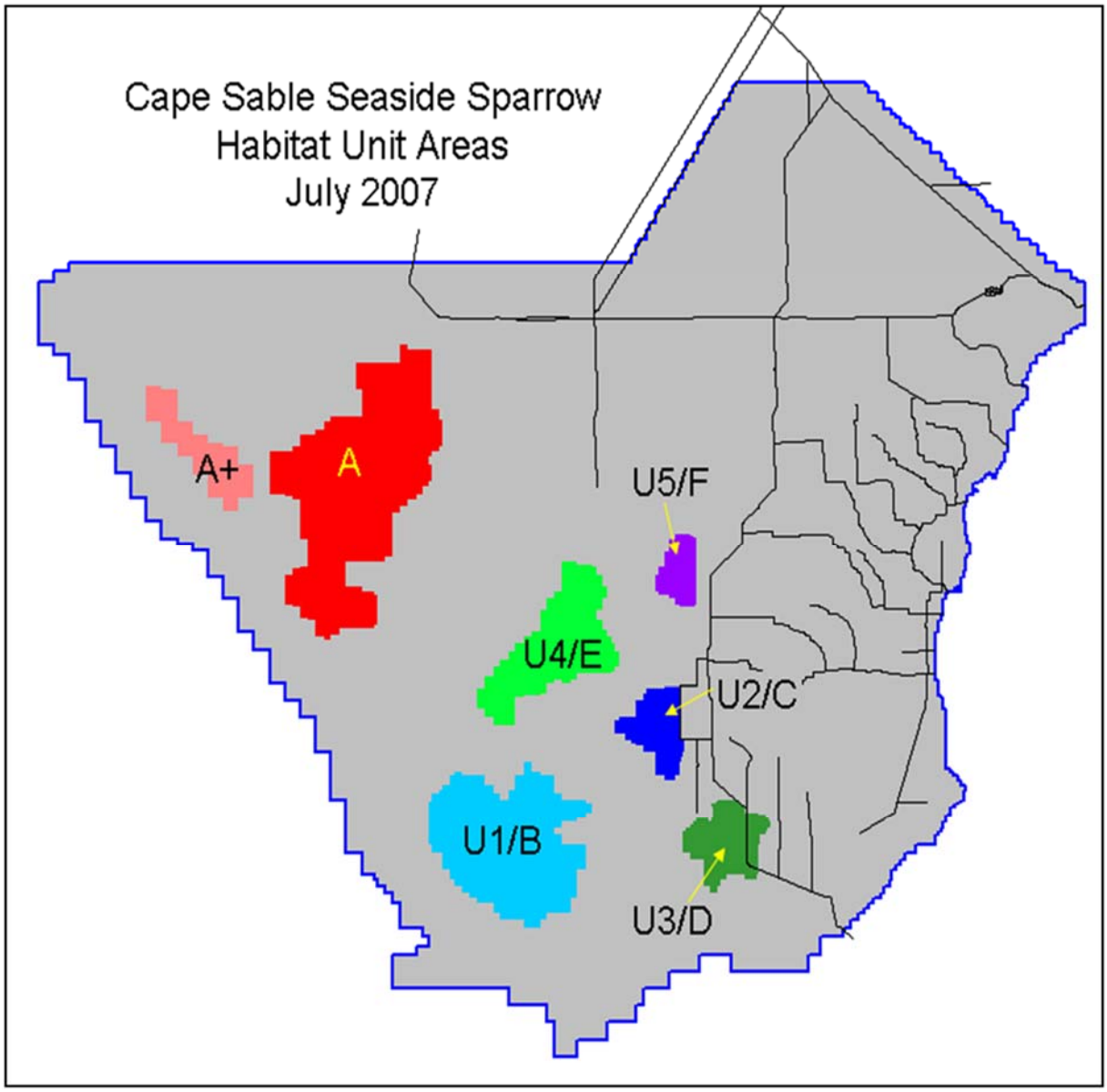

FIGURE 7. CAPE SABLE SEASIDE SPARROW SUBPOPULATIONS (A-F) AND DESIGNATED CRITICAL HABITAT UNITS (U1-U5)

Potential effects from western flows (from eastern BCNP, west of WCA 3A and the L-28 Levee) on downstream areas including CSSS-A in western ENP, have been discussed and analyzed under prior Corps planning efforts including CSOP ESA coordination with USFWS during 2006-2007, and under ERTP. During consultation with USFWS and BCNP, it was suggested that the L-28

Borrow Canal is responsible for direct delivery of water flow into western CSSS-A. Due to regional topographic gradients, when WCA 3A is high, water from western WCA 3A flows south through gaps previously constructed in the L-28 Tieback Levee and a portion of the surface water drainage from eastern BCNP (Mullet Slough) flows south from areas west of the L-28 Tieback Levee. Under these conditions, the southerly flow is most likely funneled east of the Dade-Collier Training and Transition Airport (JetPort) towards the 40-mile bend area, with the L-28 Borrow Canal (located on the west side of the L-28 Levee) facilitating water conveyance south towards western ENP. Surface water flows moving south in this area of eastern BCNP, along with other BCNP basin runoff from areas to the immediate south of the JetPort, may be collected by the Tamiami Trail Borrow Canal (north side of road) and directed through Tamiami Trail bridges and Loop Road bridges into ENP near CSSS-A. Hydrograph responses at NP-205 demonstrate a high degree of correlation to upstream hydrographs at Gauge BCNP A-9 during periods of S-12 closures. Vegetation mapping also indicated a transition from prairie-marsh to marsh vegetation as more prevalent along western CSSS-A and coincides with additional vegetation studies within CSSS habitat (Ross et al. 2003, 2004, 2006; Sah et al. 2007, 2008, 2009).

USFWS has studied aerial photos and cypress strand topography within the project area to determine potential flow paths of S-344 discharges in combination with rehabilitation of the six plugs in the L-28 Borrow Canal. An analysis of flows was provided to the SFWMD and USFWS in coordination and development of the operational strategy (**Appendix A**) for the temporary emergency deviation at S-344. Flows from S-344 may enter the L-28 Borrow Canal and travel southward until reaching the northern most plug located approximately 2 miles downstream of S-344. Once the water is stopped by the plug and is able to overtop the canal bank, depending on the bank elevation, water may begin to move towards the west into eastern BCNP. Some of the water may remain along the western banks of the L-28 Borrow Canal and reenter the next segment of canal until reaching the fifth plug and so on and so forth southward until the entire L-28 Borrow Canal is full. The westward moving water will encounter a slight topographic ridge and small amounts of the water may continue moving southward along this ridge. Other portions of the water may travel southwestward within the cypress strand and slough microtopography. The majority of flows may reach the Tamiami Canal mid-way between 40- and 50-mile bend. However; the USFWS, noted that this flow path needs the proper outlet capacity along the canal to insure that flows are able to continue southwestward into Lostman's Slough and not end up back in the Tamiami Canal or southern end of the L-28 Borrow Canal moving eastward then southward into CSSS-A.

It should be noted, that the Corps is proposing to implement a Water Flow Analysis Test (L-28 Study) in order to identify the source of water entering western SRS. The objective of the test is to characterize how surface water moves within the western ENP watershed (south of Tamiami Trail), including the effects on flow distribution from adjacent borrow canals and bridges along Tamiami Trail and Loop Road, L-28 Canal, WCA 3A outlet water control structures and WCA 3A seepage in order to: 1) identify preferential flow paths, with primary focus on flow paths affecting CSSS-A core habitat areas; 2) estimate flow velocity (e.g. travel time); and 3) evaluate effects from WCA 3A discharges. This test is being proposed under Endangered Species Act (ESA) consultation related to the Everglades Restoration Transition Plan (ERTP) as a result of an exceedance of an Incidental Take Reinitiation Trigger for the CSSS from the November 17, 2010 ERTP Biological Opinion (BO).

Subpopulation A (CSSS-A) – The Federal Action is expected to benefit WCA 3A by decreasing high water levels and prolonged periods of inundation. The Federal Action best utilizes the existing capacity within the C&SF system to alleviate high water levels in WCA 3A while providing potential benefits to BCNP. The temporary emergency operations at S-344 will allow flows to be removed from WCA 3 via gravity and be distributed, through the aid of rehabilitated canal plugs, as sheet flow to BCNP. Implementation of the Federal Action will facilitate additional regulatory releases from WCA 3A during the current period of extreme high water. This will relieve some of the pressure on Northeast Shark River Slough (SRS) and ENP, while providing additional water to BCNP. Monitoring has been developed and included within the operational strategy (**Appendix A**) for S-344 in coordination with USFWS to provide representative information on the flow south and provide early indication of undesirable flow towards CSSS-A. It is important to note that ERTP closure periods on the S-12A, S-12B, S-343A, and S-343B, designed for protection of CSSS-A, remain in place throughout deviation. Based upon the temporary nature of the Federal Action, the Corps has concluded that the Federal Action may affect, but is not likely to adversely affect CSSS-A.

Subpopulation B (CSSS-B/Unit 1) - No effect would be anticipated. CSSS-B represents the largest sparrow subpopulation and has remained relatively stable since implementation of the Interim Operational Plan (IOP) in 2002. Wet prairie vegetation predominates within this unit (Ross, Sah and Snyder, et al. 2006). Due to its location downstream of the elevated pine rocklands, Unit 1 is relatively well protected from the managed water releases under current C&SF Project operations. Potential downstream effects of the Federal Action are located within BCNP and western ENP, and are located west of CSSS-B. Consequently, implementation of the Federal Action is not expected to alter designated critical habitat within Critical Habitat Unit 1 or affect the status of CSSS-B.

Subpopulation C (CSSS-C/Unit 2) – Habitat of varying suitability occurs within Unit 2. Long-hydroperiod marshes occur south of the S-332 pump station, while areas to the north are over drained and prone to frequent fires. The most recent fire occurred in March 2007 when the Frog Pond fire swept through this area. The habitat has yet to fully recover (Sah et al. 2008, Virzi et al. 2009). The variable habitat conditions are thought to be a consequence of the 1980 construction of the S-332 pump station, located at the boundary of ENP and Taylor Slough. Unit 2 holds relatively few CSSS. Recent research has indicated that within Unit 2, CSSS-C is suffering from the ill-effects of small population size including fewer breeding individuals, male-biased sex ratios, lower hatch rates, and lower juvenile return rates (Boulton et al. 2009a, Virzi et al. 2009). Through a reduction of seepage out of ENP, use of the S-332 Detention Areas has lessened the over-drying of potential sparrow habitat within Unit 2 (CSSS-C). Potential downstream effects of the Federal Action are located within BCNP and western ENP, and are located west of CSSS-B. Consequently, implementation of the Federal Action is not expected to alter designated critical habitat within Critical Habitat Unit 2 or affect the status of CSSS-B.

Subpopulation D (CSSS-D/Unit 3) – Since 1981, when an estimated 400 CSSS resided within Unit 3, this subpopulation experienced a continual decline in population size (Cassey et al. 2007). CSSS-D is a small, dynamic subpopulation that fluctuates annually; occupancy within Unit 3 is low and detection probability is highly variable. Thought to be functionally extirpated in 2007 (Lockwood et al. 2007), CSSS were again encountered within this area in 2009 when Virzi et al.

(2009) encountered four males and two females. However, in 2012, 14 birds were counted with a population estimate of 224, which is substantially higher than between the years 2007 and 2011. Prior to the 2012 survey, vegetation within this critical habitat unit was thought to be unsuitable for CSSS breeding. Since 2000, high water levels and longer hydroperiods have prevailed resulting in a sawgrass-dominated community interspersed with patches of muhly grass at higher elevations (Ross et al. 2003). Potential downstream effects of the Federal Action are located within BCNP and western ENP, and are located west of CSSS-D. Consequently, implementation of the Federal Action is not expected to alter designated critical habitat within Critical Habitat Unit 3 or affect the status of CSSS-D.

Subpopulation E (CSSS-E/Unit 4) - Located along the eastern edge of SRS, Critical Habitat Unit 4 encompasses approximately 66 km^2. The Rocky Glades separate Unit 4 and CSSS-E from the other eastern subpopulations. Unit 4 holds the second greatest number of sparrows among all subpopulations. This unit is expected to be affected by an altered hydroperiod that is too long to support marl prairie habitat requirements. Due to its location, Unit 4 is relatively well protected from the managed water releases that occur under current C&SF Project operation. Potential downstream effects of the Federal Action are located within BCNP and western ENP, and are located west of CSSS-E. Consequently, implementation of the Federal Action is not expected to alter designated critical habitat within Critical Habitat Unit 4 or affect the status of CSSS-E.

Subpopulation F (CSSS-F/Unit 5) - The most easterly of all the CSSS critical habitat units, Unit 5 is located at the ENP boundary in close proximity to agricultural and residential development. Habitat within this critical habitat unit suffers from over-drainage, reduced water flow, exotic tree invasion and frequent human-induced fires (Ross, Sah and Snyder, et al. 2006, Lockwood, Ross and Sah 2003). To alleviate the perpetual drier conditions and its associated problems, increased water flows within this area are required. Potential downstream effects of the Federal Action are located within BCNP and western ENP, and are located west of CSSS-F. Consequently, implementation of the Federal Action is not expected to alter designated critical habitat within Critical Habitat Unit 5 or affect the status of CSSS-F.

In order to protect CSSS, structural closings, other than S-344, implemented under 2006 IOP and preserved under 2012 ERTP will be retained under the Federal Action. The action related hydrologic changes are expected to be temporary. All regulatory monitoring requirements included in the 2009 C-111 Western Spreader Canal Project BO and 2010 ERTP BO will continue as mandated within those opinions. The Corps will continue to rely upon the Increment 1 monitoring plan which includes a comparison of flows through the S-12 structures, and will continue to implement Periodic Scientist Calls as outlined within the 2011 ERTP Final Environmental Impact Statement (EIS). Flow and stage will be monitored to provide representative information on potential flows south towards CSSS-A. The Corps and SFWMD plan to meet regularly with the USFWS to communicate operations. The incremental opening of the structure and adaptive approach as outlined in **Appendix A**, will assist in minimizing potential environmental effects resulting from implementation of the Federal Action. Reference **Appendix A** for a description of monitoring to occur related to operation of S-344. The Corps has determined that the implementation of the Federal Action may affect, but is not likely to adversely affect, this subspecies.

5.5 Everglade Snail Kite and Critical Habitat and "May Affect Not Likely to Adversely Affect Determination"

A wide-ranging, New World raptor, the snail kite is found primarily in lowland freshwater marshes in tropical and subtropical America from Florida, Cuba, and Mexico, and south to Argentina and Peru (USFWS 1999). The Florida and Cuban subspecies of the Everglade snail kite, *R. sociabilis plumbeus*, was initially listed as endangered in 1967 due to its restricted range and highly specific diet (USFWS 1999). Its survival is directly tied to the hydrology, water quality, vegetation composition and structure within the freshwater marshes that it inhabits (Martin et al. 2008, Cattau et al. 2008).

Everglade snail kite habitat consists of freshwater marshes and the shallow vegetated edges of lakes where the apple snail (*Pomacea paludosa*), the Everglade snail kite's main food source, can be found. Snail kite populations in Florida are highly nomadic and mobile; tracking favorable hydrologic conditions and food supplies, and thus avoiding local droughts. Snail kites move widely throughout the primary wetlands of the central and southern portions of Florida. Snail kite nesting locations between 2001 and 2012 within south Florida are depicted in **FIGURE 8.** The Everglades snail kite is threatened primarily by habitat loss and destruction. Widespread drainage has permanently lowered the water table in some areas. This drainage permitted development in areas that were once Everglade snail kite habitat. In addition to loss of habitat through drainage, large areas of marsh are heavily infested with water hyacinth, which inhibits the Everglade snail kite's ability to see its prey.

The Everglade snail kite has a highly specialized diet typically composed of apple snails, which are found in palustrine, emergent, long-hydroperiod wetlands. As a result, the Everglade snail kite's survival is directly dependent on the hydrology and water quality of its habitat (USFWS 1999). Snail kites require foraging areas that are relatively clear and open in order to visually search for apple snails. Suitable foraging habitat for the Everglade snail kite is typically a combination of low profile marsh and a mix of shallow open water. Shallow wetlands with emergent vegetation such as spike rush (*Eleocharis* spp.), maidencane, sawgrass, and other native emergent wetland plant species provide good Everglade snail kite foraging habitat as long as the vegetation is not too dense to locate apple snails. Dense growth of plants reduces the ability of the Everglade snail kite to locate apple snails and their use of these areas is limited even when snails are in relatively high abundance (Bennetts et al. 2006). Areas of sparse emergent vegetation enable apple snails to climb near the surface to feed, breathe, and lay eggs and thus they are easily seen from the air by foraging Everglade snail kites. Suitable foraging habitats are often interspersed with tree islands or small groups of scattered shrubs and trees which serve as perching and nesting sites.

Snail kite nesting primarily occurs from December to July, with a peak in February-June, but can occur year-round. Nesting substrates include small trees such as willow, cypress (*Taxodium* spp.), and pond apple, and herbaceous vegetation such as sawgrass, cattail, bulrush (*Scirpus validus*), and reed (*Phragmites australis*). Snail kites appear to prefer woody vegetation for nesting when water levels are adequate to inundate the site (USFWS 1999). Nests are more frequently placed in herbaceous vegetation during periods of low water when dry conditions beneath willow stands (which tend to grow to at higher elevations) prevent Everglade snail kites from nesting in woody vegetation (USFWS 1999). Nest collapse is rare in woody vegetation but common in non-woody

vegetation, especially on lake margins (USFWS 1999). In order to deter predators, nesting almost always occurs over water (Sykes et al. 1995).

Snail kites construct nests using dry plant material and dry sticks, primarily from willow and wax myrtle (Sykes 1987), with a lining of green plant material that aids in incubation (USFWS 1999). Courtship includes male displays to attract mates and pair bonds form from late November through early June (USFWS 1999). Snail kites will lay between one and five eggs with an average of about three eggs per nest (Sykes 1995, Beissinger 1988). Each egg is laid at about a two-day interval with incubation generally commencing after the second egg is laid (Sykes 1987). Both parents incubate the eggs for a period of 24 to 30 days (Beissenger 1983). Hatching success is variable between years and between watersheds, but averages 2.3 chicks/nest (USFWS 1999, Cattau et al. 2008). February, March, and April have been identified as the most successful months for hatching (Sykes 1987). Snail kites may nest more than once within a breeding season and have been documented to renest after both failed and successful nesting attempts (Sykes 1987, Beissinger 1988). Chicks are fed by both parents through the nestling period although ambisexual mate desertion has been documented (USFWS 1999). Young fledge at approximately 9 to 11 weeks of age (Beissenger 1988). Adults forage no more than 6 kilometers from the nest, and generally less than a few hundred meters (Beissenger 1988, USFWS 1999). When food is scarce or ecological and hydrologic conditions are unfavorable, adults may abandon the nest altogether (Sykes et al. 1995).

The persistence of the Everglade snail kite in Florida depends upon maintaining hydrologic conditions that support the specific vegetative communities that compose their habitat along with sufficient apple snail availability across their range each year (Martin et al. 2008). Historically, WCA 3A has been a critical component within the Everglade snail kites' wetland network for foraging and reproduction. High water levels during the wet season are important in maintaining quality wet prairie and emergent slough habitat (USFWS 2010). High water levels and extended hydroperiods have resulted in vegetation shifts within WCA 3A, degrading Everglade snail kite critical habitat. This vegetation transition directly affects Everglade snail kites in several ways, most importantly by reducing the amount of suitable foraging and nesting habitat, and reducing prey abundance and availability. Wetter conditions reduce the amount of woody vegetation within the area upon which Everglade snail kites rely for nesting and perch hunting. In addition, prolonged hydroperiods reduce habitat structure in the form of emergent vegetation, which is critical for apple snail aerial respiration and egg deposition (Turner 1996, Darby et al. 1999). Drying events are essential in maintaining the mosaic of vegetation types needed by a variety of wetland fauna (Sklar et al. 2002), including the Everglade snail kite (USFWS 2010) and its primary food source, the apple snail (Karunaratne et al. 2006, Darby et al. 2008). However, little annual variation in water depths has occurred within WCA 3A since 1993, virtually eliminating the drying events necessary to maintain this mosaic. This is particularly apparent in southwestern WCA 3A, which has experienced excessive ponding in recent years.

Low water levels have an effect on Everglade snail kite nest success in WCA 3A (Cattau et al. 2008). If water levels become too low and food resources become too scarce, adults will abandon their nest sites and young (Sykes et al. 1995). Predation on nests is also higher when water levels are low. A strong relationship exists between annual minimum stage and juvenile Everglade snail kite survival rate (Martin et al. 2007, Cattau et al. 2008). Due to their inability to move large

distances, juvenile Everglade snail kites rely upon the marshes surrounding their nests for foraging. If water levels within these marshes become too low to support foraging (due to low apple snail availability), juvenile survival will be diminished.

Recent scientific information has indicated that apple snail egg production is maximized when dry season low water levels are less than 50 cm (was previously 40 centimeters) but greater than 10 cm (Darby et al. 2002, USFWS 2010). Water depths outside this range can significantly affect apple snail recruitment and survival. If water levels are less than 10 cm, apple snails cease movement and may become stranded, hence they are not only unavailable to foraging Everglade snail kites; they are also unable to successfully reproduce. Depending upon the timing and duration of the dry down, apple snail recruitment can be significantly affected by the truncation of annual egg production and stranding of juveniles (Darby et al. 2008). Since apple snails have a 1.0 to 1.5-year life span (Hanning 1979, Ferrer et al. 1990, Darby et al. 2008), they only have one opportunity (*i.e.* one dry season) for successful reproduction. Egg cluster production may occur from February to November (Odum 1957, Hanning 1979, Darby et al. 1999); however, approximately 77% of all apple snail egg cluster production occurs between April and June (Darby et al. 2008). Dry downs during peak apple snail egg cluster production substantially reduce recruitment (Darby et al. 2008). The length of the dry down, age, and size of the apple snail are all important factors in apple snail recruitment and survival. Larger apple snails can survive dry downs better than smaller apple snails (Kushlan 1975, Darby et al. 2006, 2008).

Critical habitat for the Everglade snail kite was designated September 22, 1977 (42 FR 47840 47845) and includes areas of land, water, and airspace within portions of the St. Johns Reservoir, Indian River County; Cloud Lake Reservoir, St. Lucie, County; Strazzulla Reservoir, St. Lucie County; western portions of Lake Okeechobee, Glades and Hendry counties; Loxahatchee National Wildlife Refuge (WCA 1), Palm Beach County; WCA 2A, Palm Beach and Broward counties; WCA 2B, Broward County; WCA 3A, Broward and Miami-Dade counties; and ENP to the Miami-Dade/Monroe County line (**FIGURE 9**). The designated area encompasses approximately 841,635 acres (340,598 hectares).

The Federal Action is expected to benefit WCA 3A by decreasing high water levels and prolonged periods of inundation. The temporary emergency operations at S-344 will allow flows to be removed from WCA 3 via gravity and be distributed, through the aid of rehabilitated canal plugs, as sheet flow to BCNP. Implementation of the Federal Action will facilitate additional regulatory releases from WCA 3A during the current period of extreme high water and is anticipated to result in the reduction of water levels within WCA 3A by approximately 0.1 feet. This estimate is based on the assumption of S-344 operating at a capacity of 200 cubic feet per second (cfs) for a period of 100 days (5 April to 15 July).

WCA 3A represents the largest and most consistently utilized portion of Everglade snail kite designated critical habitat. Over the past two decades, Everglade snail kites have shifted nesting activities to areas of higher elevation within WCA 3A in response to habitat degradation in traditional nesting areas resulting from prolonged high water levels. Nesting activity has shifted up the elevation gradient to the west, and has also moved south in response to recent increased drying rates, restricting current nesting to the southwest corner of WCA 3A. Temporary alleviation of extreme high water levels and prolonged inundation periods within WCA 3A may

provide increased foraging opportunities and increased potential for nesting. Wetter conditions reduce the amount of woody vegetation within the area upon which Everglade snail kites rely for nesting and perch hunting. In addition, prolonged hydroperiods reduce habitat structure in the form of emergent vegetation, which is critical for apple snail aerial respiration and egg deposition. Based on this information and the limited duration of the Federal Action, the Corps has determined that implementation of the Federal Action may affect, but is not likely to adversely affect this species and its designated critical habitat. The Corps will continue to rely upon the Increment 1 monitoring plan and will continue to implement Periodic Scientist Calls as outlined within the 2011 ERTP Final EIS.

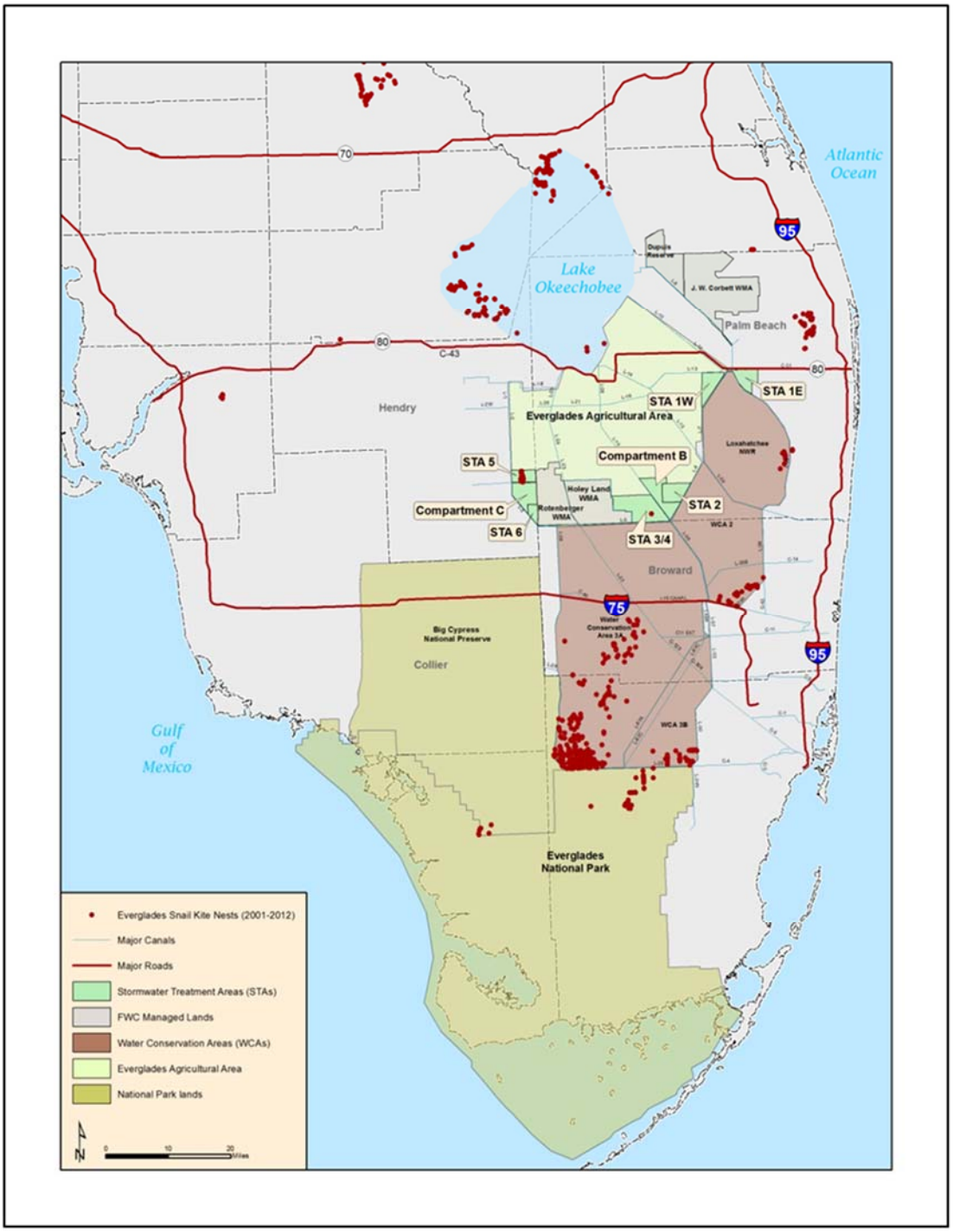

FIGURE 8. SNAIL KITE NESTING LOCATIONS BETWEEN 2001 AND 2012

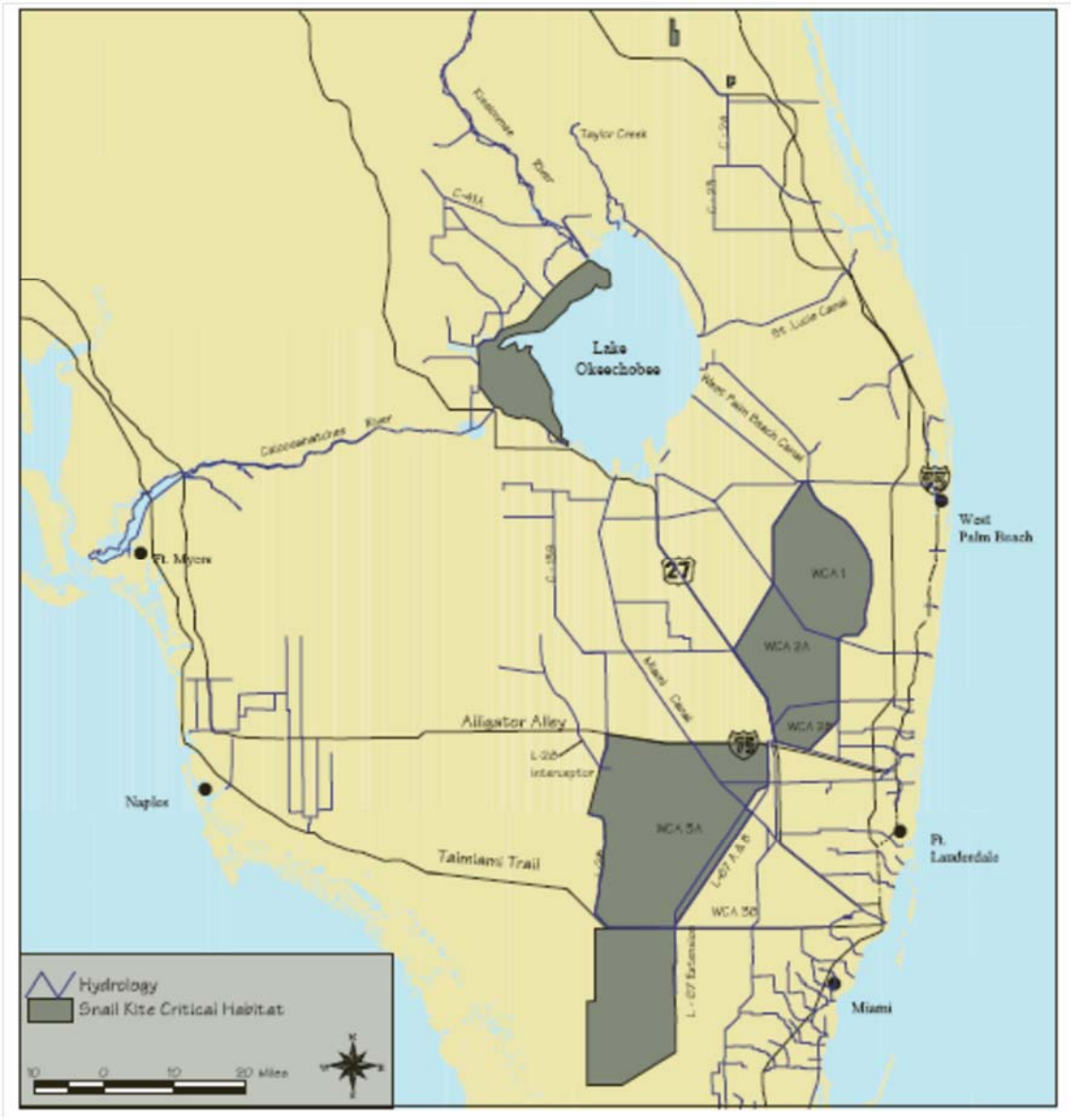

FIGURE 9. CRITICAL HABITAT FOR THE EVERGLADES SNAIL KITE

5.6 Piping Plover and "No Effect Determination"

The piping plover does not breed in Florida; breeding populations occur near the Great Lakes, the Northern Great Plains, and the Atlantic Coast. Piping plovers regularly winter in the south Florida counties of Broward, Collier, Indian River, Lee, Martin, Miami-Dade, Monroe, Palm Beach, St. Lucie, and Sarasota (Haig 1992). Piping plovers nest and feed along coastal sand and gravel beaches throughout North America. Due to lack of preferred wintering habitat within the project area, the Corps has determined that the Federal Action would have no effect on the piping plover.

5.7 Red-cockaded Woodpecker and "No Effect Determination"

Red-cockaded woodpeckers live in mature pine forests, specifically those with longleaf pines averaging 80 to 120 years old and loblolly pines averaging 70 to 100 years old. Destruction of its preferred long-leaf pine habitat by humans or disease (pines afflicted by fungus or red-ring rot) resulted in the woodpecker becoming listed as endangered in 1970. The current range is from eastern Texas to the southeastern United States and southern Florida. The red-cockaded woodpecker is primarily an upland species, also inhabiting hydric pine flatwoods. Elimination or modification to red-cockaded woodpecker habitat within the project area is not expected as conversion of upland habitat is not proposed. The Corps has determined that there would be no effect on this species from implementation of the Federal Action.

5.8 Roseate Tern and "No Effect Determination"

A coastal species, the roseate tern nests on open sandy beaches away from potential predation and human disturbance. This species feeds in near shore surf on small schooling fishes. In southern Florida, the roseate tern's main nesting areas are located in the Florida Keys and the Dry Tortugas where they nest on isolated islands, rubble islets, and dredge spoils. Due to the lack of appropriate habitat within the project area, the Corps has determined that there would be no effect on this species from implementation of the Federal Action.

5.9 Wood Stork and "May Affect Not Likely to Adversely Affect Determination"

The wood stork is a large, white, long-legged wading bird that relies upon shallow, freshwater wetlands for foraging. The wood stork is found from northern Argentina, eastern Peru and western Ecuador north to Central America, Mexico, Cuba, Hispaniola, and the southeastern United States (AOU 1983). Only the population segment that breeds in the southeastern United States is listed and on July 20, 2014 was upgraded from endangered to threatened status under ESA of 1973, as amended. In the United States, wood storks were historically known to nest in all coastal states from Texas to South Carolina (Wayne 1910, Bent 1926, Howell 1932, Oberholser 1938, Cone and Hall 1970, Oberholser 1938).

The primary cause of the wood stork population decline in the United States is loss of wetland habitats or loss of wetland function resulting in reduced prey availability. Almost any shallow wetland depression where fish become concentrated, either through local reproduction or receding water levels, may be used as feeding habitat by the wood stork during some portion of the year, but only a small portion of the available wetlands support foraging conditions (high prey density and favorable vegetation structure) that wood storks need to maintain growing nestlings.

Wood storks forage primarily within freshwater marsh and wet prairie vegetation types, but can be found in a wide variety of wetland types, as long as prey are available and the water is shallow and open enough to hunt successfully (Ogden et al. 1978, Coulter 1987, Gawlik and Crozier 2004, Herring and Gawlik 2007). Calm water, about 5 to 25 cm in depth, and free of dense aquatic vegetation is ideal, however, wood storks have been observed foraging in ponds up to 40 centimeters in depth (Coulter and Bryan 1993, Gawlik 2002). Typical foraging sites include freshwater marshes, ponds, hardwood and cypress swamps, narrow tidal creeks or shallow tidal pools, and artificial wetlands such as stock ponds, shallow, seasonally flooded roadside or agricultural ditches, and managed impoundments (Coulter et al. 1999, Coulter and Bryan 1993,

Herring and Gawlik 2007). During nesting, these areas must also be sufficiently close to the colony to allow wood storks to efficiently deliver prey to nestlings.

Wood storks feed almost entirely on fish between 2 and 25 cm (1 to 10 inches) in length (Kahl 1964, Ogden et al. 1976, Coulter 1987) but may occasionally consume crustaceans, amphibians, reptiles, mammals, birds, and arthropods. Wood storks generally use a specialized feeding behavior called tactilocation, or grope feeding, but also forage visually under some conditions (Kushlan 1979). Occasionally, wood storks stir the water with their feet in an attempt to startle hiding prey (Rand 1956, Kahl 1964, Kushlan 1979). This foraging method allows them to forage effectively in turbid waters, at night, and under other conditions when other wading birds that employ visual foraging may not be able to forage successfully.

Hydrologic and environmental characteristics have strong effects on fish density, and these factors may be some of the most significant in determining foraging habitat suitability, particularly in southern Florida. Within the wetland systems of southern Florida, the annual hydrologic pattern is very consistent, with water levels rising over three feet during the wet season (June-September), and then receding gradually during the dry season (October-May). Wood storks nest during the dry season, and rely on the drying wetlands to concentrate prey items in the ever-narrowing wetlands (Kahl 1964). Because of the continual change in water levels during the wood stork nesting period, any one site may only be suitable for wood stork foraging for a narrow window of time when wetlands have sufficiently dried to begin concentrating prey and making water depths suitable for storks to access the wetlands (Gawlik 2002, Gawlik et al. 2004). Once the wetland has dried to where water levels are near the ground surface, the area is no longer suitable for wood stork foraging, and will not be suitable until water levels rise and the area is again repopulated with fish. Consequently, there is a general progression in the suitability of wetlands for foraging based on their hydroperiods, with the short hydroperiod wetlands being used early in the season, the mid-range hydroperiod sites being used during the middle of the nesting season, and the longest hydroperiod areas being used later in the season (Kahl 1964, Gawlik 2002).

Wood storks generally forage in wetlands between 0.5 kilometer and 74.5 kilometer away from the colony site (Bryan and Coulter 1987, Herring and Gawlik 2007), but forage most frequently within 10-20 kilometer (12 miles) of the colony (Coulter and Bryan 1993, Herring and Gawlik 2007). Maintaining this wide range of feeding site options ensures sufficient wetlands of all sizes and varying hydroperiods are available, during shifts in seasonal and annual rainfall and surface water patterns, to support wood storks. Adults feed farthest from the nesting site prior to laying eggs, forage in wetlands closer to the colony site during incubation and early stages of raising the young, and then farther away again when the young are able to fly.

Wood stork nesting habitat consists of mangroves as low as 1 meter (3 feet), cypress as tall as 30.5 meters (100 feet), and various other live or dead shrubs or trees located in standing water (swamps) or on islands surrounded by relatively broad expanses of open water (Rodgers et al. 1997, Coulter et al. 1999). Wood storks nest colonially, often in conjunction with other wading bird species, and generally occupy the large-diameter trees at a colony site (Rodgers et al. 1995). **FIGURE 10** shows the locations of wood stork colonies throughout Florida. The same colony site will be used for many years as long as the colony is undisturbed and sufficient foraging habitat remains in the surrounding wetlands. However, not all wood storks nesting in a colony will return to the same

site in subsequent years (Kushlan and Frohring 1986). Natural wetland nesting sites may be abandoned if surface water is removed from beneath the trees during the nesting season (Rodgers et al. 1995). In response to this type of change to nest site hydrology, wood storks may abandon that site and establish a breeding colony in managed or impounded wetlands (Ogden 1991). Wood storks that abandon a colony early in the nesting season due to unsuitable hydrologic conditions may re-nest in other nearby areas (Borkhataria et al. 2004, Crozier and Cook 2004).

The wood stork life history strategy has been characterized as a "bet-hedging" strategy (Hylton et al. 2006) in which high adult survival rates and the capability of relatively high reproductive output under favorable conditions allow the species to persist during poor conditions and capitalize on favorable environmental conditions. This life-history strategy may be adapted to variable environments (Hylton et al. 2006) such as the wetland systems of southern Florida. Nest initiation date, colony size, nest abandonment, and fledging success of a wood stork colony vary from year to year based on availability of suitable wetland foraging areas, which can be affected by local rainfall patterns, regional weather patterns, and anthropogenic hydrologic management (Frederick and Ogden 2001). While the majority of wood stork nesting occurs within traditional wood stork rookeries, a handful of new wood stork nesting colonies are discovered each year (Meyer and Frederick 2004, SFWMD 2004, 2009). These new colony locations may represent temporary shifts of historic colonies due to changes in local conditions, or they may represent formation of new colonies in areas where conditions have improved.

Breeding wood storks are believed to form new pair bonds every season. First age of breeding has been documented in 3 to 4-year-old birds but the average first age of breeding is unknown. Eggs are laid as early as October in south Florida and as late as June in north Florida (Rodgers 1990, USFWS 1999). A single clutch of two to five (average three) eggs is laid per breeding season but a second clutch may be laid if a nest failure occurs early in the breeding season (Coulter et al. 1999). There is variation among years in the clutch sizes, and clutch size does not appear to be related to longitude, nest data, nesting density, or nesting numbers, and may be related to habitat conditions at the time of laying (Frederick 2009, Frederick et al. 2009). Egg laying is staggered and incubation, which lasts approximately 30 days, begins after the first egg is laid. Therefore, the eggs hatch at different times and the nestlings vary in size (Coulter et al. 1999). In the event of diminished foraging conditions, the youngest birds generally do not survive.

The young fledge in approximately eight weeks but will stay at the nest for three to four more weeks to be fed. Adults feed the young by regurgitating whole fish into the bottom of the nest about three to ten times per day. Feedings are more frequent when the birds are young (Coulter et al. 1999). When wood storks are forced to fly great distances to locate food, feedings are less frequent (Bryan et al. 1995). The total nesting period from courtship and nest-building through independence of young, lasts approximately 100 to 120 days (Coulter et al. 1999). Within a colony, nest initiation may be asynchronous, and consequently, a colony may contain active breeding wood storks for a period significantly longer than the 120 days required for a pair to raise young to independence. Adults and independent young may continue to forage around the colony site for a relatively short period following the completion of breeding. Appropriate water depths for successful foraging are particularly important for newly fledged juveniles (Borkhataria et al. 2008).

Receding water levels are necessary in south Florida to concentrate suitable densities of forage fish (Kahl 1964, Kushlan et al. 1975) to sustain successful wood stork nesting. During the period when a nesting colony is active, wood storks are dependent on consistent foraging opportunities in wetlands within their core foraging area (30 kilometer radius, USFWS 2010) surrounding a nest site. The greatest energy demands occur during the middle of the nestling period, when nestlings are 23 to 45 days old (Kahl 1964). The average wood stork family requires 201 kilograms (443 pounds) of fish during the breeding season, with 50 percent of the nestling stork's food requirement occurring during the middle third of the nestling period (Kahl 1964). Although the short hydroperiod wetlands support fewer fish and lower fish biomass per unit area than long hydroperiod wetlands, these short hydroperiod wetlands were historically more extensive and provided foraging areas for wood storks during colony establishment, courtship and nest-building, egg-laying, incubation, and the early stages of nestling provisioning.

The annual climatological pattern that appears to stimulate the heaviest nesting efforts by wood storks is a combination of the average or above-average rainfall during the summer rainy season prior to colony formation and an absence of unusually rainy or cold weather during the following winter-spring nesting season. This pattern produces widespread and prolonged flooding of summer marshes that maximizes production of freshwater fishes, followed by steady drying that concentrates fish during the dry season when storks nest (Kahl 1964, Frederick et al. 2009). However, frequent heavy rains during nesting can cause water levels to increase rapidly. The abrupt increases in water levels during nesting, termed reversals (Crozier and Gawlik 2004), may cause nest abandonment, re-nesting, late nest initiation, and poor fledging success. Abandonment and poor fledging success was reported to have affected most wading bird colonies in southern Florida during 2004, 2005 and 2008 (Crozier and Cook 2004, Cook and Call 2005, SFWMD 2008).

Following the completion of the nesting season, both adult and fledgling wood storks generally begin to disperse away from the nesting colony. Fledglings have relatively high mortality rates within the first six months following fledging, most likely as a result of their lack of experience, including the selection of poor foraging locations (Hylton et al. 2006, Borkhataria et al. 2008). Post-fledging survival also appears to be variable among years, probably reflecting the environmental variability that affects wood storks and their ability to forage (Hylton et al. 2006, Borkhataria et al. 2008).

The original Everglades ecosystem, including the WCAs, provided abundant primary and secondary wading bird production during the summer and fall months (Holling et al. 1994). This productivity was concentrated during the dry season when water levels receded. The concentrations of food provided ideal foraging habitat for numerous wetlands species, especially large flocks of wading birds (Bancroft 1989, Ogden 1994). However, the hydrology of the Everglades ecosystem and WCA 3A has been severely altered by extensive drainage and the construction of canals and levees (Abbott and Nath 1996). The resulting system is not only spatially smaller, but also drier than historical levels (Walters et al. 1992). Breeding populations of wading birds have responded negatively to the altered hydrology (Ogden 1994, Kushlan and Fohring 1986, Bancroft 1989).

Wood stork colonies exist within the main action area (**FIGURE 10**). The Federal Action is expected to benefit WCA 3A by decreasing high water levels and prolonged periods of inundation.

The temporary emergency operations at S-344 will allow flows to be removed from WCA 3 via gravity and be distributed, through the aid of rehabilitated canal plugs, as sheet flow to BCNP. Implementation of the Federal Action will facilitate additional regulatory releases from WCA 3A during the current period of extreme high water and is anticipated to result in the reduction of water levels within WCA 3A by approximately 0.1 feet. This estimate is based on the assumption of S-344 operating at a capacity of 200 cubic feet per second (cfs) for a period of 100 days (5 April to 15 July). Wood storks nest during the dry season, and rely on the drying wetlands to concentrate prey items in the ever-narrowing wetlands. However, frequent heavy rains during nesting can cause water levels to increase rapidly. The abrupt increases in water levels during nesting, termed reversals (Crozier and Gawlik 2004), may cause nest abandonment, re-nesting, late nest initiation and poor fledging success. A potential decrease in high water levels and prolonged periods of inundation in WCA 3A and a subsequent increase in hydroperiods within BCNP, may provide an overall net benefit for wood stork foraging suitability and nesting opportunities. Based on this information and the limited duration of the Federal Action, the Corps has determined that implementation of the Federal Action may affect but is not likely to adversely affect this species. The Corps will continue to rely upon the Increment 1 monitoring plan and will continue to implement Periodic Scientist Calls as outlined within the 2011 ERTP Final EIS.

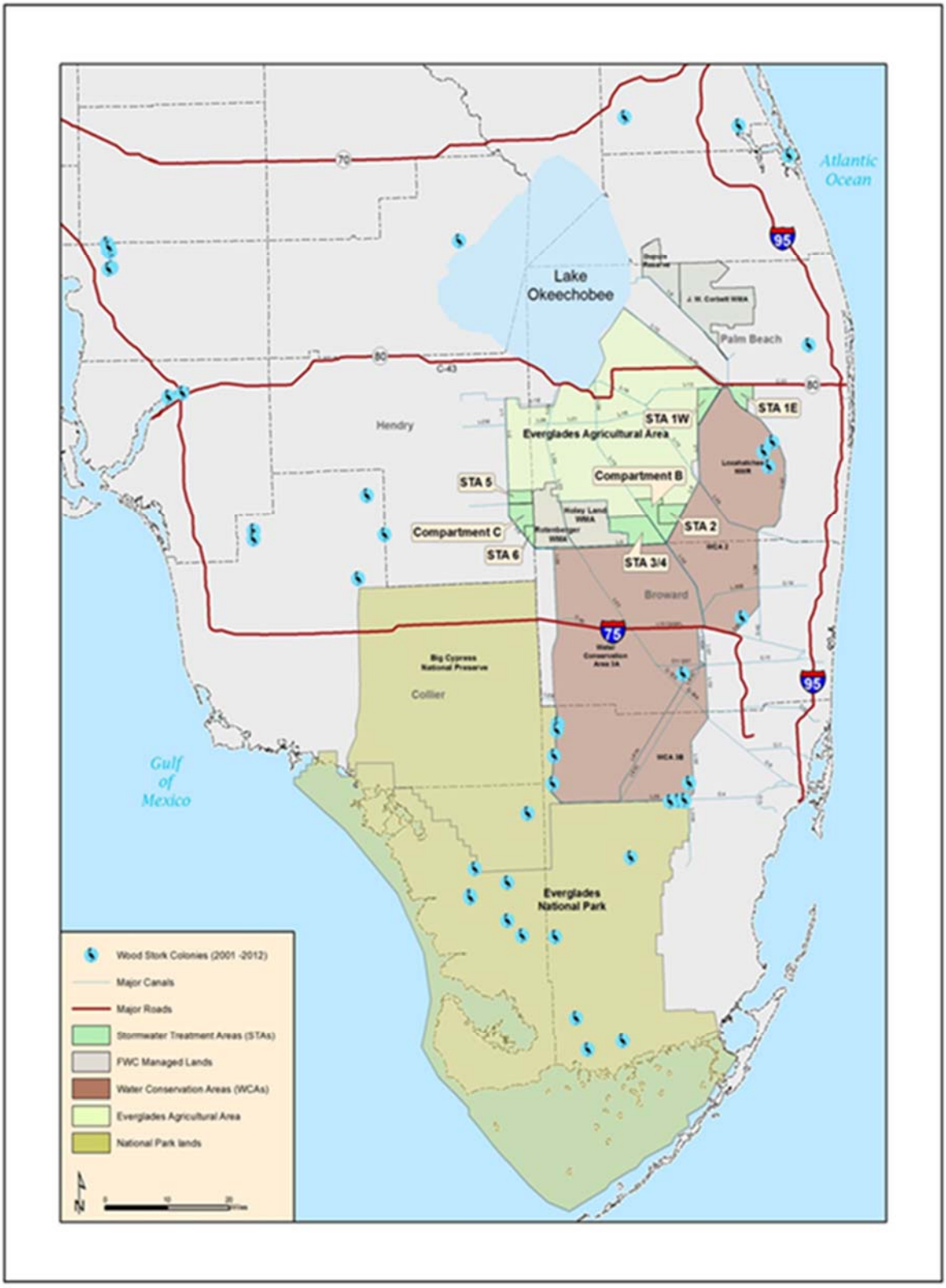

FIGURE 10. LOCATION OF WOODSTORK COLONIES IN SOUTH FLORIDA BETWEEN 2001 AND 2012

5.10 American Alligator and "No Effect Determination"

The American alligator is listed as threatened by the USFWS due to similarity of appearance to the American crocodile, an endangered species. A keystone species within the Everglades ecosystem, the American alligator is dependent on spatial and temporal patterns of water fluctuations that affect courtship and mating, nesting, and habitat use (Brandt and Mazzotti 2000). Historically, American alligators were most abundant in the peripheral Everglades marshes and freshwater mangrove habitats, but are now most abundant in canals and the deeper slough habitats of the central Everglades. Water management practices including drainage of peripheral wetlands and increasing salinity in mangrove wetlands as a result of decreased freshwater flows has limited occurrence of American alligators in these habitats (Craighead 1968, Mazzotti and Brandt 1994). The Federal Action is expected to benefit WCA 3A by decreasing high water levels and prolonged periods of inundation. Elimination or modification of American alligator habitat is not expected under the Federal Action. The Corps has determined that there would be no effect on this species from the implementation of the Federal Action.

5.11 American Crocodile and Critical Habitat and "No Effect Determination"

American crocodiles are known to exist throughout the project area, specifically around the coastal fringes from Miami to the bottom of the peninsula and up around Naples (Cherkiss 1999). The cooling canals of Florida Power and Light's Turkey Point Power Plant support the most successful crocodile nesting population in south Florida (Mazzotti et al. 2007). These cooling canals offer premium nesting habitat because they satisfy the crocodile's two primary nesting requirements – suitable substrate above the normal high water level and adjacent deep-water refugia. While crocodiles prefer sandy substrates, they will often utilize canal spoil banks (Kushlan and Mazzotti 1989). The ideal salinity range for American crocodiles is 0 to 20 psu (Moler 1992, Mazzotti 1999, Mazzotti et al. 2007).

The American crocodile's critical habitat includes all land and water within the following boundary: beginning at the easternmost tip of Turkey Point, Dade County, on the coast of Biscayne Bay; then southeastward along a straight line to Christmas Point at the southernmost tip of Elliott Key; then southwestward along a line following the shores of the Atlantic Ocean side of Old Rhodes Key, Palo Alto Key, Anglefish Key, Key Largo, Plantation Key, Windley Key, Upper Matecumbe Key, Lower Matecumbe Key, and Long Key; then to the westernmost tip of Middle Cape; then northward along the shore of the Gulf of Mexico to the north side of the mouth of Little Sable Creek; then eastward along a straight line to the northernmost point of Nine-Mile Pond; then northeastward along a straight line to the point of beginning (**FIGURE 11**).

The Federal Action is anticipated to result in the reduction of water levels within WCA 3A by approximately 0.1 feet. This estimate is based on the assumption of S-344 operating at a capacity of 200 cubic feet per second (cfs) for a period of 100 days (5 April to 15 July). The resulting discharge into BCNP would be approximately 40,000 acre-feet of water over the time frame from 5 April to 15 July. The primary impact of the Federal Action within BCNP will be to lengthen the hydroperiod in the area immediately south of the L-28 Tieback Levee, aiding in the restoration of historic hydrologic conditions for the duration of the temporary emergency deviation. The Federal Action is not expected to affect downstream estuaries currently utilized by the American Crocodile. The Corps has determined that there would be no effect on the Florida manatee and its designated critical habitat from implementation of the Federal Action.

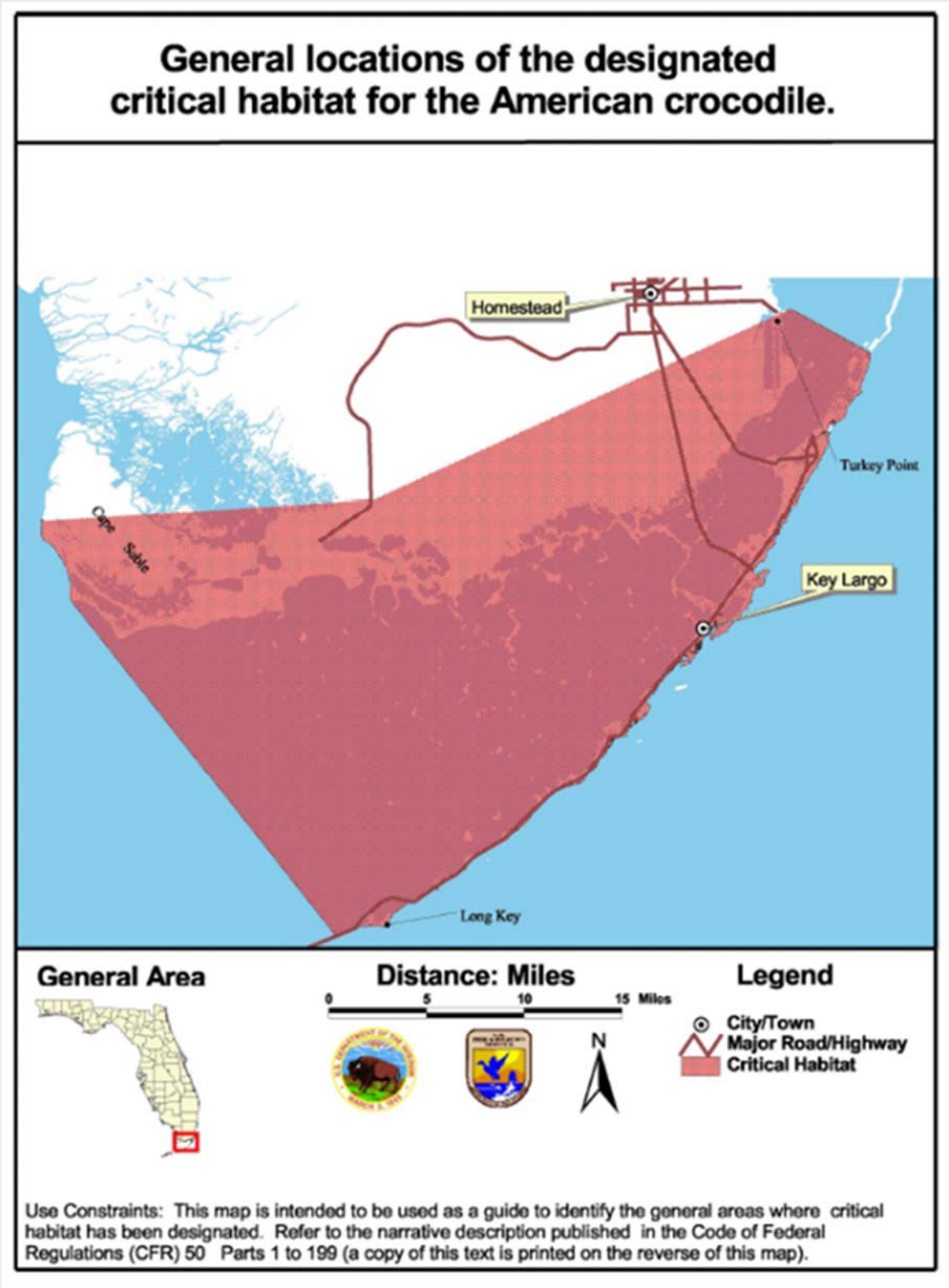

FIGURE 11. AMERICAN CROCODILE CRITICAL HABITAT

5.12 Eastern Indigo Snake and "No Effect Determination"

Eastern indigo snakes were listed as threatened in 1978 due primarily to habitat loss due to development. Further, as habitats become fragmented by roads, Eastern indigo snakes become increasingly vulnerable to highway mortality as they travel through their large territories (Schaefer and Junkin 1990). Declines in Eastern indigo snake populations were also due to over-collection by the pet trade and mortality caused by rattlesnake collectors who gas gopher tortoise burrows to collect snakes (USFWS 2013).

The Eastern indigo snake is the largest native non-venomous snake in North America, reaching lengths of up to 8.5 feet (Moler 1992). It is an isolated subspecies occurring in southeastern Georgia and throughout peninsular Florida. The Eastern indigo snake prefers drier habitats, but may be found in a variety of habitats including pine flatwoods, scrubby flatwoods, floodplain edges, sand ridges, dry glades, tropical hammocks, edges of freshwater marshes, muckland fields, coastal dunes, cabbage palm hammocks, and xeric sandhill communities (Schaefer and Junkin 1990, USFWS 1999). Eastern indigo snakes also use agricultural lands and various types of wetlands. Observations over the last 50 years made by maintenance workers in citrus groves in east-central Florida indicate that eastern indigo snakes are most frequently observed near the canals, roads, and wet ditches (USFWS 2013). It is anticipated that eastern indigo snakes would be present in sugarcane fields since one of their prey species; the King snake (*Lampropeltis getula floridanus*) has been previously documented in sugarcane fields (Krysko 2002, USFWS 2013). Eastern indigo snakes need relatively large areas of undeveloped land to maintain their population. In general, adult males have larger home ranges than females or juveniles. In Florida, Smith (2003) indicated that female and male home ranges extend from 5 to 371 acres and 4 to 805 acres, respectively.

In south Florida, the Eastern indigo snake is thought to be widely distributed. Given their preference for upland habitats (Steiner et al. 1983), Eastern indigo snakes are not commonly found in great numbers in the wetland complexes of the Everglades region, even though they may be found in pinelands, tropical hardwood hammocks, and mangrove forests in extreme south Florida (Duellman and Schwartz 1958, Steiner et al. 1983). They prefer dry, well drained sandy soils, and commonly use burrows and other natural holes as dens. Steiner et al. (1983) also reported that Eastern indigo snakes inhabit abandoned agricultural land and human-altered habitats in south Florida which would include levees within the WCAs. The Federal Action is an operational plan that is expected to benefit WCA 3A by reducing high water levels and prolonged periods of inundation. The Federal Action is also expected to increase flows to BCNP. The temporary emergency deviation is not expected to have significant effects on the upland habitats preferred by this species. No construction is proposed. The Corps has determined that there would be no effect on this species from the implementation of the Federal Action.

5.13 Bartram's Hairstreak Butterfly and Florida Leafwing Butterfly and "No Effect Determination"

Bartram's hairstreak butterfly occurs only within pine rocklands that retain its only known host plant, pineland cotton. The species is known only from pine scrub on Big Pine Key and in ENP. The species population appears to be in decline and may be subject to predation by invasive ant species.

The Florida leafwing is a medium-sized butterfly. The upper-wing (or open wing) surface color is red to red-brown, the underside (closed wings) is gray to tan, with a tapered outline, cryptically looking like a dead leaf when the butterfly is at rest. The Florida leafwing exhibits sexual dimorphism, with females being slightly larger and with darker coloring along the wing margins than the males. The Florida leafwing occurs only within pine rocklands that retain its host plant, pineland croton. Pineland croton, a subtropical species of Antillean origin, is the only known host plant for the leafwing.

Within the project area, pine rocklands occur on the Miami Rock Ridge and extend into the Everglades and Long Pine Key. These listed species have the potential to occur within the rocky glades surrounding the Frog Pond Detention Area as potentially suitable habitat is present. Potential effects of the Federal Action are located within WCA 3A, BCNP and western ENP, and are located west of potentially suitable habitat for the above species. The Corps has determined that there would be no effect on this species from the implementation of the Federal Action.

5.14 Miami Blue Butterfly and "No Effect Determination"

The Miami blue is a small butterfly endemic to Florida. The Miami blue has a forewing length of 10 to 13 millimeters. Males and females are both bright blue dorsally, but females have an orange eyespot near their hind wing. Both sexes have a gray underside with four black spots. The Miami blue butterfly occurs at the edges of tropical hardwood hammocks, beachside scrub, and occasionally in rockland pine forests. Larval host plants include the seed pods of nickerbeans (*Caesalpinia spp.*), blackbeards (*Pithecellobium spp.*), and balloon vine (*Cardiospermum halicababum*), a non-native species. Adults feed on the nectar of Spanish needles (*Bidens pilosa*), cat tongue (*Melanthera aspera*), and other weedy flowers near disturbed hammocks. Primarily a south Florida coastal species, the Miami blue's historic distribution ranged as far north as Hillsborough County on the Gulf Coast and Volusia County on the Atlantic Coast and extended south to the Florida Keys and the Dry Tortugas (FWC 2013). The butterfly was thought to be extinct following Hurricane Andrew in 1992, but was observed in November 1999 at Bahia Honda State Park in the Florida Keys. More than 329 surveys conducted at locations in mainland Florida and the Keys have failed to detect other colonies of this species. The Corps has determined that the Federal Action would have no effect on the Miami blue Butterfly.

5.15 Schaus Swallowtail Butterfly and "No Effect Determination"

The Schaus swallowtail butterfly is a large dark brown and yellow butterfly originally listed as an endangered species because of population declines caused by the destruction of its tropical hardwood hammock habitat, mosquito control practices, and over-harvesting by collectors. Schaus swallowtail butterfly distribution is limited to tropical hardwood hammocks and is concentrated in the insular portions of Miami-Dade and Monroe counties, from Elliott Key in Biscayne National Park and associated smaller Keys to central Key Largo (USFWS 1999). It is estimated that remaining suitable habitat for this species is 43% of the historical suitable habitat in Biscayne National Park and 17 percent for north Key Largo. The decline has been attributed primarily to habitat destruction (USFWS 1999). Due to the lack of preferred subtropical hardwood hammock habitat in the main action area, the Corps has determined that the Federal Action would have no effect on the Schaus swallowtail butterfly.

5.16 Stock Island Tree Snail and "No Effect Determination"

The arboreal Stock Island tree snail inhabits hardwood hammocks consisting of tropical trees and shrubs such as gumbo limbo, mahogany, ironwood, poisonwood, marlberry and wild coffee, among others. The historic distribution of the Stock Island tree snail was thought to be limited to hardwood hammocks on Stock Island and Key West and possibly other lower Keys hammocks. Recently, the range of this species has been artificially extended through the actions of collectors who have introduced it to Key Largo and the southernmost reaches of the mainland. At present, this snail occupies six sites outside of its historic range including ENP and BCNP. Due to the lack of preferred subtropical hardwood hammock habitat in the main action area, the Corps has determined that the Federal Action would have no effect on this species.

5.17 Crenulate Lead Plant and "No Effect Determination"

A perennial, deciduous shrub, the crenulate lead-plant is endemic to Miami-Dade County. Agricultural, urban and commercial development within Miami-Dade County have destroyed approximately 98-99% of the pine rockland communities where this species occurred, prompting the USFWS to list the crenulate lead-plant as endangered in 1985 (USFWS 1999). Other threats to the continued existence of this species include fire suppression, drainage and exotic plant invasion. Its present distribution is restricted to eight known locations within a 20-square mile area from Coral Gables to Kendall, Miami-Dade County. Four of the known sites are within public parks managed by the Miami-Dade County Parks Department (USFWS 1999). As the crenulate lead-plant is not known to occur within the action area, the Corps has determined that the Federal Action will have no effect on this species.

5.18 Deltoid Spurge, Garber's Spurge, Small's Milkpea, Tiny Polygala and "No Effect Determination"

Pine rocklands are the primary habitat for deltoid spurge, Garber's spurge, Small's milkpea, and tiny polygala. This community occurs on areas of relatively high elevation and consequently, has been subject to intense development pressure. In addition, pine rocklands are a fire-maintained community and require regular burns to maintain the open shrub/herbaceous stratum and to control hardwood encroachment (Gunderson 1997). Fire suppression, fragmentation, invasion by exotic species, and a lowered water table have negatively affected the remaining tracts of pine rocklands, prompting the listing of these species under the Endangered Species Act (ESA) (USFWS 1999).

Pine rocklands occur on the Miami Rock Ridge and extend into the Everglades and Long Pine Key. These listed plant species have the potential to occur within the rocky glades surrounding the Frog Pond Detention Area as potentially suitable habitat is present. Potential effects of the Federal Action are located within WCA 3A, BCNP and western ENP, and are located west of potentially suitable habitat for the above species. The Corps has determined that the implementation of the Federal Action will have no effect on these species.

5.19 Okeechobee Gourd and "No Effect Determination"

The Okeechobee gourd is a climbing annual or perennial vine. The cream-colored flowers are bell-shaped and the light green gourd is globular or slightly oblong. The Okeechobee gourd was locally common in the extensive pond apple forest that once grew south of Lake Okeechobee. Historically, the Okeechobee gourd was found on the southern shore of Lake Okeechobee in Palm

Beach County and in the Everglades. Currently this species is limited to two disjunct populations, one along the St. Johns River in Volusia, Seminole, and Lake Counties in northern Florida and a second around the shoreline of Lake Okeechobee in south Florida (USFWS 1999). The conversion of the pond apple forested swamps and marshes for agricultural purposes as well as water-level regulation within Lake Okeechobee have been the principal causes of the reduction in both range and number of the Okeechobee gourd. As the Okeechobee gourd is not known to occur within WCA 3A, BCNP, or western ENP, the Corps has determined that the Federal Action will have no effect on this species.

5.20 Big Pine Partridge Pea, Blodgett's silverbush, Sand Flax and "No Effect Determination"

Big Pine partridge pea, sand flax, and Blodgett's silverbush, are part of the imperiled pine rockland flora found only in the United States in extreme south Florida and the Lower Florida Keys. Big Pine partridge pea is currently found on two islands in the Florida Keys (Big Pine Key and Cudjoe Key), both of which part of the National Key Deer Refuge. Sand flax occurs in pine rocklands and adjacent disturbed areas in the Lower Florida Keys and Miami-Dade County. Blodgett's silverbush occurs primarily in pine rocklands, but also on the edges of hardwood hammock, coastal berm, and adjacent disturbed areas in the Florida Keys and Miami-Dade County.

Pine rocklands occur on the Miami Rock Ridge and extend into the Everglades as Long Pine Key. These listed plant species have the potential to occur within the rocky glades surrounding the Frog Pond Detention Area as potentially suitable habitat is present. Potential effects of the Federal Action are located within WCA 3A, BCNP and western ENP, and are located west of potentially suitable habitat for the above species. The Corps has determined that the implementation of the Federal Action may affect, but is not likely to adversely affect, these species.

5.21 Cape Sable Thoroughwort and Critical Habitat and "No Effect Determination"

The Cape Sable thoroughwort is endemic to south Florida, and is a flowering perennial herb that is 8-40 inches tall. The Cape Sable thoroughwort was historically known from Monroe County, both on the Florida mainland and the Florida Keys, and in Miami-Dade County along Florida Bay. The current range of the species includes areas in ENP and five islands in the Florida Keys. It occurs throughout coastal rock barrens and berms and sunny edges of rockland hammock. The decline of the species is primarily the result of habitat loss from commercial and residential development, sea level rise, storms, competition from non-native plants, predation by non-native herbivores, and wildfires. Critical habitat for the species occurs in nine separate units across approximately 10,968 acres of Miami-Dade and Monroe Counties. The nine units are: 1) ENP, 2) Key Largo, 3) Upper Matecumbe Key, 4) Lignumvitae Key, 5) Lower Matecumbe Key, 6) Long Key, 7) Big Pine Key, 8) Big Munson Island, and 9) Boca Grande Key. Seven of the nine units are currently occupied by the plant. The Federal Action is not expected to affect coastal rock barrens; therefore, the Corps has determined that the Federal Action will have no effect on this species or its designated critical habitat.

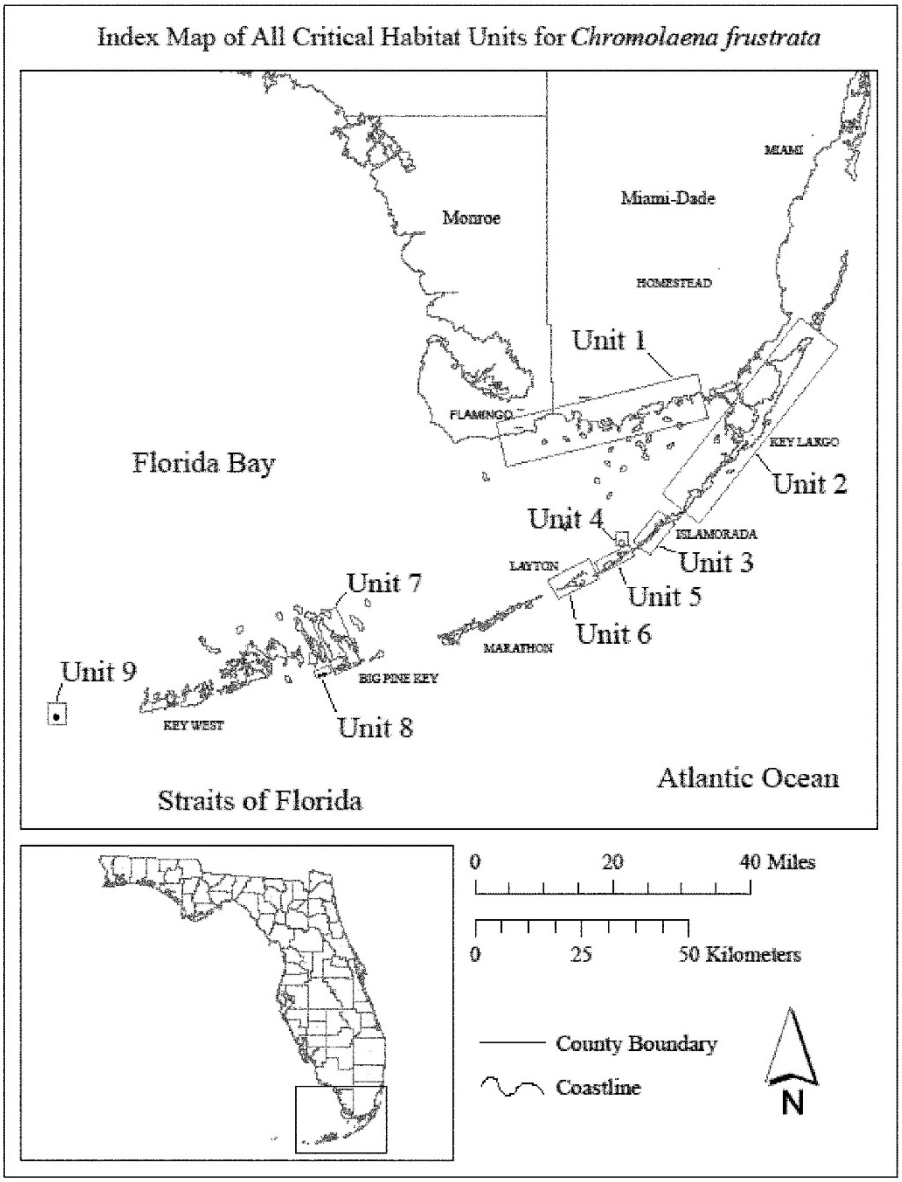

FIGURE 12. CAPE SABLE THOROUGHWORT CRITICAL HABITAT

5.22 Carters Small-Flowered Flax and Florida Brickell-Bush and "No Effect Determination"

Carter's small-flowered flax and Florida brickell-bush are endemic to the pine rocklands of the Miami Rock Ridge in Miami-Dade County. Both species grow exclusively on the Miami Rock Ridge outside the boundaries of ENP (79 FR 52567; September 4, 204). Carter's small-flowered flax is an annual or short-lived perennial herb and was first collected between coconut Grove and Cutler areas of Miami. It is currently found from R. Hardy Matheson Preserve southwest to Naranja/Modello, with a distance of approximately 27.3 km between the farthest locations.

Florida brickell-bush is a perennial herb and was known to historically occur from central and southern Miami-Dade County from approximately Coconut Grove to Florida City, although the full extent of its historical range is unknown. Florida brickell-bush is currently distributed from central and southern Miami-Dade County from SW 120 Street to Florida City. Little research has been done into the demography, reproductive biology, or genetics of the species.

Field observations indicate the species does not usually occur in great abundance. Populations are typically sparse and contain a low density of plants even in well-maintained pine rockland habitat. Carter's small-flowered flax and Florida brickell-bush have experienced substantial destruction, modification, and curtailment of their habitat and range. Specific treats to these plants include habitat loss, fragmentation, and modification cause by development (i.e. conversion to both urban and agricultural land uses) and inadequate fire management. Only small and fragmented occurrences of these two plants remain. The current ranges span such a small geographic area – a narrow band no more than 4.0 km in width, and approximately 30.1 km in length, respectively, along the Miami Rock Ridge.

Pine rocklands occur on the Miami Rock Ridge and extend into the Everglades as Long Pine Key. Potential effects of the Federal Action are located within WCA 3A, BCNP and western ENP, and are located west of potentially suitable habitat for the above species. The Corps has determined that the implementation of the Federal Action will have no effect on these species. Critical habitat for the species has been designated; however, designated critical habitat occurs outside the project area (**FIGURE 13** and **FIGURE 14**). The Corps has determined that the implementation of the Federal Action will have no effect on the designated critical habitat of these species.

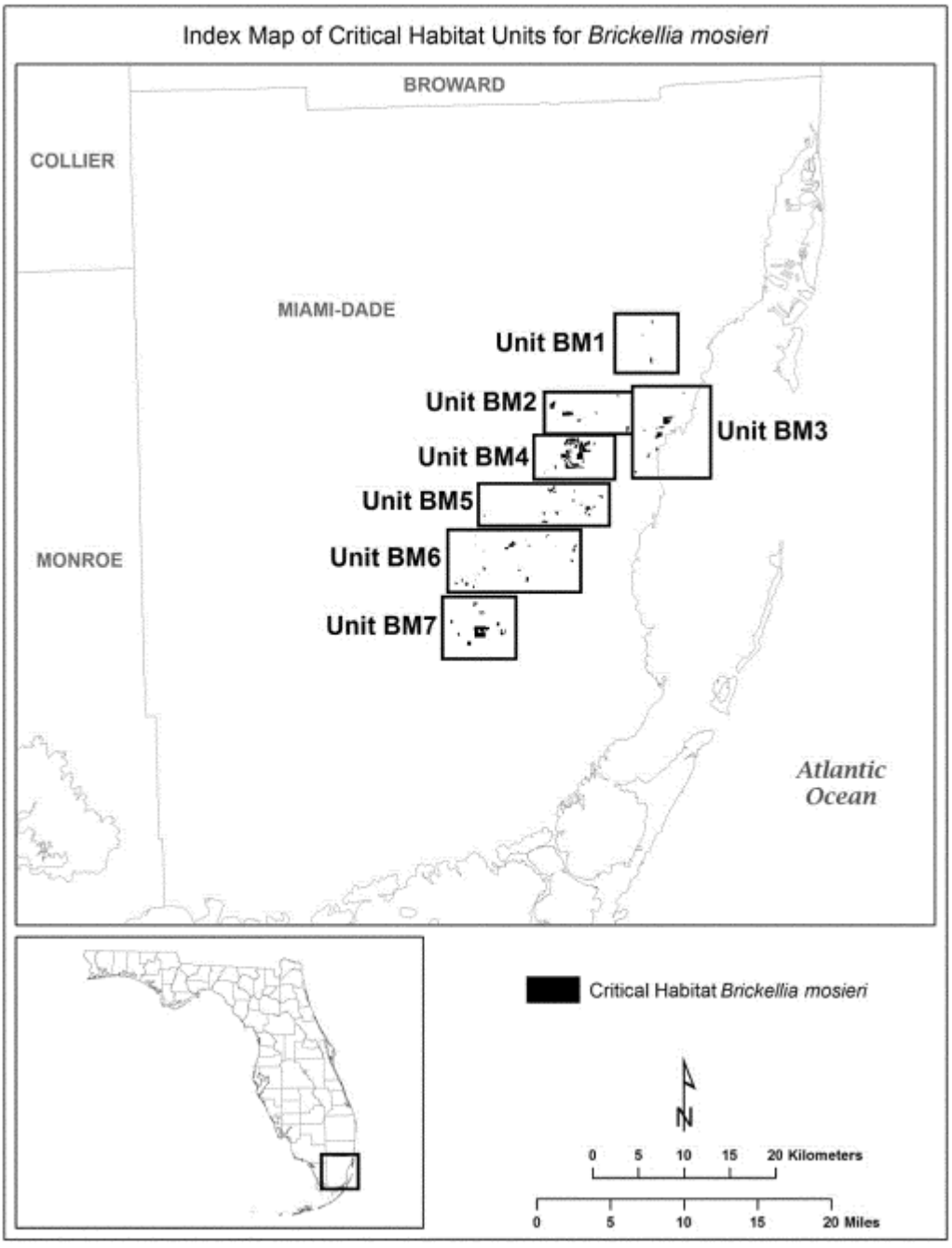

FIGURE 13. FLORIDA BRICKELL-BUSH CRITICAL HABITAT

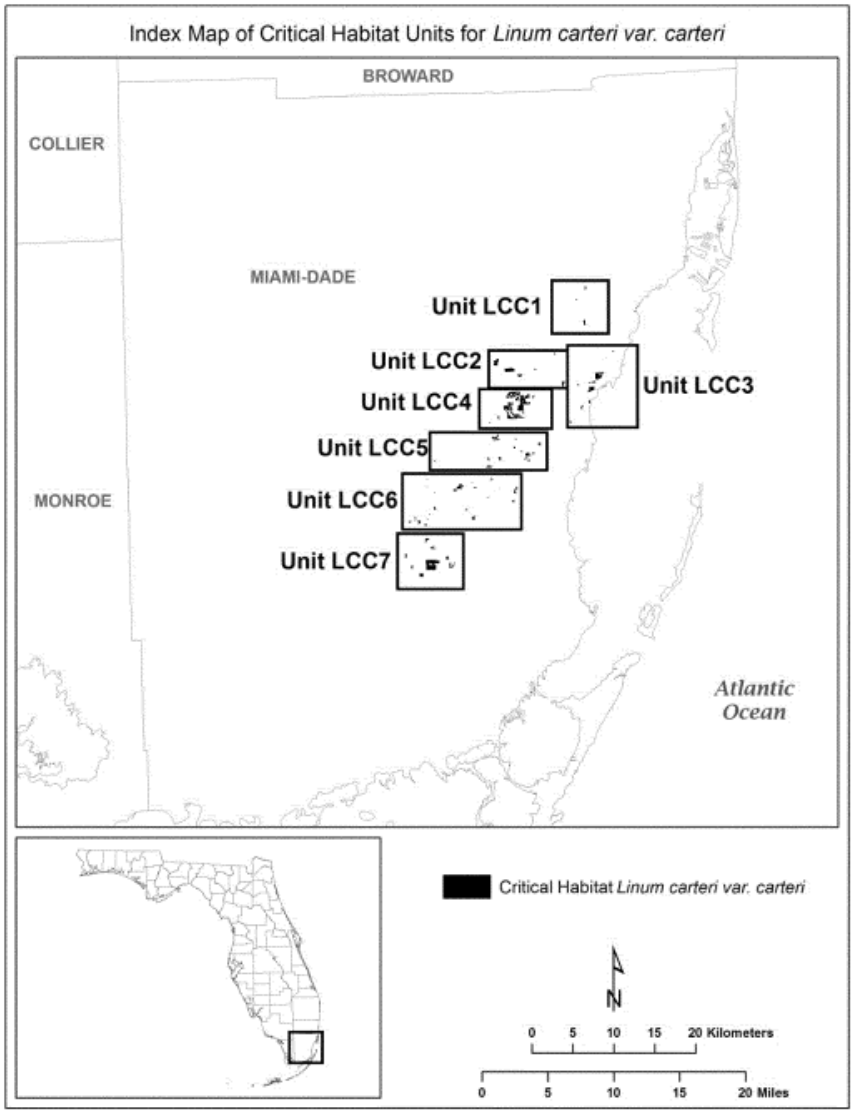

FIGURE 14. CARTERS SMALL-FLOWERED FLAX CRITICAL HABITAT

5.23 Florida Bristle Fern and "No Effect Determination"

The Florida bristle fern is very small in size and superficially resembles other bryophytes, such as mosses and liverworts, making it difficult to observe in its natural habitat. It is mat forming, has no roots, and contains trichomes (hairlike/bristelike outgrowth) on the tip of the fern. In southeastern North America, *Trichomanes spp.* are considered rare because of their delicate nature and requirements for deeply sheltered habitats with almost continuous high moisture and humidity (Farrar 1993b, Zots and Buche 2000). In Florida, the sub-species is only known to occur in Miami-Dade and Sumter Counties. In Miami-Dade County, the Florida bristle-fern is generally epiphytic (a plant that grows non-parasitically upon another plant) or epipetric (growing on rocks), typically growing in rocky outcrops of rockland hammocks, in oolitic limestone solution holes, and, occasionally, on tree roots in limestone surrounded areas (Philips 1940, Nauman 1986, Whitney et al. 2004, Possley 2013f, Van der Heiden 2014b). In Miami-Dade, the historical range of the subspecies extended from Royal Palm Hammock (now in ENP) at its southern limit, northeast to

Snapper Creek Hammock, which is located in R. Hardy Matheson Preserve. The four populations that constitute the Miami Dade County metapopulation are located in urban preserves managed by the County's Environmentally Endangered Lands Program and include Castellow Hammock Park, Hattie Bauer Hammock, Fuchs Hammock Preserve, and Meissner Hammock. Factors affecting the sub-species include habitat modification and destruction caused by human population growth and development.

Pine rocklands occur on the Miami Rock Ridge and extend into the Everglades as Long Pine Key. Potential effects of the Federal Action are located within WCA 3A, BCNP and western ENP, and are located west of potentially suitable habitat for the above species. The Corps has determined that the implementation of the Federal Action will have no effect on these species. Systematic surveys completed in ENP over the years have not been able to find the Florida bristle fern (79 FR 61148; October 9, 2014).

5.24 Florida Semaphore Cactus and Critical Habitat and "No Effect Determination"

The Florida semaphore cactus is a prickly pear cactus endemic to the Florida Keys. Historically, the Florida semaphore cactus was known from Key Largo and Big Pine Key (Barnhardt 1935), but development has destroyed these populations. The only "wild' population remaining is located in a Nature Conservancy preserve in the middle Keys. Several out plantings by Fairchild Tropical Garden and the University of South Florida were made in the late 1990s. Fairchild Tropical Gardens planted less than 200 cacti on Key Largo and Big Pine Key, the majority of which have died. The University of South Florida planted 240 cacti on Big Pine Key, Upper Sugarloaf Key, No Name Key, Little Torch Key, Ramrod Key, and Cudjoe Key. At least 3/4 of cacti planted by the University of Florida have been lost to damage from the introduced exotic cactus moths (Lippencott 1990). Threats to the species include habitat destruction due to development, collection of the species by cactus enthusiasts, introduction of the exotic cactus moth (*Cactoblastis cactorum*), salt water intrusion, lack of genetic diversity, and pathogens. Designated critical habitat for the Florida semaphore cactus is found in Miami-Dade and Monroe Counties (**FIGURE 15**). Critical habitat is located outside the immediate project area. The Corps has determined that the Federal Action will have no effect on this species and its designated critical habitat.

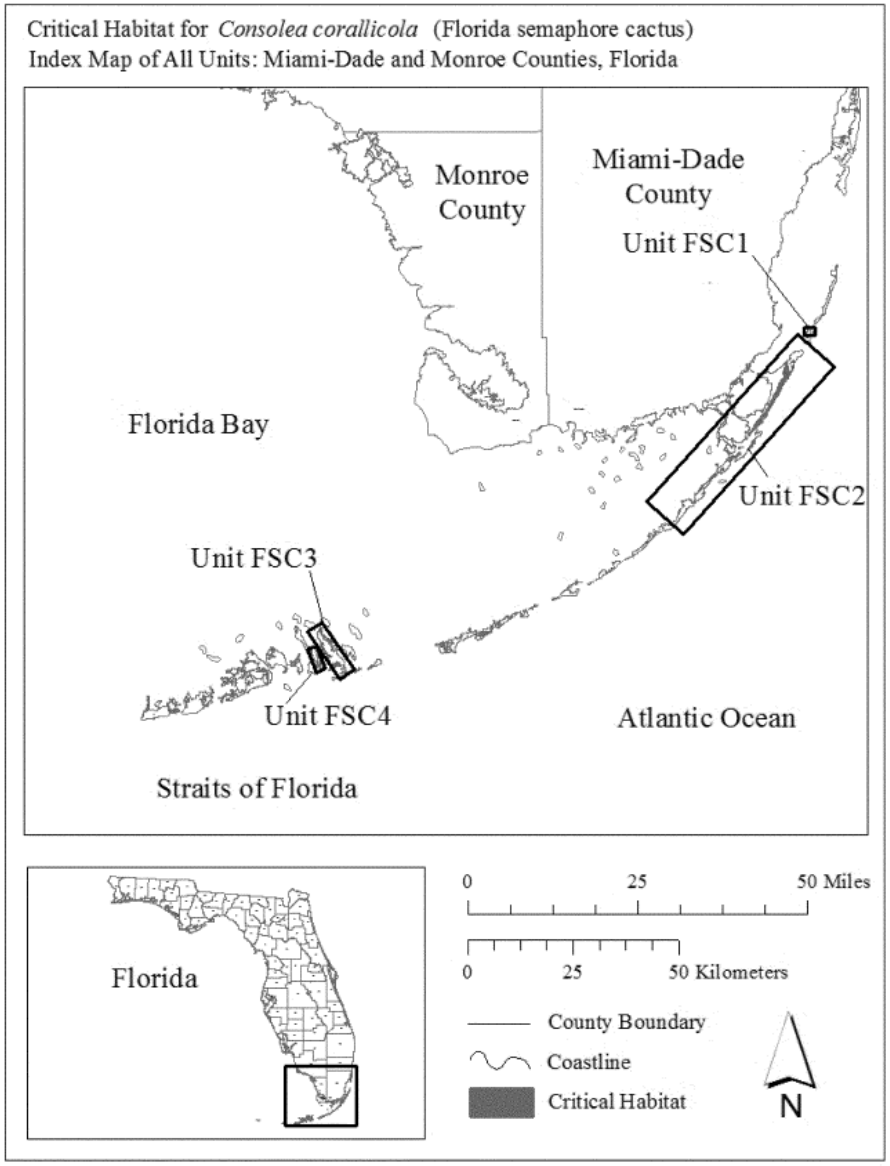

FIGURE 15. FLORIDA SEMAPHORE CACTUS CRITICAL HABITAT

6.0 EFFORTS TO ELIMINATE POTENTIAL IMPACTS ON LISTED SPECIES

All practicable means to avoid or minimize environmental effects were incorporated into the Federal Action. In order to protect CSSS, structural closings, other than S-344, implemented under 2006 IOP and preserved under 2012 ERTP will be retained under the Federal Action. The action related hydrologic changes are expected to be temporary. All regulatory monitoring requirements included in the 2009 C-111 Western Spreader Canal Project BO and 2010 ERTP BO will continue as mandated within those opinions. The Corps will continue to rely upon the Increment 1 monitoring plan which includes a comparison of flows through the S-12 structures, and will continue to implement Periodic Scientist Calls as outlined within the 2011 ERTP Final EIS. Flow and stage will be monitored to provide representative information on potential flows south towards CSSS-A. The Corps and SFWMD plan to meet regularly with the USFWS to communicate operations. The incremental opening of the structure and adaptive approach as outlined in **Appendix A**, will assist in minimizing potential environmental effects resulting from

implementation of the Federal Action. Reference **Appendix A** for a description of monitoring to occur related to operation of S-344. Additional meetings (*i.e.* WCA 3 Periodic Scientist Calls as discussed within the ERTP Final EIS (USACE 2011) and/or workshops will continue to be conducted on an as-needed basis based upon ongoing or anticipated conditions within WCAs, ENP, and/or the SDCS.

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8.0 LIST OF PREPARERS

Name	Affiliation	Qualification/Role
Melissa Nasuti	USACE	Biologist – Preparation
Gina Ralph	USACE	Biologist - Reviewer

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APPENDIX A – OPERATIONAL STRATEGY

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S-344 CULVERT OPERATION STATEGY

NORMAL USE AND PROPOSED USE OF S-344

S-344 is normally closed. The normal operational criteria for S-344 is to open it when the available capacity of S-333, S-12D, S-12C, S-12B, and S-12A is insufficient to provide the discharges prescribed by WCA 3A's Rainfall Plan. The combined discharges through S-343A, S-343B, and S-344 are reduced as required to maintain the Loop Road 1 gauge (LOOP1) below 8.5 feet NGVD29 (closed when LOOP1 above 8.5 feet NGVD29 under normal conditions). When the stage at LOOP1 exceeds 8.5 feet NGVD29, portions of the loop road begin to flood. The proposed criteria is to have full operational flexibility to partially or completely open S-344 until July 15, 2016.

OPERATIONAL CRITERIA

Opening Criteria:

The SFWMD as the operator of S-344 has full flexibility in opening S-344 to balance the objectives of efficiently rehabilitating the six 150 feet long plugs in the L-28 borrow canal while providing high water relief to WCA-3A. The following scenario describe the range of operation likely to be required to balance the objectives. The actual number of gates changes and the magnitude of their opening will be determined based on the stage response to S-344 discharges with consideration for the status and pace of repair of the six 150 feet long plugs. Both gates will be opened as described below:

- Both gates opened about one to two feet when the first (northern most) plug is fully rehabilitated.
- Both gates opened about two to four feet when the second plug is fully rehabilitated.
- Both gates opened about three to six feet when the third plug is fully rehabilitated.
- Both gates opened about three to six feet when the fourth plug is fully rehabilitated.
- Both gates opened about three to six feet when the fifth plug is fully rehabilitated.
- Both gates opened about three to six feet when the sixth (southernmost) plug is fully rehabilitated.

It is intended and hoped that the incremental and adaptive approach will result in steady and sustainable S-344 openings. However, the S-344 gates openings may be reduced if the flow or stages along the L-28 need to be moderated or reduced.

STRUCTURE CLOSINGS: Closing of the gates on S-344 will begin when one or more following conditions are met:

1) During the construction phase of the rehabilitation of L-28 plugs, the construction sites experience high water levels that cause the construction sites to be flooded.

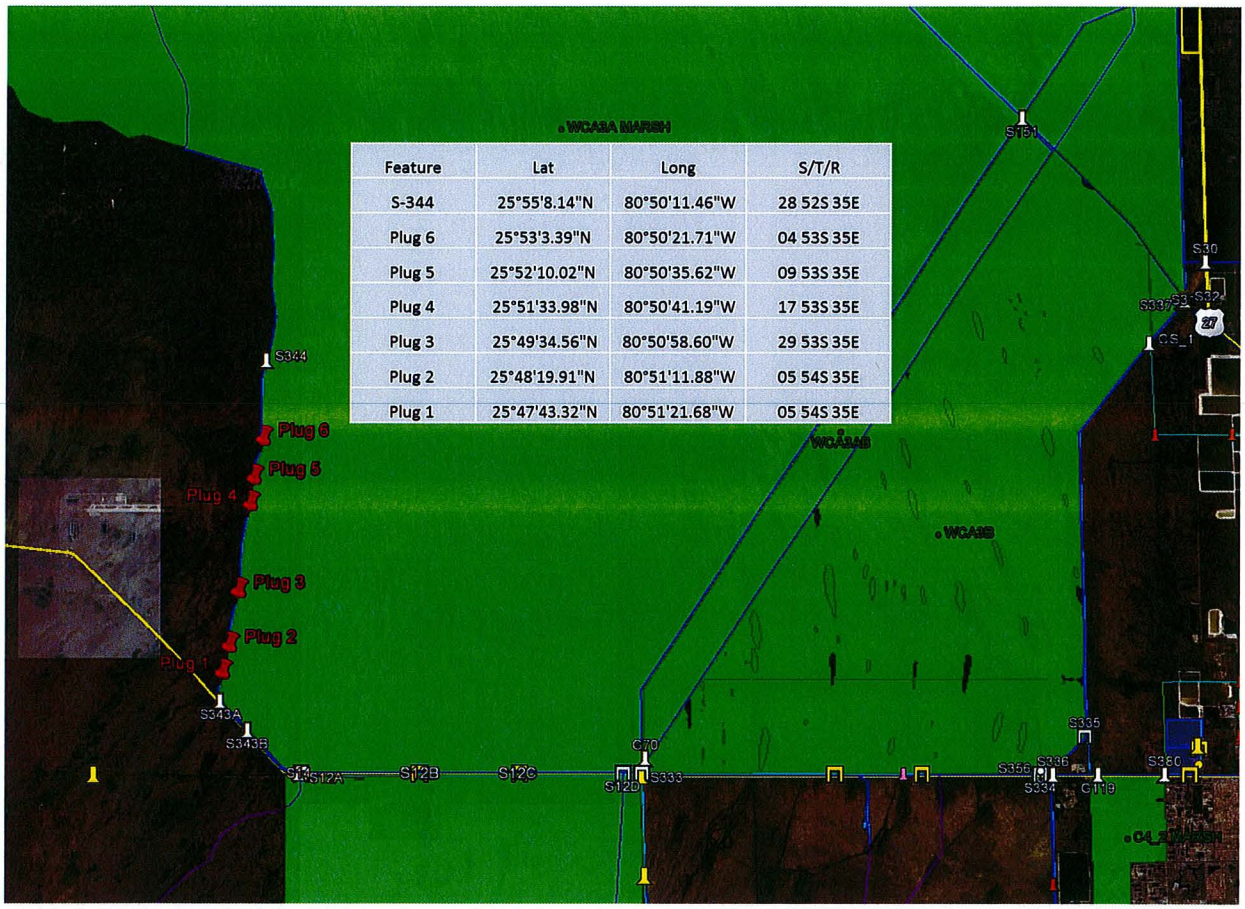
2) The Loop Road gauge 1(LOOPl) exceeds 8.5 feet NGVD29.
3) If there is a meaningful reversal in the water level recession at identified sparrow target location(s) not induced by rainfall in the area.
4) Regular coordination for ongoing operations results in a request to adjust operations.

There are ten bridges or culverts through Tamiami Trail (State Road 41) from where Loop Road connects to Tamiami Trail to about 4 miles west along Tamiami Trail. There are about six bridges or culverts through Loop Road from where Loop Road connects to Tamiami Trail to about 4 miles west along Loop Road. These bridges and culverts allow some of the flow discharge from S-344 to flow south into the region that contains CSSS Sub-Population A. Flow and stage at the following locations along Tamiami Trail (SR41) will be monitored to provide representative information on the flow south and provide early indication of undesirable flow south towards the Cape Sable Seaside Sparrow (CSSS) Sub-Population A (SP-A).

- The bridge allowing flow through Tamiami Trail which is located about 0.6 miles along Tamiami Trail northwest of S343A.
- The culvert/bridge allowing flow through Tamiami Trail which is near/across from S343A.
- The bridge allowing flow through Tamiami Trail which is located about 0.6 miles along Tamiami Trail southeast of S343A.

The sites would need to be monitored at least biweekly. S-343A tailwater will be used to indicate stage changes. Since there is no existing telemetry (e.g. HW stage, TW stage, or flow) the flow measurements will require individual stream gauging events. The SFWMD will meet regularly (e.g. weekly) with FWS to communicate operations and discuss the system response. It is expected that conditions will change over the duration of this deviation and that FWS will adaptively evolve the criteria. The Miccosukee Tribe will also be included in the communication of the operations system response and operations could be altered to avoid any adverse effects to lands utilized by the Tribe. The SFWMD will respond to operation direction from the FWS or USACE within 72 hours.

In addition, up to weekly flows will need to be monitored at the southernmost degraded section of the L-28 Levee (located about 1.8 miles from the northwestern end of the L-28 Levee or about 0.3 miles from where the L-28 turns west).



Feature	Lat	Long	S/T/R
S-344	25°55'8.14"N	80°50'11.46"W	28 52S 35E
Plug 6	25°53'3.39"N	80°50'21.71"W	04 53S 35E
Plug 5	25°52'10.02"N	80°50'35.62"W	09 53S 35E
Plug 4	25°51'33.98"N	80°50'41.19"W	17 53S 35E
Plug 3	25°49'34.56"N	80°50'58.60"W	29 53S 35E
Plug 2	25°48'19.91"N	80°51'11.88"W	05 54S 35E
Plug 1	25°47'43.32"N	80°51'21.68"W	05 54S 35E

Figure 1. S-344 and L-12 Plug Location Map

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 San Marco Boulevard
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

APR 1 1 2016

The Honorable James Billie
Chairman, Seminole Tribe of Florida
6300 Sterling Road
Hollywood, Florida 33024

Dear Chairman Billie,

The U.S. Army Corps of Engineers, Jacksonville District (Corps) would like to invite the Seminole Tribe of Florida (Seminole) to participate in formal consultation regarding an emergency deviation at Structure 344 (S-344). The Corps is developing an emergency deviation and subsequent Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) in order to continue to alleviate high water levels in Water Conservation Area 3A (WCA 3A), located in Broward, Collier, Monroe, and Miami-Dade counties, Florida. The Corps previously initiated a temporary emergency deviation to the current operating constraint of 7.5 feet National Geodetic Vertical Datum (of 1929 NGVD) in the L-29 Canal for purposes of providing high water relief for WCA 3A on February 15, 2016. Due to the continued critical nature of elevated water levels in WCA 3A and in compliance with the existing request by the Governor to maximize water releases, a second emergency deviation is being proposed to deviate from the current water control plan for S-344 on the L-28 Levee.

The purpose of this deviation is to open S-344 immediately instead of waiting for July 15, 2016 which is the normal opening date in the approved water control plan. The opening would allow water to be released from WCA 3A via gravity and flow south through the L-28 canal and into Big Cypress National Preserve (BCNP). The water is expected to continue south as sheetflow into Lostmans Slough (see enclosed map). Based on the maximum amount of time the S-344 culvert would be opened early (100 days), approximately 40,000 acre feet of water is expected to be released into BCNP. This water is only reaching the system early and will not raise the maximum elevation of the water table throughout the system. However, restrictions on water levels and flows for the protection of endangered species will provide additional protection should water levels deviate from predicted amounts. If undesirable flows should occur, the S-344 would be restricted further ensuring the deviations ability to avoid any adverse effects to Tribal and cultural resources within the area of potential effects.

Pursuant to Executive Order 13175, Section 106 of the National Historic Preservation Act (16 USC 470), and in consideration of the Corps' Trust Responsibilities and the Burial Resources Agreement between the Corps and the Seminole, the Corps would like to invite the Seminole to participate in consultation on this matter and request comments to identify any issues and/or concerns to be considered in this action. We understand that there is both the immediate need for consultation and for long term dialog on the overall operational deviations. We will continue to work with your staff to determine the best way to keep you informed and to seek your input throughout the process.

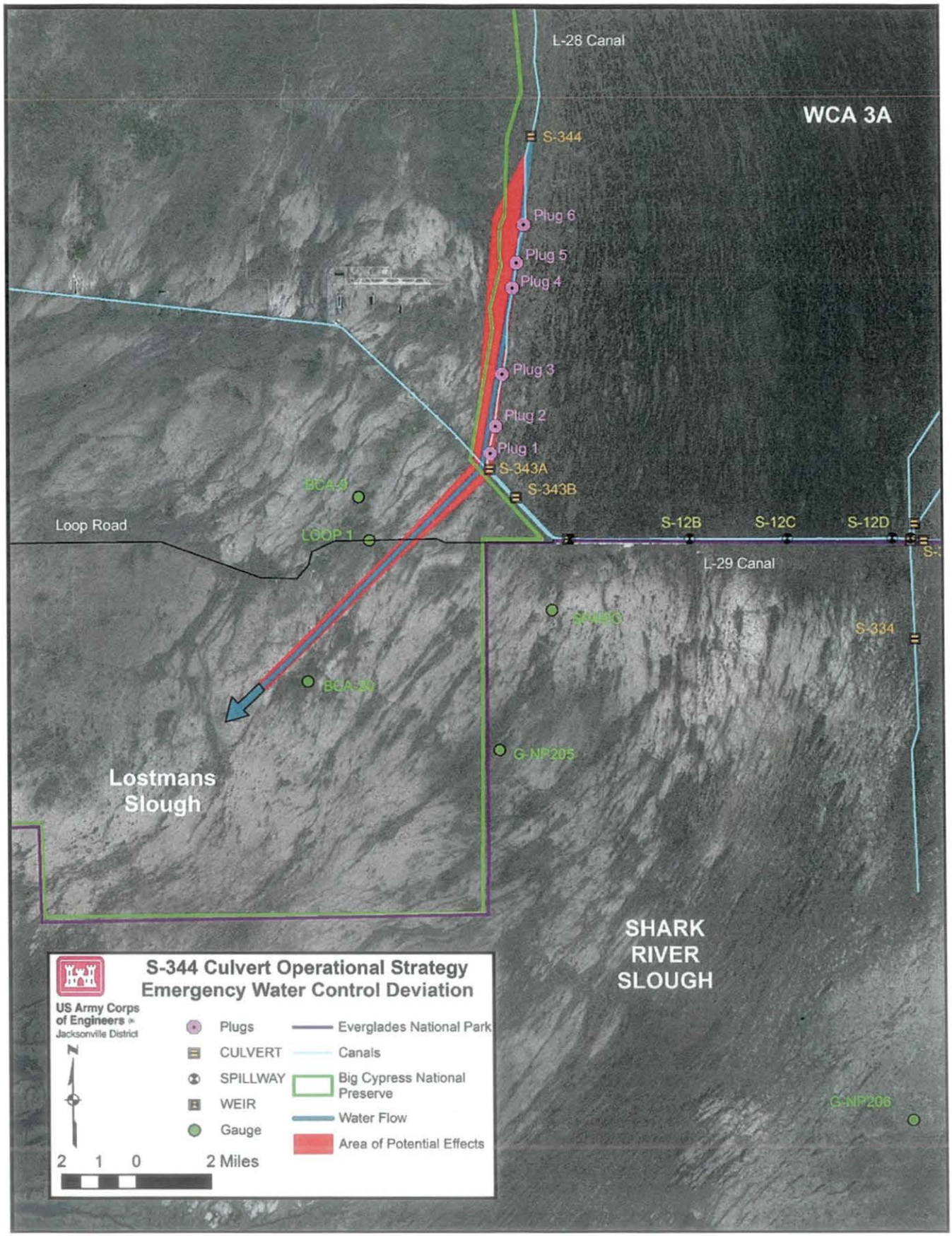
If you have any questions regarding the information in this letter, please feel free to contact me or you may contact our Tribal Liaison, Kim Taplin, at (561) 801-0285 or kimberley.a.taplin@usace.army.mil.

Sincerely,

Jason A. Kirk, P.E.
Colonel, U.S. Army
District Commander

Enclosure

cc:
Dr. Paul Backhouse, Tribal Historic Preservation Officer, Seminole Tribe of Florida, 30290 Josie Billie Highway, PMP 1004, Clewiston, Florida 33440
Cherise Maples, Director, Environmental Resource Management, Seminole Tribe of Florida, 6300 Stirling Road, Hollywood, FL 33024


L-28 Canal
WCA 3A
S-344
Plug 6
Plug 5
Plug 4
Plug 3
Plug 2
Plug 1
S-343A
S-343B
BCA-9
Loop Road
LOOP 1
S-12B
S-12C
S-12D
L-29 Canal
S-334
BCA-30
G-NP205
Lostmans Slough
SHARK RIVER SLOUGH
G-NP206
S-344 Culvert Operational Strategy
Emergency Water Control Deviation
US Army Corps of Engineers
Jacksonville District
Plugs
CULVERT
SPILLWAY
WEIR
Gauge
Everglades National Park
Canals
Big Cypress National Preserve
Water Flow
Area of Potential Effects
2 1 0 2 Miles

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 San Marco Boulevard
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO
ATTENTION OF

APR 11 2016

Planning and Policy Division
Environmental Branch

The Honorable Billy Cypress
Chairman, Miccosukee Tribe of Indians of Florida
Mile Marker 70, Highway 41
Administration Building
Miami, Florida 33194

Dear Chairman Cypress,

The U.S. Army Corps of Engineers, Jacksonville District (Corps) would like to invite the Miccosukee Tribe of Indians of Florida (Miccosukee) to participate in formal consultation regarding an emergency deviation at Structure 344 (S-344). The Corps is developing an emergency deviation and subsequent Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) in order to continue to alleviate high water levels in Water Conservation Area 3A (WCA 3A), located in Broward, Collier, Monroe, and Miami-Dade counties, Florida. The Corps previously initiated a temporary emergency deviation to the current operating constraint of 7.5 feet National Geodetic Vertical Datum (of 1929 NGVD) in the L-29 Canal for purposes of providing high water relief for WCA 3A on February 15, 2016. Due to the continued critical nature of elevated water levels in WCA 3A and in compliance with the existing request by the Governor to maximize water releases, a second emergency deviation is being proposed to deviate from the current water control plan for S-344 on the L-28 Levee.

The purpose of this deviation is to open S-344 immediately instead of waiting for July 15, 2016 which is the normal opening date in the approved water control plan. The opening would allow water to be released from WCA 3A via gravity and flow south through the L-28 canal and into Big Cypress National Preserve (BCNP). The water is expected to continue south as sheetflow into Lostmans Slough (see enclosed map). Based on the maximum amount of time the S-344 culvert would be opened early (100 days), approximately 40,000 acre feet of water is expected to be released into BCNP. This water is only reaching the system early and will not raise the maximum elevation of the water table throughout the system. However, restrictions on water levels and flows for the protection of endangered species will provide additional protection should water levels deviate from predicted amounts. If undesirable flows should occur, the S-344 would be restricted further ensuring the deviations ability to avoid any adverse effects to Tribal and cultural resources within the area of potential effects.

Pursuant to Executive Order 13175, Section 106 of the National Historic Preservation Act, and in consideration of the Corps' Trust Responsibilities, the Corps would like to invite the Miccosukee to participate in consultation on this matter and request comments to identify any issues and/or concerns to be considered in this action. We understand that there is both the immediate need for consultation and for long term dialog on the overall operational deviations. We will continue to work with your staff to determine the best way to keep you informed and to seek your input throughout the process.

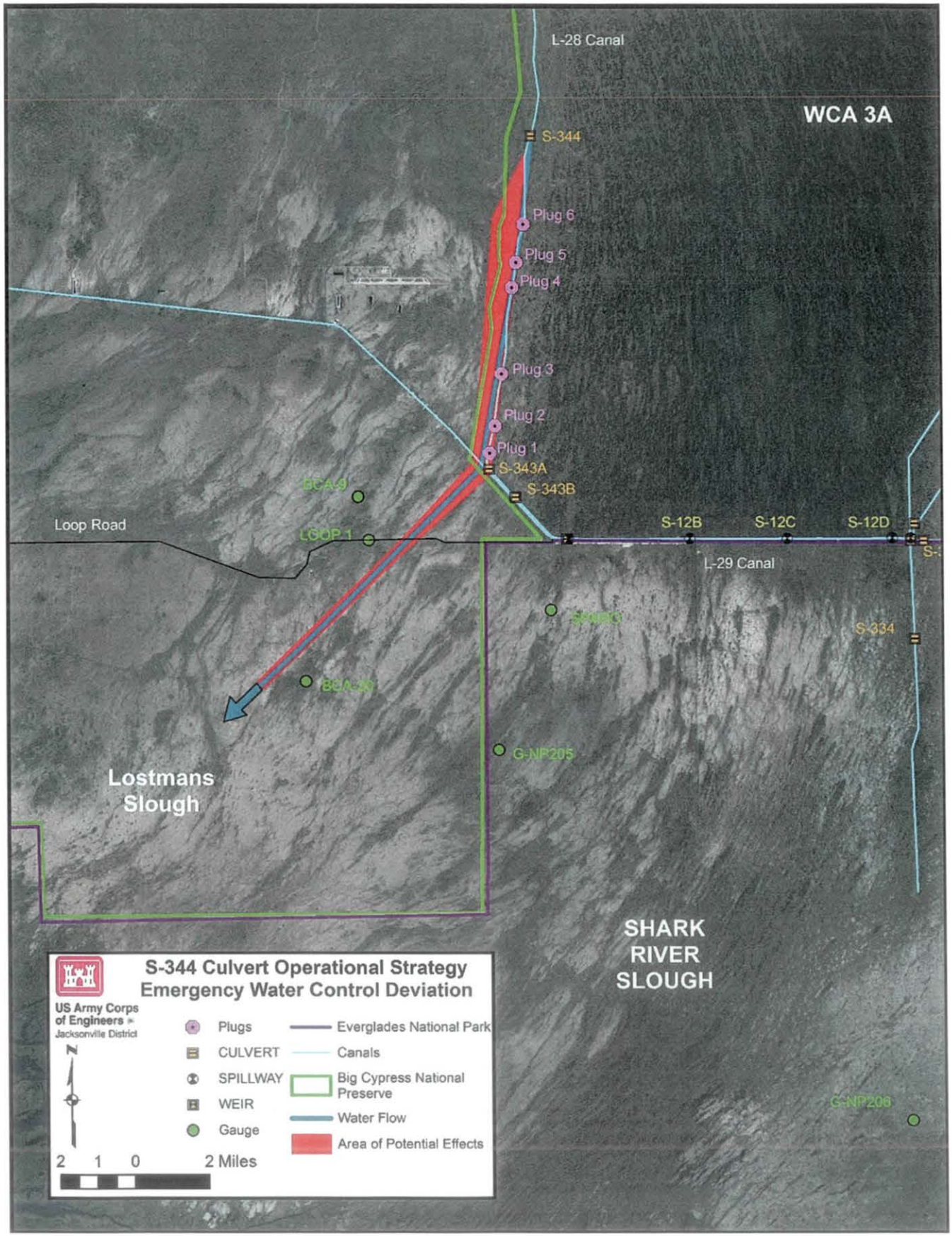
If you have any questions regarding the information in this letter, please feel free to contact me or you may contact our Tribal Liaison, Kim Taplin, at (561) 801-0285 or kimberley.a.taplin@usace.army.mil.

Sincerely,

Jason A. Kirk, P.E.
Colonel, U.S. Army
District Commander

Enclosure

cc:
Mr. James M. Erskine, Acting Water Resources Director, Miccosukee Tribe of Indians of Florida, P.O. Box 440021, Tamiami Station, Miami, FL 33144
Mr. Fred Dayhoff, NAGPRA Representative, Consultant to Miccosukee Tribe, HC 61 SR 68 Old Loop Road, Ochopee, FL 34141


L-28 Canal
WCA 3A
S-344
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S-343B
BCA-9
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S-334
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Big Cypress National Preserve
Water Flow
Area of Potential Effects
2 1 0 2 Miles

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 San Marco Boulevard
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

APR 12 2016

Tim Parsons, Ph.D.
State Historic Preservation Officer
Division of Historical Resources
500 South Bronough Street
Tallahassee, Florida 32399-0250

Dear Dr. Parsons,

The U.S. Army Corps of Engineers, Jacksonville District (Corps), is studying the environmental effects associated with a temporary emergency deviation of the Water Control Plan in order to continue to alleviate high water levels in Water Conservation Area 3A (WCA 3A), located in Broward, Collier, Monroe, and Miami-Dade counties, Florida. The Corps previously initiated a temporary emergency deviation to the current operating constraint of 7.5 feet National Geodetic Vertical Datum (of 1929 NGVD) in the L-29 Canal for purposes of providing high water relief in WCA 3A on February 15, 2016. Due to the continued critical nature of elevated water levels in WCA 3A and in compliance with the existing request by the Governor of Florida to maximize water releases, a second emergency deviation is being proposed to deviate from the current water control plan for culvert S-344 on the L-28 Levee. As such, we are notifying your office of the project under 36 CRF 800.12(b) (Emergency Situations) and 36 CFR 800.12(b)(2) and request an expedited consultation process of seven (7) days.

The purpose of this deviation is to open S-344 immediately instead of waiting for July 15, 2016 which is the normal opening date in the approved water control plan. The opening would allow water to be released from WCA 3A via gravity and flow south through the L-28 canal and into Big Cypress National Preserve (BCNP) (see enclosed map). The water is expected to continue south as sheetflow into Lostmans Slough. Based on the maximum amount of time the S-344 culvert would be opened early (100 days), approximately 40,000 acre feet of water is expected to be released into BCNP. This water is only reaching the system earlier than under normal operations and will not raise the maximum elevation of the water table throughout the system.

Since current water levels within the Everglades are below the maximum high elevation that has been experienced when the S-344 culvert is typically open under both the Everglades Restoration Transition Plan and Integrated Operations Plan, cultural resources within the project area have been previously exposed to natural hydrological conditions that may be experienced under this deviation.

A total of four cultural resources (8DA417, 8DA425, 8DA426, and 8DA3416) are located within the specific area of potential effects (APE) related to the S-344 deviation. These resources consist of archaeological sites dating from the Glades and Seminole periods and have not been evaluated regarding their eligibility for listing in the National Register of Historic Places (NRHP). Although the APE has been previously surveyed by the National Park Service, it is important to note that based on the methodology detailed in the survey reports, previously unrecorded sites not noted above may be present.

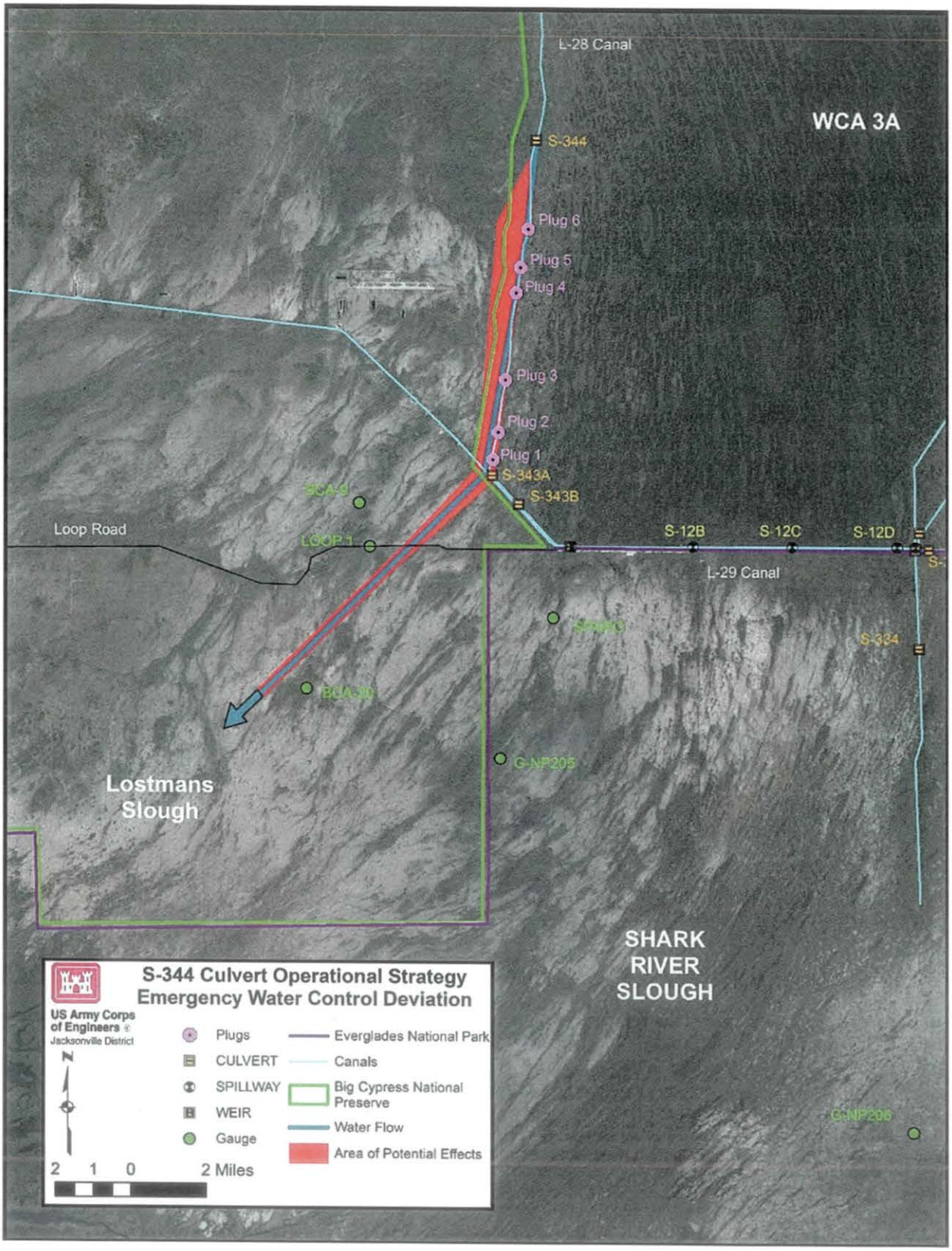
Implementation of the emergency deviation would result in the early discharge of a maximum of 40,000 acre feet of water into BCNP. Due to the minimal duration of the discharge (maximum of 100 days) effects of the action would be difficult to establish. The primary impact of the action within BCNP would be to lengthen the hydroperiod for the duration of the temporary emergency deviation. As the undertaking will not raise the maximum elevation of the water table throughout the system, effects to historic properties listed or eligible for listing in the NRHP are not anticipated. The Chief of Resource Management Division at BCNP has concurred that implementation of the planned operations should not impact cultural resources within BCNP. Additionally, restrictions on water levels and flows for the protection of endangered species will provide additional protection should water levels deviate from predicted volumes. If undesirable flows should occur, the S-344 would be restricted further ensuring the deviations ability to cause any adverse effects to cultural or Tribal resources within the area of potential effect.

As no inundation of cultural resources is expected during the temporary emergency deviation of the S-344 operational strategy, other than those typically experienced during seasonal operations, the Corps believes that this will have no adverse effect to historic properties listed or eligible for listing in the NRHP. Pursuant to Section 106 of the National Historic Preservation Act (16 USC 470) and it's implementing regulations (36 CFR 800) the Corps requests your concurrence on our determination of no adverse effect. Due to the nature of this emergency, and with regard to Part XIV. Deviations of the Everglades Restoration Transition Plan Programmatic Agreement, the Corps is kindly requesting an expedited consultation process as cited in 36 CFR Part 800.12(b)(2). I understand that the seven day consultation process is a shortened period and appreciate your assistance with this emergency. If there are any questions, please contact Ms. Meredith Moreno at 904-232-1577 or e-mail at Meredith.a.moreno@usace.army.mil. Ms. Moreno will be available to assist you in anyway with this emergency consultation process.

Sincerely,

Jason J. Spinning
Acting Chief, Environmental Branch

Enclosure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DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 San Marco Boulevard
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

APR 12 2016

Mr. Fred Dayhoff, Tribal Representative
NAGPRA, Section 106
Miccosukee Tribe of Indians of Florida
Post Office Box 440021
Tamiami Station
Miami, Florida 33144

Dear Mr. Dayhoff,

The U.S. Army Corps of Engineers, Jacksonville District (Corps), is studying the environmental effects associated with a temporary emergency deviation of the Water Control Plan in order to continue to alleviate high water levels in Water Conservation Area 3A (WCA 3A), located in Broward, Collier, Monroe, and Miami-Dade counties, Florida. The Corps previously initiated a temporary emergency deviation to the current operating constraint of 7.5 feet National Geodetic Vertical Datum (of 1929 NGVD) in the L-29 Canal for purposes of providing high water relief in WCA 3A on February 15, 2016. Due to the continued critical nature of elevated water levels in WCA 3A and in compliance with the existing request by the Governor of Florida to maximize water releases, a second emergency deviation is being proposed to deviate from the current water control plan for culvert S-344 on the L-28 Levee. As such, we are notifying your office of the project under 36 CRF 800.12(b) (Emergency Situations) and 36 CFR 800.12(b)(2) and request an expedited consultation process of seven (7) days.

The purpose of this deviation is to open S-344 immediately instead of waiting for July 15, 2016 which is the normal opening date in the approved water control plan. The opening would allow water to be released from WCA 3A via gravity and flow south through the L-28 canal and into Big Cypress National Preserve (BCNP) (see enclosed map). The water is expected to continue south as sheetflow into Lostmans Slough. Based on the maximum amount of time the S-344 culvert would be opened early (100 days), approximately 40,000 acre feet of water is expected to be released into BCNP. This water is only reaching the system earlier than under normal operations and will not raise the maximum elevation of the water table throughout the system.

Since current water levels within the Everglades are below the maximum high elevation that has been experienced when the S-344 culvert is typically open under both the Everglades Restoration Transition Plan and Integrated Operations Plan, cultural resources within the project area have been previously exposed to natural hydrological conditions that may be experienced under this deviation.

A total of four cultural resources (8DA417, 8DA425, 8DA426, and 8DA3416) are located within the specific area of potential effects (APE) related to the S-344 deviation. These resources consist of archaeological sites dating from the Glades and Seminole periods and have not been evaluated regarding their eligibility for listing in the National Register of Historic Places (NRHP). Although the APE has been previously surveyed by the National Park Service, it is important to note that based on the methodology detailed in the survey reports, previously unrecorded sites not noted above may be present.

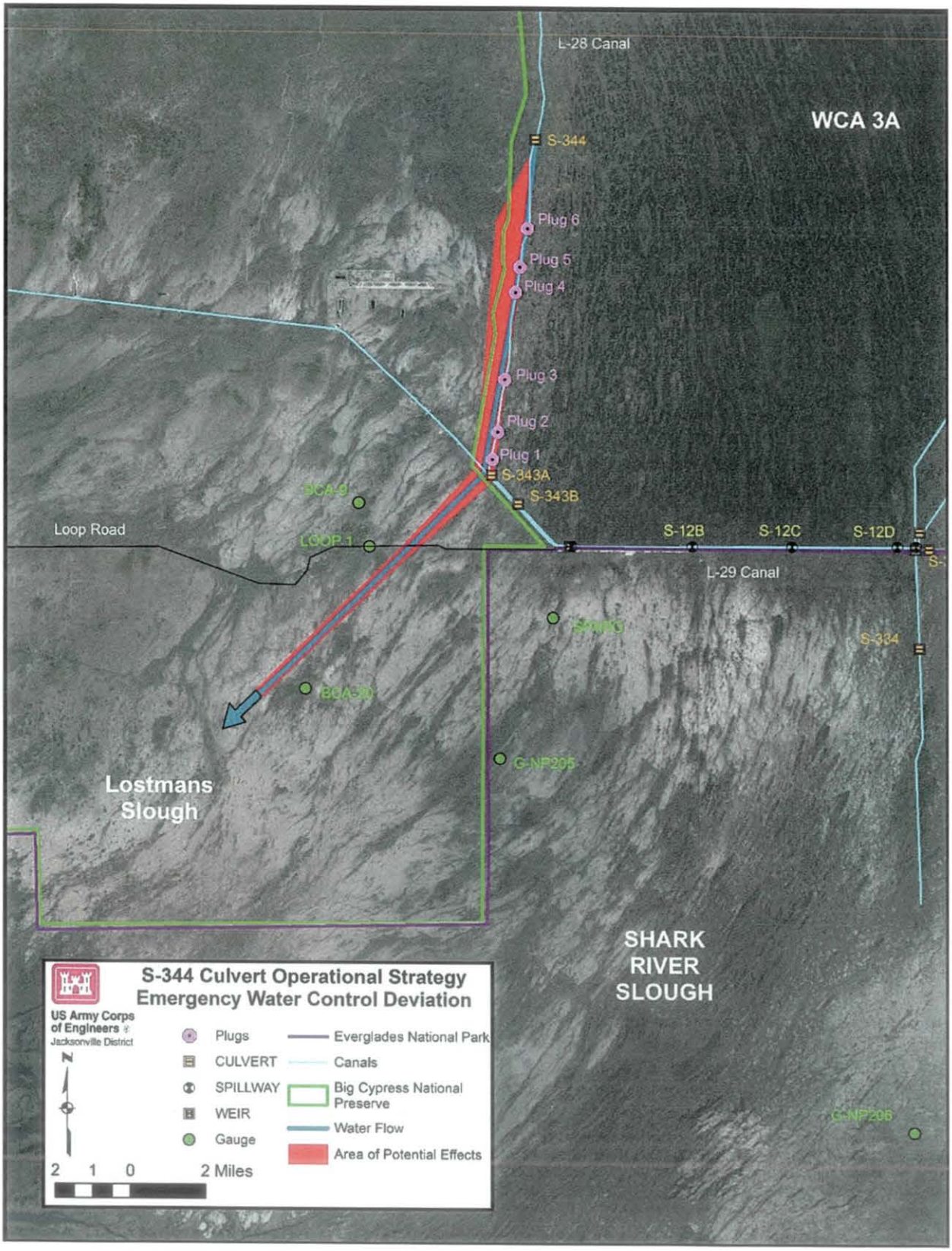
Implementation of the emergency deviation would result in the early discharge of a maximum of 40,000 acre feet of water into BCNP. Due to the minimal duration of the discharge (maximum of 100 days) effects of the action would be difficult to establish. The primary impact of the action within BCNP would be to lengthen the hydroperiod for the duration of the temporary emergency deviation. As the undertaking will not raise the maximum elevation of the water table throughout the system, effects to historic properties listed or eligible for listing in the NRHP are not anticipated. The Chief of Resource Management Division at BCNP has concurred that implementation of the planned operations should not impact cultural resources within BCNP. Additionally, restrictions on water levels and flows for the protection of endangered species will provide additional protection should water levels deviate from predicted volumes. If undesirable flows should occur, the S-344 would be restricted further ensuring the deviations ability to cause any adverse effects to cultural or Tribal resources within the area of potential effect.

As no inundation of cultural resources is expected during the temporary emergency deviation of the S-344 operational strategy, other than those typically experienced during seasonal operations, the Corps believes that this will have no adverse effect to historic properties listed or eligible for listing in the NRHP. Pursuant to Section 106 of the National Historic Preservation Act (16 USC 470) and it's implementing regulations (36 CFR 800), and in consideration of the Corps' Trust Responsibilities, the Corps requests your concurrence on our determination of no adverse effect. Due to the nature of this emergency, and with regard to Part XIV. Deviations of the Everglades Restoration Transition Plan Programmatic Agreement, the Corps is kindly requesting an expedited consultation process as cited in 36 CFR Part 800.12(b)(2). I understand that the seven day consultation process is a shortened period and appreciate your assistance with this emergency. If there are any questions, please contact Ms. Meredith Moreno at 904-232-1577 or e-mail at Meredith.a.moreno@usace.army.mil. Ms. Moreno will be available to assist you in anyway with this emergency consultation process.

Sincerely,

Jason J. Spinning
Acting Chief, Environmental Branch

Enclosure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DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 San Marco Boulevard
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

APR 12 2016

Dr. Paul Backhouse, THPO
Seminole Tribe of Florida
Tribe Historic Preservation Office
30290 Josie Billie Highway
PMP 1004
Clewiston, FL 33440

Dear Dr. Backhouse:

The U.S. Army Corps of Engineers, Jacksonville District (Corps), is studying the environmental effects associated with a temporary emergency deviation of the Water Control Plan in order to continue to alleviate high water levels in Water Conservation Area 3A (WCA 3A), located in Broward, Collier, Monroe, and Miami-Dade counties, Florida. The Corps previously initiated a temporary emergency deviation to the current operating constraint of 7.5 feet National Geodetic Vertical Datum (of 1929 NGVD) in the L-29 Canal for purposes of providing high water relief in WCA 3A on February 15, 2016. Due to the continued critical nature of elevated water levels in WCA 3A and in compliance with the existing request by the Governor of Florida to maximize water releases, a second emergency deviation is being proposed to deviate from the current water control plan for culvert S-344 on the L-28 Levee. As such, we are notifying your office of the project under 36 CRF 800.12(b) (Emergency Situations) and 36 CFR 800.12(b)(2) and request an expedited consultation process of seven (7) days.

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Since current water levels within the Everglades are below the maximum high elevation that has been experienced when the S-344 culvert is typically open under both the Everglades Restoration Transition Plan and Integrated Operations Plan, cultural resources within the project area have been previously exposed to natural hydrological conditions that may be experienced under this deviation.

A total of four cultural resources (8DA417, 8DA425, 8DA426, and 8DA3416) are located within the specific area of potential effects (APE) related to the S-344 deviation. These resources consist of archaeological sites dating from the Glades and Seminole periods and have not been evaluated regarding their eligibility for listing in the National Register of Historic Places (NRHP). Although the APE has been previously surveyed by the National Park Service, it is important to note that based on the methodology detailed in the survey reports, previously unrecorded sites not noted above may be present.

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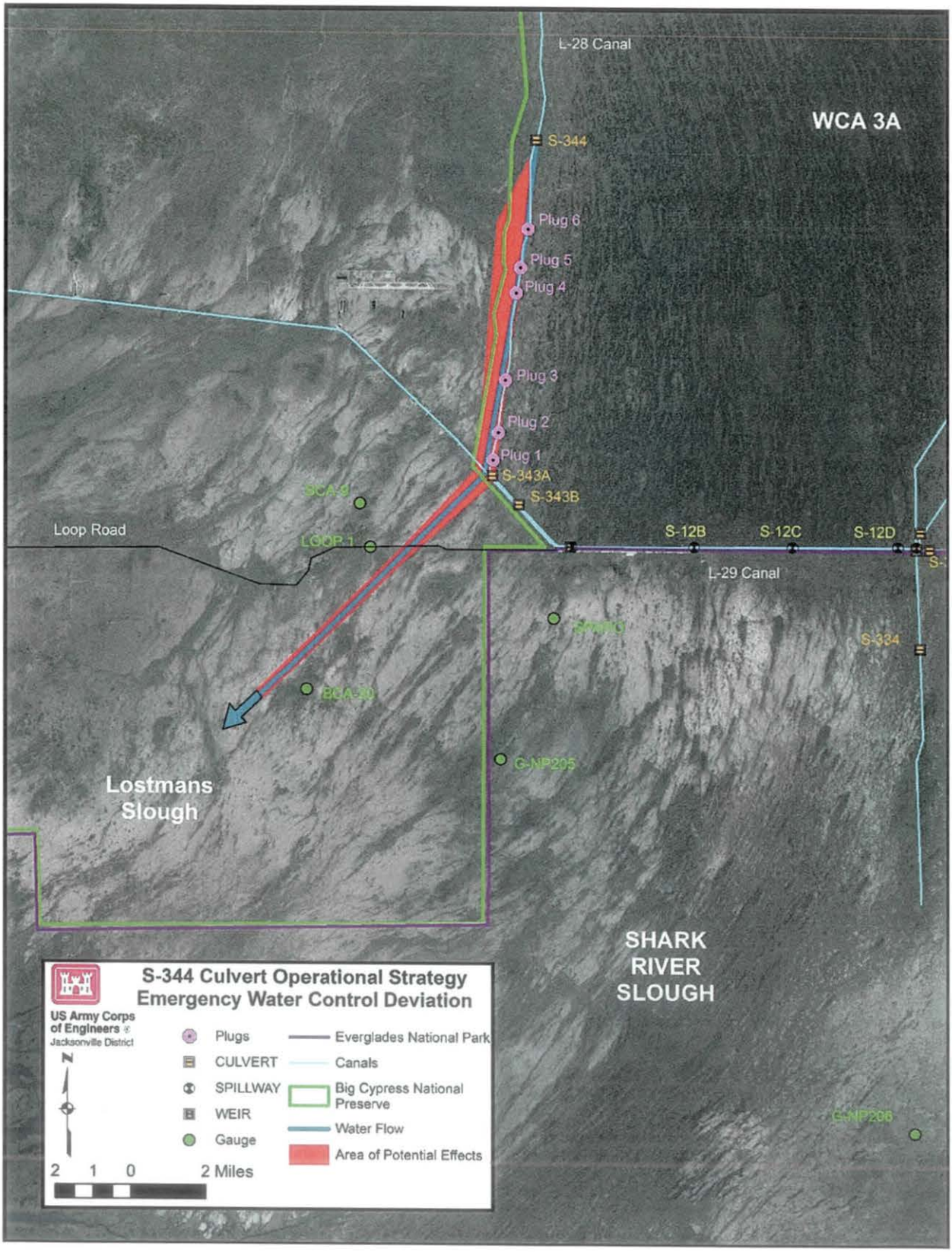
As no inundation of cultural resources is expected during the temporary emergency deviation of the S-344 operational strategy, other than those typically experienced during seasonal operations, the Corps believes that this will have no adverse effect to historic properties listed or eligible for listing in the NRHP. Pursuant to Section 106 of the National Historic Preservation Act (16 USC 470) and it's implementing regulations (36 CFR 800), and in consideration of the Corps' Trust Responsibilities and the Burial Resources Agreement between the Corps and Seminole Tribe of Florida, the Corps requests your concurrence on our determination of no adverse effect. Due to the nature of this emergency, and with regard to Part XIV. Deviations of the Everglades Restoration Transition Plan Programmatic Agreement, the Corps is kindly requesting an expedited consultation process as cited in 36 CFR Part 800.12(b)(2). I understand that the seven day consultation process is a shortened period and appreciate your assistance with this emergency. If there are any questions, please contact Ms. Meredith Moreno at 904-232-1577 or e-mail at Meredith.a.moreno@usace.army.mil. Ms. Moreno will be available to assist you in anyway with this emergency consultation process.

Sincerely,

Jason J. Spinning
Acting Chief, Environmental Branch

Enclosure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CULVERT
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WEIR
Gauge
Everglades National Park
Canals
Big Cypress National Preserve
Water Flow
Area of Potential Effects
2 1 0 2 Miles

From: Brian Lusher
To: Moreno, Meredith A SAJ
Cc: Jason.Aldridge@dos.myflorida.com
Subject: [EXTERNAL] RE: ERTP Emergency Deviation - S-344 & L-28 canal plugs (UNCLASSIFIED)
Date: Wednesday, April 06, 2016 2:35:05 PM

Hello Meredith,

Thanks for communicating about the emergency deviation and asking for confirmation of its receipt. I look forward to receiving the consultation submissions you mentioned, below, in accordance with the terms of the PA.

Thanks
Brian Lusher

-----Original Message-----
From: Moreno, Meredith A SAJ [mailto:Meredith.A.Moreno@usace.army.mil]
Sent: Monday, March 28, 2016 8:34 AM
To: Daniel B. Hughes; 'Ramirez, Armando'; 'jcharles@llw-law.com'; 'swalker@llw-law.com'; 'mdiffenderfer@llw-law.com'; 'Bradley Mueller'; 'Anne Mullins'; 'andrewweidman@semtribe.com'; Paul N. Backhouse; 'Leonard Rawlings'; 'harold.peterson@bia.gov'; David Saunders; Brian Lusher; 'Del Bene, Penelope'; Tom McCulloch; Aldridge, Jason H.
Subject: ERTP Emergency Deviation - S-344 & L-28 canal plugs (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Good morning,

Due to the continued high water levels in WCA 3A, South Florida Water Management District (SFWMD) reached out to the Corps last week to propose a deviation from the current water control plan (ERTP) operations for Structure 344 (S-344) on the L-28 Levee (see attached map). This deviation would open S-344 immediately instead of waiting for July 15th which is the normal opening date in the approved water control plan. The opening would allow up to 300 cfs to be released from WCA-3A into Big Cypress National Preserve and the L-28 canal. SFWMD is also seeking approval from the USACE Regulatory Division to conduct operation and maintenance to restore six canal plugs in the L-28 canal, located south of the S-344, to allow water to naturally disperse per the approved project from 1983.

An emergency NEPA will be conducted which requires the USACE to coordinate with the Tribes, State, and respective agencies just like the effort to raise the water levels in L-29 Canal. Official coordination pursuant to Part XIV (Deviations) of the ERTP Programmatic Agreement and Section 106 will be undertaken once the water quantity and trajectory discharged into Big Cypress National Preserve has been assessed; however, the Corps kindly requests your comments of the proposed actions (S-344 WCP deviation to ERTP i.e. early opening and maintenance to the L-28 canal plugs) for potential operational considerations and for documentation under the emergency action.

We appreciate if you are able to respond to this email acknowledging informal coordination has occurred regarding the new action and provide any additional information you may wish to contribute. Formal consultation regarding this action and a determination of effects will be coordinated with all PA signatories during NEPA consultation. The Corps has requested more information regarding how much water is going to be released, where the water will flow (an area of potential effects), and what this will do to surface and ground water within the APE. I will update everyone as to the status of this information when I receive it. In the meantime, please feel free to call or email myself or Dan Hughes with any questions or concerns.

Meredith A. Moreno, M.A., RPA
Archaeologist
Planning Division, Environmental Branch

USACE, Jacksonville District
701 San Marco Blvd.
Jacksonville, FL 32207

Phone: 904-232-1577
Email: meredith.a.moreno@usace.army.mil

CLASSIFICATION: UNCLASSIFIED

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

April 15, 2016

Jason Spinning
Acting Chief, Environmental Branch
U.S. Army Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232

Service Federal Activity Code: 41420-2016-TA-0277
Date Received: March 31, 2016
Project: WCA-3A Temporary Emergency Deviation – S-344
County: Collier, Miami-Dade, Monroe

Dear Mr. Spinning:

The U.S. Fish and Wildlife Service (Service) has reviewed the U.S. Army Corps of Engineers' (Corps) letter received on April 12, 2016, requesting our concurrence for species affects that may occur as a result of the Temporary Emergency Deviation at Structure 344 (S-344) to help alleviate high water levels in Water Conservation Area 3A (WCA-3A). By letter dated April 7, 2016, the Service expressed its support for this deviation and concurred with the list of federally-listed species that may be present within the project area. As is the case with any emergency deviation, the Service will wait until the action is complete before completing consultation. Please advise the Service immediately when this action is activated and also when it is completed. The Service is providing the following comments and suggestions as technical assistance to aid the Corps in the planning and execution of the proposed action. This technical assistance is provided in accordance with the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*). The project area lies within Broward, Collier, Miami-Dade and Monroe Counties.

Project Description

Due to the continued critical nature of elevated water levels in WCA-3A and in compliance with the existing request by the Governor to maximize water releases, a second emergency Environmental Assessment is being prepared to deviate from the current water control plan. This proposed deviation addresses the operation of the S-344 and associated features located along the L-28 Levee and Borrow Canal. The purpose of these structures is to provide a means of making regulatory releases from WCA-3A into BCNP; restore overland flow to an area of Big Cypress National Preserve (BCNP) just south of the L-28 Tieback; and prevent over drainage of the eastern BCNP under dry conditions. This temporary emergency deviation would allow the incremental opening of S-344 earlier than normally planned and commensurate with work on refurbishing the L-28 plugs. The current authorized opening date for the S-344 is July 15, 2016,

per the Everglades Restoration Transition Plan (ERTP) operating plan. The opening would allow water to be released from WCA-3A into BCNP and the L-28 Canal. The temporary emergency deviation is expected to benefit natural resources within WCA-3A and BCNP.

The Corps and Service began consultation on the previous set of emergency actions for lowering water in WCA-3A on March 1, 2016. The main action proposed at that time was raising the L-29 stage limit to 8.5 feet NGVD which facilitated increased flows through the S-333 structure into Northeast Shark River Slough. The Corps requested that the current increment of the ERTP be extended until July 15, 2016, in order to properly evaluate and include the effects of these emergency actions in the current ERTP consultation. The Service agreed, and extended the original ERTP biological opinion until July 15. Since the current proposed action, also a part of the emergency deviation to lower water levels in WCA-3A, could affect sparrows in the western part of the Cape Sable seaside sparrow subpopulation A (CSSS-A), it is assumed that it too will be fully evaluated and included in the Corps' plans for the next iteration of ERTP.

Concurrent with opening the S-334 structure, the Service understands that the SFWMD has applied for a permit to rehabilitate the plugs in the L-28 borrow canal. The Corps regulatory branch has authorized this action under the Nationwide Permit Number 31 and assigned it file number SAJ-2016-00877. Included within that permit is the requirement to monitor for indigo snakes prior to and during the rehabilitation of the plugs. The Service also believes that a survey for manatees in the area is also prudent to ensure none become trapped behind the plugs. Since opening the S-344 may impact sparrows in CSSS-A, the Service feels it is necessary to enhance some or all of the plugs in the L-28 before opening the S-344 and that the S-344 should be opened incrementally as plugs are completed.

Technical Assistance

In reviewing the revised Operational Strategy, provided as Appendix A in your correspondence of April 12, 2016, the Service noticed that several monitoring and protective measures suggested by the Service were not included. These measures, primarily for the western marl prairies and CSSS-A were provided to the SFWMD and Corps via white paper dated March 31, 2016 (Attached). The Service requests that the white paper be added to the Operational Strategy document to incorporate the Service's recommended monitoring, operations, and operational triggers. As part of that analysis, the following monitoring stations and operational triggers were recommended:

Monitoring:
The following existing hydrologic gauges will be important in monitoring and establishing safety protocols for CSSS-A:
S-344 TW
L-28 Gaps
S-343A/B TW
U.S. 41 Bridges/Culverts
BCA-9
Loop1 HW/TW
BCA-20
SPARO
NP-205
EDEN Sparrow Viewer

Monitoring of hydrologic conditions at the above gauges will provide baseline data for conditions prior to the repair of the L-28 plugs and the opening of S-344. These gauges should provide data as to how the S-344 and L-28 plugs are affecting water flows and volumes.

Gauges at U.S. 41 and at Loop Road are expected to provide information as to the impedance of the roads to flows that would otherwise flow southwestward into BCNP. Flows should be monitored in and around Lostman's Slough using BCA-9 and BCA-20 as there could be more flows into the slough from the north. By monitoring these gauges along with using the EDEN Sparrow Viewer, impacts to the western boundary of CSSS-A or to the ability of the marl prairie to achieve its natural recession will be documented. The existing trigger gauge of NP-205 and P-34 within the western marl prairie should also be used to monitor for any changes in water levels and recession rates within the habitat. We ask that USGS increase their monitoring of the U.S. 41 bridge gauges from bi-weekly to at least weekly if not 2-3 times per week during this emergency action.

Additional monitoring is recommended by the District:

- The bridge allowing flow through Tamiami Trail (0.6 miles along Tamiami Trail northwest of S343A).
- The culvert/bridge allowing flow through Tamiami Trail which is near/across from S343A.
- The bridge allowing flow through Tamiami Trail (0.6 miles along Tamiami Trail southeast of S343A).
- Southernmost degraded section of the L-28 levee (.3 miles from where the L-28 turns west.

Operational Triggers:
The Service has analyzed natural recession rates within the western marl prairie and within the L-28 borrow canal during the proposed months of operation. Water flows from the north from the L-28 and any backwater effects from Lostman's Slough to the western side of the prairie are of concern. The Service requests that S-343A TW, SPARO, and NP-205 gauges be used as triggers for making operational changes to the S-344 during the operational period. If water

flows without influences from the L-28 canal or from impedances at the U.S. 41 and Loop Road, these gauges should show no effects from S-344. However, these operations and plug repairs have not been observed in the past. Also, the EDEN Sparrow Viewer will be used to monitor water depth increases along the western marl prairie and within the habitat along with changes in the percent dry habitat available for nesting.

Below are historical recession rates at the tailwater (TW) gauge of S-343A. These recession rates will act as a baseline for the protective triggers.

S-343A TW Recession Rates:
March = 0.01 ft. /day
April = 0.03 ft. /day
May = 0.06 ft. /day
June and July are wet season months. Recession rates should be monitored real-time and compared to rainfall in the local area.

Below are initial recommendations on conditions that may warrant hydrologic / hydraulic investigations and/or changes to the S-344 operations. If concerns arise, a coordination meeting should occur to determine the risk level and path forward from changing conditions.

S-343A TW Trigger:
During dry periods, if the recession rate stops at S-343A TW gauge and reaches an ascension rate of 0.10 ft. (1.5 inches) per day, operators should investigate the source of the water. S-344 may need to be closed due to unintended flows into the L-28 canal.

SPARO / NP-205 Trigger:
If a rise in surface water levels of 0.10 ft. (1.5 inches) occurs at either gauge during a dry period, operators should investigate the source of the water. Operations of S-344 may need to be adjusted. This rise could be the effect of additional water from S-344 in Lostman's Slough slowing or stopping recession rates of the upland marl prairie. Or the increase in water levels could be due to water entering the marl prairie from the north.

EDEN Sparrow Viewer Trigger:
An example of a daily map produced by the USGS EDEN Sparrow Viewer is found in the Service's attached white paper (Figure 4). The intent is to not increase water levels within CSSS-A as a result of the emergency actions at S-344. Water levels within CSSS-A will be observed to determine current recession rates indicated by either a recession at NP-205 or an increase in the percent dry habitat on the Sparrow Viewer. If the percent dry habitat indicates a decrease in area as a result of the emergency actions, operation of S-344 should be adjusted.

Additional Issues

The Service has received reports from staff at Big Cypress National Preserve that water is currently flowing through or around the S-344 structure, even though managers believe the structure to be closed. This may indicate that the structure is in need of repair and may also affect the amount of water anticipated to flow through it once it is opened.

Thank you for your cooperation in the effort to conserve fish and wildlife resources. We look forward to reviewing your revised operational plan and post-action monitoring reports regarding this critical emergency deviation. If you have questions concerning this consultation process, please contact the project biologist Kevin Palmer at 773-469-4280.

Sincerely yours,

For

Donald (Bob) Progulske
Everglades Program Supervisor
South Florida Ecological Services Office

cc: electronic only
Corps, Jacksonville, Florida (Melissa Nasuti)
Corps, Miami, Florida (Megan Clouser)

March 31, 2016

Deliberative

Operations of the S-344 with Repaired L-28 Plugs

Goal:
The goal of repairing the L-28 plugs is to allow use of the S-344 during high water events to provide relief to WCA-3A and to provide water to the overly drained cypress strands of the Big Cypress National Preserve (BCNP). The Service fully supports the Emergency Order and wants to insure that the western marl prairie is not negatively impacted by emergency operations.

Anticipated Window of Operations and Maintenance:
It is understood that the likely period of emergency operations will occur from May 1 through July 15, 2016. These activities will occur during the nesting season of the Cape Sable seaside sparrow subpopulation A (CSSS-A).

Concerns:
March 1 through early August is the only time that the endangered CSSS can breed and nest. During this time, water levels should be able to naturally recede with dry habitat coverage increasing during the nesting season.

Coordination Meetings:
The Service recommends regular coordination meetings between agencies during the Emergency Order to discuss operations and to study hydrologic data.

Discussion:
After studying aerial photos and the cypress strand topography, it appears that flows from the S-344 will enter into the L-28 borrow canal and travel southward until reaching plug #6 (northern most plug) about 2 miles downstream. Once the water is stopped by the plug and is able to overtop the canal bank depending on the bank elevation, water should begin to move towards the west into eastern BCNP. Some of the water will remain along the western banks of the L-28 borrow canal and reenter the next segment of canal until reaching plug #5 and so on and so forth southward until the entire L-28 borrow canal is full. Again, this is dependent on the elevation of the canal bank. The westward moving water will encounter a slight topographic ridge and small amounts of the water may continue moving southward along this ridge. Other portions of the water should work its way southwestward within the cypress strand and slough microtopography. Below in Figures 1 and 2, the blue lines are estimated trajectories by combining the 3 influencing physical effects on water being discharged by the S-344.

It appears that the majority of flows will reach the Tamiami Canal mid-way between the 40- and 50-mile bend. This flow path needs the proper outlet capacity along the canal to insure that flows are able to continue southwestward into Lostmans Slough and not end up back in the Tamiami canal or southern end of the L-28 borrow canal moving eastward then southward into CSSS-A.

In a recent presentation by the Corps, a flap gate was recommended around Mile 45 with additional outlet capacity in Loop Road south of gauge BICY A9 (Figure 3).

Monitoring:
The following existing hydrologic gauges will be important in monitoring and establishing safety closure protocols to some extent for CSSS-A:
S-344 TW
L-28 Gaps
S-343A/B TW
U.S. 41 Bridges/Culverts
BCA-9
Loop1 HW/TW
BCA-20
SPARO
NP-205
EDEN Sparrow Viewer

Monitoring of hydrologic conditions at the above gauges will provide baseline data for conditions prior to the repair of the L-28 plugs and the opening of S-344. These gauges should provide clues as to how the S-344 and L-28 plugs are affecting water flows and volumes.

Gauges at U.S. 41 and at Loop Road should provide even more information as to the impedance of the roads to flows that would otherwise flow naturally southwestward into BCNP. Flows should be monitored in and around Lostman's Slough using BCA-9 and BCA-20 as there could be more flows into the slough from the north. By monitoring these gauges along with using the EDEN Sparrow Viewer, any impacts to the western boundary of CSSS-A or to the ability of the marl prairie to achieve its natural recession will be documented. The existing trigger gauge of NP-205 and P-34 within the western marl prairie will also be used to monitor for any changes in water levels and recession rates within the habitat. We ask that USGS increase their monitoring of the U.S. 41 bridge gauges from bi-weekly to at least weekly if not 2-3 times per week.

Additional monitoring is recommended by the District:

- The bridge allowing flow through Tamiami Trail (0.6 miles along Tamiami Trail northwest of S343A).
- The culvert/bridge allowing flow through Tamiami Trail which is near/across from S343A.
- The bridge allowing flow through Tamiami Trail (0.6 miles along Tamiami Trail southeast of S343A).
- Southernmost degraded section of the L-28 levee (.3 miles from where the L-28 turns west.

Operational Triggers:
The Service has analyzed natural recession rates within the western marl prairie and within the L-28 borrow canal during the proposed months of operation. Water flows from the north from the L-28 and any backwater effects from Lostman's Slough to the western side of the prairie are of concern. The Service proposes to use S-343A TW, SPARO, and NP-205 gauges as triggers for making operational changes to the S-344 during the operational period and are discussed below. If water flows naturally without influences from the L-28 canal or from impedances at the U.S. 41 and Loop Road, these gauges should not show any effects from S-344. However, these operations and plug repairs have not been observed in the past. Also, the EDEN Sparrow Viewer will monitor water depth increases along the western marl prairie and within the habitat along with changes in the percent dry habitat available for nesting.

Below are historical recession rates at the tailwater (TW) gauge of S-343A. These recession rates will act as a baseline for the protective triggers.

S-343A TW Recession Rates:
March = .01 ft. /day
April = .03 ft. /day
May = .06 ft. /day
June / July are wet season months. Recession rates will have to be monitored real-time and compared to rainfall in the local area.

Below are initial recommendations on conditions that may warrant hydrologic / hydraulic investigations and/or change of S-344 operations. If concerns arise, a coordination meeting should occur to determine the risk level and path forward from changing conditions.

S-343A TW Trigger:
During dry periods, if the recession rate stops at S-343A TW gauge and reaches an ascension rate of .10 ft. per day, as an example, operators should investigate the source of the water. S-344 may need to be closed due to unintended flows into the L-28 canal.

SPARO / NP-205 Trigger:
If a rise in surface water levels of 0.10 ft. (1.5 inches) occurs at either gauge during a dry period, operators should investigate the source of the water. Operations of S-344 may need to be adjusted. This rise could be the effect of more S-344 water in Lostman's Slough slowing or stopping recession rates of the upland marl prairie. Or the increase in water levels could be due to water entering the marl prairie from the north.

EDEN Sparrow Viewer Trigger:
An example of a daily map produced by the USGE EDEN Sparrow Viewer is found in Figure 4. The intent is to not increase water levels within CSSS-A as a result of the emergency actions at S-344. Water levels within CSSS-A will be observed to determine current recession rates indicated by either a recession at NP-205 or an increase in the percent dry habitat on the Sparrow Viewer. If the percent dry habitat indicates a decrease in area as a result of the emergency actions, operation of S-344 should be adjusted.

It will be important to establish the baseline level of the recession rate that is occurring before opening the S-344 along with the current increase in percent dry habitat. During dry periods, if water levels in CSSS-A are declining as indicated by a recession at NP-205 along with the percent dry habitat increasing, we start with the weekly change in percent dry habitat that is occurring on that week. If the percent dry habitat change weekly rate decreases by more than 2 percent (one standard deviation) as a result of the operations of S-344, operators should investigate the source of the water. Operations of the S-344 may need to end. An example would be if the marl prairie was drying at a 5 percent rate and it dropped to 3 percent dry habitat, then the situation would need to be investigated. The standard deviation of the weekly percent dry habitat change during the CSSS breeding season is based on weekly receding periods of 1999 to 2015.

If recession is not occurring in CSSS-A as indicated by NP205 and Sparrow Viewer data upon opening S-344, the goal will be to not increase stage at NP205 and to not decrease the % of dry habitat due to flows at S-344.

Future Work:
The Service sees this as a first step towards backfilling the L-28 and that this is not the only improvement needed on the L-28 borrow canal in support of CSSS-A and to help rehydrate BCNP (Figure 5).

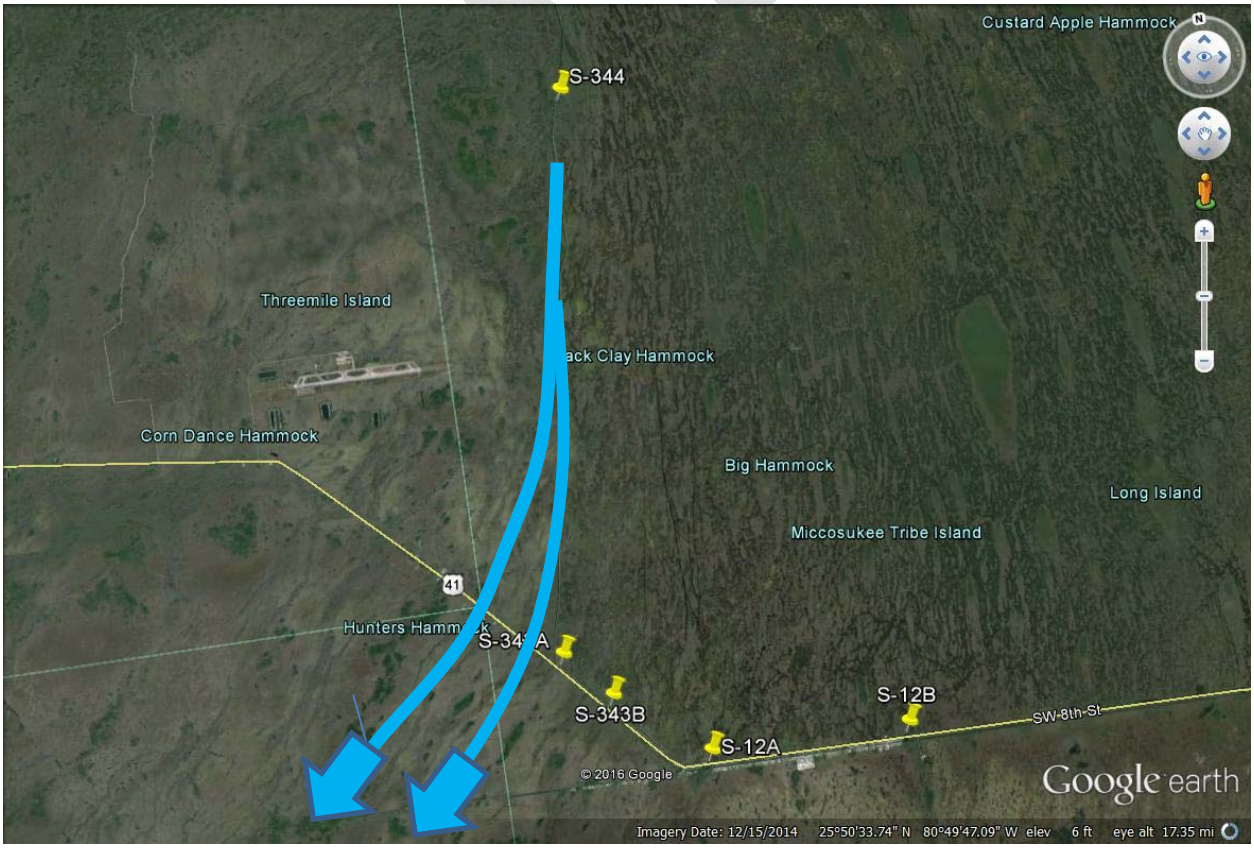

Figure 1 – Expected flow trajectory with proper outlet capacity with little influence from the L-28 Canal assumed.

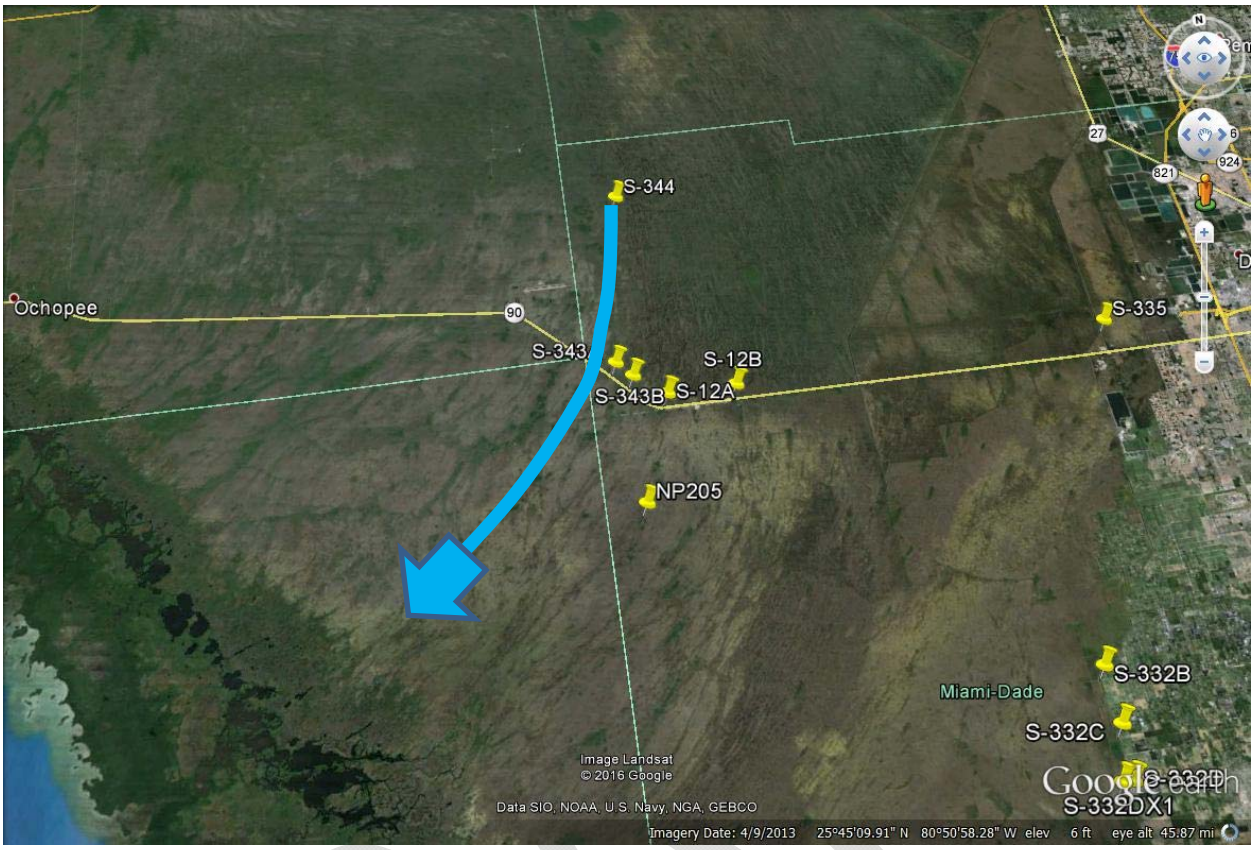

Figure 2 – Flow trajectory with proper outlet capacity with little influence from the L-28 Canal assumed showing a flow path into Lostmans Slough to the west of the western marl prairie and CSSS-A.

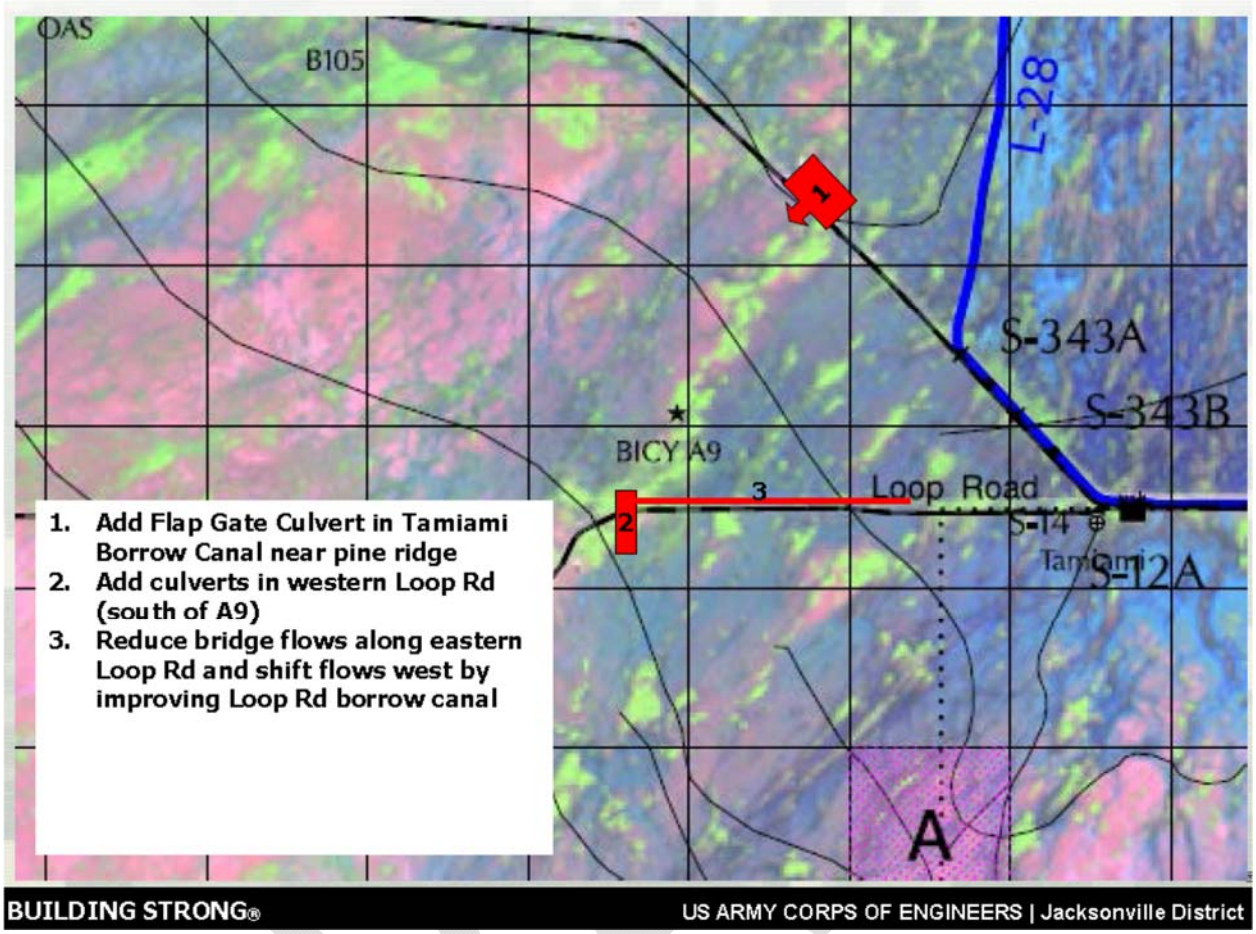

Figure 3 – Corps recommendation for additional outlet capacity in the Tamiami Trail and Loop Road for western flows (Corps Presentation February 19, 2016).

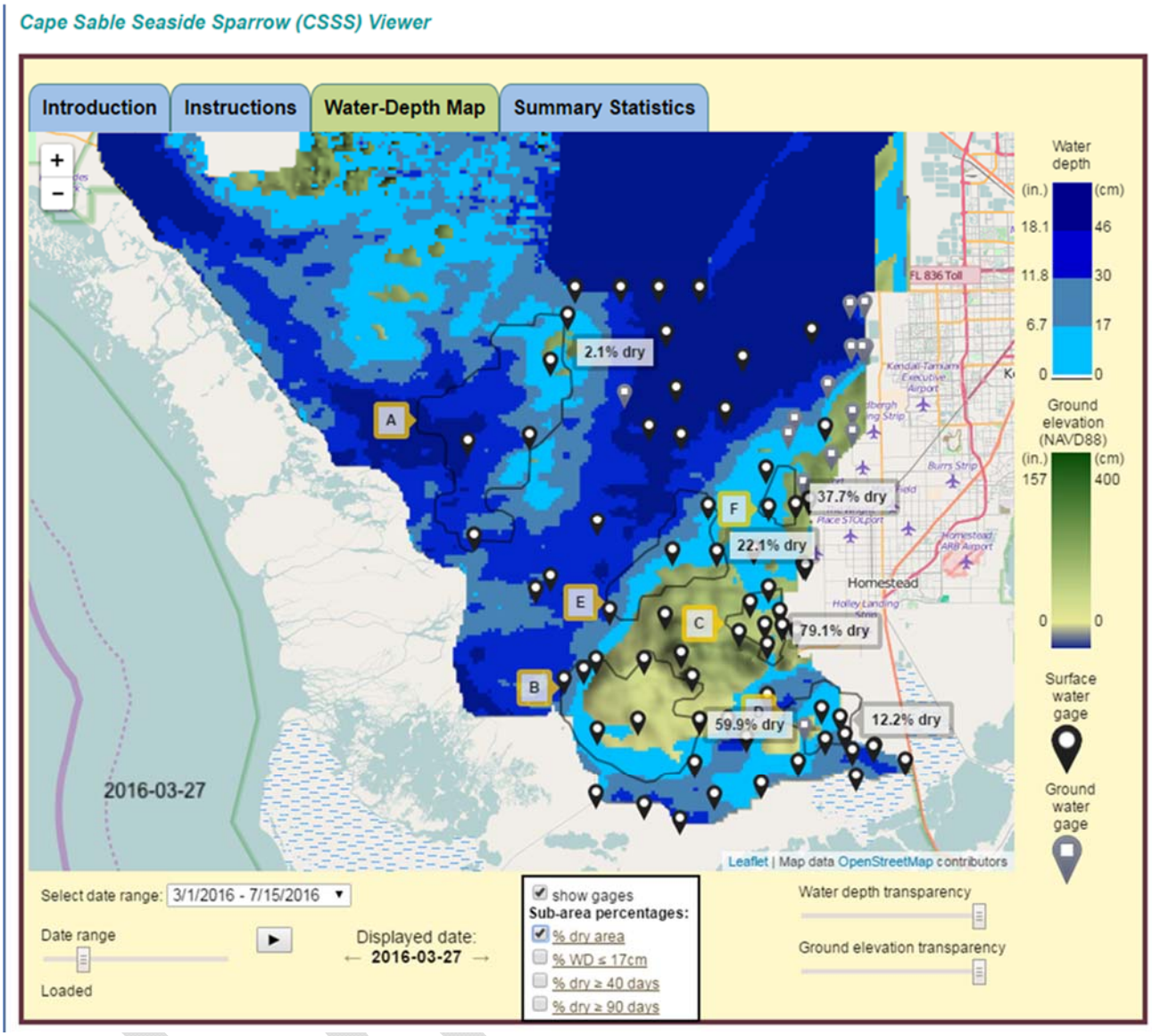

Figure 4 – Daily water depths and Percent Dry habitat is calculated using the USGS EDEN Cape Sable seaside sparrow Viewer.

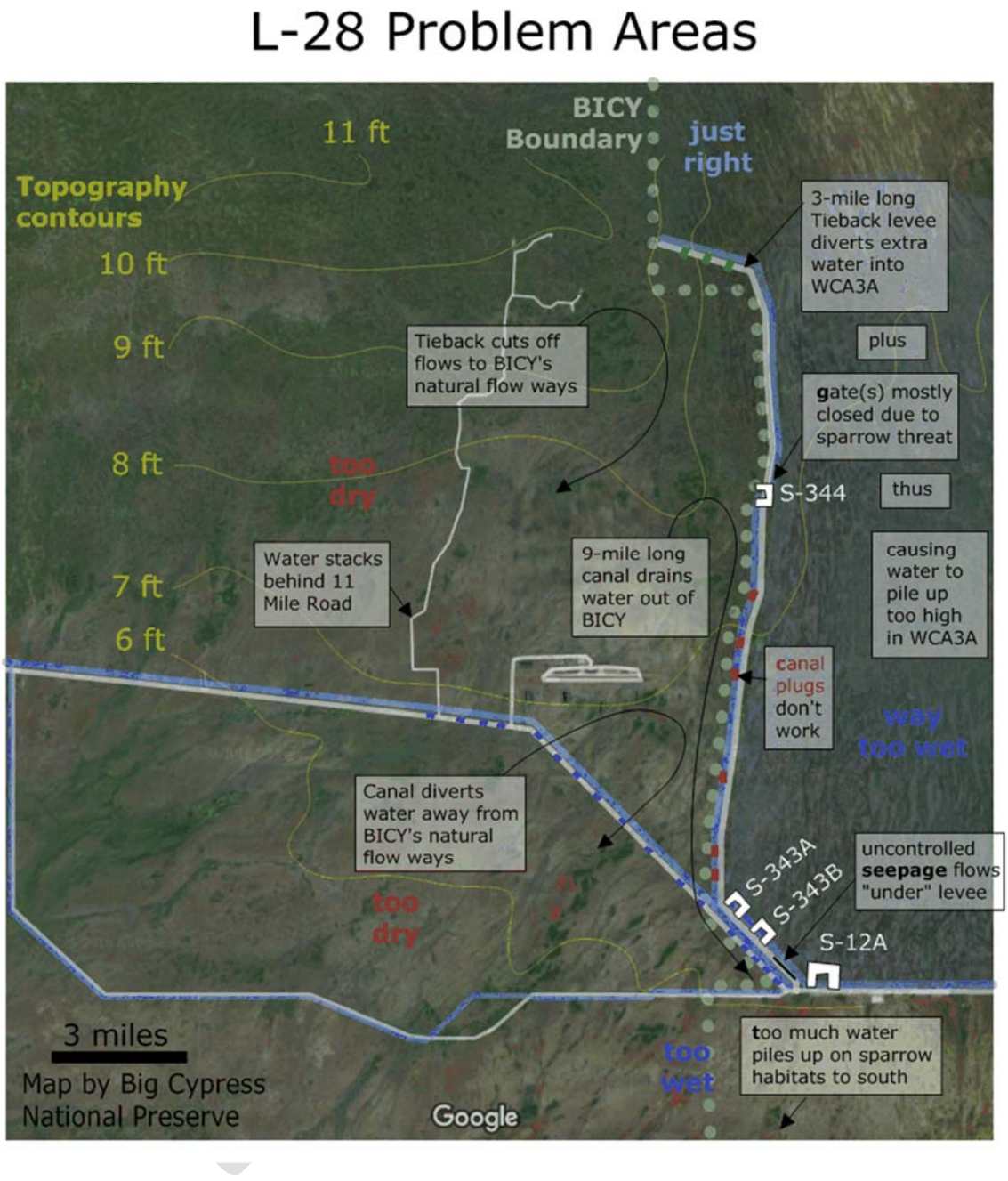

Figure 5 – Map provided by Bob Sobczak of BCNP after visiting the area March 24, 2016.