

Modified Water Deliveries to Everglades  
National Park  
8.5 Square Mile Area

Volume 1  
GRR/SEIS  
Comment Letters Received  
5/30/00

Modified Water Deliveries to Everglades National Park  
8.5 Square Mile Area  
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01

RCD in Pla  
4-13-00

4-9-2000

Dear Sir  
Received your letter about my 2  
Tracts of land 20 acres Tracts 577-09 and  
57713 I invested my money for my Grand  
Childrens college Education I have 12 Grand  
Children and 14 Great Grand Children.

I put 32 1/2 years on the Chicago Fire Dept  
my job was to save lives at the risk of  
my own and save Real Estate property Plus  
Commercial buildings. My son Chester  
Stepen Jr. is a Captain in the U.S. Army  
Reserve and my grandson Craig Stepen  
is a 1st Air Captain in the U.S. Army he flew  
11 Trips to Kosovo, now at Shreveport Air  
force base in Louisiana Commander of  
100 1st Pilots, I want you to write him  
there. They are expecting in November  
that will make it another grand son for me.

You mentioned in your letter that  
FWS has prepared a General Reevaluation Report  
and draft Supplement

Wall Street Journal had their article  
see enclosed statement. United Air Lines plans  
to build a 75 million aviation training  
Campus.

over

I had an offer of \$61,000 for my 20-  
acres. The Panamanians got their land  
back plus the canal and all buildings  
structures, machines & tools. The shape  
President Carter gave it back to ex-11/31-99  
to Americal Floods needs a much  
larger project.

Yours Truly  
Chester Stefan

6041 N NEVA Ave  
Chicago, IL 60631

Chicago Fire Dept.  
3 1/2 years of service  
Title Engineer

Mr. & Mrs. Chester Stefan  
6041 N Neva  
Chicago, IL 60631

CP Stefan

Handwritten notes and scribbles at the bottom of the page.

METROPOLITAN DADE COUNTY, FLORIDA

METRO DADE



STEPHEN P. CLARK CENTER

OFFICE OF COUNTY MANAGER  
SUITE 2910  
111 N.W. 1st STREET  
MIAMI, FLORIDA 33128-1994  
(305) 375-5311

D2

APRIL 11, 2000

Colonel Joe Miller, District Engineer  
Jacksonville District  
U. S. Army Corps of Engineers  
P. O. Box 4970  
Jacksonville FL, 32232

Dear Colonel Miller:

On several occasions during the past few months, Miami-Dade County staff has been asked to describe the assumptions that the County will use in reviewing the Supplemental Environmental Impact Statement (SEIS) for the 8.5 Square Mile Area of the East Everglades. County staff had hoped to provide information prior to the Corps' finalizing the draft SEIS, but given the extremely tight deadlines, that was not possible.

The County is currently reviewing the model outputs in the SEIS for each of the nine alternatives to determine if one in ten year flood protection would be achieved, either deliberately or incidentally. In making this determination, the County will use the methodology that is described in the attached letter dated February 18, 2000. The County will evaluate all areas that would be provided with one in ten year flood protection, in accordance with the County criteria, to determine if they would qualify for one unit per five-acre zoning under the provisions of Chapter 33B of the Code of Miami-Dade County. If any area meets the standards included in 33B-28, County staff will assume that property owners would be entitled to one unit per five acres as provided by 33B-27(b) of the Code.

During the past three decades, the residents of the 8.5 SMA have repeatedly sought road and drainage improvements, and have benefited from the enhanced drainage of the area and its surroundings provided by the "experimental" operation of the South Dade Conveyance system. We have no reason to believe that the desire for similar improvements and operations will be any less in the future than they have been in the past.

Even though the Corps' purpose in seven of the nine alternatives is to provide "flood mitigation", past experience has shown that there will be acute pressure to operate the system to provide flood protection. It is the County's position that construction of a system of canals, levees and pumps will further exacerbate the perception and heighten the expectation that flood protection could be provided and increase the pressure for roads and secondary drainage.

If the entire area, or any portion of the area, is provided with flood mitigation, the County will assume that most of the parcels will be developed as five-acre homesites with ancillary agricultural uses over the fifty-year life of the project. Implicit in this, is the assumption that the County will enforce the five acre-minimum lot size and the aggregation of smaller parcels to that

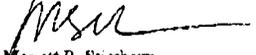
minimum if any Alternative other than full buyout is implemented. This is also supported by the County's residential land "supply and demand" situation under its current master plan and zoning.

Currently adopted County population projections do not extend past the year 2015. Therefore, they cannot be used to predict population growth in the 8.5 SMA throughout the 50-year life of the proposed project. Moreover, they assume that the 20- and 40-acre zoning unique to the area west of Levee 31-N will remain in place. If the 8.5 SMA is provided heightened perception of flood protection or rezoned for 5-acre home sites, the population projections for this area must, and will be revised. Given the inability of the projected Countywide population to be readily accommodated in the County as it is currently zoned and master planned, we must assume that the 8.5 SMA will be developed to its build-out potential within the 50-year time horizon of the proposed project.

We are encouraged by the fact that the Corps has included local secondary costs in the suite of performance measures that will be used to evaluate the alternatives in the SEIS. However, the exclusion of local secondary cost figures in the summary tables for all the Alternatives except Alternative 6, is a matter of great concern to Miami-Dade County. The County continues to maintain that induced local obligations and costs to provide additional public facilities in the area must be counted in the evaluation of all alternatives. We believe that this significant exclusion was based on flawed assumptions.

It is the County's intention to expedite its presentation of information on the local secondary costs so that all interested parties will be able to evaluate the alternatives on a more informed basis. The County's evaluation will include an estimation of future residential development in the 8.5 SMA, its tax base, and its capability of generating sufficient tax revenue to provide essential services and facilities, including roads and secondary drainage. We believe that the secondary cost information associated with the both the flood protection and flood mitigation alternatives must be available to, and considered by, the members of the SFWMD Board when they make their decision regarding the choice of a locally preferred alternative for the 8.5 SMA.

Sincerely,



Terrett R. Stierheim  
County Manager

Attachment



ENVIRONMENTAL RESOURCES MANAGEMENT  
NATURAL RESOURCES DIVISION  
33 S.W. 2nd AVENUE  
MIAMI, FLORIDA 33130-1346  
(305) 372-6789  
FAX (305) 372-6630

Mr. Richard Bonner  
U. S. Army Corps of Engineers  
Jacksonville District  
P. O. Box 4970  
Jacksonville FL 32232

February 18, 2000

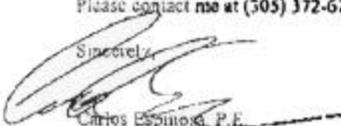
Dear Mr. Bonner:

During several meetings, the question has been posed to Miami-Dade County staff on how the County would determine when some, or all of the 8.5 SMA would be deemed to have one in ten year flood protection. The attached document describes how this determination would be made. Unlike the calculations contained in the PEER Report or the calculation that the Corps has stated that it will use in the Supplemental Environmental Impact Statement for the 8.5 Square Mile Area, the County would base its determination upon on the following:

- Providing flood protection for the 10 year, 24-hour storm for roadways;
- Providing flood protection for the 100 year, 72-hour storm for building pad and finished floor elevations; and
- Providing full on-site retention of the 5 year storm

Please contact me at (305) 372-6796 if further clarification is needed

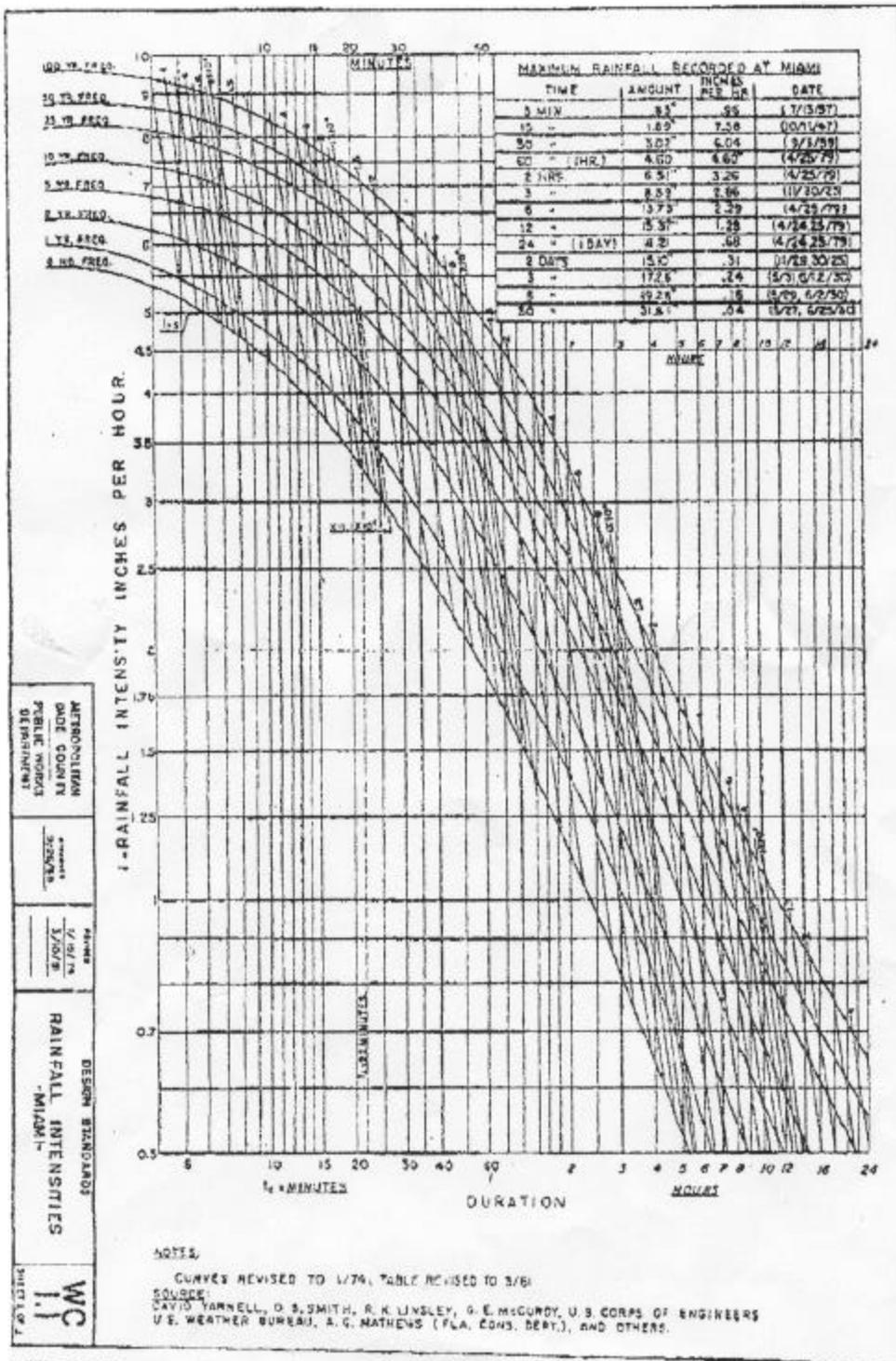
Sincerely,

  
Carlos Espinoza, P.E.  
Assistant Director

Attachments

Drainage Design Criteria for the 3.5 Square Mile Area

- Provide flood protection for the 10-year, 24-hr storm in roadways.
- Provide flood protection for the 100-year, 72-hour storm in the building pad and building finished floor elevation.
- Provide full onsite retention for the 5-year storm in all sites.
- For water quality treatment and flood protection of open areas, runoff may be conveyed through system of secondary ditches and pumped into an area adjacent to L-31N Canal for detention before emergency overflow into the canal, subject to approval by all agencies involved in this area.



APR 11 2000 TUE 2:01 PM COE PLAN DIV  
APR 11 2000 12:16 PM DERM

FAX NO. 9042323442 NO. 622 P. 1

Fax Cover Sheet



Fax Cover Sheet

MENTAL RESOURCES MANAGEMENT

OPTIONAL FORM NO. 17 (10)

FAX TRANSMITTAL

# of pages

To: Cheryl Ulrich	From: Martin G.
USACE	904 232-1117
FAX # 954-452-4825	FAX # 904 232-3442

CF: Cheryl Ulrich  
4/11/00

Date: 4/11/00

Company/Department: USACOE

Fax #: (904) 232-1213

Number of Pages(including cover): 6

Message: \_\_\_\_\_

From: Carlos Espinosa

33 S.W. 2nd Avenue  
Miami, Florida 33130  
(305) 372-6796 ♦ (305) 372-6759 (fax)

954-452-4825

**Miami-Dade County**  
**Miami-Dade County**

RCVD in Planning  
Division 4-17-00

03

April 10, 2000  
Robert W. Harvey  
12800 S. W. 7th Court  
Apt. 407 G  
Pembroke Pines, Fla.

33027

Department of the Army  
P.O. Box 4970  
Jacksonville, Fla. 32232-0029

ATTENTION of: Mr. Elmar Kurzbach,

Dear Mr. Kurzbach,

This is in regard to the draft I have received , pertaining to the 8.5 Sq. miles  
in the Florida Everglades!

I/We strongly object to the offer of \$5,000.00 for the 10 acres that we own,  
which in essence is \$500.00 per acre!! When we contracted for the land, we paid  
\$2800.00 for one (1) acre for a total of \$28,000.00 back on December 7, 1978.

It was not easy to pay \$250.00 per month plus interest to pay the land down,  
(times were tough), however we were looking ahead to when we retired that it would  
be a nest egg and we could enjoy our retirement with a little extra money? Now  
if you offered more like, \$48,000.00 to \$50,000.00, then we would be more willing  
to sell! After we have paid , Principal, interest, and taxes each year from  
December 1978 to the present time December 1999, (We have records to show if needed)  
this is not a great amount of money to request!

We are in retirement and the requested amount would surely give us a little more  
security and enjoyment in the years that we have left.

Sincerely yours,

*Robert W. Harvey*  
*Charlotte B. Harvey*  
Robert W. Harvey  
Charlotte B. Harvey

4-24-00

04

Mr. Frank Finch,

I'm addressing the project of water supply and the organizations and persons who request that report.

I would like to let you know that the alternatives are ideal, but what we would like to do is sell, since we've been paying taxes (on the property) year after year without any benefit to show for it.

Rafael Celida Lamorena

4-24-2000

RCVD in Planning  
Division 4-26-00

Mr. Frank R Finch

Me dirijo a ustedes sobre el proyecto suministro de agua. La organización y personas que solicitan dicho informe me dirijo a ustedes para hacerle saber que las ideas son ideales pero nosotros lo que queremos es vender pues estamos pagando impuestos todo los años y no tenemos ningun beneficio todos los años que ~~siempre~~ pagado impuestos

Rafael Celida Lamorena

05

**Environmental & Land Use Law Center, Inc.**

Shepard Broad Law Center · Nova Southeastern University · 3305 College Avenue · Ft.  
Lauderdale, Florida · 33314  
(954) 262-6140 · FAX (954) 262-3992

A tax exempt, Florida not for profit corporation pursuant to Section 501(c)(3) of the Internal Revenue Code.  
Dedicated to representing the public interest in environmental and land use matters.

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Joel A. Mintz  
Laurie Ann Macdonald

Richard Hamann, Treasurer  
David White

Executive Director \ General Counsel

Richard J. Grosso

Regional Director \ Senior Attorney

Susan H. Daniels

Via Facsimile 904-232-3442

May 30, 2000

Mr. Elmar Kurzbach  
USACOE, Jacksonville District  
Planning Division  
400 West Bay Street  
Jacksonville, Fla. 32232-0019

Re: SEIS for 8.5 Square Mile Area

Dear Mr. Kurzbach;

Please accept, and place into the record, the following as the formal comments on the Draft EIS. These comments are made on behalf of the Environmental and Land Use Law Center, the Natural Resources Defense Council, the World Wildlife Fund, and the Florida Sierra Club.

The attached 3 page letter, dated May 5, 2000 and signed by Richard J. Grosso and Bradford H. Sewell, is hereby adopted by reference as our comments

Sincerely,



Richard Grosso  
General Counsel

cc: Bradford H. Sewell, NRDC  
Shannon Estenez, WWF  
Barbara Lange, Florida Sierra Club

## Environmental & Land Use Law Center, Inc.

Shepard Broad Law Center · Nova Southeastern University  
3305 College Avenue · Ft. Lauderdale, Florida · 33314  
(954) 262-6140 · FAX (954) 262-3992

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May 5, 2000

### VIA FACSIMILE

Col. Joseph Miller  
ACOE Dist. Office  
Regulatory Program  
PO Box 4970  
Jacksonville, Fla.  
32232-0019

Re: 8.5 SMA SEIS/GRR

Dear Col. Miller;

We write on behalf of World Wildlife Fund, The Everglades Trust, Environmental & Land Use Law Center, the Natural Resources Defense Council, Friends of the Everglades, Tropical Audubon Society, and Sierra Club, Miami Chapter. We write to express these organizations' great concern that the Corps of Engineers is not providing complete and unbiased information to agency decision makers and the public concerning the mitigation component of the Project for Modified Water Deliveries to Everglades National Park. Specifically, we believe that the draft Supplemental Environmental Impact Statement ("SEIS") recently issued by the Corps is incomplete, analytically-flawed and biased in favor of Alternative 1, the Corps' original alternative. Further, we believe that the Corps' statements concerning the draft SEIS at the May 1st meeting of the Governing Board of the South Florida Water Management District ("Board") were frequently non-responsive, confusing, and even sometimes misleading. For example:

\* The draft SEIS emphasizes that all the alternatives improve water flows in Northeast Shark River Slough ("NESRS") but does not provide an easily-comprehensible response to the obvious question: which alternative provides the greatest improvement in water flows? Similarly, the Corps has provided wetland benefit charts that are extremely difficult to interpret, and has failed to include graphs or tables that otherwise clearly compare the hydrologic effectiveness of each alternative in restoring NESRS.

\* The draft SEIS emphasizes the number of homes to be relocated under each alternative but asserts that costs to the local government from making flood mitigation available to remaining residents are not relevant.

\* Corps representatives at the hearing minimized the consequences of several alternatives, including Alternative 1, in terms of potentially resulting in density increases in the 8.5 square mile area ("SMA"), including by portraying such increases as requiring a "variance", which is discretionary on the part of the local government, instead of a "conditional use", which must be granted if the relevant criteria are met.

We understand that the draft SEIS may be modified and augmented before appearing in final form. As you know, however, the draft SEIS serves a very important function currently. It has long been intended to be the informational basis on which the District Governing Board would make its decision concerning a Locally Preferred Alternative for the mitigation component. In turn, the Board's decision may influence the subsequent decision by the involved federal agencies.

Accordingly, we request that the draft SEIS be immediately supplemented to provide detailed responses to the questions set forth below. We believe that this must be done significantly prior to the date on which the District Governing Board will next consider this issue. We strongly believe the Board needs this information for appropriate decision-making, as does the public for its input into the process.

Which alternative provides the greatest potential for compatibility with the Comprehensive Everglades Restoration Plan ("CERP"), as measured in terms of CERP's intended hydrologic performance, construction features, and overall ecological goals.

2. What is the compatibility of each alternative with the specific requirements of the Reasonable and Prudent Alternative contained in the February 1999 Biological Opinion?
3. Explain how the alternatives compare in terms of their achievement of restored hydrologic conditions (i.e., Natural System Model or comparable measures) in NESRS.
4. The draft Coordination Act Report ("CAR") included with the draft SEIS shows that the hydrologic connection between NESRS and Taylor Slough (i.e., the Taylor Slough headwaters) is inside the impact area of Alternative 1. The CAR shows that Alternative 1 will decrease average water depths in the headwaters within a range of 0.3 to 0.9 feet. In light of this finding, why does the draft SEIS conclude that Alternative 1 will have no impact on Taylor Slough? This question similarly applies to all alternatives that the draft CAR determined would impact average water depths in the Taylor Slough headwaters.
5. Explain why the Corps decided not to assess how well each alternative provides hydrologic improvement in Taylor Slough and Florida Bay.
6. Explain how the draft EIS method of analysis (which compared each alternative to Alternative 1, but did not specifically compare each alternative to long-term restoration goals for Everglades National Park and NESRS) complies with NEPA's requirements to assess direct, indirect, and cumulative environmental impacts, including those impacts that will result from the action in combination with reasonably foreseeable actions?

Explain how the purposes of NEPA to provide for informed public input and decision-makers will be satisfied if the critical information for determining the environmental impacts of an alternative, i.e., hydrologic and ecological modeling information, is not available to the Governing Board and public significantly prior to any Board decision?

8. Explain how the "incidental flood control benefit" which the Corps acknowledges will be provided by Alternative 6D will not trigger local costs and density increases.
9. Does the Corps intend to incorporate into the draft SEIS Miami-Dade County's interpretation of its Comprehensive Plan, including local cost requirements, concerning the consequences of each alternative that make flood protection "available"? Will this be done before the Governing Board votes?
10. Will the Corps alter the current levee alignment in Alternative 6B that would result in privately held lands not receiving flood mitigation, and accordingly adjust the cost estimates for this alternative to reflect increasing acquisition costs? Will this information be available prior to the Governing Board's vote?
11. If Alternatives 6C and 6D do not provide flood protection to those residents who would remain east of the levee, explain the agencies' intended future policy concerning complaints from these residents concerning flooding impacts and how such a policy will be implemented.

12. Explain the Corps' position concerning the argument heard from proponents of Alternative 1 that constitutional prohibitions prevent exercise of eminent domain or other condemnation vehicles in this instance?

Again, we believe that the Corps must provide a timely response to these questions in order to ensure an adequate decision-making process on this very important matter and to satisfy the agency's legal responsibilities.

Sincerely,



Richard J. Grosso  
General Counsel  
Environmental and Land Use Law Center



Bradford H. Sewell  
Senior Attorney  
Natural Resources Defense Council

cc: SFWMD Governing Board members  
Michael Davis, Assistant Secretary of the Army  
Bill Leary, CEQ  
Dick Ring, ENP  
Frank Finch, SFWMD  
John Fumero, SFWMD  
Dennis Duke, USACOE  
Cheryl Ulrich, USACOE  
Dewey Worth, SFWMD  
Allison Defoor, Office of the Governor

**Environmental & Land Use Law Center, Inc.**

Shepard Broad Law Center · Nova Southeastern University  
3305 College Avenue · Ft. Lauderdale, Florida · 33314  
(954) 262-6140 · FAX (954) 262-3992

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**FAX MEMO**

**TO:** Col. Joseph Miller 904-232-2237

**CC:** **SFWMD Governing Board members** 561-682-6200  
**Michael Davis, Asst Secretary of the Army** 703-697-3366  
**Bill Leary, CEQ** 202-456-6546  
**Dick Ring, ENP** 305-242-7710  
**Frank Finch, SFWMD** 561-682-6200  
**John Fumero, SFWMD** 561-682-6276  
**Dennis Duke, USACOE** 904-232-1368  
**Cheryl Ulrich, USACOE** 904-232-1368  
**Dewey Worth, SFWMD** 561-682-6729  
**Allison Defoor, Office of the Governor** 850-922-6200

**FROM:** Richard Grosso

**DATE:** Friday, May 05, 2000

**RE:** Letter

-----  
**MESSAGE:**

Environmental & Land Use Law Center, Inc.

Stuart Broad Law Center  
New Southeastern University  
3506 College Avenue  
Ft. Lauderdale, Florida 33314  
(954) 262-6140 • FAX (954) 262-3992  
*A bar exempt Florida not for profit corporation pursuant to Section 601.16(3) of the Federal Revenue Code  
Dedicated to representing the public interest in environmental and land use matters.*

FAX

Date: 5/30/00  
Number of pages including cover sheet:

To: Elmer Kruszach

Phone: \_\_\_\_\_

Fax: 904-232-3442 (904) 232-1308

From: R. Grossa

Phone: (954) 262-6140

Fax: (954) 262-3992

Remarks:

Cover + 4 page  
P-5 SMA ELS Comment letters  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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D6



United States Department of the Interior

OFFICE OF THE SECRETARY  
Washington, D.C. 20240



ER 00/377

Mr. Elmar Kurzbach  
Department of the Army  
Corps of Engineers  
P.O. Box 4970  
Jacksonville, FL 32232-0019

MAY 17 2000

Dear Mr. Kurzbach:

This is in regard to the request for the Department of the Interior's comments on the draft environmental statement concerning the Modified Water Deliveries to Everglades National Park, 8.5 Square Mile Area, Florida.

This is to inform you that the Department will have comments, but will be unable to reply within the allotted time as we have just learned of the document's availability. A request for Interior comments is initiated by forwarding 12 copies of the document to this office for internal coordination and scheduling. According to our records, no such shipment reached this office. I have enclosed a copy of our guidance on this process for your future use.

Please consider this letter as a request for an extension of time in which to comment on the document. Our comments are scheduled to be forwarded by June 16, 2000.

Sincerely,

Terence N. Martin, P.E.  
Team Leader, Natural Resources Management  
Office of Environmental Policy and Compliance

Enclosure

May-17-00 12:27P

P.01



## FAX TRANSMISSION

U.S. FISH AND WILDLIFE SERVICE  
State Supervisor's Office  
South Florida Ecological Services Office  
P.O. Box 2676  
Vero Beach, FL 32961-2676  
561-778-0896  
Fax: 561-564-7393

P.01

To: Elmar Kurzbach Date: 5-17-2000  
Fax #: 904-232-3442 Pages: 2, including this cover sheet.  
From: Dave Ferrell  
Subject: \_\_\_\_\_

COMMENTS:

To report any problems with this facsimile transmission, please call (561) 778-0896.

D6R

MAY 30 2000

Planning Division  
Environmental Branch

Mr. Terence N. Martin, P.E.  
Director, Office of Environmental Policy and Compliance  
Team Leader, Natural Resources Management  
Department of Interior  
Main Interior Building, MS 2340  
1849 C Street, NW  
Washington, D.C. 20240

Dear Mr. Martin:

This is in response to your letter of May 17, 2000, regarding your agency's comments on the Draft Supplemental Environmental Impact Statement prepared relative to the Modified Water Deliveries to Everglades National Park, 8.5 Square Mile Area. Your letter requested an extension of time to submit Department of Interior (DOI) comments, providing them by June 16, 2000 instead of May 30, 2000.

Members of my staff have spoken with you, and Ms. Shannon Cuniff, also of your agency, to discuss our schedule and your request. During a May 18, 2000, telephone conversation, Ms. Cuniff advised that the extension of time would not be required since DOI staff were actively involved in this effort at all levels, and would indeed submit agency comments within the currently established 45-day comment period as scheduled.

The ambitious schedule we are following is being implemented in accordance with specific guidance and direction provided by our Washington level Headquarters, U.S. Department of Interior, and Council on Environmental Quality. In this schedule, we are directed to accomplish the evaluations, interagency and public coordination necessary to satisfy National Environmental Policy Act requirements, with a completion of this process as expeditiously as possible.

We regret that we cannot extend the comment period and look forward to receiving your comments on this very important aspect of the Modified Water Deliveries to Everglades National Park project.

Sincerely,



Joe R. Miller  
Colonel, U.S. Army  
District Engineer

~~CESAJ-PD-ES/Kurzbach/2325/slw~~  
~~CESAJ-PD-E/Smith~~  
~~CESAJ-EP-1/Uirich~~ CM  
~~CESAJ-PD/Duck~~  
~~CESAJ-DX/Burns~~  
CESAJ-DD/LTC Boruch  
CESAJ-DE/COL Miller 



# Miccosukee Tribe of Indians of Florida

1. DE  
CF: PD  
DC  
EDH

Business Council Members  
Billy Cypress, Chairman

Jasper Nelson, Ass't Chairman May 23, 2000  
Max Billie, Treasurer

Andrew Bert Sr., Secretary  
Jerry Cypress, Lawmaker

Colonel Joe Miller  
U.S. Army Corps of Engineers  
Jacksonville District  
P.O. Box 4970  
Jacksonville, Florida 32232

VIA FAX

Re: Addendum A to the Draft GRR and SEIS on the 8.5 Square Mile Area

Dear Colonel Miller,

I received Addendum A to the Draft GRR and SEIS on the 8.5 Square Mile Area dated May 9, 2000 about two days ago. Today, I called Elmur Kurzbach at the Corps to see if the comment period for the Draft SEIS had been extended. I was told that it has not because alternatives 6C and 6D, which were never identified until after the Draft was mailed out, are allegedly a variation of alternative 6B. This technical document, also includes a Supplement to the Fish and Wildlife Coordination Act Report.

When I received the Draft GRR and SEIS in April, it did not include the new alternatives. I do not believe that it is fair, nor does it meet the purpose and intent of NEPA, to have the SEIS be a moving target that does not incorporate a revised comment period for a revised document. But then, what can one expect from an agency that produced a Draft SEIS that does not even identify the requisite preferred alternative?

I understand that the reason for not extending the comments date is because of the DOI induced CEQ requirements for the alleged sparrow "emergency." It is ludicrous for the same agencies responsible for delaying the Modified Water Deliveries Project to now prohibit a revised public comment period based on the delay they have caused.

On behalf of the Miccosukee Tribe, I object to the Corps failure to follow the procedural requirements of NEPA. These procedures were put into place to allow the public to fully participate in the NEPA decision making process. It is impossible to do that when the proposed alternatives and information changes and the comment deadlines do not. Please advise us in writing as to whether or not the Corps will extend the comment deadline on the SEIS.

Sincerely,  
*Joette Lorion*  
Joette Lorion



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
P. O. BOX 4970  
JACKSONVILLE, FLORIDA 32232-0019

MAY 30 2000

Planning Division  
Environmental Branch

Ms. Joette Lorion  
Miccosukee Tribe of Indians  
P.O. Box 440021, Tamiami Station  
Miami, Florida 33144

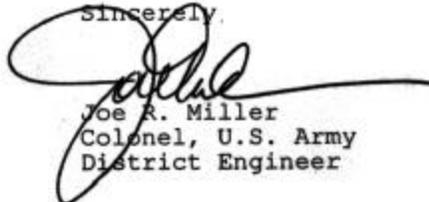
Dear Ms. Lorion:

This responds to your letter of May 23, 2000 regarding an extension of the public comment period for the Draft GRR/SEIS on the 8.5 Square Mile Area feature of the Modified Water Deliveries to Everglades National Park project.

The ambitious schedule we are following is being implemented in accordance with specific guidance and direction provided by our Washington-level Headquarters, US Department of Interior, and the President's Council on Environmental Quality. This directs us to accomplish the evaluations and public coordination necessary to satisfy the National Environmental Policy Act requirements, with a completion of the process by August 31, 2000.

We regret that we cannot extend the comment period, and look forward to receiving your comments on this very important project by May 30, 2000.

Sincerely,

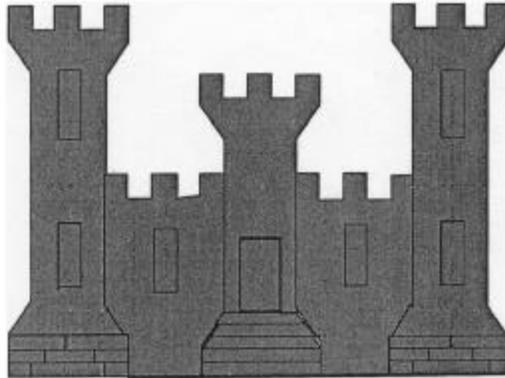


Joe R. Miller  
Colonel, U.S. Army  
District Engineer

Forward  
5/3/00

FACSIMILE TRANSMITTAL HEADER SHEET			
COMMAND	NAME OFFICE SYMBOL	TELEPHONE NUMBER	AUTHORIZED RELEASER'S SIGNATURE
FROM: Jon Maulding	CE5AF-PD-ES	904-232-2286	Sue Wilfong
TO: Joetta Lorian		305-223-8380	DAY-TIME MONTH YEAR 31 12:30 May 00
CLASSIFICATION:	NO. PGS. 1 + cover	PRECEDENCE	REMARKS:
SPACE BELOW FOR COMMUNICATIONS CENTER USE ONLY			
DA Form 3918-R 1-Aug-72			

## U.S. ARMY CORPS OF ENGINEERS



JACKSONVILLE DISTRICT

D8

May 21, 2000

Mr. Kurzback,

Lawrence Gillem paid \$6000.00  
for this property Jan. 20, 1972  
thinking it would make some  
money when he got ready to sell  
or build, then later he finds  
out it is nothing like he thought  
it would be.

We don't want you sending us  
any more papers, we want cash  
so get your act together and  
do just that, because that was  
a lot of money for us in 1972.

Lawrence C. Gillem

May 24, 2000

In behalf of the residents of West Red land Glades in the Rocky Glades now known as the 8.5 Square Mile Area. Under due process of law by Congress in the 1980's and now under the protection of the 1989 act.

I question your intent to condemn what you are responsible to protect. Is it legal or is this another bay of pigs? With a mandate to build a levee, your own approved project. To be build for our protection without qualification as a condition to the Modified Water Delivery Project. Public law 101-229 in section 104(c).

I ask, who gives you the right to choose an alternative other than protection under law, that breaches the trust of Congress with our community? Certainly not the Interior or the District. How can the Army Corps, in the light of day justify their future actions to condemn when mandated to protect under due process and existing law.

We will not let you forget the past, already under due process this issue was settled before Congress acted and passed the 1989 act. What is happening in Dade County with the S.F.W.M.D, the Dept. of Interior and the park under the guise of Everglades Restoration is a pre-determined self interest and dictatorial point of view and process.

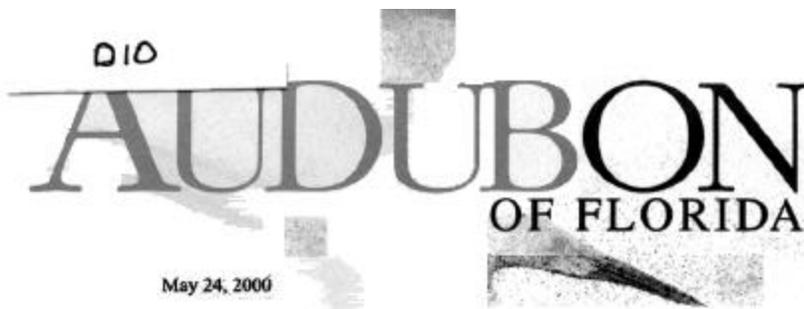
If your justification is that this would constitute due process, get real. Subverting existing law with another to take place of the one is illegal and not consider due process. It will be fought for this is nothing but a sham and to us already *deja vu*.

I urge and plea, fulfill under due process your present duty to Congress, the people and the law. Inforce the Secretary of the Army's authorization to implement existing law over the illegal ruling to cancel public law 101-229 in your 1994 Contract with the S.F.W.M.D. (YOU CAN)

Everglades restoration should be viewed as a just act not a land grab inforced by prejudices, mabs and greed. In view of our problems with discrimination in our nation this is both bad for both us and the environment.

With all due respect as an American, a Cuban American Citizen I plea to the secretary through your person to fix the fixation against the 8.5 S.M.A., not to waste more time and needed else were money on an ill-founded and ill-conceived and if condemn illegal act against my powerless community. This I ask in who's name you know.

Thank you,  
Phil's Sanchez  
truly (305) 448-4554



D10

Florida State Office  
Everglades Conservation Office  
444 Brickell Avenue, Suite 850  
Miami, FL 33131

Tel: 305/371-6399  
Fax: 305/371-6398

May 24, 2000

Mr. Elmar Kurzbach  
Department of the Army  
Jacksonville District Corps of Engineers  
P.O. Box 4970  
Jacksonville, Florida 32232-0019

Dear Mr. Kurzbach:

Audubon of Florida has prepared and is submitting for consideration the enclosed comments on the United States Army Corps of Engineers April 2000 Draft General Reevaluation Report and Supplemental Environmental Impact Statement Central and Southern Florida Project Modified Water Deliveries to Everglades National Park, Florida, 8.5 Square Mile Area Component (GRR/SEIS). Whereas the referenced GRR/SEIS is a draft document, we request to receive a copy of the final document upon its completion.

Once again, we thank the United States Army Corps of Engineers and cooperating agencies for this opportunity to provide comments and recommendations. Likewise, we express our continued commitment to working with United States Army Corps of Engineers and cooperating agencies in efforts to restore and protect America's Everglades and Florida's natural resources.

Sincerely,

Mark Kraus, Ph.D.  
Director of Restoration

Enclosure

cc: Frank Finch, South Florida Water Management District  
Steve Forsythe, United States Fish and Wildlife Service  
John Hankinson, Environmental Protection Agency, Region 4  
Richard Harvey, Environmental Protection Agency, Region 4  
Bill Leary, Council on Environmental Quality  
Dick Ring, Everglades National Park  
Cheryl Ulrich, United States Army Corps of Engineers



A STRATEGIC ALLIANCE OF THE FLORIDA AND NATIONAL SOCIETIES IN PARTNERSHIP WITH 45 LOCAL AUDUBON CHAPTERS  
Page 1 of 1





# AUDUBON OF FLORIDA

A strategic alliance of the Florida and National Societies  
in partnership with 45 Local Audubon chapters

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## Comments Pertaining to:

United States Army Corps of Engineers  
April 2000 Draft General Reevaluation Report and Supplemental  
Environmental Impact Statement  
Central and Southern Florida Project  
Modified Water Deliveries to Everglades National Park, Florida  
8.5 Square Mile Area Component

*May 2000*

### **Audubon of Florida**

Florida State Office • 444 Brickell Avenue • Suite 850 • Miami, FL • 33131-2405  
(305) 371-6399 • (305) 371-6398 fax

Everglades Conservation Office • Winter Park Office • Tallahassee Office • Center for Birds of Prey • Corkscrew Swamp Sanctuary  
Florida Coastal Islands Sanctuaries • Lake Okeechobee Sanctuaries • Ordway-Whitell Kissimmee Prairie Sanctuary • Tavernier Science Center

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## 8.5 Square Mile Area General Reevaluation Report and Supplemental Environmental Impact Statement

### 1.0 Introduction/Executive Summary

In 1992, the United States Army Corps of Engineers (USACE) finalized a General Design Memorandum (GDM) that outlined a plan for an improved water delivery system to Everglades National Park Alternative 1 of this process is the 92 GDM, more fully described in the following sections. Upon publication of that GDM, increased capabilities of modeling and the need to integrate the Modified Water Deliveries (MWD) with the C-111 project pointed to the need for a reevaluation of Alternative 1, or the 1992 GDM. It became apparent that there were other designs that could potentially meet the needs of restoring the North East Shark River Slough (NESRS) as well as the needs of the residents of the adjacent 8.5 Square Mile Area (SMA). Further, it was determined by many agencies that Alternative 1 failed as the best solution to achieve multiple purposes.

One important aspect of the 1992 project, is the need to address flood mitigation. This means that the project must mitigate for increases in flooding resulting from implementation of the MWD project, which would lead to higher water elevations. Restoring NESRS will require an increase in water elevations, thus providing less capacity for water storage, therefore "the area will be more susceptible to flood damages". (GRR 16). It is important to note the difference between flood mitigation and flood protection. While flood mitigation provides protection from project conditions, flood protection provides protection in a 1 in 10-year flood event. Further, Miami-Dade defines flood protection and the basis of that definition is used to determine whether or not an increased opportunity for development will exist. The criteria, used in this determination, is a 1 in 10-year flood event as well. When the USACOE's and Miami-Dade's definition were calibrated, it showed that the County's criteria is met where flood stages remained below the USACOE's defined protection stage of 7.7 ft. What this means is that if the flood stages remained below 7.7 feet, more development opportunities would exist on the land. (GRR 47, 48).

In November of 1998, the Governing Board for the South Florida Water Management District (SFWMD) voted unanimously to fully acquire the 8.5 SMA. That decision was rescinded by the Governing Board after a lawsuit was filed that the decision violated Government in the Sunshine provisions. The Governing Board of the SFWMD then requested that the USACE complete an evaluation on additional alternatives for the 8.5 SMA. This General Reevaluation Report (GRR) and Supplemental Environmental Impact Statement (SEIS) serve as the collection of data upon which a new Locally Preferred Alternative (LPA) could be chosen. The Governing Board may chose a new LPA or revert to the previous 1992 GDM, if no decision is made on a new alternative. Concurrently, a federal decision making process which will also rely on these documents is moving forward for potentially new federal action. If a new federal action is chosen, the GRR and SEIS will serve as a Post Authorization Change (PAC) report.

This document will take the 11 alternatives, including those recently developed by the USACOE, 6C and 6D, and will eliminate alternatives inconsistent with the requirements and objectives as set out by the USACOE and other federal agencies. At the first level analysis, alternatives are compared to the project requirements. At the second level of analysis, alternatives that are not eliminated in the first level of analysis, are then analyzed as compared to the objectives. Finally, any remaining alternatives are then analyzed in relation to the Coordination Act Report (CAR). Theoretically, at every level of analysis more alternatives are eliminated, thus reducing the number of alternatives Audubon of Florida (AOF) considers feasible.

Following our evaluation, we found:

- Alternatives 3, 7, and 8 failed to achieve required levels of flood mitigation/protection without substantial purchases of property and/or flowage easements. Because these alternatives failed to provide the required levels of flood mitigation/protection on their own structural accord, we consider Alternatives to be impractical.

Alternatives 1, 2, 6c, and 9 failed to achieve required levels of hydrological performance in ENP, and/or required levels of flood protection in the 8.5 SMA. Therefore, we consider Alternatives 1, 2, 6c, and 9 to be non-viable solutions.

- Alternative 6d marginally achieved the minimum required levels of hydrological performance in ENP. Because of the marginal performance of this alternative, and the potential for remaining residents in the 8.5 SMA to be flooded on a periodic basis, we consider Alternative 6d to be very undesirable.
- Alternative 6b met minimum required levels of hydrological performance in ENP, and provided flood protection to remaining residents in the 8.5 SMA, with the exception of those residents in the northeastern 8.5 SMA (near the FAA property). Because this Alternative allows increased development, and the potential/pressure to operate structures for increased levels of flood protection (with increased development), we view Alternative 6b as undesirable. Many issues will remain unresolved.

Alternative 4 restores flows to ENP, but is likely to encounter time delays due to the nature of life estates. Furthermore, flowage easements are proposed to be acquired at 95% of the property value when the property could be purchased free and clear for an additional 5%. Because of the implementation uncertainty tied to life estates and the economic concerns related to the acquisition of flowage easements, view Alternative 4 as undesirable.

Alternative 5 restores flows to ENP, provides flexibility to planning efforts related to the CERP and flood protection of areas east of the L-31N, and provides closure/compensation to residents of the 8.5 SMA.

## 2.0 Alternatives

The alternatives are analyzed within the context of different base conditions for evaluation. The Base 83 condition is what existed on the ground prior to the MWD project. The Base 95 is the condition as it exists today, measured and observed during the reevaluation. Future without project is the condition compared to the future effects after the authorized project, 1992 GDM, is implemented. (GRR 26, 27).

### 2.1 Alternative 1 Authorized GDM Plan

This alternative is the original project alternative that was approved and a record of this decision was executed in May 1993. This alternative includes a major levee along the 8.5 SMA perimeter, a seepage canal, a minor levee, and a single pump located at the northeast corner of the 8.5 SMA. The pump will discharge into the L-31N canal where it will flow north and discharge into the L-29 and then back to NESRS.

### 2.2 Alternative 2 Modified GDM Plan

This alternative is another version of Alternative 1, except that the pump to be installed will be constructed at the southwest corner of the 8.5 SMA, and will discharge seepage water into the C-111 Buffer Area.

### 2.3 Alternative 3 Deep Seepage Barrier Plan

This alternative includes a perimeter levee around the 8.5 SMA but the barrier will be located beneath the levee and will have a depth of 45-70 feet.

### 2.4 Alternative 4 Landowner's Choice Land Acquisition

This alternative allows for acquisition through the use of buy-out, flowage easement or life estate with flowage easement.

### 2.5 Alternative 5 Total Buy-out Plan

All land will be obtained through condemnation or willing sellers.

### 2.6 Alternative 6B Western Portion of 8.5 SMA as Buffer Plan

The western portion of the 8.5 SMA will be converted to a buffer area between the developed portion and ENP. The eastern side will be protected by a levee and a drainage system, a seepage canal, and an interior levee and a new pumping structure.

### 2.7 Alternative 6C Modified Western Boundary of 6B Alternative at the SOR Line

The difference between this alternative and 6B is that the western boundary is now located approximately 1.3 miles west of the 6B line at the Save Our Rivers boundary. The boundary is also .6 miles east of the western boundary of the 8.5 SMA and it also includes 3.8 square miles more than 6B. An exterior levee, canal and interior levee are utilized to control groundwater levels and seepage. All structure are in close proximity to one another.

### 2.8 Alternative 6D Modified Western Boundary of 6B Alternative- Canal and levee are split

In this alternative, the exterior levee is within the Save Our Rivers boundary, but the canal components are much further east than the exterior levee. Internal levees are on either side of the canal to keep surface water from entering the seepage canal. There is a significant amount of land between the canal and levee system, where residents will remain.

### 2.9 Alternative 7 Raise All Roads Plan

This plan requires raising all public roads and providing internal drainage. All areas surrounded by these raised roads will remain unimproved, but a flowage easement will be obtained from areas that receive impacts from additional high water levels.

### 2.9 Alternative 8A Western Portion of 8.5 SMA as Flow-way

The western area will serve as a buffer to ENP west of the mitigation levee and as a natural flow-way for diverting flow to the C-111 area. An interior perimeter levee and an exterior diversion levee are also part of the plan.

### 2.10 Alternative 9 Adaptive Refinement of GDM Plan

This plan has the same layout as Alternative 1, but allows for more flexibility with the ability to move forward immediately with implementing the authorized plan, and another plan could be implemented at a later date.

## 3.0 *Alternatives in Relation to Requirements*

The requirements that the COE used were deemed mandatory for any alternative to even be considered viable. The Alternatives are evaluated on the basis of whether or not they meet the requirements as shown in Tables 8, 9 and 10 of the GRR/SEIS. What AOF found, was at this level of analysis, Alternatives 3, 7 and 8A do not meet Requirement 2 listed below. As constructed these Alternatives will require additional less than fee simple acquisition through the use of flowage easements comprising 95% of the value of the land. If an Alternative cannot meet a project requirement as constructed and must utilize flowage easements in addition to structure to meet the Requirement, it should not be considered viable due to it's inability to meet the Requirement on it's own merits. The requirements include:

1. Do not negatively impact higher stages in ENP as specified in the MWD project.
  - Stages in MWD can be met.
  - Stages in NESRS are in accordance with those specified in 92 GDM
    - Must accommodate stages at least as high as 1992 GDM
    - Water depths in ENP were compared to stages in 1992 GDM
    - All alternatives have average water depths as high as or higher than the authorized plan, therefore the SEIS concludes that all alternatives meet this requirement.
2. Mitigate for increased stages within 8.5 SMA resulting from implementation of the MWD project. (3 and 6B were designed to provide flood protection, above flood mitigation).
  - Surface water elevations due to similar conditions are maintained at pre-project levels as established using the 83 Base
  - Water depths in the 8.5 SMA at pre-MWD conditions are compared to water depths for each alternative

- Certain structural alternatives could not meet this requirement alone and required non-structural tools as well, ie; land acquisition and/or flowage easements  
GRR/SEIS show that Alternatives 1, 2B, 6B, 6C and 6D meet requirement through structural features. The modeling shows that in some instances groundwater levels for all alternatives go above 1983 levels for wet scenario modeling, therefore these alternatives that experience this affect do not fully meet this requirement-  
4 and 5 meet requirement through non-structural features  
3 meets (27% structural, 73% non-structural)- heavy reliance on flowage easements  
8A meets (69% structural, 31% non-structural)- heavy reliance on flowage easements  
7, raising all roads is not mitigation- heavy reliance on flowage easements  
It could be argued that 3, 8A and 7 did not meet this requirement because of excessive reliance on non-structural mechanisms (ie; flowage easements to the point of becoming almost acquisition based).
3. Develop a solution that can be permitted by regulatory interests under current and reasonable foreseeable regulations.
    - Permit conditions and regulations currently in effect
    - Permitting restrictions from wetland loss are deemed to be unimportant because the benefit of stages gained in the Everglades system outweigh the need of circumventing the permitting process and losing wetlands. But concerns about adequate water delivery to Florida Bay are of great concern, particularly with respect to impacts to crocodiles, roseate spoonbills, and manatees. AOF does not accept this premise that permitting restrictions (wetland mitigation) are unimportant because benefits of any of the alternatives outweigh losing wetlands, these impacts could still be significant with many alternatives, therefore it warrants further analysis.
    - Also, Alternatives 1, 2B, 3, 6B, 6C, 6D, 8B and 9 have interior berms to segregate runoff so it does not mix with cleaned ENP seepage water,
    - All alternatives are deemed to have met this requirement
  4. Ensure no significant impact to existing habitat of endangered or threatened species.
    - One measure is the effects of changes within potential impact area where critical habitat occurs
    - Indicator cells were used to serve as comparisons to existing and without project conditions
    - The USFWS's 1999 Final Biological Opinion documents that project construction would likely adversely affect snail kites, woodstorks, and American Crocodiles, all significant indicator species of critical habitat.
  5. Maintain current levels of flood protection for agricultural areas east of L-31N.
    - Measures look at providing existing flood protection for areas east of L-31N  
Indicator cells in agricultural areas are evaluated for current and future conditions to determine significant impacts
    - There were limited impacts to agricultural interests east of L-31N
    - Small impacts that do exist are attributable to restoration flows to NESRS, independent of 8.5 SMA alternatives  
Each of the alternatives exhibits higher water levels east of L-31N; however, because the higher water levels are similar throughout each of the alternatives, it can be inferred that these higher water levels are relatively independent of the 8.5 SMA configuration.

### 3.1 Summary Tables for Alternatives in Relation to Requirements

The following summaries are based on interpretations of the COE's Tables 8, 9 and 10 in the GRR/SEIS.

*Alternative One- Results of Comparing Alternatives with Project Requirements*

Met	1. No negative impacts to higher stages in ENP
Met	2. Mitigation for increased stages from MWD implementation
Met	3. Met under GRR/SEIS analysis
Met	4. No significant impact to Endangered, Threatened species (ETS)
Met	5. Current levels of flood protection maintained for Ag areas based on COE's assumptions that this issue will be taken care of in the regional fix

*Alternative Two- Results of Comparing Alternatives with Project Requirements- Same issues as Alternative One*

Met	1. No negative impacts to higher stages in ENP
Met	2. Mitigation for increased stages from MWD implementation
Met	3. Met under GRR/SEIS analysis
Met	4. No significant impact to Endangered, Threatened species (ETS)
Met	5. Current levels of flood protection maintained for Ag areas based on COE's assumptions that this issue will be taken care of in the regional fix

*Alternative Three- Results of Comparing Alternatives with Project Requirements-*

Met	1. No negative impacts to higher stages in ENP
Not Met	2. This requirement is not met because of the heavy reliance on flowage easements and inability to meet criteria as designed
Met	3. Met under GRR/SEIS analysis
Met	4. No significant impact to Endangered, Threatened species (ETS)
Met	5. Current levels of flood protection maintained for Ag areas based on COE's assumptions that this issue will be taken care of in the regional fix

*Alternative Four- Results of Comparing Alternatives with Project Requirements*

Met	1. No negative impacts to higher stages in ENP
Met	2. Mitigation for increased stages from MWD implementation
Met	3. Met under GRR/SEIS analysis
Met	4. No significant impact to Endangered, Threatened species (ETS)
Met	5. Current levels of flood protection maintained for Ag areas based on COE's assumptions that this issue will be taken care of in the regional fix

*Alternative Five- Results of Comparing Alternatives with Project Requirements*

Met	1. No negative impacts to higher stages in ENP
Met	2. Mitigation for increased stages from MWD implementation
Met	3. Met under GRR/SEIS analysis
Met	4. No significant impact to Endangered, Threatened species (ETS)
Met	5. Current levels of flood protection maintained for Ag areas based on COE's assumptions that this issue will be taken care of in the regional fix

*Alternative Six B- Results of Comparing Alternatives with Project Requirements*

Met	1. No negative impacts to higher stages in ENP
Met	2. Mitigation for increased stages from MWD implementation
Met	3. Met under GRR/SEIS analysis
Met	4. No significant impact to Endangered, Threatened species (ETS)
Met	5. Current levels of flood protection maintained for Ag areas based on COE's assumptions that this issue will be taken care of in the regional fix

*Alternative Six C- Results of Comparing Alternatives with Project Requirements*

Met	1. No negative impacts to higher stages in ENP
Met	Mitigation for increased stages from MWD implementation as designed
Met	3. Met under GRR/SEIS analysis
Met	4. No significant impact to Endangered, Threatened species (ETS)
Met	5. Current levels of flood protection maintained for Ag areas based on COE's assumptions that this issue will be taken care of in the regional fix

*Alternative Six D- Results of Comparing Alternatives with Project Requirements*

Met	1. No negative impacts to higher stages in ENP
Met	2. This requirements is marginally met because of the reliance on flowage easements, but this reliance is not as heavy as Alternatives 3, 7, and 8A
Met	3. Met under GRR/SEIS analysis
Met	4. No significant impact to Endangered, Threatened species (ETS)
Met	5. Current levels of flood protection maintained for Ag areas based on COE's assumptions that this issue will be taken care of in the regional fix

*Alternative Seven- Results of Comparing Alternatives with Project Requirements*

Met	1. No negative impacts to higher stages in ENP
Not Met	2. Raising all roads is not flood mitigation and the alternative relies heavily on flowage easements and cannot meet requirement as designed
Met	3. Met under GRR/SEIS analysis
Met	4. No significant impact to Endangered, Threatened species (ETS)
Met	5. Current levels of flood protection maintained for Ag areas based on COE's assumptions that this issue will be taken care of in the regional fix

*Alternative Eight- Results of Comparing Alternatives with Project Requirements*

Met	1. No negative impacts to higher stages in ENP
Not Met	2. Not met, this requirement cannot meet this requirement as designed (69% met) and relies on flowage easements to accomplish it's goal by 31%
Met	3. Met under GRR/SEIS analysis.
Met	4. No significant impact to Endangered, Threatened species (ETS)
Met	5. Current levels of flood protection maintained for Ag areas based on COE's assumptions that this issue will be taken care of in the regional fix

*Alternative Nine- Results of Comparing Alternatives with Project Requirements*

Met	1. No negative impacts to higher stages in ENP
Met	2. Mitigation for increased stages from MWD implementation
Met	3. Met under GRR/SEIS analysis.
Met	4. No significant impact to Endangered, Threatened species (ETS)
Met	5. Current levels of flood protection maintained for Ag areas based on COE's assumptions that this issue will be taken care of in the regional fix

### 3.2 Conclusions

Alternatives 3, 7 and 8A do not meet Requirement 2 of mitigation for increased stages within the 8.5 SMA resulting from implementation of the MWD project. Two of the alternatives 3 and 8A are structural solutions, but due to their design do not meet this requirement entirely and require additional non-structural measures such as acquisition of flowage easements to meet Requirement 2. Alternative 6D also must rely on additional flowage easements to meet the requirements, but this reliance is only about 9% and will be discussed further in the next section which analyzes objectives. Alternative 7, raising all roads, does not provide flood mitigation and requires flowage easements to meet Requirement 2. Based upon AOF's methodology of eliminating alternatives as they are compared to project requirements and then project objectives, these three alternatives are thus eliminated from further consideration. Only Alternatives 1, 2, 4, 5, 6B, 6C, 6D and 9 will be further evaluated. Only Alternatives 4 and 5 provide for full flexibility in water flow south into Florida Bay. Alternative 6B also allows for some flexibility in water flow into Florida Bay. The other alternatives do not meet these criteria. Therefore concerns about adequate water delivery to Florida Bay become of great concern, particularly with respect to impacts to crocodiles, roseate spoonbills, and manatees. In addition, AOF does not accept the premise that permitting restrictions (wetland mitigation) are unimportant because benefits of any of the alternatives outweigh losing wetlands. Alternatives 4, 5, and 6B allow for significant on-site wetland restoration (mitigation), the other alternatives allow for a net loss of both wetland function and acreage without adequate opportunity for on-site mitigation.

### 4.0 Alternatives in Relation to Objectives

#### 4.1 Objectives and Performance Measures

The project objectives were identified for the purpose of measuring the performance of each alternative in meeting the goals of the project. Performance measures were then developed to measure each objective. These specific performance measures will not be listed, but will be discussed within the text of each individual set of objectives, relative to the discussion of the alternative.

There are two ways to complete this analysis. One way would be to analyze the information in terms of the "Table 10" analysis (GRR, 82) where Alternatives 2 through 9 are compared to Alternative 1, the 92 GDM. The second way is to use the "Table 8/9" analysis (GRR, 82) where each alternative is compared to the Base 95 or non-structural alternative conditions. This will be the preferred methodology chosen by AOF in its analysis for the purpose of presenting results of Alternatives weighted against project objectives extrapolating in certain instances. AOF feels that for modeling purposes, this analysis is the closest to looking at what the restored system will look like but an NSM like model would provide a clearer picture because it would compare the alternatives in terms of what the restored system should look like. This analysis is preferred to the evaluation of the various alternatives in relation to the 92 GDM because restoration targets are not the measure, performance of the alternatives in relation to one another is the target. Performance relative to the original 92 GDM is not the best gauge for whether an alternative is likely to succeed in meeting the targets, improving the system should be the measure.

These objectives include:

1. Evaluate effects on hydroperiods in NESRS.
  - Measures included: hydroperiod impacts, water depths, effects on season variability and duration of continuous flooding

- In relation to decreased hydroperiod acreage and decreased depth of acreage, Alternatives 1, 2, and 9 show these detrimental effects and it could be reasoned that that they do not meet this objective. 8A shows a slight decrease in water depth of acreage of 95 acres. Alternative 6C shows a slight decrease in hydroperiod impacts and a larger decrease in water depths.
2. Evaluate impacts to the landowners and residents of the 8.5 SMA resulting from implementation of MWD.
 

Measures included: potential flood mitigation and flood protection damages, potential direct or indirect loss to local business, residences and agricultural lands

In relation to area of damages and percentage of acres, 3, 7, 6D and 8A have percentage impacts of 73%, 69%, 9% and 31% respectively. This is flood mitigation damage where the project as designed cannot meet this objective from implementing MWD.

    - In relation to flood protection damages, Alternative 3 has a 90% acre acreage damage and 6B has a 5% acreage damage over current conditions. Acquisition based alternatives 4, 5, 6B and additionally 8A have impacts to business, relocation, agricultural lands and willingness of sellers. Obviously acquisition based alternatives will have these associated impacts.
  3. Analyze cost effectiveness.
    - Measures included: direct project costs, operations and maintenance, construction and local costs
    - The most problematic area in this analysis is that in relation to local costs. Local costs are only included for 6B because this is the only alternative perceived to provide flood protection. While the GRR also states that Alternative 3 provides flood protection. This should be reconciled.
    - See attached letter from Miami-Dade County outlining their concerns with including local cost information for only Alternative 6B. When their additional cost information is completed it should be included in the Final SEIS.
  4. Analyze effects to ecological functions.
    - Measures included: spatial extent of wetlands in 8.5 SMA and ENP, and impacts to short and long hydroperiod wetlands

When analyzing the ecological functions of this objective the use of an overall WRAP score is the performance measure. When analyzing all alternatives, it would seem that Alternatives 1, 2, 3, and 9 have the lowest WRAP scores. WRAP assessment is the generally accepted method of evaluating wetlands impacts in Florida.

As far as gauging total wetland acreage, again Alternatives 1, 2, 3 and 9 have the lowest associated acreage.
  5. Evaluate effects on conditions favorable to Federal and State listed endangered species survival.
    - Measures utilized indicator cells to evaluate effects on endangered species habitats
    - More analysis on the impacts of the Cape Sable Seaside Sparrow are included in the Modeling Section 6.0.
  6. Measure the compatibility with CERP and C-111 projects without adversely impacting the current level of flood protection east of L-31N.
    - Measure evaluates compatibility with flows and water levels from CERP and the ability to accommodate C-111 and quantify increase in stages and/or duration to agricultural lands east of L-31N.
    - The most problematic area associated with this objective is Alternative 1 and it's lack of compatibility with the C-111 project.
    - There is more analysis associated with this objective in the Modeling Appendix and Section 6.0.
  7. Analyze impacts and costs associated with time delays in implementation of alternatives.
    - Ability to meet December 31, 2003 deadline and evaluation of impact of construction delays and administrative requirements.

This analysis is arbitrary and completely based on opinion with USACOE staff's experience with Federal projects. But there is some logic in the fact that Alternatives 1, 2 and 9 are closest in their approvals and therefore would have less time delay and cost delay associated with them. This objective should not be highly weighted because of its arbitrary nature.

#### 4.2 Summary Tables

The following summaries are based on interpretations of the COE's Tables 8, 9 and 10 in the GRR/SEIS.

##### *Alternative One- Results of Comparing Alternative with Objectives*

Not Met	1. Decreased hydroperiod and decreased water depths on acreage
Met	2. GRR states no significant impact to landowners and residents quantified
	3. This criteria regarding costs cannot be considered met or not until more information is supplied by Miami-Dade County
Not Met	4. Lowest WRAP scores
Met	5. Further analysis in modeling section of this document
Not Met	6. Indicated as problematic in relation to implementation of C-111
Met	7. Prior authorization should not be heavily weighted as selection criteria.

##### *Alternative Two- Results of Comparing Alternative with Objectives*

Not Met	1. Decreased hydroperiod and decreased water depths on acreage
Met	2. GRR states no significant impact to landowners and residents quantified
	3. This criteria regarding costs cannot be considered met or not until more information is supplied by Miami-Dade County
Not Met	4. Lowest WRAP scores
Met	5. Further analysis in modeling section of this document
Met	6. GRR indicates no problems with compatibility with CERP and C-111 projects
Met	7. Merely because a later version of the previously authorized project does it meet the criteria and cannot be heavily weighted

##### *Alternative Four- Results of Comparing Alternative with Objectives*

Met	1. GRR states this objective is met with minimal impact on hydropatterns in NESRS
Not Met	2. All acquisition based Alternatives will intuitively have some impact to residents, businesses and agricultural lands
	3. This criteria regarding costs cannot be considered met or not until more information is supplied by Miami-Dade County
Met	4. Higher WRAP score
Met	5. Further analysis in modeling section of this document
Met	6. GRR indicates no problems with compatibility with CERP and C-111 projects
Met	7. This objective is based on staff opinion

##### *Alternative Five- Results of Comparing Alternative with Objectives*

Met	1. GRR states this objective is met with minimal impact on hydropatterns in NESRS
Not Met	2. All acquisition based Alternatives will intuitively have some impact to residents, businesses and agricultural lands
	3. This criteria regarding costs cannot be considered met or not until more information is supplied by Miami-Dade County
Met	4. Higher WRAP score
Met	5. Further analysis in modeling section of this document
Met	6. GRR indicates no problems with compatibility with CERP and C-111 projects
Met	7. This objective is based on staff opinion

*Alternative Six B- Results of Comparing Alternative with Objectives*

Met	1. GRR states this objective is met with minimal impact on hydropatterns in NESRS
Not Met	2. All acquisition based Alternatives will intuitively have some impact to residents, businesses and agricultural lands
	3. This criteria regarding costs cannot be considered met or not until more information is supplied by Miami-Dade County
Met	4. Higher WRAP score
Met	5. Further analysis in modeling section of this document
Met	6. GRR indicates no problems with compatibility with CERP and C-111 projects
Met	7. This objective is based on staff opinion

*Alternative Six C- Results of Comparing Alternative with Objectives*

Not Met	1. Decreased hydroperiod and decreased water depths on acreage
Met	2. GRR states no significant impact to landowners and residents quantified
	3. This criteria regarding costs cannot be considered met or not until more information is supplied by Miami-Dade County
Not Met	4. Has a lower WRAP score that is equitable to the impacts realized from Alternatives 1, 2, 3 and 9
Met	5. Further analysis in modeling section of this document
Met	6. GRR indicates no problems with compatibility with CERP and C-111 projects
Met	7. This objective is based on staff opinion

*Alternative Six D- Results of Comparing Alternative with Objectives*

Met	1. GRR states this objective is met with minimal impact on hydropatterns in NESRS
Met	2. GRR states that there is an impact in that the design requires additional flowage easements and that structurally, objective can be met 91%
	3. This criteria regarding costs cannot be considered met or not until more information is supplied by Miami-Dade County
Met	4. WRAP score is not as high as 4, 5 or 6B but is higher than 6C
Met	5. Further analysis in modeling section of this document
Met	6. GRR indicates no problems with compatibility with CERP and C-111 projects
Met	7. This objective is based on staff opinion

*Alternative Nine- Results of Comparing Alternative with Objectives*

Not Met	1. Decreased hydroperiod and decreased water depths on acreage
Met	2. GRR states no significant impact to landowners and residents quantified
	3. This criteria regarding costs cannot be considered met or not until more information is supplied by Miami-Dade County
Not Met	4. Lowest WRAP scores
Met	5. Further analysis in modeling section of this document
Met	6. GRR indicates no problems with compatibility with CERP and C-111 projects
Met	7. This objective is based on staff opinion

### 4.3 Conclusions

Alternatives 1, 2 and 9 do not meet two of the performance measures for the objectives listed above. Hydropatterns and ecological functions on NESRS are adversely affected. Additionally, problematic for Alternative 1 is compatibility with the CERP and the C-111 projects which is a performance measure to evaluate the objective. Alternative 6D seems to do a better job meeting objectives than does 6C. Alternative 6C has impacts on the hydroperiod and water depths on NESRS. Alternative 6C also has a lower WRAP score grouping it closely with Alternatives 1, 2 and 9 relative to impacts on wetlands. Therefore, these Alternatives, due to their inability to meet

the fundamental natural system based project objectives will not be heavily considered in the remainder of this document.

Alternatives 3, 7, and 8A could not meet project Requirement 2 as designed, and needed to rely on additional acquisition and flowage easements to achieve that requirement and were eliminated at the first level of analysis. In conclusion, at this stage due to the inability of Alternatives 1, 2, 3, 6C, 7, 8A and 9 to meet project requirements and objectives, AOF deems them unacceptable alternatives to resolve the issues surrounding the 8.5 SMA problem. Only Alternatives 4, 5, 6B and 6D meet the project requirements and objectives as designed, independent of any analysis of the Coordination Act Report or modeling results which now follow.

Alternative 6D has additional problems with implementation that will be more fully addressed in the next section, which analyzes the CAR responses. An addendum was sent out to this report containing additional information on impacts from Alternatives 6C and 6D.

## ***5.0 Alternatives in Relation to Coordination Act Report and Appendices***

### **5.1 Coordination Act Report (CAR) Summary and Evaluation**

#### **Legislative Requirements:**

- Evaluate effects on hydropatterns in NESRS according to Section 104 of the 1989 Everglades National Park Protection and Expansion Act
- Evaluate impacts to the landowners and residents of the 8.5 SMA resulting from implementation of MWD Project according to Section 104 of the 1989 Everglades National Park Protection and Expansion Act.
- Evaluate effects on Federal and State Listed Endangered Species survival in accordance with the Endangered Species Act of 1973

#### **Other Objectives:**

- Analyze effects to ecological function
- Measure compatibility with Comprehensive Everglades Restoration Plan (CERP) and C-111 Project without adversely impacting the current level of flood protection east of L-31N
- Analyze impacts and costs associated with time delays in implementation of alternatives

#### ***Alternative 1-Authorized GDM Plan (No Action)***

Legislative Requirement Hydrological Performance Measures (LRHPM): Performed poorly. This alternative lowers water levels in both the 8.5 SMA and in the NESRS and negates some of the possible benefits resulting from MOD Waters. This plan inadequately provides flood protection, flood mitigation, and is not compatible with future restoration efforts (ie, CERP and C-111). This alternative also performed poorly in regards to adverse effects on the breeding and feeding grounds of wood stork and snail kite populations. WRAP resulted in a score, which reflects a loss of 2,765 functional units from existing conditions. (CAR, 90)

\*Functional unit = (Performance as a wetland) X (# of wetland acres) (CAR, 63)

#### ***Alternative 2-Modified GDM Plan***

LRHPM: Performed poorly in relation to restoration of NESRS by decreasing water depths in more than 35,000 acres within the slough. The plan accomplishes full structural mitigation by mitigating for increased water levels by reducing water levels in both the 8.5 SMA and NESRS. This plan also does not provide full flood protection, but does increase the spatial distribution of short-hydroperiod wetlands by draining period-hydroperiod wetlands in ENP. This plan is, however, more compatible with future restoration than Alternative 1 because it would move water to the south, but is still less compatible than other alternatives. Due to the fact that residents within the 8.5 SMA would be allowed to remain, this plan lends itself to the belief that flood protection is provided. Neither adequate flood protection nor mitigation will be provided in the implementation of this alternative. This alternative performed poorly with regards to adverse effects on the breeding and feeding grounds of wood stork and kite populations and the WRAP score reflected a loss of 2,765 functional wetland units from existing conditions. (CAR, 90)

#### *Alternative 3-Deep Seepage Barrier Plan*

LRHPM: Performed poorly in relation to flood mitigation. This plan also fails to provide full structural mitigation to more than 4,000 acres within the 8.5 SMA. This plan did, however, perform well in the re-establishment of hydroperiods in NESRS, by increasing water depth on over 12,000 acres within the slough. For the hydrologic performance measures associated with the other project objectives, the plan ranked high with regard to providing short-hydroperiod wetlands. The seepage wall boundary would create unnatural drydown patterns and abrupt reductions in wood stork feeding habitat during the breeding season. This adverse effect resulting from abrupt water level changes resulted in poor performance results regarding wood stork populations. This plan also does not provide full flood protection to the 8.5 SMA. The permanent nature of the seepage barrier, its placement in the historical flow-path, and the likelihood of increased flooding due to the relocation of S-356 resulted in the plan receiving a poor performance rating in regards to future restoration. This plan's WRAP score indicates a net loss of 1,175 functional wetland units from existing conditions. (CAR, 91)

#### *Alternative 4-Residents' Choice Land Acquisition*

LRHPM: Performed well for all measures. Full flood mitigation would be achieved via buyout, flowage easements, and life estates. No reductions in hydroperiods or water levels within NESRS would occur as a result of this plan's implementation. This plan is considered more compatible with future restoration than the other structural alternatives, but would be less compatible than full buyout because the residents might experience increased flooding events due to the relocation of S-356. This plan received a high performance rating for wood stork population habitat and moderate rating for snail kite population habitat. WRAP scores for this plan were the highest of all the alternatives within this report, and implementation would result in a net gain of 2,248 functional wetland units to existing conditions. (CAR, 92)

#### *Alternative 5-Total Buyout Plan*

LRHPM: Performed well in all measures. Full flood mitigation would be achieved via full buyout. No water depth or hydroperiod reductions would occur in NESRS. With regard to performance of other project objectives, the plan would not perform as well in providing for short hydroperiod wetlands. Due to the full buyout of 8.5 SMA residents, damages due to flooding would not occur, thus eliminating the need for flood protection and mitigation. This plan is very compatible with future restoration due to the lack of structural restraints and full flexibility in the relocation of S-356. Restoration of peripheral wetlands that were once found in the 8.5 SMA would allow for the full ecological function of the area to be restored. Performance measures for snail kite and wood stork population received high rankings. Similar to Alternative 4, the WRAP score for this plan reflected a net gain of 2,248 functional units from existing conditions. (CAR, 93)

#### *Alternative 6B-Western Portion of 8.5 SMA as Buffer Plan*

Plan 6B reduces the spatial extent of lower water levels in NESRS by moving the canal and levee alignment to the east, but it still would reduce water depth in over 8,000 acres within the slough. This would result in a reduction of snail kite habitat. However, limiting the protected area to the higher elevations within 8.5 SMA would allow for full flood protection. Providing 1-in-10 year flood protection to residents in the area is accompanied by the costs of future projects related to restoration being required to maintain that same level of flood protection, and increased development pressure. In order to ensure this level of flood protection (1-in-10 year), increases in pumping would be required to accommodate the relocation of S-356. This additional pumping would cause further reductions in water levels to the historic peripheral wetlands within the 8.5 SMA. Performance measures received moderate ranking for snail kite populations. The WRAP score suggests implementation of this plan might result in a net gain of 1,606 functional wetland units to the existing conditions. (CAR, 94).

#### *Alternative 6C- Canal and levee at the SOR Boundary*

Under this Alternative, 27,446 acres of wetlands in NESRS are impacted by reduced water depths resulting in poor performance in relation to hydrologic measures. Specifically, this alternative did not provide flood protection in the entire area designated to receive that protection. 66% of that area designated for flood protection did not receive it. The Alternative also caused the loss of 75% of the marl forming wetlands in the study area. Alternative 6C realizes a reduction of 31.9 % of the water it gains through restoration. Another problem with potential implementation of the Alternative is that it gives the perception that flood protection will be received by designating an area to receive it, but as stated 66% of the area will not receive that benefit.

*Alternative 6D- Levee at SOR boundary and internal canal*

Under this Alternative that splits the levee from the internal canal, 5,845 acres of wetlands in NESRS are impacted by reduced water depths, which is not as much of an impact as 6C but other Alternatives still perform better and have less impacts. Also important is the fact that as the Comprehensive Everglades Restoration Plan (CERP) moves forward ENP will realize increases in the amount of water conveyed to it. But with the implementation of certain alternatives these increases are off set. Alternative 6D realizes a 4.2% portion of it's restored water to be lost. Alternative 6D does not provide flood protection to 40% of the area that is supposed to be protected from flooding. This is problematic because 60% of the residents will receive that protection but 40% won't because of the separated alignment of the canal and levee. Neighbors across the canal from each other will be treated inequitably because of the design of the Alternative. This perceived inequity could result in increased pumping to maintain the area equitably which will have increased impacts to wetland areas from water draw downs.

*Alternative 7-Elevation of all Public Roads Plan*

This plan would result in no reductions in water depths or hydroperiods in NESRS. Structural flood mitigation would not be used to mitigate for increased flooding. Roads would be raised, but this could be problematic, especially if the roads are not constructed with adequately sized culverts. The area would not receive flood protection and would be vulnerable to increased water levels due to the relocation of S-356. DOI does not consider this plan viable, viewing it as a temporary "quick fix" to a long-term problem. Raised roads would also act as barriers to collect and hold standing water. All improvements to wetland conditions will be confined to ENP. Performance was moderate for wood stork and snail kite populations. The WRAP scores indicate a net gain of 1,209 functional wetland units to the existing system. (CAR, 95)

*Alternative 8A-Western Portion of the 8.5 SMA as a Flow-way.*

This plan would neither significantly impact restoration of NESRS, nor provide structural flood mitigation to most of the 8.5 SMA residents. This plan would not provide flood protection, but it would provide for increases in short hydroperiod wetlands. It would, however, be more compatible with restoration efforts due to the minimum structural components and the orientation of enhanced flow paths and levees along natural flow-paths. Performance was moderate for both snail kite and wood stork populations. The WRAP score indicates a net gain of 2,240 functional wetland units to the existing system. The implementation of the flow-way within the western portion of the 8.5 SMA would allow for the creation of functional post-project wetlands. (CAR, 95)

*Alternative 9-Adaptive Refinement of GDM Plan*

This plan is a combination of Alternatives 1 and 2. It has the same structural layout. A future pumping structure is planned to be located at the southern terminus of the seepage canal. The modeling results for this plan are reported to be very similar to those of Alternative 2. (CAR, 29 & 95)

## 5.2 DOI Recommendations

Based on analysis performed on the nine alternatives by DOI Staff, the DOI recommends Alternative 5 as the most environmentally preferred alternative. The DOI also supports this alternative as the most consistent with the overall goals and objectives of the MWD Project. DOI stated that Alternative 4 performed well during their analysis but full acquisition provides more opportunity for wetland restoration and greater flexibility in post-project management.

DOI states that Alternative 6B meets minimum performance criteria evaluated in this version of the CAR. DOI will consider supporting the implementation of this alternative when the US Army Corps satisfactorily addresses concerns regarding NESRS storage impacts, the C-111 Projects' operations, the quality treatment capabilities, and the wetlands in the FAA's tract. DOI views Alternatives 1, 2B, 7, 8A, and 9 as performing poorly for one or more of the legislative requirements. DOI also finds that any structural solution, other than potentially Alternative 6B, would result in adverse impacts on the wetlands within ENP. (CAR, 110)

## 5.3 Preliminary Summary of DOI's Position

*Alternative 5-Performs Best for Performance Criteria Evaluated (Environmentally Preferred) Legislative Requirements*

- Provides for full re-establishment of hydropatterns in NESRS.

- Provides for full flood mitigation of the adverse hydrological impacts associated with the implementation of the MWD Project through full acquisition.
- Provides additional suitable habitats (6,582 acres) for snail kites and wood storks.

#### Other Objectives

- Flood protection is provided through full acquisition.
- Does not increase the spatial extent of short hydroperiod wetlands.
- Provides for the greatest increases in wetland function in both NESRS and the 8.5 SMA.
- Will not require retrofitting of future restoration project features.
- Provides the maximum capability for re-establishing of historical hydrological regimes through a non-structural solution.

#### Supplemental Benefits

- Alternative 5 provides an additional 2,417 functional wetland units in NESRS.
- Alternative 5 provides an additional 2,796 functional units in the 8.5 SMA.

#### Compensatory Mitigation

- Will not require compensatory mitigation for wetlands and fish and wildlife resources. (CAR, 113)

#### *Alternative 4-Performs Well for Performance Criteria Evaluated Legislative Requirements*

- Provides for full re-establishment of hydroperiods in NESRS.
- Provides for full flood mitigation of the adverse hydrologic effects associated with the implementation of the MWD Project through acquisition, flowage easements, and life estates.
- Provides additional suitable habitat for snail kites and wood storks.

#### Other Objectives

- Flood protection is provided through acquisition, flowage easements, and life estates.
- Does not increase the spatial extent of short hydroperiod wetlands.
- Provides for the greatest increases in wetland function for both NESRS and the 8.5 SMA.
- Will not require retrofitting of project features.
- Provides the maximum capability for re-establishment of historical hydrological regimes through a non-structural approach.

#### Supplemental Benefits

- Alternative 4 provides an additional 2,417 functional wetland units in NESRS.
- Alternative 4 provides an additional 2,796 functional wetland units in the 8.5 SMA.
- Compensatory Mitigation
- Alternative 4 will not require any compensatory mitigation. (CAR, 114)

#### *Alternative 6B-Meets Performance Criteria Evaluated*

#### Legislative Requirements

- Provides for re-establishment of hydroperiods in NESRS. Adverse impacts to the restored NESRS hydroperiods and water depths are within acceptable limits established by DOI.
- Provides for full mitigation of the adverse hydrological impacts associated with the implementation of the MWD Project through flood protection to a portion of the 8.5 SMA above the 7-foot ground surface contour.
- Provides additional suitable habitats for snail kites and wood storks.

#### Other objectives

- Provides flood protection to the designated areas of the 8.5 SMA.
- Does not increase the spatial extent of short hydroperiod wetlands.
- Provides for moderate increases in wetland function for both NESRS and the 8.5 SMA.
- Could potentially require retrofitting of future restoration project features.

#### Supplemental Benefits

- Alternative 6B provides an additional 2,417 functional wetland units in NESRS.
- Alternative 6B provides an additional 1,954 functional wetland units, or approx. 30% less than the supplemental benefits associated with either Alternatives 4 or 5, in the 8.5 SMA.

#### Compensatory Mitigation

- This alternative will not require any compensatory mitigation for wetlands and fish and wildlife resources losses.

#### *Alternatives 6C and 6D*

These two alternatives are deemed to not perform as highly relative to objectives and performance measures as 4, 5 and 6B. On pages 63-64 of the CAR, DOI specifically states that 6C performs poorly and 6D does not meet the performance criteria evaluated.

### 5.4 Appendix Information

#### *Appendix C (Preliminary Engineering and Costs)*

Page C-85 contains a table illustrating the itemized costs associated with Alternative 5 (Total Buyout). Unfortunately the total figure has been over estimated. Under the demolition section, the figure 514 is used as the number of homes requiring demolition work. With a demolition unit price of \$8,000 per home, the total demolition price for homes using this alternative is \$4,112,000 (\$8,000 x 514 homes). This dollar amount is incorrect because the 514 figure is inaccurate. Of these so-called 514 homes, only 321 are actual homes. The remaining 193 structures are trailers and recreation vehicles. Being that the latter are generally mobile, a different demolition figure per unit should be required for their disposal. The demolition costs for the correct amount of homes is \$2,568,000, which is \$1,544,000 below the estimated demolition price. This misinterpretation of the actual number of homes was made in the cost analysis of all alternatives requiring the demolition of homes. (CAR-Appendix C, C-87)

#### *Appendix D (Real Estate Assessment)*

By its very nature page 1 of the GRR Appendix states that this section is "tentative" in nature and for "planning purposes only". The problem is that this statement immediately diminishes the credibility and validity of the section for decision making rather than planning purposes. Important to note on page 3 of the GRR, is that zoning changes were implemented in 1981 to limit the zoning in the area consistent with an "Area of Environmental Concern" designation.

On that same page, the same study referenced by the GRR, conducted by Miami-Dade County DERM, shows 514 structures, 321 homes and 193 trailers. That compilation of land use data also shows 212 building permits in the area. This information is absent from the GRR/SEIS and should be included to accurately reflect the amount of homes that have been issued building permits from the structures that are not in compliance with zoning code. Arguments have been made that the information regarding building permit issuances could be inaccurate, if that is the case then all permits not reflected in the County's records should then be included in the analysis so that they might be brought into compliance with the zoning code.

On page 9, there is a discussion of Alternative 4. Under this scenario the GRR states that if an owner doesn't wish to utilize any of the three buy-out options, then the property will be acquired through condemnation, yet that condemnation will only yield a flowage easement. Considering the amount of funds necessary legally and otherwise to condemn land, it would be counterintuitive to condemn a property yet only to receive a flowage easement rather than fee simple title.

On pages 12-13 of the GRR/SEIS the difference should be noted between the number of homes required for acquisition of full buy-out (853 persons with 208 relocations) and the 6B levee solution (586 persons with 143 relocations). The 6B levee solution will require buy-out and relocation of approximately 70% of the people and homes as the full buy-out option. Based upon AOF's analysis, *see Appendix B to this document*, Alternative 6B (adding groups 1, 3 and 6 from table B-1) show 84 homes and 30 trailers have to be relocated. A detailed map should be included identifying various groupings and levee placements corroborated with streets and avenues. It appears that this number of 143 households might be slightly high depending on the definition of a household.

On page 17 of the GRR/SEIS, the methodology is described for determining land values for acquisition purposes. It states that the sales comparison approach was made. AOF assumes, although it is not clear, that similar sales were used for comparison purposes from sales with the 8.5 SMA. This should be clarified, whether or not the similar sales came from within the 8.5 SMA. It also should be noted whether or not those similar sales had the same land use designation, zoning and development potential on the land.

On page 19 the GRR/SEIS it states,

For the purposes of this evaluation, and to provide a cost estimate report, the estimated number of parcels in Alternative Nos. 3, 5, 6, 7, and 8 that would require eminent domain proceedings is 10% of the total parcels in each alternative remaining to be acquired. ... For Alternative 4, it is estimated that only 3% of the parcels would require acquisition through eminent domain proceedings.

The assumptions on which this statement is based should be clearly stated. Is it then assumed that the remaining owners are willing sellers? Why is it that only 10% of the remaining parcels will have to be condemned? This is entire section is unclear as to the relevance of these statements.

Section 17.0 of Appendix D, states that land use activities such as abandoned automobiles, animal pens, unidentified waste piles, pump stations and outhouses could potentially impact soil, groundwater, and surface water quality in the area. There is no additional analysis of these statements. Various alternatives have different amounts of land acquisition included or leave various amounts of people in the area. These water quality impacts should be analyzed relevant to all the various Alternatives because they surely exist with the types of uses in the area.

*Appendix E (Social Impact Assessment)*

Page 6 states that the 1990 Census Data indicate that almost 64% of the population within the 8.5 SMA is white. This is ten year old information and the Hispanic community is the main representation at public hearings. Many of the landowners, who participated in the Census are absentee land owners, which often use the land occasionally, either for vacations or agriculture. With this being the case, within a Social Impact Assessment Appendix, a section on adverse impacts to minority communities should be included.

It should be noted within Appendix E, page 16, Data collected by the SFWMD in 1999 revealed that about 1/3<sup>rd</sup> of the property owners were willing sellers. Less than 5% said they were completely unwilling to sell. The remaining 60% were undecided, more than likely contingent on fair market value offers and relocation assistance. This is certainly not indicative of many of the statements that there are no willing sellers.

On Page 17 of Appendix E, it states that the County's 2010 Urban Expansion Area Boundary does not include the 8.5 SMA. This indicates that the County is unwilling to plan for urban services in the area. While this may be the case, the fact that people will still be living in the area poses problems as Miami-Dade has indicated that there is a desire of property owners to have proper flood protection and services. Leaving people in the area with an uncertain future leads to similar requests in the future, unless those people are provided with a solution that either grants them flood protection such as Alternative 6B or completely removes the problem all together, such as Alternative 5.

One particularly troublesome assertion in Appendix E, is on page 21 where it states that "If development is allowed to occur illegally, as has occurred in the past, the development of houses to accommodate the anticipated population growth could occur *virtually anywhere within the 8.5 SMA*". This statement could mean that no matter what alternative is chosen, if local zoning ordinances and land use designations are not enforced, it won't matter what alternative is chosen. This is evidenced by the assumption that the current density on the ground is actually approximately 1 unit per 3.65 acres. Where the growth occurs will be specifically tied to what types of protections are afforded. If flood protection is afforded this will most certainly lead to an increase in future units because densities will increase to 1 unit per 5 acres through a variance of the zoning ordinances. Any properties over the 7.7 elevation, mentioned earlier in this document as the elevation which meets the flood protection designation, could receive this density increase (555 ac. are determined to meet that elevation). This could result in 111 additional units on the western side of the flood protection levee that will request additional services that will cost the County more money to deliver. The costs associated with serving these 111 units should be determined and factored into all alternatives and even current baseline conditions, because by definition these parcels can already receive 1 unit per 5 acre density.

All alternatives have various amounts of acreage acquisition and impacts associated with them. All alternatives also have various land use scenarios which lend themselves to development patterns being implemented based on either adherence to zoning and land use ordinances or the continued trend of non-enforcement. The Corps should work with Miami-Dade County to ensure that one or the other assumption will be carried out in the future. There is a wide disparity in how this development will occur under these scenarios.

## 6.0 Evaluation of Model Results

The following includes discussion related to the modeling efforts that were conducted by the United States USACE during the development of the General Reevaluation Report and Supplemental Environmental Impact Statement (GRR/SEIS). Because no model results were presented for Alternative 9, Alternative 9 is not discussed in the following section or Appendix A. Other issues related to the USACE's modeling efforts are discussed in greater detail in Appendix A. Most of Appendix A is dedicated to the evaluation of each modeled alternative relative to three project requirements. The requirements can be described as follows:

- Flood protection for areas east of the L-31N was measured against 1995 conditions (existing conditions). If water levels exceeded Base 95 conditions during the modeled period of record, it was concluded that the flood protection requirement for areas east of the L-31N was not met. However, impacts were similar for each of the Alternatives. The GRR/SEIS attributes these impacts to the Modified Water Deliveries project as a whole and not necessarily the direct result of the 8.5 SMA component.

Flood mitigation/protection for the 8.5 SMA was measured against 1983 conditions (pre-Modified Water Deliveries). If water levels exceeded Base 83 conditions and simultaneously exceeded ground level during the modeled period of record, it was concluded that the flood mitigation/protection requirement for the 8.5 SMA was not met.

Impacts to high stages in ENP were measured against Alternative 1 (the 1992 GDM plan). If water levels were lower than those for Alternative 1 during the modeled period of record, it was concluded that the high stages in ENP were adversely impacted.

Based on the review of model results contained in the GRR/SEIS, it appears that:

- Alternatives 1, 2, and 3 adversely impact high stages in ENP.
- Alternatives 1, 2, 3, and 8 do not provide levels of flood mitigation/protection defined in the GRR/SEIS. Alternative 6B provides levels of flood mitigation/protection defined in the GRR/SEIS with the exception of an area in the northeastern section of the 8.5 SMA.
- Each Alternative resulted in impacts to areas east of the L-31N. The GRR/SEIS attributes these impacts to the Modified Water Deliveries project as a whole and not necessarily the direct result of the 8.5 SMA component. Alternative 6b adversely impacts high stages in ENP and therefore appears to be unacceptable. Alternative 6d, on a wet/dry year average basis, exhibits higher ENP stages than Alternative 1 and lower stages than non-structural alternatives. Also, Alternative 6d is reported as causing property damages related to inadequate flood mitigation (table A2 of Addendum A). These damages are not apparent in the table A10 of Addendum A (Hydroperiods of Selected Indicator Cells: Number of Days Based on Average of 1989 and 1995 Stages ). Please see the following paragraph.

Table 6a summarizes the performance of each Alternative based on the USACE's modeled water levels for selected indicator cells.

Table 6a: Project Requirement Summary Table

Scenario: D13Rbc [alternative] 95_95ops							
Project Requirement	Indicator Cell Number	Alternative 1	Alternative 2	Alternative 3	Alternatives 4, 5, 7	Alternative 6	Alternative 8
		Condition Met (yes/no)					
High Stages	19990	NA	Yes	Yes	Yes	Yes	Yes
	20206	NA	No	Yes	Yes	Yes	Yes
	20357	NA	No	Yes	Yes	Yes	Yes
	20378	NA	No	Yes	Yes	Yes	Yes
	20457	NA	Yes	Yes	Yes <sup>1</sup>	Yes <sup>4</sup>	Yes <sup>3</sup>
	20726	NA	Yes	Yes	Yes <sup>7</sup>	Yes <sup>7</sup>	Yes <sup>4</sup>
	20980	NA	Yes	Yes	Yes	Yes	Yes
	21271	NA	Yes	Yes	Yes	Yes	Yes
	22335 (CSSS F)	NA	Yes	No	Yes	Yes	Yes
	24577	NA	Yes	Yes	Yes	Yes	Yes
24587	NA	Yes	Yes	Yes	Yes	Yes	
8.5 SMA Flood Mitigation/ Protection	20477	No	No	No	Yes	No <sup>6</sup>	No
	20838	No	No	No	Yes	Yes	No
	20925	No	No	No	Yes	Yes	No
	21007	No	No	No	Yes	NA <sup>2</sup>	No
	21017	No	No	No	Yes	Yes	No
	20737 (WRAP)	NA	NA	NA	NA	NA	NA
	20743 (WRAP)	NA	NA	NA	NA	NA	NA
East of L-31N Flood Protection	20031	Yes	Yes	Yes	Yes	Yes	Yes
	20036	No	No	No	No	No	No
	20390	Yes	Yes	Yes	Yes	Yes	Yes
	20396	No	No	No	No	No	No
	20931	No <sup>7</sup>	No <sup>8</sup>	No <sup>9</sup>	No <sup>10</sup>	No <sup>11</sup>	No <sup>12</sup>
	20936	Yes <sup>13</sup>	Yes <sup>14</sup>	Yes <sup>15</sup>	Yes <sup>16</sup>	Yes <sup>17</sup>	Yes <sup>18</sup>
Performance of Alternative appears to not meet the requirement of the project as defined in the GRR/SEIS.							

<sup>1</sup> Alternative 1 would result in lower water stages in areas north and northwest of the 8.5 SMA in Everglades National Park than are presently being achieved under present conditions.

<sup>2</sup> Alternative 1 would result in lower water stages in areas north and northwest of the 8.5 SMA in Everglades National Park than are presently being achieved under present conditions.

<sup>3</sup> Observed lower water stages occurred during the dry-season. Higher water stages were not negatively impacted.

<sup>4</sup> Observed lower water stages occurred during the dry-season. Higher water stages were not negatively impacted.

<sup>5</sup> Observed lower water stages occurred during the dry-season. Higher water stages were not negatively impacted.

<sup>6</sup> This cell may or may not fall within the area proposed to receive 1-in-10 year flood protection.

<sup>7</sup> During week 26, water stages are very near ground elevation, but appear not to exceed it.

<sup>8</sup> During week 26, water stages are very near ground elevation, but appear not to exceed it.

<sup>9</sup> During week 26, water stages are very near ground elevation, but appear not to exceed it.

<sup>10</sup> During week 26, water stages are very near ground elevation, but appear not to exceed it.

<sup>11</sup> During week 26, water stages are very near ground elevation, but appear not to exceed it.

<sup>12</sup> During week 26, water stages are very near ground elevation, but appear not to exceed it.

<sup>13</sup> During week 26, water stages are approximately very near ground surface, exceeding ground elevation by less than or equal to 0.1 ft.

<sup>14</sup> During week 26, water stages are approximately very near ground surface, exceeding ground elevation by less than or equal to 0.1 ft.

<sup>15</sup> During week 26, water stages are approximately very near ground surface, exceeding ground elevation by less than or equal to 0.1 ft.

<sup>16</sup> During week 26, water stages are approximately very near ground surface, exceeding ground elevation by less than or equal to 0.1 ft.

<sup>17</sup> During week 26, water stages are approximately very near ground surface, exceeding ground elevation by less than or equal to 0.1 ft.

<sup>18</sup> During week 26, water stages are approximately very near ground surface, exceeding ground elevation by less than or equal to 0.1 ft.

In addition to the evaluation described in Table 6a (but not shown in Table 6a), we compared stages of selected indicator cells associated with Alternative 1 to each of the Bases (Base 83 and Base 95) and to the no-structure plans (Alternatives 4, 5, and 7<sup>19</sup>, identified as D13Rbc\_C-111\_356\_95\_95ops). The same indicator cells used for the preceding evaluation were used during the following evaluation. Based on this second evaluation of impacts to high stages in ENP, the model results for Alternative 1 show lower water levels in ENP than are otherwise achievable under non-structural Alternative conditions. Table 6b presents an alternative method of evaluating each of the alternatives. This second evaluation uses the non-structural Alternatives as the basis for comparison. This method allows for the comparison of Alternative 1 stages to the lesser constrained stages of non-structural Alternatives. In essence, this methodology does not assume that structure-related impacts associated with Alternative 1 are acceptable base conditions. For reference, 1983 and 1995 base comparisons are also included in Table 6b. A more detailed discussion of these impacts is summarized in Table 6b, but generally shows that:

Stages modeled for Alternative 1 are generally lower than those that are achievable without a structural plan for eight of the reviewed indicator cells (D13Rbc\_C-111\_356\_95\_95ops).

Stages modeled for Alternative 1 are lower than those modeled for 1995 conditions (Base95bc\_Exist\_95\_95ops ) in two of the reviewed indicator cells.

- Stages modeled for Alternative 1 are generally higher than those modeled for 1983 conditions (Base83bc\_Exist\_95\_83ops ) in each of the reviewed indicator cells.

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<sup>19</sup> For the purposes of hydrological evaluation, the USACE assumed that water levels for each of these three alternatives would be very similar (USACE, GRR page 44).

Table 6b: ENP High-Stage Evaluation for Alternative 1 Relative to Bases and Non-Structural Alternatives

Scenario: D13Rbc_Plan1_95_95ops				
Indicator Cell Number	Appendix A Figure Number	Comparison to Base83bc_Exist_95_83ops	Comparison to Base95bc_Exist_95_95ops	Comparison to D13Rbc_C-111_356_95_95ops
19990	58	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally 1.4 ft higher.</li> <li>Stages during weeks 21-52 are generally 0.7 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 1.0 and 1.5 feet higher.</li> <li>Stages during weeks 21-52 are generally 0.4 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-52 are generally 0.1 ft lower.</li> </ul>
20206	65	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally between 0.5 to 1.0 ft higher.</li> <li>Stages during weeks 20-52 are generally 0.2 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally 0.6 ft higher.</li> <li>Stages during weeks 20-52 are generally 0.1 ft lower.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-52 are generally 0.3 ft lower.</li> </ul>
20357	64	<ul style="list-style-type: none"> <li>Stages during weeks 1-22 are generally 1.2 ft higher.</li> <li>Stages during weeks 23-52 are generally between 0.2 to 0.6 feet higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-22 are generally 1.0 ft higher.</li> <li>Stages during weeks 23-52 are generally between 0.2 feet higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-52 are generally 0.2 ft lower.</li> </ul>
20378	59	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally 0.7 ft higher.</li> <li>Stages during weeks 20-52 are generally similar.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally 0.6 ft higher.</li> <li>Stages during weeks 20-52 are generally 0.3 ft lower.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally 0.5 to 0.9 ft lower.</li> <li>Stages during weeks 21-52 are generally 0.5 ft lower.</li> </ul>
20457	68	<ul style="list-style-type: none"> <li>Stages during weeks 1-13 and 34-52 are generally between 0.3 and 0.6 ft higher.</li> <li>Stages during weeks 14-33 are generally similar.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-26 are generally between 1.0 and 1.5 ft higher.</li> <li>Stages during weeks 27-52 are generally are generally between 0.3 and 0.6 feet higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally similar to 0.1 ft higher.</li> <li>Stages during weeks 21-52 are generally 0.2 ft lower.</li> </ul>
20726	71	<ul style="list-style-type: none"> <li>Stages during weeks 1-13 and 34-52 are generally between 0.3 and 0.6 ft higher.</li> <li>Stages during weeks 14-33 are generally similar.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-26 are generally between 0.9 and 1.1 ft higher.</li> <li>Stages during weeks 27-52 are generally are generally between 0.1 and 0.6 feet higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally similar to 0.1 ft higher.</li> <li>Stages during weeks 21-52 are generally 0.4 ft lower.</li> </ul>
20980	72	<ul style="list-style-type: none"> <li>Stages during weeks 1-26 are generally between 0.5 and 1.0 ft higher.</li> <li>Stages during weeks 27-52 are generally 0.4 ft higher</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-26 are generally 1.0 ft higher.</li> <li>Stages during weeks 27-52 are generally 0.5 ft higher</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally 0.1 higher.</li> <li>Stages during weeks 21-52 are generally 0.1 ft lower.</li> </ul>
21271	55	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally 1.0 ft higher.</li> <li>Stages during weeks 20-52 are generally 0.1 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally 1.0 ft higher.</li> <li>Stages during weeks 20-52 are generally similar.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally 0.5 lower.</li> <li>Stages during weeks 21-52 are generally 0.3 ft lower.</li> </ul>
22335 (CSSS F)	77	<ul style="list-style-type: none"> <li>Stages during weeks 1-26 are generally similar.</li> <li>Stages during weeks 27-52 are generally between 0.2 to 0.7 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-26 are generally 0.6 ft higher.</li> <li>Stages during weeks 27-52 are generally between 0.6 to 1.0 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-52 are generally similar.</li> </ul>
24577	60	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.5 to 0.8 ft higher.</li> <li>Stages during weeks 21-52 are generally 0.2 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.5 to 0.7 ft higher.</li> <li>Stages during weeks 21-52 are generally 0.1 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-52 are generally similar.</li> </ul>
24587	61	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally 0.5 ft higher.</li> <li>Stages during weeks 21-52 are generally similar to 0.5 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally 0.6 ft higher.</li> <li>Stages during weeks 21-52 are generally 0.4 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-52 are generally similar.</li> </ul>

## **7.0 Conclusions**

Based on our review of the draft GRR/SEIS, we have concluded that:

- Alternatives 3, 7, and 8 failed to achieve required levels of flood mitigation/protection without substantial purchases of property and/or flowage easements. Because these alternatives failed to provide the required levels of flood mitigation/protection on their own structural accord, we consider Alternatives to be impractical.
- Alternatives 1, 2, 6c, and 9 failed to achieve required levels of hydrological performance in ENP, and/or required levels of flood protection in the 8.5 SMA. Therefore, we consider Alternatives 1, 2, 6c, and 9 to be non-viable solutions.
- Alternative 6d marginally achieved the minimum required levels of hydrological performance in ENP. Because of the marginal performance of this alternative, and the potential for remaining residents in the 8.5 SMA to be flooded on a periodic basis, we consider Alternative 6d to be very undesirable.
- Alternative 6b met minimum required levels of hydrological performance in ENP, and provided flood protection to remaining residents in the 8.5 SMA, with the exception of those residents in the northeastern 8.5 SMA (near the FAA property). 6b fails because it creates flood protection rather flood mitigation, which leads to an automatic trigger of 1 unit per 5 acre density. This increased development will result in pressure to operate structures for increased levels of flood protection to the detriment of the natural system. With this Alternative it is unknown what the impacts are to Taylor Slough and Northeast Florida Bay, because stages in Taylor Slough were not evaluated as part of this process.
- Alternative 4 restores flows to ENP, but is likely to encounter time delays due to the nature of life estates. Furthermore, flowage easements are proposed to be acquired at 95% of the property value when the property could be purchased free and clear for an additional 5%. Because of the implementation uncertainty tied to life estates and the economic concerns related to the acquisition of flowage easements, view Alternative 4 as undesirable.
- **Alternative 5 restores flows to ENP, provides flexibility to planning efforts related to the CERP and flood protection of areas east of the L-31N, and provides closure/compensation to residents of the 8.5 SMA.**

## 8.0 Recommendations

In addition to the above observations and conclusions, we recognize that the USACE seeks recommendations to help improve the report, and/or to improve the overall project. Based on our review of the draft GRR/SEIS, we offer the following recommendations for consideration:

- Because arguments have been made that Miami-Dade's permit issuance are inaccurate, all permits not accounted for in Miami-Dade's records should be brought forward for documentation and inclusion in the analysis of each alternative.
- Considering the level of funding required for the acquisition of flowage easements (purchase, legal costs, etc.), we recommend that the extra 5% be spent on acquisition of fee-simple titles.
- Land value determinations should note whether similar sales/purchases occurred under similar land-use designation, zoning, and development potential conditions.
- Water quality impacts should be addressed on an alternative-specific basis due to the potential differences in basin characteristics (shallow groundwater flow patterns relative to land use and local hydrological features such as canals and pumps).

Because different assumptions related to adherence of zoning and land-use ordinances can result in different land-use patterns, the USACE should work closely with Miami-Dade County to ensure that assumptions are correct, accurate, and reasonable.

Model results posted onto the Internet by the South Florida Water Management District<sup>20</sup>, show different values for average monthly overland flows just south of the Tamiami Trail. For months July through November, the Modified Water Deliveries project regional conveyance modeling predicts average monthly flows to be approximately 20,000 to 50,000 acre-feet greater than those anticipated under D13R conditions (conditions used for the 8.5 SMA Alternative modeling).

We encourage the USACE to evaluate the impacts of these differences and to merge the Modified Water Deliveries project regional conveyance and 8.5 SMA alternative evaluation processes into one process as soon as possible.

- Stages in Taylor Slough and flows to northeastern Florida Bay appear not to have been addressed in the GRR/SEIS. Furthermore, no indicator cells and associated performance measure graphics (i.e. stage hydrographs) are presented for areas west of L-31 W and south of the State Road 9336, in Taylor Slough.

For the purposes of evaluating impacts of Alternatives on temporal and spatial aspects of hydroperiods and water stages in Taylor Slough, it would be desirable to have a few indicator cells south and southeast of indicator cell 24577 near/in Taylor Slough.

- When comparing results, it appears that the structures of Alternative 1 behave as a constraint to water levels in the vicinity of the 8.5 SMA. This conclusion can be drawn from indicator cells near the 8.5 SMA including 20206, 20357, 20378, 20457, 20726, and 21271. At indicator cells 20206 and 20378 (areas northwest of the 8.5 SMA), high-stages provided by 1995 base conditions are not achieved, and for the other indicator cells, water levels modeled for Alternative 1 tend to be approximately 0.3-1.0 ft lower than those achieved by non-structural Alternatives.

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<sup>20</sup> Central and Southern Florida Project Comprehensive Review Study Hydrologic Performance Measures (<http://www.sfwmd.gov/org/pld/restudy/hpm/index.html>) and the Modified Water Deliveries Project South Florida Water Management Model Regional Hydrologic Performance Measures ([http://www.sfwmd.gov/org/pld/hsm/reg\\_app/mwd/index.html](http://www.sfwmd.gov/org/pld/hsm/reg_app/mwd/index.html)) web-pages.

Based on these observations, we question the use of Alternative 1 as a basis of comparison because the referenced indicator cells indicate that Alternative 1 exhibits water levels lower than those that are otherwise achievable (impacts are most evident during weeks 21-52) by the Modified Water Deliveries project.

- Addendum A does not provide the level of detail for Alternatives 6c and 6d that are included in the initial Draft GRR/SEIS Appendix A.

We recommend that the same level of analysis, post-processing, and presentation be given to each alternative.

# 1 Appendix A: Evaluation of Model Results

## 1.1 Executive Summary

Audubon of Florida (AOF) evaluated information provided by the United States Army Corps of Engineers (USACE) in the April 2000 Draft version of the 8.5 Square Mile Area General Reevaluation Report and Supplemental Environmental Impact Statement (GRR/SEIS). During AOF's evaluation, hydrological information provided in Appendix A of the GRR/SEIS was reviewed in an attempt to identify how well each Alternative performed relative to certain project requirements (as defined in the GRR/SEIS). Specifically, those project requirements are include: No adverse impacts to high stages in ENP; Flood mitigation/protection for the 8.5 SMA; and Flood protection for areas east of the L-31N.

In general:

- Alternatives 1, 2, and 3 adversely impacted high stages in ENP. Impacts to high-stage occurred during the wet season when annual peak-stages are typically observed.
- Alternatives 1, 2, 3, 6b, and 8 did not provide the required levels of flood mitigation/protection for the 8.5 SMA. Alternatives 1, 2, 3, and 8 exhibit water levels throughout most of the 8.5 SMA that exceed pre-project conditions (flooding for longer periods of time and/or to greater depths than pre-project conditions) while Alternative 6b exhibits increased water levels mainly in the northeastern portion of the 8.5 SMA.
- Areas east of the L-31N experience higher water levels under each Alternative. Although Alternative 1 exhibits dry-season water levels that are generally higher than the other Alternatives, it appears that impacts to areas east of the L-31N are not directly attributable to individual 8.5 SMA Alternatives.
- Alternative 6c provides shorter hydroperiods in ENP than Alternative 1, and provides substantially shorter hydroperiods in ENP than non-structural alternatives.
- Alternative 6d provides shorter hydroperiods in ENP than are achievable under non-structural alternatives, and is reported in Table A2 of Addendum A as resulting in approximately 546 acres of flood-incurred damages due to inadequate flood mitigation.

In addition to the above-referenced observations, AOF made the following notable observations:

- Model results posted onto the Internet by the South Florida Water Management District<sup>1</sup>, show different values for average monthly overland flows just south of the Tamiami Trail. For months July through November, the Modified Water Deliveries project regional conveyance modeling predicts average monthly flows to be approximately 20,000 to 50,000 acre-feet greater than those anticipated under D13R conditions (conditions used for the 8.5 SMA Alternative modeling).

**We encourage the USACE to evaluate the impacts of these differences and to merge the Modified Water Deliveries project regional conveyance and 8.5 SMA alternative evaluation processes into one process as soon as possible.**

Stages in Taylor Slough and flows to northeastern Florida Bay appear not to have been addressed in the GRR/SEIS. Furthermore, no indicator cells and associated performance measure graphics (i.e. stage hydrographs) are presented for areas west of L-31W and south of the State Road 9336, in Taylor Slough.

**For the purposes of evaluating impacts of Alternatives on temporal and spatial aspects of hydroperiods and water stages in Taylor Slough, it would be desirable to have a few indicator cells south and southeast of indicator cell 24577 near/in Taylor Slough.**

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<sup>1</sup> Central and Southern Florida Project Comprehensive Review Study Hydrologic Performance Measures (<http://www.sfwmd.gov/org/pld/restudy/hpm/index.html>) and the Modified Water Deliveries Project South Florida Water Management Model Regional Hydrologic Performance Measures ([http://www.sfwmd.gov/org/pld/hsm/reg\\_app/mwd/index.html](http://www.sfwmd.gov/org/pld/hsm/reg_app/mwd/index.html)) web-pages.

- When comparing results, it appears that the structures of Alternative 1 behave as a constraint to water levels in the vicinity of the 8.5 SMA. This conclusion can be drawn from indicator cells near the 8.5 SMA including 20206, 20357, 20378, 20457, 20726, and 21271. At indicator cells 20206 and 20378 (areas northwest of the 8.5 SMA), high-stages provided by 1995 base conditions are not achieved, and for the other indicator cells, water levels modeled for Alternative 1 tend to be approximately 0.3-1.0 ft lower than those achieved by non-structural Alternatives.

Based on these observations, we question the use of Alternative 1 as a basis of comparison because the referenced indicator cells indicate that Alternative 1 exhibits water levels lower than those that are otherwise achievable (impacts are most evident during weeks 21-52) by the Modified Water Deliveries project.

Addendum A does not provide the level of detail for Alternatives 6c and 6d that are included in the initial Draft GRR/SEIS Appendix A.

We recommend that the same level of analysis and presentation be given to each alternative.

## 1.2 Introduction

The following discussion is related to the modeling efforts that were conducted by the United States Army Corps of Engineers (USACE) during the development of the General Reevaluation Report and Supplemental Environmental Impact Statement (GRR/SEIS). A general description of the modeling efforts is provided which is followed by a discussion of observations and comments concerning model assumptions. In addition, issues related to Taylor Slough and Florida Bay are mentioned while potential impacts to Cape Sable seaside sparrow habitat are discussed but not quantified. The remainder of the Appendix is dedicated to the evaluation of each modeled alternative relative to three project requirements:

No adverse impacts to high stages in ENP

Flood mitigation/protection for the 8.5 SMA

Flood protection for areas east of the L-31N

Each project requirement is provided with a separate section. Stage hydrographs for selected indicator cells (see also Figure A-1) were reviewed and evaluated according to guidance provided in the GRR/SEIS. General observations and conclusions are described for each modeled alternative. For each modeled alternative, a more detailed description of observations is provided in tabular format.

### 1.2.1 Model Characteristics

Modeling efforts that were conducted as part of the process leading to the development of the GRR/SEIS evaluated a variety of scenarios under wet and dry conditions. The scenarios were developed to provide a basis for evaluating the impacts of each Alternative on hydropattern restoration in Everglades National Park (ENP), flood mitigation/protection in the 8.5 Square Mile Area (8.5 SMA), and flood protection for areas east of L-31N.

MODBRANCH was chosen to simulate the canal operations as well as surface and subsurface water flow. The geographic boundaries of the model can generally be described as just north of the Tamiami Trail south to Florida Bay (northern to southern extent respectively) and just west of the L67-extension east to Biscayne Bay (western to eastern extent respectively).

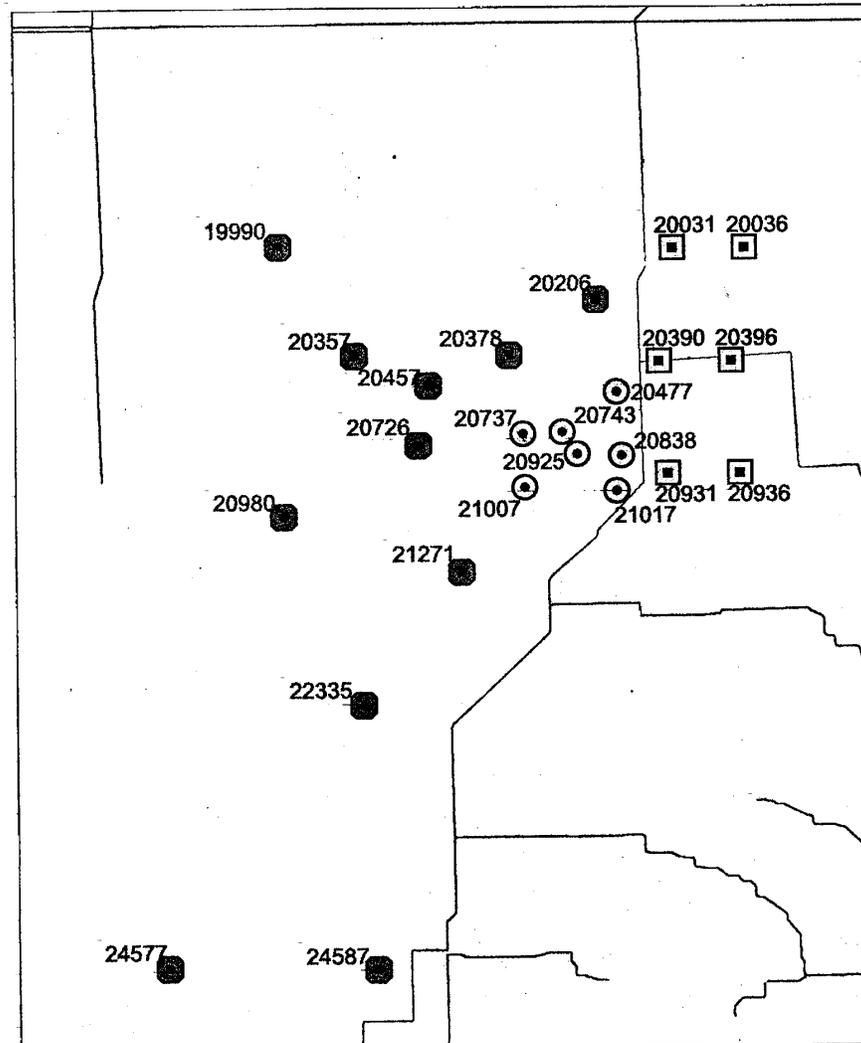
To simulate model boundary conditions that existed in 1983, 1995 and those anticipated to exist upon completion of the Comprehensive Everglades Restoration Project (CERP), model scenarios made use of boundary conditions that were derived from South Florida Water Management Model output (northern and western boundaries) and actual tidal data (southern and eastern boundaries).

To simulate dry and wet years, rainfall data were obtained from the South Florida Water Management Model (model input) for 1989 (dry year) and 1995 (wet year). The 1995 data were augmented with a synthetic 10-day, 10-year rainfall event. The synthetic rainfall event was initiated during week 19 of the 1995 period of record.

Each of the Alternative configurations modeled were named using the following conventions: Plan1 (Alternative 1), Plan2B (Alternative 2), Plan3 (Alternative 3), Plan6B (Alternative 6b), and Plan8A (Alternative 8). C-111\_356 refers to Alternatives 4, 5, and 7 are due to their similarity (based on property acquisition and flowage-easements) and an assumption that water levels for each alternative would be very similar. Alternative 9 is a modified version of Alternatives 1 and 2. Relative to model results, no model results were reported for Alternative 9 (Although the SEIS reports that Alternative 9 would perform similar to Alternative 1 and/or 2).

Lastly, each of the models made use of a set of operational guidelines. The operational rules that were simulated included those for 1983 and 1995. As indicated in Appendix A of the GRR/SEIS, C-111 operational rules have not been finalized and therefore, C-111 operational guidelines were adopted for the purposes of these modeling efforts. Impacts of alternative C-111 operations are not presented for evaluation in the GRR/SEIS.

# Figure A-1 Selected Indicator Cells



SFWMD canal coverage source: South Florida Water Management District

- 8.5 SMA Flood Mitigation/Protection Indicator Cells
- ⊙ ENP High-Stage Indicator Cells
- Agriculture Flood Protection Indicator Cells

### 1.2.2 Notable Observations Related to Modeling Assumptions

While model bases (1983 and 1995 bases) make use of the 1983 and 1995 boundary conditions, it should be noted that the modeling conducted for each alternative assumes CERP (D13R) boundary conditions for the northern and western boundaries of the MODBRANCH model. Likewise, water deliveries associated with the boundaries of the model assume implementation of CERP (D13R), or at least those components "upstream" of the Tamiami Trail.

Appendix A of the GRR/SEIS states that an evaluation of impacts associated with boundary conditions will be conducted following the completion of all Modified Water Delivery and C-111 plans. Likewise, the influence of alternative boundary conditions on each 8.5 SMA alternatives are not presented for review in the GRR/SEIS. However, boundary conditions of the MODBRANCH model might be affected by results of regional modeling efforts being conducted as part of the Water Conservation Area 3A/3B and Tamiami Trail alternative evaluation process. Model results posted onto the Internet by the South Florida Water Management District<sup>2</sup>, show different values for average monthly overland flows just south of the Tamiami Trail. An example of these differences can be seen in Attachments 1a and 1b.

Attachment 1a depicts modeled flows for several scenarios including those predicted for CERP Alternative D13R. Attachment 1b depicts modeled flows for several Modified Water Deliveries project regional conveyance alternatives (being conducted in a separate SEIS/reevaluation process). As shown in the attachments for months July through November, the Modified Water Deliveries project regional conveyance modeling predicts average monthly flows to be approximately 20,000 to 50,000 acre-feet greater than those anticipated under D13R conditions. This could lead one to believe that the 8.5 SMA modeling efforts underestimate the quantity of water flowing into the 8.5 SMA study area. Likewise, it is anticipated that stages in ENP, the 8.5 SMA, and areas east of the L-31 N could be affected by this difference in flows. We encourage the USACE to evaluate the impacts of these differences and to merge the Modified Water Deliveries project regional conveyance and 8.5 SMA alternative evaluation processes into one process as soon as possible.

### 1.2.3 Taylor Slough and Florida Bay

Although the primary objective of these modeling efforts was to evaluate impacts on water stages in ENP, the 8.5 SMA, and areas east of L-31N, stages in Taylor Slough and flows to northeastern Florida Bay appear not to have been addressed in the GRR/SEIS. Appendix A of the GRR/SEIS includes figures depicting inundation durations for areas in ENP near the 8.5 SMA. The figures illustrate an area extending from the L-67 extension east to the L-31N, and from the Tamiami Trail south to C-113.

The geographic extent of the figures does not allow for the evaluation of hydroperiods in Taylor Slough. Furthermore, no indicator cells and associated performance measure graphics (i.e. stage hydrographs) are presented for areas west of L-31W and south of the State Road 9336, in Taylor Slough. The nearest indicator cells to Taylor Slough are indicator cells 24577 and 24587. For the purposes of evaluating impacts of Alternatives on temporal and spatial aspects of hydroperiods and water stages in Taylor Slough, it would be desirable to have a few indicator cells south and southeast of indicator cell 24577 near/in Taylor Slough.

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<sup>2</sup> Central and Southern Florida Project Comprehensive Review Study Hydrologic Performance Measures (<http://www.sfwmd.gov/org/pld/restudy/hpm/index.html>) and the Modified Water Deliveries Project South Florida Water Management Model Regional Hydrologic Performance Measures ([http://www.sfwmd.gov/org/pld/hsm/reg\\_app/mwd/index.html](http://www.sfwmd.gov/org/pld/hsm/reg_app/mwd/index.html)) web-pages.

### 1.2.4 Cape Sable Seaside Sparrow

The Cape Sable seaside sparrow sub-population F is represented as area "Area 1" in Appendix A of the GRR/SEIS. Indicator cells in or near Area 1 consist of cells 21891, 21971, 22325, 23331, and 23335.

As modeled, it appears that alternatives 2, 8, and 6b are the least conducive to Cape Sable seaside sparrow breeding during the modeled wet year. The remainder of the Alternatives exhibit dry-down conditions that appear to be more conducive to sparrow habitat and breeding.

During the modeled dry year, Alternative 2 generally provides 4 additional weeks of inundated conditions greater than Alternatives 1, 4, 5, 7, and 8. It should be noted that Alternative 3 exhibited the driest conditions of the Alternatives for this cell during the modeled dry year.

As modeled, it appears that Alternatives 1, 4, 5, and 7 are more conducive to providing adequate Cape Sable seaside sparrow sub-population F breeding conditions than Alternatives 2, 6b, and 8. However, it should be noted that Appendix A of the GRR/SEIS states that the C-111 operational rules have not been finalized. Although an operational scenario was adopted for the purposes of the GRR/SEIS modeling, the adopted operational schedule may or may not be implemented as assumed. Due to the potential for the referenced modifications to impact Cape Sable seaside sparrow sub-population F, impacts to sub-population F are described, however the response of the sub-population to modeled conditions are not projected.

Table A provides a summary of observations made during the evaluation of impacts on Cape Sable seaside sparrow habitat. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

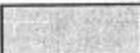
**Table A: Cape Sable Seaside Sparrow Impact Evaluation**

Indicator Cell Number (Appendix A Figure Numbers)	Observations under D13Rbc [alternative] 95_95ops conditions (wet year)	Observations under D13Rbc [alternative] 89_95ops conditions (dry year)
21891 (Figures 35 and 76)	<ul style="list-style-type: none"> <li>Alternatives 2 and 6b result in constant inundation throughout the 52-week period of record (minimum depth of approximately 0.2 ft during week 17).</li> <li>Alternative 8 exhibits dry-down conditions during weeks 16 and 17.</li> <li>Alternatives 1, 3, 4, 5, and 7 provide various durations of dry-down between weeks 10 and 20.</li> </ul>	<ul style="list-style-type: none"> <li>Alternative 2 provides the longest period of inundation generally between weeks 26 and 50 with a maximum stage of approximately 7.3 ft during week 34).</li> <li>Alternatives 1, 3, 4, 5, 7, 6b, and 8 provide various durations of inundation between weeks 29 and 49 with maximum stages of approximately 7.1 ft.</li> </ul>
21971	No model hydrographs provided	No model hydrographs provided
23325	No model hydrographs provided	No model hydrographs provided
22331	No model hydrographs provided	No model hydrographs provided
22335 (Figures 36 and 77)	<ul style="list-style-type: none"> <li>Alternatives 2 and 6b result in constant inundation throughout the 52-week period of record (minimum depth of approximately 0.2 ft during week 17).</li> <li>Alternative 8 exhibits dry-down conditions during weeks 16, 17, and 20.</li> <li>Alternatives 1, 3, 4, 5, and 7 provide various durations of dry-down between weeks 12 and 20.</li> </ul>	<ul style="list-style-type: none"> <li>Alternative 2 provides the longest period of inundation generally between weeks 26 and 52 with a maximum stage of approximately 7.2 ft during week 35.</li> <li>Alternatives 1, 4, 5, 7, 6b, and 8 provide various durations of inundation between weeks 27 and 50 with maximum stages of approximately 7.0 ft.</li> <li>Alternative 3 provides the shortest duration of inundation (relative to the other alternatives) and exhibits mostly inundated conditions between weeks 30-41 with a maximum stage of approximately 6.9 ft.</li> </ul>

Table B provides a summary of the Cape Sable seaside sparrow impact evaluation. The table shows for each indicator cell which Alternatives result in conditions that appear to be favorable to cape Sable seaside sparrow sub-population F breeding and/or habitat.

**Table B: Cape Sable Seaside Sparrow Impact Evaluation Summary Table**

Scenarios: D13Rbc [alternative] 95 95ops and D13Rbc [alternative] 89 95ops														
Indicator Cell Number	Appendix A Figure Numbers	Alternative 1		Alternative 2		Alternative 3		Alternatives 4, 5, 7		Alternative 6b		Alternative 8		
		Wet Year	Dry Year	Wet Year	Dry Year	Wet Year	Dry Year	Wet Year	Dry Year	Wet Year	Dry Year	Wet Year	Dry Year	
21891	35 and 76	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
21971	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
23325	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
22331	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
22335	36 and 77	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	No	Yes	

 Alternative appears to result in conditions that are not beneficial to cape Sable seaside sparrow sub-population F breeding and/or habitat.

### 1.3 Evaluation of Model Results

For the purposes of our evaluation of the model results presented in the GRR/SEIS, hydrographs of selected indicator cells were reviewed and evaluated relative to the requirements of the project. Table C provides a summary of the indicator cells that were evaluated.

**Table C: Selected Indicator Cell Characteristics**

Indicator Cell Number	Indicator Cell Type	Approximate Ground Elevation <sup>3</sup> (ft above NGVD)
19990	ENP / Hydropattern	6.1
20031	Agriculture / Flood Protection	6.2
20036	Agriculture / Flood Protection	7.0
20206	ENP / Hydropattern	6.4
20357	ENP / Hydropattern	6.2
20378	ENP / Hydropattern	6.6
20390	Agriculture / Flood Protection	7.1
20396	Agriculture / Flood Protection	8.1
20437	ENP / Hydropattern	6.4
20477	8.5 SMA / Flood Mitigation	7.0
20726	ENP / Hydropattern	6.5
20737	8.5 SMA / Flood Mitigation	7.0
20743	8.5 SMA / Flood Mitigation	7.0
20838	8.5 SMA / Flood Mitigation	7.7
20925	8.5 SMA / Flood Mitigation	7.2
20931	Agriculture / Flood Protection	8.2
20936	Agriculture / Flood Protection	8.3
20980	ENP / Hydropattern	6.2
21007	8.5 SMA / Flood Mitigation	5.8
21017	8.5 SMA / Flood Mitigation	7.7
21271	ENP / Hydropattern	6.9
21891	Cape Sable seaside sparrow	6.7
22335	ENP / Hydropattern / Cape Sable seaside sparrow	6.5
24577	ENP / Hydropattern	5.6
24587	ENP / Hydropattern	5.6

No model results were presented in the SEIS/GRR for a year with average precipitation. Because flood protection and mitigation in the 8.5 SMA are more likely to be impacted during wet years than in dry years, flood protection for areas east of the L-31N are more likely to be impacted during wet years than in dry years, high stages in ENP are likely to be impacted to a lesser extent by flood mitigation/protection in the 8.5 SMA during dry-years than during wet years; and because the requirements of the project are related mostly to high water events (impacts to high stages, flood mitigation, and flood protection), the following evaluations focus on wet-year conditions (model scenarios using 1995 rainfall).

Impacts to high-stages in ENP were evaluated using guidance provided on Page 59 of the GRR. "RQ1. Do not negatively impact higher stages in ENP as specified in the Modified Water Deliveries Project. To meet this requirement, it must be established that stages authorized in the MWD project can be accommodated. This is verified by evaluating water depths (stages) in NESRS for each alternative to ensure that it provides for levels in accordance with those specified in the 1992 GDM. Estimated water levels will be evaluated for all areas throughout the ENP property for the authorized plan and for each of the other alternatives."

Flood mitigation/protection in the 8.5 SMA was evaluated using guidance provided on pages 59 and 60 of the GRR which states "RQ2. Mitigate for increased stages within the 8.5 SMA resulting from implementation of the Modified Water Deliveries Project. The 1989 Act stated that there could be no increase in flooding for any of the alternatives beyond that which existed prior to the MWD GDM. Flood mitigation, for the purposes of this analysis, is when surface water elevations due to similar climatic conditions are maintained at pre-project levels as established

<sup>3</sup> Ground elevation obtained from stage hydrographs provided in Appendix A of the GRR/SEIS.

using the 1983 base conditions simulations. Water depths within the 8.5 SMA at pre-MWD conditions will be compared to water depths for each alternative to verify that it meets this requirement.”

Flood protection impacts for areas east of L-31N were evaluated using guidance provided on page 60 of the GRR. “RQ5. Maintain current levels of flood protection for agricultural areas east of L-31N. Each alternative must provide for the level of flood protection which currently exists in areas east of L-31N. Agricultural areas potentially impacted by any of the 8.5 SMA alternatives have been identified. Water levels at indicator cells within these agricultural areas will be evaluated for existing conditions and future conditions for each alternative in order to be certain that there are no significant changes in hydrology that might affect crop production.”

### 1.3.1 ENP High Stage Impact Evaluation

#### Impacts to High Stages in ENP - Alternative 1 Compared to the 1983 and 1995 Bases

The following evaluation was conducted to evaluate Alternative 1 relative to the modeled 1995 and 1983 bases. Because Alternative 1 is identified in the GRR/SEIS as the no-action alternative, Alternative 1 was used as the basis of comparison during the preparation of the GRR/SEIS. To evaluate the impacts of Alternative 1 on high stages in ENP, Alternative 1 was evaluated relative to the modeled 1995 and 1983 bases.

Based on the above-referenced evaluation, stages generated by the Alternative 1 are higher than those modeled for the 1983 Base. In general, this holds true for the 1995 Base as well with two exceptions. Alternative 1 would result in lower water stages in areas north and northwest of the 8.5 SMA in ENP than are achieved under modeled 1995 conditions. The referenced areas are represented in the following table as cells 20206 and 20378. Table 2a provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

Table 1a: ENP High-Stage Evaluation for Alternative 1 Relative to Bases

Scenario: D13Rbc_Plan1_95_95ops			
Indicator Cell Number	Appendix A Figure Number	Comparison to Base83bc_Exist_95_83ops	Comparison to Base95bc_Exist_95_95ops
19990	58	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally 1.4 ft higher.</li> <li>Stages during weeks 21-52 are generally 0.7 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 1.0 and 1.5 feet higher.</li> <li>Stages during weeks 21-52 are generally 0.4 ft higher.</li> </ul>
20206	65	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally between 0.5 to 1.0 ft higher.</li> <li>Stages during weeks 20-52 are generally 0.2 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally 0.6 ft higher.</li> <li>Stages during weeks 20-52 are generally 0.1 ft lower.</li> </ul>
20357	64	<ul style="list-style-type: none"> <li>Stages during weeks 1-22 are generally 1.2 ft higher.</li> <li>Stages during weeks 23-52 are generally between 0.2 to 0.6 feet higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-22 are generally 1.0 ft higher.</li> <li>Stages during weeks 23-52 are generally between 0.2 feet higher.</li> </ul>
20378	59	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally 0.7 ft higher.</li> <li>Stages during weeks 20-52 are generally similar.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally 0.6 ft higher.</li> <li>Stages during weeks 20-52 are generally 0.3 ft lower.</li> </ul>
20457	68	<ul style="list-style-type: none"> <li>Stages during weeks 1-13 and 34-52 are generally between 0.3 and 0.6 ft higher.</li> <li>Stages during weeks 14-33 are generally similar.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-26 are generally between 1.0 and 1.5 ft higher.</li> <li>Stages during weeks 27-52 are generally are generally between 0.3 and 0.6 feet higher.</li> </ul>
20726	71	<ul style="list-style-type: none"> <li>Stages during weeks 1-13 and 34-52 are generally between 0.3 and 0.6 ft higher.</li> <li>Stages during weeks 14-33 are generally similar.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-26 are generally between 0.9 and 1.1 ft higher.</li> <li>Stages during weeks 27-52 are generally are generally between 0.1 and 0.6 feet higher.</li> </ul>
20980	72	<ul style="list-style-type: none"> <li>Stages during weeks 1-26 are generally between 0.5 and 1.0 ft higher.</li> <li>Stages during weeks 27-52 are generally 0.4 ft higher</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-26 are generally 1.0 ft higher.</li> <li>Stages during weeks 27-52 are generally 0.5 ft higher</li> </ul>
21271	55	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally 1.0 ft higher.</li> <li>Stages during weeks 20-52 are generally 0.1 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally 1.0 ft higher.</li> <li>Stages during weeks 20-52 are generally similar.</li> </ul>
22335 (CSSS F)	77	<ul style="list-style-type: none"> <li>Stages during weeks 1-26 are generally similar.</li> <li>Stages during weeks 27-52 are generally between 0.2 to 0.7 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-26 are generally 0.6 ft higher.</li> <li>Stages during weeks 27-52 are generally between 0.6 to 1.0 ft higher.</li> </ul>
24577	60	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.5 to 0.8 ft higher.</li> <li>Stages during weeks 21-52 are generally 0.2 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.5 to 0.7 ft higher.</li> <li>Stages during weeks 21-52 are generally 0.1 ft higher.</li> </ul>
24587	61	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally 0.5 ft higher.</li> <li>Stages during weeks 21-52 are generally similar to 0.5 ft higher.</li> </ul>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally 0.6 ft higher.</li> <li>Stages during weeks 21-52 are generally 0.4 ft higher.</li> </ul>

**Impacts to High Stages in ENP - Alternative 1 Compared to Non-Structural Alternatives (4, 5, and 7)**

It is apparent, when comparing modeled water levels achieved under D13Rbc\_C-111\_356\_95\_95ops conditions (Alternative 4, 5, and 7<sup>4</sup>) relative to those achieved under D13Rbc\_Plan1\_95\_95ops conditions (Alternative 1) that Alternative 1 behaves as a constraint to water levels in the vicinity of the 8.5 SMA. This conclusion can be drawn from indicator cells near the 8.5 SMA including 20206, 20357, 20378, 20457, 20726, and 21271. At these indicator cells, water levels modeled for Alternative 1 tend to be approximately 0.3-1.0 ft lower than those achieved under Alternative 4, 5, and 7<sup>3</sup> conditions. Table 1b provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

**Table 1b: ENP High-Stage Evaluation for Alternative 1 Relative to Non-Structural Alternatives**

Scenario: D13Rbc_Plan1_95_95ops			
Indicator Cell Number	Appendix A Figure Number	Adverse Impact to High Stages (Yes/No)	Comparison to D13Rbc_C-111_356_95_95ops
19990	58	Yes	• Stages during weeks 1-52 are generally 0.1 ft lower.
20206	65	Yes	• Stages during weeks 1-52 are generally 0.3 ft lower.
20357	64	Yes	• Stages during weeks 1-52 are generally 0.2 ft lower.
20378	59	Yes	• Stages during weeks 1-20 are generally 0.5 to 0.9 ft lower. • Stages during weeks 21-52 are generally 0.5 ft lower.
20457	68	Yes	• Stages during weeks 1-20 are generally similar to 0.1 ft higher. • Stages during weeks 21-52 are generally 0.2 ft lower.
20726	71	Yes	• Stages during weeks 1-20 are generally similar to 0.1 ft higher. • Stages during weeks 21-52 are generally 0.4 ft lower.
20980	72	Yes	• Stages during weeks 1-20 are generally 0.1 higher. • Stages during weeks 21-52 are generally 0.1 ft lower.
21271	55	Yes	• Stages during weeks 1-20 are generally 0.5 lower. • Stages during weeks 21-52 are generally 0.3 ft lower.
22335 (CSSS F)	77	No	• Stages during weeks 1-52 are generally similar.
24577	60	No	• Stages during weeks 1-52 are generally similar.
24587	61	No	• Stages during weeks 1-52 are generally similar.

Based on these observations, we question the use of Alternative 1 as a basis of comparison because the referenced indicator cells indicate that Alternative 1 exhibits water levels approximately 0.1-1.0 ft lower than those that are otherwise achievable (impacts are most evident during weeks 21-52) by the Modified Water Deliveries project. This comparison methodology can be used to show how the structural 8.5 SMA Alternatives impact high-stages in ENP that might otherwise be achievable without 8.5 SMA structural components. Based on this evaluation methodology, the evaluation method proposed in the GRR/SEIS seems to result in the underestimation of impacts to high-stages in ENP.

<sup>4</sup> For the purposes of hydrological evaluation, the USACE assumed that water levels for each of these three alternatives (Alternatives 4, 5, and 7) would be very similar (USACE, GRR page 44).

Impacts to High Stages in ENP - Alternative 2

The following evaluation was conducted to ascertain if Alternative 2 negatively impacts higher stages in ENP as specified in the Modified Water Deliveries project. This evaluation process included the review of model hydrographs from weekly average groundwater stage for indicator cells within ENP. For each of the referenced indicator cells, Alternative 2 high-stages were compared against high-stages anticipated to result from the authorized Modified Water Deliveries project. If Alternative 2 high-stages were generally lower than high-stages anticipated to result from the authorized Modified Water Deliveries project (i.e.: negatively impacting higher stages in ENP), it was determined that the Alternative did not meet the federal requirement for avoiding negative impacts to higher stages in ENP.

Based on the above-referenced review, it appears that Alternative 2 adversely impacts higher water stages in ENP and therefore appears to not meet the requirement for avoiding negative impacts to higher stages in ENP. Table 1c provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

Table 1c: ENP High-Stage Evaluation for Alternative 2

Scenario: D13Rbc_Plan2B_95_95ops			
Indicator Cell Number	Appendix A Figure Number	Requirement Met (Yes/No)	Comparison to D13Rbc_Plan1_95_95ops
19990	58	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-52 are generally similar.</li> </ul>
20206	65	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-52 are generally 0.2 ft lower.</li> </ul>
20357	64	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-52 are generally &lt;0.1 ft lower.</li> </ul>
20378	59	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-52 are generally 0.2 ft lower.</li> </ul>
20457	68	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-25 are generally 0.2 ft higher.</li> <li>Stages during weeks 26-52 are generally similar.</li> </ul>
20726	71	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-25 are generally 0.2 ft higher.</li> <li>Stages during weeks 26-52 are generally similar.</li> </ul>
20980	72	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-25 are generally 0.3 ft higher.</li> <li>Stages during weeks 26-52 are generally similar.</li> </ul>
21271	55	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 0.5 higher.</li> <li>Stages during weeks 22-52 are generally 0.2 higher.</li> </ul>
22335 (CSSS F)	77	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-25 are generally 0.5 ft higher.</li> <li>Stages during weeks 26-52 are generally 0.2 ft higher.</li> </ul>
24577	60	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-52 are generally similar.</li> </ul>
24587	61	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally 0.2 ft higher.</li> <li>Stages during weeks 20-52 are generally 0.1 ft higher.</li> </ul>

Impacts to High Stages in ENP - Alternative 3

The following evaluation was conducted to ascertain if Alternative 3 negatively impacts higher stages in ENP as specified in the Modified Water Deliveries project. This evaluation process included the review of model hydrographs from weekly average groundwater stage for indicator cells within ENP. For each of the referenced indicator cells, Alternative 3 high-stages were compared against high-stages anticipated to result from the authorized Modified Water Deliveries project. If Alternative 3 high-stages were generally lower than high-stages anticipated to result from the authorized Modified Water Deliveries project (i.e.: negatively impacting higher stages in ENP), it was determined that the Alternative did not meet the federal requirement for avoiding negative impacts to higher stages in ENP.

Based on the above-referenced review, it appears that Alternative 3 does not adversely impact higher water stages in ENP and therefore appears to meet the requirement for avoiding negative impacts to higher stages in ENP. Table 1d provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

Table 1d: ENP High-Stage Evaluation for Alternative 3

Scenario: D13Rbc_Plan3_95_95ops			
Indicator Cell Number	Appendix A Figure Number	Requirement Met (Yes/No)	Comparison to D13Rbc_Plan1_95_95ops
19990	58	Yes	• Stages during weeks 1-52 are generally 0.2 ft higher.
20206	65	Yes	• Stages during weeks 1-52 are generally 0.5 ft higher.
20357	64	Yes	• Stages during weeks 1-52 are generally 0.4 ft higher.
20378	59	Yes	• Stages during weeks 1-19 are generally 1.0 ft higher. • Stages during weeks 20-52 are generally 0.8 ft higher.
20457	68	Yes	• Stages during weeks 1-52 are generally 0.5 ft higher.
20726	71	Yes	• Stages during weeks 1-25 are generally 0.3 ft higher. • Stages during weeks 26-52 are generally 0.6 ft higher.
20980	72	Yes	• Stages during weeks 1-52 are generally similar.
21271	55	Yes	• Stages during weeks 1-21 are generally 0.5 ft higher. • Stages during weeks 22-52 are generally 0.3 ft higher.
22335 (CSSS F)	77	No	• Stages during weeks 1-25 are generally similar. • Stages during weeks 26-52 are generally 0.2 ft lower.
24577	60	Yes	• Stages during weeks 1-52 are generally similar.
24587	61	Yes	• Stages during weeks 1-52 are generally similar.

Impacts to High Stages in ENP - Alternatives 4, 5, and 7

The following evaluation was conducted to ascertain if Alternatives 4, 5, and 7 negatively impact higher stages in ENP as specified in the Modified Water Deliveries project. For the purposes of hydrological evaluation, the USACE assumed that water levels for each of these three alternatives would be very similar (USACE, GRR page 44). This evaluation process included the review of model hydrographs from weekly average groundwater stage for indicator cells within ENP. For each of the referenced indicator cells, Alternative 4, 5, and 7 high-stages were compared against high-stages anticipated to result from the authorized Modified Water Deliveries project. If Alternatives 4, 5, and 7 high-stages were generally lower than high-stages anticipated to result from the authorized Modified Water Deliveries project (i.e.: negatively impacting higher stages in ENP), it was determined that the Alternative did not meet the federal requirement for avoiding negative impacts to higher stages in ENP.

Based on the above-referenced review, it appears that Alternatives 4, 5, and 7 does not adversely impact higher water stages in ENP and therefore appears to meet the requirement for avoiding negative impacts to higher stages in ENP. Table 1e provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

Table 1e: ENP High-Stage Evaluation for Alternatives 4, 5, and 7<sup>5</sup>

Scenario: D13Rbc C-111 356 95 95ops			
Indicator Cell Number	Appendix A Figure Number	Requirement Met (Yes/No)	Comparison to D13Rbc_Plan1_95_95ops
19990	58	Yes	• Stages during weeks 1-52 are generally 0.1 ft higher.
20206	65	Yes	• Stages during weeks 1-52 are generally 0.4 ft higher.
20357	64	Yes	• Stages during weeks 1-52 are generally 0.2 ft higher.
20378	59	Yes	• Stages during weeks 1-19 are generally 0.6 ft higher. • Stages during weeks 20-52 are generally 0.5 ft higher.
20457	68	Yes <sup>6</sup>	• Stages during weeks 1-25 are generally 0.1 ft lower. • Stages during weeks 26-52 are generally 0.2 ft higher.
20726	71	Yes <sup>6</sup>	• Stages during weeks 1-25 are generally 0.2 ft lower. • Stages during weeks 26-52 are generally 0.3 ft higher.
20980	72	Yes	• Stages during weeks 1-52 are generally similar.
21271	55	Yes	• Stages during weeks 1-21 are generally 0.4 ft higher. • Stages during weeks 22-52 are generally 0.2 ft higher.
22335 (CSSS F)	77	Yes	• Stages during weeks 1-52 are generally similar.
24577	60	Yes	• Stages during weeks 1-52 are generally similar.
24587	61	Yes	• Stages during weeks 1-52 are generally similar.

<sup>5</sup> Each of alternatives 4, 5, and 7 are non-structural acquisition-based alternatives that provide for meeting flood mitigation requirements through a combination of land and flowage-easement purchases.

<sup>6</sup> Observed lower water stages occurred during the dry-season. Higher water stages were not negatively impacted.

**Impacts to High Stages in ENP - Alternative 6b**

The following evaluation was conducted to ascertain if Alternative 6b negatively impacts higher stages in ENP as specified in the Modified Water Deliveries project. This evaluation process included the review of model hydrographs from weekly average groundwater stage for indicator cells within ENP. For each of the referenced indicator cells, Alternative 6b high-stages were compared against high-stages anticipated to result from the authorized Modified Water Deliveries project. If Alternative 6b high-stages were generally lower than high-stages anticipated to result from the authorized Modified Water Deliveries project (i.e.: negatively impacting higher stages in ENP), it was determined that the Alternative did not meet the federal requirement for avoiding negative impacts to higher stages in ENP.

Based on the above-referenced review, it appears that Alternative 6b does not adversely impact higher water stages in ENP and therefore appears to meet the requirement for avoiding negative impacts to higher stages in ENP. Therefore, it appears that this Alternative would likely result in negative impacts to the Cape Sable seaside sparrow and its habitat. Table 1f provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

**Table 1f: ENP High-Stage Evaluation for Alternative 6b**

Scenario: D13Rbc Pla6B_95_95ops			
Indicator Cell Number	Appendix A Figure Number	Requirement Met (Yes/No)	Comparison to D13Rbc_Plan1_95_95ops
19990	58	Yes	• Stages during weeks 1-52 are generally 0.1 ft higher.
20206	65	Yes	• Stages during weeks 1-52 are generally 0.2 ft higher.
20357	64	Yes	• Stages during weeks 1-52 are generally 0.2 ft higher.
20378	59	Yes	• Stages during weeks 1-19 are generally 0.5 ft higher. • Stages during weeks 20-52 are generally 0.3 ft higher
20457	68	Yes <sup>7</sup>	• Stages during weeks 1-25 are generally 0.1 ft lower. • Stages during weeks 26-52 are generally 0.2 ft higher.
20726	71	Yes <sup>7</sup>	• Stages during weeks 1-25 are generally 0.2 ft lower. • Stages during weeks 26-52 are generally 0.3 ft higher.
20980	72	Yes	• Stages during weeks 1-52 are generally similar.
21271	55	Yes	• Stages during weeks 1-21 are generally 0.7 ft higher. • Stages during weeks 22-52 are generally 0.5 ft higher.
22335 (CSSS F)	77	Yes	• Stages during weeks 1-25 are generally similar. • Stages during weeks 26-52 are generally 0.1 ft higher.
24577	60	Yes	• Stages during weeks 1-52 are generally similar.
24587	61	Yes	• Stages during weeks 1-52 are generally 0.2 ft higher.

<sup>7</sup> Observed lower water stages occurred during the dry-season. Higher water stages were not negatively impacted.

- Provides for full flood mitigation of the adverse hydrological impacts associated with the implementation of the MWD Project through full acquisition.
- Provides additional suitable habitats (6,582 acres) for snail kites and wood storks.

Other Objectives

- Flood protection is provided through full acquisition.
- Does not increase the spatial extent of short hydroperiod wetlands.
- Provides for the greatest increases in wetland function in both NESRS and the 8.5 SMA.
- Will not require retrofitting of future restoration project features.
- Provides the maximum capability for re-establishing of historical hydrological regimes through a non-structural solution.

Supplemental Benefits

- Alternative 5 provides an additional 2,417 functional wetland units in NESRS.
- Alternative 5 provides an additional 2,796 functional units in the 8.5 SMA.

Compensatory Mitigation

- Will not require compensatory mitigation for wetlands and fish and wildlife resources. (CAR, 113)

*Alternative 4-Performs Well for Performance Criteria Evaluated Legislative Requirements*

- Provides for full re-establishment of hydroperiods in NESRS.
- Provides for full flood mitigation of the adverse hydrologic effects associated with the implementation of the MWD Project through acquisition, flowage easements, and life estates.
- Provides additional suitable habitat for snail kites and wood storks.

Other Objectives

- Flood protection is provided through acquisition, flowage easements, and life estates.
- Does not increase the spatial extent of short hydroperiod wetlands.
- Provides for the greatest increases in wetland function for both NESRS and the 8.5 SMA.
- Will not require retrofitting of project features.
- Provides the maximum capability for re-establishment of historical hydrological regimes through a non-structural approach.

Supplemental Benefits

- Alternative 4 provides an additional 2,417 functional wetland units in NESRS.
- Alternative 4 provides an additional 2,796 functional wetland units in the 8.5 SMA.
- Compensatory Mitigation
- Alternative 4 will not require any compensatory mitigation. (CAR, 114)

*Alternative 6B-Meets Performance Criteria Evaluated*

Legislative Requirements

- Provides for re-establishment of hydroperiods in NESRS. Adverse impacts to the restored NESRS hydroperiods and water depths are within acceptable limits established by DOI.
- Provides for full mitigation of the adverse hydrological impacts associated with the implementation of the MWD Project through flood protection to a portion of the 8.5 SMA above the 7-foot ground surface contour.
- Provides additional suitable habitats for snail kites and wood storks.

Other objectives

- Provides flood protection to the designated areas of the 8.5 SMA.
- Does not increase the spatial extent of short hydroperiod wetlands.
- Provides for moderate increases in wetland function for both NESRS and the 8.5 SMA.
- Could potentially require retrofitting of future restoration project features.

Supplemental Benefits

- Alternative 6B provides an additional 2,417 functional wetland units in NESRS.
- Alternative 6B provides an additional 1,954 functional wetland units, or approx. 30% less than the supplemental benefits associated with either Alternatives 4 or 5, in the 8.5 SMA.

Compensatory Mitigation

- This alternative will not require any compensatory mitigation for wetlands and fish and wildlife resources losses.

**Impacts to High Stages in ENP - Summary**

Table 1h provides a summary of the ENP high-stage impact summary. The table shows for each indicator cell which alternatives achieve the requirements of the project and which do not.

Table 1h: ENP High-Stage Evaluation Summary Table

Scenario: D13Rbc [alternative] 95-95ops							
Indicator Cell Number	Appendix A Figure Number	Alternative 1	Alternative 2	Alternative 3	Alternatives 4, 5, 7	Alternative 6b	Alternative 8
19990	58	NA	Yes	Yes	Yes	Yes	Yes
20206	65	NA	No	Yes	Yes	Yes	Yes
20357	64	NA	No	Yes	Yes	Yes	Yes
20378	59	NA	No	Yes	Yes	Yes	Yes
20457	68	NA	Yes	Yes	Yes	Yes	Yes
20726	71	NA	Yes	Yes	Yes	Yes	Yes
20980	72	NA	Yes	Yes	Yes	Yes	Yes
21271	55	NA	Yes	Yes	Yes	Yes	Yes
22335 (CSSSF)	77	NA	Yes	No	Yes	Yes	Yes
24577	60	NA	Yes	Yes	Yes	Yes	Yes
24587	61	NA	Yes	Yes	Yes	Yes	Yes
Overall:		NA	No	No	Yes	Yes	Yes

**Performance of Alternative appears to not meet the requirement of the project as defined in the GRR/SEIS.**

\* Observed lower water stages occurred during the dry-season. Higher water stages were not negatively impacted.

### 1.3.2 Flood Mitigation Evaluation

#### Impacts to Water Levels in the 8.5 SMA - Alternative 1

The following evaluation was conducted to ascertain if Alternative 1 meets the federal requirement for flood mitigation. The evaluation process included the review of model hydrographs from weekly average groundwater stage for indicator cells within the 8.5 SMA. For each of the referenced indicator cells, Alternative 1 stages were compared against Base 83 stages. If Alternative 1 stages were generally higher than Base 83 stages (i.e.: negatively impacting Base 83 stages) and Alternative 1 stages simultaneously exceeded ground elevation, it was determined that the Alternative did not meet the federal requirement for flood mitigation. For the purposes of this evaluation, cells 20737 and 20743 (8.5 SMA wetland indicator cells) were discussed, but not evaluated relative to the flood mitigation requirement.

Based on the above-referenced review, it appears that Alternative 1 does not meet the flood-mitigation requirement of the project and will likely require the acquisition of property and/or flowage-easements to provide the required flood mitigation. Table 2a provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

Table 2a: Flood Mitigation Evaluation for Alternative 1

Scenario: D13Rbc_Plan1_95_95ops			
Indicator Cell Number	Appendix A Figure Number	Requirement Met (Yes/No)	Comparison to Base83bc_Exist_95_83ops
20477	39	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-26 are generally 0.5 ft higher.</li> <li>• Stages during weeks 27-52 are generally 0.1 ft lower.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 21-24.</li> </ul>
20838	40	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 0.7 ft higher.</li> <li>• Stages during weeks 22-52 are generally 0.3 ft higher.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 25-27.</li> </ul>
20925	42	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-26 are generally 1.0 ft higher.</li> <li>• Stages during weeks 27-52 are generally 0.5 ft higher.</li> <li>• Stages exceed Base 83 conditions and ground elevation during week 26.</li> </ul>
21007	44	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 0.4 ft higher.</li> <li>• Stages during weeks 22-52 are generally 0.6 ft lower.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 21-24.</li> </ul>
21017	41	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-26 are generally 0.7 ft higher.</li> <li>• Stages during weeks 27-52 are generally 0.5 ft higher.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 21-24.</li> </ul>
20737 (WRAP)	28	NA	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are similar except during weeks 14-17 (approximately 0.2 ft higher).</li> <li>• Stages during weeks 22-52 are generally 0.7 ft lower.</li> <li>• Stages remain below ground elevation or Base 83 stages.</li> </ul>
20743 (WRAP)	29	NA	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 0.2 ft higher.</li> <li>• Stages during weeks 22-52 are generally 0.5 ft lower.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 21-22.</li> </ul>

Impacts to Water Levels in the 8.5 SMA - Alternative 2

The following evaluation was conducted to ascertain if Alternative 2 meets the federal requirement for flood mitigation. The evaluation process included the review of model hydrographs from weekly average groundwater stage for indicator cells within the 8.5 SMA. For each of the referenced indicator cells, Alternative 2 stages were compared against Base 83 stages. If Alternative 2 stages were generally higher than Base 83 stages (i.e.: negatively impacting Base 83 stages) and Alternative 2 stages simultaneously exceeded ground elevation, it was determined that the Alternative did not meet the federal requirement for flood mitigation. For the purposes of this evaluation, cells 20737 and 20743 (8.5 SMA wetland indicator cells) were discussed, but not evaluated relative to the flood mitigation requirement.

Based on the above-referenced review, it appears that Alternative 2 does not meet the flood-mitigation requirement of the project and will likely require the acquisition of property and/or flowage-easements to provide the required flood mitigation. Table 2b provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

Table 2b: Flood Mitigation Evaluation for Alternative 2

Scenario: D13Rbc Plan2B_95_95ops			
Indicator Cell Number	Appendix A Figure Number	Requirement Met (Yes/No)	Comparison to Base83bc_Exist_95_83ops
20477	39	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-26 are generally 0.3 ft higher.</li> <li>Stages during weeks 27-52 are generally 0.5 ft lower.</li> <li>Stages exceed Base 83 conditions and ground elevation during weeks 22-23.</li> </ul>
20838	40	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 0.5 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.2 ft higher.</li> <li>Stages exceed Base 83 conditions and ground elevation during week 26.</li> </ul>
20925	42	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 0.8 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.2 ft higher.</li> <li>Stages exceed Base 83 conditions and ground elevation during weeks 22-23.</li> </ul>
21007	44	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 0.2 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.8 ft lower.</li> <li>Stages exceed Base 83 conditions and ground elevation during weeks 1-6 and week 18.</li> </ul>
21017	41	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 0.5 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.1 ft higher.</li> <li>Stages exceed Base 83 conditions and are at ground level during week 26.</li> </ul>
20737 (WRAP)	28	NA	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 0.2 ft lower except during weeks 14-17 (approximately 0.2 ft higher).</li> <li>Stages during weeks 22-52 are generally 1.2 ft lower.</li> <li>Stages remain below ground elevation or Base 83 stages.</li> </ul>
20743 (WRAP)	29	NA	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally similar.</li> <li>Stages during weeks 22-52 are generally 0.5 ft lower.</li> <li>Stages remain below ground elevation or Base 83 stages.</li> </ul>

Impacts to Water Levels in the 8.5 SMA - Alternative 3

The following evaluation was conducted to ascertain if Alternative 3 meets the federal requirement for flood mitigation. The evaluation process included the review of model hydrographs from weekly average groundwater stage for indicator cells within the 8.5 SMA. For each of the referenced indicator cells, Alternative 3 stages were compared against Base 83 stages. If Alternative 3 stages were generally higher than Base 83 stages (i.e.: negatively impacting Base 83 stages) and Alternative 3 stages simultaneously exceeded ground elevation, it was determined that the Alternative did not meet the federal requirement for flood mitigation. For the purposes of this evaluation, cells 20737 and 20743 (8.5 SMA wetland indicator cells) were discussed, but not evaluated relative to the flood mitigation requirement.

Based on the above-referenced review, it appears that Alternative 3 does not meet the flood-mitigation requirement of the project and will likely require the acquisition of property and/or flowage-easements to provide the required flood mitigation. Table 2c provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

Table 2c: Flood Mitigation Evaluation for Alternative 3

Scenario: D13Rbc_Plan3_95_95ops			
Indicator Cell Number	Appendix A Figure Number	Requirement Met (Yes/No)	Comparison to Base83bc_Exist_95_83ops
20477	39	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-20 are generally 1.0 ft higher.</li> <li>• Stages during weeks 21-52 are generally 0.2 ft higher.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 21-51.</li> </ul>
20838	40	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 0.7 ft higher.</li> <li>• Stages during weeks 22-52 are generally 0.3 ft higher.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 26-27.</li> </ul>
20925	42	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 0.9 ft higher.</li> <li>• Stages during weeks 22-52 are generally 0.5 ft higher.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 21-41.</li> </ul>
21007	44	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 0.9 ft higher.</li> <li>• Stages during weeks 22-52 are generally similar.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 1-30.</li> </ul>
21017	41	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-26 are generally 0.7 ft higher.</li> <li>• Stages during weeks 27-52 are generally 0.6 ft higher.</li> <li>• Stages exceed Base 83 conditions and ground elevation during week 27.</li> </ul>
20737 (WRAP)	28	NA	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 1.0 ft higher.</li> <li>• Stages during weeks 22-52 are generally similar.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 1-7, 18, and 21-31.</li> </ul>
20743 (WRAP)	29	NA	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 0.7 ft higher.</li> <li>• Stages during weeks 22-52 are generally similar.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 1-5, 18, and 21-30.</li> </ul>

Impacts to Water Levels in the 8.5 SMA - Alternatives 4, 5, and 7<sup>10</sup>

The following evaluation was conducted to ascertain if Alternatives 4, 5, and 7 meet the federal requirement for flood mitigation. For the purposes of hydrological evaluation, the USACE assumed that water levels for each of these three alternatives would be very similar (USACE, GRR page 44). The evaluation process included the review of model hydrographs from weekly average groundwater stage for indicator cells within the 8.5 SMA. For each of the referenced indicator cells, Alternative 4, 5, and 7 stages were compared against Base 83 stages. Because these alternatives employ land acquisition and/or the purchasing of flowage easements as the primary means of achieving the federal requirement for flood mitigation, the higher stages associated with Alternatives 4, 5, and 7 are anticipated to not result in adverse flooding impacts to the 8.5 SMA. For the purposes of this evaluation, cells 20737 and 20743 (8.5 SMA wetland indicator cells) were discussed, but not evaluated relative to the flood mitigation requirement.

Based on the above-referenced review, Alternatives 4, 5, and 7 appear to meet the flood-mitigation requirement of the project. Table 2d provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

Table 2d: Flood Mitigation Evaluation for Alternatives 4, 5, and 7

Scenario: D13Rbc C-111 356 95 95ops				
Indicator Number	Cell	Appendix A Figure Number	Requirement Met (Yes/No) <sup>10</sup>	Comparison to Base83bc_Exist_95_83ops
20477		39	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 1.1 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.5 ft higher.</li> <li>Stages exceed Base 83 conditions and ground elevation during weeks 1-13, and 20-52.</li> </ul>
20838		40	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 0.8 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.5 ft higher.</li> <li>Stages exceed Base 83 conditions and ground elevation during weeks 25-26 and 42-43.</li> </ul>
20925		42	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 1.0 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.5 ft higher.</li> <li>Stages exceed Base 83 conditions and ground elevation during weeks 1-5 and 21-52.</li> </ul>
21007		44	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 1.5 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.5 ft higher.</li> <li>Stages exceed Base 83 conditions and ground elevation during weeks 1-52.</li> </ul>
21017		41	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 0.8 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.5 ft higher.</li> <li>Stages exceed Base 83 conditions and ground elevation during weeks 26-27.</li> </ul>
20737 (WRAP)		28	NA	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 1.5 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.5 ft higher.</li> <li>Stages exceed Base 83 conditions and ground elevation during weeks 1-52.</li> </ul>
20743 (WRAP)		29	NA	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 1.2 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.2 ft higher.</li> <li>Stages exceed Base 83 conditions and ground elevation during weeks 1-13, 18-19 and 21-52.</li> </ul>

<sup>10</sup> Each of alternatives 4, 5, and 7 are non-structural acquisition-based alternatives that provide for meeting flood mitigation requirements through a combination of land and flowage-easement purchases.

Impacts to Water Levels in the 8.5 SMA - Alternative 6b

The following evaluation was conducted to ascertain if Alternative 6b meets the federal requirement for flood mitigation. It should be noted that this plan was designed by the USACE with the intent of providing full flood protection to remaining 8.5 SMA residents during 1-in-10 year flood conditions. The evaluation process included the review of model hydrographs from weekly average groundwater stage for relevant indicator cells. For each of the referenced indicator cells, Alternative 6b stages were compared against Base 83 stages. If Alternative 6b stages were generally higher than Base 83 stages (i.e.: negatively impacting Base 83 stages) and water levels simultaneously exceeded ground elevation, it was determined that the Alternative did not meet the federal requirement for flood mitigation. For the purposes of this evaluation, if it was determined that the project did not meet federal requirements for flood mitigation, it was also determined that the project did not meet the higher standard of flood protection. For the purposes of this evaluation, cells 20737 and 20743 (8.5 SMA wetland indicator cells) were discussed, but not evaluated relative to the flood mitigation requirement.

Based on the above-referenced review, it appears that Alternative 6b generally meets the flood-protection requirement of the project with the exception of indicator cell 20477. Indicator cell 20477 appears to be located between the proposed major and proposed minor levees (this area is not identified as "land to be acquired").

Table 2e provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

Table 2e: Flood Mitigation Evaluation for Alternative 6b

Scenario: D13Rbc Pla6B 95 95ops			
Indicator Cell Number	Appendix A Figure Number	Requirement Met (Yes/No)	Comparison to Base83bc_Exist_95_83ops
20477	39	No <sup>11</sup>	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 1.6 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.1 ft higher.</li> <li>Stages exceed Base 83 conditions and ground elevation during weeks 1-3 and 21-50.</li> </ul>
20838	40	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 0.5 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.2 ft lower.</li> <li>Stages remain below ground elevation or Base 83 stages.</li> </ul>
20925	42	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 0.2 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.8 ft lower.</li> <li>Stages remain below ground elevation or Base 83 stages.</li> </ul>
21007	44	NA <sup>12</sup>	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 1.2 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.2 ft higher.</li> <li>Stages exceed Base 83 conditions and ground elevation during weeks 1-52.</li> </ul>
21017	41	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-26 are generally 0.4 ft higher.</li> <li>Stages during weeks 27-52 are generally 0.4 ft lower.</li> <li>Stages remain below ground elevation or Base 83 stages.</li> </ul>
20737 (WRAP)	28	NA	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 1.2 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.2 ft higher.</li> <li>Stages exceed Base 83 conditions and ground elevation during weeks 1-52.</li> </ul>
20743 (WRAP)	29	NA	<ul style="list-style-type: none"> <li>Stages during weeks 1-21 are generally 0.6 ft higher.</li> <li>Stages during weeks 22-52 are generally 0.2 ft lower.</li> <li>Stages exceed Base 83 conditions and ground elevation during week 21.</li> </ul>

<sup>11</sup> This cell may or may not fall within the area proposed to receive 1-in-10 year flood protection.

<sup>12</sup> This cell does not fall within the area proposed to receive 1-in-10 year flood protection.

Impacts to Water Levels in the 8.5 SMA - Alternative 8

The following evaluation was conducted to ascertain if Alternative 8 meets the federal requirement for flood mitigation. The evaluation process included the review of model hydrographs from weekly average groundwater stage for relevant indicator cells. For each of the referenced indicator cells, Alternative 8 stages were compared against Base 83 stages. If Alternative 8 stages were generally higher than Base 83 stages (i.e.: negatively impacting Base 83 levels of flood protection), it was determined that the Alternative did not meet the federal requirement for flood mitigation. For the purposes of this evaluation, cells 20737 and 20743 (8.5 SMA wetland indicator cells) were discussed, but not evaluated relative to the flood mitigation requirement.

Based on the above-referenced review, it appears that Alternative 8 does not meet the flood-mitigation requirement of the project and will require the acquisition of property and/or flowage-easements to provide the required flood mitigation. Table 2f provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

Table 2f: Flood Mitigation Evaluation for Alternative 8

Scenario: D13Rbc Plan8A 95 95ops			
Indicator Cell Number	Appendix A Figure Number	Requirement Met (Yes/No)	Comparison to Base83bc_Exist_95_83ops
20477	39	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 1.0 ft higher.</li> <li>• Stages during weeks 22-52 are generally 0.4 ft higher.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 1-12 and 21-52.</li> </ul>
20838	40	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 0.7 ft higher.</li> <li>• Stages during weeks 22-52 are generally 0.4 ft higher.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 25-26 and 42.</li> </ul>
20925	42	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 0.5 ft higher.</li> <li>• Stages during weeks 22-52 are generally 0.1 ft higher.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 21-47.</li> </ul>
21007	44	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 0.1 to 1.0 ft higher.</li> <li>• Stages during weeks 22-52 are generally 0.5 ft lower.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 1-6 and 15-17.</li> </ul>
21017	41	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 0.7 ft higher.</li> <li>• Stages during weeks 22-52 are generally 0.3 ft higher.</li> <li>• Stages exceed Base 83 conditions and ground elevation during week 26.</li> </ul>
20737 (WRAP)	28	NA	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 1.3 ft higher.</li> <li>• Stages during weeks 22-52 are generally 0.4 ft higher.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 1-15, 17-19, and 21-52.</li> </ul>
20743 (WRAP)	29	NA	<ul style="list-style-type: none"> <li>• Stages during weeks 1-21 are generally 0.9 ft higher.</li> <li>• Stages during weeks 22-52 are generally 0.2 ft higher.</li> <li>• Stages exceed Base 83 conditions and ground elevation during weeks 1-9 and 21-52.</li> </ul>

No model stage hydrographs were provided for Alternative 9. In the description of Alternative 9, one is directed by the USACE to refer to Alternatives 1 and 2. Therefore, we refrain from providing comments regarding the flood mitigation effectiveness of Alternative 9 (assuming that the results from Alternative 9 would perform similar to Alternatives 1 or 2).

**Impacts to Water Levels in the 8.5 SMA - Summary**

Table 2g provides a summary of the flood mitigation impact summary for areas in the 8.5 SMA. The table shows for each indicator cell which alternatives achieve the requirements of the project and which do not. For the purposes of this evaluation, cells 20737 and 20743 (8.5 SMA wetland indicator cells) were discussed, but not evaluated relative to the flood mitigation requirement.

Table 2g: Flood Mitigation Evaluation Summary Table

Scenario: DI3Rbc [alternative] 95_95ops							
Indicator Cell Number	Appendix A Figure Number	Alternative 1	Alternative 2	Alternative 3	Alternatives 4, 5, 7	Alternative 6b	Alternative 8
20477	39	No	No	No	Yes	No <sup>13</sup>	No
20838	40	No	No	No	Yes	Yes	No
20925	42	No	No	No	Yes	Yes	No
21007	44	No	No	No	Yes	NA <sup>14</sup>	No
21017	41	No	No	No	Yes	Yes	No
20737 (WRAP)	28	NA	NA	NA	NA	NA	NA
20743 (WRAP)	29	NA	NA	NA	NA	NA	NA
Overall:		No	No	No	Yes	No	No

**Performance of Alternative appears to not meet the requirement of the project as defined in the GRR/SEIS.**

<sup>13</sup> This cell may or may not fall within the area proposed to receive 1-in-10 year flood protection.

<sup>14</sup> This cell does not fall within the area proposed to receive 1-in-10 year flood protection.

### 1.3.3 Flood Protection Evaluation

#### Impacts to Water Levels for Areas East of the L-31N - Alternative 1

The following evaluation was conducted to ascertain if Alternative 1 adversely impacts existing levels of flood protection in areas east of L-31N. The evaluation process included the review of model hydrographs from weekly average groundwater stage for indicator cells east of L-31N. For each of the referenced indicator cells, Alternative 1 stages were compared against Base 95 stages. If Alternative 1 stages were generally higher than Base 95 stages (i.e.: negatively impacting Base 95 levels of flood protection), it was determined that the Alternative adversely impacted existing levels of flood protection.

Based on the above-referenced review, it appears that Alternative 1 adversely impacts flood protection for areas east of L-31N. Increased inundation duration caused by Alternative 1 appears to be greater than that experienced under other alternatives. It should be noted that each alternative exhibits similar periods of inundation and water depths for each of the indicator cells. As indicated in Appendix A of the GRR/SEIS, these impacts appear not to be directly attributable to individual 8.5 SMA alternatives. In general, the increased periods of inundation experienced under Alternative 1 occur during the first 20 weeks. Table 3a provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

Table 3a: Flood Protection Evaluation for Alternative 1

Scenario: D13Rbc_Plan1_95_95ops			
Indicator Cell Number	Appendix A Figure Number	Increased Period of Inundation <sup>15</sup> (Yes/No)	Comparison to Base95bc_Exist_95_95ops
20031	49	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.9 to 1.0 ft higher.</li> <li>Stages during weeks 21-52 are generally similar to 0.2 ft higher.</li> </ul>
20036	50	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.5 to 1.2 ft higher.</li> <li>Stages during weeks 21-52 are generally between 0.1 to 0.5 ft higher.</li> </ul>
20390	51	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.7 to 1.2 ft higher.</li> <li>Stages during weeks 21-52 are generally similar to 0.2 ft higher.</li> </ul>
20396	52	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-16 are generally between 0.2 to 0.9 ft higher.</li> <li>Stages during weeks 17-52 are generally similar.</li> </ul>
20931	53	No <sup>16</sup>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.5 to 0.9 ft higher.</li> <li>Stages during weeks 21-52 are generally similar to 0.3 ft higher.</li> </ul>
20936	54	Yes <sup>17</sup>	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally 0.5 ft higher.</li> <li>Stages during weeks 20-52 are generally similar.</li> </ul>

<sup>15</sup> According to the interpretation provided in the GRR/SEIS (GRR, page 47)

<sup>16</sup> During week 26, water stages are very near ground elevation, but appear not to exceed it.

<sup>17</sup> During week 26, water stages are approximately very near ground surface, exceeding ground elevation by less than or equal to 0.1 ft.

Impacts to Water Levels for Areas East of the L-31N - Alternative 2

The following evaluation was conducted to ascertain if Alternative 2 adversely impacts existing levels of flood protection in areas east of L-31N. The evaluation process included the review of model hydrographs from weekly average groundwater stage for indicator cells east of L-31N. For each of the referenced indicator cells, Alternative 2 stages were compared against Base 95 stages. If Alternative 2 stages were generally higher than Base 95 stages (i.e.: negatively impacting Base 95 levels of flood protection), it was determined that the Alternative adversely impacted existing levels of flood protection.

Based on the above-referenced review, it appears that Alternative 2 adversely impacts flood protection for areas east of L-31N. Increased inundation duration caused by Alternative 2 appears to be less than that experienced under other alternatives. In general, the increased periods of inundation experienced under Alternative 2 occur during the first 14 weeks (and in weeks 18-20). It should be noted that each alternative exhibits similar periods of inundation and water depths for each of the indicator cells. As indicated in Appendix A of the GRR/SEIS, these impacts appear not to be directly attributable to individual 8.5 SMA alternatives. Table 3b provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

Table 3b: Flood Protection Evaluation for Alternative 2

Scenario: D13Rbc Plan2B 95 95ops			
Indicator Cell Number	Appendix A Figure Number	Increased Period of Inundation <sup>18</sup> (Yes/No)	Comparison to Base95bc_Exist_95_95ops
20031	49	Yes	<ul style="list-style-type: none"> <li>• Stages during weeks 1-20 are generally between 0.3 and 0.9 ft higher.</li> <li>• Stages during weeks 21-52 are generally similar.</li> </ul>
20036	50	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-20 are generally between 0.2 to 1.0 ft higher.</li> <li>• Stages during weeks 21-52 are generally similar.</li> </ul>
20390	51	Yes	<ul style="list-style-type: none"> <li>• Stages during weeks 1-20 are generally between 0.2 to 0.7 ft higher.</li> <li>• Stages during weeks 21-52 are generally similar to 0.2 ft lower.</li> </ul>
20396	52	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-16 are generally between 0.3 to 0.9 ft higher.</li> <li>• Stages during weeks 17-52 are generally similar.</li> </ul>
20931	53	No <sup>19</sup>	<ul style="list-style-type: none"> <li>• Stages during weeks 1-20 are generally between 0.3 to 0.7 ft higher.</li> <li>• Stages during weeks 21-52 are generally similar.</li> </ul>
20936	54	Yes <sup>20</sup>	<ul style="list-style-type: none"> <li>• Stages during weeks 1-19 are generally between 0.2 and 0.6 ft higher.</li> <li>• Stages during weeks 20-52 are generally similar.</li> </ul>

<sup>18</sup> According to the interpretation provided in the GRR/SEIS (GRR, page 47)

<sup>19</sup> During week 26, water stages are very near ground elevation, but appear not to exceed it.

<sup>20</sup> During week 26, water stages are approximately very near ground surface, exceeding ground elevation by less than or equal to 0.1 ft.

Impacts to Water Levels for Areas East of the L-31N - Alternative 3

The following evaluation was conducted to ascertain if Alternative 3 adversely impacts existing levels of flood protection in areas east of L-31N. The evaluation process included the review of model hydrographs from weekly average groundwater stage for indicator cells east of L-31N. For each of the referenced indicator cells, Alternative 3 stages were compared against Base 95 stages. If Alternative 3 stages were generally higher than Base 95 stages (i.e.: negatively impacting Base 95 levels of flood protection), it was determined that the Alternative adversely impacted existing levels of flood protection.

Based on the above-referenced review, it appears that Alternative 3 adversely impacts flood protection for areas east of L-31N. In general, the increased periods of inundation experienced under Alternative 3 occur during the first 15 weeks (and in weeks 17-20). It should be noted that each alternative exhibits similar periods of inundation and water depths for each of the indicator cells. As indicated in Appendix A of the GRR/SEIS, these impacts appear not to be directly attributable to individual 8.5 SMA alternatives. Table 3c provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

Table 3c: Flood Protection Evaluation for Alternative 3

Scenario: D13Rbc Plan3 95 95ops			
Indicator Cell Number	Appendix A Figure Number	Increased Period of Inundation <sup>21</sup> (Yes/No)	Comparison to Base95bc_Exist_95_95ops
20031	49	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.6 and 1.0 ft higher.</li> <li>Stages during weeks 21-52 are generally 0.1 ft higher.</li> </ul>
20036	50	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.4 to 1.1 ft higher.</li> <li>Stages during weeks 21-52 are generally 0.1 ft higher.</li> </ul>
20390	51	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.6 to 1.0 ft higher.</li> <li>Stages during weeks 21-52 are generally between 0.2 ft lower to 0.2 ft higher.</li> </ul>
20396	52	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-16 are generally between 0.1 to 0.7 ft higher.</li> <li>Stages during weeks 17-52 are generally similar.</li> </ul>
20931	53	No <sup>22</sup>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.5 to 0.8 ft higher.</li> <li>Stages during weeks 21-52 are generally similar to 0.2 ft higher.</li> </ul>
20936	54	Yes <sup>23</sup>	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally between 0.2 and 0.5 ft higher.</li> <li>Stages during weeks 20-52 are generally similar.</li> </ul>

<sup>21</sup> According to the interpretation provided in the GRR/SEIS (GRR, page 47)

<sup>22</sup> During week 26, water stages are very near ground elevation, but appear not to exceed it.

<sup>23</sup> During week 26, water stages are approximately very near ground surface, exceeding ground elevation by less than or equal to 0.1 ft.

Impacts to Water Levels for Areas East of the L-31N - Alternatives 4, 5, and 7

The following evaluation was conducted to ascertain if Alternatives 4, 5, and 7 adversely impacts existing levels of flood protection in areas east of L-31N. For the purposes of hydrological evaluation, the USACE assumed that water levels for each of these three alternatives would be very similar (USACE, GRR page 44). The evaluation process included the review of model hydrographs from weekly average groundwater stage for indicator cells east of L-31N. For each of the referenced indicator cells, Alternative 4, 5, and 7 stages were compared against Base 95 stages. If Alternative 4, 5, and 7 stages were generally higher than Base 95 stages (i.e.: negatively impacting Base 95 levels of flood protection), it was determined that the Alternative adversely impacted existing levels of flood protection.

Based on the above-referenced review, it appears that Alternatives 4, 5, and 7 adversely impact flood protection for areas east of L-31N. In general, the increased periods of inundation experienced under Alternatives 4, 5, and 7 occur during the first 16 weeks (and in weeks 17-20). It should be noted that each alternative exhibits similar periods of inundation and water depths for each of the indicator cells. As indicated in Appendix A of the GRR/SEIS, these impacts appear not to be directly attributable to individual 8.5 SMA alternatives. Table 3d provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

Table 3d: Flood Protection Evaluation for Alternatives 4, 5, and 7<sup>24</sup>

Scenario: D13Rbc_C-111_356_95_95ops			
Indicator Cell Number	Appendix A Figure Number	Increased Period of Inundation <sup>25</sup> (Yes/No)	Comparison to Base95bc_Exist_95_95ops
20031	49	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.6 and 1.0 ft higher.</li> <li>Stages during weeks 21-52 are generally 0.1 ft higher.</li> </ul>
20036	50	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.4 to 1.1 ft higher.</li> <li>Stages during weeks 21-52 are generally 0.1 ft higher.</li> </ul>
20390	51	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.6 to 1.0 ft higher.</li> <li>Stages during weeks 21-52 are generally between 0.2 ft lower to 0.2 ft higher.</li> </ul>
20396	52	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-16 are generally between 0.1 to 0.7 ft higher.</li> <li>Stages during weeks 17-52 are generally similar.</li> </ul>
20931	53	No <sup>26</sup>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.5 to 0.8 ft higher.</li> <li>Stages during weeks 21-52 are generally similar to 0.2 ft higher.</li> </ul>
20936	54	Yes <sup>27</sup>	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally between 0.2 and 0.7 ft higher.</li> <li>Stages during weeks 20-52 are generally similar.</li> </ul>

<sup>24</sup> Each of alternatives 4, 5, and 7 are non-structural acquisition-based alternatives that provide for meeting flood mitigation requirements through a combination of land and flowage-easement purchases.

<sup>25</sup> According to the interpretation provided in the GRR/SEIS (GRR, page 47)

<sup>26</sup> During week 26, water stages are very near ground elevation, but appear not to exceed it.

<sup>27</sup> During week 26, water stages are approximately very near ground surface, exceeding ground elevation by less than or equal to 0.1 ft.

**Impacts to Water Levels for Areas East of the L-31N - Alternative 6b**

The following evaluation was conducted to ascertain if Alternative 6b adversely impacts existing levels of flood protection in areas east of L-31N. The evaluation process included the review of model hydrographs from weekly average groundwater stage for indicator cells east of L-31N. For each of the referenced indicator cells, Alternative 6b stages were compared against Base 95 stages. If Alternative 6b stages were generally higher than Base 95 stages (i.e.: negatively impacting Base 95 levels of flood protection), it was determined that the Alternative adversely impacted existing levels of flood protection.

Based on the above-referenced review, it appears that Alternative 6b adversely impacts flood protection for areas east of L-31N. In general, the increased periods of inundation experienced under Alternative 6b occur during the first 15 weeks (and in weeks 19-20). It should be noted that each alternative exhibits similar periods of inundation and water depths for each of the indicator cells. As indicated in Appendix A of the GRR/SEIS, these impacts appear not to be directly attributable to individual 8.5 SMA alternatives. Table 3e provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

**Table 3e: Flood Protection Evaluation for Alternative 6b**

Scenario: D13Rbc_Pla6B_95_95ops			
Indicator Cell Number	Appendix A Figure Number	Increased Period of Inundation <sup>28</sup> (Yes/No)	Comparison to Base95bc_Exist_95_95ops
20031	49	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.5 and 1.0 feet higher.</li> <li>Stages during weeks 21-52 are generally 0.1 ft higher.</li> </ul>
20036	50	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.2 to 1.0 ft higher.</li> <li>Stages during weeks 21-52 are generally similar.</li> </ul>
20390	51	Yes	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.4 to 0.8 ft higher.</li> <li>Stages during weeks 21-52 are generally similar.</li> </ul>
20396	52	No	<ul style="list-style-type: none"> <li>Stages during weeks 1-16 are generally between 0.2 to 0.8 ft higher.</li> <li>Stages during weeks 17-52 are generally similar.</li> </ul>
20931	53	No <sup>29</sup>	<ul style="list-style-type: none"> <li>Stages during weeks 1-20 are generally between 0.2 to 0.7 ft higher.</li> <li>Stages during weeks 21-52 are generally similar to 0.1 ft lower.</li> </ul>
20936	54	Yes <sup>30</sup>	<ul style="list-style-type: none"> <li>Stages during weeks 1-19 are generally between 0.2 and 0.5 ft higher.</li> <li>Stages during weeks 20-52 are generally similar.</li> </ul>

<sup>28</sup> According to the interpretation provided in the GRR/SEIS (GRR, page 47)

<sup>29</sup> During week 26, water stages are very near ground elevation, but appear not to exceed it.

<sup>30</sup> During week 26, water stages are approximately very near ground surface, exceeding ground elevation by less than or equal to 0.1 ft.

**Impacts to Water Levels for Areas East of the L-31N - Alternative 8**

The following evaluation was conducted to ascertain if Alternative 8 adversely impacts existing levels of flood protection in areas east of L-31N. The evaluation process included the review of model hydrographs from weekly average groundwater stage for indicator cells east of L-31N. For each of the referenced indicator cells, Alternative 8 stages were compared against Base 95 stages. If Alternative 8 stages were generally higher than Base 95 stages (i.e.: negatively impacting Base 95 levels of flood protection), it was determined that the Alternative adversely impacted existing levels of flood protection.

Based on the above-referenced review, it appears that Alternative 8 adversely impacts flood protection for areas east of L-31N. In general, the increased periods of inundation experienced under Alternative 8 occur during the first 15 weeks (and in weeks 17-20). It should be noted that each alternative exhibits similar periods of inundation and water depths for each of the indicator cells. As indicated in Appendix A of the GRR/SEIS, these impacts appear not to be directly attributable to individual 8.5 SMA alternatives. Table 3f provides a summary of observations made during the evaluation process. Please see Appendix A of the GRR/SEIS for additional details and relevant hydrographs.

**Table 3f: Flood Protection Evaluation for Alternative 8**

Scenario: D13Rbc_Plan8A_95_95ops			
Indicator Cell Number	Appendix A Figure Number	Increased Period of Inundation <sup>31</sup> (Yes/No)	Comparison to Base95bc_Exist_95_95ops
20031	49	Yes	<ul style="list-style-type: none"> <li>• Stages during weeks 1-20 are generally between 0.6 and 1.0 ft higher.</li> <li>• Stages during weeks 21-52 are generally 0.1 ft higher.</li> </ul>
20036	50	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-20 are generally between 0.4 to 1.1 ft higher.</li> <li>• Stages during weeks 21-52 are generally 0.1 ft higher.</li> </ul>
20390	51	Yes	<ul style="list-style-type: none"> <li>• Stages during weeks 1-20 are generally between 0.6 to 1.0 ft higher.</li> <li>• Stages during weeks 21-52 are generally between 0.2 ft lower to 0.2 ft higher.</li> </ul>
20396	52	No	<ul style="list-style-type: none"> <li>• Stages during weeks 1-16 are generally between 0.2 to 0.8 ft higher.</li> <li>• Stages during weeks 17-52 are generally similar.</li> </ul>
20931	53	No <sup>32</sup>	<ul style="list-style-type: none"> <li>• Stages during weeks 1-20 are generally between 0.5 to 0.8 ft higher.</li> <li>• Stages during weeks 21-52 are generally similar to 0.2 ft higher.</li> </ul>
20936	54	Yes <sup>33</sup>	<ul style="list-style-type: none"> <li>• Stages during weeks 1-19 are generally between 0.2 and 0.7 ft higher.</li> <li>• Stages during weeks 20-52 are generally similar.</li> </ul>

No model stage hydrographs were provided for Alternative 9. In the description of Alternative 9, one is directed by the USACE to refer to Alternatives 1 and 2. Therefore, we refrain from providing comments regarding the flood protection effectiveness of Alternative 9 (assuming that the results from Alternative 9 would perform similar to Alternatives 1 or 2).

<sup>31</sup> According to the interpretation provided in the GRR/SEIS (GRR, page 47)

<sup>32</sup> During week 26, water stages are very near ground elevation, but appear not to exceed it.

<sup>33</sup> During week 26, water stages are approximately very near ground surface, exceeding ground elevation by less than or equal to 0.1 ft.

**Impacts to Water Levels for Areas East of the L-31N - Summary**

Table 3g provides a summary of the flood protection impact summary for areas east of L-31N. The table shows for each indicator cell which alternatives achieve the requirements of the project and which do not. In general, it appears that none of the Alternatives meet the requirement for flood protection for areas east of the L-31N due to D13R boundary conditions that were adopted for the modeling process. Each alternative exhibits similar periods of inundation and water depths for each of the indicator cells. As indicated in Appendix A of the GRR/SEIS, these impacts appear not to be directly attributable to individual 8.5 SMA alternatives. However, if upon final evaluation of the Modified Water Deliveries and C-111 projects, it is established that implementation of the Modified Water Deliveries and C-111 projects will result in increased flooding in areas east of the L-31N, flood mitigation should be provided to those areas east of the L-31N in a manner that does not adversely impact water stages or water quality in ENP.

Table 3g: Flood Protection Evaluation Summary Table

Scenario: D13Rbc [alternative] 95 95ops							
Indicator Cell Number	Appendix A Figure Number	Alternative 1	Alternative 2	Alternative 3	Alternatives 4, 5, 7	Alternative 6b	Alternative 8
20031	49	Yes	Yes	Yes	Yes	Yes	Yes
20036	50	No	No	No	No	No	No
20390	51	Yes	Yes	Yes	Yes	Yes	Yes
20396	52	No	No	No	No	No	No
20931	53	No <sup>24</sup>	No <sup>24</sup>	No <sup>24</sup>	No <sup>24</sup>	No <sup>24</sup>	No <sup>24</sup>
20936	54	Yes <sup>25</sup>	Yes <sup>25</sup>	Yes <sup>25</sup>	Yes <sup>25</sup>	Yes <sup>25</sup>	Yes <sup>25</sup>
Overall:		NA <sup>30</sup>	NA <sup>30</sup>	NA <sup>30</sup>	NA <sup>30</sup>	NA <sup>30</sup>	NA <sup>30</sup>



Performance of Alternative appears to not meet the requirement of the project as defined in the GRR/SEIS. However, each alternative exhibits similar periods of inundation and water depths for each of the indicator cells. As indicated in Appendix A of the GRR/SEIS, these impacts appear not to be directly attributable to individual 8.5 SMA alternatives.

<sup>24</sup> During week 26, water stages are very near ground elevation, but appear not to exceed it.

<sup>25</sup> During week 26, water stages are approximately very near ground surface, exceeding ground elevation by less than or equal to 0.1 ft.

<sup>30</sup> Each alternative exhibits similar periods of inundation and water depths for each of the indicator cells. As indicated in Appendix A of the GRR/SEIS, these impacts appear not to be directly attributable to individual 8.5 SMA alternatives.

### 1.3.4 Summary of Alternative Performance

The observations contained in the preceding pages can be summarized as follows:

- Alternatives 1, 2, and 3 adversely impact high stages in ENP.
- Alternatives 1, 2, 3, and 8 do not provide levels of flood mitigation/protection defined in the GRR/SEIS. Alternative 6b provides levels of flood mitigation/protection defined in the GRR/SEIS with the exception of an area in the northeastern section of the 8.5 SMA.
- Each Alternative resulted in impacts to areas east of the L-31N. The GRR/SEIS attributes these impacts to modeled regional influences and not necessarily the direct result of the 8.5 SMA component.

Table 4: Project Requirement Summary Table

Scenario: D13Rbc [alternative] 95_95ops							
Project Requirement	Indicator Cell Number	Alternative 1	Alternative 2	Alternative 3	Alternatives 4, 5, 7	Alternative 6b	Alternative 8
		Condition Met (yes/no)					
High Stages	19990	NA	Yes	Yes	Yes	Yes	Yes
	20206	NA <sup>37</sup>	No	Yes	Yes	Yes	Yes
	20357	NA	No	Yes	Yes	Yes	Yes
	20378	NA <sup>37</sup>	No	Yes	Yes	Yes	Yes
	20457	NA	Yes	Yes	Yes <sup>38</sup>	Yes <sup>38</sup>	Yes <sup>38</sup>
	20726	NA	Yes	Yes	Yes <sup>38</sup>	Yes <sup>38</sup>	Yes <sup>38</sup>
	20980	NA	Yes	Yes	Yes	Yes	Yes
	21271	NA	Yes	Yes	Yes	Yes	Yes
	22335 (CSSS F)	NA	Yes	No	Yes	Yes	Yes
	24577	NA	Yes	Yes	Yes	Yes	Yes
24587	NA	Yes	Yes	Yes	Yes	Yes	
8.5 SMA Flood Mitigation/Protection	20477	No	No	No	Yes	No <sup>39</sup>	No
	20838	No	No	No	Yes	Yes	No
	20925	No	No	No	Yes	Yes	No
	21007	No	No	No	Yes	NA <sup>40</sup>	No
	21017	No	No	No	Yes	Yes	No
	20737 (WRAP)	NA	NA	NA	NA	NA	NA
	20743 (WRAP)	NA	NA	NA	NA	NA	NA
East of L-31N Flood Protection	20031	Yes	Yes	Yes	Yes	Yes	Yes
	20036	No	No	No	No	No	No
	20390	Yes	Yes	Yes	Yes	Yes	Yes
	20396	No	No	No	No	No	No
	20931	No <sup>41</sup>					
20936	Yes <sup>42</sup>	Yes <sup>42</sup>	Yes <sup>42</sup>	Yes <sup>42</sup>	Yes <sup>42</sup>	Yes <sup>42</sup>	
Performance of Alternative appears to not meet the requirement of the project as defined in the GRR/SEIS.							

<sup>37</sup> Alternative 1 would result in lower water stages in areas north and northwest of the 8.5 SMA in ENP than are presently being achieved under present conditions.

<sup>38</sup> Observed lower water stages occurred during the dry-season. Higher water stages were not negatively impacted.

<sup>39</sup> This cell may or may not fall within the area proposed to receive 1-in-10 year flood protection.

<sup>40</sup> This cell does not fall within the area proposed to receive 1-in-10 year flood protection.

<sup>41</sup> During week 26, water stages are very near ground elevation, but appear not to exceed it.

<sup>42</sup> During week 26, water stages are approximately very near ground surface, exceeding ground elevation by less than or equal to 0.1 ft.

### 1.3.5 Evaluation of Alternatives 6c and 6b

In response to various government agency and public comments, the USACE conducted modeling of additional Alternatives during May 2000. The new Alternatives are identified as Alternative 6c and Alternative 6d. Resulting supplements to the draft GRR/SEIS were posted to the internet (<http://www.saj.usace.army.mil/dp/mwdc111-1.htm>) by the USACE during mid-May. The revised and updated materials included an addendum to the GRR/SEIS and an updated version of the Draft Coordination Act Report generated by the United States Fish and Wildlife Service and National Park Service. We recognize and respect the fact that project managers and staff are attempting to adhere to a strict project timeline in an effort to rehydrate ENP as soon as possible. However, these new materials were released for public review approximately 15 days prior to the close of public comment. Furthermore, information presented in the addendum for Alternatives 6c and 6d did not include the array of information presented for the other Alternatives (i.e.: indicator cell data and hydrographs). As a result, our comments on the hydrological performance of Alternatives 6c and 6d are brief. Likewise, we will (if needed) provide additional comments on new materials as they are generated.

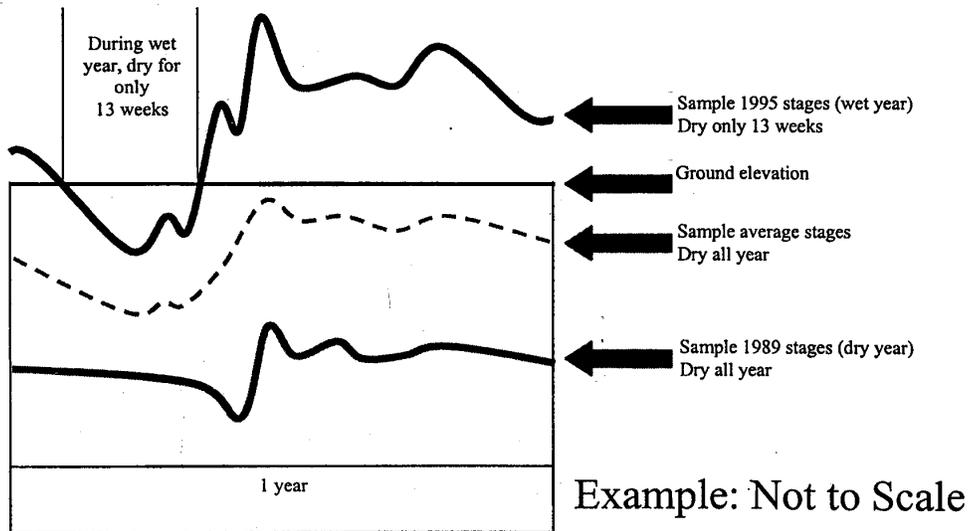
For the purposes of evaluating Alternatives 6c and 6d, various materials were reviewed. Materials included documents and reports presented at public meetings/workshops held since the release of the Draft GRR/SEIS, and information presented in the updated GRR/SEIS documents. The following pages include discussion of our evaluation, observations, and findings.

In general, and on a wet/dry year average basis, we found:

Alternative 6b adversely impacts high stages in ENP and therefore appears to be unacceptable.

Alternative 6d, on a wet/dry year average basis, exhibits higher ENP stages than Alternative 1 and lower stages than non-structural alternatives. Also, Alternative 6d is reported as causing property damages related to inadequate flood mitigation (table A2 of Addendum A). These damages are not apparent in the table A10 of Addendum A (Hydroperiods of Selected Indicator Cells: Number of Days Based on Average of 1989 and 1995 Stages ). Please see the following paragraph.

During our review of the updated GRR/SEIS documents we noted that information presented consisted mostly of annual averages, and averages of wet and dry year stages in some cases. Likewise, little information related to ecologically important seasonal variability (timing and duration of high/low stages) is presented for evaluation (Although Tables A6 and A7 attempted to present weekly stage information, values in the tables were unreadable). The following are hypothetical examples of our concerns.



**Alternative 6c**

Based on information presented by SFWMD staff to the SFMD Governing Board on May 10, 2000, Alternative 6c adversely impacts stages throughout 27,446 acres of wetlands within ENP (See also Attachment 2).

Based on information contained in Addendum A of the GRR/SEIS, Alternative 6c provides average annual depths in northeastern Shark River Slough similar to those provided by Alternative 1 and 0.14 feet less than those provided by non-structural alternatives (4, 5, and 7) under 1995 rainfall conditions (wet year).

Table 5a provides a summary of annual average hydroperiods and is based on information provided in Table A10 of Addendum A. As noted in Table A10 of Addendum A, the annual average hydroperiods are averages of wet and dry season values.

It should be noted that Table A 10, as posted on the internet, was apparently scanned from paper-copy at a low resolution. Therefore, some of the numbers presented in the table were difficult to read. For clarification, the numbers perceived to be represented in Table A10 are provided. This methodology was used during the development of Tables 5a, 5b, and 5c.

In general, Alternative 6c exhibits hydroperiods (combined average of 1989/dry-year and 1995/wet-year hydroperiods) similar to slightly greater than Alternative 1. However, Alternative 6c exhibits hydroperiods of a much shorter duration (19 to 80 days shorter) than non-structural alternatives for indicator cells near the 8.5 SMA (indicator cells 20206, 20378, 20457, and 20726).

**Table 5a: ENP Hydroperiod Evaluation for Alternative 6c Relative to Alternative 1 and Non-Structural Alternatives (4, 5, and 7) Based on Averages of Wet/Dry Year Stages (all units are in days)**

Scenario: Alternative 6c		
Indicator Cell Number	Comparison to Alternative 1 (Alt 6c - Alt 1 = hydroperiod difference)	Comparison to Non-Structural Alternatives (Alt 6c - Alt 4,5,7 = hydroperiod difference)
19990	Same	Same
20206	251 - 253 = 2 days shorter	251 - 334 = 83 days shorter
20357	364 - 364 = no difference	364 - 364 = no difference
20378	220 - 218 = 2 days longer	220 - 286 = 66 days shorter
20457	341 - 352 = 11 days shorter	341 - 360 = 19 days shorter
20726	237 - 230 = 7 days longer	237 - 269 = 32 days shorter
20980	364 - 363 = 1 day longer	364 - 364 = no difference
21271	Numbers are indiscernible	Numbers are indiscernible
22333 (CSSS F)	191 - 185 = 6 days longer	191 - 186 = 5 days longer
24577	159 - 154 = 5 days longer	159 - 156 = 3 days longer
24587	146 - 136 = 10 days longer	146 - 140 = 6 days longer

Table 5b provides a summary of potential flood mitigation/protection impacts for areas in the 8.5 SMA. For the purposes of Table 5b, an increase in hydroperiod for indicator cells within the protected area of the 8.5 SMA indicates that conditions are made worse by this alternative. In general, Alternative 6c exhibits average wet/dry year average hydroperiods in the 8.5 SMA that are less than 1983 base conditions. Hydroperiods for wetland indicator cells in the 8.5 SMA are significantly reduced. On an average basis, Alternative 6c seems to provide shorter hydroperiods than Base 83 conditions. However, there is a potential that annual flooding events are not being observed in these average values.

**Table 5b: 8.5 SMA Flood Mitigation Evaluation for Alternative 6c Relative to Base 83 Based on Averages of Wet/Dry Year Stages (all units are in days)**

Scenario: Alternative 6c	
Indicator Cell Number	Comparison to Base 83 (Alt 6c - Base 83 = hydroperiod difference)
20477	0 - 9 = 9 days shorter
<b>20838</b>	<b>0 - 0 = no difference</b>
<b>20925</b>	<b>0 - 7 = 7 days shorter</b>
<b>21007</b>	<b>0 - 112 = 112 days shorter</b>
<b>21017</b>	<b>0 - 0 = no difference</b>
<b>20737 (WRAP)</b>	<b>0 - 147 = 147 days shorter</b>
<b>20743 (WRAP)</b>	<b>0 - 84 = 84 days shorter</b>

Table 5c provides a summary of potential flood protection impacts for areas east of the L-31N. For the purposes of Table 5c, an increase in hydroperiod for indicator cells east of the L-31N indicates that conditions are made worse by this alternative. In general, Alternative 6c exhibits average wet/dry year average hydroperiods in areas east of the L-31N that are similar to 1995 base conditions, with the exception that indicator cell 20031 was flooded for a longer period of time. As indicated in the GRR/SEIS, flooding impacts to areas east of L-31N are intended to be evaluated further during regional modeling efforts.

**Table 5c: Areas East of L-31N Flood Protection Evaluation for Alternative 6c Relative to Base Based on Averages of Wet/Dry Year Stages (all units are in days)**

Scenario: Alternative 6c	
Indicator Cell Number	Comparison to Base95 (Alt 6c - Base95 = hydroperiod difference)
20031	162 - 93 = 69 days longer
<b>20036</b>	<b>0 - 0 = no difference</b>
<b>20390</b>	<b>0 - 0 = no difference</b>
<b>20396</b>	<b>0 - 0 = no difference</b>
<b>20931</b>	<b>0 - 0 = no difference</b>
<b>20936</b>	<b>0 - 0 = no difference</b>

**Alternative 6d**

Based on information presented by SFWMD staff to the SFMD Governing Board on May 10, 2000, Alternative 6d adversely impacts stages throughout 5,845 acres of wetlands within ENP.

Based on information contained in Addendum A of the GRR/SEIS, Alternative 6d provides average annual depths in northeastern Shark River Slough 0.10 feet higher than those provided by Alternative 1 under 1995 precipitation and 1995 operation model conditions (used to remain consistent with the remainder of our evaluation), and 0.04 feet less than those provided by non-structural alternatives (4, 5, and 7).

Table 6a provides a summary of annual average hydroperiods and is based on information provided in Table A10 of Addendum A. As noted in Table A10 of Addendum A, the annual average hydroperiods are averages of wet and dry season values.

It should be noted that Table A 10, as posted on the internet, was apparently scanned from paper-copy at a low resolution. Therefore, some of the numbers presented in the table were difficult to read. For clarification, the numbers perceived to be represented in Table A10 are provided. This methodology was used during the development of Tables 6a, 6b, and 6c.

In general, Alternative 6c exhibits hydroperiods (combined average of 1989/dry-year and 1995/wet-year hydroperiods) similar to slightly better than Alternative 1. However, Alternative 6d exhibits hydroperiods that are shorter than non-structural alternatives for indicator cells near the 8.5 SMA (indicator cells 20206, 20378, 20457, and 20726).

**Table 6a: ENP Hydroperiod Evaluation for Alternative 6d Relative to Alternative 1 and Non-Structural Alternatives (4, 5, and 7) Based on Averages of Wet/Dry Year Stages (all units are in days)**

Scenario: Alternative 6d		
Indicator Cell Number	Comparison to Alternative 1 (Alt 6d - Alt 1 = hydroperiod difference)	Comparison to Non-Structural Alternatives (Alt 6d - Alt 4,5,7 = hydroperiod difference)
19990	364 - 364 = no difference	364 - 364 = no difference
20206	304 - 253 = 51 days longer	304 - 334 = 30 days shorter
20357	364 - 364 = no difference	364 - 364 = no difference
20378	247 - 218 = 29 days longer	247 - 286 = 39 days shorter
20457	352 - 352 = no difference	352 - 360 = 8 days shorter
20726	261 - 230 = 31 days longer	261 - 269 = 8 days shorter
20980	364 - 363 = 1 day longer	364 - 364 = no difference
21271	Numbers are indiscernible	Numbers are indiscernible
22333 (CSSS F)	187 - 185 = 2 days longer	187 - 186 = 1 days longer
24577	157 - 154 = 2 days longer	157 - 156 = 1 day longer
24587	142 - 136 = 6 days longer	142 - 140 = 2 days longer

Table 6b provides a summary of potential flood mitigation/protection impacts for areas in the 8.5 SMA. For the purposes of Table 6b, an increase in hydroperiod for indicator cells within the protected area of the 8.5 SMA indicates that conditions are made worse by this alternative. On an average basis, Alternative 6c seems to provide shorter hydroperiods than Base 83 conditions. However, there is a potential that annual flooding events are not being observed in these average values. Table A2 of Addendum A shows that 546 acres of land are damaged as a result of inadequate flood mitigation. These seemingly contradictory figures are an example of how annual averages tend to overlook significant events.

**Table 6b: 8.5 SMA Flood Mitigation Evaluation for Alternative 6d Relative to Base 83 Based on Averages of Wet/Dry Year Stages (all units are in days)**

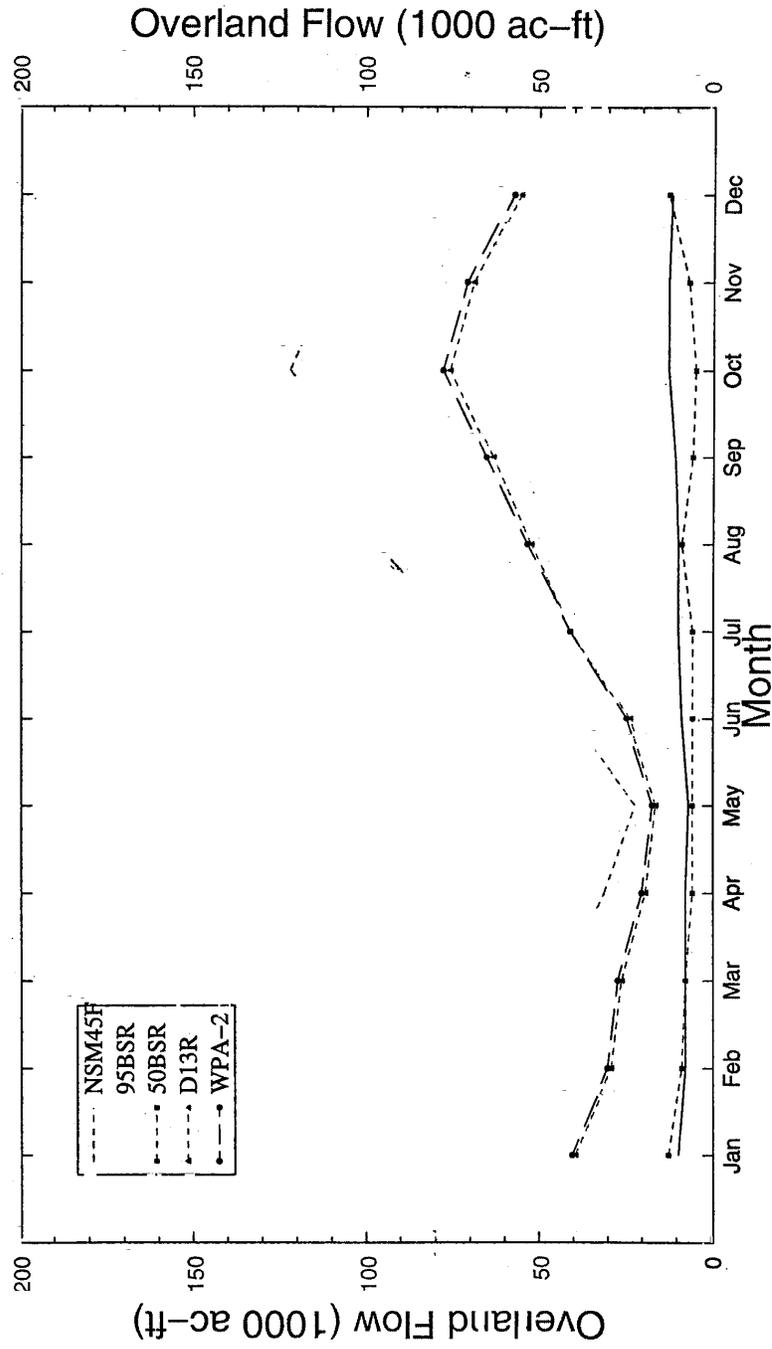
Scenario: Alternative 6d	
Indicator Cell Number	Comparison to Base 83 (Alt 6d - Base83 = hydroperiod difference)
20477	0 - 9 = 9 days shorter
20838	0 - 0 = no difference
20925	0 - 7 = 7 days shorter
21007	100 - 112 = 2 days shorter
21017	0 - 0 = no difference
20737 (WRAP)	149 - 147 = 2 days longer
20743 (WRAP)	0 - 84 = 84 days shorter

Table 6c provides a summary of potential flood protection impacts for areas east of the L-31N. For the purposes of Table 6c, an increase in hydroperiod for indicator cells east of the L-31N indicates that conditions are made worse by this alternative. In general, Alternative 6d exhibits average wet/dry year average hydroperiods in areas east of the L-31N that are similar to 1995 base conditions, with the exception that indicator cell 20031 was flooded for a longer period of time. As indicated in the GRR/SEIS, flooding impacts to areas east of L-31N are intended to be evaluated further during regional modeling efforts.

**Table 6c: Areas East of L-31N Flood Protection Evaluation for Alternative 6d Relative to Base 95 Based on Averages of Wet/Dry Year Stages (all units are in days)**

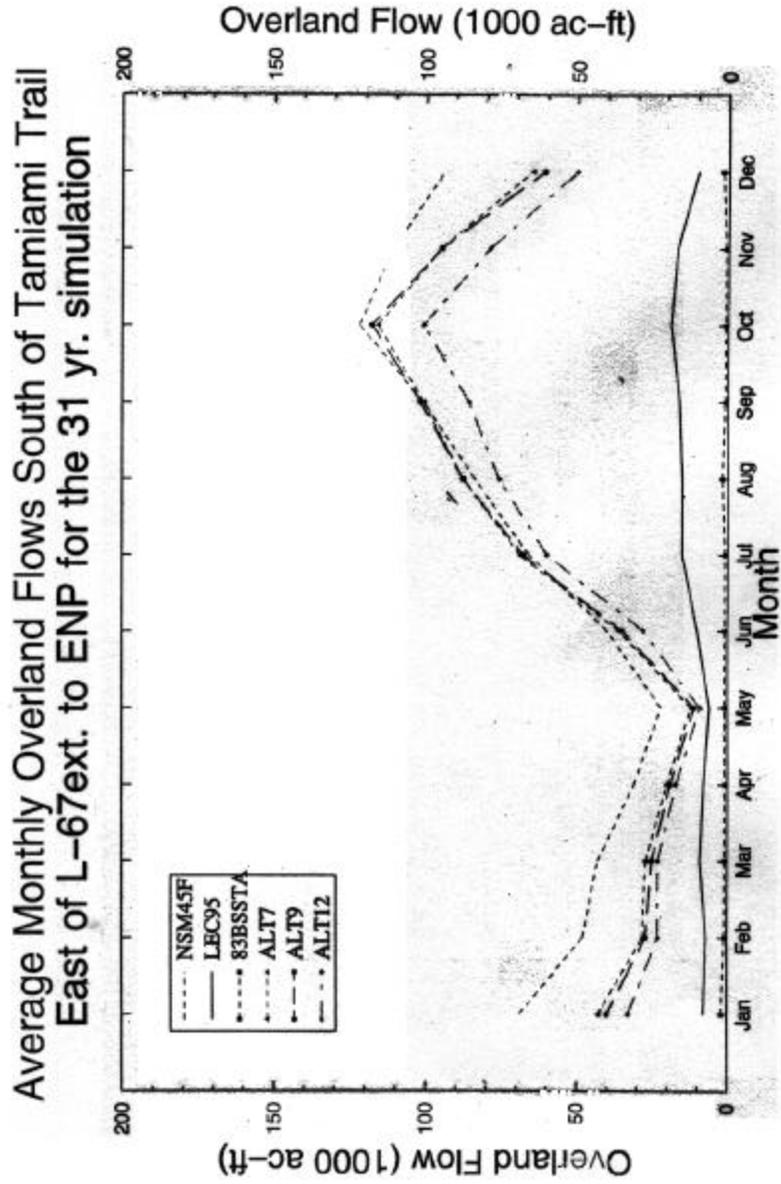
Scenario: Alternative 6d	
Indicator Cell Number	Comparison to Base 95 (Alt 6d - Base95 = hydroperiod difference)
20031	185 - 93 = 92 days longer
20036	0 - 0 = no difference
20390	0 - 0 = no difference
20396	0 - 0 = no difference
20931	0 - 0 = no difference
20936	0 - 0 = no difference

Average Monthly Overland Flows South of Tamiami Trail East of L-67ext. to ENP for the 31 yr. simulation



Note: Flow represents overland flows for cells Row 22 Columns 22 thru 26. NSM water depths at key ENP gage locations are used as operational targets for most alternatives. NSM flows are NOT targets and are shown for comparative purposes only.

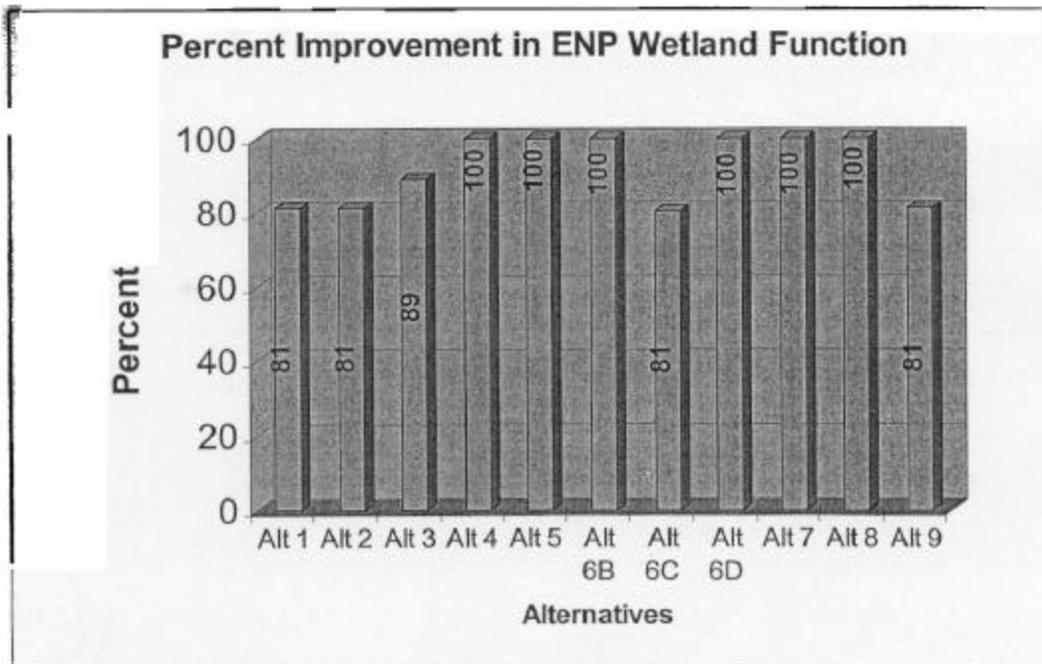
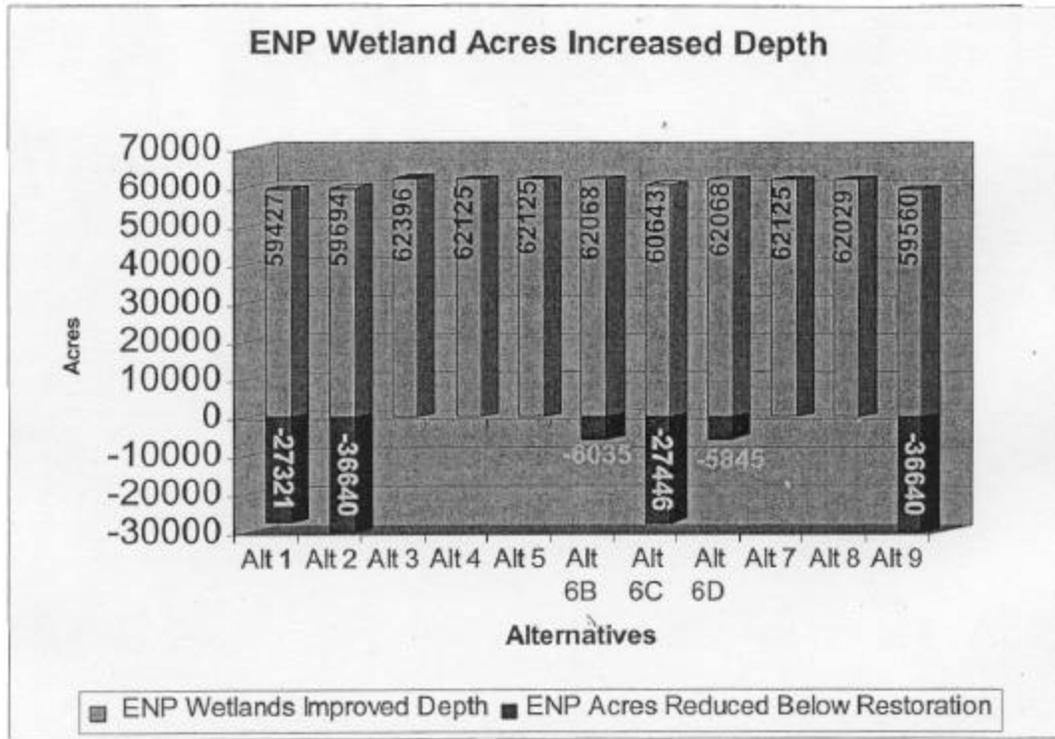
Run date: 04/13/00 23:35:09  
 DRAFT for Design Discussions  
 SFWMM V3.5



Note: Flow represents overland flows for cells Row 22 Columns 22 thru 26. NSM water depths at key ENP gage locations are used as operational targets for most alternatives. NSM flows are NOT targets and are shown for comparative purposes only.

Run date: 12/20/99 21:16:04  
For Planning Purpose Only  
SPHMM V3.7

Attachment 3



# 1 Appendix B: Review of Miami-Dade County Structure/Permit Information

The total area to be discussed contains 321 houses and 193 trailers (ie; campers and RV's). The following tables offer breakdowns per alternative levee location of the number of houses and trailer structures to be effected.<sup>1</sup>

Group	Approx. boundary	# of houses	# of trailers	Legal permits
Group 1	SW 209-202 AVE SW 168-128 ST	57	24	
Group 2	SW 201-197 AVE SW 168-128 ST	51	30	11
Group 3	SW 200-194 AVE SW 127-120 ST	8	4	2
Group 4	SW 193-192 AVE SW 127-120 ST	0	0	0
Group 5	SW 194-188 AVE SW 119-112 ST	9	4	2
Group 6	SW 210-and west SW 168-and north	19	2	13
Group 7	SW 196-188 AVE SW 168-120 ST	197	129	154
<b>Totals</b>		<b>321</b>	<b>193</b>	<b>212</b>

*\*Elevation 6.8 NGVD is associated with SW 209<sup>th</sup> AVE., elevation 7.0 NGVD is associated with SW 202<sup>nd</sup> AVE, and elevation 7.2 NGVD is associated with SW 197<sup>th</sup> AVE.*

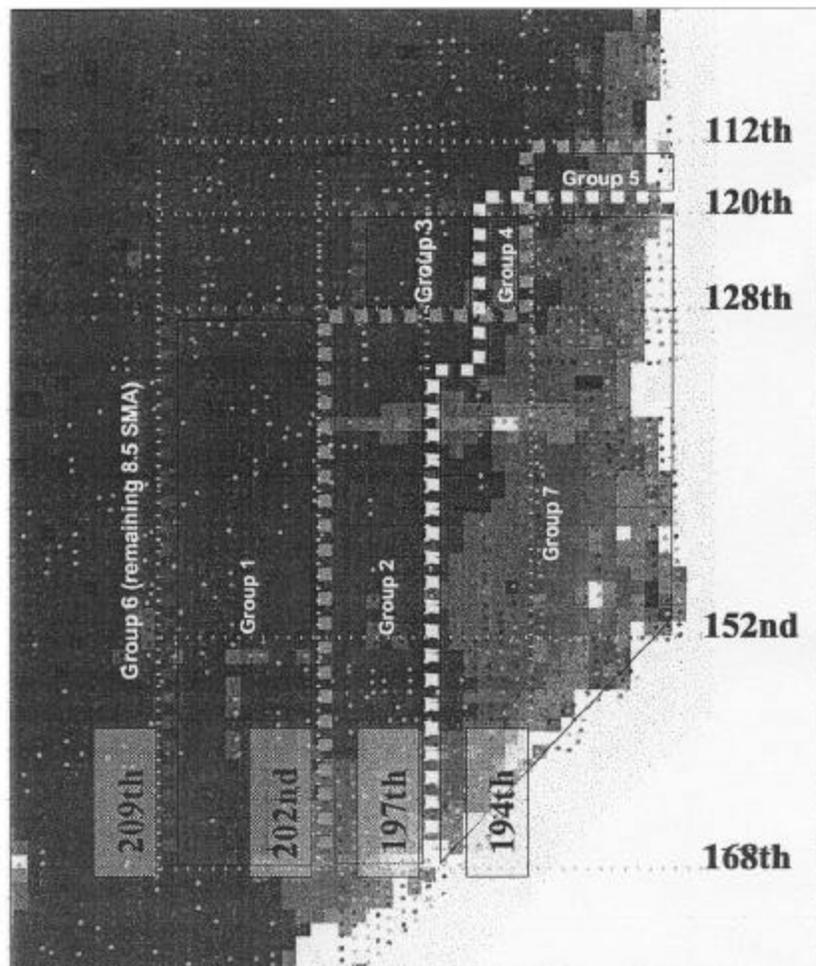
Constructing the levee at the easternmost location and highest elevation (7.2 NGVD) will result in the greatest amount of feasibility to operate the system in order to gain maximum benefits to wetlands in Everglades National Park. Constructing the levee at this elevation will impact homes and other structures within Groups 1, 2, 3, 5 and 6 whose boundaries are denoted above. The total number of homes to be impacted is 124, and the total number of trailers to be impacted is 64. Of these 188 possible living structures, only 58 are registered as legally permitted homes within the Department of Environmental Resource Management's information databases.

Constructing the levee at the midpoint elevation [7.0 NGVD (current 6B configuration)] will result in impacts to homes and other structures within Groups 1, 3, 4 and 6. Within these groups there are 84 houses and 41 trailers. Of these 125 possible living structures, only 45 are registered as legally permitted homes within the Department of Environmental Resource Management's information databases.

Constructing the levee at the westernmost, and lowest elevation (6.8 NGVD) will result in the fewest homes and other structures being impacted. Construction at this elevation will have an impact on structures in Groups 5 and 6 only. The total number of homes between these two groups is 28, and the total number of trailers is 6. Of these 30 possible living structures, only 15 are registered as legally permitted homes within the Department of Environmental Resource Management's information databases.

<sup>1</sup> Information supplied by Miami-Dade County Department of Environment Resources Management, May 2000.

# Figure B-1 Existing Structure Evaluation



Topographic point coverage source: Everglades National Park

Approximate Road Alignment



D11



Elmar G Kurzbach  
05/30/2000 12:16 PM

To: Joe R Miller/CESAJ/SAJ02@CESAJ, Dennis R Duke/CESAJ/SAJ02@CESAJ, Cheryl P Ulrich/CESAJ/SAJ02, Richard E Punnett/CESAJ/SAJ02@CESAJ, Susan A Bullock/CESAJ/SAJ02@CESAJ, Jon Moulding/CESAJ/SAJ02

cc:  
Subject: Response to Corps EIS for 8.5 SMA

FYI - 8.5 SMA DSEIS comment from Ms. Fortin. Elmar.

----- Forwarded by Elmar G Kurzbach/CESAJ/SAJ02 on 05/30/2000 12:13 PM -----

From: Madeleine Fortin <mfortin@bellsouth.net> on 05/30/2000 11:11 AM  
To: Elmar G Kurzbach/CESAJ/SAJ02@CESAJ  
cc:  
Subject: Response to Corps EIS for 8.5 SMA

UNITED FRIENDS AND PROPERTY OWNERS OF THE 8.5 SQUARE MILE AREA

Col. Joe Miller  
PO Box 4970  
Jacksonville, FL 32232

RE: "DISSERTATIONS STOOD IN THE PLACE OF ACTION..." THE CORPS DOES  
YET ANOTHER ENVIRONMENTAL IMPACT STATEMENT!

"France he said, went to ruin despite this array of documents! Dissertations stood in the place of action, a million reports were written every year. Bureaucracy was enthroned! Records, reports, statistics, failing which France would have gone to ruin, increased, multiplied and grew majestic!" (Balzac, "The Bureaucrat")

Col. Miller;

The above quote from Balzac, written just after the French Revolution, accurately describes the Corps of Engineer's orientation towards the completion of the Modified Water Delivery Project. Since the early 1980's the following studies have been done on the 8.5 Square Mile Area:

1. 1980-East Everglades Resources Planning Project
2. 1985-East Everglades Resource Planning & Management Implementation Plan commissioned by Gov. Graham
3. 1988-East Everglades Land Acquisition Task Force commissioned by Gov. Martinez
4. 1992-An Environmental Impact Statement done by the Corps of Engineers as part of the Modified Water Delivery Project
5. 1995-East Everglades 8.5 Square Mile Area Study Committee commissioned by Gov. Childes
6. 1998- PEER report
7. 1998- the District Review Team (DRT) Report compiled by an inter-agency group

The first 6 reports recommended against buying the 8.5 SMA. The DRT Report is the only report that recommended acquisition of the area and

that report was thrown out due to Sunshine Law violations committed by group members. Now, the Corps has finished yet another Environmental Impact Statement on what amounts to digging a drainage ditch! I understand that this report cost over \$1.2 million and has taken almost one year to complete. As a result of the Corps inability to complete one small project, ground water levels have been kept unnaturally high throughout the County. The result has been the death of the state owned Everglades in the Water Conservation Areas and massive flooding from one heavy rainstorm. The Department of Agriculture estimates that Hurricane Irene resulted in over \$230 million in crop losses alone!

The document gets off to a poor start. The photograph used on the front cover shows a small strip of unimpacted wetland on the very edge of the community. Looking at this picture gives the viewer the inaccurate impression that the entire community is unimpacted wetlands. Either the person who choose the picture did so intentionally to give this inaccurate impression or they are incredibly insensitive. It would be more appropriate to show an aerial photograph of the homes, farms, orchards, pastures and nurseries that this project component is designed to protect.

I also object strongly to the way this document was put together. There was little input from impacted residents or the Miccosukee Tribe included in the document. For some reason, HDR Engineering, the authors of this report, choose to accept data from the Miami-Dade County Department of Environmental Resource Management (DERM). It is unclear why they did this. It appears that some of the information DERM used comes directly from the above mentioned DRT Report. The legal implications of this are obvious. HDR could have gotten all of the necessary information directly from the Miami-Dade County information service for under \$200.

It is my understanding that NEPA stipulates that the public must be involved in the decision making process. God knows residents of the 8.5 SMA tried to be involved, but the data we gave to HDR was not included. Consultants hired by the Miccosukee Tribe also presented data to HDR, but their information was not used either. For example, I took HDR staff around myself and showed them many of the businesses present in the community. This information was not used and the EIS lists only 2 businesses in the community! Apparently the man I took on the tour doesn't believe what he sees with his own eyes.

The Corps had no difficulty including options for evaluation that were suggested by the environmental lobbying groups but refused to evaluate options suggested by community residents. I requested that the Corps evaluate the effect of including a small internal secondary drainage component with options 1, 2, 3, and 9. The Corps refuses to do this saying their computer model can't model something so small. I would like to have this secondary drainage system evaluated and it isn't necessary to use a computer model to do it. I have included a copy of this secondary drainage system with this letter and I want it printed with my comments. It appears to community residents that the only way to have access to the Corps decision-making process is to give major donations to the Democratic Party. Then Al Gore and the Assistant Secretary of the Army, Michael Davis, will see to it that your ideas are included.

In section 1 of the EIS, on the first page, second paragraph, it states that PL 101-229 says that the Corps was authorized to "construct a flood mitigation system." Please quote the exact legislative language- "The

secretary of the Army is authorized and directed to construct a flood protection system." While there may be disagreements about what level of protection is required by law, that's no excuse to misquote a Congressional Act.

The Corps continues to maintain that they only have to provide the community with "flood mitigation." I am told that this means that they must provide our community with "pre-project conditions." So far I have not seen any mention of exactly what this means. I have filed a FOIA request for a definition of just what is meant by the phrase "pre-project conditions" ie, what would be the average ground water levels for the wet and dry seasons that the Corps would have to provide us with, but so far I have not received any written answer to my FOIA request. I have been told verbally that the Corps doesn't want to tell us what levels of ground water they will provide us with because it "would limit their project flexibility." Indeed-that's the whole point! Unlimited possibilities are inappropriate for a federal agency with as much power as the Corps of Engineers.

At one point, the EIS lists this level of ground water that the Corps would have to provide my community with as the level appearing in a 1983 computer model run, but I have not seen any actual ground water levels listed.

On page 3 it states, "The 8.5 SMA is prone to frequent flooding due to its location along the eastern periphery of the historic Everglades." This statement is incorrect. The 8.5 SMA is not "prone to flooding". Our community floods for the same reason that urban Miami-Dade County had 4 feet of flooding from the 9 inches of rain we received during Hurricane Irene-the unnaturally high levels of ground water that have resulted from Iteration 7 of the Experimental Program and the Corps inability to complete the Modified Water Delivery Project. Flooding is the direct result of mismanagement of the canal system, not our location. To state in a public document that our community's location is the reason we flood perjures people against the community as well as relieving the Corps of it's responsibility to see that the canal system is operated correctly.

On pages 22 and 23 the EIS makes many incorrect statements concerning the hydrology of the area. It states that "...freshwater sheet flow traversed portions of this area on its way towards the Everglades and its eventual discharge to Florida Bay." This is grossly inaccurate. Shark River Slough discharges into Whitewater Bay, not Florida Bay. Taylor Slough discharges into Florida Bay but the 8.5 SMA does not contribute sheet flow to Taylor Slough. There was no sheet flow over the area because it is too high to accommodate sheet flow.

On page 23, our community's secondary drainage system is mentioned. "Although along the southern boundary of the 8.5 SMA a series of surface water flow channels have been constructed within the upper few feet of the limestone bedrock, these channels do not appear to augment drainage of the area to any significant degree. Information provided by Miami-Dade County Department of Environmental Resources Management (DERM) indicates that these channels are not part of a system that drains the water downgradient to a positive outfall." This is grossly inaccurate. Our community's secondary drainage canals have the capacity to remove 100 cfs, or 200 acre feet of water a day from our community. Prior to the completion of L-31 N, these secondary canals drained into

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C-102. They were supposed to be connected to L-31 N when it was completed but this was not done. There has been no authorization to deauthorize these canals. They're clearly shown on a map from the South Florida Water Management District titled, "Dade County Canal Maintenance."

The second paragraph on page 23 states that "Because the 8.5 SMA was historically considered to be west of the development area, formal flood protection levels of service within the area were never established." The 8.5 SMA was in existence before "development area(s)" were established. Our community was here before L-31 N was constructed. The first road into the area was constructed in 1936. The area has been farmed since the early 1950's. This paragraph then goes on to say, "At times, when flooding in the 8.5 SMA was at its worst, Canal L-31N and its associated pumping stations have been operated in opposition to the normal operating procedures in an effort to reduce this flooding." This is incorrect. At no time was L-31N "operated in opposition to normal operating procedures" to provide us with flood protection. G-211 was not operated according to operating criteria for months prior to Hurricane Irene and was the major cause of the flooding in the urban areas of the County. In the fall of 1994, water levels were raised 18 inches above operating criteria north of S-331 and held there for 13 months.

On page 37 it states, "The possibility exists that elevated levels of pesticides occur but have not been documented." Give me a break! What you're saying is, "We can't find pesticides in your ground water, but we know they're there!"

On pages 43 and 44 plant community classifications are listed. "Forested Exotic Wetlands" is noted to be over 50% dominated by exotic species while "Upland Forest Shrub Complex" is listed as land that has been cleared but which is currently abandoned. If land has been used and then abandoned it will be covered with over 50% exotic species and should be labeled as such. "Fallow, 50% covered with exotics" would be appropriate. An "upland forest shrub complex" label gives the reader the incorrect impression that the land being described has somehow miraculously returned to some pristine ecological condition. Most people will not read these classifications, they will look at the map that shows these plant communities. There are areas listed as "Upland Forest Shrub Complex" that are totally covered with Brazilian pepper. To call them an "Upland Forest" is a blatant misrepresentation of the facts.

It is obvious that the information your agency has received from DERM is incorrect. Below is a small sample of the misinformation DERM has supplied you with:

Table 8 Tabulation of Existing Land Use Classifications in the 8.5 SMA Used for Analysis. This entire table is incorrect. The number of residential parcels is severely under represented. The amount of land the SFWMD owns is incorrectly listed as 160 parcels. Miami-Dade County is said to own 185 parcels, the USDA is said to own 5 parcels and the Trustees of the Internal Improvement Trust fund own 2 parcels. Please consider the following information which is available to the public from the County tax records:

Miami-Dade County owns 5 parcels, not 185

The SFWMD owns 120 parcels, not 160

The USDA and the Trustees of the Internal Improvement Fund own nothing

There are 481 parcels that have an address in the community. Most of these parcels have some type of dwelling on them.

It appears that DERM generates its own data. The following information was not used by HDR Engineering although it is easily available from the County Information service. According to the Miami-Dade County land use code contained in the tax information, the following land uses are noted in the 8.5 SMA:

COUNTY CODE#

0001 244 parcels are described as being "Residential" only (DERM states this is 74 in Table 8 and 321 in Appendix D, page 3)  
0002 6 parcels are described as having "Duplexes"  
0003 2 parcels are described as having "Multiple family dwellings"  
0006 3 parcels have "Mobile homes"  
0009 1 parcel is listed as "Mixed use, residential"  
0041 1 parcel is listed as "Educational-private"  
0065 22 parcels have "Parking, vacant lot, enclosed" (Meaning that property is fenced)  
0066 96 parcels are listed as having "Extra features other than parking"  
0032 2 parcels are listed as being "Light manufacturing and food processing"  
0037 1 parcel is listed as being a "Warehouse or storage"  
0079 76 parcels are listed as being "Mixed use, agricultural"

It is interesting to note that the following County land use codes do not occur in the 8.5 SMA community:

0082 Glade  
0083 Marsh or swamp  
0084 Recreational or endangered  
0091 River  
0092 Lake  
0093 Submerged land

It is also interesting to note that the land the Corps has already purchased is listed as Land Use Code# 0098, "Federal", while the land that Everglades National Park has purchased in the park expansion area is listed as #0080, "Vacant land, government". There is a land use code for the SFWMD-#0085, however none of the land purchased by the SFWMD is listed under this land use code. Land purchased by the SFWMD is listed as 0080, "Vacant land, government"

Appendix D, Real Estate, page 3, states that there are 1984 parcels of land in the community. Moving on to the Social Impact Assessment section, pg. 1, we read that our community contains 1801 tracts of land. Appendix D also says that DERM identified 514 housing units. On page 3, DERM lists the population as only 853. Apparently you don't count as a resident if you don't receive your mail at the address of your property. No one in the area receives home mail delivery because it isn't available. Residents receive their mail at locked boxes on SW 168 St. and SW 136 St. Mail delivery is erratic and many people choose to receive their mail at a PO box or at work.

Demographics, page 4, makes the unsubstantiated claim that the community contains "illegal immigrants." This is a discriminatory statement with no documentation to back it up. Residents of the 8.5 SMA demand that this statement be removed from the final document.

This section also states that "1990 Census data disaggregated or collected by county census block or zip code cannot be extracted to accurately reflect the demographics of the area." I can attest to the truth of this as I attempted to get census data for the area myself. But then this document goes ahead and uses this unreliable census data at length! The number of people, our income, average age, level of education, etc. is discussed in detail, using this very same "unreliable" census data!

Public Services and Utilities, page 14, states, "The relative isolation of the 8.5 SMA from the rest of Miami-Dade County has resulted in the area having limited public services." This is incorrect. We have limited public services because the County will not provide us with services. It isn't our "isolation", it is the County's indifference that limits our services. Our community is closer to Miami than Homestead or the Redlands.

On page 14 it also states, "Adequate storm water drainage and drainage outlets are also lacking." This is also incorrect. These canals were illegally blocked. Having secondary drainage canals that the County refuses to maintain and which the SFWMD refuses to allow community residents to maintain, is not the same as not having secondary drainage in the first place.

Also on page 15, it states that, "There are no major employers in the area.." While there are no large businesses employing hundreds of people, the plant nurseries, fruit orchards and row crop farming employ a substantial number of low income workers. The packing house employs up to 50 people during the peak agricultural season and is open all year round.

Community Cohesion discusses residents feelings about our community. On page 15 it states that because some people who own homes in the area stay in town during the week to work, or get their mail at a PO box, that, "For whatever social or economic reasons their loyalties lay elsewhere." This is so absurd that I can't imagine why the Corps included it! People's "loyalties" are not demonstrated by where they get their mail. A more accurate way to judge people's "loyalties" would be to acknowledge that despite abandonment by Miami-Dade County, and repeated attempts by government agencies to illegally confiscate their land, the vast majority of people continue to resist, often at great personal cost. The SFWMD was only able to acquire the land it has acquired because District staff told property owners that their land was being condemned and they had no choice but to sell.

Sense of Place, pg. 16, states that one third of the property owners want to sell to the SFWMD. The District is unable to provide proof of the number of people who want to sell to the District. Many people requested an appraisal from the District, but this does not constitute a commitment to sell. No one has ever verbally expressed a wish to sell their property to the District at a public meeting, but many property

owners have stood up and stated they did not want to sell their property to the District. A quarter of the homeowners have signed a disclaimer stating they do not wish to sell their property to the SFWMD.

Future Land Use, pg. 20 makes the statement, "The ten-year flood elevation within the area has been determined to be the 7.7' elevation or contour within the area.....about 574 acres are located above the 7.7 elevation..." The color map showing elevations, FIGURE NO. 5, TOPOGRAPHIC SETTING, gives an inaccurate impression of land elevations in the community as well. It shows 75% of the community as being below 7 feet in elevation and only about 25% of the community as being above 7 feet. This is slanderously inaccurate. Miami-Dade County's own flood criteria contour map shows over half of the community as being 7.6' or higher. The Corps map lists the source of this information as "DERM(1998)." DERM has elevation maps done by Florida Power & Light, that show the community as being about one foot higher than the map that appears in the EIS. Additionally, a USGS elevation map done in 1979, shows that almost all of the community is above 7 feet while more than half the community is above 7.5 feet. Only a small sliver of land along the western edge of the community is shown as being between 6.5 to 7 feet. One has to wonder why DERM would give a map with incorrect elevations on it to HDR and the Corps-and why the Corps would accept it.

At least I would like to commend the Corps for continuing to support it's own, already authorized and funded project. I would also like to commend the Corps for refusing to endorse the Park's Draft Coordination Act Report. Community residents have given the Corps their support for the Modified Water Delivery Project. We hope the Corps will continue to resist the illegal attempts to destroy our community in defiance of the clearly stated will of Congress that our community be protected.

**STOP WASTING TIME AND MONEY! COMPLETE THE MODIFIED WATER DELIVERY PROJECT, AS IT WAS AUTHORIZED, IMMEDIATELY!**

Madeleine Fortin, Board of  
Directors,  
May 29, 2000  
United Property Owners & Friends of the 8.5 Square Mile  
Area  
21801 SW 152 Street  
Miami, Florida 33187  
305-255-7098  
<mfortin@bellsouth.net>

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Madeleine  
Fortin  
May 1, 2000  
21801 SW 152 Street  
Miami, Florida 33187  
305-255-7098  
<mfortin@bellsouth.net>

Col. Joe Miller  
PO Box 4970  
Jacksonville, FL 32232

Col. Miller:

Please model the following secondary drainage system for the 8.5 Square Mile Area. Include it with the Corps Alternatives 1,2,3 and 9. Do not include any estimates for cost. Residents are attempting to form an improvement district which will have to supply the funding for construction and maintenance for this secondary drainage system as well as for repair and maintenance of our roads. The Corps will not be responsible for either funding or construction of this system.

The function of this internal, secondary drainage system is to equalize ground water levels generated by local rainfall. This small system can either discharge south, under SW 168 Street, into a storm water treatment area or gravity discharge east into L-31 North, just south of pump station S-331 for land south of SW 136 Street, or for land north of SW 136 Street drainage can be pumped into L-31 North canal, via a feeder canal north of G-211 at proposed structure S-357. All features should be constructed in current right of ways of existing roads and will not involve the acquisition of additional land.

This internal secondary drainage system includes, but is not limited to the following features:

From SW 136 Street south to Sw 168 Street:

1. The existing saw cut canals that run east and west along SW 168 Street should be utilized. These canals have openings already cut into the sides of L-31 North. They have the ability to discharge 50 cfs each for a total of 100 cfs. To prevent unnecessary draining of any part of Everglades National Park, a plug should be placed in these canals at SW 221 Avenue.
2. Equalizer canals running north and south every .5 mile or .25 mile, whichever is necessary to adequately equalize ground water. These canals should be a maximum of 6 feet deep and 3 feet wide. They will drain into the above mentioned canals running alongside SW 168 Street and will start at SW 218 Avenue in the west and go to SW 197 Avenue in the east.
3. Swales along side of all avenues that do not have an equalizer
4. Culverts wherever a street crosses an avenue.

From SW 104 Street, south to Sw 136 Street:

1. A saw cut drainage canal running east and west along the north side of SW 136 Street from SW 208 Avenue to SW 197 Avenue and discharging east into L31 North or a collector canal channeling water to proposed structure S-357.
2. Equalizer canals running north and south every .5 miles or .25 mile, whichever is necessary to adequately equalize ground water. These canals should be a maximum of 6 feet deep and 3 feet wide. They will drain south into the above mentioned canal running along the north side of SW 136 Street or be channeled into the collector canal for proposed S357 and should begin at SW 208 Avenue in the west and go to SW 197 Avenue in the east .
3. Swales along side of all avenues that do not have an equalizer
4. Culverts wherever a street crosses an avenue.

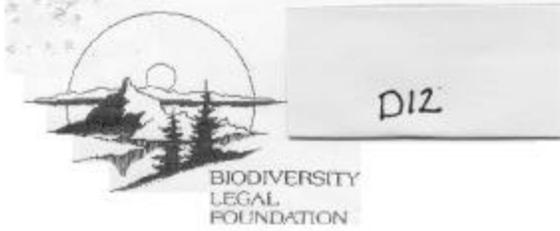
Col. Miller, the problems that my community faces can be easily solved if only the involved government agencies will work together with us. A

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secondary drainage system is a simple thing and it is all that is necessary for the continued existence of our community.

It is my understanding that DERM has already developed a plan for an internal secondary drainage system but DERM staff refuse to allow the public to see it. Perhaps the Corps could request a copy of it.

DERM continues to use the argument that Miami-Dade County does not have the financial resources to provide our community with any services although we have given the County will over \$200 million in property taxes in the last 20 years for which we have received essentially nothing in return. Community residents feel confident that we can form an improvement district and provide our own services, thus relieving the County of this responsibility. Your assistance in helping us to get this internal secondary drainage system modeled will be very helpful. I hope we can count of your help!



PD  
Jim Duck

May 30, 2000

By Fax and U. S. Mail

Colonel Joe R. Miller  
District Engineer, Jacksonville District  
Attention: Ms. Cheryl Ulrich, P. E.  
U. S. Army Corps of Engineers  
P.O. Box 4970  
Jacksonville, FL 32232-0019

Re: 8.5 Square Mile Area DSEIS

Dear Colonel Miller:

Of the options reviewed in the Supplemental Environmental Impact Statement/General Reevaluation Report, Modified Water Deliveries (April and May 2000), the Biodiversity Legal Foundation supports alternative 5 – total buyout – of the 8.5 square mile area.

We believe that the U. S. Army Corps of Engineers (“Corps”) and the South Florida Water Management District (“District”) should support full purchase of the area. In support of this recommendation, we would note the following matters. First, we are concerned that the SEIS/GRR evaluation does not accurately weigh the economic and ecological effects of the alternatives. This falsely reduces the value of the full buyout alternative, and falsely raises the value of the other alternatives.

Second, we would note that the Central and South Florida Project has decreased water levels and durations in the 8.5 Square Mile Area (SMA). This has not only resulted in adverse impacts to the ecological values of this area and spurred development – resulting in additional adverse impacts – but also resulted in adverse effects to wetlands in Everglades National Park, due to the draining effect of flood control measures on park marshes that are to the west of the 8.5 SMA.

In addition, flood management actions – many of which are intended to benefit the 8.5 SMA – have resulted in the Corps’ jeopardizing the continued existence of the Cape Sable seaside sparrow, and the District and Corps harming the sparrow. These measures have also adversely affected other wading bird species, and modified vegetation patterns.



We believe that alternative 5 would best accomplish the reestablishment of historical hydroperiods in Northeast Shark River Slough; other alternatives would result in decreases in hydroperiod and depths.

Likewise, alternative 5 would best allow restoration of wetland functions and values. Other alternatives would continue to foster degradation and destruction of wetlands. The considerable direct, indirect, and cumulative effects of constructing the levee/canal design have not been fully evaluated by the Corps.

Alternative 5 would best allow the conservation of listed and sensitive species, including but not limited to, Cape Sable seaside sparrow, snail kite, and wood stork.

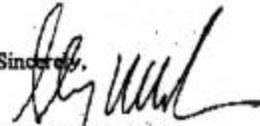
We are concerned that all alternatives except a full buyout would result in continuing conflict. Even partial buyout alternatives – such as alternative 4 – would still result in impacts to residents during large rain events such as Hurricane Irene. The Corps is not authorized to provide anything beyond “flood mitigation” to the 8.5 SMA. Therefore, residents will continue to have water on the roads and property in the area. While this is not “flooding,” as it is below historical levels (due the Corps’ management actions), it nevertheless does not resolve the concerns of the local residents.

We also are concerned that all alternatives other than full buy out will result in continuing adverse impacts to water quality in the Everglades. This will not only be in the form of run-off from agricultural activities, but also the other types of pollution that unfortunately have accompanied human settlement. As our past history has so clearly shown, much of our unwanted water – with the accompanying pollution – eventually ends up being discharged into the Everglades.

We also believe that the partial buyout options would result in additional financial costs that are not fully considered by the Corps in their review of alternatives. The considerable costs for roads, schools, police, administrative services – all the costs that are borne by society when an area is developed – must be fully counted and evaluated by the Corps. When all of the costs are fully considered, we believe that full buy out also will be the most cost effective.

We may have not addressed all issues raised by the DSEIS/GRR. However, not discussing a particular issue should not be construed by the Corps as support for the analysis in the DSEIS/GRR.

Sincerely,

  
Sidney B. Maddock  
Environmental Analyst

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Brian & Rosalyn Scherf

(954) 922-5828

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## FLORIDA BIODIVERSITY PROJECT

P.O. Box 220615  
Hollywood, FL 33022  
(954) 922-5828

May 30, 2000

VIA FAX

Elmar Kurzbach  
U.S. Army Corps of Engineers  
P.O. Box 4970  
Jacksonville, FL 32232-0019

RE: 8.5 SMA Supplemental EIS Comments

Dear Col. Miller,

The Florida Biodiversity Project (FBP) submits the following comments on the 8.5 SMA SEIS. We request that these comments be included in the administrative record. For the reasons discussed below, the FBP finds the SEIS to be inadequate. In particular, there are several substantive issues regarding the Corps failure to comply with the National Environmental Policy Act (NEPA), the Everglades National Park Expansion and Protection Act, and inadequate environmental analysis. The Draft Fish and Wildlife Coordination Act (CAR) which is included in the Draft SEIS as appendix G provides substantial, credible, and compelling evidence of the Corps failure to do adequate environmental analysis. Finally, the FBP urges the Corps to select a federally preferred alternative. The FBP believes that Alternative 5 – the full buyout – should be selected since it clearly best meets the legislative and other objectives identified in the Draft SEIS.

### I. Background

There is substantial and compelling evidence that the C&SF Project has dramatically transformed the Greater Everglades Ecosystem into largely a reservoir system severely altering the natural hydrology and ecology. For example, canal and levee systems fragment habitat, create barriers for wildlife, drain adjacent wetlands, alter natural flow rates and direction, facilitate the spread of exotic species, create artificial habitats, and provide conduits for the spread of nutrients and toxic contaminants. Of particular relevance here, the Corps through their management and operation of the of C&SF Project have altered the flows of Northeast Shark River Slough (NESRS) whereby 80-85% of flows are artificially channeled into Western Shark Slough, rather than the 45% as would found under historical conditions.

In 1989, Congress recognized the adverse effects of the C&SF Project and authorized the Everglades National Park Protection Expansion Act (Act) which added

107,600 acres to the Park and mandated historic flows be restored. The Act recognized that increased water flows would raise water levels in the 8.5 SMA and the areas needed protection from these increased flows. A 1994 amendment to the Act also recognized land acquisition as one solution to provide protection from restored water flows.

The 8.5 SMA is important to ecological function since these short hydroperiod perimeter areas that historically were wet in the wet season and dry during the dry season, would be in danger of being lost to a system in which canals and levees keep water levels high on the wet side and low on the dry side. However, it is these same perimeter zones that are needed to restore the landscape and ecological functions. Additionally, historical flows through the 8.5 SMA provided water to Taylor Slough and Florida Bay.

## **II. The SEIS does not objectively evaluate the ecological effects of alternatives on NE Shark River Slough.**

The Corps is required to rigorously explore and objectively evaluate all reasonable alternatives. 40 C.F.R. § 1502.14(a). First, NEPA requires that information be of high quality, have accurate scientific analysis, expert agency comments, and public scrutiny. 40 C.F.R. § 1500.1(b). Further, NEPA requires that the SEIS be supported by evidence the agency has made the necessary environmental analysis. 40 C.F.R. § 1502.1.

The FBP believes that the Corps' SEIS is fundamentally flawed because it uses the wrong baseline standard – the 1995 base to evaluate alternatives rather than the full implementation of Modified Water Delivery Project (MWD) and D-13R of the Restudy. It makes no sense to compare alternatives with the 1995 base only when future conditions will be determined by the implementation of the CERP. The CAR analyzes in exhaustive detail how the canal/levee alternatives will adversely impact the hydrology of up to 27,000 acres in ENP. In order to comply with NEPA, the Corps must model the effects of the alternatives with full implementation of MWD and D-13R.

Additionally, the EIS must analyze the direct, indirect, and cumulative impacts of the alternatives. Direct effects are defined by the CEQ regulations as “caused by the action and occur at the same time and place.” 40 C.F.R. §1508.8. Indirect effects are defined as being “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.” 40 C.F.R. § 1508.8.

Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” 40 C.F.R. § 1508.7. Additionally, an EIS must provide full and fair discussion of significant

environmental impacts. The EIS must also be concise, clear to the point, and supported by evidence that the agency has made the necessary environmental analysis. 40 C.F.R. § 1502.1.

Clearly, Everglades restoration (MWD & CERP) is a reasonably foreseeable future action and therefore must be analyzed. In fact, the dominant purpose of resolving the 8.5 SMA issue is to proceed with Everglades restoration by restoring historical water flows.

### **III. The SEIS does not analyze the effects of alternatives on Taylor Slough and Florida Bay.**

Parts of NESRS provide the headwaters for Taylor Slough and subsequent flows to Florida Bay – both critical components of Everglades Restoration. Part of these historical flows passed through the 8.5 SMA. It is therefore a gross oversight for the Corps not to model the effects of the various alternatives on these areas. Likewise the Corps has failed to comply with the NEPA regulations noted in the above section. The Final SEIS must model the effects of the various alternatives on these areas under full implementation of restoration scenario of MWD and D-13R.

### **IV. The Draft SEIS fails to select a federally preferred alternative.**

NEPA requires the identification of agency's preferred alternative or alternatives, if one or more exists in the draft statement and identify such alternative in the final EIS unless another law prohibits the expression of such a preference. 40 C.F.R. § 1502.14 (e).

The Corps has chosen not to identify a preferred alternative in the Draft SEIS, although it must according to NEPA do so for the Final SEIS. In addition, DOI has already stated their preference in the CAR for alternative 5 which in their analysis best meets the legislative and other requirements. The CAR provides substantial, credible, and compelling evidence for the selection of Alternative 5 – the full buy-out. There are six compelling reasons why Alternative 5 should be selected.

1. Provides Full Legal Compliance – Alternative 5 fully complies with the objectives listed in the SEIS and the legislative requirements of Everglades National Park Protection and Expansion Act and other objectives listed by the Corps. The purpose of the Act is to “restore” the natural hydrological conditions within the Park to the extent practicable. The 1994 amendment to the Act recognized that property acquisition could be required. The 8.5 SMA is a management component of the MWD Project and therefore the selected alternative must be consistent with the objectives of MWD Project.
2. Provides the greatest ecological benefits and is the most scientifically justifiable – It provides the greatest increase wetland function, allows for more complete hydrological restoration of NESRS, provides the most benefits to endangered species, increases marl forming wetlands, provides recharge to the headwaters of Taylor

Slough, provides peripheral wetland habitat, allows for restoration of habitat, reduces exotic species, and provides the most compatibility with the objectives of the Comprehensive Everglades Restoration Plan. Alternative 5 also provides the most flexibility for adaptive management.

3. Eliminates safety and liability concerns- A fundamental purpose of government is to provide for the public safety. Hurricanes and tropical storms are a common occurrence in south Florida. The 8.5 SMA experienced naturally higher water stages during Hurricanes Andrew and Irene. It makes no sense to allow people to reside on the wet side of the L-31 containment levee. Is the District willing to bear the millions of dollars in liability consequences if people are killed and/or property is destroyed during seasonal major storm events because of the District allowing people to reside in harms way on the wet side of a levee? Attorneys and newspapers will ask why the District placed politics over public safety.
4. Reduces Water Quality Impacts - The CAR documents increased levels of phosphorous and fecal coliform bacteria in the 8.5 SMA following hurricane Irene. Additionally, two toxic solvents have also been identified. The elevated levels would be in violation of state water quality requirements. The canal and levee alternatives would likely recirculate dirty water. With residential occupation there will likely be perpetual water quality problems and treatment would likely to be very expensive. The 8.5 SMA may eventually need an expensive STA system to comply with water quality standards under a canal/levee alternative.
5. Would be the most cost-effective in the long-term – There would be no surprises in future costs, such as continued litigation, emergency rescue and rebuilding costs due to hurricanes and tropical storms, demands for additional infrastructure, likely (add other costs failed to disclose costs) demands for full flood protection later, and no wetland mitigation expenses. The 1998 PEER consultants report submitted to the SFWMD came to same conclusion on future costs. Additionally, substantial funding for land acquisition is available from the DOI, the Farm Bill, ESA, Miami-Dade County, and the state of Florida.
6. Provides a final resolution to this contentious issue. Alternative 5 would end litigation and the need for further water control structures to reduce natural water stages. The draw down of water levels from a canal/levee alternative would likely spur future development and combined with higher water stages during seasonal hurricanes and tropical storms would insure continued conflict and an inability to meet legislative requirements and Everglades restoration objectives.

**V. The SEIS fails to include mitigation costs for the alternatives.**

Under the Executive Order 11990, the Clean Water Act 404(b)(1) Guidelines, and Corps policies and guidelines, the Corps would have to provide mitigation for the loss of wetlands due to construction of structural components and for

loss of wetland function. Table 17 in the CAR lists the projected cost of mitigation for various alternatives. First, the Corps must design a mitigation plan based on the selection of a federally preferred alternative. Second, these mitigation costs should be reflected in the Final SEIS include monitoring and adaptive management.

## VI. Conclusion

It is fundamental for the Corps to understand that in order for Everglades restoration to succeed it must be based on sound science and full compliance with environmental statutes. It makes no sense to spend almost \$8 billion on Everglades restoration if scientific decision making will be continually undermined by political expediency.

The Corps original canal/levee proposal and subsequent variations are a band-aid approach that would draw down water levels from not only the 8.5 SMA but NESRS reducing both hydroperiod and water depth levels over an area as large as 27,000 acres in violation of the Everglades National Park Protection and Expansion Act.

In summary, the Corps must revise the following areas in the Final SEIS:

1. For the reasons set forth above, the SEIS is wholly inadequate and the Final SEIS must be revised to analyze environmental effects of all alternatives on NESRS, Taylor Slough, and Florida Bay based on a full restoration scenario and to comply with all relevant statutes.
2. The Corps legal position that restoring historic water flows would constitute "flooding" is flawed. The 8.5 SMA is not subject to "flooding" because historically the area was naturally inundated during the wet season. A "flood" is defined by Webster's Dictionary as "an overflowing of water on land usually dry." Therefore, higher water stages are the result of the Everglades ecosystem trying to establish natural hydropatterns. If people persist in wanting to reside in a wetland, on the wet side of the containment levee no less, then they should expect natural water levels.
3. The Corps needs to select a federally preferred alternative. For the reasons discussed above the FBP believes Alternative 5 best meets the legislative requirements and other objectives and should be selected as the federally preferred alternative.
4. The Corps needs to provide a detailed mitigation plan with costs for any alternative which reduces wetland function.

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May 30 00 11:42p

Brian & Rosalyn Scherf

(954) 922-5828

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Sincerely,

Brian Scherf  
Boardmember



# Miccosukee Tribe of Indians of Florida

D-14

**Business Council Members**  
Billy Cypress, Chairman

Jasper Nelson, Ass't. Chairman  
Max Billie, Treasurer

Andrew Bert Sr., Secretary  
Jerry Cypress, Lawmaker

May 30, 2000

Colonel Joe Miller  
U.S. Army Corps of Engineers District, Jacksonville  
PO Box 4970  
Jacksonville, FL 32232

**Re: Comments and Objections on the Draft GRR/SEIS on the 8.5 SMA**

Dear Colonel Miller:

The Miccosukee Tribe of Indians hereby files our comments and objections to the Army Corps of Engineers (ACOE or Corps) Supplemental Environmental Impact Statement (SEIS) and General Reevaluation Report (GRR) for the 8.5 Square Mile Area Component of the Modified Water Deliveries (MWD) project. The Tribe also adopts herein the letters, documents, and fact sheets that were submitted to the Army Corps of Engineers and the South Florida Water Management District (SFWMD or District) at the numerous public meetings on the 8.5 SMA GRR/SEIS and the other components of the MWD project, as well as the testimony that was given on behalf of the Tribe by Colonel Terry Rice, Dr. Ron Jones, Steve Carney, Brad Waller, Jim Goldasich, Gene Duncan, Joette Lorion, Dr. Will Post, Burkett Neeley, and Tribal General Counsel Dexter Lehtinen and attorney Dione Carroll.

## **UNREASONABLE AGENCY DELAY OF MODIFIED WATER DELIVERIES PROJECT DESTROYS EVERGLADES AND THREATENS RESTORATION**

As stated in voluminous correspondence to the Corps, the Tribe's Everglades land in WCA-3A, and the State-owned Everglades, continue to be irreparably damaged, and the Miccosukee culture threatened, because of the Corps and Department of Interior (DOI) inability to implement the Modified Water Deliveries (MWD) project by 1997, as you told Congress you would do. The unreasonable and inexcusable delay of this project not only threatens the Tribe's culture, religion, and way of life in violation of the trust responsibility, but is also jeopardizing the continued existence of the endangered snail kite and its critical habitat, in violation of the Endangered Species Act (ESA). These issues and concerns were described in the Tribe's Comments on the Interim and Structural Operational Plan (ISOP),

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P.O. Box 440021, Tamiami Station, Miami, Florida 33144, (305) 223-8380, fax (305) 223-1011  
Constitution Approved by the Secretary of the Interior, January 11, 1962

which are incorporated by reference and attached to this document.

The Draft GRR/SEIS states that “the full implementation of the MWD project cannot occur until flood mitigation is provided to the 8.5 Square Mile Area”. The Corps and DOI have known this since Public Law 101-229 was passed in 1989. Yet, the 8.5 SMA has not been protected, as Congress directed and other interests are now feeling the economic and environmental pain of your inaction. Lake Okeechobee; the Indian River Lagoon and Caloosahatchee estuaries; Florida Bay; the Water Conservation Areas; and other natural areas are being seriously damaged, while urban and agricultural areas are under increased jeopardy of flooding, all because the Corps and DOI have not implemented the MWD project. This decade of stagnation is now threatening the Comprehensive Everglades Restoration Plan (CERP) because of the pitiful example of implementation that you are setting.

The Draft GRR also states that “the Miccosukee Indian Tribe is concerned that implementation of the MWD has been delayed due to the 8.5 SMA...” (GRR p. 85) The Tribe never said this. The Tribe believes that the implementation of the MWD project has been unreasonably delayed because of the failure of the Corps and DOI to implement the MWD project that was presented to Congress in 1992, including the mitigation project for the 8.5 SMA. The current, unnecessary GRR/SEIS process should not be used as an excuse by the agencies who have simply failed to do what Congress directed them to do.

#### **CORPS GRR/SEIS PROCESS IS FUNDAMENTALLY FLAWED**

The current Corps GRR/SEIS process that is being conducted by the Corps own admission, so that the local sponsor can select a locally preferred alternative/option (LPA or LPO), is fundamentally flawed and does not meet the requirements of the National Environmental Policy Act (NEPA). First, it is clear from the title of the General Reevaluation Report that the Corps realizes that the current District selection process is not a true SEIS process, because there is no federal decision making. The Draft GRR/SEIS clearly states numerous times that the federal government is spending federal taxpayer money so that the SFWMD can select a locally preferred alternative (LPA), thereby prejudicing the alleged federal process.

Although the Corps continues to state that they will make the final decision, it is clear that they intend to rubber stamp the District’s non-federal decision. Proof of this is in the fact that the Corps has refused to follow the usual NEPA process by failing to identify the federal government’s preferred alternative. Not only is this contrary to the full disclosure purpose of NEPA, it prevents the District from choosing an LPA based on the alternative that satisfies the federal interest. A review of other Corps NEPA documents on other projects does not find similar processes, except for the process that was used at Snake River which is currently under investigation by the Government Accounting Office and Congress for undue influence on Corps of Engineers decisions.

Additionally, the Corps has improperly segmented the Modified Water Deliveries Project into components that under NEPA must be considered in a single SEIS. By

segmenting the project, the Corps has allowed the project purpose to be skewed, especially for the District who will not understand the devastating impacts that an 8.5 Square Mile Area LPA will have on the overall project. This improper segmentation has also allowed the Fish and Wildlife Service (FWS) and the Corps to underestimate the costs of delay to the Everglades and other wetlands outside the immediate vicinity of the 8.5 SMA that will be caused by the selection of 8.5 SMA alternatives that will result in the delay of MWD. It seriously underestimates the impact of delay on the endangered snail kite and its critical habitat in WCA-3A.

The GRR also misstates the authorized project purpose by stating that P.L. 101-229 directed the Corps to restore the natural hydrological conditions "to the maximum extent practicable." (GRR p. 42). The word "maximum" does not appear in the law. Congress authorized a Modified Water Deliveries Project and the components of that project are so closely connected that it is a violation of NEPA to improperly segment them. Indeed, if you read the section of the law on the 8.5 SMA, the only thing the Corps is authorized to do is to construct protection for them. To create a specific 8.5 SMA project and consider things like buyout and condemnation, that were not authorized by Congress in the MWD project, is to stand NEPA on its head.

Finally, just as the Corps did in the case of the PEIS on the Restudy, they have once again violated NEPA by creating a moving target document. Once again, the Corps has published a voluminous draft document for public comment and in the eleventh hour supplemented the document with modeling for two new alternatives, claiming that they are just variations of ones they already presented in the first document. The Corps also denied members of the public an extended comment period to comment on the supplement, which is totally contrary to the spirit and intent of NEPA. (See Attachment A, letter from Joette Lorion to Colonel Miller dated May 23, 2000.)

#### **UNNECESSARY AND REDUNDANT SEIS PRODUCES SAME RESULT**

The Draft GRR/SEIS leads to the same logical conclusion that was reached in the 1992 General Design Memorandum on MWD and in numerous other reports, i.e. the 1992 Corps plan/concept is by far the fastest, cheapest, and most humane way of satisfying the federal interest for the 8.5 Square Mile Area. Any alternative that you choose must satisfy the federal interest at the least cost to the taxpayer. The alternative must also be "reasonable". Under NEPA, "reasonable" means that it must be able to be implemented within the time frame allotted for the project. The Corps MWD project is already woefully behind the 1997 completion date, and you have also been mandated a 2003 deadline for the completion of the MWD project due to a Fish and Wildlife (FWS) Biological Opinion. A review of Table 7 in the Draft SEIS demonstrates that the 1992 Corps plan/concept is clearly the only way that you can possibly meet this date. The time for study has long passed. The Corps is required by law to pick an alternative that is reasonable. Under the law, the Corps must implement the 1992 Corps plan/concept, the only reasonable alternative, as expeditiously as possible.

The comments below only serve to reinforce the 1992 Corps plan/concept as the best

alternative for implementing the 1989 Congressional directive, and support the Tribe's assertion that the current SEIS was unnecessary and has only caused further unreasonable and inexcusable delay of the Congressionally directed MWD project. Some of these comments included in the section "Key Points" and Debunking the New Myths Created by the Park" are taken from a letter that was sent to the South Florida Water Management District Governing Board of the South Florida Water Management District (SFWMD), by Colonel Terry Rice on April 17, 2000, concerning their possible selection of a Locally Preferred Option (LPO). (see Attachment B, letter from Colonel Rice to Colonel Miler.) The Tribe also includes some of the comments from Colonel Rice's letter herein because they are germane to your analysis and deliberations.

#### THE KEY POINTS

**Fiscal Responsibility:** "Cost effectiveness" cannot be abused or we may risk losing much more than the MWD project. As the Corps becomes more and more involved in environmental restoration projects, "benefit/cost ratios" will give way to "cost effectiveness" as basis of justification. If the Corps does not clearly chose the option that gets the job done at the least cost, it will open itself up to criticism and a reluctance by Congress to fund projects based on this more liberal basis. In addition to ensuring that "cost effectiveness" is accomplished by your choice of plans, the following points also need to be addressed:

- ▶ **Mod Water Is a 100% Federal Responsibility:** The plan chosen for the Modified Water Deliveries project to fulfill the Federal interest in carrying out the 1989 Act is a 100% Federal funding responsibility - Unlike a typical project which is authorized by a WRDA and funded through Corps appropriations based on a cost share with a local sponsor, this project is authorized and funded through DOI channels with no local sponsor cost share required ... it is 100 percent funded by the federal government. The SFWMD has no obligation to commit any funds for construction of this project, and certainly there will be a taxpayer revolt if the District is perceived as giving the federal government funds when it is not required.

**Tribe bottom line:** The Corps failure to identify a preferred alternative in the Draft GRR/SEIS and quantify the exact costs that the District will have to pay beyond the 1992 Corps plan in selecting an LPO could cause the District to select an unreasonable and unimplementable LPO that will cause more delay and destruction of the Everglades.

- ▶ **All Costs Are Not on the Table in the Draft GRR/SEIS:** Costs for alternatives which take land in the 8.5 SMA are not fully assessed in the GRR/SEIS and the severe demands they will create on limited public funds must be fully disclosed under NEPA. The 3 major increases, as discussed below, will conservatively result in an increase in the cost of implementation (increased cost of acquisition plus the cost of restoration) ranging from \$235 million to \$403 million, an annual increase in the cost of maintenance of approximately \$22.4 million, and a cost of delay only considering tree island destruction of \$12.3 million to \$123

**million per year -**

- 1) **Increased acquisition costs:** In land acquisition there is a good rule of thumb ... “the final cost will be significantly greater than the first estimate.” As an example, the Frog Pond was appraised for approximately \$12 million in the C-111 project planning process ... in the end, the SFWMD paid \$43 million. For the 8.5 SMA, if we only assume a doubling of the estimate, the increase would be about \$179 million, bringing the buyout cost to \$358 million.

**Tribe bottom line:** The Corps has a duty to factor in and quantify these land acquisition costs, and the cost of condemnation and a quick take they say may be necessary in the Draft GRR/SEIS. These costs must be assessed in the final SEIS.

- 2) **Increased restoration and maintenance costs:** If land (agricultural, residential, commercial, or even degraded wetlands) is purchased in the 8.5 SMA, it will not magically return to its natural condition, as is essentially the assumption of the Corps in the Draft GRR/SEIS. We have learned this all over Florida as we pay dearly for mitigation acres, so they can be restored and maintained. The Save Our Rivers program requires a “stewardship” plan. The hole-in-the-donut is a local example of what happens when such lands are left unattended ... overtaken by Brazilian Pepper, it will take approximately \$26,000 per acre just to restore them. Given the varying conditions in the 8.5 SMA, count on \$10,000 to \$40,000 per acre for restoration and \$3,000 to \$5,000 per acre per year to maintain them. A quick calculation using 5,600 acres at \$10K to \$40K per acre increases the cost from \$56 million to \$224 million for restoration and \$4K per acre per year for maintenance results in annual cost of \$22.4 million.

**Tribe bottom line:** The Corps had the duty under NEPA to calculate these costs in the Draft GRR/SEIS. The Corps failure to calculate and estimate the reasonable and foreseeable costs of the restoration and maintenance of the land in the acquisition alternatives resulted in the acquisition alternatives being grossly underestimated and could result in the selection of an unreasonable and unimplementable alternative. Pursuant to NEPA , the final SEIS must include these costs. (See Attachment C, testimony concerning land maintenance and restoration costs before the SFWMD on Save Our Rivers, August 5, 1999).

- 3) **Increased delays in implementation:** The assumption in the Draft GRR/SEIS that all alternatives can be completed in about the same time frame is fundamentally flawed, especially since Table 8, the red light/green light table shows that there are serious delay problems associated with the acquisition alternatives that makes them “unreasonable.” The Corps plan (alternative 1) and its variations (alternatives 2 and 9) are ready to go. The other plans require additional steps that will probably delay implementation

for many years and perhaps decades, i.e. Congressional approval, Corps approval, additional funding, condemnation authority, and/or a new/revised Project Cooperation Agreement. During the delay, the damage to Lake Okeechobee, the WCA's, the east/west estuaries, Florida Bay, and even the Park, along with an increased jeopardy to agricultural and urban areas of flooding, will continue with an incalculable cost. Of course there are many parts of the natural system that are being damaged but let's focus only on the tree islands in WCA 3 ( Tribal and State Everglades). Table 7 in the Draft GRR/SEIS estimates that about 246 acres are being lost for each year of delay and the cost of restoration ranges from \$50,000 to \$500,000 per acre to restore them, therefore, the increase in cost due to tree islands alone is from \$12.3M to \$123 million per year.

**Tribe bottom line:** Despite the information in Table 7, the GRR/SEIS incorrectly fails to quantify this cost of delay for the red light alternatives. This failure to quantify the cost of delay's impact on the tree islands in WCA-3A, is a fundamental flaw that seriously underestimates the costs of the acquisition alternatives impacts on Tribal lands in WCA-3A and other parts of the ecosystem. The Draft SEIS should have used network analysis and risk assessment and defined the steps that will be required to complete each alternative. The costs, associated with the delay that each alternative induces, should have also been quantified to the greatest extent feasible and presented in the Draft GRR/SEIS. Under NEPA, the SEIS must quantify and disclose these costs or an unreasonable and unimplementable alternative may be selected.

**Legal Pitfalls:** The Corps is obligated to clearly address each of the following in the context of each alternative being considered:

- ▶ **“Cart before the Horse”:** The process to determine the plan to fulfill the Federal interest is the GRR with accompanying SEIS NEPA document - In 1992, the Corps identified their preferred alternative in a General Design Memorandum and EIS. Now, the Corps has issued an SEIS on only one component of the Modified Water Deliveries project that does not identify the Corps plan that was chosen through a legitimate process as the preferred alternative. Instead they have issued a GRR that states that the goal of their new study is to assist the Governing Board of the District in selecting an LPA. By not identifying the Corps preferred alternative and by conducting an unnecessary analysis so that state entity can make a decision on an LPO prior to the Corps completing its analysis, the Corps is prejudicing the NEPA decision making and asking the District to inappropriately commit District funds without having identified the federal project for which they are being asked to select an LPO.

**Tribe bottom line:** The Corps GRR/SEIS will be challenged under NEPA as having not been a federal decision making process, but rather a rubber stamping of the non-federal decision of a state entity.

- ▶ **Congress Was Clear:** The Federal interest is specified in the 1989 Act and the 1994

amendment to the Act - the 1989 Act is very clear:

**1) PL 101-229 is unequivocal:**

*Flood Protection; Eight and One-Half Square Mile Area. - If the Secretary of the Army makes a determination pursuant to subsection (b) that the "Eight and One-Half Square Mile Area" will be adversely affected, the Secretary of the Army is authorized and directed to construct a flood protection system for that portion of presently developed land within such area.*

Any option chosen other than "construct a flood protection system" as directed by Congress is open to a legal challenge.

**Tribe bottom line:** The statements in the GRR/SEIS that acquisition of the 8.5 Square Mile Area and condemnation of the land is "mitigation" and/or "protection" is ludicrous. The law clearly states "CONSTRUCT a flood protection system." It does not say "DESTRUCT a community." The law is clear. Even in Alice in Wonderland, where according to Humpty Dumpty words can mean so many things, it depends on who's master. In this case, the master is Congress, and Congress will never stand for such a perversion of P.L. 101-229. The Draft GRR/SEIS must reject any alternatives that do not meet the requirements of P.L. 101-229.

**2) 1994 Amendment is often misused:** The 1994 amendment to PL 101-229 has been portrayed by many to authorize acquisition of the area. It is important to read the amendment and accompanying report language because it only authorizes acquisition with some rather strict conditions: a) No condemnation is authorized ... only willing sellers, b) the land will not be a buffer for the Park, and c) any acquisition solution must be faster and cheaper than the Corps 1992 plan. Again, since the Modified Water Deliveries Project has already been inexcusably delayed, a decision to acquire the area does not meet these conditions and is open to challenge.

- ▶ **Questionable Use by Miami-Dade County DERM of EEL and SAMP Funds to Cost Share Land Acquisition:** In 1998, Miami-Dade County DERM proposed to use Environmentally Endangered Lands (EEL) and Special Area Management Program (SAMP) funds in 1998 to support the buyout decision. The Commission never voted to support the DERM proposal ... and many believe they will never vote to use these funds once they understand that such a commitment will trigger condemnation. The Corps should not accept a District LPO that relies on these sources of funds to buy land in the 8.5 SMA without a vote by the County Board of Commissioners. Even with vote, the use of EEL and SAMP funds will be challenged by those who do not believe it is an appropriate use of money from the Wetland Trust Fund. For instance, it is our understanding that SAMP acquisitions in the 8.5 SMA were never approved by the Corps of Engineers as mitigation for the Bird Drive and North Trail basins, yet such purchases were made until they were challenged in public meetings as not providing appropriate functional value for the

land being developed in the Bird Drive Basin. If these funds were allowed to be used in the LPO, this could be a serious problem for the Corps SAJ 404 permit because there is an opinion that people who live in the Bird Drive Basin could still be liable for mitigation if DERM does not provide sufficient functional lift with the fees provided them.

- ▶ **Premature Commitment of Federal Funds:** Any commitment of any federal funds before the completion of NEPA is forbidden by law - the federal interest is satisfied by the plan developed through the Corps process. Law forbids the commitment of federal dollars prior to the completion of NEPA. Therefore, some have the legal opinion that any commitment by any federal agency, like DOI, prior to the completion of NEPA is unlawful and any commitment of funds above and beyond those that satisfy the federal interest after NEPA are also unlawful. These points should have been made in the GRR/SEIS.
- ▶ **Property Rights Threatened:** Property rights are high on the agenda of many Florida residents and Governor, Bush and should also be on the mind of federal government agencies. It is a violation of property rights and the constitution to remove people from their homes when it is not necessary for the goal you are trying to accomplish. Thus, there is absolutely no public purpose under P.L. 101-229 for the condemnation alternatives and they must be rejected. In addition, the Corps must seriously consider the precedent you would be setting, i.e. that “urban removal” is acceptable for restoration without it being necessary. Certainly, buyout of all, or even a significant portion of the 8.5 SMA, would be the first time on such a large scale that people were forced from their homes in the name of Everglades restoration. And, the Corps has been shown over and over again that removal is not even necessary. Constitutionally protected property rights should be addressed in the context of each alternative being considered and those that violate those rights must be rejected in the final SEIS.

**Tribe bottom line:** The Draft GRR/SEIS does not define the public purpose for the acquisition alternatives, because there is none. The Draft GRR/SEIS should reject any condemnation/acquisition alternatives because the modeling of the alternatives has demonstrated that there is no significant difference in restoring the flows to Shark River Slough between the Corps plan and the acquisition alternatives.

- **Human Rights:** An awareness of human rights and discrimination issues surrounding the 8.5 SMA and the MWD project is growing. The Draft SEIS clearly defines the 8.5 SMA as a minority, Hispanic community with many Cuban refugees, but the GRR presented to the District does not disclose this fact. The President’s Executive Order 12898 clearly requires agencies to see that Everglades Restoration does not have a disproportionate impact on minority and low income communities. Yet, this requirement of the federal government was not stressed to the District in the GRR. Every day, more people are recognizing the plight of the 8.5 Square Mile Area in which the federal government and state agencies are considering removing a minority community from

their homes for no good reason, and even though Congress ordered the Corps to protect them. The League of United Latin American Citizens (LULAC), the oldest and most respected Hispanic civil rights organization in the country with 140,000 members, has passed resolutions and written letters denouncing the treatment that both the 8.5 Square Mile Area and the Miccosukee Tribe are receiving in the implementation of the MWD project as discriminatory and a violation of human rights. LULAC, and others, are considering litigation to stop this grave injustice. (See Attachment D, LULAC resolution.)

**Administrative Hurdles:** The Corps has the duty to make certain that the District identifies and understands the new administrative hurdles that will be created by a plan other than the 1992 Corps plan. The Draft GRR/SEIS failed to have a plan in place for each alternative, to include a probability for success, so that the District knows the full consequences of embarking on a new plan. The result of the Corps failure to do this may cause the District to end up on a dead-end excursion. Some of these hurdles are as follows:

- ▶ **Money** - the Draft GRR/SEIS identifies possible sources of funding for each LPO but contains no time frames or assessment of certainty. What certainty will the Corps require to ensure that your other partners can produce even if they say they can? Any commitment for LPO funding must be a contractual certainty or we could lose many more years in implementing the MWD project and increase the already great cost of delay.
- ▶ **Congressional approval** - the directive of Congress was very clear as quoted above ... it is the judgment of many that Congress will have to approve, which might even include amending the law, any acquisition decision. The Corps must not accept any LPO that does not meet the requirements of P.L. 101-229 and for which additional congressional approval is going to delay progress, or, even worse, cause an LPO to be unimplementable.
- ▶ **Corps approval** - Corps approval of an LPO will be required ... it always takes significant time. The Draft GRR/SEIS does not contain a realistic time line for the associated steps and the risks entailed.
- ▶ **Corps redesign** - a long and tortuous process and all alternatives will require a redesign ... even buyout. The Draft GRR/SEIS does not realistically layout the steps, time line, and associated risks. For instance, the report estimates that full buyout, including condemnation can be accomplished by June of 2004 without any examples of other projects that have been able to condemn and remove hundreds of residences in that time frame. For instance, in 1989 Congress directed DOI to condemn and purchase the East Everglades Expansion Area by 1994. DOI still has thousands of properties to buy. The Corps must provide realistic time lines for each alternative..
- ▶ **New/Modified Project Cooperation Agreement (PCA)** - a long and tortuous process. The Draft GRR/SEIS does not realistically layout the steps, time line, and

associated risks.

**Condemnation authority** - if there is even one unwilling seller, you will need condemnation authority (in fact, there are many unwilling sellers in this predominantly Hispanic community). Whether the request goes to the State Legislature or Congress, it will not happen fast ... if ever. The Draft GRR/SEIS does not realistically layout the steps, time line, and risks associated with the condemnation alternatives.

### **ENVIRONMENTAL JUSTICE IN THE MWD PROJECT**

As previously stated, LULAC has passed a resolution denouncing discrimination against the Miccosukee Tribe and the residents of the 8.5 SMA in the implementation of the MWD project. The Corps Draft GRR/SEIS section entitled Social Impact Assessment (SIA) and other areas of the Draft SEIS contain numerous conflicting, unsupported, and offensive statements about the 8.5 SMA. For instance, the narrative contains a totally unsupported statements about the cohesiveness of the community that, "for whatever social or economic reason, their loyalties lie elsewhere." (SIA p.15) The Corps Draft SEIS also arbitrarily decided that there are only 208 residences by the intrusive searching of mail records to see who received mail every day, not realizing that many of the people who live in the area receive their mail at a post office box.(SIA p. 5)

The Draft GRR/SEIS then created an arbitrary distinction between residents and non-residents by deciding who they believe occupy their residences every day, and those who they believe only occupy them on weekends. The Draft GRR/SEIS also incorrectly and arbitrarily classifies the 264 residences on agricultural land as agricultural rather than residential, thereby low balling the number of residences that would be impacted by the condemnation alternatives. Needless to say, this type of distinction would never be made in an exclusive community.

Additionally, there are conflicting numbers for the number of residences throughout the document. There are 321(the property appraiser data) on some pages, 208 on others, and a high of 514 when local costs are being calculated. And, the number of unwilling sellers is grossly underestimated based on news reports and the data that has been provided to the Corps by residents who own more than one property. (See Attachment E, news articles.)

It is clear that there is an attempt to skew the impact of acquisition on the area. These figures, appears to be based on a questionable land use survey data base by the Dade County Department of Environmental Resources Management (DERM) that is seriously flawed and contains admitted mistakes and differences from what appears to be HDR spot checks. (See attached DERM memo from Gwen Burzycki to Jean Evoy.) The Corps refused to use a land use survey supplied to them by the Tribe and instead chose to rely on the DERM survey that mischaracterizes the land use in an attempt to encourage the decision makers to move the residents out. Under NEPA, the Corps cannot rely on this local agency's unproven data without independently conducting their own analysis to verify that it is accurate and reliable.

The Corps has the duty to conduct their own independent analysis of the DERM data and assumptions. It is not adequate to just take a cursory look at the questionable survey and data base of this local agency that clearly has a not-so-hidden agenda of removing the people from the 8.5 SMA for local zoning reasons.

The Draft GRR/SEIS identifies the fact that environmental justice impacts are associated with the acquisition alternatives, but does not discuss the affirmative duty described in Executive Order 12898 and federal civil rights laws not to create disproportionate and undue burdens on minority communities, especially when there are alternatives that would avoid such adverse impacts. This includes the impacts both on the 8.5 SMA and the Miccosukee Tribe, especially their lands in WCA-3A, that are being caused by the delay in the MWD project as described in P.L. 101-229.

The Corps must fully disclose to the District, and the public, the adverse impacts on the Tribe and the 8.5 SMA residents of delaying the MWD project, including the destruction of Tribal lands. Given the challenges that Governor Bush has faced with his One Florida plan, it is imperative that the human rights and minority rights issues in the context of each alternative be fully considered and disclosed. The Corps has the affirmative duty under Executive Order 12898 not to adversely impact minority communities unnecessarily and a duty federal civil rights laws not to discriminate. The District cannot select an LPO that would cause the Corps to violate their duty or the law. The Draft GRR fails to apprise them of the environmental justice issue.

#### **HOLDING YOUR GROUND ON THE OLD LOCAL COST SERVICES MYTH**

The Tribe encourages the Corps to maintain their correct position on the issue of local services costs as it pertains to alternatives 1, 2 and 9. It is clear under the Miami-Dade County code, mitigation does not require the County to provide local services to the 8.5 SMA. Indeed, the County has not provided services in over thirty years and there is absolutely no indication that they will provide them now. The Local Cost Services issue was concocted by the Park and DERM in an attempt to skew the decision making process. Indeed, the Park exceeded their statutory authority and misused Modified Water Deliveries Project money to pay for a Local Cost Services study as part of a District Review Team process that was challenged by the Tribe in a Sunshine lawsuit. It is disconcerting that this report is a reference for the Draft SEIS, since the District has signed a settlement agreement agreeing not to use it.

DERM, apparently unhappy that the Corps refused to include that flawed analysis in the Draft GRR/SEIS, has come up with another new study. The Tribe has attempted to obtain the raw data for their allegedly new report, but has so far been unsuccessful. The Corps should once again reject the DERM report which was not commissioned by, nor approved by, the Board of Commissioners. The Corps should also independently verify any DERM reports or data before they allow it to be used in any way in the GRR/SEIS process. **The Tribe commends the Corps for continuing to stand by the correct position on this issue, i.e. mitigation does not trigger services costs.** The Tribe agrees that the local cost

services issue should not be a factor in assessing whether the federal interest is met, since the authorized Corps mitigation project does not trigger services.

### **DEBUNKING THE NEW DERM WATER QUALITY MYTH**

The Corps has incorrectly and capriciously included the water quality data that was taken by DERM after Hurricane Irene in the Draft GRR/SEIS. DERM's data, which according to the attached Park memo would not be allowed to be used in a court of law, was an attempt by DERM to undo what the water qualities studies used by the Corps and in the previous PEER report showed, which is that the 8.5 SMA does not pollute the Park. (See Attachment G, Park memo dated March 20, 2000.) The Corps should rely only on legally sufficient routine studies conducted by water quality expert Dr. Ron Jones or others, rather than on samples taken by the local Dade County agency after the Hurricane.

In fact, an article appeared in the Miami Herald that reported that the Park's own wastewater system in Chekika failed after the Hurricane. (See Attachment H, Miami Herald article dated March 30, 2000.) It is wrong to hold the 8.5 SMA to a higher standard than the Park. It is also wrong for the Draft GRR/SEIS to use data taken after the Hurricane that does not even meet the legal testing requirements to project water quality impacts on the Park. The Corps must not include the DERM water quality data in the SEIS because it is not legally sufficient.

### **DEBUNKING NEW MYTHS CREATED BY THE PARK AND FWS**

Over the last 1½ years, most of the myths regarding the 8.5 SMA have been debunked. Unfortunately a couple of new myths have come to the forefront as described and debunked in the following paragraphs.

**The "Edge Effect"** - an edge effect exists to some extent on all boundaries to the Park. The Draft GRR/SEIS should have explained this. In the Coordination Act Report (CAR), the Park and Fish and Wildlife Service have portrayed the "edge effect" due to the 8.5 SMA in a way that is misleading and overstates its significance. Rather than look at the existing degraded conditions as their point of departure/basis of comparison, as the Corps has, the Park used what they think existed in this area hydrologically prior to human alteration of the system. Thus, when the Corps adds more water to Shark River Slough via the execution of the MWD project, they improve greatly the hydration of 100,000's of acres to include those next to the 8.5 SMA. On the other hand, the Park admits no improvement in these areas, but instead makes it sound like the Corps is actually lowering water levels. The Corps GRR/SEIS must explain that they are actually improving conditions greatly on the "edge", while the Park is portraying it as degrading conditions by using a different basis of comparison, which is hypothetical, at best.

Furthermore, the Corps/GRR SEIS should point out that even if the Park had the historical conditions correct, it is now not desirable to meet them ... the soil in Shark River Slough has subsided a foot or more and a half. To raise water to historic levels would drown

the Park and be devastating to nature. The Corps should also address the potential impacts on the flood protected areas. These facts would serve to minimize the "edge effect" being used by the Park to get the 8.5 SMA for a Park buffer.

Having destroyed the myth that purchase of the 8.5 SMA is necessary to restore the Slough, it is clear that the "edge effect" is the Park's only remaining possible excuse ... meaning all other excuses were so overly exaggerated and totally wrong, that the "edge effect", no matter how minuscule and overblown, would be the only excuse they would be able to find to try to convince people that buyout was right. But, as the Tribe has commented to the Corps on several occasions during the report preparation and will do so this time in regard to the Draft CAR, even the "edge effect" doesn't stand the test to justify acquisition ... 1) the MWD project is to restore 100,000's of acres of Everglades ... we can't wrangle over few acres in the Park that will actually be greatly improved by the Corps project ... those within the 8.5 SMA outside of the Park can be dealt with separately and I'm sure they can be improved also ... the Park is being both "penny 'foolish' and pound foolish", 2) as proven in the 1998 PEER report, there are ways to actually pump clean seepage water directly back into this area, thus minimizing the "edge effect" further, but the Park seems to resist this ... solve the problem and the Park won't have any excuse left, 3) Congress told the Corps to restore flows "to the extent practicable" ... perfection, whatever that is as it is certainly different to different people, was not an order, and, if we even knew what it is, in a natural area that has been compromised and is now surrounded by millions of people, we will never achieve it. With the foot plus of subsidence that has occurred, perfection is a lot different than NSM levels, and 4) just as a technical point, the Federal government does not give itself a 404 permit. As for mitigation, it should not be an issue because of the 100,000's of acres that are receiving a ecological functional lift from the project.

**Tribe bottom line:** The Corps must reject the Draft CAR report and the edge effect it has inspired because it is based on faulty data and a flawed, prejudicial analysis based on the Wetland Rapid Assessment Procedure (WRAP) that was never intended for this purpose and has not gone through rulemaking. The edge effect is just one more specious argument concocted so the Park can get the Park buffer that they could never get from Congress, at increased federal and state taxpayers expense. The Corps GRR/SEIS must expose this and discard the Park and FWS's report as an unnecessary obstacle to implementing the MWD project. It is interesting to note that the Congressional history of P.L. 101-229 that directed that the 8.5 Square Mile Area should be protected while flows were restored to the extent practicable to the Slough demonstrates that those who agreed to the law, including the Park, were aware that there would be a small transition area.

**"Buyout is essential to the restoration of Florida Bay"** - this myth is absolutely preposterous and must be quickly set aside. The Corps GRR/SEIS does not even mention a comparison of one alternative to another with regard to Florida Bay. The Corps has also testified that there would be no difference among the alternatives in the restoration of Florida Bay. That is because it is not a factor in the restoration of Florida Bay. Despite this, some have convinced many citizens in the Keys that removing people from the 8.5 SMA is

essential to the restoration of Florida Bay. They even had a resolution passed by the Monroe County Commissioners supporting buyout, based on this misinformation. But since the initial vote, 2 Commissioners became aware and voted to rescind this resolution. Any honest hydrologist will tell you that the final disposition of the 8.5 SMA has not even a remote impact on the Bay quality or quantity of water. The Corps must address this issue in the Final SEIS and lay it to rest. The Corps should also address the importance of the implementation of the Modified Water Deliveries and C-111 projects to the Bay and how delays that would be caused by buyout will, in the end, further jeopardize the health of the Bay.

**Tribe comment:** The Draft GRR/SEIS fails to clearly explain and put into context the “edge effect” and “Florida Bay” issues that resulted from the prejudicial Draft Fish and Wildlife Coordination Act Report (CAR) and the Park, so that they do not unnecessarily skew the analysis and resulting decision. The Tribe has already sent the Corp a letter rejecting the faulty WRAP process that has not gone through the required legal process. (See Attachment I, letter from Joette Lorion to Colonel Miller dated March 3, 2000.) As you know, WRAP has not been through rulemaking and the team used DERM data and DERM elevations that are incorrect and flawed, even according to the County’s own flood criteria map. Even more important, FWS says that they relied on this faulty analysis/recommendation of the WRAP team to rank the alternatives, thereby prejudicing the process and perhaps violating FACA. The Draft GRR/SEIS does not identify that WRAP has not gone through rulemaking, nor does it contain the explanation in the ACOE letter to the District, as to why they rejected to make the CAR an official part of the document because the Corps felt it was prejudicial. Although the Draft GRR/SEIS does describe briefly the differences in modeling between the Corps SEIS and the CAR, the Final SEIS must more fully explain these modeling differences as they apply to the purpose of the MWD project. Finally, the vegetation map which resulted from this faulty process must also be rejected.

#### CONCLUSION

The ACOE has the duty in the GRR/SEIS to expose the “edge effect” and “buyout is essential to the restoration of Florida Bay” as myths, and that they are not key factors to be considered in restoring flows to Shark River Slough. The Corps has the duty to deal with facts and reject any alternative that will result in paralyzing stagnation, greatly increased costs, and human rights issues. Under NEPA, the Corps had the duty to identify the 1992 concept/plan as their preferred alternative. They failed to do so. The current Draft GRR/SEIS clearly demonstrates that this is still the preferred alternative, and the Corps has the duty to tell the District this before they select an LPO, or the result will be a NEPA process that is prejudiced by the failure of the Corps to clearly identify the plan that meets the federal interest prior to an LPO being selected.

The Miccosukee Tribe of Indians of Florida, asks that the Corps end the years of delay provoking studies and make the only technically, fiscally, and morally responsible decision you can make so that we can get along with the many restoration challenges we



have ahead of us ... that is the 1992 Corps plan/concept. The conclusion is clear: the cheapest, fastest, most people-sensitive way to deal with the 8.5 SMA and restore the Everglades and Florida Bay is the 1992 Corps concept/plan modified based on any new information that is available. If the Corps chooses to make a decision based on politics, instead of science, and backed up by an improper NEPA procedure, it will only mean more delay and destruction of Tribal Everglades and will in all likelihood be the end of the Everglades restoration process.

Sincerely,

Joette Lorion  
Government Affairs

cc: Chairman Billy Cypress  
Governor Job Bush  
Governing Board Member, SFWMD



# United States Department of the Interior

OFFICE OF THE SECRETARY

OFFICE OF ENVIRONMENTAL POLICY AND COMPLIANCE

Richard B. Russell Federal Building

75 Spring Street, S.W.

Atlanta, Georgia 30303

May 30, 2000

D15

ER 00/377

Colonel Joe R. Miller,  
District Commander  
Jacksonville District  
U.S. Army Corps of Engineers  
400 West Bay Street  
Jacksonville, Florida 32232

**RE:** Draft Supplemental Environmental Impact Statement/General Reevaluation Report for the Modified Water Deliveries to Everglades National Park, 8.5 Square Mile Area, Miami-Dade County, Florida

Dear Colonel Miller:

The Department of the Interior (Department) has reviewed the Draft Supplemental Environmental Impact Statement/General Reevaluation Report (SEIS/GRR) for the Modified Water Deliveries to Everglades National Park (MWD Project), 8.5 Square Mile Area (8.5 SMA), Miami-Dade County, Florida, dated April 6, 2000. Specifically, the Fish and Wildlife Service (FWS) and National Park Service (NPS) have been cooperating agencies with the Corps of Engineers (Corps) during the preparation of this document. As cooperating agencies, the FWS and NPS have prepared a Draft Fish and Wildlife Coordination Act Report (FWCA), with Supplements, which is appended to the Draft SEIS/GRR. The Final FWCA Report, including the views and recommendations of the Florida Fish and Wildlife Conservation Commission, will represent the Secretary of the Interior's report to Congress in accordance with section 2(b) of the FWCA for this project.

The Department seeks a permanent and sustainable solution to the 8.5 SMA issue. In this context, the Department offers the following comments and recommendations on the Draft SEIS/GRR. Our comments focus primarily on: (1) issues which require resolution prior to finalization of the SEIS/GRR; (2) compatibility of a potential selected federally-preferred plan to the Comprehensive Everglades Restoration Plan (CERP) and the future ecological integrity of Everglades National Park (ENP); and, (3) accurate and thorough disclosure of the best available technical information, as well as other specific issues. It is the goal of the Department to provide the Corps with clear and concise recommendations to facilitate the preparation of a comprehensive and defensible Final SEIS/GRR.

Below are general comments on the Draft SEIS/GRR. Enclosed please find the Department's specific and technical comments.

## General Comments

The Final SEIS/GRR should fully meet the letter and spirit of the National Environmental Policy Act (NEPA) and the Council on Environmental Quality's Regulations on "Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR Parts 1500-1508 *et seq.*) to resolve politically charged ecological and social issues in order to facilitate implementation of the MWD Project and achieve the anticipated environmental benefits for ENP.

It is critical that the Final SEIS/GRR incorporate a consistent approach based on the best available data with respect to the analysis and comparison of proposed alternatives. This approach should focus on meaningful comparisons of the alternatives. Meaningful analysis, in this context, requires both a comparison of each alternative to the "No Action" alternative (which in this case the Corps has chosen to be the originally authorized plan), and an analysis of each alternative to the condition that the MWD Project is intended to achieve. Comparison to the originally authorized plan, as currently disclosed in the Draft SEIS/GRR, is insufficient to fully assess the ramifications of selection of a federally-preferred alternative because it fails to provide an assessment of the degree to which each alternative best contributes to the goals of the MWD Project (*i.e.*, hydrologic restoration of Northeast Shark River Slough [NESRS]). The Final SEIS/GRR must include an analysis of each alternative relative to the Restored Condition (full MWD implementation) as the only avenue to meet the disclosure requirements of NEPA in light of the legislated mandates contained in the Everglades National Park Expansion and Protection Act (P.L 101-229). To disregard this rationale compromises the adequacy of the document for fully informed decision-making. It is the Department's position that incorporation of these analyses will not unduly delay the Final SEIS/GRR, as the Draft FWCA Report prepared by the FWS and NPS contains this information.

The Department finds that the issue of water quality has not been fully disclosed or adequately addressed in the Draft SEIS/GRR, particularly for structural Alternatives 1, 2B, 6(B,C, D) and 9. The information presented in the SEIS/GRR clearly indicates that there is the potential for introducing pesticides, nutrients and bacteria in surface water and shallow groundwater into ENP. There are some references to dilution effects, Stormwater Treatment Areas (STAs), and residence times, but an assessment and discussion of long-term water quality implications is lacking in the document. For example, under Requirement 3 (GRR, page 60) the SEIS/GRR states that "...it is required that the alternatives be designed and constructed to meet regulations and permit conditions currently in effect." Table 6, "Analysis of Project Requirements," indicates that all of the alternatives meet Requirement 3. A more detailed comparison between the alternatives is needed, assessing the differences in dilution effects, loading rates and treatment strategies and costs. The Final SEIS/GRR needs to provide a detailed analysis, including design and costs of STAs, potential loading rates, and residence times, for the federally preferred alternative. If the STA is not currently in the C-111 project GRR cost and design, the cost of the STA should be reflected as an additional federal cost.

The Department is also concerned that, unless adequately assessed and managed, there is a risk of introducing contaminated water into ENP, which has implications regarding the 1991 Settlement Agreement (1991, Case No. 88-1886-CIV-HOEVELER). These water quality issues need full disclosure in the Final SEIS/GRR.

The issue of compatibility with future restoration actions associated with the CERP is of paramount importance to the Department. Currently, we find that this issue has not been addressed adequately in the Draft SEIS/GRR. For example, in the GRR (Table 7, PM6a) it is stated that "...all alternatives are compatible with future restoration because they increase water levels in NESRS." However, there are other considerations that need to be addressed, including a five-fold increase in the discharges at S-356, relocation of S-356 and L-31N seepage management. There are also sequencing implications of implementing the 8.5 SMA Project in conjunction with other components of the MWD and C-111 Projects that need to be fully disclosed and elucidated in the Final SEIS/GRR. The Department recommends the Final SEIS/GRR include a detailed discussion on these overall compatibility issues in the final document.

The Department also finds that the SEIS/GRR insufficiently discloses the hydrologic modeling findings of the Draft FWCA. Separating the results of the cooperating agencies into widely removed and sometimes conflicting discussions does not adequately inform the decision-maker nor the public of the full nature of environmental consequences and agency concerns. Furthermore, the Final SEIS/GRR, at a minimum, needs to include an explanation as to the value and relevance of the Department's analyses relative to the comparison of the performance of each alternative to the fully restored condition associated with the MWD Project. Section 4.4.3 provides a reasonable attempt at explaining the difference among and the basis for using each of the hydrologic modeling conditions; however, further information regarding the shortcomings or drawbacks of each analysis, taken by itself, is needed.

Significant wetland assessment discrepancies between the Corps and the cooperating agencies are also contained in the document, e.g., the substantially different results from the interagency wetland assessment (Wetland Rapid Assessment Procedure) and the Corps' wetland assessment. More explanation is needed in the Final SEIS/GRR to elucidate the relevance and significance of the information to the decision-maker and the public (*i.e.*, why it is valuable and meaningful data). Such an approach would be consistent with our agencies' various missions, and for our overarching goal of restoring the south Florida ecosystem.

In the Department's review of the cost comparisons for the alternatives, it became unclear how the Corps derived their current estimate of \$30.6 million for Alternative 1, the original authorized flood mitigation plan. The cost of this alternative is now substantially less than the Corps estimate of \$47.9 million for the 8.5 SMA mitigation component, as described in the 1999 Capital Asset Plan for the MWD Project. The Department requests that the Corps resolve this large cost differential, and

provide us with specific information on the cost changes for the construction, PED, and land acquisition elements of this alternative.

It is also unclear what factors have led to a significant increase in the estimated cost of a total buyout option (such as Alternative 5 in the Draft SEIS/GRR) for the 8.5 SMA. In the 1990 draft GDM for the Modified Water Deliveries Project, we believe that the Corps estimate for a total buyout was in the range of \$80 million. In 1998, contractors for the SFWMD estimated the cost at approximately \$112 million. The Draft SEIS/GRR now has the cost of total buyout (Alternative 5) estimated at \$179 million. The Department requests that the Corps include specific details on these cost changes for Alternative 5 in the Final SEIS/GRR.

The Department has had an outside contractor complete a comparison of the secondary cost data and underlying assumptions between the Miami-Dade County Secondary Cost Report and the Corps Local Cost Analysis, included in the Draft SEIS/GRR. In general, the County's report projects large budgetary shortfalls for all of the alternatives (except total buyout), whereas the Draft SEIS/GRR projects budgetary surpluses for all of the alternatives (except total buyout). The primary difference is related to the County's assumption that increased residential densities and growing pressures on the County and regional water managers would require the construction of a secondary drainage system. An additional cause of the large cost differences is that the Corps has apparently misinterpreted the County's demographic projections, and assumed that the population in this area will cease to grow after 2015. The Department recommends that the Corps accept the County's assumptions for future growth in the area and their projected costs for services, and capital and maintenance costs for roads. The Department further agrees with the County that increased growth will inevitably lead to increased pressure to provide a secondary drainage system for the area, capable of providing 1 in 10 year flood protection.

Based on the Department's review of the Draft SEIS/GRR, our major findings are as follows:

Alternative 5 (Total Buyout) performed the best for all performance objectives, and represents the Department's environmentally preferred alternative;

Alternative 4 (Resident's Choice Acquisition) performed well, and meets the performance objectives; and,

- Alternative 6B (Buffer Plan) performed adequately, and minimally meets the performance objectives.

The remaining alternatives (1, 2, 3, 6(C&D), 7, 8, and 9) performed poorly, and do not meet one or both of the performance objectives that the Department believes are critical: restoring hydropatterns in NESRS and providing a flood protection system for residents in accordance P.L. 101-229. As a

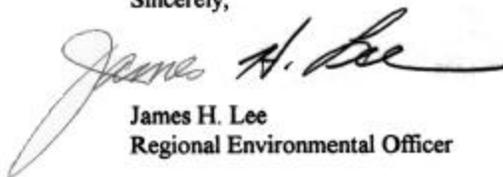
result, these alternatives do not represent either a practicable or sustainable solution to "Restore the natural hydrologic conditions within the Park" as required by P.L. 101-229.

In summary, the lack of full disclosure of the Department's analyses and findings in the Final SEIS/GRR could compromise the utility of the document for subsequent decision-making by the Corps, and could compromise the timing of decision-making by the Department for potential funding commitments for the MWD Project, as separate supplemental NEPA documentation might be required by the Department. If these issues are not resolved in the Final SEIS/GRR, the Department, upon recommendation of its bureaus, could be compelled to consider initiating a formal elevation of these unresolved issues to the Council on Environmental Quality pursuant to Part 1504 of NEPA.

The Department appreciates the Corps' efforts and commitment in finalizing the 8.5 SMA Project. The Department will make every effort to find a practicable and sustainable solution which will ensure the hydrologic restoration of NESRS and ENP. Such a solution is a critical link in the restoration of the greater Everglades ecosystem.

If you have any additional questions or comments, please contact Mr. Stephen Forsythe, FWS State Supervisor, or Mr. Richard Ring, Superintendent of Everglades National Park.

Sincerely,



James H. Lee  
Regional Environmental Officer

Enclosure

CC:

CEQ, Washington, DC (George Frampton, Acting Chairman)  
DOA, Washington, D.C. (Michael Davis, Deputy Assistant Secretary for Policy and Legislation)  
DOI, Washington, D.C. (Mary Doyle, Assistant Secretary for Water and Science)  
COE, Washington, DC (General Joe Ballard, Chief of Engineers)  
COE, Atlanta, GA (General J. Richard Capka, Division Engineer)  
FWS, Atlanta, GA (Sam Hamilton, Regional Director)  
NPS, Atlanta, GA (Jerry Belson, Regional Director)  
EPA, Atlanta, GA (John Hankinson, Regional Administrator)  
SFWMD, West Palm Beach, FL (Frank Finch, Executive Director)  
ENP, Homestead, FL (Dick Ring, Superintendent)  
FWS, Vero Beach, FL (Stephen Forsythe, State Supervisor)

**Specific Comments of the Department of the Interior  
on the  
Draft Supplemental Environmental Impact Statement/General Reevaluation  
Report of the Modified Water Deliveries to Everglades National Park, 8.5  
Square Mile Area, Miami-Dade County, Florida  
(May 2000)**

**Significant Issues**

Base Conditions Used For Alternatives Analysis: There remains a fundamental difference between the Corps' and the Department's analyses regarding the choice of base conditions used to evaluate the performance of the potential alternatives. In assessing the degree of restoration achieved in Northeast Shark River Slough (NESRS), the Corps' utilized the Existing Condition (1995 Base), while the Department utilized the Restored Condition as the performance standard for measuring restoration success. The Restored Condition hydrologic model run used by the Department was the same as that identified by the Corps in the General Reevaluation Report as "MWD Project with full implementation (D13R)." This is the condition set by the Corps to represent "projected conditions along Tamiami Trail in the future with the MWD Project in place." Since the objective of the MWD Project is to restore natural hydrologic conditions within ENP, the Department considers the Restored Condition to be the most appropriate benchmark to determine which alternative(s) most fully meet the goal of restoring NESRS. On the other hand, for analyses which legally require conditions to be the same or better than they are now or were in the past (*i.e.*, mitigation for the 8.5 SMA and protection of federally listed species habitat), the Department, like the Corps, used the Existing Condition (1995 Base and/or 1983 Base) hydrologic model predictions to evaluate the alternatives.

In the SEIS/GRR, some aspects of alternative performance were measured against Alternative 1, the No-Action Alternative. However, since Alternative 1 has significant, measurable adverse effects on NESRS, the Department considers these comparisons to be inappropriate for evaluating the successful restoration of NESRS, as well as providing a meaningful Final SEIS/GRR for fully informed decision-making. Therefore, the Department recommends that the Corps' Final SEIS/GRR include the comparison of alternatives to the Restored Condition in order to determine which alternative(s) most fully meets the goal of restoring NESRS, as legislatively mandated in the Everglades National Park Protection and Expansion Act (P.L. 101-229). The Department would be pleased to work with the Corps to ensure that the analyses contained in the FWCA Report (Chapter 5) are integrated into the Final SEIS/GRR for this purpose.

Wetland Functional Analysis: The Department is convinced that improving wetland function is at the core of overall Everglades restoration, in general, and should serve as the primary focus in reestablishing natural hydropatterns in NESRS and ENP, in particular. There is currently a significant disparity in the analyses and disclosure of wetland effects in the Draft SEIS/GRR which continues to lead to confusion and an overall misunderstanding concerning the degree to which wetland resources would be effected by the selection of a federally preferred alternative.

While both the Corps and the Department utilized hydrologic analyses such as depth, timing, duration, and volume to assess the effects of potential alternative plans on wetland resources, the Department, and cooperating agencies, utilized a comprehensive approach to wetland functional assessment by implementing the Wetland Rapid Assessment Procedure (WRAP) developed by the South Florida Water Management District, to quantify gains and losses in wetland function. The Corps formally agreed to utilize WRAP as an efficient and consistent wetland functional assessment methodology for all future Everglades restoration projects, and actively participated on the WRAP Team for the 8.5 SMA Draft SEIS/GRR.

Due to the concerted effort by the interagency team members, the WRAP analysis provides the most comprehensive analysis of wetland function in and adjacent to the 8.5 SMA conducted to date. This three month analysis included aerial overview and groundtruthing of 37 wetland sites by experienced wetland ecologists and botanists. The WRAP Team focused their assessment on the wetland mosaic within the 8.5 SMA extending two miles to the north, south and west into ENP in order to assess both the direct and secondary effects on wetland resources.

In addition to participating in the interagency WRAP assessment, however, the Corps additionally modeled wetland acreage estimates throughout the entire NESRS for their wetland analysis to document wetland impacts. Consideration of this relatively large area dilutes the functional significance of effected wetlands within the scope of the 8.5 SMA Project. As reported in the Draft SEIS/GRR, only slight differences in wetlands acreage between the alternatives is realized (*i.e.* a range of minus four to plus two percent of the wetlands in NESRS). More significantly, wetland function was not assessed. These reported results are contrary to the wide range of wetland functional effects revealed by the WRAP comparative assessment for the 8.5 SMA Project. The stark differences in the results of the two wetland assessment methodologies remains confusing and needs to be rectified in the Final SEIS/GRR.

As a consequence, the Department concludes that the Corps' wetland assessment contained in the Draft SEIS/GRR is inadequate, as it: 1) does not assess, or attempt to quantify, wetland functional losses and gains; and, 2) it dilutes, or masks, the relative differences in wetland functional performance between the alternatives. The Department recommends that the Corps' wetland assessment be removed from the Final SEIS/GRR and be replaced with a more detailed and thorough disclosure of wetland functional losses and gains based on the WRAP assessment. The Department would be pleased, as a cooperating agency, to assist the Corps in re-drafting those pertinent portions of the Draft SEIS/GRR in this regard. Again, this information is readily available in the Draft FWCA Report.

Compensatory Mitigation for Unavoidable Wetland Losses: The Department finds that the issue of wetland compensatory mitigation is largely ignored in the Draft SEIS/GRR and recommends that this omission be rectified in the Final SEIS/GRR. As a result of our review, the only reference to wetland compensatory mitigation is found at page 18, Section 2.6 "Mitigation." This single paragraph includes a statement which states "...unavoidable impacts to wetland or aquatic resources are expected to be

offset by the ecological improvement throughout the area of potential effect (ENP Expansion Area and the 8.5 SMA) that results from the overall restoration achieved by the MWD.” The SEIS does not contain any substantive or quantified evaluation which supports this claim. In fact, the Corps’ wetland assessment concludes that as many as 2,869 acres of wetlands will be lost if Alternative 2 is selected and that 2,538 acres will be lost if Alternative 1 (No Action) is selected. The Corps measures improvement in wetlands as an increase in acres of wetlands inundated resulting from implementation of MWD. The Corps’ assessment does not address the wildlife, vegetation, water quality and wetland buffer components of WRAP, as it relates to wetland function. Additionally, excessive inundation of wetlands can also significantly impair wetland function.

An explanation of the pending 404(b)(1) evaluation for the federally preferred plan (Page 182, Section 4.25) should also be included in the discussion of wetland compensatory mitigation. Because the decision before the Federal Government involves alternative approaches to addressing the dual legislated objectives of restoring NESRS and mitigating the flooding effects of the MWD Project, the scope of the 404(b)(1) analysis must include an analysis of each alternative’s impacts sufficient to identify the alternative with the least adverse effects on the aquatic ecosystem. Section 404 of the Clean Water Act (CWA) indicates that no discharge of dredged or fill material shall be permitted if practical alternatives to the proposed discharge exist that have the least adverse impacts on the aquatic ecosystem. The most appropriate means to demonstrate which alternative(s) meets this criteria is by comparing each alternative to the fully restored MWD condition. Only after such a comparison is completed should the Corps identify the extent to which the alternatives have other significant adverse environmental consequences.

The Department recommends that the paragraph on page 18 be deleted from the SEIS/GRR, and that pending the selection of a federally preferred plan, an appropriate wetland compensatory mitigation plan for unavoidable losses of wetland resources be included in the Final SEIS/GRR consistent with the CWA section 404(b)(1) Guidelines, Executive Order 11990 (protection of wetlands), and various Corps policies and procedures. The Department would be pleased to work with the Corps to develop this plan which the FWS and NPS also recommended in the Draft FWCA Report (Chapter 6 “Wetland Functional Evaluation”).

Fish and Wildlife Enhancement Features: The Draft FWCA Report at Chapter 6 provides the Corps with recommendations to mitigate for anticipated losses of fish and wildlife resources consistent with the FWS’ Mitigation Policy (FR Vol. 46, No. 15, dated January 23, 1981). Chapter 6 contains Fish and Wildlife Enhancement Features designed to offset fish and wildlife resource losses within the scope of the project. In our previous Planning Aid Letter, dated January 11, 2000, specific design features were provided (*i.e.*, tree island design, wetland littoral shelves and fish refugium) to increase the overall ecological function associated with the 8.5 SMA Project in order to compensate for anticipated fish and wildlife resource losses. These design features are currently being incorporated into other project components of the CERP by the Corps, the SFWMD and the cooperating agencies, most notably for the Water Preserve Area Feasibility Study.

The Department finds that the incorporation of these types of ecological features into projects designed to restore south Florida are necessary for the Federal and State Governments to truly achieve our respective restoration goals. Specific to the 8.5 SMA Project, 1940's photography of the western 8.5 SMA depicts a mosaic of tree islands, which today do not exist due to anthropogenic impacts. The restoration of this tree island mosaic would significantly return ecological structure and function to this portion of NESRS.

The Draft SEIS/GRR currently contains no discussion of these design features. The Department recommends that an analysis and discussion of these features be included in the Final SEIS/GRR. The FWS and NPS would be pleased to work with your design engineers during detailed design to ensure that these features, where compatible, become reality in order to provide structural and ecological integrity for the 8.5 SMA Project.

Cumulative Effects: The Department is aware of several on-going and planned federal actions requiring NEPA documentation associated with the MWD and C-111 Projects (*i.e.*, 8.5 SEIS/GRR, Tamiami Trail EIS/GRR, Conveyance and Seepage Structures EIS/GRR, C-111 EIS/GRR, and Interim Operating Plan EIS/GRR). Because of this, there is a need to fully analyze and disclose the cumulative effects of these combined actions as they relate to each other and to the overarching CERP. These actions are all hydrologically linked and interdependent in order to successfully achieve restoration of the southern Everglades. As such, the Department considers it essential for future decision-making to include in the Final SEIS/GRR for the 8.5 SMA Project and all future NEPA documentation a full discussion of the timing and sequencing of these NEPA actions, the hydrologic implications anticipated during the sequencing process, effects on fish and wildlife resources (including federally listed species) expected as these projects come on-line, other reasonably foreseeable federal, state, or local actions potentially associated with these actions, and an assessment of any other secondary effects anticipated.

Cost Comparisons Between Alternatives: During the Department's review of the cost comparisons for the alternatives in the Draft 8.5 SMA SEIS/GRR, it became unclear how the Corps derived their current estimated cost for Alternative 1, or the original authorized flood mitigation plan. The Draft SEIS/GRR lists the current cost for this alternative at \$30,585,531 (from Table C-2, Appendix C, Preliminary Engineering and Costs), or rounded to \$31 million in the comparison tables (see Table 15, etc.). This cost is substantially less than the Corps' estimate of \$47.9 million for the 8.5 SMA mitigation component, as described in the 1999 Capital Asset Plan for the MWD Project, a document that was prepared jointly by the Corps and the Department, and presented to the Office of Management and Budget in late 1999 (see the September 1999 Fixed Asset Plan, Modified Water Deliveries Project, OMB Circular A-11, Exhibit 300B).

By looking at these costs differences in detail (using the documents provided by the Corps in 1999 that were used to prepare the Capital Asset Plan), it is apparent which specific cost changes need further explanation. In the 1999 Capital Asset Plan the land acquisition estimate for the 8.5 SMA mitigation component was \$13.4 million (versus \$4.4 million in the Draft SEIS/GRR), construction costs were estimated at \$31.4 million (versus \$22.1 in the Draft SEIS/GRR), and planning,

engineering, and design was estimated at \$3.1 million (versus \$4.4 million in the Draft SEIS/GRR). This means that the total cost for the Alternative 1 mitigation component in the Draft SEIS/GRR has been reduced by approximately \$17.3 million when compared to the Corps' estimate included in the 1999 Capital Asset Plan. The documents provided by the Corps in 1999, also included a reasonable explanation for the projected increases in costs for the 8.5 SMA mitigation component (from \$31.5 million in 1991 dollars to \$47.9 million in 1999 dollars). The specific explanation in the graphics provided to the Department cite inflation and schedule changes between 1991 and 1999, a switch to fully funding contracts up-front, and finally, a change to a new estimating software package (MCACES), as the reason for these increases.

In addition, it is unclear what factors have led to a significant increase in the estimated cost of a total buyout option (such as Alternative 5 in the Draft SEIS/GRR) for the 8.5 SMA. In the 1990 draft GDM for the MWD Project, we believe that the Corps' estimate for a total buyout was in the range of \$80 million. In 1998, contractors for the SFWMD estimated the cost at approximately \$112 million, which is similar to the Corps' estimate in the 95% Draft SEIS/GRR. The Draft SEIS/GRR currently has the cost of total buyout (Alternative 5) estimated at \$179 million. The preliminary cost summary sheets in Appendix C show an increase in the buyout acreage for this alternative over previous estimates, but this does not explain the substantially increased cost. Please provide further details on these cost changes for total buyout in the Final SEIS/GRR.

Evaluation of Local Cost Differences: The Department has contracted with a national scientific and engineering consulting firm to complete a preliminary review of the local costs to Miami-Dade County that would be expected in response to the implementation of each alternative. This work effort specifically compared the secondary cost data and underlying assumptions included in the Miami-Dade County Secondary Cost Report (submitted to the SFWMD in April 2000) to those of the Corps from appendix F (Local Cost Analysis) in the Draft SEIS/GRR. In general, the County's report projects large budgetary shortfalls for all of the alternatives (except total buyout), whereas the Draft SEIS/GRR projects budgetary surpluses for all of the alternatives (except total buyout).

The primary difference between the two local cost estimates is related to the County's assumption that all the alternatives (except total buyout) would require the construction of a secondary drainage system to provide 1 in 10 year flood protection. This is in anticipation of increased residential densities and growing pressures on the County and regional water managers. This assumed level of flood protection and increased densities would then require a more extensive road network, with the projected capital costs for several of the alternatives exceeding \$150 million. A secondary cause of the large cost differences is that the Corps has apparently misinterpreted the County's demographic projections, and assumed that the population in this area will cease to grow after 2015. This artificial cap on future growth results in additional lowered local costs in the Draft SEIS/GRR. Overall, Department believes that the Corps should accept the County's assumptions for future growth in the area and their projected costs for services, and capital and maintenance costs for roads. The Department further agrees with the County that increased growth will inevitably lead to increased pressure to provide a secondary drainage system for the area, capable of providing 1 in 10 year flood protection.

## Technical Comments

Cooperating Agency Recognition: Any subsequent revisions to the Draft SEIS/GRR should correctly cite the participation of the NPS (in lieu of Everglades National Park) as a cooperating agency. The roles and contributions of both the NPS and FWS in development of the requirements and objectives, as well as the technical analyses of the affected environment and environmental effects, should be acknowledged at the beginning of the document.

Naming Alternatives: Throughout the document, in addition to numbering the alternatives, readability would be significantly enhanced if the alternatives were descriptively referenced (*i.e.*, the name Alternative 7 is non-descriptive and therefore it is difficult to keep each of the alternative's features and impacts conceptually separated).

Responding to Public Input: The Final SEIS/GRR should present a section that links the Project Objectives to the issues raised during scoping and public comment to demonstrate that the public input was responded to and will be considered in subsequent decision-making.

Page 1, Section 1.1 "Purpose and Need": The Final SEIS/GRR should be revised to provide a clear and readable statement of the purpose and need for federal action on the 8.5 SMA Project in the context of the overall MWD Project and the larger CERP. The Department suggests that this section begin with the project purpose and need statement found in Section 1.7 (pages 7 and 8). An explanation of the purpose of the SEIS/GRR should be provided which combines discussions of authorizations, documents, and findings in chronological order. The current approach of starting with the 8.5 SMA Project's authorizing documents obfuscates the actual purpose and need for federal action, as well as the objective of preparing supplemental environmental documentation for the MWD Project.

Page 8, Section 1.3 "Project Need or Opportunity": Recommend re-writing 1<sup>st</sup> para., 5<sup>th</sup> sentence to read: "The SFWMD, ENP, and others suggested additional potential options that would meet the legislated mitigation requirements and other interests in the 8.5 SMA while ensuring environmental restoration of NESRS."

Page 10, Section 1.4.3 "Project Objectives": The Project Objectives need to be reworded as "outcome-oriented" objectives (in lieu of "analysis-oriented" objectives) in the Final SEIS/GRR. The Department understands the Corps' desire of using objectives reflecting analysis as the outcome for the Draft SEIS/GRR, owing to the SFWMD Governing Board's request for a neutral analysis of all the alternatives pending their selection of a Locally Preferred Alternative. However, for the purpose of determining the federal interest and potential federal actions, objectives that are results or outcome-oriented rather than analysis-oriented are now needed, reflective of the Project Requirements listed in Section 1.4.2.

Page 16, Section 2.0 “Alternatives Evaluated”: The Final SEIS/GRR needs to include a summary comparison of the alternatives evaluated, usually portrayed as a table, describing how each alternative met the Project Objectives.

Page 16, Section 2.1 “Description of Alternatives”: The Final SEIS/GRR should include a brief synopsis of each of the alternatives that serves to sharply define the issues considered for the selection of a federally preferred alternative, and provide the decision-maker with clear choices and their corresponding ramifications.

Page 17, Section 2.2 “Issues and Basis for Choice”: The sentence regarding “worst and best case scenarios” needs to be revised to clarify its intent.

Page 17, Section 2.3 “Preferred Alternative”: The Final SEIS/GRR should include a discussion of the process and parties involved with the identification of the federally preferred alternative.

Page 17, Section 2.4 “Alternatives Eliminated from Detailed Evaluation”: The Department believes that the Draft SEIS/GRR contained an array of alternatives that went above and beyond the requirements to adequately comply with the NEPA. We are aware that this was done to provide the public and the Governing Board of the SFWMD with an evaluation of all the alternatives suggested prior to and during scoping, even though there was probably more than sufficient rationale for eliminating some of the alternatives from further study. In light of the need to expeditiously complete this environmental review, the Corps should consider whether it would be helpful, reasonable and acceptable to now eliminate some of the alternatives that are demonstrated to not meet (or minimally meet) the project purpose and need, and adjust Section 2.4 accordingly.

Page 19, Section 3.0 “Affected Environment”: The Final SEIS/GRR should include a discussion of the upstream effects in the Water Conservation Areas and the downstream effects to Florida Bay from the various alternatives, since these areas are hydrologically linked.

Pages 49 and 50 “Listed Species” (background information on the wood stork and the snail kite): These sections do not include a very complete or relevant discussion of hydrology as it relates to the needs of these listed species and the 8.5 SMA, especially the wood stork. Suitable background information is provided in Chapter 7 of the Draft FWCA Report and should be incorporated into the Final SEIS/GRR.

Section 4.0, “Environmental Justice”: Throughout the discussion of alternatives in this section, it is recommended that “potentially increase the adverse environmental effects” be replaced with “may disproportionately affect.”

Section 4.0 “Aesthetics”: Regarding the discussion of levees in this section, it is recommended that the sentences be replaced as follows: “The westernmost levee proposed under this alternative, albeit relatively low in elevation, will nonetheless *decrease the visual appeal of a* picturesque viewshed of the adjoining Save Our Rivers land and ENP parkland.” We find it difficult to imagine that a

structural feature such as a levee, which is generally required by the Corps to be maintained with short mowed grasses and kept clear of shrubs and trees, as a *slight improvement in the viewshed*. This section, as well as mitigation discussions, should also address the maintenance requirements of levees and canals.

Page 93, Section 4.4.5 “Wetland Resources”, Sentence 3: Delete and replace with: “Representative wetland sites of each wetland type were surveyed using WRAP.”

Page 93, Section 4.4.5 “Wetland Resources”, Sentence 4: Include SFWMD and the Miccosukee Tribe of Indians in the list of representatives. Follow this sentence with this qualifying statement: “Representatives from SFWMD and the Miccosukee Tribe participated in the existing condition WRAP, but did not participate in the with-project projections.”

Page 100, “Threatened and Endangered Species”: A Biological Assessment (BA) is referenced for the Cape Sable seaside sparrow, but not for the other listed species. This reference should be deleted from this paragraph because it is inappropriate to imply that a BA would only pertain to one of the five listed species potentially effected. A statement should be included in the Final SEIS that the Corps will prepare a BA for all five listed species which occur within the scope of the project, or that specific sections of the Final SEIS/GRR constitutes a BA. The Corps should also include an “effect determination” for the five listed species. If the Corps concludes that the federally preferred plan is not likely to adversely affect listed species, and the FWS concurs, then section 7 consultation can be concluded informally. If the FWS is unable to concur with this determination, the FWS will request the Corps enter into formal section 7 consultation. On the other hand, if the Corps concludes that the federally preferred plan is likely to adversely affect listed species, the Corps should request initiation of formal section 7 consultation with FWS.

Page 104, Section 4.5.11 “Air Quality and Noise”: It is our experience that noise travels longer distances over water than land; therefore, the discussion of construction and operational noise impacts appears insufficient. A discussion of the transmission of noise over water and wetlands as it effects nearby residences, as well as ambient conditions in ENP, is needed. The true duration and frequency of noise impacts needs to be fully elucidated, and not just the average decibels at a distance of 50 feet.

Page 104, Section 4.5.12 “Farmlands”: As written, it is unclear what and how the direct and indirect conversion of farmlands under the Farmlands Protection Act includes and how it will be assessed. Please expand on this section in the Final SEIS/GRR.

Page 111, Section 4.6.8 “Socio-Economics”: Mitigative measures for the effects of relocating residents, as well as the parties potentially responsible or able to implement to measures, need to be clearly discussed and identified in the Final SEIS/GRR. This should include federal, state, and local entities, as well as the residents in the 8.5 SMA. Mitigative measures for reducing the effects of relocations, especially in light of the environmental justice concerns, need to be more fully evaluated and elucidated in the Final SEIS/GRR. That the Corps will work with “... these minority and low income populations to identify potential mitigation for these impacts...” is an insufficient description

of mitigation. The Final SEIS/GRR should be revised to include options to minimize or compensate for potential impacts. Examples of potential options are contained in some of the alternatives, such as: 1) options of life estates and flowage easements in lieu of buyout, 2) means to assist relocation into eastern sections of the 8.5 SMA to lessen the hardships associated with relocation or break-up of the community; and, 3) means to retain farming and the low density rural atmosphere of the area. Furthermore, an explanation of how properties are valued and owners or tenants can be financially compensated (*i.e.*, what this compensation does and does not include and whether any special legislation were needed) should be included in this discussion. Finally, a discussion of any other potential incentives to mitigate these effects should be included in this section.

Additionally, the Final SEIS/GRR should clearly state that implementation of Alternatives 1, 2, or 9 each require some additional relocation over and above the number previously identified in the authorized plan. Not to recognize that the authorized plan (Alternative 1) , or its derivatives (Alternatives 2 and 9), require some relocation is misleading.

Environmental Consequences of Alternatives 1 through 9 for “Listed Species”: (pages 109, 118, 129, 138, 146, 155, 164, and 174; and Environmental Consequences of Alternatives 6C and 6D for “Listed Species” page 8 in Addendum A): The analysis presented in the Draft SEIS/GRR for wood storks and snail kites is inconsistent with the information provided in Chapter 7 of the Draft FWCA Report. For both the snail kite and the wood stork the SEIS and Addendum A states that the effects of Alternatives 2 through 9, including 6C and 6D, are similar to those stated in the analysis for Alternative 1. For the snail kite this is inconsistent with more quantitative information provided in the Draft FWCA Report, and for the wood stork the SEIS is especially contradictory to information provided in the Draft FWCA Report. Accordingly, information in Chapter 7 of the Draft FWCA Report concerning wood storks and snail kites should be incorporated into the Final SEIS/GRR.

Under the same section and pages as above, with regards to the Cape Sable seaside sparrow, no analysis is provided for Alternatives 1 through 9, and the text indicates that an assessment will be prepared in the future. Addendum A on page 8 includes an assessment of impacts to the sparrow for Alternatives 6C and 6D which are stated to be similar to 6B, yet such an analysis has, according to the text, been deferred and is not included in the “Environmental Consequences” of 6B. This is confusing and inconsistent with the Draft FWCA Report, and the conclusion is contrary to the fact that the Draft FWCA Report concluded that the model runs provided by the Corps, and the modeling assumptions, were not appropriate to gage impacts to the sparrow.

Section 9, “Mailing List”: In the address for Mr. Bradley J. Hartman, the organization should be stated as the Florida Fish and Wildlife Conservation Commission.

Table 11, SEIS (unnumbered): For Alternatives 4, 5, and 7, Table 11 indicates that 1,404 acres of the total wetland acres are changed. This is inconsistent with the information collected by the WRAP Team. The WRAP analysis, based on groundtruthing and photointerpretation, found that a total of 2,695 acres of wetlands exist in the 3,588 acres of land within 8.5 SMA, and that no wetland losses occur with implementation of Alternatives 4 and 5. In fact, the WRAP analysis for Alternatives 4 and

5 clearly indicates that all existing wetlands within the 8.5 SMA are improved to a maximum functional index of 0.85 per acre, with an additional 900 acres of farmed land (below 7.0' NGVD) restored to wetlands. Wetland function in ENP under these two alternatives are also improved, but do not result in any change in wetland acreage. Implementation of either of these two alternatives would result in a total gain of 900 acres of wetlands compared to the existing condition. For Alternative 7, the WRAP analysis found no change in wetland function compared to the existing condition. The use of the term "changed" needs to be fully disclosed, and the origin of the acreage figures in Table 11 need to be fully explained and justified in the Final SEIS/GRR, or deleted in favor of the more detailed and quantified interagency WRAP assessment.

### **General Reevaluation Report**

GRR Sec 5.1 Pg 75-76 "Analysis of Project Requirements": The performance of Alternative 1 cannot be the goal for hydrologic restoration, since Alternative 1 causes drainage of ENP wetlands and causes significant negative impacts to higher stages in ENP as specified in the MWD Project. The performance goal for RQ1 needs to be changed to full MWD implementation as described on page 84 of the SEIS and represented by model run D13R\_C-111\_356\_xx\_95ops.

GRR Sec 5.1 Pg 76 "Analysis of Project Requirements": Average water depths (averaged over 63,000 acres and 365 days) are not a meaningful measure of impacts to stage in ENP. It is incorrect to say that all alternatives meet the requirement to not negatively impact higher stages in ENP as specified in MWD. Alternatives 1,2B, 6C and 9B all have significant negative impacts to NESRS, reducing MWD water depths in more than 27,000 acres in Alternative 1 and Alternative 6C, and reducing MWD water depths in more than 36,600 acres in Alternative 2B, and 9B. The Department recommends using a performance measure of number of acres with decreased water depths relative to the to full MWD implementation as described on page 84 of the SEIS and represented by model run D13R\_C-111\_356\_xx\_95ops.

GRR Sec 5.1 Pg 76 "Analysis of Project Requirements": Contrary to the assertion in the first sentence of paragraph 3, Alternative 1 fails to provide structural mitigation to 263 acres in the 8.5 SMA (see Figure 119, Vol 2, Appendix A, Table 3, Vol 3, Appendix G, page 40). This sentence should be changed to read that Alternatives 2B and 6B provide mitigation through the proposed structural features associated with each alternative. An additional sentence should be added stating "Alternative 1 complies with this requirement through a combination of structural and non-structural means. 263 acres are provided mitigation through flowage easements." Costs should be adjusted to reflect the cost of these flowage easements.

GRR Sec 5.1 Pg 78 "Analysis of Project Requirements": The statement in paragraph 2 "All alternatives that discharge water from a point source have design features that utilize water quality treatment impoundments or buffers" is incorrect. There is no design or cost related to water quality impoundments in the SEIS/GRR. The sentence needs to read "All alternatives that discharge water from a point source depend on unspecified features that would be added to the design and cost of the C-111 project."

GRR Sec 5.1 Pg 79 “Analysis of Project Requirements”: RQ5: Maintain current levels of flood protection for agricultural areas east of L-31N is an inappropriate requirement for the MWD project. Current levels of flood protection were provided under an experimental program which provided flood protection at the expense of ENP wetlands. The 1989 Everglades National Park Expansion and Protection Act states at section 3d: “Any flood protection system implemented by the Secretary of the Army pursuant to this subsection shall be required only to provide for flood protection for present agricultural uses within such adjacent agricultural area.” Therefore, RQ5 needs to be changed to “Maintain levels of flood protection for agricultural uses occurring in 1989” in the Final SEIS/GRR.

GRR Table 2, “Features of Alternatives”: This table reflects percentages for land acquisition and structural mitigation intended, but not met. These numbers should reflect actual percentages required for land acquisition and actual percentage of land provided structural mitigation in the Final SEIS/GRR.

GRR Table 4 “Summary of Alternative Comparisons”: This table needs to include a comparison under the federal requirement to verify restoration of natural hydrologic conditions within ENP.

GRR Table 5 “Description of Performance Measures”: Flood Mitigation Damages need to be evaluated over the entire 1995 model year, not just weeks 21-37. Flood Mitigation needs to be addressed in terms of increased stage and hydroperiod, not just inundation depth. It is recommended these changes be made in the Final SEIS/GRR.

GRR Table 6 “Analysis of Project Requirements”: Table 6 needs to indicate that Alternatives 1, 2B and 9 do not meet RQ1. There is also the need to provide adequate analysis to support RQ3 results. It is recommended these changes be made in the Final SEIS/GRR.

GRR Table 7 Pm1a: The results as reported in the Draft SEIS/GRR erroneously conclude that if there is a single cell that shows an increase in hydroperiod or stage relative to the existing base95 condition, then the goal to restore natural hydrological conditions in ENP has been met. Results need to be changed to indicate how each alternative effects increased stages and hydroperiods due to full implementation of MWD. These changes need to be made in the Final SEIS/GRR.

GRR Table 7 Pm2a: Alternative 1 does not provide mitigation without non-structural features (Fig. 119, App. A). These statements need to be adjusted accordingly and need to treat non-structural mitigation for all alternatives in a consistent way (*i.e.*, the statement in the Final SEIS/GRR should state that Alternatives 1, 3, 6C, 6D, 7 and 8A require the purchase of flowage easements to provide supplemental mitigation for increased water depths).

GRR Table 7 Pm2f: Impacts to landowners for Alternatives 1, 3 and 7 are erroneously identified as zero properties. This does not reflect the areas within the designated inhabited area where structural mitigation is not provided (263, 4,257 and 6,909 acres for alternatives 1, 3 and 7, respectively). This table needs to be corrected in the Final SEIS/GRR to reflect these impacts.

GRR Table 7 Pm4a, 4b: The definitions for short and long hydroperiod wetlands are inappropriate. These definitions need to be restated correctly as on page 92 of SEIS. Tables of wetland acres and maps of wetland distribution need to be revised to reflect the correct definition in the Final SEIS/GRR.

GRR Table 7 Pm6c: Operational protocols can be modified to mitigate for impacts east of L-31N; however, these modifications will likely reduce the restoration benefit to hydrologic conditions in ENP. This project has no authority to mitigate for impacts to land uses that are not compatible with Base83 operating protocols, since this is the authorized pre-project operational protocol. This needs to be clarified in the Final SEIS/GRR.

GRR Table 8 Effects on seasonal variability: Min and max stage should not be the same for Alternatives 4, 5, and 7. Please explain this discrepancy in the Final SEIS/GRR.

GRR Table 8 Flood mitigation damages: Alternative 1 should be 263 acres.

#### **ADDENDUM "A" TO THE DRAFT SEIS/GRR (May 2000)**

At the request of the SFWMD, Addendum A to the Draft SEIS/GRR was prepared to assess two variations of Alternative 6B. These two new alternatives (Alternative 6C and 6D) provide levee/canal alignments which seek to: 1) protect wetland resources within the 8.5 SMA; 2) minimize impacts to landowners and agricultural interests; and, 3) minimize impacts to wetland resources within ENP.

#### **General Comments**

While the Department understands that additional public input resulted in the Corps' effort to develop variations of Alternative 6B, Alternatives 6C and 6D are not similar in nature and design to Alternative 6B and should be treated separately in the final as new alternatives. Alternative 6B was designed to provide flood protection to 8.5 SMA residents residing within the boundaries of the mitigation levee. Alternative 6C and 6D are designed to mitigate for increased water levels due to full MWD implementation. Alternatives 6C and 6D are not designed to provide flood protection to residents within the boundaries of the mitigation levee.

In addition, Alternative 6B places the canal between the buffer area and the inhabited area. Consequently, this difference has an important effect on water quality. Alternative 6B will likely have better water quality because the contaminated seepage water collected from the east (the populated area) will be diluted by the high quality seepage water from the west (the restored buffer area). Contaminated canal seepage water in Alternative 6D will be collected on both sides from populated areas which will compromise water quality.

## Specific Comments

Page 3, Section A 2.0 “RQ 3”: Reference the Department’s above comments and recommendations at “Compensatory Mitigation for Unavoidable Wetland Losses”. While it is recognized that existing wetland resources will be impacted, the statement in the 1<sup>st</sup> paragraph states: “However, it is anticipated that the benefit gained by increased stages in the Everglades system will offset losses to these wetlands.” Addendum A to the SEIS/GRR does not contain any substantive or quantified evaluation which supports this claim. The Corps’ wetland assessment documents that 2,538 acres of wetlands will be lost if Alternative 1 (No Action) is selected as the federally preferred alternative. The Department views this loss as avoidable, as six alternatives (Alternatives 4, 5, 6B, 6D, 7 and 8) not only avoid these losses, but actually increase the spatial extent and functionality of wetland resources in and adjacent to the 8.5 SMA based on the WRAP assessment.

The Department recommends that this statement be deleted from the SEIS/GRR, and that pending the selection of a federally preferred plan, an appropriate wetland compensatory mitigation plan for unavoidable losses of wetland resources be included in the Final SEIS/GRR consistent with the Clean Water Act section 404(b)(1) Guidelines, Executive Order 11990 (protection of wetlands), and various Corps policies and procedures. The Department would be pleased to work with the Corps to develop this plan, as the FWS and NPS have recommended in the Draft FWCA Report (Chapter 6 “Wetland Functional Evaluation”).

Page 3, Section A 2.0 “RQ 4”: The Department finds that it is premature to conclude that Alternatives 6C and 6D would result in no impacts to habitats supporting federally listed species. Conclusions regarding the effects of a federally preferred alternative on listed species are more appropriately made pursuant to section 7 consultation in accordance with the ESA.

It is recommended that the term “critical” in the 2<sup>nd</sup> paragraph be deleted, as it implies “designated critical habitat” as defined in the ESA. The last sentence in this paragraph should be re-written as follows: “Section 7 consultation will be initiated after a federally preferred alternative is selected.”

Page 4, Section A 3.0 “Results of Alternatives Analysis”: The 2<sup>nd</sup> paragraph states that “...there is no attempt to make a determination of whether an objective has been “met”.” The Department finds that this approach is inconsistent with the spirit and intent of NEPA. The Final SEIS/GRR should contain an alternatives analysis which fully discloses which alternative does or does not (and to what degree) meet the stated project objectives. Failure to do so would greatly hamper the decision-maker’s ability to reach a fully informed decision. We recommend the approach of summing the results, by objective and for each alternative, similar to that contained in the Draft FWCA be adopted by the Corps for the Final SEIS/GRR.

Page 8, Section A 4.7 “Listed Species”: It is recommended that effects to the species listed be included in this section, in addition to the Florida panther and the Eastern indigo snake, need to be

evaluated in accordance with section 7 of the ESA upon the selection of a federally preferred alternative (see above comments, page 100 “Threatened and Endangered Species”).

Appendix A, page 27: It is recommended that a full explanation be included in the Final SEIS/GRR justifying why the Corps’ hydrologists used the number of days of continuous inundation as a measure of restoration of natural hydrologic conditions in ENP.

Appendix A, Table 19: Average annual storage calculations are three times the levels that ENP hydrologists calculated. Please explain more thoroughly in the Final SEIS/GRR the basis for these calculations and why they are considered an estimate of average annual storage.

Addendum A, Transmittal Letter: The transmittal letter indicates “...technical results to the same level of detail as in the GRR/SEIS for Alternatives 6C and 6D.” However, several key results are missing from Alternative 6C and 6D analysis, including maps of wetland distribution, hydrographs of groundwater stage at indicator cells, graphs of wetland types, comparison graphs of average annual storage, wetland resource gain or loss, inundation maps, and graphs of Cape Sable seaside sparrow water surface elevations. The following list of figures are examples of maps and tables provided in the analysis of Alternatives 1 through 6 that are not provided for Alternatives 6C and 6D.

Missing Tables:

From the SEIS:

Table 11: Four-Week Average Around Max/Min Average for ENP Indicator Cells

Table 12: Average Range of Indicator Cells for ENP Expansion Lands

Table 13: Continuous Flooding for ENP Expansion Lands

Table 14: Average Stage of Indicator Cells for Agricultural Lands

From Appendix A, Hydrologic Analysis:

Ex. Table 7: Minimum Weekly Average Groundwater Head – 1995

Ex. Table 8: Four-Week Average Around Minimum Weekly Average GW Head

Ex. Table 9: Week of Minimum Weekly Average Groundwater Head

Table 20, 21: Average Annual Depth and Average Annual Storage In NESRS (compared to Alternative 1)

Table 23: Wetland Acreage within NESRS

Table 24: Wetland Acreage within NESRS Compared to Base 83

Table 25: Wetland Acreage within NESRS Compared to Base 95

Table 26: Wetland Acreage within NESRS Compared to Plan 1

Table 27: Number of consecutive Days Water is Below Ground Surface at Select CSSS Area F Indicator Cells – 1995

Table 28: Total Number of Days Water is Above Ground Surface at Select CSSS Area F Indicator Cells – 1995

Table 29: Number of consecutive Days Water is Below Ground Surface at Select CSSS Area F Indicator Cells – 1989  
 Table 30: Total Number of Days Water is Above Ground Surface at Select CSSS Area F Indicator Cells – 1989  
 Table 31: S-331 Monthly Discharge Volumes - 1989  
 Table 32: S-331 Monthly Discharge Volumes – 1995  
 Table 33: S-173 Monthly Discharge Volumes – 1989  
 Table 34: S-173 Monthly Discharge Volumes – 1995  
 Ex. Table 45: 8.5 SMA Mitigation: Plan 1 Compared to Base 83 – Weeks 1-52  
 Ex. Table 52: 8.5 SMA Mitigation: Plan 1 Compared to Base 83 – Weeks 21-37  
 Ex. Table 59: 8.5 SMA Mitigation: Plan 1 Compared to Base 95 – Weeks 1-52  
 Ex. Table 66: 8.5 SMA Mitigation: Plan 1 Compared to Base 95 – Weeks 21-37  
 Table 74: Spatial Changes in NESRS Depth – compared to Base 95 and Plan 1

Missing Figures:

From Appendix A, Hydrologic Analysis:

Ex. (82 figures) Figure 27: Hydrograph – Weekly Average Groundwater Stage at Cell 20457  
 Figure 116: Comparison of NESRS Average Annual Storage for Wet Year  
 Figure 117: Comparison of NESRS Average Annual Storage for Dry Year  
 Figure 120: Estimated Wetland Types in NESRS by Project Alternative  
 Figure 121: Wetland Resource Gain or Loss, Plans versus Base 83  
 Figure 122: Wetland Resource Gain or Loss, Plans versus Base 95  
 Figure 123: Wetland Resource Gain or Loss, LPA's versus Plan 1  
 Figure 130: Number of Days Water Surface Elevation is Below Ground Surface during the Wet Year – CSSS Indicator Cells in Area F  
 Figure 131: Number of Days Water Surface Elevation is Above Ground Surface during the Wet Year – CSSS Indicator Cells in Area F  
 Figure 132: Number of Days Water Surface Elevation is Below Ground Surface during the Dry Year – CSSS Indicator Cells in Area F  
 Figure 133: Number of Days Water Surface Elevation is Above Ground Surface during the Dry Year – CSSS Indicator Cells in Area F  
 Ex. Figure 134: Duration of Continuous Inundation > 0.2 ft – Plan 2B Wet Year  
 Ex. Figure 134b: Duration of Continuous Inundation > 0.0 ft – Plan 2B Wet Year  
 Ex. Figure 135: Duration of Continuous Inundation > 0.2 ft – Plan 2B Dry Year  
 Ex. Figure 135b: Duration of Continuous Inundation > 0.0 ft – Plan 2B Dry Year  
 Ex. Figure 136: Inundation Map Plan 2B – Week 26  
 Ex. Figure 136b: Inundation Map Plan 2B – Week 23  
 Ex. Figure 136c: Root Zone Inundation Map Plan 2B – Week 23  
 Ex. Figure 139: Extent of Wetlands for Plan 2B

# FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION



JAMES L. "JAMIE" ADAMS, JR.  
Bushnell

BARBARA C. BARSH  
Jacksonville

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Deltona

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St. Petersburg

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Sarasota

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Miami

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Pensacola

JOHN D. ROOD  
Jacksonville

ALLAN I. EGBERT, Ph.D., Executive Director  
VICTOR J. HELLER, Assistant Executive Director

OFFICE OF ENVIRONMENTAL SERVICES  
BRADLEY J. HARTMAN, DIRECTOR  
(850)488-6661 TDD (850)488-9542  
FAX (850)922-5679

May 30, 2000

D-16

Col. Joe Miller  
District Engineer  
U.S. Army Corps of Engineers  
P.O. Box 4970  
Jacksonville, Florida 32232-0019

ATTN: Mr. James Duck, Planning Division

Re: 8.5-Square-Mile Area Draft General  
Reevaluation Report and  
Supplemental Environmental Impact  
Statement, Miami-Dade County (SAI  
#FL199810150676CR2)

Dear Col. Miller:

The Office of Environmental Services of the Florida Fish and Wildlife Conservation Commission (FWC) has reviewed the referenced draft documents, and provides the following comments as public input on the draft General Reevaluation Report (GRR) and Supplemental Environmental Impact Statement (SEIS).

In 1992, the U.S. Army Corps of Engineers (COE) was authorized to construct the program of Modified Water Deliveries to Everglades National Park in order to improve water flows into the park. An integral part of that program was mitigation for any increased level of flooding that this program would otherwise incur on the residents of a privately owned area, called the 8.5-Square-Mile Area ("8.5 SMA"), that lies between the L-31N protective levee and Everglades National Park. At that time, the COE's solution to the mitigation requirement was to construct a system of protective levees and a seepage canal along the northern and western portion of the 8.5 SMA. The project has not yet been constructed, in part because of continued disagreement over the efficacy of this solution. In light of new information and improved modeling capacities that have developed since 1992, the COE has reevaluated the alternatives, of which there were nine, and added two additional alternatives in the draft GRR and SEIS. Unlike the case in 1992, the COE has not identified a preferred alternative, but plans to defer to the South Florida Water Management District as the local sponsor to identify a locally preferred

Col. Joe Miller  
May 30, 2000  
Page 2

alternative first. It is then anticipated that the selected alternative will be further refined to improve its performance.

The analyses provided in the draft GRR and SEIS indicate that picking an alternative will not be a simple process, and will necessitate consideration of a complex set of environmental, political, social, and economic issues. Unfortunately, limitations on staff time have prevented us from doing an independent analysis of the alternatives that were presented in the draft documents. Instead, we have relied on the analyses presented in the U.S. Fish and Wildlife Service's draft Fish and Wildlife Coordination Act (FWCA) report to identify four alternatives that would most benefit the fish and wildlife resources of the area. Specifically, Alternative 4 (Residents' Choice Land Acquisition), Alternative 5 (Total Buy-Out Plan), and Alternative 6B (Western Portion of 8.5 SMA as Buffer Plan) would accomplish the needed mitigation, while substantially improving conditions in the park. Alternative 8A (Western Portion of 8.5 SMA as Buffer Plan) would also improve conditions in the park, but the draft FWCA report indicates that it would probably not provide the required flood mitigation in the 8.5 SMA.

Please refer to the attached for specific comments on the text of the draft GRR and SEIS.

Sincerely,



Bradley J. Hartman, Director  
Office of Environmental Services

BJH/MAP  
ENV 2-16/5/3  
8.5SMA.COE.doc  
Enclosure

cc: Mr. Stephen Forsythe, USFWS, Vero Beach  
Superintendent Richard Ring, ENP, Homestead  
Mr. Frank Finch, SFWMD, West Palm Beach  
Mr. Elmar Kurzbach, COE, Jacksonville  
Ms. Cherie Trainor, Florida State Clearinghouse

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**COMMENTS AND INQUIRIES ON APRIL 2000 DRAFT GRR AND EIS:  
8.5 SMA**

(Presented in order of their occurrence in the test)

**Draft GRR**

p. 13, top paragraph (also Table 6 of SEIS): The Florida tree snail has been inadvertently identified as a mussel; however, it should be correctly identified as a mollusk.

p. 15, first paragraph under section 2.2.5 (“Flood Mitigation Needs”): Our understanding is that there has been disagreement as to the level of protection from flooding that was provided before the program of Modified Water Deliveries to Everglades National Park was authorized. We recommend that the GRR clearly specify the level of protection that the 8.5 SMA received before the 1992 authorization.

p. 27, section 3.2.1 (Base 83); also p. 65 section 4.4.2, subsection a (“Operating Procedures: 1983 Operations”): Similarly, we understand that there was a difference between the way that the L-30 and L-31N canals were operated in 1983 as opposed to how they were authorized to be operated, and that this issue has been an area of controversy between staff of Everglades National Park and the COE. We recommend that this assumption for the Base 83 conditions be clearly stated in order to end further dispute.

p. 33, last paragraph under “Birds”: The discussion on foraging opportunities for wood storks that breed in Everglades National Park only mentions northeastern Shark River Slough, thereby implying that this is the only area available for them to feed. Wood storks can feed as far as 50 miles from their nest sites, so storks that have been nesting at the rookery just south of Tamiami Trail as it passes between Water Conservation Area 3B and the park would be expected to forage in a number of areas outside of the park. It would be more accurate to reword this section to indicate that northeastern Shark River Slough is one of the nearest areas available for feeding opportunities.

p. 64, section 4.4.1 (“Boundary Conditions”); also p. 67, item CD4 (“Project Conditions: Base 95 + Future Without Project”); and p. 17 of Volume 2, Appendix A, “Water Sources and Sinks”: What are the model boundary conditions in terms of assumptions regarding the seepage and conveyance portions of the program of Modified Water Deliveries to Everglades National Park? This aspect could affect the volume of water that may be introduced into the eastern portion of Shark River Slough. Since the overall project has been divided into three independently treated issues (the 8.5 SMA, seepage management from and conveyance through Water Conservation Area 3B, and raising the Tamiami Trail), we are concerned that assumptions in one be consistent with the direction of plans for the others.

p. 85, section 7.4 (“Views of the Miccosukee Tribe”): This section implies that Water Conservation Area 3B is under lease with the Miccosukee Tribe of Indians. While we appreciate their concern for the fate of tree islands in this area, it is not under tribal control. We request that this section be reworded to more accurately reflect the relationship.

Table 7, Objectives 7 (“Analyze impacts and costs associated with time delays in implementation of alternatives”): This objective addresses the impact of delaying the project in terms of further flooding of tree islands in the Water Conservation Areas. It assumes a linear relationship between time and the South Florida Water Management District’s analysis of loss of tree islands over a 55-year period, and assumes that “full restoration” would cost between \$50,000 and \$500,000 per acre. While we agree that this consideration should be taken into account, we recommend that it be better documented if it is to play any significant role in the decision-making process. First, rather than basing the estimate on a linear rate of loss, the argument would carry more weight if it included a range of loss assuming a decade of dry years and assuming a decade of wet years. Second, flooding is not the only source of loss of extent of tree islands: fire can also eliminate them over time. Finally, we recommend that the cost estimate of “full restoration” be documented, and that the term “full restoration” be defined. The purpose of our recommendation is that, should this aspect become a significant point of contention in the future, the basis of decision is clearly stated so as to avoid ambiguity of interpretation.

## **SEIS**

p. 38, section 3.10 (“Vegetation”): While Davis’ 1948 vegetation map provides a valuable insight into hydrological patterns prior to the implementation of the Central and South Florida Project, the main canals that drain the Everglades had been in place for several decades when he collected his data. We therefore expect that some loss of peat is likely to have occurred during the interim. Does the SEIS take this loss of peat into account in determining the pattern of vegetation in the predrainage landscape?

p. 55, last paragraph under section 3.19 (“Future Land Use”): The SEIS identifies lack of zoning enforcement as a contributor to conditions that have raised the flood-protection expectations of the residents of the 8.5 SMA. If this is the case, does the COE have any legal avenue to enter into an agreement with Miami-Dade County as a local sponsor to improve zoning enforcement in the future?

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

MAY 30 2000

**D-17**

Colonel Joe R. Miller  
District Engineer  
Jacksonville District, Corps of Engineers  
P.O. Box 4970  
Jacksonville, FL 32232  
ATTN: Mr. Elmar Kurzbach  
Planning Division

**SUBJECT:** Draft Supplement to the Final Environmental Impact Statement with Addendum A (DSEIS) and Draft General Reevaluation Report (DGRR) for Modified Water Deliveries (MWD) to Everglades National Park, 8.5 Square Mile Area (SMA), Miami-Dade County, Florida; CEQ No. 000102

Dear Colonel Miller:

Pursuant to Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (EPA), Region 4 has reviewed the subject documents. The DSEIS/DGRR examine multiple structural/operational alternatives advanced to mitigate the projected increases in flooding within the 8.5 Square Mile Area (SMA). These elevated water levels are predicted (via modeling) to result from augmented stages associated with future plans to modify water deliveries to the Everglades National Park (ENP; Park). These changes to present water deliveries seek to restore a more natural hydrologic regime within the Park which in turn should improve overall ecosystem health. However, full implementation of MWD cannot occur until the issue of induced flooding within the 8.5 SMA is addressed.

Redressing flood impacts within the 8.5 SMA is a complex issue that needs to consider multiple factors. Further, compensation for the additional flooding resulting from MWD activities will not occur in isolation; rather, each change becomes a part of and is influenced by other components of this project, viz., modifying the Tamiami Trail, control of seepage and conveyance from Water Conservation Areas (WCA) 3A and 3B, and possible operational changes to C-111. Because of their interrelated nature, these project elements are also being re-evaluated.

Multiple alternatives for structural and operational flood control measures are being examined as a means to deal with the flood mitigation/protection issue within the 8.5 SMA. Alternatives 1, 2B, 3, 4, 5, 6B, 6C, 6D, 7, 8A, and 9 are addressed in the DSEIS. Structural

alternatives seek to physically modify the effects of water movement (directly/indirectly); these include levees, canals, swales, pump stations, road elevations, and seepage barriers. Operational alternatives being evaluated are acquisition (in whole or part via voluntary participation or by condemnation), flowage easements, and life estates coupled with flowage easement payments. It should be noted that the comparison between these alternatives and the so-called No-Action Alternative (i.e., future without project) is not straightforward. The No-Action Alternative is actually the levee, seepage canal, berm and pump system characterized in the DSEIS as Alternative 1 (*Authorized GDM Plan*), which formed the basis of the Record of Decision for the original MWD Final EIS (May 1993). The U.S. Army Corps of Engineers (USACE)/Department of Interior will use the information developed in the SEIS process to make a decision as to potential future federal action(s) on this project. Integral to this decision-making will be the identification and development of the preferred alternative in the Final SEIS (FSEIS).

All of the alternatives have strengths and weaknesses. Moreover, these plans/strategies are intrinsically complicated given the areal extent of the overall study area, the interrelationships with other development activities, and the magnitude of the processes involved. Because of the complexity inherent in whatever design/operation mode is ultimately chosen, the document cites that unanticipated results could occur, trends may happen more slowly than predicted, and/or field investigations produce data which are ambiguous and/or do not aid decision-making.

During the project development/scoping phase, it became apparent that no one alternative would resolve all issues and trade-offs would have to be made. For example, some property owners will not get the degree/type of flood protection they anticipated, or some wetland community types may not be optimized relative to their hydrological needs. Nonetheless, there is a fundamental need to move expeditiously such that this excellent opportunity to improve the overall Everglades ecosystem is not lost. The national interest of successfully resolving the MWD issue(s) makes the difficult choices attendant to this effort worthwhile.

As a general policy, EPA prefers operational as opposed to structural solutions for flood mitigation. Our evaluation of this action used this focus to gauge and then rank the adverse wetland and water quality ramifications/impacts that each alternative would engender. In our opinion these issues should be of paramount importance in ultimate decision-making for all stakeholders. For example, all waters discharged into ENP must meet Florida Class III water quality criteria and the Park is also afforded additional water quality protection as an Outstanding Florida Water. This requires that the quality of water that was delivered to the Park as of 1979 be maintained in the future. Specific phosphorus limits also apply to structures that discharge water into the Park. The quality of water from upstream sources influence the Park's water quality. Monitoring data reveal nutrients, pesticides, metals, and bacteria in surface water and groundwater discharges from

residential and agricultural areas within the 8.5 SMA at concentrations which can materially affect the long-term preservation of important plant/animal communities in the Park.

Specific EPA water quality comments are enclosed as our *Detailed Water Quality Comments*. In general, however, the DSEIS and DGRR should be revised to contain more precise statements of the water quality treatment requirements which will apply to construction/operation of any new structures. For example, the DGRR (page 78) states that "all alternatives that discharge water from a point source have design features that utilize water quality treatment impoundments or buffers". This does not appear to be true for Alternative 1. The documents state that for several of the alternatives, water from the SMA will be discharged to a Stormwater Treatment Area (STA) for treatment. However, it appears that STA costs (real estate, capital, operation and maintenance, long-term water quality monitoring) are not included.

These long-term water quality concerns and costs would be less applicable with the operational alternatives, e.g., Alternative 5 (*Total Buy-Out Plan* via willing sellers and condemnation of remaining parcels), since potential sources of long-term water quality degradation within the 8.5 SMA would be largely eliminated. All of the structural alternatives will require additional long-term water quality monitoring at key locations, such as S-357. Cost estimates should be revised to include water quality treatment and monitoring. If these estimates are not developed prior to the Record of Decision, it should be stated that although these additional costs are likely, they have not been included.

Project operations can impact water quality. Seepage water from east of L-31 is known to be of poorer water quality than seepage water from the Park. The DSEIS/DGRR should be revised to include specific statements about how the water management system will be operated to maximize water quality by minimizing the delivery of seepage water from east of L-31.

EPA believes that Alternative 5 is the most consistent with balancing water quality/quantity goals (with restoration of approximately 1,400 acres of wetlands) of this 8.5 SMA project as well as the Central and Southern Florida (C&SF) Project. On the other hand, Alternative 1 with its structural flood control features isolating the entire 8.5 SMA would result in significantly more short- and long-term water quality degradation along with the most extensive wetland losses (approximately 2,500 acres) and drawdown area within the Park. Its structural isolation would require removal of internal surface water runoff which, we believe, could require water quality treatment prior to pumpage into ENP.

Intermediate to Alternatives 1 and 5 in terms of water quality and wetlands protection are Alternatives 4, 6B, and 8A. Alternative 4 (*Landowner's Choice Land*

*Acquisition Plan*) proposes the buy-out of willing sellers and a mitigation package for the incremental flood damages experienced by the remaining property owners, while Alternative 6B offers flood protection in the more developed areas with buy-outs creating a western buffer. Alternative 4 would minimize most of our water quality/wetland concerns (wetland gain of approximately 1,400 acres). It proposes buying out the majority of the property owners and at the same time meets the most important needs of other stakeholders. This acquisition of parcels from willing sellers uses an innovative combination of flowage easements, life estates with flowage easements, and fee simple purchase as a means of lessening the adverse effects of additional flooding. The significant environmental disruptions (both short- and long-term resulting from direct and indirect processes) attendant to all structural designs are effectively eliminated. It can be accomplished relatively quickly, its flexibility answers the concerns voiced by most of the current property owners, it provides a balance between environmental and societal objectives, and it is reasonably definitive and should resolve this matter for the majority of property owners. Further, Alternative 4 should have the latitude to mesh with other MWD elements when they are built and as our knowledge of the entire Everglades system improves. However, we acknowledge that Alternative 4 may result in some property owners resisting any of the proposed flood mitigation options.

The Alternative 6 variants (6B, 6C and 6D) would provide differing structural flood protection/mitigation. Water quality effects would be a function of the size of the buffer area (6B largest to 6C smallest) and whether development increases through time in the remaining protected areas. Water quality concerns could be lessened by assuring that these alternatives always have an internal levee adjacent to the seepage canal to prevent surface water inflow. Although the text for Alternative 6D states that there would be two interior levees, Figure A4 shows only one. Similar to Alternative 1 and all alternatives involving structural resolution, the protected property areas will still be materially affected by internal surface water which would require removal and water quality treatment. However, since development is more concentrated in the southeast quadrant of the SMA, overall water quality and wetland issues in the unprotected areas should improve.

Qualitatively, the water quality benefits of Alternatives 4 and 6B appear to be comparable, whereas quantitatively their wetland restoration values diverge from a gain of approximately 1,400 to 250 acres, respectively. Alternative 4 has a water quality detriment in the fact that some scattered residences with poorly functioning septic tanks and farm operations will remain with their runoff being eventually added to the C&SF Project. Alternative 6B isolates the more dense development in the southeast quadrant of the SMA, but the layout facilitates potential treatment measures. The other Alternative 6 variants (6C/6D) are less desirable (wetland losses of approximately 2,050 to 50 acres, respectively) since they enlarge the protected area for development and provide the potential for increased long-term water quality degradation. The DSEIS notes the present lack of enforcement of zoning ordinances in this area and makes the reasonable inference

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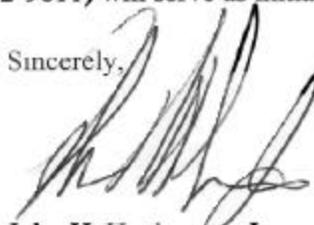
that development can be expected to intensify through time. Accordingly, Alternative 8A with its flow-way design and net gain of approximately 400 acres of wetlands is more environmentally preferable than the 6C/6D alternatives. We also note that while Alternative 7 has an immediate net gain in wetland potential greater than 8A and the same as 5 and 4 (approximately 1,400 acres), its long-term water quality/wetland ramifications are more problematic in this regard since, in the absence of zoning enforcement, development can be expected to intensify in the protected areas.

From a water quality degradation and wetlands restoration perspective and in support of the goals of C&SF Project, EPA ranks the alternatives from most to least environmentally preferable as: 5, 4, 6B, 8A, 6D, 6C, 7, 2B, 9, 3, 1. This recommendation supposes that all internal surface waters within any leveed area will be treated to "marsh-ready" levels before delivery into the Park to reduce long-term water quality degradation. Using this perspective, EPA has environmental concerns with some alternatives and more substantive environmental objections with others (generally due to their structural aspects). Additional information on the issues noted above will be necessary for informed decision-making on this action.

Since a preferred alternative was not identified in the DSEIS, we have rated all alternatives presented in the DSEIS. We believe Alternative 5 is the environmentally preferred alternative since it generally restores the area to its natural conditions and Alternative 1 has the most adverse environmental consequences since its structural approach maximizes internal surface water and wetland drainage. Accordingly, we rate Alternative 5 as LO (i.e., *Lack of Objections*) and Alternative 1 as EO-2 (i.e., *Environmental Objections*, with additional information requested). Because of their intermediate impacts, we rate 4 and 6B as EC-2 (*Environmental Concerns* with additional information requested), with a preference for the 4 due to the overall wetland gain. The remaining alternatives (8A, 6D, 6C, 7, 2B, 9 and 3) are rated as EO-2 in descending environmental order because of their substantive structural impacts.

Thank you for the opportunity to comment on this action. If we can be of further assistance or if a meeting is desirable to discuss this or related projects, Richard Harvey (561-615-5292) and Heinz Mueller (404-562-9611) will serve as initial points of contact.

Sincerely,



John H. Hankinson, Jr.  
Regional Administrator

Enclosure

## DETAILED WATER QUALITY COMMENTS

Dr. William Walker's 1997 report titled *Analysis of Water Quality and Hydrologic Data from the C-111 Basin*, is noteworthy. Dr. Walker analyzed 1984-1996 hydrologic data and phosphorus data from the C-111 basin in order to determine relationships between hydrologic factors and phosphorus concentration and load at South Florida Water Management District (SFWMD) or USACE water control structures throughout the Basin. He found that the source water is critical, and that seepage water from the Park tends to have much lower phosphorus (as low as 6 ppb) than water from east of L-31. This compares to water inflows to the C-111S basin that averaged 24 ppb. He suggested some key principles for protecting water quality that are relevant to USACE water management decisions concerning the 8.5 SMA: inflow of seepage water from east of L-31 should be minimized and the system should be designed for operational flexibility. If water quality does not meet all applicable water quality regulatory requirements at the point of discharge into the Park, then the USACE design must include a means for water quality treatment, such as a wetland or buffer area.

The DGRR notes several water quality issues that must be addressed. Recent water quality data for surface water within the 8.5 SMA indicate elevated total phosphorus, fecal coliform, and total coliform bacteria, and occasional detections of pesticides. Total phosphorus concentration for eight locations within the 8.5 SMA during October 1999 ranged from 140 ppb to 930 ppb (DSEIS Table 2). This compares to the 10 ppb default numeric total phosphorus criterion for the Everglades Protection Area, and the 11 ppb phosphorus limit mandated by the Federal Court Order for S-332, S-18C and S-175. However, in the January 1, 2000 Everglades Consolidated Report, SFWMD reports that for S-331/S-173 from May 1998 to April 1999, the median total phosphorus concentration was 8 ppb (n=28; pg. A4-3-40).

The SFWMD has detected pesticides at low concentrations on several occasions (DSEIS Table 1). Table 1 contains several errors: the units for surface water samples should be ug/L, not ug/kg; endosulfan sulfate was detected, not endosulfan; 'hezazinone' should be 'hexazinone'; and the 0.032 reported for G211 was actually at S331 on 8/4/99. In addition, other detections are omitted from the table: atrazine was detected in surface water at S331 on 4/19/99 at 0.055 ug/L and on 1/6/99 at 0.029 ug/L; atrazine was detected at G211 on 1/6/99 at 0.012 ug/L. Atrazine is the most commonly detected pesticide product in South Florida surface waters. It is a herbicide of low aquatic toxicity and there is no Florida Class III numeric water quality criterion.

The DSEIS and the DGRR recognize these water quality concerns, and the potential long-term incompatibility of surface water or ground water from the 8.5 SMA with the Everglades. Several alternatives include interior levees to segregate runoff from inside the 8.5 SMA so that it will not mix with cleaner seepage water from the Park. The DGRR (page 78) states that "...all alternatives that discharge water from a point source have design features that utilize a water quality treatment impoundments or buffers"). This does not appear to be true for all alternatives, such as Alternative 1. No details or costs for any of these water quality treatment features are provided.

REVD in Planning  
6/1/00.

May 29, 2000

D18

Dear Sir's

In regard to the 8.5 S.M.A. let me say we are not responsible for the breach of trust and or in the delays in the Modified Water Delivery Project.

We do not question a want by local government to buyout the area but due question the legality of condemnation for there is no just reasons.

No ecological benefit, no justification of wetlands no significant difference in restoration needs for we are in a rural area with little use.

We welcome for all to see a land grab under the guise of Everglades restoration, a hidden agenda in benefit of local government against a minority community of Cuban Americans by the federal government in violation of public law 101-209 wish the U.S. Army Corps of Engineers plans to eliminate with the local sponsors the S.F.W.M.D.'s authority in a showcase act on a precedence for all to see on how government can deprive people under due process their legal and constitutional rights of private property for wish there is no legitimate public purpose.

This only if Congress and the law allow it. With all due respect as an American citizen I plea to the Secretary of the Army through your person to fix the fixation against the 8.5 S.M.A.

I erge the Secretary to fulfill under due process the present duty to Congress, our people,

and the law. To execute the 1994 Contract at present with the S.F.W.M.D. in order not to waste time and money on this ill-founded, ill-conceived and if condemn illegal act.

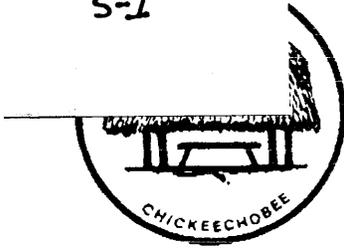
Our protection guaranteed without qualification to the Modified Water Delivery Project under public law 101-229 Section 104(c) is a Congressional trust, a privilege to use but also your present job.

Days vu of the 1998 Nov. 12 and later in Congress, your actions to deliver under a mandate is not to question or

at early 2000s to 2010s

3095 SW 19th St  
MIA, FL 33145  
305-448-4554

S-1



# Miccosukee Tribe of Indians of Florida

**Business Council Members**  
Billy Cypress, Chairman

Jasper Nelson, Ass't. Chairman  
Max Billie, Treasurer

Andrew Bert Sr., Secretary  
Jerry Cypress, Lawmaker

February 29, 2000

Colonel Joe Miller  
Department of the Army  
Jacksonville District Corps of Engineers  
P.O. Box 4970  
Jacksonville, Florida 32232-0019

Re: Supplemental Environmental Impact Statement on the 8.5 Square Mile Area

Dear Colonel Miller,

The Miccosukee Tribe of Indians has participated in many Environmental Impact Statement processes. The notice that we received from you containing an "8.5 Square Mile Area Project Document Request Form," is highly objectionable and, in our opinion, violates the spirit and intent of Part 1503.1 (a) (2) (ii) of the Council on Environmental Quality regulations that requires you to invite comments on the SEIS document from affected Indian Tribes. It is also not in keeping with the President's Executive Order that requires government agencies to treat Indian Tribes on a government-to-government basis.

The Tribe should receive a copy of the entire SEIS at the same time other governmental entities receive it, without being asked to return a mailer to the COE. In fact, we request that each Tribal representative and expert listed in this COE process on this SEIS receive a full copy of the document, including the summary. As you know, Tribal lands in WCA-3A will be directly affected by your decision.

Additionally Part 1503.1 (a) (4) requires that you invite comments from those persons that may be interested or affected. Certainly, the residents and property owners of the 8.5 SMA, who could lose their homes and land as a result of your SEIS, should all be sent a bilingual summary of your document, and full copies should be sent to those who have so requested. Putting a procedural roadblock between this rural, minority community and their comments on your 8.5 SMA SEIS does not meet the spirit, or intent, of the National Environmental Policy Act.

P.O. Box 440021, Tamiami Station, Miami, Florida 33144, (305) 223-8380, fax (305) 223-1011  
Constitution Approved by the Secretary of the Interior, January 11, 1962



I request that you reconsider your current course of action on inviting public comments from those who will be directly affected. The line in your flyer that states: "Failure to return this request form postmarked by March 17, 2000 will be interpreted as a desire not to receive a copy (or Portion) of this Draft document" is not conducive to public participation. It is also particularly offensive from an agency who failed to mail notice of a public meeting on this issue in a timely manner.

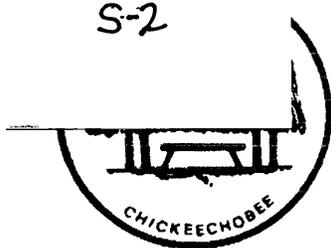
Sincerely,

*Joette Lorion*

Joette Lorion  
Government Affairs

cc Chairman Cypress  
Dexter Lehtinen  
Gene Duncan  
United Property Owners and Friends of the 8.5 SMA  
LULAC

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# Miccosukee Tribe of Indians of Florida

**Business Council Members**  
Billy Cypress, Chairman

Jasper Nelson, Ass't. Chairman  
Max Billie, Treasurer

Andrew Bert Sr., Secretary  
Jerry Cypress, Lawmaker

March 3, 2000

Colonel Joe Miller  
Department of the Army  
Jacksonville Corps of Engineers  
P.O. Box 4970  
Jacksonville, Florida 32232-0019

VIA FAX AND REGULAR MAIL

Re: Wetland Rapid Assessment Procedure (WRAP) 8.5 Square Mile Area

Dear Colonel Miller,

This is to inform you that the Miccosukee Tribe of Indians believes that the current WRAP process being used by the Fish and Wildlife Service (FWS) as part of the Coordination Act Report (CAR) to assess wetlands in the 8.5 SMA for the COE Supplemental Environmental Impact Statement SEIS is unproven, untested, and indefensible. It has come to our attention that the Wetlands Rapid Assessment Procedure (WRAP) has not gone through rulemaking, and that it is being used in a manner in which it was not intended to be used.

The attached memo from Scott Robbins, Director, Natural Resource Management Division of the SFWMD, dated March 20, 1998, clearly shows its discomfort with the way that the COE has been using SFWMD WRAP even for mitigation. The memo states emphatically that, "The District will not implement any new policies relative to determining mitigation ratios without participation from all interested parties and rulemaking, as appropriate." How can FWS and the COE justify using a crude tool developed to measure distinct changes in discrete areas to assess mitigation, to make broad, sweeping conclusions about such a large area - especially when it has not gone through rulemaking?

I attended the first FWS meeting on the 8.5 SMA wetlands assessment on October 29, 1999. I questioned the legality of the COE SEIS, since it appeared that a state entity, and not the federal agency, would be making the decision in a federal process. I also questioned the appropriateness of the planned FWS assessment. I especially expressed the Tribe's concern that the MWD SEIS had been improperly segmented, thereby allowing a narrow and inappropriate focus on wetlands in and around the 8.5 SMA. I advised FWS and the COE that a MWD Project, not an 8.5 SMA Project, had been authorized by Congress, and that by segmenting the project, FWS was failing to quantitatively assess the adverse impacts on hundreds of thousands of acres of Tribal Everglades. I stressed the need to assess the cost of restoring wetlands in the 8.5 SMA. Dave Ferrell of FWS told me this would not be done. This was extremely disconcerting, since our experts have testified

P.O. Box 440021, Tamiami Station, Miami, Florida 33144, (305) 223-8380, fax (305) 223-1011  
Constitution Approved by the Secretary of the Interior, January 11, 1962

that to restore the area it would cost between \$10,000 and \$40,000 an acre. The cost of restoring the land, which will be overtaken by exotics if not restored, could equal or surpass the cost of buying the land. These restoration costs must be quantitatively assessed.

In a memo dated November 18, 1999, Colonel Terry Rice informed you on the Tribe's behalf that the method being used by FWS was superficial and underpinned by gross assumptions. Most important, he advised you that if it was not put into the context of the entire MWD project, it would fail to assess the project's impact on 100,000 of acres of wetlands whose functional lift would totally dwarf any of the wetlands in the 8.5 SMA. Colonel Rice expressed concern that the FWS process that is being used to assess the 8.5 SMA will skew a decision on MWD that can only be made in a regional context. The Tribe's concern is that the continued delay of MWD project, due to an obsession with the 8.5 SMA, will further destroy tree islands that could cost an estimated \$50,000 per 1.2 acres of impacted area to replant, and as much as \$50,000 to \$500,000 to replace. This does not include the loss to the Tribe's culture and way of life, which is priceless.

It is our understanding that the District is no longer participating in the WRAP process. This causes us to question how FWS believes that the SFWMD Governing Board, or the COE for that matter, can make a decision based on a tool that has not gone through the required rulemaking process. Especially, when FWS and the COE are using state, rather than federal jurisdictional wetland criteria. It is my understanding that even the COE representative has said that using state wetland criteria in the WRAP is not defensible. If the COE representative has stated it is not defensible to use this WRAP tool based on state wetland criteria, it should come as no surprise to the COE or the District when the Tribe challenges any result reached as legally indefensible.

The Tribe has monitored the current FWS process hoping that it might eventually comply with the law, but our consultant has confirmed our initial observations about the impropriety and lack of validity of the process. Our consultant is no longer monitoring your process, and the Tribe is officially notifying you, Colonel Miller, that we do not want to be identified in any way with the WRAP process and/or any results that the WRAP process may reach.

We urge the Corps to also disavow the WRAP process currently being used in the 8.5 SMA SEIS, as this tool has not been exposed to the comment opportunities required under the Administrative Procedure Act. Use of WRAP based on state wetland criteria, and without the opportunity for notice and comment required for a rule, will unduly prejudice the Tribe and others who will be adversely impacted by the use of this inappropriate and indefensible tool.

Sincerely,

*Joette Lorion*

Joette Lorion  
Government Affairs

cc Chairman Billy Cypress  
Dexter Lehtinen, Esquire



# South Florida Water Management District

## Memorandum

To: Distribution List  
Robert G. Robbins, Director, Natural Resource Management Division  
March 20, 1998

Subject: Wetlands Rapid Assessment Procedure (WRAP)

### Summary:

Wetland Rapid Assessment Procedure (WRAP) was developed by the South Florida Water Management District (District) as a tool to assist in the post permit compliance evaluation of wetland mitigation sites. WRAP is documented in the District's Technical Publication REG-001, dated September 1997. Recently, the U. S. Army, Corps of Engineers (Corps) has begun using WRAP in their permitting process as a methodology to determine mitigation ratios for wetland impacts. In some cases, the Corps' use of WRAP has led to mitigation ratios which are higher than those previously assessed by the Corps on similar projects.

The District has not participated in the Corps' use of WRAP to determine mitigation ratios for individual projects. The District does, however, anticipate that WRAP may play a future role in adding consistency and predictability to the process of determining mitigation ratios. The District will not implement any new policies relative to determining mitigation ratios without participation from all interested parties and rulemaking, as appropriate.

### What is WRAP?:

WRAP is a functional assessment procedure developed to assist in the evaluation of wetland sites that have been or will be created, enhanced, preserved or restored through the District's permit processes. The overall objective in the development of WRAP was to utilize as much information as possible, both from literature reviews and professional experience, and organize it in the form of a simple, but accurate scoring procedure.

WRAP was initially developed as a tool for determining ecological function of wetland mitigation sites for permitted mitigation projects. Traditionally, success criteria such as survivorship of wetland plants has been used to determine mitigation success. By assessing functional wetland improvements through the use of WRAP, real mitigation benefits may be determined based upon a comprehensive set of criteria that reflect ecological success.

#### *Governing Board:*

Frank Williamson, Jr., Chairman  
Eugene K. Pettis, Vice Chairman  
Mitchell W. Berger

Vera M. Carter  
William E. Graham  
William Hammond

Richard A. Machek  
Michael D. Minton  
Miriam Singer

Samuel E. Poole III, Executive Director  
Michael Skayton, Deputy Executive Director

continue to collect field data to monitor the statistical reliability of the methodology.

### Future use of WRAP

Initially, District staff will use WRAP to track ecological success of mitigation projects. Eventually, and after consultation with the regulated community, District anticipate replacing traditional wetland compliance monitoring with WRAP evaluations. This is expected to have the dual benefit of reducing monitoring costs to the applicant, as well as provide useful data on the successes and failures of various forms of mitigation.

Some environmental consultants prefer to use WRAP to evaluate the quality of wetlands that are the subject of a permit application. This is fine. WRAP is a functional assessment that may provide a more accurate analysis than some traditional methods such as Habitat Evaluation Procedure (HEP) or Wetland Evaluation Technique (WET) and may be easier to use than the new Hydrogeomorphic (HGM) approach.

If and when a sufficient WRAP analysis database is established, we may find that WRAP is also a useful tool to determine appropriate mitigation ratios. If that turns out to be the case, then District staff, in consultation with the regulated community, will further refine those models and may propose their use for permit applications.

S-2R

MAR 31 2000

Planning Division  
Environmental Branch

Mr. Billy Cypress, Chairman  
Miccosukee Tribe of Indians of Florida  
Post Office Box 440021 Tamiami Station  
Miami, Florida 33144

Dear Mr. Cypress:

This is in response to your letter of March 3, 2000 regarding the use and appropriateness of the Wetlands Rapid Assessment Procedure (WRAP), and other aspects of The Fish and Wildlife Coordination Act Report (CAR) for the 8.5 Square Mile Area D-SEIS. You also commented on the local sponsor's role in selecting a Locally Preferred Alternative. You have raised several issues and therefore I would like to answer each of your comments in turn.

You object to 'WRAP' methodology used by the U.S. Fish and Wildlife Service (FWS) and the U.S. Army Corps of Engineers (Corps) to assess current and future functioning of regulatory wetlands. The WRAP method was developed in Florida by the South Florida Water Management District, (SFWMD) and it is now adopted or in the process of adoption by the Corps in other jurisdictions in Florida, in the southeastern United States, and even in the Caribbean. It is not true that WRAP has not been tested, nor is it our experience in the Corps that it is unreliable. In general, it has been found by many wetlands and wildlife experts who have tried it, to be rapid, easy to apply, repeatable and at least as good a method to estimate and compare wetlands function in a regulatory context as HEP or WET, methods previously used by the Corps and State agencies, as well as FWS, for the same purpose. WRAP is faster and requires less outside data collection than HGM, as stated in the SFWMD memorandum, but it is only useful to compare the functional quality of a given site under existing conditions with potential future functional quality of the same site under different conditions. That was the way it was expected to be used by FWS in the CAR. WRAP depends on the expertise of the evaluators, and works only if applied by a group of biologists familiar with the wetlands

communities being rated. It integrates several aspects of wetlands function. It allows a comparison of wetlands functional "score" among several alternative land treatment options. Its incorporation into the FWS studies that the CAR will report on was one method for obtaining input from wetlands experts outside FWS. Therefore, on the issue of including a WRAP analysis as one of the evaluation tools, we must respectfully state that we do not agree that it is "untested, unreliable and indefensible.

However, WRAP is just one tool among many that the Corps expects FWS and other agencies to use to develop recommendations in the CAR. The recommendations in the CAR will probably be based on hydrology, experience, scientific research, endangered species considerations, and other fish and wildlife information. FWS and cooperators also have Corps "Modbranch" model outputs, and their own management and direct research results, to provide recommendations for the 8.5 Square Mile Area (SMA). We are aware that WRAP alone is a small part of the big picture. We are sorry you did not continue to participate, for your consultant's expertise on the everglades wetlands, during the WRAP analysis of existing conditions, added to the consensus FWS was seeking.

Beyond the appropriateness of WRAP to the FWS analysis, we would like to state that it is not within our legal authority to mandate evaluation methodologies, data cited, or recommendations made by a Fish and Wildlife CAR. The scientific contents and conclusions of the CAR are the responsibility, under the Fish and Wildlife Coordination Act, as amended (PL 85-624; 16 U. S. C. 661-666), of FWS. As a Federal Agency contemplating a major water resources project modification, the Corps is required by this law to consult with FWS and the State agency with knowledge of and jurisdiction over wildlife elements. The Corps is also required under the law to include the reports and recommendations of the wildlife agencies in authorization documents for project construction or modification; and we are required to give full consideration to FWS recommendations, and include such justifiable means and measures for wildlife mitigation or enhancement as the Corps finds should be adopted to obtain maximum overall project benefits. We will therefore receive, consider, evaluate fully and respond to FWS recommendations. Since at this time we do not know what those recommendations will be, we do not know which, or if any of

them, are "justifiable" or should be adopted. The Fish and Wildlife Coordination Act requires us to fund CAR studies and to receive and include FWS recommendations. It does not require us to adopt all such recommendations. Again, we are not authorized by this law or any other to determine the manner in which FWS discharges its duty.

You further state that you questioned on October 29, 1999 and continue to question the Corps' strategy of having SFWMD make the decision about which alternative it would recommend. However, it is essential that the SFWMD, as the local sponsor, indicate which alternative it prefers and can support, since it must be willing and able to fund any additional cost of the recommended plan above the authorized plan. Our preliminary analysis shows that there will be a wide range of costs and an equally wide range of environmental consequences, under the alternatives we are considering. SFWMD has expressed a desire to act as local sponsor for these project modifications; therefore selection of an alternative by the SFWMD governing board is absolutely essential. Our function in this process is to provide timely and unbiased information about the alternatives and their consequences. There will be a Federally Recommended plan in the Final S-EIS.

Your letter also questions the segmentation strategy for the Mod Waters project documentation under NEPA, and the decision to assess the 8.5 SMA as one NEPA unit. That decision was made by the Jacksonville District, and confirmed by the Council on Environmental Quality. It was our judgment that, in the interest of getting all of the project modifications necessary to build a "Mod Waters" project in place and fully coordinated with stakeholders and the public by the year 2003, we needed to split off some particularly complex and/or difficult segments first and work through to a resolution of them.

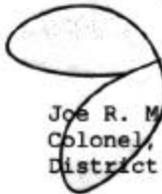
The next step is for FWS to submit the CAR to us. We expect that a discussion of the results of the WRAP analysis will constitute only one section of the Draft CAR. Furthermore, since the CAR will be included in totality as an appendix to the Draft SEIS, it will be available for review and rebuttal by yourselves and other stakeholders during the NEPA process. We do not yet know what recommendations FWS will make based on WRAP.

the importance of this particular evaluation tool in the broader context of our formulation and alternatives evaluation process.

The next step is for FWS to submit the CAR to us. We expect that a discussion of the results of the WRAP analysis will constitute only one section of the Draft CAR. Furthermore, since the CAR will be included in totality as an appendix to the Draft SEIS, it will be available for review and rebuttal by yourselves and other stakeholders during the NEPA process. We do not yet know what recommendations FWS will make based on WRAP.

Please continue to contact us with questions you may have about the SEIS process, the alternatives evaluation, or the role of our agency and others in the alternative development.

Sincerely,



Joe R. Miller  
Colonel, U.S. Army  
District Engineer

Copy Furnished:

Ms Joette Lorion, Government Affairs, Miccosukee Tribe of  
Indians, 7700 N. Kendall Drive, Suite 303, Miami, Florida  
33126

*Handwritten signatures and initials:*  
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