ANNEX A

C-111

LETTERS RECEIVED IN RESPONSE TO THE DRAFT

GENERAL REEVALUATION REPORT

AND

ENVIRONMENTAL IMPACT STATEMENT

STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS

2740 CENTERVIEW DRIVE • TALLAHASSEE, FLORIDA 32399-2100

LAWTON CHILES
Governor

LINDA LOOMIS SHELLEY
Secretary

April 29, 1994

Colonel Terrence Salt
U.S. Army Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232-0019

Dear Colonel Salt:

RE: U.S. Army Corps of Engineers Draft Integrated General Re-evaluation Report (GRR) and Environmental Impact Statement (DEIS) on the Central and Southern Florida Project -Canal 111 (C-111) South Dade County, Florida
SAI: FL9403010133C

The State of Florida has completed its review of the draft Integrated General Reevaluation Report (GRR) and Environmental Impact Statement (DEIS) on the Central and Southern Florida Project - Canal 111 (C111), South Dade County, Florida. The GRR and DEIS have been reviewed in accordance with the requirements of the National Environmental Policy Act and the Coastal Zone Management Act of 1972, as amended.

During the state's review, we requested and received comments from the Departments of Environmental Protection, Transportation and State, the Florida Game and Fresh Water Fish Commission and the South Florida Water Management District which are incorporated herein by reference. Additionally, a meeting to discuss the project was held in West Palm Beach on April 20, 1994, which included representatives of the Corps, Governor's Office, Departments of Environmental Protection and Community Affairs, Game and Fresh Water Fish Commission, South Florida Water Management District and Dade County. Another meeting on the project was held on April 20 in Miami, which included representatives of the Corps, Governor's Office, Department of Environmental Protection, South Florida Water Management District, Dade County, agricultural interests of Dade County, the Nature Conservancy, National Audubon Society, Florida Audubon Society and Friends of the Everglades.

The State of Florida concurs with the Corps' determination that, of the alternatives presented in the draft GRR/EIS, alternative 6A is preferred. However, since its effectiveness in meeting environmental enhancement and flood protection goals will not be determined until further operational details, design evaluation and hydrologic modeling are completed, we request a thorough evaluation of the design modifications recommended by our reviewing agencies, as enclosed.

In addition to the enclosed comments made by our reviewing agencies, the State of Florida wishes to strongly emphasize our desire to further a plan which maximizes the restoration of natural water flows to the eastern and southern Everglades. We are particularly interested in eliminating the adverse effects of C-111 and urge that every effort be made to find an alternative to the continuation of fresh water discharge to Manatee Bay through lower C-111, specifically that: (1) the subdivided buffer strip be expanded, (2) the proposed C-111 spreader canal be moved north to align with an existing drainage ditch and extended under U.S. Highway 1; (3) the capacity of the pump S332E be increased for enhanced flood protection; and (4) the southern reach of C-111 be filled or plugged. We realize that a level of flood protection for Florida City and the surrounding areas must be maintained, and this recommendation assumes that the suggested alternative combined with an operating schedule for the entire C-111 basin can accomplish this objective. In any event, if C-111N is to be constructed, then it needs to be moved north to minimize the impacts on wetlands of dredging and filling.

Consideration and discussion of plans for managing lands to be acquired under this plan needs to be included. Land management plans need to be developed that will avoid the invasion of acquired lands by exotic species.

While the state is not advocating Alternative 9 - "Seepage Curtain Wall," the state believes that the potential benefits or risks of this proposal have not been adequately addressed.

In so far as this project is still in developmental stages and subject to modifications based on further Corps work and consideration of the comments contained in and attached to this letter, we find the draft GRR/EIS consistent with the Florida Coastal Management Program and the goals, policies, plans and objectives of the State of Florida. Furthermore, our final

position will be based on the review of further plans, including the operating schedule for the project and modeling results which evaluate the modifications suggested above. Please provide the State Clearinghouse with any supplemental EIS, further project plans, reports and the final EIS for the state's review.

We appreciate the Corps' efforts to assist in the restoration of Everglades National Park and the priority that this project has been given. Your staff has been very cooperative in its willingness to meet and discuss the project. We look forward to working with the Corps on a plan to enhance the natural conditions of Everglades National Park and Florida Bay.

Very truly yours,

Linda Loomis Shelley
Secretary

LLS/ewr

Enclosures

cc: Virginia Wetherell, Department of Environmental Protection
Allan Egbert, Game and Fresh Water Fish Commission
Tilford Creel, South Florida Water Management District
George Percy, Department of State
Estus Whitfield, Executive Office of the Governor
Pamela McVety, Department of Environmental Protection
Bradley Hartman, Game and Fresh Water Fish Commission
Mike Ciscar, Department of Transportation

Florida Department of
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Marjory Stoneman Douglas Building
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Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

April 27, 1994

Estus Whitfield
Office of Planning and Budgeting
Executive Office of the Governor
The Capitol
Tallahassee, Florida 32399-0001

RE: Draft Integrated General Reevaluation Report and Environmental Impact Statement (IGRREIS), Canal 111
SAI: FL9403010133C

Dear Mr. Whitfield:

Some of the comments provided by the Department on January 28, 1994, regarding the alternatives included in the C-111 Canal Preliminary Draft IGRREIS dated December 1993, are still pertinent to the most recent draft dated February, 1994. Several modifications previously suggested by the Department have been included in the recommended plan; however, other important issues have not been addressed. Additional comments are included to address the new alternatives presented in this draft.

As originally designed, the Central and Southern Florida Flood Control Project was never intended to provide flood protection for land west of the L-31N levee and the C-111 Canal. However, indirect drainage and flood protection have been provided through the lowering of adjacent canal levels. As a result, the ground water elevation has been reduced and ground water movement altered. The Rocky Glades ecosystem has been adversely impacted. Water deliveries to Everglades National Park (ENP) have at times had to be modified and even curtailed. Increased discharges to Manatee Bay and Barnes Sound have resulted in significant environmental deterioration in these waterbodies. The combined result of all these effects has been a loss of adequate quality, quantity, and timing of fresh water flow to Florida Bay. The Department can only support modifications to the C-111 project which will protect Manatee Bay and Barnes Sound and result in significant improvements to the habitat and water quality of the Everglades and Florida Bay.

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The Corps' preferred Alternative 6A does not go far enough toward accomplishing this objective. However, we believe that this aternative could be improved significantly with further modification and improvement (cf. enclosed figure). Specifically, a 500 cfs pump (S-332E) should be located on the C-111E Canal and discharge to a spreader canal which extends east at the north end of the C-109 and C-110 Canals and passes under U. S. Highway 1. This feature would increase the ability to disperse water in a more natural manner into existing wetland areas. Filling of the C-109 and C-110 Canals would prevent the short-circuiting of marsh sheet flow.

The spreader canal proposed in Alternative 6A would be constructed through undisturbed, high quality marshes. About 2000 feet north of the junction of the C-111 and C-111E Canals, an existing ditch extends eastward from the C-111E Canal to U.S. Highway 1. Instead of crossing an undisturbed marsh, the canal should be constructed through this previously disturbed area. If flow requirements make it necessary to connect the spreader canal directly to the C-111 Canal, an extension westward from the C111-E Canal to the C-111 Canal at the more northern location would disturb considerably less wetlands than the proposed location.

With the 500 cfs capacity of S-332E Pump Station available to provide flood protection, the C-111 Canal south of the pump station should be filled. Back-filling the C-111 Canal would be a very great and long awaited environmental accomplishment. This section of the project cuts through the publicly owned Southern Glades which should be restored to a natural condition. Reestablishing sheet flow through this area will benefit the marshes adjacent to existing canals and in the panhandle of the ENP and provide ample opportunity for water quality enhancement. A greater volume of fresh water discharge to Florida Bay will result and dry season ground water drainage to the canal along U.S. Highway 1 will be halted. The Outstanding Florida Waters and Aquatic Preserves of both Manatee Bay and Barnes Sound would be spared the periodic devastation caused by large scale discharges down the C-111 Canal and through the S-197 Structure. If modeling suggests that backfilling the entire length of the C-111 Canal would retard ground water flow, we recommend placing plugs downstream of each of the nine culverts in C-111 to ensure that surface and ground water flows are not diverted eastward. The C-111 Canal can be plugged using material obtained from degrading the spoil mounds south of the canal.

An important environmental function may currently be provided by the spoil mound and culvert system on the northeast bank of the lower C-111 Canal. Caution should be used when considering alterations to this spoil levee. A healthy and functional biological community adapted to current water levels exists in the area north of the C-111 Canal and west of U.S. Highway 1. While providing excellent habitat, this area also serves as an important water storage area. It is possible that the water levels which currently exist in this storage area are very similar to those which existed before the natural hydrology of south Florida was destroyed. This is one of the few remaining areas which stores excess water during the wet season, moderates large scale discharges from the canal system, and helps maintain ground water levels and flows into the dry season. If C-111 Canal is filled, the northern levee should be preserved. Sheetflow to the south can be provided by operating the control culverts that exist in the levee on the north side of the C-111 Canal.

The plan should include extensions of the sub-divided buffer strip to the north to include the discharge from the S-332A Pump and to the south to the southern end of the Frog Pond. Pump station S-332 should be relocated to the west bank of the C-111 Canal with discharge via a lined canal to the extended sub-divided buffer strip. Culverts in the L-31W levee would provide a widely distributed discharge to the headwaters of Taylor Slough. A new control structure should be constructed in the south end of the reservoir which would discharge water from the south end of the Frog Pond back into the C-111 Canal.

As seepage from wetlands west of the canal system is reduced, the dilution of agricultural and urban pollutants will also be reduced. The final project design must include features which will allow all discharges from the project to the Everglades Protection Area to meet the water quality standards which have been developed for that area. The modifications outlined above would provide water quality treatment in the detention/retention zone for all L-31N and C-111 Canal water discharging to ENP. In addition, extending the sub-divided buffer strip would also maximize the temporary storage of excess flood waters, raise additional ground water levels adjacent to ENP and provide additional sheet flow distribution for water discharging to ENP. Ground water levels would be raised in an area that historically provided an important storage function. Seepage from the storage areas would help maintain Everglades and Taylor Slough water levels into the dry season.

Increased ground water levels would also be beneficial to the ecologically important biological community of the Rocky Glades. This community played an important role as a major food source for the Everglades' animal population. During the beginning of the dry season when water levels were still high in other areas of the Everglades, declining ground water levels in the Rocky Glades concentrated food in the rocky depressions. This declining ground water level also helped to provide water to, and extend the hydroperiod of, the Everglades. Formerly, an abundance of varied feeding areas available at different times during the year provided great stability to the Everglades ecosystem.

A major deficiency of the draft IGRREIS is that it does not include operational details for the system after modification. Without operational details, the potential benefits from structural modifications cannot be fully understood and no definitive conclusions of environmental consequences can be drawn. For instance, what ground water and water control elevations will govern operation of the various structures and canals? How will these elevations vary between the wet and dry seasons and during the planting and growing season? Will ground water elevations anywhere in the basin trigger the shut down of the Everglades water delivery system? These are important questions which will ultimately determine the final success and environmental impact of project modifications. We are particularly concerned with this point since the Corps' proposed Alternative 6A would allow discharge through C-111 Canal to Manatee Bay under some conditions.

Water and environmental quality are rapidly deteriorating in the Everglades and Florida Bay ecosystems. It is essential to turn this trend around as soon as possible with aggressive restoration efforts, of which the modifications to the C-111 system are critical components. Although Alternative 6A is the best option presented in the IGRREIS, it needs further modification to achieve the necessary results discussed in this and our two previous comment letters. Since the environmental impacts of Alternative 6A will not be fully understood until future design and hydrologic modeling are completed, the project design will be reevaluated in a future supplement to the EIS. The Corps has stated that the final design of Alternative 6A will be determined by this future analysis.

Since this alternative can be modified in the future, we do not object to proceeding with completion of the final EIS. Based on the information available at this time, we do not object to the project under the federal consistency provisions of the Florida Coastal Management Program. We will reevaluate the consistency of the project when the EIS is supplemented to document environmental impacts based on completion of further design and modeling. Our consistency position will be based on an adequate evaluation of Alternative 6A with the following modifications:

*Backfill or plug the C-111 Canal south of S-332E, increase pump capacity to 500 cfs, and extend the C-111 spreader canal under U.S. Highway 1;

*Provide water quality treatment in a detention/retention zone for all water discharging to Everglades National Park and other state waters;

*Extend the sub-divided buffer strip north to include the discharge from the S-332A pump and south to the southern end of the Frog Pond;

*Relocate pump station S-332 to the west bank of the C-111 canal with discharge via a lined canal to a detention/retention zone in the extended sub-divided buffer strip;

*Relocate the proposed southern spreader canal further to the north;

*Purchase the agricultural lands west of L-31N and C-111.

We anticipate that the Corps will evaluate and model an alternative with these features in the supplement to the IGGREIS. A comparison can then be made between this option and Alternative 6A as it is presented in the draft IGRREIS.

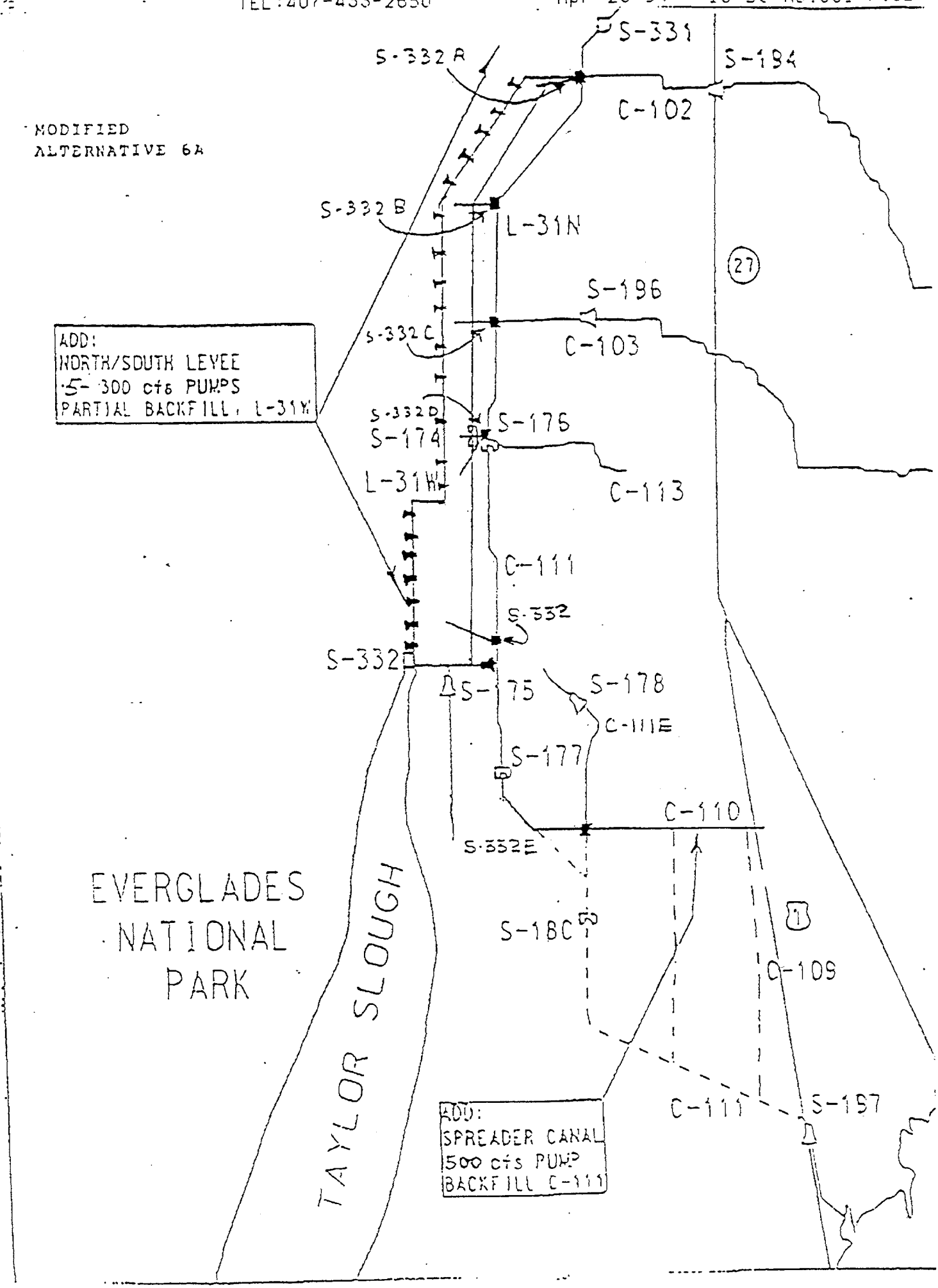
We appreciate this opportunity to comment on this important project. My staff is available to continue discussions with the Corps on developing an acceptable project. If there are any questions regarding the technical comments in this letter, please contact Herb Zebuth at (407)433-2650.

Sincerely,

Pamela P. McVety

Pamela P. McVety
Chief, Office of Intergovernmental Programs

VBW/hz
Enclosure
cc: Virginia B. Wetherell
Mary E.S. Williams
Ed Irby
Frank Nearhoof
George Baragona
John Abendroth
Greg Brock
Charles Knight
Frank Votra
Herb Zebuth


MODIFIED
ALTERNATIVE 6A
S-331
S-332A
S-194
C-102
S-332B
L-31N
27
S-196
S-332C
C-103
ADD:
NORTH/SOUTH LEVEE
5- 300 cfs PUMPS
PARTIAL BACKFILL L-31W
S-332D
S-174
S-175
C-113
L-31W
C-111
S-332
S-332
S-75
S-178
C-111E
S-177
C-110
S-332E
EVERGLADES
NATIONAL
PARK
TAYLOR SLOUGH
S-18C
1
C-109
C-111
S-197
ADD:
SPREADER CANAL
500 cfs PUMP
BACKFILL C-111

FLORIDA GAME AND FRESH WATER FISH COMMISSION

MRS. GILBERT W. HUMPHREY, Miccosukee | JOE MARLIN HILLIARD, Clewiston | J. BEN ROWE, Gainesville | JULIE K. MORRIS, Sarasota | QUINTON L. HEDGEPETH, DDS, Miami

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April 4, 1994

APR 8 1994

ICA

Ms. Janice L. Hatter, Director
Florida State Clearinghouse
Executive Office of the Governor
Office of Planning and Budgeting
The Capitol
Tallahassee, Florida 32399-0001

RE: SAI #FL9403010133C, Canal-111 Draft General Reevaluation Report (GRR) and Environmental Impact Statement, Dade County

Dear Ms. Hatter:

The Office of Environmental Services of the Florida Game and Fresh Water Fish Commission has reviewed the referenced document, and offers the following comments.

Canal-111 (C-111) is part of the comprehensive Central and Southern Florida Flood Control Project (C&SF) authorized by the Flood Control Act of 30 June 1948. The purpose of the C-111 study is to develop a system of structures to aid in the restoration of the C-111 basin and the ecosystems of Everglades National Park (ENP). The 1989 Everglades National Park and Protection Act authorized the construction of modifications to the C&SF project to attempt to restore flows to ENP and to recreate a system more closely mimicking that which historically occurred. Guidelines established to aid in the formulation and evaluation of alternatives included the restoration of historic hydrologic conditions in the C-111 basin, protection of natural values associated with Everglades National Park, elimination of harmful freshwater flows into Manatee Bay/Barnes Sound, and the maintenance of flood protection for the C-111 basin.

Hydrological and biological evaluations were conducted and analyzed for seven of nine proposed structural alternatives. The predicted conditions for each of the alternatives were compared to modern historic conditions. Hydrological analysis required the development of a hydrohabitat model which incorporated the expanse of area that would receive more or less water in appropriate time frames and the degree of restoration of the historic

hydrology in which the marl soil habitat was formed and maintained. For the biological evaluation, a species compatibility index was developed to compare the proposed effects of the alternatives on eight species or species assemblages including the wood stork, roseate spoonbill, Cape Sable seaside sparrow, American alligator, freshwater fishes in Taylor Slough, freshwater fishes in marl prairies, estuarine fishes, and emergent aquatic plants.

Three alternatives were added to the GRR after the release of the Preliminary Draft in December 1993. One alternative (Alternative 9) was supplied by the agricultural community, one by Everglades National Park (Alternative 8), and one by the U.S. Army Corps of Engineers (ACOE) (Alternative 6A). After review, Alternative 9 was determined to be economically infeasible and was dropped from consideration. Review of Alternative 8 showed that, conceptually, it offered more environmental advantages than any prior alternatives. The restoration of stages in the headwaters and upper portions of Taylor Slough would be the main benefit derived from Alternative 8. This would be accomplished by creation of a large buffer strip along the ENP boundary, from Tamiami Trail to the Frog Pond, including the 8.5-square-mile "residential" area. Water would be pumped from the L-31N into the buffer strip, allowing the maintenance of higher water levels along the ENP boundary. Additionally, the lower portion of the C-111 would be backfilled and a spreader canal with a 500-cfs pump station would be constructed to discharge water into the east/west spreader canal lands. The C-109 and C-110 would be eliminated.

Due to the advantages offered by Alternative 8, the ACOE incorporated some of its features into Alternative 6 and called it Alternative 6A. Similar to Alternative 8, Alternative 6A would create a levee, west of the L-31N from C-102 south through the Frog Pond. The area between the levee and the canal would serve as a buffer zone between the agricultural community to the east, and a detention/retention zone to the west. This detention/retention zone would be created by constructing a second levee west of the first levee. Four pump stations would be designed to pump canal water across the buffer zone to the retention/detention area, via lined canals. Twenty-four, 36-inch culverts and an overflow spillway would be constructed along the western levee of the detention/retention area. Similar to Alternative 6, a new canal with a 50-cfs pump (the spreader canal) would be added between the S-332E and US Highway 1, and would provide eastern conveyance across C-109 and C-110. Canal-109 and C-110 would be plugged. Spoil mounds south the C-111 would be degraded.

Of these alternatives, the U.S. Army Corps of Engineers has chosen Alternative 6A as the recommended plan. The objective of Alternative 6A is to restore stages and increase water levels in the headwaters and upper portions of Taylor Slough. The use of the retention/detention area would allow maintenance of higher water levels within the Rocky Glades and northern Taylor Slough. This would reduce seepage loss from Taylor Slough back into the canal and would aid in the treatment of stormwater runoff prior to release into ENP. The retention/detention area could be used to temporarily retain water, therefore allowing water to be released into the Taylor Slough during the appropriate time periods.

Based on review of the proposed alternatives, we believe that Alternative 6A, while a great improvement over the present day system, lacks the structural components necessary to move towards restoration of the lower C-111 basin. The report states that preliminary data developed at the South Florida Water Management District showed that backfilling C-111 caused a reduction in water moved to lands south of the lower section of C-111. This argument was used as justification for retaining C-111; however, without an operational change to bring additional water to the lower C-111 basin, to compensate for water diverted to Taylor Slough, environmental impacts cannot be properly determined. Operational and water supply options need to be developed to determine the potential ecological benefits of the proposed alternatives. We believe that plans which include: (1) backfilling C-111, (2) construction of a spreader canal with a large pump station (per Alternatives 4 and 8), (3) the functional elimination of C-109 and C-110, and (4) changing the operational criteria to allow for increases in overall flows into the system during specified periods, would provide the greatest ecological benefit by restoring sheetflow in the lower basin, and eliminating the capacity to release harmful, freshwater discharges into the estuary through S-197. Furthermore, we believe that the use of a spreader canal and large pump station, in addition to the redirection of S-18C discharges to the pumps proposed to deliver water to the detention/retention basins, would provide an effective method for flood control of developed lands in the region and would eliminate the need for the C-111.

Sincerely,

Bradley J. Hartman, Director
Office of Environmental Services

BJH/MS/rs
ENV 1-3-2
cl11grr.sai
cc: Mr. A.J. Salem, Chief
Planning Division
U.S. Army Corps of Engineers
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FLORIDA DEPARTMENT OF STATE
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March 21, 1994

Ms. Janice L. Hatter, Director
State Clearinghouse
Executive Office of the Governor
Room 1603, The Capitol
Tallahassee, Florida 32399-0001

In Reply Refer To:
Denise M. Breit
Historic Sites
Specialist
(904) 487-2333
Project File No. 940727

RE: Cultural Resource Assessment Request
SAI# FL9403010133C
Central and Southern Florida Project - Canal 111 (C-111)
Dade County, Florida

Dear Ms. Hatter:

In accordance with the provisions of Florida's Coastal Zone Management Act and Chapter 267, Florida Statutes, as well as the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), we have reviewed the referenced project(s) for possible impact to historic properties listed, or eligible for listing, in the National Register of Historic Places, or otherwise of historical or architectural value.

A review of the document indicates that a survey will be performed per our recommendations of January 20, 1994 (SAI# FL9401051559C). Therefore, as long as this condition is met and project impacts to any identified significant historic properties are appropriately avoided, minimized, or mitigated, the proposed project will have no adverse effect on cultural resources listed, or eligible for listing, in the National Register, or otherwise of historical or architectural value.

If you have any questions concerning our comments, please do not hesitate to contact us. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,

for Laura A. Kammerer

George W. Percy, Director
Division of Historical Resources
and
State Historic Preservation Officer

GWP/Bdb
xc: Jasmine Raffington, FCMP-DCA

South Florida Water Management District

3301 Gun Club Road • P.O. Box 24680 • West Palm Beach, FL 33416-4680 • (407) 686-8800 • FL WATS 1-800-432-2045

PRO EVR

April 29, 1994

Colonel Terrence C. Salt, District Engineer
U.S. Army Corps of Engineers
Jacksonville District
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Colonel Salt: Rock

Attached is a summary of our staff comments regarding the Draft of the C-111 GRR. We at the District recognize and appreciate the hard work and dedication of Corps staff in meeting the accelerated schedule for this project. We also support your decision to proceed with the approval process within the Corps now, and to continue to revise the design in the next phase of the process. At the same time, we recognize there are major issues facing all of us in moving ahead on the C-111 project. We understand the importance of reaching consensus on a cost sharing recommendation within the next two weeks, and we pledge to work together with you to find something we can both support.

Based on comments from our staff and others concerned with C-111, a variety of technical issues need further investigation and refinement during future detail design studies. These issues involve design elements, real estate requirements, flood control benefits, and consensus on flow distribution patterns in the lower C-111 basin.

Be assured that the District is committed to working closely with the Corps and Everglades National Park in addressing these issues. We are encouraged by the progress made thus far, and are eager to play our part in addressing the needs of Taylor Slough, Florida Bay, and south Dade County.

Thank you for your help and continuing support with the C-111 effort.

Sincerely,

Tilford C. Creel
Executive Director

attachment
c: Estus Whitfield, Governor's Office
Governing Board Members
Richard Ring, ENP

Governing Board:
Valerie Boyd, Chairman
Frank Williamson, Jr., Vice Chairman
Annie Betancourt
William Hammond
Betsy Krant
Allan Milledge
Eugene K. Pettis
Nathaniel P. Reed
Leah G. Schad
Tilford C. Creel, Executive Director
Thomas K. MacVicar, Deputy Executive Director

END

C-111 General Re-evaluation Report

Staff Review

APRIL 5, 1994

OVERVIEW

The Operations and Maintenance Department expressed some concerns regarding baseline assumptions built into the report. Cross sections given are pre-South Dade Conveyance system, and don't reflect existing configurations. Possible implications arise in that we really don't know how this alternative will reflect flows in the current configuration. Further, we don't know whether drawings or modeling are correct. This requires some clarification.

Use of optimum water levels in Table 2-1 are at issue. Model results indicating an improvement in flood control show an improvement only over this theoretical scenario. Cost/benefit decisions made on this basis could be misleading. We recommend adding a statement in Section 3.1 that addresses this. We further recommend additional model runs, utilizing current levels to evaluate the true flood benefits of the Alternative selected.

Given current difficulties in deriving an operational plan for limited test areas, we encourage early and earnest efforts to address an operating plan for this project.

Concerns have been expressed by our Planning Department that proposed construction activities will have substantial impacts on large areas of wetlands, especially during the period of construction. It is likely that these disturbed areas may take a long time to recover. These areas need to be protected to prevent invasion by exotic species. A potential mitigation for these impacts may come from conversion of Frog Pond agricultural lands to wetlands, and probable improved water deliveries to the southern glades wetlands of the proposed C-111N canal. To this end, the District would like to see some additional information included in the final design phase that details monitoring, restoration and management plans for the Frog Pond, Rocky Glades and southern C-111 areas.

Acquisition of agricultural "in-holdings" west of C-111 and L-31N is not stated as a defined objective of the GRR. The acquisition of those lands should therefore be subject to economic comparison with alternative means of accomplishing the objectives of the project.

There is no quantitative indication of the extent to which S-197 discharges will be reduced or eliminated by this plan. Such an analysis should be included.

Discussions regarding water quality are not included in this report. A basic analysis of the suitability of direct discharge of water from these adjacent lands to ENP needs to be considered.

INTRODUCTION

A question arose regarding the inclusion of River Basin Monetary Authorization & Miscellaneous Civil Works Amendments Act of 1970 as justification for this report. The act references a number of canals with designations unfamiliar to this group. What happened to these canals? If this Act is mentioned, care should be taken to correlate authorization with reality.

The Interim Plan specifics should be included in Section 1, in addition to current language. This could be used as an introduction to current canal configurations.

The Corps needs to update the Everglades SWIM section to reflect the passage of the Everglades Forever Act (Section 373.4592 FS).

Section 1.6.7 re: Hole in the Donut restoration. Was any incorporation made in the model to take the raised elevation of the eastern Frog Pond into consideration?

EXISTING CONDITION/AFFECTED ENVIRONMENT

Section 2 should be rewritten. There is no flow to it; the information is poorly organized and section 2.4.8 is technically inaccurate. It appears that most of the information came from the Everglades SWIM Plan. District staff would be willing to assist in this re-write.

On pages 2-10 to 2-11, statements are made concerning levels and sources of phosphorus and mercury in the Everglades that need some scientific basis. There are also some literature citations in the text with no follow-up description of the source in the "Sources Cited..." section, such as "FWS, 1991" on p. 2-15; "W.E. Odum et al, 1982" on p. 2-18; and the references cited in the reptiles section on p. 2-20.

FUTURE 'WITHOUT PROJECT' CONDITION

Section 3.2 references the inclusion of Modified Water Deliveries in the future "without project" condition. It indicates that an operational plan is part of MWD. This is not accurate, since there is no consensus on an operating plan for MWD.

Section 3.5 Land Use, 4th paragraph: needs to be rewritten. It is not clear what connection exists between a return to design criteria and the heading "future, without project" condition. Does this imply that if there is no GRR, there would automatically be a return to design optimum? This needs clarification.

Section 3.8, 3rd paragraph: should be eliminated, with suggested language included:

In Manatee Bay, Barnes Sound and Florida Bay, cycles of unnatural salinity conditions will likely continue. Discharges of large flow volumes to coastal receiving waters will occur within short time periods following major storms. This will result in significant swings in salinity, from 0 to levels well in excess of seawater salinity. The impact on the area biota will continue to be significantly negative.

Omit the 2nd Section 3.

PROBLEMS AND OPPORTUNITIES

Section 4.1, 3rd paragraph: question accuracy of sentence, "These flows are collected in the canals and are discharged, for the most part, to the east to Biscayne Bay." The Corps needs to look at the latest water budgets (either from ENP or the District) to discern levels flowing south versus east.

Section 4.1, 6th paragraph: The Corps needs to cite a reference for the values given for agricultural flood damage.

Section 4.3.2, 5th paragraph: The sentence, "By the late 1960's and early 1970's, construction of the L-31N, L-31W, and C-111 canal systems reached completion, and the optimum canal operational stages were lowered in response to expanding agricultural and urban development into the lower lying..." . We question the validity of this statement. The Corps needs to evaluate this statement, and consider if this is in fact the rationale for lowering these operational stages. If it is not, this may not be an appropriate cite for this document. It is also in conflict with recent statements made by the Corps in litigation. Definitely needs clarification.

FORMULATION OF ALTERNATIVE PLANS GENERAL RE-EVALUATION REPORT

Section 5.2.1 Restoration of Historic Hydrologic Conditions, 2nd sentence: should address why water quality is not considered in this report.

Section 5.2.3: No information is included in this section. We've recommended some (reference Section 3.8, 3rd paragraph above).

Section 5.5.1(a) Omit the word "natural". Staff asserts this statement may be true some of the time (during the wet season), but cannot be used as a general statement.

Section 5.5.1: We question whether the criteria suggested equate to "operational flexibility". We interpret that phase to mean the ability to balance all priorities for this plan, including the need to maintain flood protection. There is no mention of any flood protection features in items a-h. Better to define this section as "environmental factors".

Section 5.5.3 Environmental Benefits: typo, p.5-7, first sentence: "demonstration" should be "demonstrate".

Section 5.6 Alternatives: recommend moving this section into the Appendix.

Section 5.6.4.8 Alternative 6, last full paragraph: pump station designated S-332C should be S-332E.

Section 5.6.4.10, Alternative 9, 2nd paragraph: need to relook at environmental effects of curtain wall, and potential impacts on the aquifer and timing & distribution of flows along Everglades eastern wetland area.

Section 5.6.4.11 Alternative 6A: next to last sentence states that "project objectives of restoring natural timing, location...would be addressed by these features." We could find no evidence in your subsequent analyses that the timing of water deliveries was analyzed. Although the modeling runs indicate anticipated water levels and durations, they do not indicate the seasonal distribution of water. This is an issue of equal importance to the amount of water. There is no detailed analysis of the water quality effects of this plan. Presumably operational details will be developed and made explicit during the PED process. Without such details, it is not possible to make a full evaluation of the various alternatives. Second paragraph, last sentence: please reword to the following.

> "A concrete lined canal will be connected to the outlet side and discharge 1/2 mile west through the new S-332D tieback levee into the detention/retention zone."

Figure 5-23 indicates that a new, 1000 foot bridge will be required to replace the existing bridge across Taylor Slough. There is no basis for determining this bridge length. Where did the 1000 foot length come from? Is it necessary to be that long?

{We need additional detail regarding S-332 D pump station discharge: how will it work; general design concept}.

Section 5.10.1 Marl Soil Ecosystem Criteria: on pp. 5-51 and following, we agree that these are suitable conditions for the formation of marl soils, based on Tabb's work, and thus represent a reasonable performance measure. From that point on, the analysis was not very clear. Most of the marl model discussion on the bottom of p. 5-51 and the top of p. 5-53 was very awkward and hard to follow. Likewise, the continuing discussion on pp. 5-53 and 5-55 of Hydrohabitat Index was very confusing. Perhaps it would be clearer if the report included sample calculations showing how some of the actual numbers in Table 56 were derived. pg. 5-53 1st sentence: Section 2.5 is supposed to be marl measurements. Section 2.5 is actually population. Need to find it (we couldn't) and rename appropriate section, or delete that reference.

Section 5.14 Evaluation of Alternative Plans: this paragraph references Section 5.5. Section 5.2 names a separate group of objectives. How do these fit together? Which objectives are driving this process? This needs to be clarified. Recommend clarifying first sentence of Section 5.5 so the reader can better understand how the two sets of objectives are aligned. The two tables (5.8 and 5.9) do not help. Which of the two tables drove the process of choosing the best alternative? We recommend additional words to clarify and answer this question.

Results of hydrological assessment model runs (Figs. 5-26 to 5-36 and Tables 5-10 and 5-11) appear to be based on only one year of data (1976 - 1977). Given the wide variability of S. Florida rainfall, it seems risky to extrapolate very far from this result. Is this an average year?

ENVIRONMENTAL EFFECTS OF RECOMMENDED PLAN

Section 6.6 Water Quality. Again, concerns regarding water quality exist, and we think they should be addressed in this document in much more detail than what is covered in this paragraph.

Section 6.10, p. 6-7, 4th paragraph: Question re: calculation on Rocky Glades population. How do we get from 15 to 50, if 5 households contain 3.2 persons per? Either go with macro estimate, or change number to 16.

RECOMMENDED PLAN

Section 7.1.2 Pump Stations: there is no basis defined for sizing of the pumps (4 @300 cfs = 1200 cfs). Please define the process used to size these pumps.

Section 7.1.2.4, S-332D: Staff needs to understand how pump station discharges flow through the levee "toward" ENP. Is it through the retention/detention area, or directly to the Park? How wide is the top of S-332D? (Operations & Maintenance staff need to have this information to effectively comment from their perspective).

Section 7.1.2.5, S-332E: there is no definition of the basis for selecting 50 cfs capacity of S-332E.

Section 7.1.3.1 Levee 31-W tieback: L-31W tieback goes north to S-332B instead of S-332D (typo on page 7-5). L-31W indicates a levee crown width of 15 feet. District requires at least 18 feet of levee crown width for maintenance purposes (vehicle and equipment access needs). As it pertains to the section of the tieback north of S-176: there is no specific functionl criteria defined for the retention/detention area. It would appear that the retention/detention area is unlikely to have any real influence over the timing of flows into ENP, given its size, and hydraulic gradients involved. With respect to the section of the

tieback from S-176 south to S-175: its function appears to be to define a buffer zone, in this case about 1 mile in width. It would appear to have a sole benefit in reduction of seepage inflows, in this case to the C-111 canal. Is this its purpose? If so, is this the most cost effective means to accomplish that end?

Section 7.1.3.2 S-332D Tieback Levee: The function of the levee appears to serve as a "buffer" between the retention/detention area and L-31N. Staff is concerned that seepage rates in the L-31N borrow canal will be significantly impacted by this tieback levee. To that end, this report does not quantitatively address either absolute or differential seepage rates of inflow to L-31N.

Section 7.1.3.7 Eastern Spreader Canal (C-111N): construction of C-111N includes placement of the spoil as a mound on the north bank of the spreader canal. This would appear to interrupt drainage from areas north of C-111N. What will be the impact on upstream properties? This is a question must be addressed. Extension of C-111N across U.S. 1 to provide water supply to "Model Lands" between US 1 & Card Sound road would appear reasonable, but is not included in the project as it is "outside authorization". It would seem reasonable to consider this for the future. Culverts across US 1 are still an issue, requiring additional discussion with DOT prior to implementation of either project.

Section 7.2.1, p.7-7: Need to replace or delete the last sentence of the first paragraph with new text. This sentence seems to contradict the preceding sentences in the paragraph, regarding the interest that needs to be acquired. We assume that the "buffer lands" referred to in the last sentence are the eastern portion of the Rocky Glades, but this is not totally clear.

Section 7.2.2, p. 7-8: There is no discussion of the moving cost payments that may be payable to the residents within the acquisition area. This should be addressed along with some discussion about the obligation to pay for any business relocation moving costs (i.e. moving fruit trees and irrigation system components from tropical fruit groves).

Section 7.3 Monitoring: the overall monitoring plan is very cursory in nature. This needs to be enhanced. The District will cooperate as part of this enhancement effort. Gathering data will be important for future project iterations.

PUBLIC INVOLVEMENT, REVIEW AND CONSULTATION

Section 8.5 Summary of Compliance with Environmental Regulations: Fish & Wildlife Coordination Act, as amended, #8, last sentence. "These subjects are discussed in Section 7.4." They are not discussed in Section 7.4. Should be Section 7.3.

RECOMMENDATIONS

LIST OF PREPARERS

Appendix C, section 7-b, p. C-5: Need to capitalize word "total" in next to last sentence.

Appendix C, section 9. Need to add discussion of residential and business moving costs.

Appendix C, section 10: We are required to do two appraisals when the subject property is valued at more than $500 k. Thus, the number of appraisals that the District will have to do to acquire 300 parcels will be more than 300, given that some portion of the parcels will be valued in excess of $500 k. The Corps should be able to make a reasonable guess as to how many parcels are large enough to require two appraisals. There should also be a discussion about the costs associated with doing title work/obtaining title insurance and environmental audits.

FLORIDA DEPARTMENT OF TRANSPORTATION

LAWTON CHILES
GOVERNOR

BEN G. WATTS
SECRETARY

MEMORANDUM

DATE: March 14th, 1994

TO: Todd Leachman, Planning

FROM: Mike Ciscar, Senior Project Manager

COPIES: John Martinez, Barbara Bernier, File

SUBJECT: COMMENTS ON C-111 DRAFT GRR/EIS
Work Program Item Numbers: 6116800; -6801; -3533; -4033
State Project Numbers: 90060-1501; -1585;
87010-1509; -1501
Federal-aid Project Numbers: SA-485-1(138);SN-485-1(140);
F-485-2(62); SE-485-2(71)
SR-5/US-1 South
From: Abaco Road, on Key Largo
To: Card Sound Road, Just south of Florida City
Counties: Monroe & Dade

This is to provide you with my comments on the subject document.

The extent of my review was only to ascertain what impacts, if any, the US Army Corps of Engineer's (ACOE's) plans would have on the US-1 SOUTH Improvement Program. The following are my comments:

1) On page 1-17, Section 1.6.6 states that the Florida Department of Transportation (FDOT) plans to install 22 two-foot diameter culverts underneath US-1. This is incorrect, the FDOT is studying the provision of 20 two-foot diameter culverts, NOT 22.

2) On page 8-3, Section 8.5.1.b states that the ACOE assumes that the culvert underneath US-1, required as part of their Alternative 4, will be constructed by FDOT. Since Alternative 6A is the recommended plan, we are proceeding with the design of US-1 with the assumption that the spreader canal will not cross the highway, and therefore no culvert will be required at this location. If Alternative 4 is selected prior to the construction of US-1, the plans will be modified to include the required culvert, provided that there are no significant utility conflicts and the FDOT is given appropriate wetland mitigation credits.

I thank you for the opportunity to comment on this important document, and look forward to being kept abreast of any further developments with this C-111 GRR. Should you have any questions, please contact me at 470-5260.

\US1GRR.M14

RECYCLED

FLORIDA DEPARTMENT OF TRANSPORTATION

LAWTON CHILES
GOVERNOR

BEN C. WATTS
SECRETARY

District Six
602 South Miami Avenue
Miami, Florida 33130

OMNIFAX TRANSMITTAL COVER SHEET

DATE: 3/17/94

FAX TO: SUSAN TRAUB-METLY

COMPANY: STATE CLEARINGHOUSE

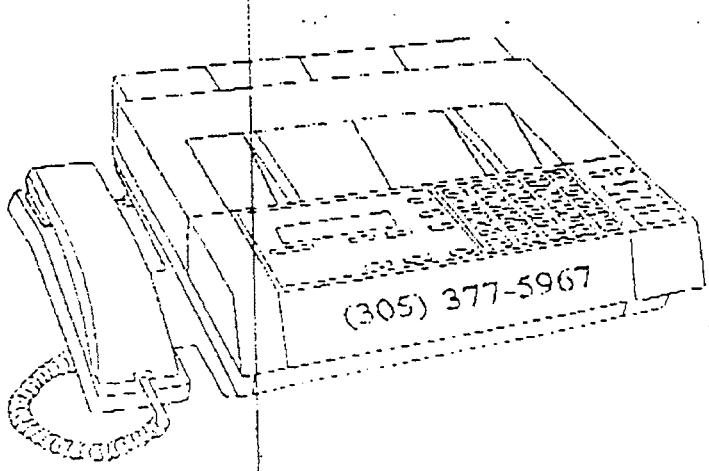
FROM: TODD LEACHMAN

TOTAL NUMBER OF PAGES, INCLUDING COVER SHEET: 3

FAX NUMBER DIALED: 904 488-9005

OUR FAX NUMBER: (305) 377-5967 OUR OFFICE NUMBER: 377.5916

COMMENTS: ORIGINALS TO FOLLOW VIA MAIL



20 Apr 94

C-111 GRR/EIS Comps

MIAMI AIRPORT

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Estus Whitfield	Governor's Office	904 488 5551
Peter Rhodes	SFWMD	407 687-6652
Jim Humble	South Dade Land Dep	2457089
Tom Kirby	DADE COUNTY FARM BUREAU	246-5514
Lynn Griffin	FDEP	904/488-0784
Ernie Barnett	FDEP	904 488-0784
Karsten Rist	Fla. Audubon Society	305 238-2864
Eric Draper	The Nature Conservancy	904 222 0199
Frank Bernardino	Dade Co. DERM	305 372-6781
Nancy Brown	Friends of the Everglades	305-255-3591
GLENN LANDERS	CORPS	904-232-2125
ELWIN MOORE	National Audubon Everglades Campaign	305 653-1136

Estus FAX 904-922-6200

C-111 Interagency Meeting
20 APRIL 1994
WEST PALM BEACH, FL

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Jim Sturgis	SFWMD	407 687-6288
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Richard Bonner	Corps of Eng.	904/232-2586
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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9450 Koger Boulevard
St. Petersburg, Florida 33702

April 18, 1994

A.J. Salem
Chief, Planning Division
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Mr. Salem:

This responds to your February 24, 1994, request for review and comment on the Draft Integrated General Reevaluation Report and Environmental Impact Statement for the Central and Southern Florida Project, Canal 111 (C-111) in South Dade County, Florida.

In general, the document adequately assesses impacts of the proposed modifications. Although the recommended plan differs somewhat from the alternative recommended by the National Park Service (and supported by the National Marine Fisheries Service in our previous comments) in their Hydrological Evaluation of the Proposed Alternatives, we find the plan acceptable, provided the necessary operational adjustments and other remaining issues are addressed during future detailed planning activities.

Thank you for the opportunity to review this report. If you have questions regarding our comments, please contact Ms. Shelley Du Puy of our Miami Field Office at 305/595-8352.

Sincerely,

Shelley DuPuy

for Andreas Mager, Jr.
Assistant Regional Director
Habitat Conservation Division

cc:
F/SEO2
F/SEO23-PC

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICES
SANCTUARIES & RESERVES DIVISION
Florida Keys National Marine Sanctuary
9499 Overseas HWY 1
Marathon, Florida 33050

April 15, 1994

Colonel Terrence C. Salt
District Engineer
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Colonel Salt,

I am writing to you on behalf of the Florida Keys National Marine Sanctuary and the 2800 square nautical miles of priceless natural resources which are protected within its boundaries. These nationally significant resources including seagrass meadows, mangrove islands, extensive hardbottom habitat, patch reefs, and the Nation's only living coral reef tract that lies adjacent to North America, are in jeopardy from declining water quality throughout the Everglades Ecosystem.

In recent months, an unprecedented level of coordination between Federal and State agencies, and involvement by the public, has occurred in order to protect its resources and ensure the livelihood of the Keys community. I applaud the Corps of Engineers commitment to share in this collective effort to restore the Everglades Ecosystem.

This highly diverse ecosystem supports valuable commercial and recreational fisheries and forms the economic basis for the number one industry in the Florida Keys which is tourism and recreation. The major components of the ecosystem are linked through the flow of fresh water from Lake Okeechobee through the Everglades into Florida Bay, where it eventually mingles with Gulf of Mexico waters before moving from the Bay through passes in the Keys onto the coral reef tract. Today this flow has been interrupted by a variety of human manipulations in the South Florida region, resulting in inadequate water deliveries that no longer follow a natural hydro-period (flow pattern). The Bay, which used to be estuarine in salinity, now exhibits high salinities throughout the year and frequently displays hypersaline conditions as a result of decreased freshwater inflow.

An unprecedented consensus now exists among scientists and resource managers of some of this Nation's most significant resources. Serious and progressive degradation is occurring within the Florida Bay ecosystem, and the entire ecosystem may collapse. A crisis of extraordinary proportion jeopardizes this Nation's most diverse and unique natural resources: an ecosystem that the economy of South Florida and the Keys is dependent upon.

The scientists and managers further agree that this crisis is a direct result of flood control, other water management measures, and agricultural runoff that have substantially reduced the amount and quality of freshwater flowing into the Everglades/Florida Bay hydrological system. Likewise, the actual and potential adverse effects of Florida Bay degradation on the marine resources of the Sanctuary have been well documented. As a result, decisions regarding quantity, quality, timing and distribution of freshwater inflows into the Everglades and Florida Bay are of direct and immediate concern to the management of the Florida Keys National Marine Sanctuary.

Dr. Jim Porter has documented the decline of coral habitat on several reefs in the Florida Keys, with his greatest rate of decline being recorded at Looe Key Reef, where he initiated his work in 1984, and where we know the waters of the Gulf and Florida Bay flow. The decline reported by Dr. Porter coincides with anecdotal observations made by many knowledgeable scientists who have visited Looe Key Reef in recent years.

Tortugas pink shrimp landings averaged over 10 million pounds annually during 1963-1980. Since then, annual landings have equaled that average only once, production has been less than 8 million pounds per year, and severe drops below 5 million pounds per year were seen during 1988-1991. Tortugas shrimp fishery production appears to be directly or indirectly linked to freshwater inflow into Florida Bay, the largest nursery area for juvenile pink shrimp in South Florida. While exact mechanisms are not yet known, higher rainfall levels and higher levels of freshwater generally lead to greater pink shrimp production and the lack of freshwater results in less production. In addition, the loss of seagrass habitats has likely exacerbated the decline in pink shrimp production, which appears to have begun before the seagrass die-off.

Research supported by the National Park Service, and carried out by the National Marine Fisheries Service during 1984-1985, demonstrated that the western portion of Florida Bay, adjacent to the Gulf of Mexico, and channel habitats throughout the Bay consistently supported the highest diversity of fish. The channel areas and basins in western Florida Bay also displayed the greatest diversity and density of seagrasses. Statistical analyses indicated close relationships between seagrass abundance and the abundance and diversity of fish populations, including gray snapper and spotted seatrout. The basins in western Florida Bay currently undergoing seagrass die-off and secondary loss of seagrasses as a result of increased turbidity are those areas that had the highest diversity and densities of fishes.

In Florida Bay, the turtle grass (Thalassia) die-off has led to increased acreage of non-vegetated sediments. Loss of seagrass habitat will lead to reduced fisheries productivity, both short-term (as denuded areas take time to recover) and long-term (if reduced water clarity prevents recolonization or induces further die-off).

Seagrass habitats, which dominated the sea floor of Florida Bay, have changed from a mixture of predominately three species (turtle grass, shoal grass, and manatee grass) to largely monospecific meadows dominated by turtle grass. Since the mid-1980s, the generally monospecific turtle grass habitats, particularly in the western portion of the Bay, have been undergoing a die-off with large areas of unvegetated bottom being the end result. Coinciding with this die-off has been an increase in turbidity from both resuspended carbonate sediments and blooms of microscopic algae.

The Florida Keys National Marine Sanctuary makes the following recommendations on the C-111 reconstruction plan:

1. The Sanctuary recognizes that Plan 6A is a step in the right direction. However, it is questionable whether or not it will allow water levels to increase adequately to restore fresh water flow into Florida Bay via Taylor Slough. We recommend that the Corps' seriously reevaluate this plan to ensure adequate fresh water flow into the Bay.

2. The Sanctuary supports the acquisition of the lands west of the L-31/C-111 canals, known as the "Frog Pond and the "Rocky Glades Agricultural Area."

3. The Sanctuary supports the establishment of the retention/detention areas west of L-31, with pumps and structure to deliver water westward into Taylor Slough.

4. The Sanctuary supports backfilling of the C-109 and C-110 canals with 9-10 plugs in each.

5. The Sanctuary supports building a 1,000 ft bridge across State Road 9336 (the road leading to Flamingo) at the Taylor Slough crossing, to replace the current bridge and culverts.

In addition to the above elements contained in the plan, the Sanctuary recommends the following:

1. Replace the proposed C-111N spreader canal with water detention/retention areas running east-west at the head of the C-111 basin.

2. Construct a 500 cfs pump at the S-332E location to accommodate both normal and high rainfall periods.

3. Plug and backfill the existing C-111 canal below the S-18C structure and eliminate the S-197 structure.

The Sanctuary recommends that the Corps expedite every way possible the implementation the C-111 reconstruction plan to prevent any further degradation of Florida Bay as a result of the lack of

fresh water flow.

The Florida Keys National Marine Sanctuary wants to commend the Army Corps of Engineers on its' efforts to address the environmental crisis that now exists in Florida Bay. Thank you for the opportunity to be able to comment on the proposed project. If you have any questions regarding the recommendations, please feel free to contact me.

Sincerely,

Billy D. Causey
Sanctuary Superintendent

cc: Ed Lindelof

South Florida Water Management District

3301 Gun Club Road • P.O. Box 24680 • West Palm Beach, FL 33416-4680 • (407) 686-8800 • FL WATS 1-800-432-2045

PRO EVR

April 29, 1994

Colonel Terrence C. Salt, District Engineer
U.S. Army Corps of Engineers
Jacksonville District
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Colonel Salt: Rock

Attached is a summary of our staff comments regarding the Draft of the C-111 GRR. We at the District recognize and appreciate the hard work and dedication of Corps staff in meeting the accelerated schedule for this project. We also support your decision to proceed with the approval process within the Corps now, and to continue to revise the design in the next phase of the process. At the same time, we recognize there are major issues facing all of us in moving ahead on the C-111 project. We understand the importance of reaching consensus on a cost sharing recommendation within the next two weeks, and we pledge to work together with you to find something we can both support.

Based on comments from our staff and others concerned with C-111, a variety of technical issues need further investigation and refinement during future detail design studies. These issues involve design elements, real estate requirements, flood control benefits, and consensus on flow distribution patterns in the lower C-111 basin.

Be assured that the District is committed to working closely with the Corps and Everglades National Park in addressing these issues. We are encouraged by the progress made thus far, and are eager to play our part in addressing the needs of Taylor Slough, Florida Bay, and south Dade County.

Thank you for your help and continuing support with the C-111 effort.

Sincerely,

Tilford C. Creel
Executive Director

attachment
c: Estus Whitfield, Governor's Office
Governing Board Members
Richard Ring, ENP

Governing Board:
Valerie Boyd, Chairman
Frank Williamson, Jr., Vice Chairman
Annie Betancourt
William Hammond
Betsy Krant
Allan Milledge
Eugene K. Pettis
Nathaniel P. Reed
Leah G. Schad
Tilford C. Creel, Executive Director
Thomas K. MacVicar, Deputy Executive Director

C-111 General Re-evaluation Report

Staff Review

APRIL 5, 1994

OVERVIEW

The Operations and Maintenance Department expressed some concerns regarding baseline assumptions built into the report. Cross sections given are pre-South Dade Conveyance system, and don't reflect existing configurations. Possible implications arise in that we really don't know how this alternative will reflect flows in the current configuration. Furth[illegible] we don't know whether drawings or modeling are correct. This requires some clarifica[illegible]

Use of optimum water levels in Table 2-1 are at issue. Model results indicating an improvement in flood control show an improvement only over this theoretical scenario. Cost/benefit decisions made on this basis could be misleading. We recommend adding a statement in Section 3.1 that addresses this. We further recommend additional model runs, utilizing current levels to evaluate the true flood benefits of the Alternative selected.

Given current difficulties in deriving an operational plan for limited test areas, we encourage early and earnest efforts to address an operating plan for this project.

Concerns have been expressed by our Planning Department that proposed construction activities will have substantial impacts on large areas of wetlands, especially during the period of construction. It is likely that these disturbed areas may take a long time to recover. These areas need to be protected to prevent invasion by exotic species. A potential mitigation for these impacts may come from conversion of Frog Pond agricultural lands to wetlands, and probable improved water deliveries to the southern glades wetlands of the proposed C-111N canal. To this end, the District would like to see some additional information included in the final design phase that details monitoring, restoration and management plans for the Frog Pond, Rocky Glades and southern C-111 areas.

Acquisition of agricultural "in-holdings" west of C-111 and L-31N is not stated as a defined objective of the GRR. The acquisition of those lands should therefore be subject to economic comparison with alternative means of accomplishing the objectives of the project.

There is no quantitative indication of the extent to which S-197 discharges will be reduced or eliminated by this plan. Such an analysis should be included.

Discussions regarding water quality are not included in this report. A basic analysis of the suitability of direct discharge of water from these adjacent lands to ENP needs to be considered.

INTRODUCTION

A question arose regarding the inclusion of River Basin Monetary Authorization & Miscellaneous Civil Works Amendments Act of 1970 as justification for this report. The act references a number of canals with designations unfamiliar to this group. What happened to these canals? If this Act is mentioned, care should be taken to correlate authorization with reality.

The Interim Plan specifics should be included in Section 1, in addition to current language. This could be used as an introduction to current canal configurations.

The Corps needs to update the Everglades SWIM section to reflect the passage of the Everglades Forever Act (Section 373.4592 FS).

Section 1.6.7 re: Hole in the Donut restoration. Was any incorporation made in the model to take the raised elevation of the eastern Frog Pond into consideration?

EXISTING CONDITION/AFFECTED ENVIRONMENT

Section 2 should be rewritten. There is no flow to it; the information is poorly organized and section 2.4.8 is technically inaccurate. It appears that most of the information came from the Everglades SWIM Plan. District staff would be willing to assist in this re-write.

On pages 2-10 to 2-11, statements are made concerning levels and sources of phosphorus and mercury in the Everglades that need some scientific basis. There are also some literature citations in the text with no follow-up description of the source in the "Sources Cited..." section, such as "FWS, 1991" on p. 2-15; "W.E. Odum et al, 1982" on p. 2-18; and the references cited in the reptiles section on p. 2-20.

FUTURE 'WITHOUT PROJECT' CONDITION

Section 3.2 references the inclusion of Modified Water Deliveries in the future "without project" condition. It indicates that an operational plan is part of MWD. This is not accurate, since there is no consensus on an operating plan for MWD.

Section 3.5 Land Use, 4th paragraph: needs to be rewritten. It is not clear what connection exists between a return to design criteria and the heading "future, without project" condition. Does this imply that if there is no GRR, there would automatically be a return to design optimum? This needs clarification.

Section 3.8, 3rd paragraph: should be eliminated, with suggested language included:

> In Manatee Bay, Barnes Sound and Florida Bay, cycles of unnatural salinity conditions will likely continue. Discharges of large flow volumes to coastal receiving waters will occur within short time periods following major storms. This will result in significant swings in salinity, from 0 to levels well in excess of seawater salinity. The impact on the area biota will continue to be significantly negative.

Omit the 2nd Section 3.

PROBLEMS AND OPPORTUNITIES

Section 4.1, 3rd paragraph: question accuracy of sentence, "These flows are collected in the canals and are discharged, for the most part, to the east to Biscayne Bay." The Corps needs to look at the latest water budgets (either from ENP or the District) to discern levels flowing south versus east.

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FORMULATION OF ALTERNATIVE PLANS GENERAL RE-EVALUATION REPORT

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Section 5.5.1(a) Omit the word "natural". Staff asserts this statement may be true some of the time (during the wet season), but cannot be used as a general statement.

Section 5.5.1: We question whether the criteria suggested equate to "operational flexibility". We interpret that phase to mean the ability to balance all priorities for this plan, including the need to maintain flood protection. There is no mention of any flood protection features in items a-h. Better to define this section as "environmental factors".

Section 5.5.3 Environmental Benefits: typo, p.5-7, first sentence: "demonstration" should be "demonstrate".

Section 5.6 Alternatives: recommend moving this section into the Appendix.

Section 5.6.4.8 Alternative 6, last full paragraph: pump station designated S-332C should be S-332E.

Section 5.6.4.10, Alternative 9, 2nd paragraph: need to relook at environmental effects of curtain wall, and potential impacts on the aquifer and timing & distribution of flows along Everglades eastern wetland area.

Section 5.6.4.11 Alternative 6A: next to last sentence states that "project objectives of restoring natural timing, location...would be addressed by these features." We could find no evidence in your subsequent analyses that the timing of water deliveries was analyzed. Although the modeling runs indicate anticipated water levels and durations, they do not indicate the seasonal distribution of water. This is an issue of equal importance to the amount of water. There is no detailed analysis of the water quality effects of this plan. Presumably operational details will be developed and made explicit during the PED process. Without such details, it is not possible to make a full evaluation of the various alternatives. Second paragraph, last sentence: please reword to the following.

> "A concrete lined canal will be connected to the outlet side and discharge 1/2 mile west through the new S-332D tieback levee into the detention/retention zone."

Figure 5-23 indicates that a new, 1000 foot bridge will be required to replace the existing bridge across Taylor Slough. There is no basis for determining this bridge length. Where did the 1000 foot length come from? Is it necessary to be that long?

{We need additional detail regarding S-332 D pump station discharge: how will it work; general design concept}.

Section 5.10.1 Marl Soil Ecosystem Criteria: on pp. 5-51 and following, we agree that these are suitable conditions for the formation of marl soils, based on Tabb's work, and thus represent a reasonable performance measure. From that point on, the analysis was not very clear. Most of the marl model discussion on the bottom of p. 5-51 and the top of p. 5-53 was very awkward and hard to follow. Likewise, the continuing discussion on pp. 5-53 and 5-55 of Hydrohabitat Index was very confusing. Perhaps it would be clearer if the report included sample calculations showing how some of the actual numbers in Table 56 were derived. pg. 5-53 1st sentence: Section 2.5 is supposed to be marl measurements. Section 2.5 is actually population. Need to find it (we couldn't) and rename appropriate section, or delete that reference.

Section 5.14 Evaluation of Alternative Plans: this paragraph references Section 5.5. Section 5.2 names a separate group of objectives. How do these fit together? Which objectives are driving this process? This needs to be clarified. Recommend clarifying first sentence of Section 5.5 so the reader can better understand how the two sets of objectives are aligned. The two tables (5.8 and 5.9) do not help. Which of the two tables drove the process of choosing the best alternative? We recommend additional words to clarify and answer this question.

Results of hydrological assessment model runs (Figs. 5-26 to 5-36 and Tables 5-10 and 5-11) appear to be based on only one year of data (1976 - 1977). Given the wide variability of S. Florida rainfall, it seems risky to extrapolate very far from this result. Is this an average year?

ENVIRONMENTAL EFFECTS OF RECOMMENDED PLAN

Section 6.6 Water Quality. Again, concerns regarding water quality exist, and we think they should be addressed in this document in much more detail than what is covered in this paragraph.

Section 6.10, p. 6-7, 4th paragraph: Question re: calculation on Rocky Glades population. How do we get from 15 to 50, if 5 households contain 3.2 persons per? Either go with macro estimate, or change number to 16.

RECOMMENDED PLAN

Section 7.1.2 Pump Stations: there is no basis defined for sizing of the pumps (4 @300 cfs = 1200 cfs). Please define the process used to size these pumps.

Section 7.1.2.4, S-332D: Staff needs to understand how pump station discharges flow through the levee "toward" ENP. Is it through the retention/detention area, or directly to the Park? How wide is the top of S-332D? (Operations & Maintenance staff need to have this information to effectively comment from their perspective).

Section 7.1.2.5, S-332E: there is no definition of the basis for selecting 50 cfs capacity of S-332E.

Section 7.1.3.1 Levee 31-W tieback: L-31W tieback goes north to S-332B instead of S-332D (typo on page 7-5). L-31W indicates a levee crown width of 15 feet. District requires at least 18 feet of levee crown width for maintenance purposes (vehicle and equipment access needs). As it pertains to the section of the tieback north of S-176: there is no specific functionl criteria defined for the retention/detention area. It would appear that the retention/detention area is unlikely to have any real influence over the timing of flows into ENP, given its size, and hydraulic gradients involved. With respect to the section of the

tieback from S-176 south to S-175: its function appears to be to define a buffer zone, in this case about 1 mile in width. It would appear to have a sole benefit in reduction of seepage inflows, in this case to the C-111 canal. Is this its purpose? If so, is this the most cost effective means to accomplish that end?

Section 7.1.3.2 S-332D Tieback Levee: The function of the levee appears to serve as a "buffer" between the retention/detention area and L-31N. Staff is concerned that seepage rates in the L-31N borrow canal will be significantly impacted by this tieback levee. To that end, this report does not quantitatively address either absolute or differential seepage rates of inflow to L-31N.

Section 7.1.3.7 Eastern Spreader Canal (C-111N): construction of C-111N includes placement of the spoil as a mound on the north bank of the spreader canal. This would appear to interrupt drainage from areas north of C-111N. What will be the impact on upstream properties? This is a question must be addressed. Extension of C-111N across U.S. 1 to provide water supply to "Model Lands" between US 1 & Card Sound road would appear reasonable, but is not included in the project as it is "outside authorization". It would seem reasonable to consider this for the future. Culverts across US 1 are still an issue, requiring additional discussion with DOT prior to implementation of either project.

Section 7.2.1, p.7-7: Need to replace or delete the last sentence of the first paragraph with new text. This sentence seems to contradict the preceding sentences in the paragraph, regarding the interest that needs to be acquired. We assume that the "buffer lands" referred to in the last sentence are the eastern portion of the Rocky Glades, but this is not totally clear.

Section 7.2.2, p. 7-8: There is no discussion of the moving cost payments that may be payable to the residents within the acquisition area. This should be addressed along with some discussion about the obligation to pay for any business relocation moving costs (i.e. moving fruit trees and irrigation system components from tropical fruit groves).

Section 7.3 Monitoring: the overall monitoring plan is very cursory in nature. This needs to be enhanced. The District will cooperate as part of this enhancement effort. Gathering data will be important for future project iterations.

PUBLIC INVOLVEMENT, REVIEW AND CONSULTATION

Section 8.5 Summary of Compliance with Environmental Regulations: Fish & Wildlife Coordination Act, as amended, #8, last sentence. "These subjects are discussed in Section 7.4." They are not discussed in Section 7.4. Should be Section 7.3.

RECOMMENDATIONS

LIST OF PREPARERS

Appendix C, section 7-b, p. C-5: Need to capitalize word "total" in next to last sentence.

Appendix C, section 9. Need to add discussion of residential and business moving costs.

Appendix C, section 10: We are required to do two appraisals when the subject property is valued at more than $500 k. Thus, the number of appraisals that the District will have to do to acquire 300 parcels will be more than 300, given that some portion of the parcels will be valued in excess of $500 k. The Corps should be able to make a reasonable guess as to how many parcels are large enough to require two appraisals. There should also be a discussion about the costs associated with doing title work/obtaining title insurance and environmental audits.

The Everglades Coalition

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April 15, 1994

Colonel Terrence Salt
U.S. Army Corps of Engineers
Jacksonville District
P.O. Box 4970
Jacksonville, Florida 32232-0019

re: Draft Integrated GRR and EIS for C-111

Dear Colonel Salt:

By way of this letter, the Everglades Coalition submits its comments on the February 1994 Draft Integrated General Reevaluation Report and Environmental Impact Statement for Canal 111. We consider this project to be a cornerstone in the effort to restore the Everglades system to its former health, recreating a functioning ecosystem containing the same key components and processes which once characterized its pre-project condition. By reference we wish to restate the comments contained in National Audubon Society's January 24, 1994, letter on the same subject.

We wish to congratulate the Corps for making significant improvements in the proposal from when we last saw it. Your proposed retention/detention areas will provide clean water, flood protection and a water barrier between developed lands and the natural Everglades system. Your proposal goes a long way towards restoring sheetflow in this area. We also applaud your proposed acquisition of sensitive lands bordering Everglades National Park. While this draft GRR represents a significant improvement over current operating conditions we believe that further ecological improvements will be achieved with the changes indicated below. We strongly support moving this project forward on its current fast track.

ECONOMIC IMPACT

The economic analysis for this project is flawed because it does not incorporate the cost of the collapse of Florida Bay versus the benefits of restoring it. The degradation of Florida Bay has endangered the economy of the entire Florida Keys which is based in large part on fishing and diving. Scientists agree restoration of freshwater flows is one essential ingredient to the restoration of the Bay. Since a primary objective of the C-111 GRR is to restore natural flows through Taylor Slough into the Bay, the economic benefits of environmental recovery to these industries should be quantified and will provide additional economic justification for this project.

ACHIEVING FULL RESTORATION

As described in the Ogden et al (1993) Report, "Environmental evaluation for the structural alternative plans for the C-111 draft GRR, submitted to the U.S. Army Corps of Engineers, December 1993", extensive ecological degradation of the Taylor Slough and C-111 basins has occurred. This degradation has occurred primarily as a result of changes in hydrological conditions caused by structural and operational water management practices in the South Dade Conveyance System (SDCS). Water levels in the marshes of Taylor Slough, Rocky Glades and the C-111 basin have been significantly lowered. Depths during the wet season now are as much as 2 feet lower in some areas (Johnson and Fennema 1989, Loftus et al 1992, Van Lent et al 1993, and Van Lent and Johnson 1993). Further, the distribution and timing of water deliveries has been significantly altered.

These reductions in water depths have reduced hydroperiods basinwide, resulting in changes in periphyton communities affecting the rest of the food chain. This hydrologic disruption adversely affects the number of fish present which affects the use of the area by predators such as birds (Bancroft 1993; Affidavit, South Dade Land Corp. v. Sullivan). This has apparently led to the widespread reduction in the use of this area by a suite of wetland dependent species including Wood Storks, American Alligators, Wading Birds, Roseate Spoonbills and fish.

The Congressional mandate for this General Reevaluation Report (GRR), is to make structural modifications to the C-111 basin canal system which are capable of imparting "restoration of the ecosystem in Taylor Slough and the eastern panhandle of Everglades National Park (ENP) . . . ." To meet this goal, these and future modifications, as well as the establishment of operational criteria must be designed to achieve hydrologic and ecological restoration. Ogden et al (1993) list four important restoration objectives for these basins which we support:

a. The recovery of keystone/indicator species, including pre-drainage wading bird nesting colony patterns, alligator reproductive patterns, and freshwater fish population movement and survival patterns;

b. The recovery of viable populations for all endangered and threatened species;

c. Reestablish the upland freshwater source to mangroves and coastal wetland communities to restore their natural productivity and ecological important detrital export to estuaries;

d. The re-establishment of more natural spatial and temporal patterns of salinities in coastal estuaries.

Achieving the goal of ecological restoration will require changing the works and operations of the system in such a way that sufficient water will be placed in the correct places at correct time to achieve hydrologic restoration. Flexibility is essential to the development of a delivery system that mimics historic hydrologic conditions in the marshes. The project must also be done in a manner that the flood control obligations of the Corps are maintained in the developed areas.

To ensure that this ultimate goal of ecological restoration is met, we recommend that the Corps immediately take the following actions aimed at more precisely refining the process and goals of restoration:

1. Undertake a complete review and evaluation of all historical and current information to better define natural ecological functions for the affected area (with particular attention given to pre-SDCS information).

2. Begin development of a fine scale natural systems model capable of providing an estimate of pre-project hydrologic conditions. This is vital to measuring the success of the project.

3. Create a comprehensive hydrologic and biologic monitoring program capable of providing the quality, quantity, breadth and scope of information necessary to fully evaluate the relative success of initial structural and operational modifications. These data will be important for designing future improvements and modifications to system operations if ecological restoration is not achieved by initial structural and operational

changes under this GRR. The critical parameters outlined in the Ogden et al (1993) report on biological assessment should be included in the monitoring program. The program should utilize other information necessary to evaluate the success of the project gathered by Everglades National Park, National Biological Survey, Florida Keys National Marine Sanctuary and other natural resource managers.

PROPOSED STRUCTURAL MODIFICATIONS

We believe the preferred alternative (6A) makes significant progress towards providing the general structural modifications needed to recreate natural hydrologic conditions in northern Taylor Slough. We feel strongly that the process of achieving full ecological restoration of this area will be an iterative one. As the operations plan for this revised system is developed and tested, we expect some structural details to change to accommodate optimal operation. We support efforts to build a system capable of flexibly meeting the entire range of natural water delivery conditions.

Changes to the preferred alternative are required to more likely provide full ecological restoration of the southern portion of the C-111 basin and the southern portion of Taylor Slough. We recommend the following modifications be made to the preferred alternative:

1. The size of the proposed retention/detention basins are insufficient to meet the ecological restoration goals of the project. Therefore, we need to expand the two cell retention/detention area north to Tamiami Trail as suggested in Alternative 8 and south along C-111 through the Frog Pond past the entrance road to the Park to the end of the farmlands as suggested in Technical Report SFNRC 93-4. This larger strip or series of cells will provide more capacity for capturing runoff from the developed areas to the east, providing flood protection, accommodating supplemental deliveries from the north, cleansing water, and providing the flexibility to correctly time the release of water into Everglades National Park. Furthermore, a water barrier in this area is essential to reducing the seepage of water out of Northeast Shark Slough in Everglades National Park. This integrated approach will also allow the maximum flexibility to coordinate water deliveries between Northeast Shark Slough and the C-111 basin.

2. The placement and size of the S-332 pumps and associated culverts must be designed to achieve full ecological restoration of the Rocky Glades and headwaters of Taylor Slough. In a restored system we don't believe the current S-332 will allow the western portion of the Frog Pond to receive natural patterns of water deliveries. By replacing the present S-332 with a conversion of the

northernmost east-west section of the L-31W canal into an open ended spreader canal, the system will be capable of recreating sheetflow across the historic headwaters of Taylor Slough. Sheetflow can also be enhanced by using a continuous series of culverts along the western side of the retention/detention basins from Tamiami Trail south. This is preferable to the proposed alternative for two reasons. First, water delivered via this canal will be capable of restoring hydroperiods in northern Taylor Slough, particularly through its historic headwaters, rather than bypassing them to be injected at S-332. Second, a spreader canal will recreate more natural distribution than use of S-332 as a point source discharge.

3. To achieve restoration of the southern part of the system , historic patterns of flow must be recreated. To achieve this the following should become part of the GRR.

- The C-111N canal should become one side of a retention/detention area extending from the south end of the Frog Pond ranging east through a gated structure under Card Sound Road.

- The C-111N canal should be placed as far north as possible, south of the upland contour line and linked with the retention/detention area to the north. This northern placement is critical for restoring flows in this area and for spreading flood waters over a larger area.

- Two-way pumping capacity between the Rocky Glades/Frog Pond retention/detention area and this extension should provide maximum operational flexibility. Larger pumping capacity (at least 500 cfs) will provide the flexibility to remove flood waters from the C-111 basin and discharge them into the retention/detention area along the C-111N canal.

- Removal of the C-111 south of S-18C as an active canal is critical for the restoration of sheet flow across this area of the Everglades and to prevent pulse discharges into Manatee Bay and Barnes Sound.

These changes are necessary for three primary reasons.

First, the proposed location of C-111N severs hundreds of acres of high quality wetland marsh from the rest of the basin. This severance will result in further degradation of habitat as well as preclude recreation of natural ecological conditions.

Sècond, the proposed spreader canal is incapable of improving the timing of flows to the area -- a critical component of ecological restoration. Unless flows are extended over time in a way that matches historic natural delivery patterns (something a spreader canal cannot do), natural ecological conditions cannot be recreated. By substituting an extension of the retention-detention areas, the ability to control timing as well as distribution of flows is enhanced.

Furthermore, by adding this new retention-detention area, flood control obligations can be met while allowing the land south of this area to be used solely for restoration objectives. We must eliminate the possibility of further pulse damage to Barnes Sound and Manatee Bay as well as prevent sheetflow disruption by the lower extent of C-111. Even without flushes from C-111, unnatural releases of freshwater may unbalance Manatee Bay's estuarine environment. These goals may be accomplished through filling C-111 south of S-18C, or if cheaper and fully effective, through a series of closely spaced plugs.

We look forward to your revised GRR with great anticipation.

Sincerely,

Thomas D. Martin
Co-chair

Joseph Browder
Co-chair

Theresa Woody
Vice-chair

cc: Tilford Creel
Richard Ring

Members of the Coalition include:

American Rivers

Audubon Society of the Everglades

Biodiversity Benefits

Center for Marine Conservation

Clean Water Action

Defenders of Wildlife

Dunlop & Browder

Environmental Defense Fund

Fishermen Against Destruction of the Environment

Florida Audubon Society

Florida Bay Initiative, Inc.

Florida Defenders of the Environment

Florida Keys Audubon Society

Florida Lake Management Society

Florida PIRG

Florida Wildlife Federation

Friends of the Everglades

Izaak Walton League

League of Women Voters of Florida

National Audubon Society

National Parks and Conservation Association

Everglades Outward Bound Center

1000 Friends of Florida

Reef Relief

Save Our Everglades, Inc.

Royal Palm Audubon Society

Sierra Club

SCLDF

Tropical Audubon Society

The Wilderness Society

Florida Conservation Association

United States Department of Agriculture | Forest Service | Southern Region | 1720 Peachtree Road, NW Atlanta, Georgia 30367

Reply to: 1950-4

Date: March 16, 1994

Mr. A. J. Salem
Chief, Planning Division
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Salem:

Thank you for the opportunity to review the draft Integrated General Reevaluation Report and Environmental Impact Statement on the Canal 111 Project. As this will have no impact on National Forest lands, we have no comments.

Please continue to provide us with the opportunity to review other Corps of Engineers environmental documents.

Sincerely,

MARVIN C. MEIER
Acting Regional Forester

cc:
P&B

TROPICAL AUDUBON SOCIETY, INC.

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THE VOICE OF CONSERVATION IN SOUTH FLORIDA

March 11, 1994

Colonel Terrence C. Salt, District Engineer
Jacksonville District, U.S. Army Corps of Engineers
P. O. Box 4970
Jacksonville, FL. 32232-0019

Dear Colonel Salt:

Thank you for your response to my letter of January 3, 1993, which reached me through the office of Senator Graham. We certainly have great hopes for the comprehensive review study of the C&SF project. However at this time we are very concerned about the GRR for the C-111 basin. We are keenly aware that the solutions which the draft GRR proposes ultimately have to fit into the larger picture of the comprehensive review study and of Everglades restoration.

We find that alternative 6A, the preferred alternative, maintains the southern reach of canal C-111 and structure S-197. Everglades National Park shows C-111 filled or plugged and structure S-197 deleted in their alternative #4 and their later alternative #8. We concur. The only reason for keeping C-111 and S-197 operational is to use them for the purpose of draining flood waters from the C-111 basin into Barnes Sound. This is an unacceptable use.

The draft GRR describes on pages 4-2 and 4-3 the damage caused by the release of flood waters when the plug was removed at the end of the C-111 canal in 1988. With S-197 in place the impact would likely be less severe. However, we believe that such flood waters could have a significant positive impact on Florida Bay if we provided a means to get them there.

We surmise that the Corps' engineers felt that it was necessary to keep C-111 and S-197 operational to assure flood protection for South Dade farms and residences.

We would like to recommend a different structural solution to achieve flood protection for South Dade. Alternative 6A shows

a buffer zone/treatment area west of L-31N. The same kind of buffer should be established south of the areas under cultivation in the C-111 basin. Such a buffer is also shown in National Audubon's "Report on Water Supply Preserves". C-111 would be plugged or filled.

If we experience heavy rains and South Dade is threatened with flooding, drainage would be achieved by pumping water out of the northern boundary canal over the levee into the treatment area. From there the water would sheet flow south and ultimately reach Florida Bay.

This design has three significant benefits over alternative 6A:

1) No destructive discharges of water into Barnes Sound.

2) All fresh water potentially available for Florida Bay will reach the Bay.

3) Water quality issues which might exist now or which might result from future land use decisions can be dealt with by an appropriate design of these treatment areas.

More importantly this design concept will solve some of the longstanding conflicts over water management between the requirements of residents and farmers in South Dade and the needs of Everglades/Florida Bay restoration. The C-111 project must ultimately be successful in the political arena to attract the necessary funding for its implementation. The proposed design will help to achieve this end. Because of these important advantages we urge the Corps to model the alternative described above.

We are also concerned about the significant differences between Everglades National Park's alternative 8 and alternative 6A north of the proposed structure S332A. If the 8 1/2 square mile area should come into public ownership, then the area north of S332A should look more like it is shown in alternative 8. The levee design of alternative 6A south of S332A should be extended to the north to provide flood protection for residents and agriculture to the east while making it possible to raise water levels in the Park. If L-31 N remains the only dividing structure then water management will continue to face the dilemma of either flooding

agricultural areas because of high canal stages or of draining everglades wetlands because of low canal stages.

Our last comment relates to alternative 9. The consultants employed by the South Dade Land Corporation estimated the cost of their proposed solution to be about 1.4 million dollars per mile at their upper limit. The Corps' engineers computed 6.6 dollars per mile. The difference between the two estimates is too large to be ignored and deserves a full explanation.

Sincerely,

Karsten A. Rist

Karsten A. Rist

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Jacksonville District Corps of Engineers
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April 1, 1994

Dear Colonel Salt:

I recently attended the Public Meeting on the C-111 Basin held on 29 March 1994 at Homestead Senior High School. Unfortunately, I had to leave at 11:00 pm and did not get a chance to address you and the SFWMD representatives. I will therefore submit written comments concerning the Central and Southern Florida Project - DRAFT - Integrated General Reevaluation Report and Environmental Impact Statement - CANAL 111 (C-111) SOUTH DADE COUNTY, FLORIDA.

1. All Project Partners need to remember the original flood control legislation (Flood Control Acts of 1948 and 1968) was intended for drainage, flood control, and flood prevention and that subsequent legislation mandates that flood control and prevention be given equal weight and consideration in any attempts to reestablish more natural water flow and hydroperiods in Everglades National Park. In general, this document tries to minimize and gloss over this fact.

2. Agricultural representatives from South Dade County should have been Project Partners from the beginning of the development of this plan. Agricultural representatives should be included in any further planning and decision making.

3. Alternative Plan #9 was given very inadequate and cursory treatment in the document and should be looked at in much more depth and perhaps tested.

Equal Opportunity/Affirmative Action Institution

4. There is a lack of any scientific data concerning water quality and the agricultural practices in South Dade County and any insinuations (found throughout the text and in tables) that agriculture is polluting the fresh water should be taken out.

5. Section 6.8 contains inaccurate agricultural statistics which tends to minimize the scope, diversity, and economic value of the agriculture in the Rocky Glades area. Fruit crops grown in that area include mangos, 'Tahiti' limes, lychees, carambolas, guavas, and longans.

6. Flood control and protection is missing from the Operational Control Section (5.5.1). Flood control and protection for agricultural lands west (i.e., Frog Pond, Rocky Glades) and east of L-31N and the C-111 canals should be a part of the evaluation criteria for each proposed alternative plan.

7. Under Evaluation Criteria and Tables:
Table 5-2
In the row on Community Cohesion you indicate no change (0) for any of the plans. This is not the case for those plans where agricultural land (e.g., Rocky Glades, Frog Pond) is taken out of production. There will be a definite economic, social, and economic impact on the land owners, their families, accessory businesses, and the community.

In the rows on Displacement of Business and Displacement of Farms you indicate no change and negative changes (loss) due to most of the plans, respectively. However, in reality farming is a business and so are the businesses that serve farming (e.g., packinghouses, fertilizer companies, tractor companies, etc.), therefore the Displacement of Business row should also show negative changes (losses) due to most of the plans.

Table 5-3
The information on the economic impact to agriculture, the community, the county and state are missing.

Table 5-4:
This table on economic evaluation of the various plans neglects the negative economic impact on the loss of farm land and accessory industries in the Annual Benefits row.

Other comments

1. Why has there not been an agricultural economic impact study conducted on the effect of the various plans? Dade County is number five in agricultural receipts in the State of Florida (Annon, 1993) and a recent study by the University of Florida indicates sales of agricultural products contributed $910

million dollars to Dade county output (Mosely, 1990). In addition, the annual value of the vegetable crop is over $293 million and the tropical fruit crops industry $74 million.

All of the proposed plans except perhaps Alt. #9 will greatly affect agriculture and the accessory industries that serve it. The Central and Southern Florida Project - DRAFT - Integrated General Reevaluation Report and Environmental Impact Statement - CANAL 111 (C-111) SOUTH DADE COUNTY, FLORIDA document does not objectively nor thoroughly access the true ramifications of the various plans on Dade County, Florida.

2. The fresh surface water and Biscayne aquifer from Lake Okeechobee south is connected and water levels in the Frog Pond and Rocky Glades area are affected by water levels to the northeast and northwest. Therefore, the effect of pumping water from the mainland to the Keys, of surface obstructions such as the Tamiami Trail and roadways that protrude into the Everglades (e.g., road to Flamingo and Shark River Slough), and the proposed development and pumping from the West Wellfield should all be studied and factored in with respect to the various plans proposed for the C-111 Basin.

3. None of the plans, including 6A appear to adequately address water levels, flood control, and flood prevention east of L-31N and C-111.

4. Hydrologists from outside the Army Corp and SFWMD should be given the opportunity to officially and objectively evaluate the proposed plans contained in this document. Furthermore, outside review by hydrologists of the entire water management problem for Everglades National Park and agriculture should be seriously considered.

In closing, it does not appear that the Central and Southern Florida Project - DRAFT - Integrated General Reevaluation Report and Environmental Impact Statement - CANAL 111 (C-111) SOUTH DADE COUNTY, FLORIDA plan was objectively written, nor were the various plans investigated or objectively analyzed. Any proposed plan that has such economic impact on the lives of thousands of people, affects so much land and productive agriculture, and that will potentially cost millions of dollars necessitates careful, objective, planning.

Thank you for this opportunity to comment.

Sincerely,

Jonathan H. Crane

Jonathan H. Crane, Tropical
Fruit Crop Specialist

Citations

Annon. 1993. Touring Florida Agriculture. FL. Dept. of Agric. and Consumer Services, Bob Crawford, Commissioner, 545 E. Tennessee St., Tallahassee, FL 32308

Moseley, A.E., 1990. Economic Impact of Agriculture and Agribusiness in Dade County, Florida. Industry Report 90-4. Food and Resource Economics Dept., Univ. of FL, Gainesville, FL.

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April 6, 1994

Colonel Terrence Salt
U.S. Army Corps of Engineers
Jacksonville District
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Jacksonville, Florida 32232-0019

RE: Central and Southern Florida Project
C-111 Plan

Dear COL Salt:

The following comments are submitted on behalf of the Florida Division of the Izaak Walton League of America, Inc. with regard to the above issue.

As I reviewed the District's Draft Integrated General Reevaluation Report and Environmental Impact Statement, it struck me that much of the problems we are having is due to the attitude of our culture that we can take a natural place and change it to suit us, without regard for the consequences of our actions. South Florida would not be habitable for most of the residents without artificial drainage and air conditioning, but the drainage which has been forced on the land is now showing its inevitable results in the pollution of the Everglades and the death of Florida Bay. I was forced to wonder how many more engineering-based plumbing solutions we can implement before we realize that the protection of our water supply, our fisheries, and the other amenities which made Florida attractive and useful in the first place depend on real restoration of the historic wetlands and drainage regimes.

The Florida Division supports the efforts of the Corps of Engineers to remediate the problems of Florida Bay. We strongly endorse the proposal to acquire the Frog Pond and Rocky Glades.

It is unfortunate that the proposal does not include immediate acquisition of the 8.5 square mile area. The problems which these three areas present are reflections of the District's and Dade County's lack of effective wetlands protection and use of after the fact permitting to allow activities which were known at the time to be damaging to the system. The problems which exist now were predictable results of making political compromises at that time, instead of acting to protect the resource.

The proposal for the C-111 canal is insufficient to address

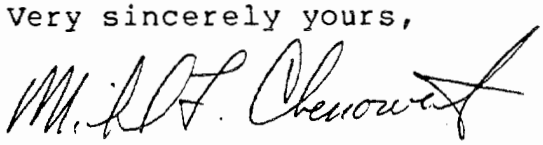
the continuing threat it poses to disruption of the water quality and distribution in Florida Bay, Barnes Sound and Card Sound. As you are certainly aware, a few years ago, these areas were profoundly damaged by the unchecked release of billions of cubic feet of fresh water into a system which had adapted to hyper-saline conditions, in order to appease a few Homestead farmers who might have had wet tomatoes. Residents of Blackwater Sound reported massive kills of all sorts of marine organisms, including fish, lobsters, and seagrasses. The damage to the natural system which occurred cannot be overemphasized. Friends reported at least one eight pound spiny lobster killed by the fresh water. I belive that the current algae bloom condition of Florida Bay was either triggered or reinforced by the irresponsible release of that fresh water.

Now, the Corps' proposal is to remove the spoil along the C-111, which should be used to refill and permanently close that canal, and use it instead for fill for the L-31-W tieback levee. This proposal is unacceptable. C-111 south of at least S-18-C must be permanently brought back to grade, and sheet-flow throughout the Southern Glades must be reestablished west of US-1. This should include the refilling of C-109 and C-110 as well. Any incidental flooding which might occur as a result probably would have occurred anyway had not the Corps and the State of Florida meddled in the original natural drainage system.

It is not credible that the Corps must use spoil from C-111 as fill for L-31-W when the National Park is proposing, in a permit submitted to your office, to place 9.5 million yards of fill in wetlands elsewhere in the Everglades. It was originally proposed to be put in the Frog Pond, and now I am told it is being proposed to be put somewhere in Everglades National Park. To the extent that fill is required for L-31-W, it should be taken from the Hole-in-the-Doughnut spoil, and not from fill which could be used to refill and restore the site of C-111.

It is obvious that the Corps' proposal is too little, too late, and that much more, such as acquiring the 8.5 square miles, and elimination of canal-directed drainage-motivated discharges to the sea between Vero Beach and Miami, around to Fort Myers, remains to be done. What your staff has proposed, however, is an important first step, and with the reservations outlined above, we endorse the effort.

Very sincerely yours,



Michael F. Chenoweth, Vice President
The Florida Division of the Izaaak
Walton League of America, Inc.

cc: Dr. Carl Keeler, President

South
Florida
Regional
Planning
Council

March 24, 1994

Mr. A. J. Salem
Department of the Army
P.O. Box 4970
Jacksonville, FL 32232-0019

RE: SFRPC #94-0303 - Review of the Draft Integrated General Reevaluation Report and Environmental Impact Statement on the Canal III Project; U.S. Army Corps of Engineers, South Dade County, FL.

Dear Mr. Salem:

In response to the Draft Integrated General Reevaluation Report and Environmental Impact Statement on the C-111 Project, Council staff has recognized key regional issues, findings, and recommendations germane to the project. Regional issues addressed in the draft reevaluation report include the following:

- Wellfield protection
- Flood Damage
- Florida Bay Restoration
- Surface Water Management
- Infrastructure Cost
- Flood Control
- Freshwater Flows to Florida Bay
- Environmental resource protection and management
- Water Resources Management
- Urban growth and development

Many positive impacts on wetlands and water resource issues will potentially result from proposed alternative project. However, Council staff recommends that project reviewers make use of specific technical studies prepared by federal, state, regional, and local government agencies on the comprehensive impacts of the proposed alternatives. The following goals and policies of the *Regional Plan for South Florida* should also be used as reference and directional tools to address the project's regional issues.

Policy 8.1.1 Developments proposed for large undeveloped recharge areas of the aquifer will ensure that the recharge potential of the property is not significantly altered from the pre-development rate by leaving the greatest possible amount of the property permeable and by retaining and filtering runoff.

Policy 8.1.11 The impact on wetlands will be analyzed as part of planning and development of future wellfields to ensure that hydrologically sensitive habitats will not be adversely affected.

Policy 8.1.12 Water system planning and development programs shall be consistent with water availability, use, allocation, and management plans and coordinated with the South Florida Water Management District.

Policy 8.1.17 Encourage and assist in increasing coordination among all agencies in the development of hydrologic studies on the groundwater resources of the Region.

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Broward (305) 961-2999, Dade and Monroe (305) 620-4266, FAX (305) 961-0322

Policy 8.1.18 Local and regional agencies should encourage and assist in the development and implementation of comprehensive water management plans and programs for the Region that are consistent with state and South Florida Water Management District plans. These plans should include water use guidelines for urban development.

Policy 8.1.19 Encourage and assist in increasing coordination between water management programs and land use planning efforts to ensure the long-range maintenance, allocation, and enhancement of the Region's water resources.

Policy 8.1.22 The state, South Florida Water Management District and local governments shall protect the water supply for the Everglades National Park, state park lands, and other environmentally significant areas.

Policy 8.1.27 A definitive examination of historical water level data should be undertaken in conjunction with computer modeling of the interaction of the groundwater and surface water systems. At a minimum, the objectives should include:

a) the effect of surface water management systems on groundwater;
b) a determination of the elevation at which groundwater and surface water will stabilize;
c) the effect of the determined water level on potable water supply and salt water intrusion; and
d) the effect of projected sea level rise on groundwater quality and quantity.

GOAL 8.2 To protect groundwater quality and quantity and where feasible, improve water quality.

Policy 8.2.1 Discourage water management and development projects that may alter the natural wet and dry cycles or cause functional disruption of wetlands and aquifer recharge areas.

Policy 8.2.2 Encourage the maintenance, restoration or creation of wetland areas to provide natural cleansing of surface water runoff and to aid in aquifer recharge.

Policy 8.2.6 Require the use of generally accepted best management practices to reduce or prevent groundwater pollution particularly in aquifer recharge areas.

Policy 8.2.12 Prior to allowing any modifications to existing groundwater control elevations in the Region, the South Florida Water Management District should evaluate. the following:

a) the effect on water quality in the Region;
b) the effect on salt water intrusion in the Region;
c) the effect on the Region's water supply; and
d) the effect on marine resources.

Policy 8.3.2 Wellfield protection programs, including appropriate ordinances, shall be developed and implemented which address as a minimum, condemnation or elimination of existing inappropriate land uses, prohibitions, structural containment safeguards, monitoring, emergency reporting and clean up, personnel training, inventory, and financial responsibility.

GOAL 8.4 To provide adequate flood protection while maintaining surfacial water quality, protecting natural ecosystems, and providing for adequate aquifer recharge.

Policy 8.4.1 Surface water management systems should be designed, at a minimum, to meet level of service standard "C" as shown in Figure Policy 8.3 of the background statement, unless natural resource, water supply or related factors preclude this.

Policy 8.4.9 All project lakes of new developments should be designed so as to prevent the direct discharge of stormwater runoff in these lakes.

Policy 8.4.13 Encourage the establishment of natural vegetation buffer zones and gradually sloping berms away from artificial waterways in order to increase safety around the lakes and prevent the direction of contaminants into adjacent water bodies.

Policy 8.4.14 A vegetated and functional littoral zone shall be established as part of any new surface water management system of lakes greater than or equal to 0.5 acres in size. Prior to construction of the surface water management system for any phase of a project, the developer shall prepare a design and management plan of the wetland/littoral zone that will be established as part of these systems. The littoral zone established shall consist entirely of native vegetation and shall be maintained permanently as part of the water management system. At a minimum, 10 square feet of vegetated littoral zone per linear foot of lake shoreline shall be established as part of the surface water management system. This vegetated littoral zone habitat shall be located such that no less than 50 percent of the total shoreline is buffered by a minimum width of 10 feet of vegetated littoral zone habitat.

GOAL 8.5 Eliminate the net loss of functional values of wetland systems in the Region and protect remaining wetland systems.

Policy 8.5.2 Degradation or destruction of functional wetlands and deep water habitats will occur in the Region only if:

a) the activity is necessary to prevent or eliminate a public hazard, and
b) the activity is in the public interest and no other reasonable alternative exists; and
c) the habitat functions and values are significantly less than those typically associated with such habitats and the habitat cannot be reasonably restored, and
d) the activity is water dependent, but in no case shall the activity be allowed for obtaining fill; and
e) the activity does not destroy the habitat of threatened or endangered species.

Policy 8.5.13 As a site is developed, invasive exotic plants will be removed from areas to be developed as well as areas to be left in a natural state or as part of the landscaping.

Policy 8.5.14 Coordinated efforts among local, regional, state and federal agencies to indicate invasive exotic plants should be implemented.

Policy 8.5.15 For those projects located in areas that were historically wetlands, development review and approval shall include consideration of the mitigation of historical wetland loss in addition to any wetland loss as a result of the proposed project. If the site has no wetlands at the time of review, and if appropriate, the applicant shall create and maintain a minimum of one percent of the total site acreage as wetlands. If the site has wetlands, those wetlands shall be preserved, or if appropriate, their loss mitigated consistent with Regional Policies 8.5.3 and 8.5.4. Mitigation banking and off-site mitigation may be considered under either scenario.

Policy 8.5.16 Project lakes for new development will be constructed with at least a 4:1 (horizontal to vertical) side slopes to a depth of at least two feet below the water control elevation. These areas will be planted with vegetation acceptable to the reviewing agency and maintained until an appropriate annual survival rate is maintained.

GOAL 10.1 Beginning in 1991, maintain or increase the percentage of the area of natural systems in the Region based on the area documented in local government comprehensive plans.

Policy 10.1.1 As a site is developed, invasive exotic plant species shall be removed.

Policy 10.1.2 Discourage the introduction and spread of invasive exotic plants in the Region.

GOAL 10.2 By 1995, increase the effectiveness of regulations designed to protect and enhance the long-term productivity of natural systems.

Policy 10.3.1 Discourage activity reducing or adversely altering the habitat of an endangered or threatened species or species of special concern.

Policy 10.3.8 In the review process, developments which contain potentially significant habitat or species shall, at a minimum, be required to:

a) inventory the site with an approved methodology and provide the results of the survey to reviewing agencies; and
b) either preserve the habitat of the species with appropriate buffers or relocate the species and habitat if determined acceptable by the U.S. Fish and Wildlife Service and the Florida Game and Freshwater Fish Commission.

All inventories must occur during the time of year that the anticipated species or plant community may be observed.

GOAL 10.5 By 1995, identify lands and develop land acquisition and management practices in the Region which integrate and provide a sufficient water supply and protect wildlife and natural resources.

Policy 10.5.7 Encourage the use of tax incentives, transfer of development rights, and other means to protect flood plains, floodways, and significant wetlands.

Policy 12.1.5 Increase participation in recycling program and the use of recycled goods on all levels.

GOAL 14.1 Beginning in 1991, minimize the impacts of mining on the health of the citizens of South Florida.

Policy 14.1.1 Utilize methods to prevent permanent groundwater and surface water contamination during mining operations.

Policy 14.1.6 Department of Environmental Regulation regulations for mining shall be met to reduce point of source pollution.

GOAL 14.2 Return all mined areas to natural or other productive use upon completion of mining activities.

Policy 14.2.1 All companies planning to commercially mine resources in the Region will file a reclamation plan prior to commencement of mining activity.

Policy 14.2.2 Reclamation plans will include guidelines for final use and design of completed mines. These guidelines will include, but not be limited to:

a) use of the land, depending on location (urban, residential, etc.);
b) desired natural function, (wildlife habitat, wetland enhancement, etc.);
c) slopes for littoral zones; and
d) a stated reasonable and practical time period in which restoration is to occur.

Policy 14.2.3 Coordinate current state and local mining regulations and reclamation plans to ensure that financial means are available to obtain sufficient reclamation.

Policy 14.2.4 Prepare an inventory and reclamation plan for abandoned mining areas.

GOAL 16.1 Establish a planning framework for regional land use with a planning horizon of at least 20 years by 1995.

Policy 16.3.7 Existing natural wetlands which are pristine or of high quality will be incorporated into the site plans of developments in the Region, or preserved in such a way that they are not adversely impacted.

Thank you for the opportunity to comment. Please call, if you have any questions.

Sincerely,

James H. Graham, Jr.

James H. Graham, Jr.
Senior Planner

JHG/kc

PD

COUNTY of MONROE
KEY WEST FLORIDA 33040
(305) 294-4641

BOARD OF COUNTY COMMISSIONERS
MAYOR, Jack London, Distict 2
Mayor Pro Tem, A Earl Cheal, District 4
Wilhelmina Harvey, Dictrict 1
Shirley Freeman, District 3
Mary Kay Reich, District 5

District Four
Marathon Government Annex
Suite 110
490 63rd Street, Ocean
Marathon, FL 33050
Telephone: (305) 289-6000
FAX: (305) 289-6013

April 4, 1994

COL Terrence Salt
Jacksonville District
Army Corps of Engineers
Post Office Box 4970
Jacksonville, FL 32232-0019

Dear COL Salt:

Thank you for being at the public hearings regarding the plans to restore fresh water to the Everglades, held in Homestead, March 29, 1994. I thought you personally handled the crowd just right. Unfortunately, the same cannot be said for your assistant.

When I was a Lieutenant in the Corps thirty years ago, we had better sound systems than the one that was used at the hearing. I am disappointed that a better system was not available.

Although I signed up to speak, I was not allowed the opportunity prior to my departure on the bus which brought us to the hearing.

The "T" shirt I presented to you is a statement of our concerns. You saw many of us wearing those shirts, although there were not enough for all of us from the Keys. Those with shirts accounted for only about half of the people from the Keys. If you were to hold hearings in the middle of the Keys, there would be many many more people in attendance.

To briefly summarize Mayor London's message, which contained many important statistics, "Our environment is our economy". The problems in Florida Bay may effect 80,000 Monroe County residents, in some way. Obviously directly effected are the fishermen and guides, and as the pea green mess approaches the inhabited Keys, property values drop, visitors are fewer which in turn effects all businesses in the Keys. The problems in the Everglades and Florida Bay obviously has a greater impact

on Monroe County residents than to the farmers whose numbers by their own admission, only account for a high of 6,000.

One gentleman from the Farm Bureau mentioned his concern that the elected officials were not doing anything to resolve the issue. I served on the South Florida Regional Planning Council last year and during that time, there never was a Commissioner from Dade County in attendance. I have at several Florida Bay meetings held by the South Florida Water Management District and the Corps of Engineers, and have never seen a Dade County Commissioner in attendance. Apparently they have little interest in this problem.

I have not studied the proposed plan 6A in detail so I don't offer any technical solutions. I only request that your efforts be to restore the Everglades and Florida Bay to its natural condition as much as possible and in the most cost effective manner.

Thanks again for your attendance at the public hearing.

Sincerely,

A. Earl Cheal

A. EARL CHEAL, DBA
Mayor Pro Tem

AEC:mkn

cc: Monroe County Board Of County Commissioners

salt0055.68/PEO

Danny L. Kolhage

BRANCH OFFICE
3117 OVERSEAS HIGHWAY
MARATHON, FLORIDA 33050
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CLERK OF THE CIRCUIT COURT
MONROE COUNTY
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KEY WEST, FLORIDA 33040
TEL. (305) 292-3550

BRANCH OFFICE
88820 OVERSEAS HIGHWAY
PLANTATION KEY, FLORIDA 33070
TEL. (305) 852-7145

May 4, 1994

Colonel Terrence C. Salt
District Engineer
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Colonel Salt:

Please be advised that at a Special Meeting in formal session on April 12, 1994, the Board of County Commissioners of Monroe County adopted Resolution No. 121-1994, authorizing the Mayor of Monroe County to provide the U.S. Army Corps of Engineers with written comments on the Draft General Reevaluation Report and Environmental Impact Statement for the proposed reconstruction of the C-111 Canal.

Enclosed please find a certified copy of this Resolution for your consideration.

Very truly yours,

Danny L. Kolhage
Clerk of Circuit Court
and ex officio Clerk to the
Board of County Commissioners

By: Isabel C. DeSantis
Isabel C. DeSantis,
Deputy Clerk

cc: Mayor of Monroe County
County Attorney
File

Mayor Jack London

RESOLUTION NO. 121-1994

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS AUTHORIZING THE MAYOR OF MONROE COUNTY TO PROVIDE THE U. S. ARMY CORPS OF ENGINEERS WITH WRITTEN COMMENTS ON THE DRAFT GENERAL REEVALUATION REPORT AND ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED RECONSTRUCTION OF THE C-111 CANAL

FILED FOR RECORD
'94 MAY -4 AM 7:20
MONROE

WHEREAS, the U.S. Army Corps of Engineers has developed a Draft General Reevaluation Report and Environmental Impact Statement for the proposed reconstruction of the C-111 Canal near Homestead and Florida City, Florida; and

WHEREAS, the proposed changes to the C-111 canal basin are being designed to significantly alter the amount of fresh water currently entering the Taylor Slough drainage basin within Everglades National Park; and

WHEREAS, reduction in the historic flow of fresh water through Taylor Slough, which flows into Florida Bay, is a significant component of the current ecological degradation being witnessed in Florida Bay, and

WHEREAS, the health of Florida Bay plays a critical role in the continued health of tourist and commercial fishing economies in Monroe County, Florida; and

WHEREAS, the health of Florida Bay also plays a significant part in defining the character of the Keys' quality of life for its citizens whose lives are so integrally intertwined with the ambient waters and marine life of the Keys; and

WHEREAS, the decline of Florida Bay is currently having a significant impact on the tourism and commercial fishing economies and the general quality of life in Monroe County, Florida.

BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MONROE COUNTY, FLORIDA, that:

- the Mayor of the Board of Commissioners is authorized to provide the attached letter as the official comments of the Board regarding the C-111 Reconstruction Project; and
- this letter reflects the Board's vital interest in the appropriate and expeditious completion of this project; and
- this letter also reflects the Board's strong commitment to the revitalization of the County's tourist and commercial fishing economies and general quality of life through the restoration of health to Florida Bay.

PASSED AND ADOPTED by the Board of County Commissioners of Monroe County, Florida at a special meeting held on the 12th day of April, A. D. 1994.

Mayor London	yes
Mayor Pro Tem Cheal	yes
Commissioner Freeman	absent
Commissioner Harvey	yes
Commissioner Reich	yes

BOARD OF COUNTY COMMISSIONERS
MONROE COUNTY, FLORIDA

BY: Jack London
JACK LONDON, MAYOR

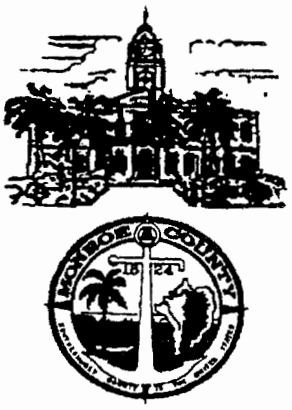
(SEAL)
Attest: DANNY L. KOLHAGE, Clerk

Isabel C. DeSantis
CLERK OF THE COURT

G/W/DC/BC042412

APPROVED AS TO FORM AND LEGAL SUFFICIENCY
BY
Attorney's Office

COUNTY *of* MONROE
KEY WEST FLORIDA 33040



BOARD OF COMMISSIONERS
MAYOR, Jack London, District 2
Mayor Pro Tem, A. Earl Cheal, District 4
Wilhelmina Harvey, District 1
Shirley Freeman, District 3
Mary Kay Reich, District 5

12 April 1994

Colonel Terrence C. Salt
District Engineer
U. S. Army Corps of Engineers
P. O. Box 4970
Jacksonville, Florida 32232-0019

MONROE COUNTY COMMISSION'S COMMENTS: DRAFT GENERAL REEVALUATATION REPORT AND ENVIRONMENTAL IMPACT STATEMENT FOR THE C-lll CANAL.

Dear Colonel Salt:

The paramount concern and commitment of the Board of Commissioners and citizens of Monroe County to the issues surrounding the demise and resurrection of Florida Bay was evident at the recent public hearings held by the Army Corps of Engineers in Homestead. Monroe County represents a small fraction of the population of south Florida, a mere 78,000 residents, and yet more half of those in attendance wore the orange Tee Shirts pronouncing, "No Bay.....No Jobs!"

We thank the Corps of Engineers for its current intensified effort and shared commitment to the restoration of the Everglades Ecosystem and, particularly,

Florida Bay. We equally appreciate your continued efforts to restore flows to Taylor Slough and Florida Bay and the opportunity to comment on your current plans to do so.

I. Monroe County has the following concerns and objectives regarding Florida Bay and the C-111 canal:

1. Florida Bay is a critical economic and environmental resource for Monroe County. A vast segment of the County's $2 Billion annual tourist economy and $90± million annual fishing economy depend upon the ecological health of Florida Bay. In addition, real estate values and tax revenues in Monroe County depend upon environmental health, which is what draws people to the Keys.

Tourism

- Over 6.2 million tourists visited the Keys in 1990.
- Tourists spent over $787 million in 1991 in Monroe County.
- The tourist economy, which depends on clean marine waters, healthy reefs, and abundant fish life, employed 18,000 people in 1990.
- In 1992 the Hotel/Motel industry generated $314 million in gross sales.
- In 1992 the Hotel/Motel industry generated over $18 million in yearly sales taxes in Monroe County.

Commercial Fishing

- The commercial fishing industry represents an important source of revenue for Monroe County; in 1990, commercial fisherman landed 19.7 million pounds of finfish, shellfish, and other aquatic organisms.
- 1990 dockside landings were valued at over $48.4 million. This corresponded to over $90 million in total economic activity generated by the industry.
- The commercial fishing industry produces over 20% of the statewide total for at least 12 economically important species.

- There are 3,550 commercial vessels, 3,294 saltwater products licenses, 83 wholesale seafood dealers, 155 retail seafood dealers in Monroe County.

- The 1991 pink shrimp landings in Monroe County dropped by almost 80% from 1981 levels (from 15,773,173 pounds landed in 1981 to 3,267,315 landed in 1991) resulting in the collapse of the pink shrimp industry. The nursery grounds for pink shrimp lie within Florida Bay.

Real Estate

- The Real Estate Industry, which depends on a healthy Florida Bay and Reef System to sell properties, in 1990 generated over $150 million in purchase loans.

- The current volume of real estate sales in Monroe County exceeds $250 million annually.

- Mortgage loan closings presently exceed $400 million per year.

- Public revenue, in the form of state intangible taxes and documentary stamps, generated annually from real estate closings presently exceeds $2.5 million.

2. Florida Bay is undergoing an ecological collapse.

- At least 83,000 acres of seagrasses, which provide food and shelter for fish and shellfish, have died in the past 6 to 7 years.
- Algae blooms fueled by the seagrass die-off, have clouded the Bay's clear waters and have extended as far as the Florida Keys coral reef tract, compounding the damage and affecting fishing and diving interests there.
- Millions of sponges have died recently, as a result of algae blooms, eliminating habitat for commercially valuable spiny lobsters, other invertebrates, and juvenile fish.
- Sediments underlying the currently denuded sea bottom are re-suspended continuously under virtually all wind conditions, not just during storm events.
- Salinities and temperatures have become uncharacteristically high and exhibit less seasonal fluctuation than is typical, an unhealthy circumstance.

- Oxygen levels frequently plummet and are, now, typically lower than average. This forces respiration in normally photosynthetic algae and remaining seagrasses. The condition also promotes more and more frequent fish kills.

Among other causes, a lack of historical fresh water inputs to Florida Bay ranks prominently in the demise of this formerly rich ecosystem.

3. The restoration of Florida Bay must be a paramount objective for the Army Corps Engineers in their management of fresh water and the network of conveyance canals on the mainland. Monroe County's economic health and quality of life depend on it.

4. There is a scientific consensus that the restoration of clean, nutrient and pesticide free, fresh water flows to Florida Bay is an action that can be taken ***NOW*** to help restore vitality to Florida Bay. Until recently, flows have been systematically reduced by as much as 80% over the past fifty years as the result of the Army Corps' construction and management of the South Florida water conveyance system. As a result of these past actions, Florida Bay has been changed from an estuary into a hypersaline lagoon.

5. The C-111 canal system is a critical part of the canal system that now controls flows to Florida Bay. This canal system has been utilized to divert fresh water away from Taylor Slough where it historically contributed to the Bay's fresh water inputs. The Corps has taken this action without considering the harm to Monroe County, simply to benefit a few land owners in south Dade County. This policy and action must be reversed.

6. In addition, the C-111 has been used to release huge quantities of fresh water into Manatee Bay and Barnes Sound during periods of intense rainfall. The unnatural slugs of fresh water have resulted in fish kills, destruction of benthic resources, and have resulted in significant harm to the residents of Monroe County. Once again, the Corps has taken these actions to provide drainage to a few landowners in south Dade County.

7. New plans for the C-111 canal system must reverse these damages to Monroe County. The new plans must advance the restoration of fresh water flows to Florida Bay, eliminate the harmful discharges to Manatee Bay, and must be formulated to account for their impacts to the economy of Monroe County.

II. Specific comments on the Army Corps' preferred alternative for reconstruction of the C-111 canal System.

1. The economic impacts of the C-111 reconstruction plan on the future economy and environmental health of Monroe County have not been taken into consideration. This is a serious short coming in the Corps' planning. The Corps' actions regarding the C-111 canal have seriously impacted the economy of Monroe County in the past and the plan is woefully incomplete without this analysis.

2. The preferred alternative, Plan 6A, is a step in the right direction, but it does not go far enough in satisfying the preceding concerns and objectives. The analyses and computer models from Everglades National Park, as well as, from the Corps itself, indicate that the preferred plan will make modest advances only in restoring fresh water levels in Taylor Slough, and thus, Florida Bay. It will not return historic levels of flow to the Bay.

3. Monroe County supports the following specific components of Plan 6A:

- Acquisition of the lands west of the L-31/C-111 canals, known as the "Frog Pond" and the "Rocky Glades Agricultural Area." Keeping these lands dry enough to farm causes huge losses of fresh water from Taylor Slough and Florida Bay, causing damage to the interests of Monroe County.

- Establishment of the retention/detention areas west of L-31, with pumps and structures to deliver water westward into Taylor Slough.

- Backfilling of the C-109 and C-110 canals with 9-10 plugs in each.

- Building a 1,000 foot bridge across State Road 9336 (the road leading to Flamingo) at the Taylor Slough crossing, to replace the current inadequate bridge and culverts.

These structural and land use changes will benefit Florida Bay by increasing water levels and flows in Taylor Slough, and thus, fresh water flows to Florida Bay.

4. Monroe County requests that the following changes in the preferred plan (6A) be evaluated and implemented if deemed to be effective in improving conditions in Florida Bay:

- Replace the proposed C-111N spreader canal with a water detention/retention area running east-west at the head of the C-111 basin. The detention/retention area must be located further north than the proposed spreader canal, in order to reestablish fresh water flows and deliver maximum benefits to these coastal wetlands. The retention/detention area must extend across US-1 in order to re-establish fresh water flows into the impounded wetlands between US-1 and Card Sound roads. Construct a 500 cfs pump at the S-332E location to accommodate both normal and high rainfall periods.

- Plug and backfill the existing C-111 canal below the S-18C structure and eliminate the S-197 structure. The C-111 canal must ***NEVER AGAIN*** be used to discharge flood waters to Manatee Bay. Construction of the retention/detention area described above, and the larger pump, will give operational flexibility to manage high rainfall periods.

- In the long-term and with a look to the Big Picture, the retention/detention area west of the L-31 canal and levee must be extended northward to the Tamiami Trail. The productivity and health of Florida Bay will be completely restored only if more fresh water is delivered to Everglades National Park as a whole, and therefore, Taylor and Shark River Sloughs, from Water Conservation Area 3 (WCA 3). Currently we "rob Peter to pay Paul" within Everglades National Park and south of the Tamiami Trail, when delivering more water to Taylor Slough. The coordinated rise in water levels within both Sloughs, with a consideration of quantity, quality, and hydro-period, is ultimately essential to the restoration of health to Florida Bay.

- These changes to the preferred plan will help to eliminate the adverse impacts that Monroe County currently feels in the administration of water conveyance and management in the C-111 basin.

5. Finally, Monroe County requests that the Army Corps of Engineers accelerate the schedule for the implementation of the preferred plan. The crisis in Florida Bay is too urgent, a compressed schedule must be developed and implemented. The Corps must request funds from Congress for Fiscal Year 1995

to begin implementation of the preferred plan, inclusive of the modification requested above.

On behalf of the citizens of Monroe County, whose livelihoods are so integrally tied to the health of Florida Bay, the Board of Commissioners is heartened to see the strength of the Corps' current efforts to restore the Everglades Ecosystem, and Florida Bay as a part of it. We implore the Corps to look more closely at the down stream impacts created from its past actions in the Everglades. These impacts are felt most strongly in the Keys. We appreciate the opportunity to address our concerns both for the impacts of Florida Bays' demise on our economy and on your efforts in the C-111 basin to resurrect Florida Bay. We look forward to future participation in this vital process.

Sincerely,

Jack London

Mayor Jack London
Monroe County Board of Commissioners

G/W/DC/BC042411

Working for the Nature of Tomorrow®

NATIONAL WILDLIFE FEDERATION

Southeastern Natural Resources Center
1401 Peachtree Street, N.E., Suite 240, Atlanta, GA 30309

(404) 876-8733
FAX (404) 892-1744

April 14, 1994

Colonel Terrence Salt
U.S. Army Corps of Engineers
Jacksonville District
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Colonel Salt:

The National Wildlife Federation (NWF) appreciates your leadership in helping to restore the Everglades ecosystem. As you know, NWF is the nation's largest conservation education organization. Founded in 1936, the Federation works to conserve natural resources and to protect the Earth's environment. NWF has approximately 48,000 Florida members committed to the protection and management of wildlife habitat. The Corps' Canal 111 proposals, put forth in the February 1994 Draft Integrated General Reevaluation Report and Environmental Impact Statement (GRR/EIS), represent a significant step towards restoring sheetflow in the Everglades, an essential component of any Everglades restoration plan.

The Draft GRR/EIS offers a significant improvement over both present conditions in the area and previous Corps proposals. The proposed retention/detention area will significantly contribute toward improving flood protection, creating a water barrier between the Everglades and developed lands, and providing clean water. While we agree with your recommendation to support Alternative 6A, we believe Alternative 6A could be improved in several ways:

1. The Corps should expand the retention/detention area north to Tamiami Trail (as suggested in Alternative 8) and south along C-111 through Frog Pond and past the Park entrance road (as suggested in Technical Report SFNRC 93-4). This would offer better flood protection, create more capacity for capturing runoff from developed areas, and allow for better timing of released water into Everglades National Park, while

reducing seepage out of the Park through Northeast Shark Slough.

2. In order to maximize ecological restoration of the Rocky Glades area and the headwaters of Taylor Slough, the Corps must create an open-ended spreader canal between C-111 and S-332. This would re-create sheetflow across the headwaters of Taylor Slough in a manner most consistent with historic flow.

3. We recommend the addition of the following measures to re-create historic flow patterns in the southern part of the system:

   - Place the C-111N canal as far north as possible and link it with the retention/detention area. This is important for restoring flows and spreading flood waters.

   - Use a pumping capacity of at least 500 cfs between the Rocky Glades/Frog Pond retention/detention area and the C-111N extension, in order to provide operational flexibility to remove flood waters from the C-111 basin.

   - Remove the portion of C-111 south of S-18C as an active canal to restore sheetflow into Florida Bay and to eliminate the risk of fish kills from pulse discharges into Barnes Sound and Manatee Bay following heavy rains.

We also recommend that you consider the opportunity cost of the "No action" Alternative in order to obtain a more accurate assessment of the economic impact of the Canal 111 project. The economy of South Florida is dependant upon the environment. Commercial and recreational fishing, and diving are multi-million dollar industries that could not survive the further degradation of Florida Bay. The value-added to Florida's economy by these business ventures provides further economic justification for this project.

The acquisition of the Rocky Glades and Frog Pond areas are crucial to the restoration of freshwater flows into the Everglades ecosystem and Florida Bay. NWF supports the Corps' proposal to secure these sensitive areas.

Achieving hydrologic restoration of this ecosystem will require the delivery of a sufficient amount of water at the proper times to the appropriate places. To ensure that we achieve the ultimate goal of ecological restoration, the Corps' meets its flood protection obligations, and to provide project flexibility, we recommend that the Corps take these specific actions:

- Undertake a complete review and evaluation of all historical and current information, to better define natural ecological functions for the affected area;

- Develop a fine-scale natural systems model capable of providing an estimate of pre-project hydrologic conditions, to measure the success of the Canal 111 Project; and

- Create a comprehensive hydrologic and biologic monitoring program, to fully evaluate the relative success of initial structural and operational modifications.

Thank you for taking this major step forward to restore the Everglades/Florida Bay. We look forward to your continued leadership regarding this unique and important ecosystem.

Sincerely,

Carolyn Waldron
Director

ENVIRONMENTAL
DEFENSE FUND

California Office
Rockridge Market Hall
5655 College Ave.
Oakland, CA 94618
(510) 658-8008
Fax: 510-658-0630

COMMENTS OF THE ENVIRONMENTAL DEFENSE FUND CONCERNING THE DRAFT INTEGRATED GENERAL REEVALUATION REPORT AND ENVIRONMENTAL IMPACT STATEMENT FOR CANAL 111 (C-111), SOUTH DADE COUNTY, FLORIDA

Submitted by:

Rodney M. Fujita, Ph.D

Senior Scientist

April 14, 1994

The Environmental Defense Fund (EDF) is a non-profit, non-governmental organization that uses science, law, and economics to solve environmental problems. EDF has 6 offices and 250,000 members nationwide. Rodney M. Fujita is a marine ecologist with special expertise in water quality assessment and protection. Dr. Fujita has led EDF's efforts to protect the marine ecosystems of the Florida Keys since 1988.

EDF has a deep interest in protecting and restoring the integrated ecosystems of South Florida, a biologically rich and productive system extending from the Caesium Basin to the barrier reefs of the Florida Keys. EDF attorneys have played an important role in developing solutions to the problem of nutrient pollution originating from agriculture in the Everglades. EDF staff have also been actively stimulating ecosystem restoration efforts focused on the restoration of a more natural pattern of water flow through the integrated landscape and seascape of South Florida. EDF has also long been active in efforts to protect and restore the

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coral reefs (and associated marine ecosystems) of the Florida Keys. EDF helped draft legislation establishing the Florida Keys National Marine Sanctuary, and has been active in the development of the Sanctuary's comprehensive management plan. Because the restoration of good water quality is key to the restoration of the ecosystem as a whole, EDF has focused on the development of a meaningful and enforceable water quality protection plan.

GENERAL COMMENTS ON DRAFT THE INTEGRATED GENERAL REEVALUATION REPORT AND ENVIRONMENTAL IMPACT STATEMENT

EDF concurs with the regional goals and success criteria established in the Science SubGroup Report (pp. 30-31): reinstatement throughout the system of natural hydroperiods and sheet flow as approximated by natural system models; reestablishment of predrainage wading bird nesting colony locations and timing of nesting; no further wetland losses; restoration of degraded wetlands; wetland use permits stipulating requirements for enhanced hydrologic connectivity, water quality, and water storage; improved recruitment of fishery and nonfishery species; increased fish abundance and reinstatement of species in pre-disturbance locations; reduction in mercury body burdens in top carnivores; reduction of contaminants in sediments; increases in native faunal diversity; reduction in deformed fish in estuaries; reappearance of missing vegetative landscapes; elimination of nutrient tolerant and exotic plant species; a periphyton community characteristic of oligotrophic, natural hydroperiod systems; and increases in the populations of threatened and endangered species. More specific objectives and strategies for achieving these goals are sketched out in the Science SubGroup Report. Changes in the structure and functioning of the C-111 project have important implications for Florida Bay and the marine ecosystems of the Keys. EDF supports the hydrologic and ecological restoration objectives and strategies for coastal areas, Florida Bay, the Florida Reef Tract, and the Florida Keys to the Dry Tortugas described in the Science SubGroup Report (pp. 63-71). EDF believes that these goals and strategies to achieve them are consistent with the replacement of unsustainable, damaging economic activity (farming in former wetlands subject to flooding) with sustainable, high-value, environmentally responsible economic activities (commercial and sport fishing, tourism, etc.).

EDF supports the general intent of the proposed C-111 project modifications: to restore the hydrology of the C-111 basin and Taylor Slough to a more natural pattern of freshwater input, depth, and timing. However, while it seems clear that Alternative 6A (the recommended alternative) will provide the greatest ecological benefits, **EDF cannot recommend adoption of any of the alternatives for the C-111 project at this time** because changes in operational criteria to be associated with these criteria have not yet been specified.

EDF concludes that all of the alternatives described in the Integrated General Reevaluation Report and Environmental Impact Statement (IGRR/EIS) are likely to fail to achieve important goals set out by the Science SubGroup for the region (pp. 57-71). Impacts of the alternatives, both positive and negative, on listed and endangered species are expected to be insignificant; hence, the goal of expanded populations of these species will probably not be achieved. The goal of restoring natural fire regimes will not be met under

any of the proposed alternatives. Beneficial impacts on water quality are only speculated upon in the IGRR/EIS. **Because increased flows of nutrient-enriched water to Florida Bay have the potential to be very damaging, it is imperative that the factors that have been contributing to noncompliance with water quality standards in the region be established and controlled to ensure that nutrient (and other pollutant) concentrations in all water released into the Bay are close to pristine levels.**

SPECIFIC COMMENTS

Page 2-11. Phosphorus levels at S-332, S-175, and S-18C are low but have been increasing in recent years, frequently exceeding target levels. Best management practices to reduce nutrient loadings from known anthropogenic sources that discharge to Outstanding Florida Waters and other oligotrophic aquatic systems should be implemented immediately, preferably in a way that achieves water quality goals while allowing dischargers the flexibility to choose cost-effective measures to reduce pollution. If a nutrient budget analysis of the Taylor Slough Watershed (and of the entire region that contributes water, or is expected to contribute water as ecological restoration proceeds, to Florida Bay) indicates that agriculture and other anthropogenic sources are not contributing excess nutrients or other pollutants to the ecosystem, then requirements to reduce loadings may be relaxed.

2-22. The IGRR/EIS states that regional climate is controlled by latitude, proximity to Atlantic and Gulf, and numerous inland lakes. Is it known that the regional climate has not responded to changes in vegetation and hydrologic changes? In other tropical ecosystems, massive loss of vegetation and the resulting decrease in evapotranspiration is thought to alter rainfall quanitity and patterns.

3-1 to 3-7. While reference is made (p. 3-6) to the fact that freshwater deliveries to Manatee Bay, Barnes Sound, and Florida Bay would continue in their reduced-from-historical state under the "Without Project", or base, condition, the environmental and economic implications are not adequately described. Boesch et al. (Deterioration of the Florida Bay ecosystem: An Evaluation of the Scientific Evidence, Report to the Interagency Working Group on Florida Bay, sponsored by the National Fish and Wildlife Foundation, the National Park Service, and the South Florida Water Management District, 1993) conclude that disruption of the natural timing and quantity of freshwater flow has resulted in the destruction of wetlands and other types of fish and wildlife habitat in the transition zone between the Everglades and Florida Bay. Furthermore, the base condition would include a continuation of the drainage of large volumes of water away from Shark River Slough, a major source of freshwater to Florida Bay. Therefore, the "Without Project" condition would be expected to result in the continued degradation of transition zone habitats and perhaps of the Bay as a whole, along with greatly reduced fish recruitment and wildlife abundance. Since Florida Bay habitats are crucial in the life cycles of the species that support most of the region's commercial fisheries, the "Without Project" conditions would also result in continued economic harm to fishermen, the sportfishing industry, and the tourism industry, and would seem likely to increase harm, as the ecological collapse of Florida Bay and the integrated coastal ecosystems of the Bay and

the Keys deepens. Continued seagrass dieoff and/or lack of seagrass recolonization, with associated algal blooms and turbidity, will likely result in continued loss of coral cover, sponge die-offs, and other adverse changes in the integrated estuarine and marine ecosystems of the region.

5-6. Evaluation factors for alternative plans should include, in addition to environmental benefits, economic benefits associated with the restoration of natural ecosystem structure and function -- e.g., commercial and sport fisheries, tourism, quality of life associated with clear waters in Florida Bay and the Keys, etc.

5-7. The environmental benefits of mangroves, fringing marshes, seagrass meadows, and other components of the integrated estuarine and marine ecosystems of Florida Bay and the Keys are not included in the evaluation criteria.

8-13. The IGRR/EIS states that "to compare total benefit-to-cost ratios without including environmental benefits would be misleading". We concur, and believe that the IGRR/EIS leads the reader to make such misleading comparisons because it lacks an adequate discussion of the environmental and economic costs of no action and of the environmental and economic benefits of restoration.

5-49-50. Table 5-4 indicates that the three alternatives that have the greatest potential to provide large ecological improvements (4, 6, and 6A) would be all be associated with a major negative effect on regional income due to the loss of agricultural lands. When analyzing the costs and benefits of alternatives, it must be recognized that current practices, while resulting in agricultural revenues, also result in a much larger but unquantified amount of economic and biological harm represented by the loss of biological diversity, the loss of valuable soil (and hence, the loss of sustainable agricultural use), the loss of potential fisheries yield, the loss of sportfishing revenue, the loss of tourism income, and reductions in property value. These costs, if quantified and incorporated into the NED (National Economic Development) account, would surely outweigh the costs of ecological restoration.

Some of the economic impacts of the preferred alternative (6A) would be offset by restoration as a result of increased income from sustainable agriculture, sustainable and enhanced commercial and sport fishing, environmentally responsible tourism, and other economic activities that can occur in harmony with natural ecosystem structure and function. Continuation of the base condition (i.e., the "no action" alternative) would likely result in the collapse of the valuable commercial and sport fishing industries of Florida Bay and the Keys, adverse effects on tourism and quality of life, and incalculable harm to the Everglades and marine ecosystems of the region. According to the Science SubGroup Report (p. 2), tourism is a major industry in the region, and recreational fishing and diving are significant in the overall economy. Recreational activities and tourism account for about half of the total employment in Monroe County (the Keys). Sportfishing contributes about $77 million and diving contributes about $354 million to the Keys economy each year. These critical economic sectors are highly dependent upon the protection and restoration of biological

diversity, ecosystem integrity, and water quality. While a rigorous comparison of the net economic benefits of the preferred alternative is not possible at this time, the more natural ecosystems and sustainable economic activities associated with ecological restoration are highly preferable to the continued catastrophic loss of natural resources and unsustainable agriculture that would be associated with no action.

6-2 to 6-4. The preferred alternative (and indeed all of the alternatives) are expected to have little or no effect on threatened and endangered species. Restoration should result in increased abundance of such species.

7-9. Prescribed burning will continue in the lands acquired for restoration. EDF concurs with the conclusions of the Science SubGroup Report (p. 13) that the replacement of the natural fire regime with prescribed burning which dampens variation can lead to the loss of biological diversity. Species tend to be adapted to natural variations. Dampening these variations would be expected to result in selection for certain species and elimination of others.

METROPOLITAN DADE COUNTY, FLORIDA

METRO-DADE

METRO-DADE CENTER

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

Colonel Terrence Salt
United States Army
Corps of Engineers
Jacksonville District
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Colonel Salt:

On April 19, 1994, the Dade County Commission will act on a proposal to spend $25 million to acquire land in the upper Southern Glades area of the C-111 basin and in the Model Lands Basin. The South Florida Water Management District has already acquired more than 28,000 acres in the Southern Glades and has pledged an additional $25 million for land acquisition in these areas (see attached map). Because of these commitments, we are especially concerned that the acquisition areas may become drier if the preferred alternative 6A described in the February 1994 draft Integrated General Reevaluation Report (GRR) and Environmental Impact Statement for Canal 111 in South Dade County, Florida is implemented.

We are also very concerned that the GRR does not thoroughly evaluate all of the proposed alternatives in the context of the entire C&SF Project and that no modeling was presented for the preferred alternative. The modeling results presented in the draft overstate the benefits to be derived and understate negative impacts that may occur elsewhere in the southern Everglades system, because the model assumed that the system would be operated at design stages even though the system has rarely been operated to maintain the authorized design stages.

Dade County believes that any effective solution to water shortages in Taylor Slough, the eastern panhandle and coastal estuaries must involve the reintroduction of more water into the southern Everglades from Lake Okeechobee and its outlets. Without such assurances, engineering solutions such as the preferred alternative, will merely redistribute artificially deficient water resources during periods of water shortages to the potential peril of other important natural resources such as Biscayne National Park and the possible detriment of domestic and agricultural users in south Dade County.

Dade County requests that: (1) a binding commitment be made to divert more water from Lake Okeechobee and the northern Everglades to the southern Everglades to ensure that the potentially detrimental effects of this project do not materialize; (2) Dade County become an active participant in the development of operational criteria for all of the structures in the C-111 Basin; (3) the alignment of C-111N be moved as far north as possible in the Southern Glades acquisition area with a culvert connection to the Model Lands area; and (4) C-111N be supplied through a 500 cfs pump rather than the 50 cfs pump shown in alternative 6A.

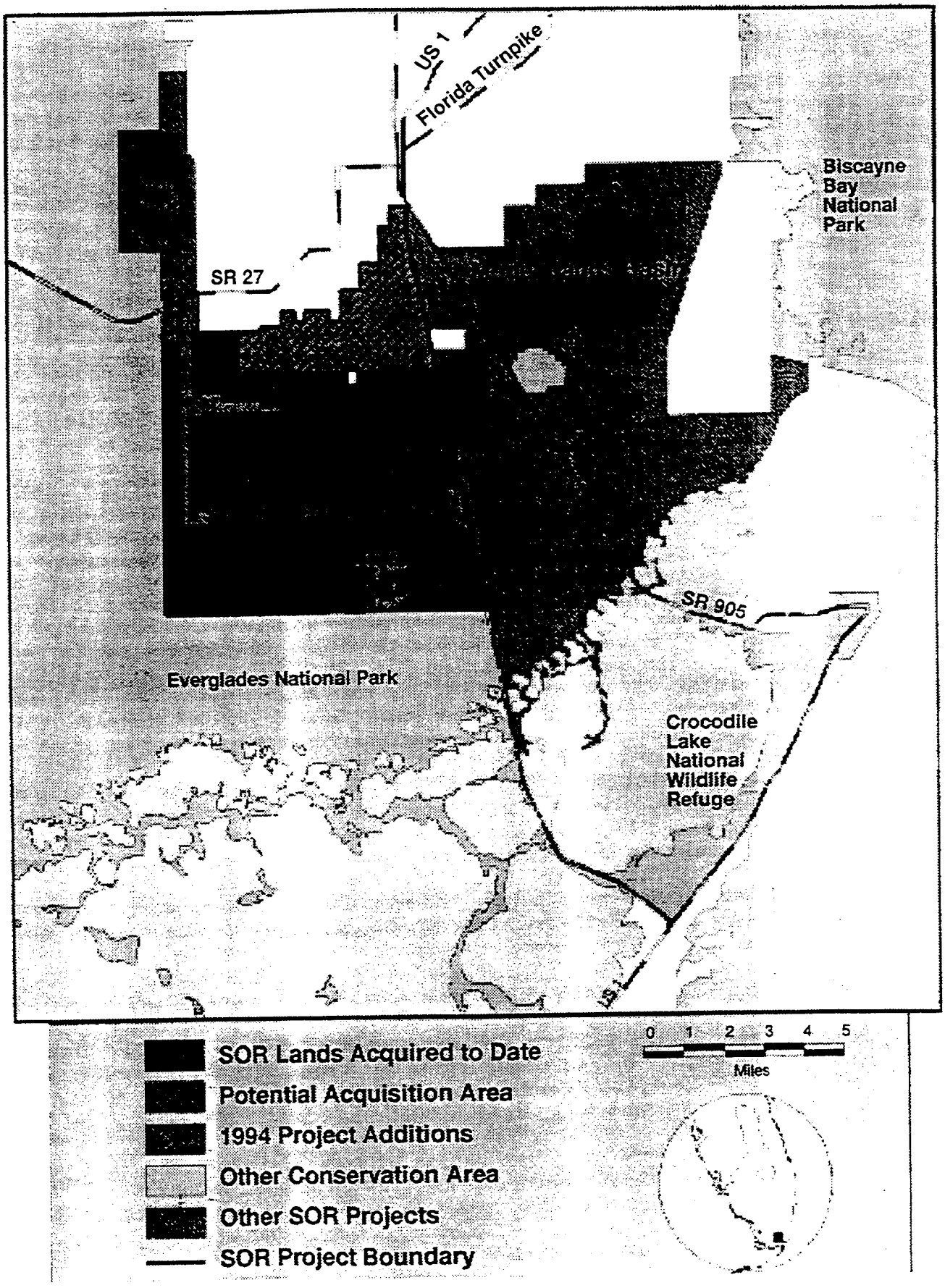
Please refer to the attached report for additional information regarding these comments and recommendations. If you have any questions about this letter or the attachment, please contact Ms. Jean Evoy at (305) 375-2835.

Sincerely,

Joaquin G. Aviño, P.E., P.L.S.
County Manager

Attachments

CC: Chairman and Members, Board of County Commissioners
Chairman and Members, South Florida Water Management District Board
Mr. Richard Ring, Superintendent, Everglades National Park


US 1
Florida Turnpike
Biscayne Bay National Park
SR 27
SR 905
Everglades National Park
Crocodile Lake National Wildlife Refuge
SOR Lands Acquired to Date
Potential Acquisition Area
1994 Project Additions
Other Conservation Area
Other SOR Projects
SOR Project Boundary
0 1 2 3 4 5
Miles

Biscayne National Park and the possible detriment of domestic and agricultural users of the Biscayne Aquifer in Dade and Monroe Counties. We also concur with the statement made by Everglades National Park in its Technical Report SFNRC 93-4, "Operational criteria must be locked in as part of the entire process, otherwise the preferred alternative may not work for most of its intended purpose (viz. the L-31W canal)."

Dade County is also concerned about projected decline in hydroperiods and water levels that are shown for the Upper Eastern Panhandle under alternative 6. We assume that the impacts of the preferred alternative 6A would be similarly negative. Over 28,000 acres of this area has been acquired by the South Florida Water Management District for the purposes of restoring sheetflow to SE Everglades National Park and NE Florida Bay and contributing to the survival of freshwater and marine communities. The Metro-Dade Board of County Commissioners has pledged to share the cost of purchasing lands in the northern portion of this area and in the Model Lands Basin east of US 1 through its Environmentally Endangered Lands Program. The total acquisition cost is estimated to be $50 million.

The preferred alternative includes a canal that would sever the lands that are being purchased and a 50 cfs pump that would divert only a small fraction of the water that is projected to flow south through C-111. Under the preferred alternative, lands north of the proposed canal and levee would become drier and the already serious problem of exotic vegetation control would be exacerbated. Dade County concurs with the National Audubon Society and other members of the Everglades Coalition that it would be preferable to divert floodwaters further to the north into the exotics dominated area. The County also supports the National Park's and the Coalition's recommendation that a 500 cfs pump be installed to divert floodwaters east from C-111 and to make the portion of C-111 south of S-332E essentially inoperable.

Since the C-111 GRR Study Area includes the triangle between US 1 and Card Sound Road, Dade County requests that the Corps reconsider extending the C-111N canal through a culvert, or series of culverts, under US 1 into the Model Lands Area. This would begin the process of reconnecting the lands that span the southern Everglades. This portion of the Model Lands functions as a recharge area for maintaining the salt barrier line and for the discharge of freshwater into Barnes Sound and Manatee Bay which are directly contiguous to NE Florida Bay.

Dade County could support the highly engineered approach to enhancing water deliveries to the upper Taylor Slough described in the preferred alternative, if we could be assured that the authorized canal levels will be maintained in the L-31N and C-111 canals and that hydroperiods and water levels will not be decreased in the Southern Glades SOR Lands and North C-111 acquisition areas.

Dade County requests that: (1) a binding commitment be made to divert more water from Lake Okeechobee and the northern Everglades to the southern Everglades to ensure that the potentially detrimental effects of this project do not materialize; (2) Dade County become an active participant in the development of operational criteria for all of

METRO-DADE COUNTY COMMENTS ON THE C-111 GRR

Metro-Dade County staff have reviewed the February 1994 draft Integrated General Reevaluation Report and Environmental Impact Statement for Canal 111 in South Dade County, Florida. Dade County has gone on record on several occasions in support of Everglades restoration efforts, however, we have several concerns about the preferred alternative presented in this draft document.

It is unfortunate that the limited timeframe and scope of this GRR do not allow for thorough evaluation of all proposed alternatives, especially the preferred alternative, in the context of the entire C&SF Project. No modeling of the preferred alternative 6A or Everglades National Park's alternative 8 is included in the February draft. Alternatives 1, 2 and 3 were modeled using authorized project design stages while alternatives 4 through 6 were modeled using a rating curve for S-176, based on flow in lieu of actual stage data, and authorized stages for structures S-174, 175 and 332 where they were included in the alternative. The hydroperiod and water depth differences between each of the alternatives and the base condition assumed that the structures in the base condition were operated at their authorized design stages. This is cause for skepticism, because the South Dade Conveyance has rarely been operated as it was designed. In fact, the headwater at S-176 was actually at the authorized design stage on only <u>two days</u> in the entire four year period between January 1990 and March 1994.

The modeling results included in the draft may substantially overstate the benefits to be derived and understate potentially negative impacts elsewhere in the system, if canal stages are not be maintained at optimal levels. This concern is heightened by the fact that S-332 B, C and D in the preferred alternative are designed to pump when water levels in L-31N range from 3.0 to 6.5 feet. Before Dade County can support this project, we need to know how often canal stages can be expected to drop below the 5.5 optimum design stage in the segment of L-31N between S-331 and S-176 if the preferred alternative is implemented, the assumptions on which this estimate is based and how these proposed pump stations will be operated when canal stages fall below 5.5 feet.

In Appendix A, the draft document acknowledges that "Water availability was limited to basin rainfall, existing S-331 water supply releases and seepage inflows from Shark River Slough restoration of Modified Deliveries to Everglades National Park. Lack of available water severely limited the alternatives from reaching their full restoration capabilities".

Dade County believes that any effective solution to water shortages in Taylor Slough, the eastern panhandle and coastal estuaries must involve the reintroduction of more water into the southern Everglades from Lake Okeechobee and its outlets. Without such assurances, engineering solutions such as the preferred alternative, will merely redistribute artificially deficient water resources during periods of water shortages to the potential peril of other important natural resources such as

the structures in the C-111 Basin; (3) adequate sheetflow be provided across the eastern panhandle area by diverting floodwaters into C-111N, which should be constructed in the exotics dominated areas in the upper portion of the Southern Glades acquisition area rather than the alignment shown in alternative 6A; and (4) C-111N be supplied with a 500 cfs pump rather than the 50 cfs pump included in alternative 6A.

OPTIONAL FORM 99 (7-90)
FAX TRANSMITTAL # of pages ▶ 5
To Col Salt. From Gerald Miller
Dept./Agency Phone # 404/347-3776
Fax # 904-232-3442 Fax # 404/347-5206
NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION
UNITED STATES ENV
345 C
ATL/
APR 15 1994

Colonel Terrance A. Salt
District Engineer, Jacksonville
P.O. Box 4970
Jacksonville, FL 32232

Attn: Mr. Stephen Sutterfield
Planning Division

Subject: Draft Environmental Impact Statement (DEIS) for Canal 111 (C-111), South Dade County (Central and Southern Florida Project for Flood Control and Other Purposes)

Dear Colonel Salt:

Pursuant to Section 309 of the Clean Air Act and Section 102 (2)(C) of the National Environmental Policy Act (NEPA), EPA, Region IV has reviewed the subject document which discusses the environmental consequences of an array of structural and non-structural modifications to existing works in the C-111 basin.

The former measures include the construction or modification of ten canals, building the L-31/S-332D tieback levees, upgrading the S-332D bridge which connects Taylor Slough (TS) with the Everglades National Park (ENP), installing five 300 cfs pumps, and removal/reuse of excavated material along the southerly leg of C-111. Non-structural components of the plan include acquisition of over 11,000 acres of land in the Frog Pond and Rocky Glades and relocation of some residential structures which would be adversely impacted by project implementation.

These actions will be accomplished in an attempt to restore certain functional elements of the TS and eastern ENP ecosystems which have been negatively affected by the ongoing construction of numerous flood control projects in the C-111 Basin. Critical to TS restoration is the reconstitution of the seasonal overflow of water from Shark River Slough (SRS). Additionally, the project works should remove 40% of the standard flood runoff from the subject drainage area, reduce depth/duration of larger floods, provide water control to prevent overdrainage, prevent saltwater intrusion, and provide facilities to convey up to 500 cfs to ENP when normal runoff is available.

While certain of the construction activities, e.g., tie-back levees, necessary to accomplish these ends will create some

significant localized environmental impacts, we agree that the long-term benefits justify the short-term losses. Eventually it is anticipated that a compromise solution will evolve which will provide both flood protection and a means to increase management options to benefit the natural environment.

Alternatives 4, 6, and 6A will all raise water in SRS to a degree; however, this objective can only be achieved when rainfall is adequate and judicious water management is undertaken. Only then will a somewhat natural overflow condition result. Among these alternatives EPA strongly supports 6A since it has the greatest flexibility to restore natural timing, location, and volume of water to the major TS subdivisions. Moreover, it achieves these results with no significant increase in comparative cost over project life.

The interposing buffer areas are a significant beneficial aspect of 6A. They should physically lessen seepage back into the canals as well as assimilate some of the phosphorous which has created a significant problem in the basin. Appropriate management of these buffer areas, therefore, will be very important. Of course, the other major design elements of 6A will alter the water budget in the Rocky Glades and Frog Pond to an important extent. This change will adversely affect agricultural endeavors located there which is one of the forcing functions for the legislation authorizing their purchase.

On the basis of our review we would like to commend all the parties which assisted in developing the overall plan and the supporting documents. The use of ongoing scoping throughout the planning phase was an innovative way to insure that all the important issues in this complicated project were included. Nonetheless, the amount of effort required to compile all this information, make a cogent assessment of how all the pieces mesh together, and present the data in a coherent fashion was obviously a major undertaking. We appreciate that many of the project goals will only be realized after a period of time and may differ somewhat from initial projections.

Therefore, we have assigned a rating of EC-1 to the document, per se. That is, we have a degree of environmental concern about how all the project elements will ultimately function and more importantly the number of refinements that will be necessary to accomplish all the desired purposes. However, we are fully supportive of 6A's objectives and the overall concept of the project. As additional details become available, it should be shared with the involved parties. A brief list of information which we believe would benefit and/or should be included in the final document is attached.

Thank you for the opportunity to comment on this action. If we can be of further assistance in this matter, Dr. Gerald Miller (404-347-3776) will serve as initial point of contact.

Sincerely,

Heinz J. Mueller, Chief
Environmental Policy Section
Federal Activities Branch

Attachment

Specific Comments

o The recommended plan is a compromise which everyone hopes will accomplish the often independent objectives of flood control and environmental enhancement. The scope of the project matches the magnitude of the goals. While these environmental aims are laudable, construction of structural measures will result in some important, if localized adverse impacts. For example, borrow material for the S-332D Tieback Levee could come from existing disposal mounds along C-111 or an adjacent potential borrow canal. Disregarding cost, the former option appears to be much better than the latter, i.e., wetland enhancement is obviously preferable to wetland habitat conversion to open water.

Therefore, we suggest that during the final stage just prior to actual construction every effort be taken to make any necessary adjustments/design changes to keep these unavoidable losses to a minimum. In a related matter we urge that the staging of construction, e.g., temporary fill for access, fill pads for construction materials, etc., be carefully considered to avoid unnecessary adverse environmental impacts.

o In fact, given the scale of this proposal, we offer that wherever possible existing mounds of material from previous construction be excavated to ground level and relict borrow refilled. However, care will have to be taken in this regard to avoid providing habitat favorable for penetration of exotics.

o Best Management Practices (BMP) will be required during all construction phases for this type of project. Given the sensitive nature of the subject area, we suggest the contracts for all construction components contain substantive financial penalties for non-performance of critical BMPs. As noted, follow-up monitoring will be accomplished to insure that the agreed upon success criteria for sediment control, etc. occur and where necessary work repeated until satisfactory results are obtained.

o The five pumping stations will be powered by diesel engines to ensure reliability during electric power outages. Given the high water table and biological sensitivity of the environment around these stations, the operation/maintenance plan for the pumps and fuel systems should be carefully reviewed to insure compliance with all reasonable contingencies.

o Low berms will be created in a number of locations to satisfy hydraulic design requirements and to provide access for maintenance. These areas will have to be managed in a number of ways for vegetation control. Mowing would not be a major problem from an environmental perspective; however, the use of herbicides, especially via aerial application could be problematical. We suggest that the use of herbicides be kept to a minimum because of their unintended consequences.

o While we appreciate that cost is an important factor in decision-making relative to this project, we suggest that the acquisition of land interests in the detention/retention area be purchased in fee simple rather than just encumbered by flowage easements. The former would give greater operational flexibility in their immediate use and preclude potential renegotiation with land owners regarding future changes in value/use.

o A brief site reconnaissance will need to be conducted for the five properties which will be required for operation of the recommended alternative to insure the absence of any hazardous/toxic wastes.

GHIOTO & ASSOCIATES
Water Resources and Civil Engineering

Rodney D. Ghioto, P.E.
Owner

April 18, 1994

Transmitted by FAX
(Hard copy to follow)

Mr. A. J. Salem
Chief, Planning Division
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Subject: Comments on the Draft Integrated General Reevaluation Report and Environmental Impact Statement, Canal 111 (C-111) South Dade County, Florida.

Dear Mr. Salem:

Enclosed for your consideration is a copy of our comments regarding the February 1994 draft document. I am submitting these comments on behalf of the Florida Lime and Avocado Administration Committees and South Dade Land Corp, who together represent a very large segment of the agricultural lands affected by this project.

I hereby request that you evaluate the comments and our proposed plan in detail before sending this document to higher levels of authority. We feel that the Recommended Plan will be damaging to agriculture both east and west of the canals. We also feel that the curtain wall alternative will provide better environmental benefits while improving agricultural conditions in the area.

Sincerely,
Rodney D. Ghioto, P.E.

GHIOTO & ASSOCIATES
Owner

cc: Mr. James Humble, South Dade Land Corporation
FLAAC
Ms. Silvia Alderman, Katz, Kutter, Haigler, Alderman, Davis, Marks & Rutledge
Mr. Brad Waller, Hydrologic Associates USA, Inc.
Mr. Pete Rhoads, SFWMD

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A REVIEW OF THE

DRAFT
INTEGRATED GENERAL REEVALUATION REPORT AND ENVIRONMENTAL IMPACT STATEMENT
CANAL 111 (C-111)
SOUTH DADE COUNTY, FLORIDA

February 1994

Prepared for

South Dade Land Corporation
and the
Florida Lime and Avocado Administration Committees

by

GHIOTO & ASSOCIATES
Water Resources and Civil Engineering

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Part A

Curtain Wall Alternative

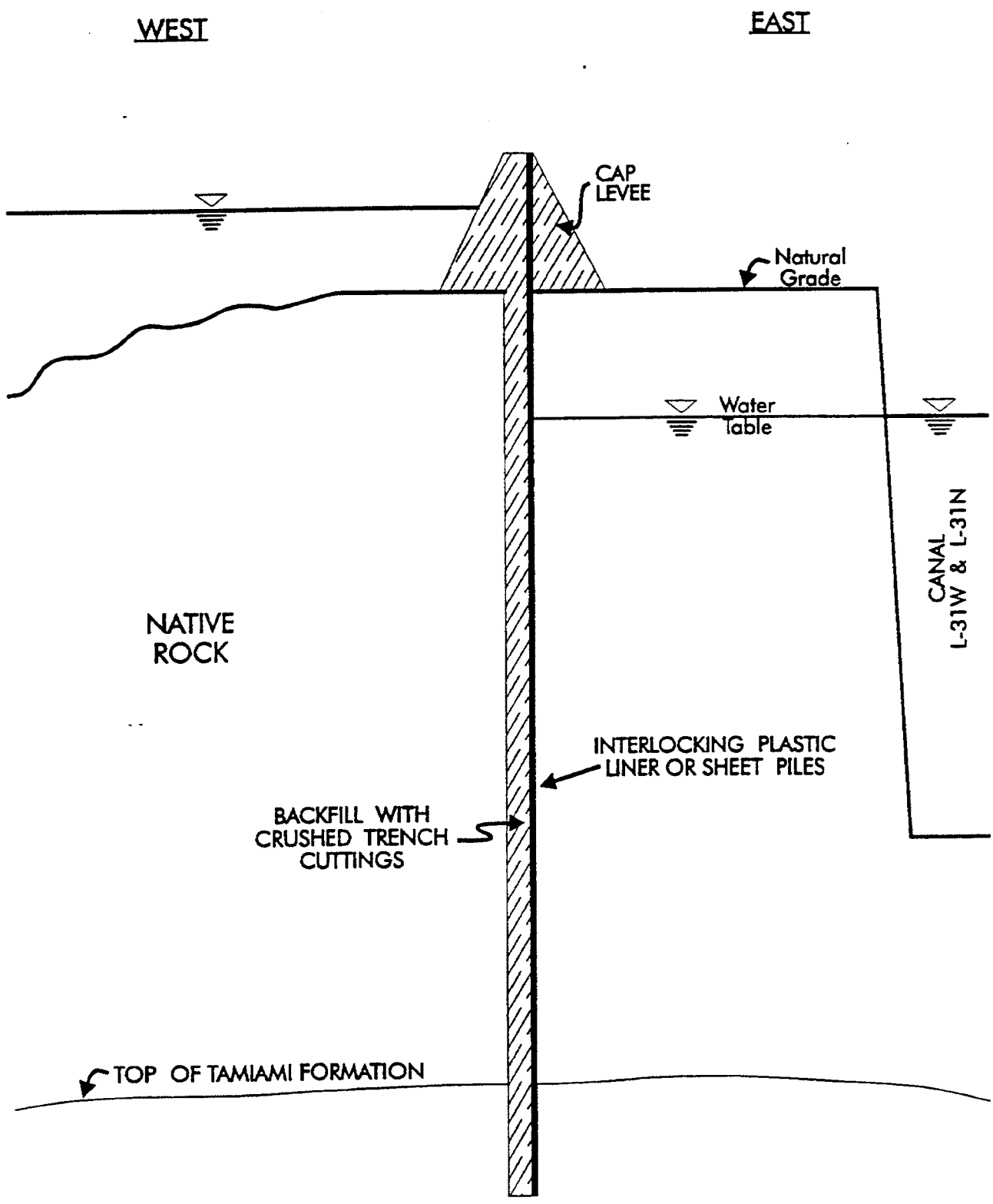
We feel that a more passive approach to reduction of water losses from the ENP and, therefore hydroperiod extension, is appropriate and potentially much more cost effective than the Recommended Plan (Alternative 6A). In fact, because we feel that the Selected Plan will cause additional damage to farm lands east of the canals, we believe acquisition of much more land or construction of a curtain wall (in addition to the Selected Plan) will need to be accomplished to ultimately resolve this problem. Our proposal relies upon the construction of a vertical flow-retarding barrier wall, fabricated from plastic, along the western edge of developed areas in South Dade County. Its purpose would be to reduce ground water losses from Northeast Shark River Slough, the Rocky Glades and the northern Taylor Slough Basin. This technology is not new and has been successfully applied all over the world, especially for the containment of hazardous materials in ground water as well as surface water bodies. It has also been used in the rehabilitation of failing flood control levees.

It has become obvious to us that this alternative is the only feasible way to achieve restoration goals. It is also the only alternative proposed that would not risk irreparable harm to up to 35 square miles of existing and unique agricultural lands. It is the only alternative that is a "win - win" scenario for all who are genuinely concerned about the health of the southern Everglades, Florida Bay and preservation of the endangered American Farmer.

The Construction Concept

Figure 1 shows a vertical section of the proposed concept. It consists of a vertical trench through the limestone with a plastic liner inserted along the eastern side of the trench face. After placement of the material, the trench would be backfilled with trench cuttings. The liner material could consist of 120 mil plastic liner material with interlocking joints. For areas where this material is not appropriate, due to small to medium sized solution cavities, a plastic sheet pile can be used instead and interlocked with the liner material if necessary. In situations where neither is appropriate, it may be necessary to leave a local gap in the curtain wall. It should be remembered that the concept consists of reducing regional flow and leakage associated with localized openings is not considered to be significant.

The liner material would extend upward into a small cap levee that would be constructed to protect areas to the east from surface flow during wet periods.



GHIOTO & ASSOCIATES Water Resources and CMI Engineering 7548 Municipal Drive • Orlando, Florida 32819	CROSS SECTION CURTAIN WALL CONCEPT	Figure 1

The footprint of this levee would probably be less than that necessary under other alternatives because it wound contain an impermeable insert. Structural integrity is needed but seepage through the cap levee itself is prevented by the liner material. Structural integrity below natural land surface is provided by the rock itself.

The section in Figure 1 shows the liner fully penetrating to the less permeable Tamiami Formation, which varies in depth from about 40 to 55 feet along the proposed alignment. However, this need not be the case because its purpose is to reduce, not stop, leakage from the park. If the concept works too well and additional easterly flow is desired, then gated culverts through the cap levee could be used to move water from west to east. In addition, it would be possible to remove panels from the curtain wall if more flow is required.

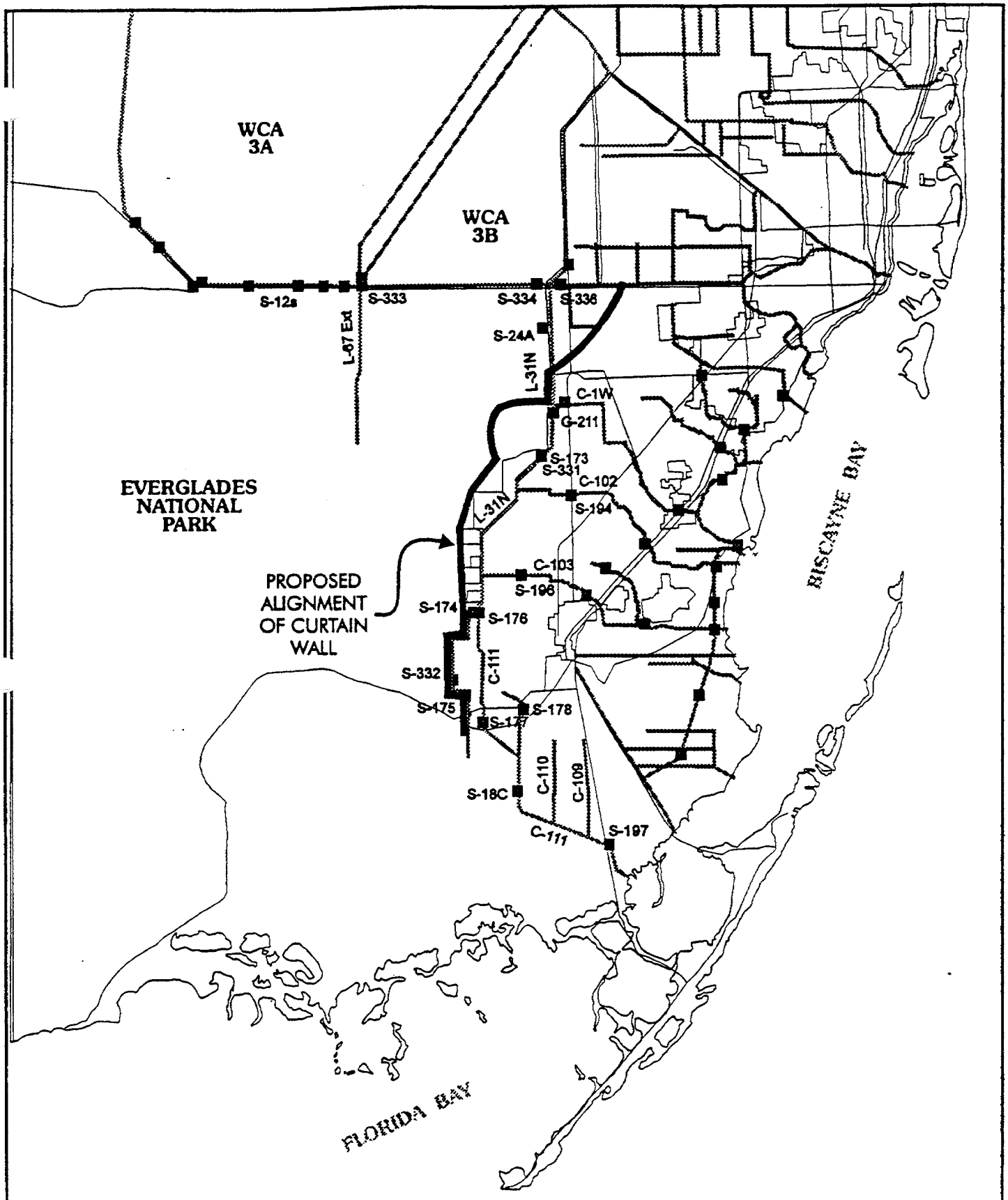
Proposed Alignment

The proposed route for this facility is shown in Figure 2. It would begin at the southern boundary of the Frog Pond and be placed along the western bank of the L-31W borrow canal. North of the Frog Pond, it would follow the same alignment as the western levee proposed in the Corps' Alternative 6. It would also follow the proposed western levee alignment around the 8.5 Square-Mile residential area to the existing the L-31N levee. Structure G-211 would be moved north of C-1W to form a new delivery location for L-31N borrow canal and to make C-1W available for flood control use. The alignment would cross L-31N at G-211 and then follow the eastern bank of the canal (northward) to a point immediately south of the remnant wetlands of the Bird Drive area. From that point, it would skirt the southern side of the wetland area in a northeastern sweep to be terminated at Tamiami Trail.

In the northern portion of the system, the remnant wetland portions of the Bird Drive area can then be re-connected to NESRS via degradation or gapping that portion of the L-31N levee, north of the relocated G-211. In addition, the restored Bird Drive area wetlands could possibly be connected to the proposed lake belt system farther north providing additional water supply to NESRS and/or to the L-31N canal to the south.

Structure S-336 can be moved eastward to coincide with the point where the curtain wall ties into Tamiami Trail. The proposed S-356 and S-357 pump stations, as well as modifications to S-334, would be eliminated from the 1992 plan for NESRS.

Pump stations can be located along the curtain wall at strategic locations to back pump under-seepage and to provide additional water supply to the ENP where



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CURTAIN WALL ALIGNMENT

Figure 2

and when appropriate. Through selection of the proper vertical length of the curtain wall, eastward seepage would potentially be a small fraction of what it would be with all of the other proposed plans. Therefore, the size of the proposed pump stations could probably be significantly reduced or even eliminated.

By movement of G-211 farther north, meaningful flood protection for the 8.5 Square-Mile residential area, and other areas between G-211 and S-331, could be provided via efficient use of the C-1W canal.

S-331 and the South Dade Conveyance System could be used as originally intended, to supply water during droughts to the L-31N and C-111 basins as well as to ENP at S-332 and S-18C. However, with drastically reduced losses from the ENP, water supply at these locations could be limited to the rainfall/runoff equivalent of historic Taylor Slough areas originally removed from the basin by the project. It is also possible that, if much higher levels are obtained to the north (in NESRS), large quantities of supplemental flows directly to Taylor Slough from the east could be reduced or eliminated. The overflow from Shark River Slough would be more effective in holding up water levels.

Hydrologic Function

The primary case for restoration of Taylor Slough has been predicated on the fact that ground water outflows to the east have been increased by drainage of developed areas resulting from the C&SF Project and earlier activities of man. There is no reason to deny this because that was the original intent of the C&SF Project and it worked. The ENP has contended that this increased ground water outflow has made it impossible to maintain historic hydroperiods (i.e. higher water levels for longer periods of time) in the upper Taylor Slough area.

Water levels west of the curtain wall can be manipulated to almost any desirable elevations, over any desired locations, and for any desired period of time. This will only be constrained by the availability of water from the north (across Tamiami Trail) and local rainfall over ENP. Recent (preliminary) two dimensional modeling by the SFWMD, in the vicinity of the Frog Pond, indicates that the curtain wall would be effective in reducing outflow at that location by up to 96 percent if installed to a depth of 41 feet. These results indicate that water losses from the ENP could be controlled to a significant degree, maybe to the point where pumping to the west would not be required. It should be remembered that reducing losses of water is the same as adding more water if the goal is to maintain hydroperiod.

If westward pumping could be eliminated or significantly reduced, then implementation costs would decrease and there would be less concern over the quality of water along and within the borders of the ENP.

With the curtain wall, the agencies will be free to experiment with the restoration of NESRS and Taylor Slough at will. In addition, water levels east of the curtain wall can be maintained in a lower range so that agricultural productivity of this region can be maximized rather than stifled. The residential area would be provided with real flood protection (above the differential damages level contained in the 1992 GDM). The only land required is right of way acquisition for the cap levee and maybe a small borrow canal to the east for collection of under seepage.

One of the problems with the current thinking regarding higher water levels in canals to reduce losses from the ENP is that the steeper ground water gradients still exist to the east. As with the current test, the gradient is simply shifted from the L-31N and C-111 canals to the ridge structures, where it then steepens to the east coast. This requires additional pumping into the region to maintain that gradient, and these subsurface flows are then lost from the system. Lower water levels east of the curtain wall will flatten the eastern gradient and require much less volumetric input, via the South Dade Conveyance System (SDCS), to maintain the system.

Water Supply Function

The SDCS can function as originally intended to supply that region's well fields and irrigation needs, additional needs in the lower part of the ENP, and needs associated with the prevention of salinity intrusion. We do not need a 5.5 foot elevation at the S-176 headwater or 4.5 feet at S-177 for salinity intrusion prevention. It is emphasized that we are not proposing lowering water levels (east of the wall) to the point where there would be a salinity intrusion problem. That would be self defeating because agriculture needs fresh water for irrigation. Rather, we are proposing lower water levels that would be commensurate with farming in the area without fear of flooding that would adversely impact planting, growing or harvesting.

With generally higher water levels to the north of G-211 (relocated), higher water levels to the west, and with the institution of a rainfall based delivery schedule to the lower ENP, it may also be determined that the S-331 pump station would hardly ever need to be operated at its design capacity. Most SDCS deliveries will likely be possible by gravity via S-173 and/or siphoning at S-331.

Water Quality Function

We believe that South Dade Agriculture is not adversely impacting water quality in the C-111 Basin as has been claimed by others. However, by reducing or eliminating the need for inputs of water to the ENP from the L-31N and L-31W canals, water quality would be a much lesser question with respect to the Taylor Slough Basin. It should also be emphasized that there is much less likelihood that a gradient would occur for significant periods from the canal system westward to the upper Taylor Slough Basin.

Delivery of high quality water to the southeast ENP will be accomplished through use of the area south of the proposed C-111N canal. Non flood discharges from S-197 should be made in a manner commensurate with the maintenance of estuarine conditions in Barnes Sound and Manatee Bay. Through maintenance of base flows through this facility and sheet flow over the southern bank of C-111, storage availability in the above area can be maintained so that a repeat of the 1988 event might be avoided.

It should be noted that historic water quality in the C-111 Basin has been excellent when compared to that produced in the northern Everglades area. We believe that the slight trend toward higher phosphorous levels in the lower C-111 Basin is as much (or more) related to water management activities over the past decade as it is to increased agricultural activity, as alluded to but not flatly stated in the draft GRR. High water levels in Northeast Shark River Slough have significantly increased ground water levels (for extended periods of time) in the 8.5 Square Mile Residential Area. We believe that this activity has potentially resulted in increased nutrient loads from septic tanks to L-31N, upstream of S-331. It is also possible that the reflooding of NESRS is producing nutrient loads through seepage flows into the northern end of L-31N. Flooding of farm lands could also be a factor. If they are not flooded, water quality will improve. All of the above potential pollution sources will be reduced or eliminated through implementation of the curtain wall in concert with lower water levels east of the facility.

Benefits to Florida Bay

Although we feel that the jury is still out with respect to the actual causes of and solutions to Florida Bay problems, the reduction of eastward groundwater outflows from the Taylor Slough basin and the coincident ability to maintain higher water levels (better than all other alternatives) will increase the southerly groundwater gradients toward the bay. This water will be more available and of a better quality than that which would occur under all other alternatives.

A plan that can be supported by all of the affected parties is more likely to be constructed in a timely fashion. Execution of Alternative 6A, will be delayed if the government has to obtain farm lands by condemnation and then construct all of the physical works that will occupy those lands. Execution of the curtain wall can be "fast tracked" because it will receive a great deal of support from adjacent agricultural land owners and because there is mutual benefit from speedy implementation. Having made the decision to construct this facility, attention can then become more focused on determination of what the actual problems are with the bay and what appropriate actions are necessary to optimize its bio-diversity.

Flood Control Function

As we have indicated on numerous occasions in the past, holding antecedent water table levels high under agricultural areas will result in a demand for higher discharges from smaller, more frequent, rainfall events. This happens because there is no below grade storage available and even small rainfalls can create flooding conditions in root zones. These frequent and higher discharges have been a point of contention between the farmers and those who wish to eliminate farming from the area. For some reason, people have been given the impression that holding lower antecedent water levels results in the release of larger water volumes over long periods of time. **This conclusion is scientifically incorrect.**

With lower water levels east of the curtain wall, more buffer storage will be available in the aquifer for the smaller storm events. This will reduce the pressure to discharge because the agricultural and residential areas will not be held on the brink of destruction, as will be the case with all other alternatives. Runoff volumes from normal rainfall events can therefore be discharged at a slower rate.

Operational Flexibility

Operational flexibility can be easily maintained with the curtain wall through installation of periodic gated culverts (probably at the proposed pumping station locations) to bleed water out of the ENP if desired.

Reversibility

This project is reversible because the curtain wall material can be fabricated in a manner that allow for partial or total extraction. However, it is unlikely that extraction would be required either for water supply or for environmental reasons.

Construction Costs

Ghioto & Associates has been in contact with manufacturers of these materials who have provided examples of similar installations. For a project of this size, fabrication would probably be done on site. They have contacted a Florida contractor who has equipment to construct the trench more efficiently than the methods proposed by the USACE. The equipment has the ability to cut through solid rock with a rectangular footprint. This eliminates the need to split out rock between circular drilled holes as proposed by the Corps. The contractor's installation estimates for the curtain wall range from $3.0 Million per mile for a 40-foot cut to $4.2 Million per mile for a 60-foot cut. Based on modeling done by the SFWMD, we feel that it is likely that the trench will not have to be anchored well into the Tamiami Formation, as assumed by the Corps. Therefore, the actual trench depth should fall somewhere between 40 feet and 60 feet. Assuming an average of 50 feet for depth, a linear interpolation of cost leads to $3.6 Million per mile.

Using the above unit cost, the total curtain wall cost over 16.3 miles would be $58.7 Million. The Corps removed this alternative from consideration because its estimated cost of $108 Million was too far in excess of its estimated land cost for Alternative 6A of $58.9 Million, a figure which we feel is unrealistically low. The above estimates therefore place Alternative 6A and Alternative 9 at roughly the same cost in terms of capital expenditures. And, given that the Alternative 6A land cost is unrealistically low, Alternative 9 becomes the only economically feasible alternative. In addition, it is anticipated that the estimated costs for land acquisition will rise significantly from those included in the document. Conversely, the unit costs for curtain wall construction will likely decrease as a result of competitive bidding for contracts and as experience is gained in its construction.

In addition to the above, construction of this facility would greatly reduce capital costs of other facilities and lands under the C-111 GRR, as well as, the 1992 GDM. This would result from the ability to downsize or eliminate major pumping stations. Operational costs of using S-331 would decrease significantly because it would not be needed except in times of major droughts.

It must be emphasized that the curtain wall eliminates the need to purchase land. Therefore, it will result in annual economic contributions to the local economy over the 50-year life of the project. These annual contributions far outweigh even large differences in the capital costs that are presented in the Draft C-111 GRR. It must also be emphasized that the State of Florida is a partner in this project and should be sensitive economic impacts on the state and local levels. Florida did not enter into the C&SFFCP in order to benefit someone in another state or perhaps outside of the United States.

Section 122 Effects

"Effects of the alternatives on air, noise and water pollution, natural resources, and other types of resources listed in Section 122 of the 1970 River and Harbors and Flood Control Act..."

Table 5-2 qualitatively lists these effects for all of the alternatives. These are interpreted on the following page, using the table legend provided, for historic conditions, existing conditions, Alternative 6A (the Corps' Recommended Plan) and Alternative 9 (Curtain Wall Concept).

This table, as compiled by the USACE, clearly indicates that Alternative 9 (Curtain Wall) is far superior to Alternative 6A (Recommended Plan). While the Recommended Plan **Very Adversely Affects** Man-made resources, employment and displacement of people, the Curtain Wall Concept **has no adverse effects** upon these categories. While the Recommended Plan **adversely displaces (removes) farms**, the Curtain Wall Concept **has no adverse effects.**

In addition to the above, it can be seen that there are a number of ratings in the table with which we take exception. For example, the table indicates that a Beneficial Change will occur to Natural Resources with both plans. Under the criteria used to model the alternatives (all except the Curtain Wall which was not modeled), there is only a small positive effect on natural resources. This is evident from the environmental evaluations provided in the Draft C-111 GRR. However, these could be increased if more water is injected into the C-111 Basin at S-331 (putting the farmers at even greater risk than indicated in the GRR). The Curtain Wall Concept will result in higher and more natural hydroperiods in the ENP without hurting agriculture. **Therefore, is should be concluded that the Recommended Plan has much less benefit to Natural Resources than does the Curtain Wall.**

IMPORTANT PARTS OF TABLE 5-2

CATEGORY OF EFFECTS	HISTORIC CONDITION	EXISTING CONDITION	ALT 9	ALT 6A
Air Pollution	Low	Low	No Change	No Change
Noise Pollution	Low	Low-Medium	No Change	No Change
Water Pollution	Low	Medium-	Beneficial Change	Beneficial Change
Man-made Resources	Low	Medium	No Change	**Very Adverse Change**
Natural Resources	High	Medium	Beneficial Change	**Beneficial Change ****
Aesthetic Resources	High	Medium	Beneficial Change	Beneficial Change
Community Cohesion	Low	Medium	No Change	**No Change ****
Public Facilities and Services	Low	Medium	No Change	**No Change ****
Employment	Low	Medium	No Change	**Very Adverse Change**
Tax Values	Low	Medium	No Change	**Beneficial Change ****
Property Values	Low	Medium	No Change	**Beneficial Change ****
Displacement of People	NA	NA	No Change	**Very Adverse Change ****
Displacement of Businesses	NA	NA	No Change	**No Change****
Displacement of Farms	NA	NA	No Change	**Adverse Change****
Desirable Community Growth	NA	NA	No Change	**No Change****
Desirable Regional Growth	NA	NA	No Change	**No Change****

** **We take exception to this rating. See text.**

The table states that there will be a beneficial change to tax values and property values under the Recommended Plan and no change with the Curtain Wall. In fact, as will be discussed elsewhere in this response, the change will be very adverse for the Recommended Plan because of the way that the Base Condition was developed. If one can make the base condition perform poorly, then it is possible to show some benefit. However, the Base Condition is not a reflection of Existing Conditions in South Dade. It is not even a reflection of Historic Conditions in South Dade. It is a reflection of how difficult the Corps can make farming in South Dade under its most stringent interpretation of its operational discretion and under the inclusion of all previously implemented policies and structural modifications that may have already adversely impacted agriculture.

The table also states that there would be no change to tax values and property values under the Curtain Wall Concept. We disagree with these findings because implementation of this plan will result in meaningful flood protection for the region and a much higher certainty that "protected lands" will actually be protected.

In addition to the above, we take exception to the No Change entries under the Recommended Plan for Public Facilities and Services, Displacement of Businesses, Desirable Community Growth and Desirable Regional Growth. One should make a close comparison of the effects of the Dairy Rule and Dairy Buyout Program on all of these areas. Removal of farm lands and the increase of flood risk that will be brought about by the Recommended Plan will undoubtedly have similar effects on the South Dade County.

Based on the foregoing, we feel strongly that the Curtain Wall Concept gets a far superior rating than the Recommended Plan under Section 122.

Alternative Plan Evaluation Matrix (Table 5-9, Pg. 5-65)

This table provides a basis for determination of whether or not a given alternative meets the operational flexibility, environmental effectiveness, cost effectiveness and flood control goals of the project. The table provided below provides the USACE evaluations of Alternative 6A (the Selected Plan) and Alternative 9 (Curtain Wall Concept). In addition, we have included our own evaluation of these factors. The differences between the two are discussed in the following.

IMPORTANT PARTS OF TABLE 5-9

Evaluation Factors		
OPERATIONAL FLEXIBILITY	**ALT 6A**	**ALT 9**
a. Maintain natural water levels along boundary of headwaters and upper Taylor Slough	Y	N
b. Control location of flows into:		
- Taylor Slough headwaters/upper	Y	Y
- Taylor Slough middle portion	Y	Y
c. Control timing of flows into:		
- Taylor Slough headwaters/upper	Y	N
- Taylor Slough middle portion	Y	N
d. Control flows to east-west spreader canal lands	Y	Y
e. Minimize flows to Manatee Bay/Barnes Sound	Y	Y
f. Uniform sheet flow to lower Taylor Slough	Y	Y
g. Increase hydroperiods in headwaters and upper Taylor Slough	Y	Y
h. Increase average depths in headwaters and upper Taylor Slough	Y	Y
ENVIRONMENTAL BENEFITS		
a. Increase hydrohabitat units	332	NA
b. Increase species compatibility indices	NA	NA
COST EFFECTIVENESS		
Total Annual Cost ($ Million)	11.9	14.0
FLOOD CONTROL IMPACTS		
Annual flood damage reduction ($ Million)	3.4	NC

Operational Flexibility is first defined in terms of holding higher stages around only the perimeter of northern Taylor Slough. With the Curtain Wall Concept, this criterion for success is Not Applicable, because higher perimeter stages are not needed to make the plan function properly.

All other measures of flexibility relate solely to the provision of properly timed external flows to the Slough. These criteria are also Not Applicable because the real purpose of the project is to maintain higher stages in the Northern Taylor Slough Area. The timing of stages (as well as magnitude) will be far superior to Alt. 6A because it will be more natural than we could make it through artificial pumping.

The last flexibility criterion, increasing average depths in the headwaters and Upper Taylor Slough, will be far better with the Curtain Wall, because higher depths can be accomplished with less water than with the Recommended Plan.

Environmental Benefits will also be greater with the Curtain Wall. It does not take modeling, although we would like to see it, to conclude that hydrohabitat units will probably be an order of magnitude higher than the very weak showing provided by the Recommended Plan.

Cost Effectiveness is about the same as discussed previously. The numbers in the table should therefore be revised.

Flood Control Impacts are placed at $3.4 Million/year for the Recommended Plan and were not computed for the Curtain Wall Concept. We feel that a properly executed flood damage assessment along with proper hydrologic analyses will produce flood control benefits for the Curtain Wall that will far out strip those indicated for the Recommended Plan.

Again, it is obvious to us that the Curtain Wall Concept is by far the better of the two plans in all respects.

Concluding Remarks

South Dade agriculture is willing to work with the Corps, the District and the Park to further develop this conceptual plan through analysis of hydraulic performance and the development of design strategies. We are flexible with respect to design details, construction materials and construction methodology. We are also willing to support a demonstration project on the concept to determine actual effectiveness as well as to develop optimized designs and construction methodologies. It is our sincere belief that this type of plan is the answer to <u>perceived</u> coexistence problems between agriculture and the environment. It is also much more responsible in terms of public expenditures and economic benefit to the region than are all other proposed alternatives.

1

PART B
OTHER QUESTIONS AND COMMENTS

The following contains our comments on the subject draft GRR and a number of questions regarding technical aspects of the Recommended Plan and associated analyses. I request that the questions posed in this letter be individually reproduced and answered in writing within the next edition of the GRR document.

1.6.7 Hole in the Donut Restoration

We find it interesting that the park wants to build the east side of the Frog Pond up by 2 to 3 feet and then purchase it for buffer. Why not continue to farm it?

2.2.4 Modified Water Deliveries GDM

The Everglades Protection and Expansion Act also provided for flood protection for the 8.5 square mile residential area and adjacent agricultural areas.

2.3 WATER QUALITY

"The recent die-off of vast areas of seagrass in Florida Bay and the persistence there of a very damaging algae bloom is considered by some to be a result of nutrient pollution."

"Some" also believe that some nutrient pollution is coming from septic tanks and urban runoff in the Keys. "Some" also believe that nutrients are being imported from the west via littoral currents bringing Shark River Slough waters into the Bay. "Some" also believe that the algae blooms are related to temperature in the Gulf of Mexico. This litany can go on. The point, however, is that we still do not know what the problems are.

What is the Corps' definition of "some"? These kinds of statements should be qualified so that they do not, by inference, place blame where it should not be placed.

"Phosphorous levels at S-332, S-175 and S-18C are low but have been increasing in recent years, and now frequently exceed target levels. This is

believed to be a result of increasing agricultural use and changes in land use in the Taylor Slough Watershed."

Who "believes" this is true, the Corps? Is this statement an act of faith or a statement of fact? Where are the data that support this "belief"?

Do the S-12 structures and the L-28 Borrow Canal currently meet target levels? If not, then could some of these nutrients be reaching L-31N through seepage?

Ghioto & Associates has analyzed Total Phosphorous data provided by SFWMD for the period between 10/5/1983 and 5/25/1993 at S-176, S-177 and S-332. These data were screened so that only information available at all three sites on the same days was considered. In general, where higher levels persist for more than one sampling, Total P at S-176 exceeds values at S-332 and S-177. This indicates that the Frog Pond is not a significant day to day contributor of phosphorous to the system.

Any statement about the source(s) of elevated phosphorous levels is sheer speculation at this time because there is no long term monitoring station between Tamiami Trail and S-176. Samplings taken by Hydrologic Associates on behalf of South Dade Land Corporation indicate that these contributions could be entering the C-111 basin via S-331. The "belief" that higher levels are due to local contributions is pure supposition and does not belong in a document produced by a public agency.

If water quality is to become an issue in South Dade, it is recommended that additional sampling stations be established at Tamiami Trail, G-211 and S-331 so that people can deal with data rather than speculation.

3.7 WATER QUALITY

"Agricultural and urban areas in the northern Everglades are expected to continue to influence water quality in the study area and Everglades National Park if no further action is taken."

Is this paragraph addressing areas north or south of Tamiami Trail? If the answer is north, then this statement only has meaning in terms of water imported into South Dade County by the Corps' project, the South Dade Conveyance System and the NESRS restoration.

The discussion on Mercury levels is totally irrelevant to this project.

3

2.4 ENVIRONMENTAL RESOURCES

This section indicates that Shark Slough spills over to Taylor Slough at Elevation 6.5 feet (measured at P-33).

Is this conclusion drawn from surveyed topographic data?

Is it appropriately included in the model(s), or averaged over two miles?

Was this potentially adverse impact to private lands to the east considered or even mentioned in the Modified Water Deliveries to Everglades National Park, June 1992?

Did the Corps incorporate the Grossman Road Borrow Canal into the model(s) and evaluate its impacts as indicated on page F-62 of Modified Water Deliveries to Everglades National Park, June 1992?

What effect do all of the above considerations have on the Base Condition used to evaluate alternatives and assess damages? Please provide a numerical analysis of these effects.

2.9.8 Storms of June 1988

"The question arises why flooding occurred when design stages were not exceeded. First, the design stages in L-31N are close to the natural ground elevation and secondly, there is an almost complete lack of a secondary drainage system in the area."

How can one expect secondary drainage systems to perform if canal stages are kept at ground level during a flood? The design stages for the canals should be lowered so that drainage from uplands can occur.

2.9.9 Storms of August 1988

S-331 was used to accumulate storage of waters in the lower C-111 Basin which were pumped into the Basin via S-331. This water was pumped to offset the negative impacts of flooding NESRS on the East Everglades. The Water Deliveries Testing Program is responsible for this problem. The problems in Manatee Bay/Barnes Sound would have been much less catastrophic if this accumulation had not occurred. Termination of S-333 discharges had little effect because use of S-331 is related to rainfall over the Slough that adds elevation on top of the higher water levels induced by use of S-333 over long periods of time.

3.3.2 Flood Control

"Unless lands are taken out of production for future environmental acquisitions, the flood damage susceptibility will remain the same."

We take exception to this conclusion at this location in the report because that it is factually incorrect. There are alternatives that will provide flood protection to all of the agricultural lands and that will accomplish environmental (hydroperiod) goals of the ENP without taking lands out of production.

3.8 ENVIRONMENTAL RESOURCES

(Note: Page 3.6 was not in our copy of the document. Therefore, the following comment is from the previous draft.)

"In 1969-1970, coincidentally with a drop in water level in the northern part of Taylor Slough, abrupt changes in timing of nest initiation occurred in wood stork colonies; the change adversely affected nesting success. From 1981 to 1993, Cape Sable sparrow nesting attempts declined by 75 percent; sparrow habitat had been invaded by woody vegetation. Roseate spoonbill colonies have diminished since the early 1980s."

Are you sure that the decline in sparrow nesting and the diminishing of Roseate Spoonbills in recent years is a not a result of too much water in their habitat? For all of the species listed above, the collected data should be presented and references of sources of the data cited.

"Reversal of this trend of desiccation is regarded as a Federal responsibility."

There is also a Federal responsibility to the homeowners, workers and businesses of the region which comprise the "human environment" under NEPA.

SECTION 5 FORMULATION OF ALTERNATIVE PLANS

Most of our discussion of this subject is contained in Part A where we compare the Curtain Wall Concept to the Recommended Plan. Therefore, our comments here are of a general nature.

5

This section describes the methodology for evaluation of the various alternatives. Because the Corps removed the Curtain Wall from consideration as a result of disputable cost data, it was not included in the environmental analyses and comparisons. We feel that the Curtain Wall should be objectively analyzed (through modeling) with appropriate consideration given to design optimization. If this is done, it is our opinion that this alternative will provide superior environmental enhancements over the Recommended Plan. We hereby request that this be done.

5.1 FEDERAL OBJECTIVE

It appears that the federal objective for this project has been changed from one of economic development to one of environmental restoration without economic considerations related to improving the NED (National Economic Development), the OSE (Other Social Effects) or the RED (Regional Economic Development) accounts. In fact, the report assumes that, if flood damage prevention remains the same as in the original project, then there are no negative effects on the economic and social accounts. In our opinion, this assumption is wrong and the Corps should include negative impacts on the NED, OSE, and (in particular) RED accounts in its Environmental Impact Statement under NEPA. The reason why this assumption is wrong, is that over 5,000 acres of extremely productive farm lands (the Frog Pond), which were originally envisioned to have flood protection under all previous plans, are being removed from the NED and the RED accounts by the preferred plan. In addition, the OSE is being negatively affected as a result of impacts to people in terms of employment and general economic dislocation.

In addition to the above, it is our opinion that economic and environmental objectives are not mutually exclusive if the Corps, the ENP and the SFWMD are willing to consider potentially less costly alternatives to the preferred plan.

"Because of the environmental nature of this reevaluation report, the determination of an NED plan which is normally required for a flood damage prevention project, will not be accomplished within this report."

The environmental nature of the report is not grounds for ignoring the NED aspects of the plan. In fact, there should be an effort on the part of the Federal and State governments to attempt to improve the economic and human environments as well as the natural environment. Instead, the Recommended Plan attempts to remove the idea of flood protection for the area through erroneous technical assumptions and inappropriate modeling.

6.3 PLANNING CONSTRAINTS

It is our opinion that scope and time requirements for study completion should not be a study constraint if it leads to a plan which negatively impacts the region and does not produce the desired degree of hydroperiod changes thought to be necessary by ENP staff. The "do something now" attitude that has been driving the restoration process for the past decade has resulted in the degradation of Barnes Sound in 1988 and has potentially negatively impacted Florida Bay and Taylor Slough by the instantaneous shifting of huge volumes of water from one location to another.

Experimentation with hydroperiods in the Everglades can be accomplished by less costly methods; can be unconstrained with respect to water elevations; and, can begin much more quickly if our proposed alternative were to be implemented.

We feel that the separation of operations from structural elements is a mistake because it limits the economic viability of the final plan. It also introduces a high degree of uncertainty into the process on the part of affected parties. While it is agreed that the plan should provide a range of variability in water levels within the ENP for biological ehancement, we feel that a range of operations to the east, including lowered optimum levels, would provide for more agricultural certainty. The farmers of the region are sincerely concerned that a plan will be formulated which will, in the end, be operated to their detriment on the grounds that "environmental optimization" is necessary. Again, these two goals are not mutually exclusive. In addition, lowered water levels to the east are not necessarily inconsistent with water supply needs associated with well fields, salinity intrusion control, or the estuarine needs of the east coast.

5.5 EVALUATION FACTORS

This list of evaluation factors should have included negative effects on the NED, OSE and RED accounts as previously indicated. These should be conducted after a realistic approach to determination of flood damages has been executed.

5.6.1 Background

"However, these studies would have extended the study duration by more than 1 year."

As stated previously, the study time line is not a valid excuse for ignoring important data and information deficiencies. This project should go through one

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more iteration, which includes an appropriate evaluation of the Curtain Wall Alternative before a Recommended Plan is proposed.

5.6.4 Final Alternatives

We feel that the use of an uncalibrated, unverified 1x1 version of the SFWMM is totally inappropriate for evaluation of flood prevention performance as well as flood damage assessment. This will be discussed in more detail later in this response.

Table 5-2 Effects Evaluation, Section 122

Please provide the rationale and numbers supporting the "no change" ratings given to Displacement of People, Displacement of Businesses, Displacement of Farms, Desirable Community Growth, and Desirable Regional Growth. The table shows that there will be "very negative" effects on Man Made Resources, Employment, Tax Values and Property Values. Why are these not quantified in physical and economic terms and discussed in detail as "human environment" impacts?

Table 5-12 Preliminary Analysis of Annual Benefits and Costs

An additional row should be added to this table to show Benefit to Cost Ratios of all of the alternatives.

	B/C Ratio
ALT 1	0.80
ALT 1A	1.03
ALT 2	0.87
ALT 3	0.52
ALT 4	0.32
ALT 5	0.70
ALT 6	0.34

These numbers indicate that the public is expected to be willing to receive a return of 34 cents on the dollar to achieve the minor environmental benefits offered by the preferred plan (ALT 6, ALT 6A). Would it not be wise to attempt to achieve higher environmental benefits and a higher return on investment?

ENVIRONMENTAL EFFECTS OF SELECTED PLAN
6.1 PHYSICAL FORM

This paragraph, extolling the bounteous results of this project, is totally inconsistent with the rest of this section which indicates that the environmental benefits are minimal. This is discussed more fully below.

6.2 HYDROLOGY

"The impact of having an extended area of pumped discharges in Plan 6A causes higher groundwater levels along the eastern border of the Park with resultant loss of hydraulic slope away from Shark River Slough and an increase in total volume remaining in the slough."

Is there enough pumping capacity proposed to completely handle all of the seepage that will cross under the levee? Do we run the risk of having to continuously discharge from the C-111 system to make up differences? If so, has the Corps considered the environmental consequences of a continuous discharge from the system?

The above statement, as well as all others related to the "environmental benefits" of the selected plan, is derived from the hydraulic provision of a head along the eastern side of the park so that water losses are reduced and hydroperiods extended. This goal can be attained without acquisition of the "buffer area". As a matter of fact it can be attained while lowering operating ranges to the east. The fact that this can be accomplished with physical facilities leads to a question of why must the lands be purchased at all? Aesthetics?

In addition to the above, it would seem logical that a more passive method could possibly be employed to retard easterly water losses from ENP without the requirement of land and with much less pumping capacity than 1200 cfs.

"Soil moisture storage in the initial 1.5 feet of unsaturated ground above the water table provides about 3.6 inches of rainfall storage."

This statement assumes that there is no antecedent rainfall prior to the storm event (based on a storativity of 0.2 ft/ft). Recent experience in the eastern portion of the Frog Pond indicates that once the water table rises above the level of native rock, capillary action becomes important. The soils in this area have a high marl content and have been vertically well mixed from the surface to the top of native rock. How does this behavior and antecedent rainfalls prior to the storm event affect the proposed plan's performance?

9

"The remaining volume of the 10-year, 5-day storm is removed by project structures."

This statement implies that the water stored in the upper 1.5 feet will remain there for the duration of the storm, which would kill most vegetable crops. Was this factored into the flood damage computations? If this volume (3.6 inches) is considered to be buffer, then it should only be counted when it occurs at depths of 1.5 to 3.0 feet.

6.3 ENVIRONMENTAL RESOURCES

In this paragraph and in paragraph 6.4, the environmental report card on the selected plan is presented. Excerpts are as follows:

Cape Sable Sparrow (No Difference) - **"These criteria are met fairly well under the existing condition, and none of the evaluated alternatives would change this very much.....None of the considered alternative actions would adversely affect the sparrow."**

Snail Kite (No Difference) - **"..... the snail kite will be essentially unaffected by the considered project"**

Wood Stork (Marginal Benefit) - **"Although the habitat improvement is marginal, the considered alternatives will not adversely affect the wood stork"**

Bald Eagle (No Difference) - **"There would be no effect on bald eagles from implementation of any of the alternatives."**

Indigo Snake (No Difference) - **"No effect will occur to the eastern indigo snake.."**

Florida Panther (No Difference) - **"Considered alternative actions would not adversely modify habitat for panthers, and the considered project would have no effect."**

American Crocodile - **"....we have determined that the alternative actions would not adversely affect the American crocodile."**

We have two concerns with this section and the selected plan's performance. The first is related to the justification for spending 121.7 Million Dollars of taxpayer's money for this result.

The second concern is the indication that the proposed hardware may give better results under "a different water control schedule". What type of schedule is meant here? Is the Corps suggesting that facilities and operation can not be separated as stated earlier in the report? Does this mean that S-331 will be used to divert water from the north into the C-111 Basin via S-331?

6.6 WATER QUALITY

"As discussed in section 2.3, nutrient enrichment resulting primarily from agricultural runoff is the major water quality problem in the Everglades. Although nutrient levels are low in the Taylor Slough drainage [basin,] they frequently exceed targets established for the input points at S-332, S-175 and S-18C. The water delivery systems discussed in this report are not specifically designed to address nutrients; however those that incorporate retention areas or flow-ways will have a beneficial water quality impact."

This section attempts to lump South Dade agriculture into a broader group having much different farming methods, crops, soils and water management techniques. The target exceedences discussed may not be the result of South Dade agriculture at all (see our pervious discussion).

The use of retention areas or flow-ways in South Dade would be much harder to achieve than in the northern Everglades because of the extremely high permeabilities and transmissivities encountered within the Biscayne Aquifer area.

6.8 AGRICULTURE

The conclusions presented here are predicated upon the operational strategies assumed in the modeling. If modifications to operations are necessary to achieve desired environmental benefits, then there is a genuine concern to agriculture as to how the system will perform under flood conditions. "Optimization" of environmental benefits could easily be translated to increased flood risk for the protected region as has happened over the past several years.

Flooding concerns to agriculture are related to the smaller storm events as much as to the larger. There has been a tendency to reduce discharges from the system (operationally) and at the same time maximize water table levels. This leads to loss of natural buffer storage and increased demands to operate the system in a flood control mode.

11

If water levels west of the proposed levee are increased, what effect do they have on required pump station design capacities?

"The effect of land purchases is to remove cropland from production and therefore reduce damage susceptibility in the study area."

This concept fails to consider the negative permanent loss of agricultural lands in the area. In addition, it should not be used to imply that purchase of agricultural lands in this manner is necessarily the most cost effective means of achieving flood control.

In addition, to the "profit" loss indicated in the report, there will be a ripple effect throughout the entire local economy. Profit by the producer is not the only benefit of having farming in the area.

6.10 DISPLACEMENT OF PEOPLE, BUSINESSES AND FARMS

What are the numerical economic effects in terms of loss of jobs and loss of business with the removal of agricultural lands from the area?

6.18.1 MODIFIED WATER DELIVERIES TO ENP

"During non-flood conditions, excess seepage water from Shark River Slough collected in L-31N borrow canal could be passed to the C-111 system for enhanced hydrologic restoration of Taylor Slough."

This statement is in direct conflict with the statement made in Section 8.5.1.t regarding S-331 Operation. If S-331 is not going to be used for this purpose, then how will it be accomplished? Will you wait till water levels drop and then pump them up for some undetermined period of time?

South Dade agriculture has been concerned about pumping seepage waters at S-331 for nearly a decade. The huge volumes of water sent to the south have been responsible for the environmental damage to Barnes Sound in 1988 and may now be partially responsible for conditions in Florida Bay. When G-211 was constructed, we were told that it would reduce the need to discharge seepage waters to the south. Although the annual flows have decreased, the Corps and the SFWMD are using seepage from this system to artificially extend wet season hydroperiods on agricultural lands to the south of S-331. The farmers are opposed to this becoming a design feature of the plan.

On page F-60 of the 1992 GDM, the Corps responded to our questions regarding modeled seepage to L-31N from NESRS and our concern, under flood conditions, that the anticipated pressure that increased seepage would place on downstream systems. Excerpts from the Corps' response are provided below.

"In calculating seepage into L-31(N) south of Tamiami Trail, it is assumed that the layer of silt and organic marl overlying the highly permeable limestone retards seepage into the canal during flood stages..... During the FDM design phase, the continuity and permeability of the organic upper layer will be investigated. The investigation will include percolation tests, pump tests, and a possible canal drawdown test."

Have these tests been done and a conclusion reached? If seepage rates to the L-31N canal increase dramatically, what will the Corps do about it? If seepage rates are higher, how will this affect forward pumping at S-331 to the south? Will there be rules of operation that prohibit moving this water to the south?

APPENDIX A HYDROLOGY AND HYDRAULIC ANALYSIS

Use of the 1x1 Model

We take exception to the technical adequacy of the 1x1 model for determination of flood stages, and therefore flood damage assessments, in the agricultural areas. This model is probably adequate for determination of relative environmental merits of plans within the ENP. However, it is inadequate for flood assessments because it does not have the required absolute accuracy. Model characteristics that must be considered are as follows.

Average land elevations over a 1x1 square mile area are not adequate to determine the point at which crop damage or surface flooding begins. This is especially true when one considers the level of accuracy possible in the developed areas.

In addition to the averaging over space, the 1x1 model uses daily values of rainfall to compute stages and discharges. It also produces average daily stage as an output. How can you use average daily peak stage to predict whether there will be damage to crops with a 12 hour susceptibility.

Modeling of Channels

In older versions of the model, a single channel reach was used between structures, regardless of the number of grids that it intercepted. Is this the case for the 1x1 Model also?

If the answer to the above question is yes, then how can one expect to obtain an accurate estimation of stage gradients between the structures? How can one have confidence in evaluation of the effects of a canal with a flat pool (numerically) on seepage from surrounding grids with varying water table elevations?

If the 1x1 model does have the capability to model channel reaches at a grid resolution, then how can we rely on calibrations from an inherently different model?

Physical Model Input Data

How were average land elevations assigned to grids east of L-31N and C-111?

What was the density of known land elevation points per square mile?

What is the computed confidence interval for average land elevations assigned in feet? Does this input data limitation vary spatially throughout the area and, if so, by how much?

Because the model uses average land elevations, one can expect that half of the land is below the stated average and half is above the average. What is the deviation on a grid by grid basis east of the L-31N and C-111 canals?

Boundary Conditions

What boundary conditions were used along the eastern and southern perimeter of the model grid?

What would be the effects of hurricane and tropical storm surge on computed elevations in the C-111 Basin? Was a sensitivity analysis to boundary condition water elevations conducted for storm event runs? If not, why not?

Calibration and Verification

Please provide the calibration and verification run results for the 1x1 model as used in this GRR.

Seasonal Flood Occurrence

The report states that the "2-year 5-day rainfall total of 7.2 inches was used to represent the beginning of flood damages". However, it does not provide the justification for making this selection. This is important because this assumption leads to the elimination of all potential damages to row crops between November 1 and March 31 of all years. Based on our experience in the area, we feel that damaging rainfalls of lesser volume are probable.

Please provide your justification for this very important assumption.

Please provide an updated analysis of % Chance based on up to date rainfall records. Why was the analysis stopped at 1977? There are at least another 15 years of record that could be used. I know of problem years since that date.

Optimum Water Levels

Table A-5 provides the structure operation levels used in the model. Why are these numbers different (higher) from project optimums at S-176 and S-174? Is the Corps refining the optimum water levels or just boosting them to be conservative? Or are they higher to account for some average stage condition between the structures? The answers to these questions are very important.

Base Condition Used

The Base Condition is used to establish a benchmark for determination of benefits and impacts that would result from alteration of the system from that condition. The base condition consists of a set of assumptions regarding existing structures, their configuration and their operations. The degree to which a project affects the environment (including the human environment) can be altered through alteration of the assumed base condition. For example, if the base condition can be made to look very bad, then almost anything will appear to be an improvement. The C-111 Draft GRR does an incredible but elegant job of manipulating the base condition, and thus the outcome of the alternatives evaluations.

a. Inclusion of the 1992 Water Deliveries GDM

Indirect impacts on the agricultural areas west of L-31N are effectively ignored with inclusion of this design into the base condition.

b. Inclusion of the C-111 Interim Plan

We have repeatedly asked the Corps to evaluate the Interim Plan for C-111 with respect to adverse impacts on South Dade agriculture. Since 1989, our requests have been ignored. At this time, this unevaluated plan is being included into the Base Condition and its impacts are being ignored here also. Why?

In our opinion, the lands east of C-111 have never seen the Base Condition as defined in the GRR.

Flood Profiles

The flood profiles contained in Plates A-10, A-11 and A-12 are from the Supplement 37, September 12, 1963. Please update these to show how plan performance has affected them. Perhaps peak canal discharges could be used along with HEC-II for this purpose. This effort should not take more than a few days of labor and would shed a great deal of light on our ability to evaluate this plan. We do not feel that stage results directly from the 1x1 model are appropriate for this purpose. We assume that you feel the same way since a similar analysis was used to test tailwater effects on structures discharging to the ENP.

APPENDIX E SOCIAL AND ECONOMIC ANALYSIS

We feel that the flood damage assessments presented in this appendix are flawed as a result of hydrologic assumptions made, the model used and the quality of topographic data in relation to sensitivity of crops to high water conditions.

The hydrologic assumptions with respect to initiation of flood damages totally remove any damages that might occur between November 1 and March 31 of each growing season for row crops.

The model, as discussed previously, is inappropriate mostly because of the spatial averaging over a square mile and the temporal averaging of peak stages for crops with less than one day of susceptibility.

In addition to the above, it is assumed that all row crops will have roots extending only 0.17 foot below natural ground and that water levels must reach that level before damage can begin. Vegetable crops are planted in rock plowed areas where the overlying marl soils are mixed with rock to a much greater depth than 0.17 foot. As a result, when water levels are within the rock plowed depth, the soils absorb water upward (via capillarity) and become saturated.

When the water table stays in this zone for an extended period of time (even below the roots by measurement in a well), the soil column will stay saturated to the top of the bed. Therefore, crops will become susceptible to flood damage with lower water levels than indicated in this appendix. In addition, it will take much longer to drain the soils and crops will be damaged worse than anticipated.

We feel that these factors are not properly handled in the analyses and that there will be far greater agricultural damages (east of the canals) than are indicated by the GRR. We also feel that the design parameters in the GRR as well as anticipated operational strategies will contribute to these damages.

TREC-HOMESTEAD TEL:305-246-7003 Apr 11 94 10:03 No.002 P.02

UNIVERSITY OF FLORIDA

Institute of Food and Agricultural Sciences
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April 8, 1994

Mr. Stephen Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-1104
Attn: CESAJ-PD-PF

Re: Public Meeting on a Study for Structural and Non-structural Modifications to The C-111 Basin, South Dade County, Florida

Dear Mr. Sutterfield:

The plan proposed for purchase of private lands west of C-111 known as the Frog Pond and Rocky Glades agricultural area is taking of personal property against the will of landowners.

Alternate 9 to install a 60 ft. deep curtain wall is estimated to cost $108 million. It is not known if the curtain wall needs to be 60 feet deep. Assuming a 30 foot depth (and perhaps even a 20 foot depth may be adequate) would be adequate to reduce ground water movement sufficiently to develop a head of water west of the curtain in the Everglades National Park (ENP) the cost of the curtain would be similar to your estimated cost of purchasing the land.

I propose you develop testing to determine the depth required for the curtain to give the necessary head to provide water to the ENP and to the Bay. Then private citizens can maintain their property, growers can continue to farm, the park and bay can have the water they need.

Thanks for this opportunity to reply regarding the study on THE C-111 BASIN in addition to speaking at the public meeting.

Sincerely yours,

Herbert H. Bryan
Professor & Acting Center Director

MF06C111BA8

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SERVE • CONSERVE

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April 18, 1994

Col. Terrence Salt
U.S. Army Corps of Engineers
Jacksonville District
P.O. Box 4970
Jacksonville, FL 32232-0019

Re: Draft Integrated General Reevaluation Report (GRR) and Environmental Impact Statement (C-111)

Dear Colonel Salt:

We have reviewed the subject document and, in concept, find conclusions supportable. Miami-Dade Water and Sewer Department (WASD) has two points to make, that go beyond the general goals of the GRR as follows:

WASD is currently in the process of evaluating treated wastewater re-use alternatives. While the concept of land application to golf courses and other public areas may be the easiest to permit, we believe that returning this resource to Western Dade County may constitute a higher use. WASD would urge that the GRR, and the stance of the USCOE in general, would lend support to the concept of returning treated wastewater to Western Dade County.

Secondly, use of our water resources must be balanced between environmental, agricultural and domestic requirements. We are concerned about the lack of consideration given to domestic users. Major well fields operated by Homestead, Florida City, Florida Keys Aqueduct Authority and WASD may be impacted by the redistribution of water within the C-111. As it appears that the recommended alternative 6A has not been modeled in detail and that strict operating parameters have not been established, the use of existing well fields and planning of future well fields will be very difficult. WASD strongly suggest detailed modeling to be done and strict operating parameters be established to predict the impacts on exisiting and future well fields.

Sincerely,

Anthony J. Clemente
Director

JC/gy

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APRIL 18,1994

COL. TERRANCE SALT
U.S. ARMY CORPS OF ENGINEERS
400 W. BAY ST.,ROOM 939
JACKSONVILLE, FLORIDA 32232-0019

RE: C-111 REEVALUATION REPORT (FEB 1994)

DEAR COLONEL T. SALT,

YOU SHOULD BE FAMILIAR WITH THE PHOTOS OF OUR MATURE TROPICAL FRUIT GROVES LOCATED IN THE ROCKY GLADES FARM LANDS, WEST OF L31-N. THESE VARY LANDS HAVE BEEN FARMED SINCE THE 1950'S. SINCE YOU HAVE ALSO MADE IT IMPOSSIBLE FOR US TO CO-EXIST WITH OUR NEIGHBORS, EVERGLADES NATIONAL PARK AND SOUTH FLORIDA WATER MANAGEMENT, SOMETHING MUST BE DONE.

IT IS NOT A QUESTION AS TO WHETHER WE AGREE WITH THE DRAFT OR NOT. THE FACT IS THAT YOU HAVE BEEN VERY SUCCESSFUL IN TAKING OUR LAND, WITH NO REGARDS TO OUR PRIVATE PROPERTY RIGHTS.

THEREFORE, WE THINK THE GOVERNMENT SHOULD BE RESPONSIBLE FOR PURCHASING THE PROPERTY AT A FAIR PRICE. WE ALSO THINK WE ARE ENTITLED TO COMPENSATION FOR THE ECONOMIC IMPACT UPON OUR BUSINESS. FARMING IS OUR ONLY LIVELIHOOD AND WAY OF MAKING A LIVING. WE WILL SUFFER A GREAT LOSS OF INCOME AND SHOULD BE COMPENSATED FOR SAME AND MADE WHOLE.

IT IS URGENT FOR ALL INVOLVED THAT YOU TAKE DECISIVE MEASURES.

SINCERELY YOURS,

BARNEY W. RUTZKE SR. SHARON D. RUTZKE

• Avocados • Tomatoes • Mangos • Carambola (Star Fruit) • Cattle

Milledge Iden & Held
A PARTNERSHIP INCLUDING PROFESSIONAL ASSOCIATIONS
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OF COUNSEL:
Florence Snyder Rivas
John M. Milledge, P.A.

March 30, 1994

Terrence C. Salt
Colonel, U.S. Army
District Engineer
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Colonel Salt:

Just a note to thank you for the dignity your presence gave to the hearing last night in Homestead. We all appreciate your efforts.

The proposed plan, 6A, is an excellent one which I support. The buffer design will work, I believe, and in various configurations can be extended along most of the east side of the Park and Conservation Areas.

I would also support filling in the C-111, not because I'm worried about it being used for flood control or because I'm worried about Barnes Sound, but I do believe that restoring sheet flow to the area west of US1 is difficult when a canal intercepts the flow.

Thanks again.

Sincerely,

Allan Milledge

AM/ip

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April 18, 1994

Mr. Ed. Salem
US Army Corps of Engineers
Federal Building
P.O. Box 4970
Jacksonville, Florida 32232-0019

RE: **Canal 111 GRR**
Review Comments - February 1994 Version

Dear Mr. Salem,

The following comments are presented for your review and consideration in preparation of the final GRR for Canal 111. These comments, presented in no particular order, should be considered in addition to my comments addressed to you in January 1994. Most of these comments have been presented at public hearings over the last few weeks.

The restoration goals for the Park can be accomplished by both plans 6A and 9, as stated in the GRR. The primary difference between the two plans is how to handle the increased seepage from additional water in the Park. Plan 6A requires the condemnation of 11,000 plus acres of farmland (about 1/3 of the farmed acreage in the basin); plan 9 requires very little condemnation of land but involves application of existing geotechnical technology to retard seepage from the Park to the developed areas in the east.

The aquifer in south Dade County is highly permeable and literally does not hold water. Since drainage has occurred in south Dade in the 1960's, there is no longer the hydraulic pressure in the east to retard seepage coming from what is now the Everglades National Park. An effective seepage control measure has to be included in the C-111 GRR because there is no longer the hydraulic pressure to prevent flow to the east. The selected plan 6A provides for a series of pumps to supply water to upper Taylor Slough and provide flood protection to the upper C-111 basin. These pumps will be recirculating a considerable amount of seepage water as is now the case with S-332. Because there are no operational criteria in the GRR, it is impossible to analyze the flood protection capabilities of the 6A design. If the pumps do not work effectively in restoring target water levels in the Park the only option is to raise water levels in the Levee 31N borrow canal which would jeopardize the developed areas east of the levee, thus condemning even more land by removing flood protection capacity. Effective seepage control has to be part of the C-111 GRR if restoration and flood protection needs are to be met. Plan 9 provides for a solution to both goals. The curtain wall that is proposed will solve both problems.

The economics of plan 9 will justify its implementation when a more realistic cost is placed on the construction of the curtain wall and the long term maintenance of 11,000 plus acres of abandoned farm land. I urge you to consider different geotechnical methods that are more cost effective and reversible. I could not find in the GRR the long term costs of maintaining abandoned farmlands nor who would be responsible for this cost and allocation of work. Could you please provide me with this.

In the GRR it is stated that the maintenance of water levels through the South Dade Conveyance System (SDCS) is for water supply and retarding saltwater intrusion. There is no evaluation of the saltwater intrusion extent since the SDCS became operable. These data should be available from the US Geological Survey and be presented, if the operation of the C-111 system is to retard saltwater intrusion.

It is stated in the GRR that there may not be enough water in the basin to meet the restoration goals of the Park and that water may need to be imported (probably via S-331). A solution that was not addressed in this GRR is backpumping the adjacent coastal canals: C-102 and C-103. The water in the western reaches of these canals historically provided base flow to Taylor Slough, but is now discharged to tide. Rather than import water through an interbasin transfer at S-331, it would be worth a strong consideration to backpump excess water that historically did go to Taylor Slough. Capturing of excess water in the western C-102 and C-103 would solve both quantity and quality problems in the Taylor Slough/C-111 basins.

In summary there are three areas that need further consideration in the development of the GRR: Seepage control, backpumping local basins, and the economics of implementing the plan. By controlling seepage losses, the restoration of the Park and Florida Bay can proceed in a timely manner and the eastern areas of the basin can be provided adequate flood protection. This is a definite win-win situation. Backpumping of local runoff can provide an ample source of high quality water that was historically part of the Taylor Slough Basin. This would eliminate the need for an interbasin transfer transfer of water and reduce the loss of a valuable water resource to tide. These basins are now out of the scope of the C-111 GRR but should be brought into the plan to incorporate a much needed change in the water management in South Dade. Finally, the economics of a curtain wall must be re-evaluated based on existing technologies. Once this re-evaluation is made you will find it to be a more cost effective alternative for the restoration of the Park and the protection of the eastern, developed areas as opposed to condemning agricultural lands and maintaining them in the long term.

I would be pleased to discuss any of my comments with you at your convenience. Thank you for giving me the opportunity to provide the Corps with my comments.

If you have any questions or comments, please give me a call at our Miami office.

Sincerely,

Bradley G. Waller,
Principal Hydrologist

BGW:na

ELAINE USHERSON
44 EAST COURT
ROYAL PALM BEACH, FL. 33411
4-3-94

Mr. Stephen Sutterfield,
U.S. Corps of Engineers
P.O. Box 4970.
Jacksonville, FL. 32232-0019

Re: The restoration of the Everglades System and Florida Bay.

I attended the public meeting in Homestead, Florida. I filled out a speakers card however, it was not called when I had to return home to Palm Beach County.

1- I respectfully request that you consider alternative 6A and fill in the C111 canal south of the retention-detention areas. The timing and distribution in the C111 basin is utmost importance to restore the health of Florida Bay.

2- Please always consider always keeping the natural water elevation in Everglades National Park and All the parks and preserves in the restoration of the Everglade system, including the Loxahatchee Slough in Palm Beach and Martin County. This Slough should Not be permitted to be distroyed (developed) or it too will come back to haunt us.

3. Enforce your Eminent Domain power to purchase Rocky Glades, Frog Pond and all Real Estate required to restore our Everglade System. There were available land however, those people chose to build in a "lake". They have profited (most) while "we the people" of South Florida lost. To pay them more than their origional cost would be nothing less than extortion. They have "taken" my source of potable water at reasonable cost, and they have threatened "taken" my native species and threatened and endangered species habitat. (the wetlands)

Thank you for your dedication. Please consider my input.

Respectfully,
Elaine Usherson

March 27, 1994

Don Black
155 19th Ave S.E.
St Petersburg FL
33705

Mr Steven Sutterfields:

I first wish to commend the corp on its recommendation of Alternative 6A in restoring natural water levels and historical timing of water into Everglades Nat Park via Taylor Slough.

As you must know, it is not only the wildlife that will benefit if the glades and water quality are restored, but the whole economic structure of monroe county will also benefit. And this economic impact of the Keys must be considered in the equation when the discussion of the high cost of the clean up is touted.

As good as alternative 6A is, the restoration has to expand its

OVER

retention - detention area particularly along C-111N and L-31N to ensure enough clean water for both Taylor and shark river sloughs.

Sincerely

Donald A. Black

Brian and Rosalyn Scherf
1060 Tyler Street
Hollywood, FL 33019
(305) 922-5828

April 13, 1994

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Sir,

Enclosed are supplementary comments on the proposed modification of C-111 canal network to enhance water flows into Taylor Slough and Florida Bay.

BACKGROUND

The construction of the Central and South Florida Project by the Corps is regarded as the principle factor in the destruction of the Everglades ecosystem. Decades of ditching, draining, and pollution have taken their toll. Florida Bay at the southern most end of the system has seen the dramatic degradation. Some estimates state that freshwater flows into the Bay have declined by 90% from historic levels. There can be no doubt that Florida Bay is critically ill. Among the symptoms:

- An estimated 100,000 acres of seagrass have died.
- Virtually all the sponges in Everglades National Park have died.
- Fish, shrimp, and crab populations have crashed.
- Large algae blooms and sedimentation cloud the once clear water.
- Water salinity has risen to levels much higher than the surrounding ocean.
- The health of the offshore reef is declining, imperiling the whole economy of the Florida Keys.
- Mangroves and other shoreline vegetation are dying.
- Wading bird populations have dramatically declined from historic levels.

Even in it's compartmentalized and degraded condition the Everglades is regarded as a priceless ecological treasure by the international community. The Everglades has been honored by designations as a Wetland of International Significance, a World Heritage Site, and an International Biosphere Reserve. This unique ecosystem, already classified by scientists as being near ecological collapse must undergo an aggressive and visionary restoration program if it is to survive.

Congress has mandated that the Corps undertake studies to restore the Everglades by modifying the Central and South Florida Project. Last November the Science sub-group issued it's report stating the scientific foundation for restoration. This document should serve as the starting point for restoration activities.

OPTION 9

The farmers alternative for the "curtain wall" should be rejected for the following reasons:

- It is too expensive at 180 million.
- Construction of the wall may contaminate underground aquifers with sediment.
- Construction would cause more salt water intrusion compromising well fields.
- Construction would limit restoration options as new ecological data becomes available.

LAND ACQUISITION

According the science subgroup report the "Rocky Glades, the 8.5 square mile area, and Frog Pond" must be purchased under the minimum restoration scenario. These hard choices must be made. Further, additional farm lands in excess of the 11,000 acres may be needed to adequately provide a buffer to restore water flows into Taylor slough.

WATER QUANTITY

A key problem avoided in the draft report is where the additional water will come from. Recent estimates state that at least 500,000 acre feet of water will be needed. A minimum flows and levels study should be included. Water flows should attempt to come close to historic levels, distribution, and timing. The western flow way concept advocated by the National Audubon Society and endorsed by the Everglades Coalition should be implemented. Besides additional links to the C&SFFCP, water conservation measures should be mandated along with a prohibition of further wells in the study area.

C-111 CANAL

The C-111 canal should be filled. It was not originally part of the C&SFFCP and has no useful purpose. Historically the canal has discharged huge slugs of water killing aquatic life and further endangering the American crocodile. While in the short term canals may be needed to distribute water, the goal should be a self-regulating ecosystem with minimum human interference. Canals and other water control structures should be removed over the long term when possible.

Thank you for the opportunity to comment on Florida Bay restoration. Please send us a copy of the final EIS.

Sincerely,

Brian and Rosalyn Scherf

Brian and Rosalyn Scherf

3-29-94

Mr. Stephen Sutterfield
U.S. Army Corps. of Engineers
P.O Box 4970
Jacksonville, Fl. 32232-0019

I am writing to you on the Canal C-111 issue. As a Fisherman fishing for fun and to make a living in Fla. Bay, this is very Important to me. I've been watching the bay go downhill since I was a kid. I urge you to return a full natural flow of Clean water to the Bay. We don't need a part. Fix we need a complete fix. If we don't Fix the bay I'm going to lose my livelyhood and be forced out of the Keys

Thank You.
Mike Nielsen
11253 5th Ave
Marathon, Fl 33050.
305-743-6212.

421 N.E. 14th St, Homestead, Fl 33030

Mar. 30/94

Dear Mr. Sutterfield

I have lived in this area (Homestead) since 1978. During this time, I have watched as fewer and fewer birds are nesting in this area. Sometimes there is hardly a trickle of water in what should be a wet area. It has gotten so bad, you can hardly see a bird on Anhinga Trail.

I would say that Everglades National Park as such had hit rock bottom. Another year, and you might as well write it off.

For one thing, they should quit allowing homes to be built in West Broward Co. as they are doing now.

Purchase of Frog Pond area and Rocky Glades area would help. Also, more water should be allowed in the C-111 canal.

I don't know all the answers, but I do know something must be done fast or forget Everglades National Park.

Sincerely,

Ruth B. Read

Homestead Resident

Yvonne & Fred Harper
P.O. Box 759
Long Key, Fl 33001-0759

March 21, 1994

Mr. Steven Sutterfield
U.S. Corps of Engineers
P.O. Box 4970
Jacksonville, Fl, 32232-0019

Dear Mr. Sutterfield:

We may not be able to attend the March 29th. hearing concerning Florida Bay, but wish to voice our concerns. We are 60 and 62 years of age, respectively, and have been diving in the Middle Keys for 30 years. Since 1971, on a part time basis, and then since 1986 on a full time (seasonal) basis, we've made part of our income from Commercial Lobster Diving. Our activities are concentrated in the Middle Keys near Channel Two, Channel Five and Long Key Bridges.

During the last two seasons, we've been unable to work on many days because of visibility of less than one foot. In some cases, this was a direct result of the Algae Bloom, and in other cases was a result of turbidity being worse, and longer lasting than usual. The die-off of sea grasses in Florida Bay has freed up previously trapped silt so that, after a storm, more silt is suspended in the water, and remains for several days longer.

Our situation may be unique, but many other Commercial Fishermen are also being affected by the Algae Bloom, sea grass and sponge die offs; and consequently adverse conditions. We're afraid we've only seen the beginning of problems as reduced nursery habitat causes continued reduction in available Lobster, Crabs and Finfishes.

While there may be some differing opinions amongst scientists as to the IDEAL methods of restoring the Bay, there seems to be NO DOUBT that improved Fresh Water flow to Florida Bay will be beneficial. Apparently it only took Humans a few decades to create the present unhealthy, unbalanced situation in Florida Bay. Let's hope we've gained the wisdom to START NOW to un-do the mess we've created.

There's no time for more studies. Do whatever it takes to start restoring Florida Bay NOW.

Sincerely,

Yvonne Harper Fred Harper

Norma B. Hamilton
29001 Boyce Road
Punta Gorda, Florida 33982

April 7, 1994

Dear Mr. Sutterfield,

Having read about the various proposals to restore water flow in the Everglades by way of the C-111 project, I would like to express my opinion.

It is apparent that the Everglades is in dire need of corrective action and restoration of more natural water flow. I fully support the Corps choice of alternative 6A. However, I believe that the economic analysis should include the cost of the present and alarming decline in Florida Bay - since there are already many disastrous effects.

I hope the Corps will succeed in effecting enough of the right changes to restore the Everglades to Sincerity.

Thank you,
Norma Hamilton

Pearson Associates
Public Relations and Marketing Consultants

March 26, 1994

MEMORANDUM

TO: Steven Sutterfield

FROM: David Pearson

SUBJ: Florida Bay

As a native of Miami and a member of a pioneer Miami family (my father, Dr. Colquitt Pearson was the first anesthesiologist in South Florida), I would like to go on record on the following:

1. Supporting The Corps' "Alternative 6A" plan to restore fresh water to Florida Bay.

2. Expand the economic analysis for the project to include the cost of the degradation of Florida Bay viz a viz fishing, diving, and tourism.

Thank you for making this a part of the record.

DP/cs
corps.pe

1450 Madruga Avenue, Suite 408, Coral Gables, Florida 33146-3163
Telephone (305) 665-5439 Fax (305) 665-6495

March 25, 1994

Mr Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jax, Fl 32232-0019

Dear Mr. Sutterfield,

I am writing in regard to the C-111 Project. The economic analysis for this project is flawed because it does not incorporate the cost of the collapse of Florida Bay vs. the benefits of restoring it. The degradation of Florida Bay has endangered the economy of the entire Florida Keys which is based in large part on fishing and diving. Scientists agree restoration of freshwater flows is absolutely essential to restoration of the Bay. Since the C-111 area is a key avenue for inflow of fresh-water into Florida Bay, the benefits of economic recovery to these industries in Florida Bay should be quantified and will add additional economic justification for restoring historic conditions.

Sincerely,

Quinice H. Locke (Mrs.)

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

I welcome the proposed purchase of the lands adjacent to the Park, known as the "Frog Pond" and the "Rooky Glades." The proposed retention/detention area on these lands is essential to the restoration of water quality in the South East Glades.

May I suggest that proper control of storm water run-off from Homestead and Florida City will require a pump of 500cfs capacity rather than the 50 cfs pump proposed at S-332B. Further an expanded reservoir area along the west side of L-31N will do much to guarantee clean water under timely control to Taylor Slough and the Shark River Valley in Everglades National Park.

I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Ann Pierce Hamm
3094 Cadiz Road
Boca Raton, Fl. 33432

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

I welcome the proposed purchase of the lands adjacent to the Park, known as the "Frog Pond" and the "Rocky Glades." The proposed retention/detention area on these lands is essential to the restoration of water quality in the South East Glades.

May I suggest that proper control of storm water run-off from Homestead and Florida City will require a pump of 500cfs capacity rather than the 50 cfs pump proposed at S-332B. Further an expanded reservoir area along the west side of L-31N will do much to guarantee clean water under timely control to Taylor Slough and the Shark River Valley in Everglades National Park.

I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

K. Carter
5260 N.W 2nd Ave
Boca Raton, Fl. 33487

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

I welcome the proposed purchase of the lands adjacent to the Park, known as the "Frog Pond" and the "Rocky Glades." The proposed retention/detention area on these lands is essential to the restoration of water quality in the South East Glades.

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I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Judith C. Wiegand
1583 S.W. 5th Ave
Boca Raton, FL 33432

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

I welcome the proposed purchase of the lands adjacent to the Park, known as the "Frog Pond" and the "Rocky Glades." The proposed retention/detention area on these lands is essential to the restoration of water quality in the South East Glades.

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I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

680 LAUREL CR
DELRAY 33445

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

I welcome the proposed purchase of the lands adjacent to the Park, known as the "Frog Pond" and the "Rocky Glades." The proposed retention/detention area on these lands is essential to the restoration of water quality in the South East Glades.

May I suggest that proper control of storm water run-off from Homestead and Florida City will require a pump of 500cfs capacity rather than the 50 cfs pump proposed at S-332B. Further an expanded reservoir area along the west side of L-31N will do much to guarantee clean water under timely control to Taylor Slough and the Shark River Valley in Everglades National Park.

I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Simone Spiess
SIMONE SPIESS
[illegible] Blvd

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

I welcome the proposed purchase of the lands adjacent to the Park, known as the "Frog Pond" and the "Rocky Glades." The proposed retention/detention area on these lands is essential to the restoration of water quality in the South East Glades.

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I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Elayne Fortgang
7820 Mansfield Hill
[illegible]

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

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I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Martin J. Fortgang

MARTIN J. FORTGANG
7828 MANSFIELD HOLLOW
DELRAY BEACH, FL 33446
407-495-5015

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

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I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Gertrude G. [illegible]
161 NE Harbour Terr
Boca Raton, FL 33431

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

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I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Stuart Johnson
6235 Sverde Trl J315
Boca Raton FL

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

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I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

5657 Willow Creek Lane

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

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I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Mary E. Boyd F-302
950 Lakeview Circle
Delray Bch, Fl. 33444

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

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I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Mary M Johnson
6035 S Verde Trl J345
Boca Raton FL 33433

April 14, 1994

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

Dear Mr. Sutterfield,

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I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Kathryn Boyd
950 Lords Circle # 302
Delray Beach, Fla. 33444

April 14, 1994

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

Dear Mr. Sutterfield,

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Sincerely,

Alan K. Parmelee
4765 N.W. 6 Th CT.
DELRAY BCH FL. 33445

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

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I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

George Mallard

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

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Sincerely,

Al Kleinguetl
3305 General St
Boca Raton Fla 33428

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

I welcome the proposed purchase of the lands adjacent to the Park, known as the "Frog Pond" and the "Rocky Glades." The proposed retention/detention area on these lands is essential to the restoration of water quality in the South East Glades.

May I suggest that proper control of storm water run-off from Homestead and Florida City will require a pump of 500cfs capacity rather than the 50 cfs pump proposed at S-332B. Further an expanded reservoir area along the west side of L-31N will do much to guarantee clean water under timely control to Taylor Slough and the Shark River Valley in Everglades National Park.

I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Elisabeth Hoffman
4307 NW 5th Avenue
Boca Raton FL 33431

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

I welcome the proposed purchase of the lands adjacent to the Park, known as the "Frog Pond" and the "Rocky Glades." The proposed retention/detention area on these lands is essential to the restoration of water quality in the South East Glades.

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I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

MARY IRVING GOULAWRENCE
DERAT FL
33445

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

I welcome the proposed purchase of the lands adjacent to the Park, known as the "Frog Pond" and the "Rocky Glades." The proposed retention/detention area on these lands is essential to the restoration of water quality in the South East Glades.

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I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

[illegible] Jacobson
701 N.E. Harbourview [illegible]
Boca Raton, Fla
33431

April 14, 1994

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

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I welcome the proposed purchase of the lands adjacent to the Park, known as the "Frog Pond" and the "Rocky Glades." The proposed retention/detention area on these lands is essential to the restoration of water quality in the South East Glades.

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I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Esther Hecht
6252 Stanley Lane
Delray Beach FL 33484

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

I welcome the proposed purchase of the lands adjacent to the Park, known as the "Frog Pond" and the "Rocky Glades." The proposed retention/detention area on these lands is essential to the restoration of water quality in the South East Glades.

May I suggest that proper control of storm water run-off from Homestead and Florida City will require a pump of 500cfs capacity rather than the 50 cfs pump proposed at S-332B. Further an expanded reservoir area along the west side of L-31N will do much to guarantee clean water under timely control to Taylor Slough and the Shark River Valley in Everglades National Park.

I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Hugh Benton
5800 CAMINO DEL SOL #302
Boca Raton Florida 33433

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

I welcome the proposed purchase of the lands adjacent to the Park, known as the "Frog Pond" and the "Rocky Glades." The proposed retention/detention area on these lands is essential to the restoration of water quality in the South East Glades.

May I suggest that proper control of storm water run-off from Homestead and Florida City will require a pump of 500cfs capacity rather than the 50 cfs pump proposed at S-332B. Further an expanded reservoir area along the west side of L-31N will do much to guarantee clean water under timely control to Taylor Slough and the Shark River Valley in Everglades National Park.

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Sincerely,

Ingeborg T. J. Benton
5800 Camino Del Sol, #302
Boca Raton, FL 33433

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

I welcome the proposed purchase of the lands adjacent to the Park, known as the "Frog Pond" and the "Rocky Glades." The proposed retention/detention area on these lands is essential to the restoration of water quality in the South East Glades.

May I suggest that proper control of storm water run-off from Homestead and Florida City will require a pump of 500cfs capacity rather than the 50 cfs pump proposed at S-332B. Further an expanded reservoir area along the west side of L-31N will do much to guarantee clean water under timely control to Taylor Slough and the Shark River Valley in Everglades National Park.

I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Carole Carlson
3260 N.W. 42nd Ave
Unit 701
Boca Raton, Fla. 33431

April 14, 1994

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

Dear Mr. Sutterfield,

With great concern I have watched the gradual destruction of the East Everglades eco-system and the fisheries of Florida Bay. I see hope for the restoration of the East Everglades in option 6A as proposed by the Corps of Engineers.

I welcome the proposed purchase of the lands adjacent to the Park, known as the "Frog Pond" and the "Rocky Glades." The proposed retention/detention area on these lands is essential to the restoration of water quality in the South East Glades.

May I suggest that proper control of storm water run-off from Homestead and Florida City will require a pump of 500cfs capacity rather than the 50 cfs pump proposed at S-332B. Further an expanded reservoir area along the west side of L-31N will do much to guarantee clean water under timely control to Taylor Slough and the Shark River Valley in Everglades National Park.

I have great confidence that, with the support of the people of Florida, the Corps of Engineers will develop and implement a practical plan for restoration of the South East Everglades and Florida Bay.

Sincerely,

Sara S. Stalles
161 NE Navarre Way
Boca Raton FL 33432

Lawrence M. Porter
28 Ocea Court, Route 23
Jamaica Bay West
Ft. Myers, FL 33912

26 Mar 94

Mr Steven Sutterfield;
U.S. army Corps of Engineers
P.O. Box 4970
Jacksonville, FL, 32232-0019

Dear Mr. Sutterfield:

In regard to the proposed C-111 project to restore flows into Taylor Slough and Florida Bay, I am in favor of Alternative 6A with some improvements.

1. Purchase the Frog Pond and Rocky Glades agricultural area.
2. Construct the retention/detention area in Rocky Glades and the Frog Pond.
3. Fill or plug canal C-111 to prevent agricultural and urban Run off.
4. To ensure flood protection to communities to the North, and restore historic timing and distribution of sheetflow designate and design the proposed C-111N canal

as a retention/detention area line to the east to the North.

5. use a 500 cfs pump instead of a. cfs one at S-332B so that wat pumped into a large retention/det area along C111N will allow a natural sheetflow South.
6. Expand the retention/detention ar along the West side of L-31N nor of the Tamiami Trail as sugge by alternative #8 to ensure a water patterns for Shark Valley Taylor Slough.
7. Extend C111N East of US 1 fo Maximum flexibility and wate delivery to all parts of the system.

Now is the time to get this system operating as it should Tomorrow will be too late.

Sincerely
Lawrence M Porter F
Caloosa Bird Club

March 28, 1984

Dear Mr Sutterfield

I am writing to you because I am unable to attend the public meeting in Homestead tomorrow (3-29)

I am in favor of. Alternative 6A. I feel that it is a good proposal that could be improved by filling C 111 Canal, which would eliminate the poisoning of Barnes Sound with slugs of agricultural and urban runoff

2. The proposed C-111N canal should be designed as a retention/detention area linked to the North. This would restore historic timing and distribution of sheetflow in this part of the Everglades while also helping to insure flood protection to communities to the North.

3. The Corps should use a 500 CFS pump at S-332B so that the waters are pumped into a large retention/detention area along

2.

C-111N which would allow [cut off] sheetflow to move through the Everglades into Florida Bay Pro[cut off] ecological Benefits As well As g[cut off] flood protection.

4- Expand the retention/detention area along the West side of [cut off] As suggested by alternative 8

5. Lastly C111N - Should be [cut off] E of US1 to allow maximum and water deliveries to all part[cut off] this system

This system and its water [cut off] ment policies must be overhau[cut off] to prevent overdraining of [cut off] Everglades & ~~[illegible]~~ further end of to Florida Bay.

Hold fast to restoring Fla Taylor Slough & Florida Bay. Do[cut off] Be pressured by the Agri bu[cut off] interests into doing nothing. Area must be Saved!

Thank you
Jeanne Girard
2641 Gately Dr. W
WPB Fl 33415

[redacted]

March 31, 1994

Mr. Steven Sutterfield

US Army Corps of Engineers

P.O. Box 4970

Jacksonville, FL 32232-0019

Dear Mr. Sutterfield:

I have always been vitally interested in the protection of the environment. Certainly the proper protection of the Florida Everglades is of vital importance to the well-being of the state of Florida. I believe a proper balance must be sought between the operations of the industrial community and the maintenance of the health of the Everglades.

I have been following closely over several years, actions that have taken place in sections of the Everglades. Problems in the management system over the past ten years have been aggravated by practises that have over-drained the Everglades, preventing water from flowing into Florida Bay. This has been done to benefit a few tomato growers in the so called Frog Pond area. Such action has done visible and significant harm to the Everglades and Florida Bay through preventing fresh water flow from reaching key parts of the Bay.

Of the various plans relative to restoring of fresh water flow to restore Florida Bay, Alternative 6-A seems to have much merit. However, after considerable thought on the matter, I would like to offer some improvements as per the following: (See next page)

1. To more fully ensure flood protection to communities to the north, as well as restore distribution of sheetflow in this part of the Everglades, the proposed C111N canal should be designed as a retention/detention area linked to the area to the north.

2. The Corps should use a 500 cfs pump instead of a 50 cfs one at S-332B so that waters are pumped into large retention/detention area along C-111N which allows natural sheetflow to move down through the southern Evergladesarea into the marine environment. This should provide some ecological benefits while allowing greater flood protection as well.

3. Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8. Only by this action will the Corps ensure that enough clean water can be made available in both Shark Slough and Taylor Slough.

4. C-111N should be extended east of US I to allow maximum flexibility and water deliveries to all parts of the system.

Respectfully,

Richard E. Marshall

Richard E. Marshall

11076 Alumni Way
Jacksonville, Fl 32246
March 28, 1994

Dear Mr. Sutterfield,

I am writing regarding Alternative 6A to restore flows into Taylor Slough and Florida Bay.

First, the economic analysis is flawed because it does not incorporate the cost of the collapse of Florida Bay vs. the benefits of restoring it. The collapse endangers the economy of the entire Florida Keys.

I would like to see the purchase of the Frog Pond and Rocky Glades agricultural area since this is essential to the future of the Everglades / Fl Bay system. The proposed retention/detention area, in what is now the Rocky Glades and Frog Pond is essential to ensuring water quality + flood control.

The proposed C-111N Canal should be designed as a retention/detention area linked to the area to the north. C-111N also should be extended east of US1 to allow maximum flexibility + water deliveries to all parts of this system.

Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8 to allow enough clean water for both Shark Slough and Taylor Slough.

Lastly, the corp should use a 500 cfs pump instead of a 50 cfs one at S-332B so that waters are pumped into a large retention/detention area along C-111N which allows natural sheetflow to move down through the southern Everglades area into the marine environment. This provides ecological benefits while allowing for greater flood protection as well.

Thank you for your consideration

Sincerely,

Anne D. Kennedy-Turner

30 March 1994

Mr Steven Seitzfeld
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Fl 32232-0019

Dear Mr Seitzfeld,

A few comments on the proposed C-111 Project. The economics analysis for the project is possibly flawed because it does not incorporate the cost of the collapse of Florida Bay vs. the benefits of restoring it. The degradation of Florida Bay has endangered the economy of the entire Florida Keys which is based on large part on fishing and diving. Scientists agree restoration of freshwater flows is absolutely essential to restoring the Bay. Since the C-111 area is a key avenue for inject of freshwater into Florida Bay, the benefits of economic recovery to that industries in Florida Bay should be quantified and could add additional economic justification for restoring historic conditions.

In the last decade farmers in the Frog Pond area have successfully prevailed upon the government to give them more and more drainage benefits not provided by law. By providing this benefit, the Corps and District have harmed the Park and Bay because when Frog Pond is drained also drained is the adjacent marshes in Taylor Slough. Therefore, purchase of the Frog Pond and Rocky Glade agricultural area contemplated by this proposal is essential to the future of the Everglades system.

The proposed retention/detention area, on what is now the Rocky Glades and Frog Pond, is essential to ensuring water quality in this area as well as providing flood control for areas east of L-31/C-111 canals.

While Alternative 6A is a good one, it is my belief it can be improved in the following ways

- To more fully ensure flood protection to communities to the north, as well as restore historic timing and distribution of sheetflow in this part of the Everglades, the proposed C-111 N canal should be designed as a retention/detention area linked to the area to the north.

- The Corps should use a 500 cfs pump instead of a 50 cfs one at S-332B so that waters are pumped into a large retention/detention area along C-111 N which allows natural sheetflow to move down through the southern Everglades area into the marine environment. This provides ecological benefits while allowing for greater flood protection as well.

- Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8. Only by doing this will the Corps ensure that enough clean water can be made available in historic patterns for both Shark Slough and Taylor Slough

- C-111N should be extended east of US 1 to allow maximum flexibility and water deliveries to all parts of this system.

Thank you for your concern and attention in this matter.

Sincerely
Robert E Rutkowski

2527 Foxon Court
Topeka, Kansas
66605-2086

SIERRA CLUB

BROWARD COUNTY GROUP

April 17, 1994

Larry Marvel
Conservation Vice-Chair
5561 SW 7th Street
Plantation, Florida 33317
(305)321-5753

Stephen Sutterfield
US Army Corps Of Engineers
P O Box 4970
Jacksonville, FL. 32232-0019

Dear Mr. Sutterfield,

I attended the meeting in Homestead on March 29 concerning the proposed C-111 project which promises to improve the flow into Taylor Slough and Florida Bay. I was struck by the nearly unanimous agreement, among farmers, environmentalists, residents and politicians that Florida Bay should be saved. I congratulate the Corps efforts to bring the affected parties to this position.

The Broward County Group of Sierra Club generally agrees with your plan 6A and strongly believes that Alternative 9 is seriously—dangerously—flawed. You chose correctly and we strongly urge you to reject further attempts to change your choice to Alternative 9.

However, 6A can and should be improved. First, hydroperiod can be improved by replacing C-111N by a retention/detention area which accepts stormwater runoff from Homestead and Florida City. Secondly, the pump at S-332E should be sized at 500 cubic feet per second, rather than the proposed 50 cfs, so that the stormwater runoff mentioned above can be pumped to the retention/detention area instead of being routed through the C-111 to the ocean and causing the kind of marine disasters we've seen too often in the past. Next, these new retention/detention areas should be extended east of US-1 to optimize water deliveries to all parts of the area, including coastal Everglades. Additionally, we believe that the C-111 should be filled south of the retention/detention areas. Finally, expansion of the retention/detention area along the west side of L-31N and north to the Tamiami will insure that water is available to both Shark Slough and Taylor Slough in the required quantities.

Please keep up the good work, but don't miss this opportunity to make the aforementioned improvements to your plan.

Sincerely,

Larry Marvel
Conservation Vice-Chair

Recycled Paper

Richard H. Spencer
6152 N. Verde Trail E116
Boca Raton, Fl. 33433
Phone: 407 479-4651

April 13, 1994

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Fl. 32232-0019

Subject: Support of Canal 111 Project, Alternative 6A

Dear Sutterfield:

As a resident of south Florida for over a quarter of a century, I deplore what has happened, and is continuing to happen, to our everglades and Florida Bay. I heartily support your efforts to restore and enhance the flow of fresh water to those areas by implementation of the subject project.

A. Following are some specifics that I endorse as being significant to the success of the project:

1. Purchase of Frog Pond and Rocky Glades agricultural area
2. Identify the cost of Florida Bay collapse vs restoration cost - both pieces are needed for true evaluation.

B. Following are some suggestions for enhancement of Alternative 6A and its implementation:

1. To more ensure flood protection north, as well as restore the sheet flow to the south, design the proposed Canal 111N to be a retention/detention area linked to the area north.
2. To allow and enhance sheetflow south, increase the pump size from 50 cfs to 500cfs at S-332B to pump water into a large retention/detention area along the C111N.
3. To ensure adequate clean water for Clark and Taylor Sloughs, it is suggested that the retention/detention area along the west side of L-31N, north to Tamiami Trail be expanded.
4. Extension of C111N east across U.S. Hwy. 1 would enhance flexibility and area delivery coverage for the system.

With appreciation for the Corps' proposal and attention to this matter.

Respectfully,

R. H. Spencer

Richard H. Spencer

April 13, 1994
6941 S. Shore Dr.
S. Pasadena, FL
3370

Mr. Steven Sutterfield
U.S. Corps of Engineers
P.O. Box 4970,
Jacksonville, FL 32232-0019

Dear Steven Sutterfield:

I am unable to attend the public meeting on March 29th in Homestead, but I am nevertheless very interested in restoring the Everglades. The management of the region certainly has had its flaws.

I approve of alternative 6A if it will do the following things.

(1) Extend C-111N east of US 1 for maximum flexibility and flow delivery to all parts of the system.

(2) Expand the retention/detention along the west side of L-31 North to Tamiami Trail (alternative 8). Clean water will then be available for Shark Slough and Taylor Slough.

(3). Use a larger pump (500 cfs) instead of the 50 cfs at S-332 B so that waters are pumped into larger retention area along C-111 N. This will allow a natural flow through the southern Everglades. It will allow for ecological benefits and greater flood protection.

(4). The proposed C-111N canal should be designed as a retention/detention area linked to the area to the North to provide these communities flood protection.

Hoping that you will give my letter full consideration.

Sincerely yours,
Estelle Dinsdale

Mr. David Sapir APT. 5
2101 Atlantic Shores Blvd.
Hallandale, FL 33009-2857

March 30th 1994.

Mr. Steven Sutterfield

Have looked-up "Sutter" and found that a Mr. John Augustus Sutter (1808-1880) had a mill in eastern Cal, where gold was discovered in 184[illegible]. Any relationship? What is or was a Sutter?

Dear sir, Greetings,

I have read and understood "the flyer" I'm pending. I fully agree that "Alternative 6A" is the way to go and can be much improved by following the recommendations of the (4) red encircled improvements. Please accept my Thanks.

David Sapir.

AUDUBON SE REGIONAL OFFICE

ACTION ALERT

NATIONAL AUDUBON SOCIETY

MARCH 18, 1994

Urgent Everglades/Florida Bay Action Alert

The US Army Corps of Engineers is holding a hearing on restoring flows into Taylor Slough and Florida Bay through the proposed C-111 Project.

March 29, 1994
7:00 pm
Homestead High School
351 S.E. 12 Street
(East of Hwy 1)
For information about buses, call Theresa Ashley at (305) 296-3880

Background: C-111 is in the far southeast region of the Everglades system. It is the key area for providing overland flows into southeastern portion of Everglades National Park and the northeast corner of Florida Bay. This area provides important habitat for endangered species such as the Wood Stork, Cape Sable Sparrow, American Crocodile and the Snail Kite. However, the ditching and draining of this area has disrupted the natural timing, distribution and flow of water. Instead of a gentle sheet of water, fed by rain, moving slowly through this area, canals drain water out of marshes and quickly out of the system. In the last decade problems in the system have been aggravated by water management practices which have overdrained the Everglades and prevented water from going into Florida Bay - all to benefit a few tomato growers in the area known as the Frog Pond. This over draining has done visible and significant harm to the Everglades/Florida Bay and prevented vital freshwater flows from reaching the key areas of the Bay.

How you can help:

1. Attend the public hearing on March 29
2. Attend the public hearing on March 29 and write a letter to the Corps of Engineers
3. Write a letter to the corps of engineers

You can help by attending the public ~~hearing at Homestead~~ on the 29th. It is clear that the agricultural community intends to turn out many of its workers to oppose this restoration project and is using scare tactics to recruit homeowners from other areas of South Dade County. If you can't attend the hearing then please submit written comments, prior to April 20, 1994, to:

Mr. Steven Sutterfield
US Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

What the Corps proposes: This project is being undertaken to select a plan to increase the operational capability and flexibility of the C-111 system to provide restoration for the ecological integrity of Taylor Slough and the eastern panhandle area of the Everglades. The project must maintain existing authorized levels of flood protection for agricultural interests adjacent to C-111. Restoration of these flows will provide freshwater necessary for restoring Florida Bay. The

The Corps reviewed 10 alternatives including a no action alternative, and alternatives 1-6A, 8 and 9. The Corps found that alternative 6A met all of the criteria to provide operational flexibility for this part of the system. The tomato farmers offered Alternative 9 which did not provide flexibility to restore natural water levels along the boundary and headwaters of upper Taylor Slough or to control the timing flows into Taylor Slough - essential to the restoration of historic flows in this area. The Corps noted that Alternative 6A provides the same amount of flood protection as the farmers proposal. The Corps chose Alternative 6A because it provides the greatest benefit to the environment, maximizes operational flexibility and provides flood damage prevention capability to agriculture.

Points you can make about the proposal:

- The economic analysis for this project is flawed because it does not incorporate the cost of the collapse of Florida Bay vs. the benefits of restoring it. The degradation of Florida Bay has endangered the economy of the entire Florida Keys which is based on large part on fishing and diving. Scientists agree restoration of freshwater flows is absolutely essential to restoration of the Bay. Since the C-111 area is a key avenue for input of freshwater into Florida Bay, the benefits of economic recovery to these industries in Florida Bay should be quantified and will add additional economic justification for restoring historic conditions.

- In the last decade farmers in the Frog Pond area have successfully prevailed upon the government to give them more and more drainage benefits not provided by law. By providing these benefits, the Corps and District have harmed the Park and Florida Bay, because when they drain the Frog Pond they also drain the adjacent marshes in Taylor Slough. Therefore, purchase of the Frog Pond and Rocky Glades agricultural area contemplated by this proposal is essential to the future of the Everglades/Florida Bay system.

- The proposed retention/detention area, in what is now the Rocky Glades and Frog Pond, is essential to ensuring water quality in this area as well as providing flood control for areas east of L-31/C-111 canals.

- While Alternative 6A is a good one it can be improved in the following ways.

  a. To more fully ensure flood protection to communities to the north, as well as restore historic timing and distribution of sheetflow in this part of the Everglades, the proposed C-111N canal should be designed as a retention/detention area linked to the area to the north.

  b. The Corps should use a 500 cfs pump instead of a 50 cfs one at S-332B so that waters are pumped into a large retention/detention area along C-111N which allows natural sheetflow to move down through the southern Everglades area into the marine environment. This provides ecological benefits while allowing for greater flood protection as well.

  c. Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8. Only by doing this will the Corps ensure that enough clean water can be made available in historic patterns for both Shark Slough and Taylor Slough.

  d. C-111N should be extended east of US 1 to allow maximum flexibility and water deliveries to all parts of this system.

April 14, 1994

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. 4970
Jacksonville, Fl 32232-0019

Re: Restoring Water Flow into Taylor Slough and Florida Bay through the Proposed C-111 Project

Dear Mr. Sutterfield:

I support the restoration project to improve the flow of water into Florida Bay, having seen first hand the seriousness of the water quality problem.

I believe the 6A alternative is the best, but could be improved by completely plugging the C-111 canal to prohibit urban runoff and varying amounts of fresh water from disturbing the balance in Barnes Sound. The C-111N canal should be designed to retain water and extended to east of US 1 and larger pumps should be in place to provide for greater water distribution and allow the natural sheetflow to move water down through the souther Everglades area into Florida Bay. Additionally, the retention area along the west side of L-31N should be expanded to allow for greater flow for Shark Valley slough and Taylor Slough.

While I realize that many of these proposals will jeopardize various existing interests, the long-range water picture must be factored into the decisions made. There are many more upstream and downstream interests as well as future water demands to be considered. Our watershed (the Everglades) must be protected and sacrifices must be made now.

Sincerely,

Karen Young

Karen Young
901 Placetas Ave.
Coral Gables, Fl 33146

il 11, 1994

Army Corps of Engineers
) Mr. Stephen Sutterfield
) Box 4970
:ksonville, FL 32232-0019

ir Mr. Sutterfield:

: proposed project to increase the operational capability and
:xibility of the Canal #111 (C-111) is long overdue. This canal
:aged Florida Bay by dumping stormwater into the Bay during heavy
ins and flood events and draining nearby marshes at time of
:ught for agricultural purposes.

the last decade farmers in the Frog Pond area have successfully
:vailed in receiving more drainage benefits than provided by law
the expense of the Everglades. Drainage of Frog Pond also
:ains the adjacent marshes in Taylor Slough. The current
:dition of the Slough displays that this agricultural use is
compatible with a healthy Bay. The Corps must purchase this land
d the Rocky Glades agricultural area to insure the future health
Florida Bay and The Everglades.

th the approval of the Everglades Restoration Plan by the Florida
gislature, the Corps is afforded an excellent opportunity to
ntribute to this Plan by restoring the historic sheetflow to the
utheastern Everglades. The creation of a water retention/
tention area instead of the proposed C-111N would better
complish this goal. This would provide full flood protection and
establish the natural sheetflow without destroying the marine
vironment.

e retention areas prevent unnatural water flows into the Bay and
ould be expanded along the west side of L-31N north to Tamiami
:ail as suggested by Alternative 8. The Corps could achieve
:ximum flexibility and water deliveries to the coastal Everglades
extending the retention area east of US Highway 1. The return
the natural sheetflow to Shark Slough and Taylor Slough will
:low the Everglades to filter water flows into Florida Bay and
:lp restore the ecological cycle that has been disrupted.

:ncerely,

:rold Hancock, 5848 NW 21st Street, Lauderhill, FL 33313

Christopher D. Koss

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

April 10, 1994

Dear Mr. Sutterfield:

May I please add my wholehearted support to your proposal alternative 6A for the Everglades/Florida Bay Restoration.

I believe that proposal could be enhanced by linking Canal 111N to the north, which would help in the distribution of sheet flow in this part of the Everglades.

Further, a much-larger pump at S-332B would enable more effective retention and detention along C-111N.

Expansion of the retention area along the west side of L-31N, as suggested in Alternative 8, would allow enough clean water for both Shark and Taylor Sloughs.

By extending Canal 111N east of Highway 1, maximum flexibility and water delivery would be provided for the entire system.

Sincerely yours,

881 Ocean Drive #17E Key Biscayne, Florida 33149

Allen D RIos
2233 Nowry LN
kissimmee, FL 34741

Mr. Steven Sutterfield
US Army Corps of Engineers
P.O. Box 4970
Jacksonville. FL 32232-0019

Dear Mr. Sutterfield,

I am writing you to submit my comments on the proposed C-111 progect. As you know the C-111 project area is the key area for providing overland flows into southeastern portion of Everglades National Park and the northeastern corner of Florida Bay.This area provides inportant habitat for endangered species such as Wood Stork,Cape Sable Sparrow, American Crcidile and theSnail Kite. I would like to hit on a few points about the overall praposal.

* THe economic analysis for this project is flawed because it does not incorperate the cost of the collapse of Florida Bay vs. the benifits of restoring it. the degradation of Florida Bay has endangered the the economy of the intire Florida Keys which is based in large part to diving and fishing.

*In the last decade farmers in the Frog Pond area have been given more and more drianage benifets not provided by law.By providing these benefits the Corps and District have harmed the Park and Florida Bay, because when they drain the Frog Pond they also drian the marshes in the adjacent Taylor Slough. THerefore, the purchase of the Frog Pond and Roccky Glades agriculteral area is essential to to the future of the Everglades/Florida Bay system.

* THe proposed retention/detention area, in what is now the Rocky glades and Frog Pond, is essential to ensuring water quality in this area as well as providing flood control for areas east of L-31/C-111 canals

Of the ten alternatives reviewed by the Corps, 6A is the best alternitive, but it can be inproved in the following ways.

* To more fully insure flood control, as well as restore historic timing and distribution of sheetflow in this part of the Everglades,the proposed C-111N canal should be designated as a retention/detention area linked to the area to the north.

*The Corps should use a 500 cfs pump instead of a 50 cfs one at S-332B

(over)

* Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by alternitive 8.

*C-111N should be exstended east of US-1 to allow maximum flexibility and water deliveries to all parts of this system.

Thank you for allowing me to submit these comments.I hope you take into account the points I have listed, and implement alternative 6A with the inprovements I have suggested.

Sincerly,

Allen D RIos
2233 nowry LN
Kissimmee, FL 34741
(407) 933-1797

Catherine VerSchneider
638 Snug Harbor Drive #15
Boynton Beach, FL 33435

April 10, 1994

Mr. Steven Sutterfield
US Army Corps of Engineers
PO Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield:

Restoring flows into Taylor Slough and Florida Bay through the C-111 Project must incorporate the cost of the collapse of Florida Bay versus the benefits of restoring it. The degradation of Florida Bay has endangered the economy of the entire Florida Keys, which depends on the quality of the water resource. Scientists agree that restoration of the freshwater flows is absolutely essential to the restoration of the Bay. Since the C-111 area is a key avenue for input of freshwater into the Florida Bay, the benefits of economic recovery to fishing and diving industries should be quantified, thereby increasing economic justification for restoring historic conditions.

In the last decade, farmers in the Frog Pond area have successfully prevailed upon the government to give them more and more drainage benefits not provided by law. By providing these benefits, the Corps and District have harmed the Park and Florida Bay., as draining Frog Pond also drains adjacent marshes in Taylor Slough. Therefore, purchase of Frog Pond and Rocky Glades agricultural area, as contemplated by the proposal, is essential for the future of the Everglades/Florida Bay system.

The proposed retention/detention area, in what is now Frog Pond and Rock Glades, is requisite for ensuring water quality in this area , as well as providing flood control for areas east of L-31/C-111 canals.

The Corps chose Alternative 6A because it provides the greatest benefit to the environment, maximizes operational flexibility, and provides flood damage prevention capability to agriculture. Alternative 6A can be improved in the following ways:

1. For better flood protection to communities to the north, and restore historic timing and distribution of sheetflow in this part of the Everglades, the proposed C-111N canal should be designated as a detention/retention area linked to the area to the north.

2. The Corps should use a 500 cfs pump (not 50 cfs) at S-332B so that waters are pumped into a large retention/detention area along C-111N which allows natural sheetflow to move down through the southern Everglades area into the marine environment.

3. Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8. Only by doing this will the Corps ensure that enough clean water can be made available in historic patterns for both Shark Slough and Taylor Slough.

4. C-111 should be extended east of US1 to allow maximum flexibility and water deliveries to all parts of this system.

Thank you for your time.

Sincerely,

Catherine VerSchneider

Catherine VerSchneider

9560 N. W. 31st Place
Sunrise, FL 33351
April 11, 1994

Mr. Steven Sutterfield
U. S. Army Corps of Engineers
P. O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield,

I am strongly in favor of re-establishing the historic flow, timing, and distribution of water to Taylor Slough and Florida Bay. Florida Bay is dying because it is starving from the lack of freshwater.

The only living coral reef in the continental U. S. is also being impacted. The quality of life of South Florida is also being destroyed, plus damaging our economy.

I support the Canal 111 Project, Alternative 6A. We must revitalize this crucial resource.

I also support the purchase of the Frog Pond and Rocky Glades agricultural area which is essential to this ecosystem. Farmers should never have been allowed in these areas to begin with!

I also approve of the following improvements to Alternative 6A:

1. The proposed Canal 111N should be designed as a retention/detention area linked to the area to the north.
2. The Corps should use a 500 cfs (cubic feet/second) pump instead of a 50 cfs pump at S-332B.
3. The Corps should expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested in Alternative 8.
4. Canal 111N should be extended east of U. S. Highway 1.

Too much damage has already been done to the Everglades ecosystem. And the taxpayer is still subsidizing the sugar industry to continue polluting the Everglades. Makes no sense. It only angers me.

Sincerely

Carol Weenk

(Mrs. H. Weenk)

cc: Governor L. Chiles

Lawrence Gladsden
10830 SW 84 Street, Apt. G-1
Miami, Florida 33173
305-598-3899

04/08/94

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Fl 32232-0019

Dear Mr. Sutterfield,

I support Canal 111 Project, Alternative 6A. The purchase of the Frog Pond and Rocky Glades agricultural areas, and their conversion into a retention/detention area is essential to ensuring water quality and flood control.

The economic analysis for this project would be much more accurate were its effects on the economy of the Florida Keys, and on the various recreational industries associated with a healthier Florida Bay and environs, taken into consideration.

6A, while a good alternative, could be improved if:

* Proposed Canal 111N were designed as a retention/detention area linked to the area to the north.
* A 500cfs pump were used at S-332B.
* The retention/detention area along the west side of L-31N were expanded north to Tamiami Trail as suggested in Alternative 8.
*Canal 111N were extended east of U.S. Highway 1.

I am a life-long resident of Dade County, and an angling enthusiast who loves the Florida Bay area. I would like my children to enjoy it someday, also. Maybe it will be richer for them, instead of poorer -- if we work together to make it that way.

Sincerely Yours,

Lawrence Gladsden

North Carolina
Outward Bound School

March 21, 1998

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

Dear Mr. Sutterfield:

As I will be unable to attend your upcoming hearing on flow restoration into Taylor Slough and Florida Bay through the C-111 projects, I submit the following comments for your consideration.

First of all, I would like to congratulate you, and the Corps, for the thoughtfulness that you obviously put into this research / analysis. With this in mind, I would like to stress:

- I note that you did not include the cost benefit of restoring Florida Bay in your economic analysis. It is crucial that this be a part of such a study as quantifying the benefits of such restoration would substantially add justification for these efforts.

- It is essential that purchase of the Frog Pond and Rocky Glades agricultural area be included in this proposal. These locations are crucial to the future of the Everglades / Florida Bay System.

- I support your choice of alternative 6A, and I would ask that you consider the following:

  -To both ensure flood protection and restoration of sheet flow, the proposed C-111N canal should be designed as a retention / detention area.

  -The Corps should utilize a 500 cfs pump rather than a 50 cfs one at S-332B.

  -To ensure that enough clean water will be made available to both Shark and Taylor Slough, the retention / detention area along the west side of L-31N north to Tamiami Trail should be expanded.

  -C-111N should be extended east of US 1.

Again, thank you for your consideration in this matter. I look forward to learning of the outcome of the upcoming hearing. If there is ever any way that I can be of service or assistance, please do not hesitate to contact me.

Yours,

Doug Wells
Director
Everglades Outward Bound®Center

9423 Fontainebleau Blvd.
Bldg. 37, Unit 104
Miami, Floride 33172
April 12, 1994

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Fl 32232-0019

Dear Mr. Sutterfield

We have never met but I know how much you have tried to help clean up the Everglades. I have lived in Floride for over 35 years and have enjoyed camping and wildlife photogrophy in the Everglades for more than 25 years.

As a former science teacher in Dade-County, I took many of my students on field trips to the Everglades and even weekend camping trips. I know how important wetlands are to the health of our nation.

You have my support in the Canal 111 project, alternative 6A, which will restore a good flow of fresh water to Taylor Slough and the eastern panhaldle of the Everglades. In addition, I would suggest the following:

(1) Canal 111 should help restore the historic flow of water through the Everglades, (2) use a 500 cfs pump to help improve the flow of water to the marine environment which helps both the ecosystem and economy of south Florida, (3) expand the area west of L-31N to the Tamiami Trail to provide sufficient water to both Shark and Taylor Slough.

Thank you for helping to restore fresh water to the southern Everglades and for helping promote the good health of the south Floride ecosystem.

Sincerely,

David McCafferty

David Mc Cafferty

16630 S.W. 80th Avenue
Miami, FL 33157

(305) 233-1078 (home)
(305) 378-7499 (work)

April 11, 1994

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield:

As a resident of south Florida, I am extremely concerned about the health of the Everglades and Florida Bay, and their impact on the United States' largest coral reef. Therefore, I urge you to support the Canal 111 Project, Alternative 6A.

This Alternative will most effectively address the water quality and environmental crises we are facing. The purchase of the Frog Pond and Rocky Glades agricultural area is essential to the future of the Everglades and Florida Bay.

While Alternative 6A is our best option on the table, it should be improved:

* Proposed Canal 111N should be designed as a retention/detention area linked to the north to provide greater flood protection and restore historic timing and flow.
* A 500 cfs pump should be used instead of a 50 cfs pump at S-332B so waters are pumped into a large retention/detention area along C-111N.
* The retention/detention area along the west side of L-31N north to Tamiami Trail should be expanded as suggested in Alternative 8.
* Canal 111N should be extended east of U.S. Highway 1.

Please act now to give Florida Bay and the Everglades a chance to recover. South Florida's economy is dependent upon tourism. The destruction of these resources is not only an environmental tragedy, it is an economic nightmare.

Sincerely,

Carl R. Hayes

Carl R. Hayes

Cynthia A. Hewitt

TO: Steven Sutherfield

FROM: Chris L. Klappin 2752 SW 74th way #2201 Fort Lauderdale, FL 33314

DATE: 4/10/94

RE:

Dear Sir:

It is my wish that you support Alternative 6A for the Canal III project, plus some additional modifications. I like the fact that the proposal includes the purchase of the Frog Pond and Rocky Glades agricultural areas, which I think are essential to the future of the Everglades/Florida Bay ecosystem. These areas need to be flooded and put back to their natural state. The proposed retention/detention area, in what is now the Rocky Glades and Frog Pond, is essential to ensuring water quality in this area and for providing flood control for areas east of L-31/C-111 canals.

However, I think the economic analysis for this project is flawed because it does not incorporate the cost of the collapse of Florida Bay versus the benefits of restoring Florida Bay. South Florida's economy is completely dependent upon the environment.

While 6A is a good proposal, it can be improved in the following ways:

The proposed Canal 111N should be designed as a retention/detention area linked to the area to the north to restore the historic timing and distribution of sheet flow in this part of the Everglades.

The Corps should use a 500 cubic feet/second pump instead of a 50 cfs pump at S-332B so that waters are pumped into a large retention/detention area along C-111N. This would allow natural sheetflow to move down through the southern Everglades.

The Corps should expand this retention/detention area along the west side of L-31N north to Tamiami Trail as suggested in Alternative 8. Only by doing this will the Corps ensure that enough clean water can be made available in historic patterns for both Shark + Taylor Sloughs. Canal 111N should be extended east of U.S. Highway 1.

Sincerely,

Chris Klappin

4/13/94

1116 Discovery Cir W
Pompano Beach, FL
33064

Dear Mr. Sutherfield:

As a resident of Florida may I urge you to extend Canal 111 N. east of U.S. Highway 1 to allow for maximum flexibility; also to use 500 cubic feet/second pumps instead of a 50 cfs pumps at S. 332 B. to that water are pumped into a large retention/detention area along C-111N. I think that expansion of the retention/detention area along the west side of L-31 north to Tamiami Trail would help.

Thank you for your efforts to save the Everglades Florida Bay

Sincerely,

Marianne C. Churchill

r. Steven Sutterfield
.S. Army Corps of Engineers
.O. Box 4970
acksonville, Fl 32232-0019

ear Mr. Sutterfield:

h regard to the proposed C-111 project for the purpose of restoring water flows into Taylor Slough and Florida Bay in the far southeast region of the Everglades system, we wish to support the project with the following alternative inclusions.

1. Alternative 6-A must include the plugging of C-111.
2. C-111N must be used as a retention area.
3. There must be a larger pump at S-332B.
4. There should be an expansion of the retention area along the west side of L-31N.

This project is critical as this is a key area for providing overland flows into the southeastern area of Everglades National Park and the northeast section of Florida Bay. The natural timing, distribution and water flow to this area has been badly disrupted by the ditching and draining that has occurred in past years.

We hope that you will be enthusiastically behind this plan for recovery.

Most sincerely,

Judith Jens
William Jens

Judith and William Jens
April 6, 1994

Dear Mr. Sutterfield:

I am writing this letter in support of the Canal 111 Project, Alternative 6A. This project is crucial to the restoration of Florida Bay as well as the economy and quality of life in South Florida.

As a South Floridian I support all efforts to save our precious wetlands, however Alternative 6A can be improved in a number of ways.

1. Canal 111N should be extended east of U.S. Highway 1.
2. The Corps should use a 500 cfs pump instead of a 50 cfs pump at S-332B.
3. The proposed Canal 111N should be designed as a retention/detention area linked to the area to the north.
4. The Corps should expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested in Alternative 8.

Please protect our delicate ecosystems by saving the wonderful plants and animals that live in them.

Sincerely,

Karen Witusik

Karen Witusik
5507 Grant Street
Hollywood, FL 33021

April 15, 1994

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield:

We are writing so that the Corps and especially those of you charged with proposed C-111 Project will be aware of our views during your decision making regarding this absolutely ecologically critical project. We are strongly in favor of this restoration project.

Everglades National Park and Florida Bay are dependent on the overland flow of fresh water provided by this key area. We highly value the natural wealth of these treasures of Florida and are most concerned for both the endangered species in them and the economic well-being of the fishing and diving industries in the Keys. The restoration proposed is essential to the ecological integrity of Taylor Slough and the eastern area of the Everglades.

We want you to know that we feel the economic analysis for this project is deficient - The benefits of economy recovery to the fishing and diving industries in the Florida Keys/Bay should be quantified because they will add significant additional economic justification for restoring previous ecological health.

also, please consider that by providing drainage benefits not provided by law to the farmers in the Frog Pond area the Corps and the District have hurt the Park and Florida Bay because these actions also drain Taylor Slough's adjacent marshes. Therefore, the purchase of the Frog Pond and Rocky Glades agricultural area contemplated by this proposal is completely necessary to the future of the Everglades and Florida Bay system.

The proposed retention/detention areas in the Rocky Glades and Frog Pond essential for flood control east of L-31/C111 canals and for water quality.

Lastly, please consider improving Alternative 6A, which we feel is a good approach, in the following ways:

1. The proposed C-111N canal should be designed as retention/detention area linked to the area to the north. This is for flood control and natural timing and coverage of sheetflow
2. The Corps should use a 590 cfs pump, not a 50 cfs one at S-332B, so that natural sheetflow moves down through the southern Everglades
3. Ensure enough clean water in historic patterns for both Shark and Taylor Sloughs by expanding the retention/detention area along the west side of L-31N north to the Tamiami Trail as suggested by Alternative 8.
4. Extend C111N east of US1 for greatest flows and flexibility throughout this system.

Thank you for considering our values, hopes, concerns and views, we feel so strongly about the values of our environment.

Sincerely,

Jane Rogers & Walter Foy

2011 Alameda Dr.
Deltona, FL
32738

Matt Berres
9120 Joy Rd
Plymouth, Mi.
48170

Mr. Steven Sutterfield
U.S. Army corps of Engineers
P.O. Box 4970
Jacksonville, Fl 32232-0019

Mr. Sutterfield,

I am writing you to express my concern regarding Project C-111 and its effects on the Taylor Slough and Florida Bay. As you know the C-111 canal, located in the far southeast region go the Everglades system, is a key area for providing overland water flows into the southeastern portion of Everglades National Park and the northeast area of Florida Bay. This area provides important habitat for many endangered species such as the Wood Stork, Cape Sable Sparrow, American Crocodile and the Snail Kite. I am sure you are also aware that water management practices in this area have allowed the Everglades to be over-drained and prevented water from going into Florida Bay. This over drainage has caused significant ecological harm to the Everglades/Florida Bay area.

I understand that through your reviewing process have found Alternative 6A to provide an equal amount of flood protection as the tomato farmer's Alternative 9, as well as providing the greatest benefit to the environment, greater operational flexibility and flood damage prevention capability to agriculture.

However, I encourage you to consider the following improvements to Alternative 6A in order to maximizes its effectiveness:

- The proposed C-111N canal should be designed as a retention/detention area linked to the area to the north, to more fully ensure flood protection to communities to the north, and to restore the historic timing and distribution of sheet flow in this part of the Everglades.
- The Corps should use a 500 cfs (cubic feet/second) pump instead of a 50 cfs pump at S-332B so that waters are pumped into a large retention/detention area along C-111N. This would allow natural sheet flow to move down through the southern Everglades area into the marine environment, providing ecological benefits while allowing for greater flood protection.
- Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested in Alternative 8. Only by doing this will the corps ensure that enough clean water can be made available in historic patterns for both Shark and Taylor Sloughs.
- C-111N should be extended east of U.S. Highway 1 to allow for maximum flexibility and water deliveries to all parts of this system.

I urge you to consider these recommendations when deciding on Alternative 6A. They will make Alternative 6A even better for the Everglades and Florida Bay ecosystem.

Sincerely,

Matt Berres
A concerned citizen

Lawrence Gladsden
10830 SW 84 Street, Apt. G-1
Miami, Florida 33173
305-598-3899

04/08/94

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Fl 32232-0019

Dear Mr. Sutterfield,

I support Canal 111 Project, Alternative 6A. The purchase of the Frog Pond and Rocky Glades agricultural areas, and their conversion into a retention/detention area is essential to ensuring water quality and flood control.

The economic analysis for this project would be much more accurate were its effects on the economy of the Florida Keys, and on the various recreational industries associated with a healthier Florida Bay and environs, taken into consideration.

6A, while a good alternative, could be improved if:

* Proposed Canal 111N were designed as a retention/detention area linked to the area to the north.
* A 500cfs pump were used at S-332B.
* The retention/detention area along the west side of L-31N were expanded north to Tamiami Trail as suggested in Alternative 8.
*Canal 111N were extended east of U.S. Highway 1.

I am a life-long resident of Dade County, and an angling enthusiast who loves the Florida Bay area. I would like my children to enjoy it someday, also. Maybe it will be richer for them, instead of poorer -- if we work together to make it that way.

Sincerely Yours,

Lawrence Gladsden

Lawrence Gladsden
10830 SW 84 Street, Apt. G-1
Miami, Florida 33173
305-598-3899

28 Avalon Street
Clearwater FL 34630
April 13, 1994

Steven Sutterfield
U.S. Army Corps of Engineers
P O Box 4970
Jacksonville FL 32232-0019

Dear Mr. Sutterfield,

I am writing to you because of my concern about the declining "health" of the Everglades.

I urge you to consider the following points when selecting a plan to restore flows into Taylor Slough and Florida Bay through the proposed C111 Project.

You are considering several alternatives with a preference for Alternative 1-6A ...

The economic analysis for this project is flawed because it does not include the cost of the collapse of Florida Bay vs the benefit of restoring it. Because of the degradation of Florida Bay the economy of the entire Florida Keys is endangered. Fresh water flows is essential to Florida Bay restoration -- and thereby, to the economic recovery of the area, which should add additional economic justification for restoring historic conditions.

Purchase of the Frog Pond and Rocky Glades agriculture area contemplated by the proposal is essential to the future of the Everglades / Florida Bay System.

The proposed retention/detention area in what is now Frog Pond and Rocky Glades is essential to ensuring water quality in this area as well as providing flood control for areas east of L-31/C111 CANALS.

While Alternate 6A is a good one it can be improved by:

- designating C111N Canal as a retention/detention area linked to the area to the north, to more fully ensure flood protection to communities to the north as well as restore historic timing and distribution of sheetflow in that part of the Everglades -

- using a 500 cfs pump instead of a 50 cfs one at S-332B to allow natural sheetflow to move through southern Everglades into the marine environment. This also provides ecological benefits while allowing for greater flood protection.

- expanding the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested in Alternative 8. Only by doing this will the Corps ensure that enough clean water can be made available in historic patterns for both Shark Slough and Taylor Slough.

- extending C111 east of U.S.1 to allow maximum flexibility and water deliveries to all parts of this system.

Thank you for your time and attention.

Sincerely,

Marjorie B. Herndon

Marjorie B. Herndon

RRA
LUB

Loxahatchee Group
Palm Beach County

April 10, 1994

Mr. Steven Sutterfield
US Army Corps of Engineers
PO Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield:

The Sierra Club Loxahatchee Group, representing over 1400 members in Palm Beach County, urges you to **adopt C-111 Alternative 6A** in your attempt to restore water flow to the Taylor Slough and eastern Everglades.

Landowners in the Frog Pond and Rocky Glades areas have successfully lobbied the government over the last decade to give them more and more drainage benefits which are not provided by law. The present canal system has been devastating to the Everglades National Park and the Florida Bay, and must be changed before it is too late.

We believe that Alternative 6A is a good compromise, providing adequate flood protection for agricultural interests while also providing the freshwater necessary to help the Everglades and the Florida Bay. But this alternative can be improved.

Please consider designing the proposed **C-111N canal as a retention/detention area** linked to the area to the north. This would provide better flood protection to communities to the north and also would restore historic timing and distribution of sheetflow in this part of the Everglades. Also, please consider using a **500 cfs pump** instead of the proposed 50 cfs pump at S-332B so that waters are pumped into the retention/detention area along C-111N.

While economic considerations are important, they should be balanced with environmental and human health considerations. In the past, canal projects were undertaken based solely on economics and Florida has suffered, and will continue to suffer for many years, due to these decisions. Please do not allow the Everglades/Florida Bay ecosystem to continue to die.

Sincerely,

Roberta Gastmeyer

Roberta Gastmeyer
Conservation Vice Chair

MR SUTTERFIELD

THIS LETTER IS IN REGARDS TO CORPS PLAN 6A FOR THE C-111 CANAL. PLEASE CONSIDER BACK FILLING THE MANATEE BAY END OF THE CANAL TO STOP ALL DISCHARGE OF FRESH WATER INTO MANATEE BAY. ALSO TO SAVE THE FLA. BAY WE MUST PURCHASE FARMING AREAS ROCKY GLADES AND FROG POND TO RESTORE FRESH WATER FLOWS TO SHARK RIVER AND TAYLOR SLOUGH. PLEASE CONSIDER AMENDING THE PROPOSED C-111N SPOILER CANAL WITH A WATER RETENTION/DETENTION AREA NORTH OF THE TAMIAMI TRAIL.

THANKS FOR YOUR TIME

SINCERELY

John Wheaton
PO BOX 501410
MARATHON FL
33050-1416

April 6, 1994

Mr. Steven Sutterfield
US Army Corp of Engineers
P. O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield,

I am writing to inform you that I am in favor of **CANAL 111 Project plus Alternative 6A**, with the following changes:

- Proposed Canal 111 N should be designed as a retention/detention area linked to the area to the north, and
- The Corp should use a 500 cfs (cubic feet/second) pump instead of a 50 cfs pump at S-332-B, and
- The Corp should expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested in Alternative 8, and
- Canal 111 N should be extended east of US Highway 1.

Please add my voice to the many other voices for the Everglades/Florida Bay.

Sincerely,

Therese M. Richeal

Therese M. Richeal
3421 Andover Drive
Fairfax, Virginia 22030

APPRAISALS & ESTATE SALES

Lucie Anderson • 1122 Circle Drive • Lake Wales, FL 33853 • (813) 676-8660

March 28, 1994

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Fl 32232-0019

Dear Sir,

In regard to the C-111 Project, I feel that Alternative 6A is good but can be improved as follows:

a) The proposed-111N canal should be designed as a retention/detention area linked to the area to the north.
b) C-111N should be extended east of U.S.1 to allow maximum flexibility and water delivery to all parts of the system.
c) Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8.
d) Using a 500 cfs pump provides eco. logical benefits while allowing greater flood protection as well.

Respectfully submitted,
Lucie P. Anderson,
Ridge Audubon Society.

Fl. Voter Ref: City I, Precinct-19
Cong-12; Sen-17
House-65

7209 S.W. 62 ST
MIAMI, FL 33143
MARCH 31, 1994

Mr. Stephen Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville FL 32232-0019

Dear Sir:

I am a resident of Dade County since 1936, a homeowner and concerned citizen. I attended the March 29 meeting at Homestead on the proposed C-111 Project but did not air my views, which are:

1. The alternative 6A proposal is the best solution to restoring adequate water flow, including purchase of Frog Pond and Rocky Glades land.
2. A new retention area should be created to replace C-111N south of Homestead and Florida City, and the C 111 N filled south of this retention area. The new retention/detention area should extend east of U.S. 1.
3. Use a 500 cfs pump at S-332E.
4. Expand the retention/detention area north to Tamiami Trail along west C-111N.

Yours truly,

April 6, 1994
403 Oakwood Ct
Fern Park, FL 32730

Mr. Steven Sutterfield
US Army Corps of Engineers
PO Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield,

Florida Bay is in desperate need of fresh water. The health of the marine life is suffering and the tourist trade will be suffering because of it. This deterioration can be reversed by restoring the historic sheet flows of water in the C-111 area and I am writing to urge you take the actions which will accomplish this.

If Florida Bay collapses, we will have a situation similar to what happened in the area around Lake Apopka. I'm sure you are aware of what happened to this once beautiful and economically thriving fishing community. The economy of the Florida Keys is based in large part on fishing and diving. The sensible way to restore the quality of water in the bay is to allow its full range of cleansing flow.

Additionally, a larger pump should be used at S-332B so that more water is pumped into the retention area along C-111N. This will provide for even greater ecological benefits and allow for flood protection as well.

Yours truly,

Samuel Kendall

Adam Redford
18611 SW 92nd Ave.
Miami, FL 33157

Mr Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Fl 32232-0019

April 13, 1994

Dear Mr. Sutterfield:

I am a registered voter residing in Dade County who enjoys fishing and diving in the Everglades and the Florida Keys. I would like to state my support for the Canal 111 Project, Alternative 6A.

The Frog Pond and Rocky Glades areas should be purchased from the current owners and used as retention/detention area.

THe proposed Canal 111N should be designed as a retention/detention area linked to the area to the north.

The Corps should install a 500cfs pump instead of a 50 cfs pump at S-332B to pump water into C111N to restore sheetflow.

As suggested in Alternative 8, the retention/detention area along the west side of L-31N north to Tamiami Trail should be expanded.

I, like many others, feel that it is imperative that rapid, effective action be taken to restore this unique ecosystem which is vital to the economic health of Monroe County, and is enjoyed by visitors from this State, this country and the rest of the world.

Sincerely yours,
Adam Redford
Adam Redford

March 30, 1994

United States Army Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32203

Dear Sirs:

Thank you for the opportunity to comment on proposed solutions for the serious problems involving Florida Bay. I attended the hearing on Tuesday, April 29, 1994, at Homestead High School, and I request that this letter be placed on record.

I am a permanent year-round resident of Islamorada. I am employed by a local resort, and I scuba dive, snorkle, and sail.

I emphatically support immediate implementation of Alternative 6A, along with the provisions of the Audubon Society and the purchase of the entire Frog Pond and Rocky Glades areas.

I request the immediate filling of the C-111 canal, as well as the extension of detention/retention basins.

I ask that the measures necessary to restore Florida Bay and to reestablish sheet flow be taken regardless of effect upon residential, business, or recreational concerns in either the Keys or the mainland.

My position is based upon the fact that, although we can not fully restore the Everglades and Florida Bay to their natural state, we can take responsibility for preventing further degradation.

It is imperative that evaluations of these issues consider the full impact of the massive degradation of one of our nation's few remaining wilderness areas and one of the world's few living coral reefs. We choose to live in a delicate area, and we have not been good stewards. We--both islanders and mainlanders--now reap the consequences.

Again, please accept my appreciation for your time and interest.

Respectfully,
Cheryl W. King

Cheryl W. King

Post Office Box 2095
Key Largo, Florida 33037

Sanibel-Captiva Audubon Society
P.O. Box 867
Sanibel Island, Florida 33957

March 31, 1994

Mr. Steven Sutterfield
Army Corps of Engineers
P.O.Box 4970
Jacksonville, FL 32232-0019

Re: Everglades Restoration

Dear Mr. Sutterfield

C-111, in the southeastern corner of the Everglades, provides flow to Everglades National Park, and the northeast corner of Florida Bay, areas vital to recovery of habitat for several endangered species, including the snail kite, woodstork, Cape Sable sparrow and American crocodile.

To this end, the Sanibel-Captiva Audubon Society urges the Corps of Engineers to act promptly to restore flow into Taylor Slough and Florida Bay through the proposed C-111 Project.

You have several alternatives, and prefer 6A. We feel 6A can be improved, and urge you to consider the following modifications.

Expand the proposed retention/detention area in the Rocky Glades-Frog Pond area to ensure water quality and provide flood control for areas east of the L-31/C-111 canals.

The C-111N canal should be designed as a retention/detention area to ensure flood protection for areas to the north.

A 500 cfs pump is essential to provide enough water for sheet flow through the southern Everglades area .

The retention/detention area along the west side of L-31N to the Tamiami Trail should be expanded to ensure enough water for both Shark Slough and Taylor Slough.

We appreciate your concern, and look for quick action.

Sincerely,

Bob Slayton
Conservation Chair

LLOYD BRUMFIELD
11225 S.W. Meadowlark Circle
Stuart, Florida 34997
(407) 286-4326

April 4, 1994

Mr. Steven Sutterfield
U. S. Army Corps of Engineers
P. O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield:

Subject: Restoring Flows Into Taylor Slough and Florida Bay Through The Proposed C-111 Project Recommending Alternative 6A With Certain Modifications

As a matter of background, I lived in Dade County for 28 years and have detail knowledge of the Redlands Area, Florida Bay and the Florida Keys, Everglades waterflow, sugar cane and all other farming, people-urban development, etc. etc. etc. Also, I have been involved in the South Florida Water Management District's activities concerning the Everglades and Florida Bay. I was in attendance at the Corp's hearing here in Palm City last December 6 and wrote a document for the Corp.

It is my recommendation that Alternative 6A be adopted, however, several changes need to be made in 6A.

(1) Canal C-111 should be plugged to prevent sea grass from dying. (2) C-111N should be a retention area for sheetflow. (3) Larger pumps should be used along C-111N. (4) Expand the retention area along the west side of L-31N to Tamiami Trail. (5) C-111N should be extended east of US 1.

Respectfully submitted,

Lloyd Brumfield

CATBIRD LANDING

POST OFFICE BOX 760
CAPTIVA ISLAND, FLORIDA 33924

April 6, 1994

Mr. Steven Sutterfield
US Army Corps of Engineers
P.O.Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield:

We are writing with regard to the proposed C-111 project to restore flows into Taylor Slough and Florida Bay in the far southeast region of the Everglades system.

As you know, this is the key area for providing overland flows into the southeastern part of Everglades National Park and the northeast corner of Florida Bay. It is the ditching and draining of this area that has disrupted the natural timing, distribution and flow of water to this area.

We support alternative 6-A in the C-111 project PROVIDED THAT this alternative also includes the plugging of C-111, the use of C-111N as a retention area, a much larger pump at S-332B, and an expansion of the retention area along the west side of L-31N, as the best alternative available for the restoration of Florida Bay.

I hope you agree with and will push this plan.

Sincerely,

Laura and Bill Riley

Laura and William Riley

Mar 23, 1994

Mr. Sutterfield

The Audubon Society suggested I write comments on the Everglades/Florida Bay proposed Project C-111.

I understand the project analysis does not include the cost of the collapse of Florida Bay vs. the benefits of restoring it. It should be included.

I believe purchase of the Frog Pond and Rocky Glades agricultural area is essential to the future of the Everglades & Florida Bay system.

The proposed retention/detention area (Rocky Glades and Frog Pond) is needed to insure water quality, and provide flood control for areas east of L-31/C-111 canals.

To more fully enable flood protection to communities to the north, as well as restore historic timing and distribution of sheetflow in this part of the Everglades, C-111N canal should be a retention/detention area linked to the area to the North.

Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by alternative 8.

C-111N should be extended east of US 1 to allow maximum flexibility and water delivery to all parts of the system.

Install a 500 cfs pump instead of a 50 cfs one at S-332 so that water is pumped into a large retention/detention area along C-111 allowing natural sheetflow thru the Southern Everglades providing ecological benefits as well as greater flood protection.

Sincerely,

Frank L. Pryles

April 8, 1994

Steven Sutterfield
U.S. Corps of Engineers
P.O. Box 4970
Jacksonville, FL

Dear Sir,

I endorse alternative 6A to increase the flexibility of the C-111 system to restore natural water levels. Florida Bay is a disaster area — fresh water flow is absolutely essential to restoration of the Bay.

The proposed retention/detention area will ensure water quality & provide flood control, but coned the expansion of this area along the west side of L-31N north to Tamiami Trail, as suggested by alternative 8 be added. It would ensure the availability of clean water for both Shark Slough and Taylor Slough.

Sincerely
Jadwiga Zadlo
5480 N. Traveler Palm Lane
Tamarac, FL 33319

April 8, 1994

Mr. Steven Butterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232

Dear Mr. Butterfield:

I support the Canal 111 Project, Alternative 6A to benefit the ecology of the southeastern Everglades.

I suggest the following improvements to Alternative 6A and ask that they be considered.

The proposed Canal 111N should be designed as a retention/detention area linked to the area to the north so that there would be more flood protection to communities to the north and to restore the historic timing and distribution of sheet flow in this part of the Everglades.

The Corps should use a 500 cfs pump instead of a 50 cfs pump at S-332b to provide for better ecological benefits while allowing for greater flood protection.

The Corps should expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested in Alternative 8 to ensure that enough clean water can be made available in historic patterns for both Shark and Taylor Sloughs.

Canal 111N should be extended east of U.S. Highway 1 to allow for maximum flexibility and water delivery to all parts of the system.

Thank you for consideration of this vital help for the Everglades and Florida Bay. As a retired teacher of gifted elementary children in Broward County that have studied and appreciated the value of the Everglades, and taken fields trips to observe this valuable area of our state, I urge you on behalf of the youth of our state to support these restoration projects.

Elizabeth Schrader

(Mrs.) Elizabeth Schrader
1357 NW 97th Terrace
Coral Springs, FL 33071

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville FL 32232

RE: Everglades System

Dear Mr. Sutterfield:

Alternative 6A is a good choice, but would be improved by:

1) by increasing [illegible] of S-338 [illegible]
2) expanding retention/detention area along west side of L-31N to Tamiami Trail
3) extend C-111N east of US 1

Thank you for considering these suggestions

Sincerely
Michael A. [illegible]
16102 E LAKE Burrell Dr
Lutz FL 33549

March 30 1994

Mr. Steven Sutterfield
US Corp of Engineers
P.O. Box 4970
Jacksonville FL 32232-0019

Dear Mr Sutterfield

I attended the Meeting of farmers + fishermen March 29 1994 in Homestead. While I understand the Concern of the farmers and we all do need food, I wonder why they are where they are in the first place - why were they ever allowed to drain the Everglades. Developers are still draining, filling in and building Shopping Centers that are Not Needed. This needs to be changed.

I love the Everglades and have spent many happy hours there. I believe proposal #6A will help a lot but should be modified as per Audubon recommendations.

Rita E. James
8420 SW 95 St
Miami FL 33156
305 595 [illegible]
Voter No. [illegible]00356883

AUDUBON SOCIETY
OF THE EVERGLADES

P. O. BOX 6782, WEST PALM BEACH, FLORIDA 33405 PHONE (305) 588-6908

MARCH 31, 1994

RE: CANAL-111 PROJECT

MR. STEVEN SUTTERFIELD
JAX DIST., ARMY CORPS OF ENGINEERS

DEAR SIR,

AFTER CAREFUL CONSIDERATION THIS AUDUBON CHAPTER URGES YOU TO ADOPT AND A.S.A.P. IMPLEMENT OPTION 6A TO INCREASE THE FLEXIBILITY OF THE C111 SYSTEM TO HELP RESTORE PROPER FLOWS TO THE EVERGLADES NATIONAL PARK.

WE URGE MODIFYING THIS PLAN TO INCLUDE A 500 CFS PUMP AT S332B, EXPAND RETENTION/DET. AREA ON C-111N, (and L31N) AND ALSO TO PROTECT BARNES SOUND & MANATEE BAY BY PLUGGING C111.

SINCERELY,

Chuck Potter
V. Pres. ASE

(407) 586 4221

3/30/94

Dear Mr. Sutterfield -

I have been following media coverage on the condition of Florida Bay. As a citizen of the state, I hope you will do all that is necessary to restore the water flow into Taylor Slough and Florida Bay. I do not have the scientific or technical knowledge to intelligently form an opinion. So I depend on the Audubon Society and the Sierra Club to keep me informed. I trust their scientific and technical knowledge and therefore follow their recommendations. Per their suggestion, I am asking you to stick with Alternative 6A. Any other action seems not to be in the interest of this state's future, but rather for the interest of special interest groups with short-term profits in mind. The loss of Florida Bay will be devastating to the state's economy, especially income from the fishing and diving industries... tourism too. And of course the Bay + the entire remaining Everglades are too precious to our environment to be further degraded. I implore you to consider the improvements to Alternative 6A that the Audubon Society is presenting to you and to the Corps. Thank you for your time and attention.

Sincerely,

Gail Larkin
6879 Bridlewood Ct.
Boca Raton, FL

The Nature Conservancy.
a Chapter

FAXED

April 18, 1994

Mr. Stephen Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232

VIA FAX: 904-232-3442

RE: C-111 - Draft Integrated General Reevaluation Report and Environmental Impact Statement.

Dear Mr. Sutterfield:

I am writing you to provide The Nature Conservancy's comments on the GRR for the C-111 canal.

The C-111 canal system effectively controls water levels and flows in the ecologically important Taylor Slough watershed. Therefore, the structure and operation of this canal system have an enormous impact on the health of Everglades National Park and Florida Bay.

Florida Bay is a critical economic resource for Monroe County as well as environmental resource. A vast segment of the county's $2 billion annual tourist economy and $90± million annual commercial fishing economy depend upon the ecological health of Florida Bay. In addition, real estate business and tax revenues in Monroe County depend upon environmental health, which is what draws people to the Keys.

Florida Bay is undergoing an ecological collapse. At least 83,000 acres of seagrasses which are food and shelter for fish and shellfish have died. Millions of sponges have been killed, eliminating habitat for commercially-valuable spiny lobsters. Algae blooms and resuspended sediments, unleashed by the seagrass die-off, have clouded the Bay's clear waters and have intruded over the coral reefs, compounding the damage and affecting fishing and diving activities.

There is scientific consensus that the restoration of clean, fresh water flows to Florida Bay is an action that can be taken now to restore Florida Bay. These flows have been systematically reduced by as much as 80% over the last fifty years as the result of the Corps' construction and management of the canal system in South Florida. As a result of these past actions, Florida Bay has been changed from an estuary into a hypersaline lagoon.

Lee Road, Suite 500 • Winter Park, FL 32789 • 407 628-5887 • FAX 407 644-1778

The restoration of Florida Bay must be a paramount objective for the Corps in their management of fresh water and the canal system on the mainland. The environmental health of Florida Bay and the coral reefs depends on it as well as Monroe County's economy.

The C-111 canal system is a critical part of the canal system that now controls flows to Florida Bay. The C-111 canal system has been used to divert fresh water away from Taylor Slough where it used to contribute to the Bay's freshwater flows. The Corps has taken this action without considering the harm to downstream resources in Florida Bay and the Florida Keys. In turn, the adverse impacts to downstream economic interests in the Florida Keys have also not been considered. This policy and action must be reversed.

In addition, the C-111 has been used to release huge quantities of fresh water into Manatee Bay during high rainfall years. These unnatural slugs of fresh water have resulted in fish kills and damages to the marine resources of the Florida Keys. Again, these actions have been taken to the detriment of the people of Monroe County.

New plans for the C-111 canal system must reflect the full range of values that are affected: Florida Bay, and the environment and economy of Monroe County - not just interests in South Dade County. The new plans must advance the restoration of fresh water flows to Florida Bay, eliminate the harmful discharges to Manatee Bay, and must be formulated to account for their impacts to the economy of Monroe County.

The Nature Conservancy asks you to consider the following specific comments on the Corps' preferred alternative for reconstruction of the C-111 canal system:

1. The environmental and economic impacts of the plan on Monroe County have been completely left out of the analysis. This is a serious shortcoming in the Corps planning. The Corps actions regarding the C-111 canal have seriously impacted the economy of Monroe County, and the plan is incomplete without this analysis.

2. The preferred alternative, plan 6A, is a step in the right direction, but it does not go far enough in satisfying the preceding concerns and objectives. The analyses and computer models from Everglades National Park, as well as from the Corps itself, indicate that the preferred plan will make modest advances in restoring fresh water levels in Taylor Slough, and thus fresh water inputs to Florida Bay.

3. The Nature Conservancy supports the following specific parts of Plan 6A:

- Acquisition of the lands west of the L-31/C-111 canals known as the Frog Pond and the Rocky Glades Agricultural Area. Keeping these lands dry enough to farm causes huge losses of fresh water to Taylor Slough and Florida Bay, damaging the environment and the economy of Monroe County.

- Establishment of the retention/detention areas west of the L-31, with pumps and structures to deliver water westward into Taylor Slough.

- Backfilling of the C-109 and C-110 canals, with 9-10 plugs in each.

- Building a 1,000 foot bridge across State Road 9336 (the road to Flamingo) at the Taylor Slough crossing, to replace the current inadequate bridge and culverts.

These structural and land-use changes will benefit Florida Bay by increasing water levels and flows in Taylor Slough, and increasing fresh water flows to Florida Bay.

4. The Nature Conservancy requests that the following changes be made in the preferred plan 6A:

- Replace the proposed C-111N spreader canal with a water detention/retention area running east-west at the head of the C-111 basin. The detention/retention area must be located further north that the proposed spreader canal, in order to re-established fresh water flows and deliver maximum benefits to these coastal wetlands. The retention/detention area must extend across US-1 in order to re-establish fresh water flows into the impounded wetlands between US-1 and Card Sound Road. Construct a 500 cfs pump at the S-332B location to accommodate high rainfall periods as well as normal years.

- Plug and backfill the existing C-111 canal below the S-18C structure, eliminate the S-197 structure. The C-111 canal must *never again* be used to discharge flood waters to Manatee Bay. Construction of the retention/detention area described above, and the larger pump, will give operational flexibility to manage high rainfall periods.

- In the long-term, the retention/detention area west of the L-31 canal & levee must be extended northward to Tamiami Trail. The productivity and health of Florida Bay will be restored only if more fresh water is delivered to Taylor Slough from Water Conservation Area 3, and fresh water levels and flows are restored in both Taylor and Shark River Sloughs.

These changes to the preferred plan will help to eliminate the adverse impacts that Florida Bay and the Florida Keys have suffered as a result of past activities in the C-111 basin.

Finally, The Nature Conservancy requests that the Army Corps of Engineers accelerate the schedule for the preferred plan. The crisis in Florida Bay is too urgent, a compressed schedule must be implemented. The Corps must request funds from Congress in Fiscal Year 1995 to begin implementation of the preferred plan, with the modifications listed above.

Thank you for the opportunity to comment on the C-111 GRR. Please do not hesitate to contact me if you have any questions.

Sincerely,

John Flicker

John Flicker
State Director

F. L. SIMON, JR.
Apt. 311 - The SHORE
5757 Gulf of Mexico Dr.
Longboat Key, FL 34228

March 26, 1994

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield:

Re: The Proposed C-111 Project

I am in full support of this project since the restoration of Florida Bay is so important to the Everglades, area water quality, flood control and the economy of the Keys. I also feel that alternative 6A can be improved by expanding the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8 to restore the historic patterns of clean water in Shark and Taylor Sloughs.

Maybe with this project the Corps of Engineers will get its good name back again.

Sincerely,

F. Lester Simon, Jr.

FLS/e

Mr. Steven Sutterfield.
US Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

March 25, 1994.

Dear Mr. Sutterfield,

While I can not attend the Public Hearing in Homestead on March 29th, I am pleased to have the opportunity to comment in favor of one of the alternatives # 1-6A.

What could be better than releasing fresh water to the Everglades and Florida Bay without flooding the farmers?!! However, creating a retention area in a proposed canal, C-111N, is suggested to enhance beneficial sheet flow distribution, and extending the canal east of US 1 would provide greater flexibility.

I support your efforts to halt overdraining, and to take measures as above to remedy the present situation.

Virginia J. Corcoran

213 Ninth Ave. S.
[illegible] FL 32948

March 30, 1994

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

Colonel Sir:

My wife and I live on Florida Bay and are appalled and sickened by the environmental collapse we see going on around us. The lack of fresh water into Florida Bay has caused hyper-salinity, dead smelly sea grasses, which caused algae blooms covering 100's of square miles, which has killed all sponges in a 400-600 square mile area, which has caused an 80% drop in pink shrimp and a 30% drop in juvenile lobster.

Thirty percent of the bay is already unfishable, and we've stopped boating our friends from up north to Flamingo, because instead of being a positive environmental experience, it has become depressing. I'll never forget the look on the face of my fishing buddy from Seattle when we entered "The Dead Zone".

The pea soup has already begun to destroy this country's only living coral reef. Remember, once it's dead, it's not coming back. Is that what you want on your tombstone? "I killed the Everglades, Florida Bay, and America's only coral reef".

I spent eight hours travelling and attending yesterday's public hearing on the Corps of Engineer's plan for the C-111 canal. Your plan is good, but WE CANNOT WAIT ANOTHER TWO YEARS TO START WORK!!! THERE WON'T BE ANYTHING LEFT TO SAVE!!! There was no explanation at the hearing for the delay.

Please act now:

1. Put plan 6A into effect immediately.
2. Purchase Rocky Glades and the Frog Pond using eminent domain via Senate bill 2770. Push for U.S. Senate Bill S1631 which identifies money to pay for this land.
3. The Corps should use a 500 CFS pump instead of a 50 CFS one at S-332E to reestablish natural sheet flow, rather than flushing stormwater down C-111 killing marine life in Barnes Sound and Manatee Bay.
4. Fill the end of the C-111 canal, steering fresh water to Taylor Slough rather than into the Atlantic.

I apologize for the terse tone of this letter. I know the wheels of government turn slowly, but you must make an exception and take bold action. You look like a fine military man. Please act like one.

We are waiting, Mother Nature is not.

James Clift
Mary Clift

OKLAWAHA VALLEY AUDUBON SOCIETY, INC.

Post Office Box 641
Eustis, FL 32727-0641
March 29, 1994

Mr. Steven Sutterfield
U. S. Army Corps of Engineers
P. O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield:

We regret that we are not able to attend the hearing today on the restoration of flows into Taylor Slough and Florida Bay through the proposed C-111 Project.

We are deeply concerned with the need to restore overland flows in the area and improve the ecology of the southeastern Everglades and Florida Bay. Such restoration is long overdue.

Alternative 6A chosen by the Corps appears to fill the need for most of this restoration, however we have several suggestions which we hope you will take under consideration.

1) Designate the proposed C-111N canal a retention/detention area linked to the area to the north.

2) Increase the pumping capacity at S-332B from 50 cfs to 500 cfs to insure a natural sheetflow through the southern everglades from the retention/detention area as well as providing greater flood protection.

3) Expand the retention/detention area along the west side of L-31N north to Tamiami Trail, thus insuring enough clean water can be made available for both Shark Slough and Taylor Slough.

4) Extend C-111N east of US1 to allow maximum flexibility and water deliveries to all parts of this system.

Thank you for your commitment to "saving" the east Everglades and Florida Bay. We realize that you will have some stiff opposition from the agricultural interests, but rely on your good judgment and knowledge of the current situation to insist on the best alternative, modified if necessary.

Very truly yours
Linda Kissner
Linda Kissner, President

LK:YR

MR & MRS RICHARD H SCHROO[illegible]
[illegible]
COCOA BEACH FL [illegible]

4/1/94

Mr Steven Sutterfield
USA Corps of Engineers

Dear Mr Sutterfield:

The restoration of the Everglades and Florida Bay is very important to our country and the environment. The benefits of restoring FL Bay are immense. The perceived interests of a few farmers are of far less importance.

Alternative 6A appears, with perhaps some modest enhancements suggested by Audubon seems reasonable. Let's stop talking and get down to restoring the Everglades now. We've wasted too many years doing little more than talk.

Thank you.

Sincerely

M/M R.H. Schroo[illegible]

3-31-94

Dear Mr. Sutterfield,

I urge you to take quick action to restore fresh water to Florida Bay. I'm glad you are acting on Alternative 6A, but surely a retention/detention area could be established real soon. The bay needs fresh water NOW!

Thank you,

Alice K. Badenell

8513 SW 147 PL
Miami, FL 33193

14910 S.W. 74 Avenue
Miami FL 33158-2121

March 29, 1994

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville FL 32232-0019

Dear Mr Sutterfield:

The task facing the Corps in the C-111 project is formidable, but must be completed if Florida Bay and the Florida Keys are to have any future at all.

When farmers say this project is jeopardizing their future, they ignore the simple fact that the existing system which has expanded their drainage benefits above and beyond what the law allows is killing another natural resource, every bit as precious as our agriculture industry. Over the past 10 years, agricultural interests have successfully twisted the government's arm in draining Frog Pond and the adjacent marshes in Taylor Slough. The result of this drainage is clearly visible in Florida Bay.

While farmers complain that their way of life will be endangered if these generous drainage benefits are reduced, they must remember that another group has already suffered at their expense. Fishermen, charter boat operators, and residents depend on Florida Bay for their livelihood, and watch their way of life disappear everyday. As one third-generation Key's resident said, "Florida Bay is our field--fishing and tourism are our crops."

To sum up, the economic benefits of a healthy Florida Bay and a sustained tourism industry in the Florida Keys should be taken into account whenever a cost/benefit analysis of the C-111 project is mentioned. The proposed water retention area, in what is now the Rocky Glades and Frog Pond, is absolutely essential to ensure water quality while still offering flood control for the areas east of the L-31 and C-111 canals. This plan will still allow adequate flood protection for agriculture while saving Florida Bay and the Florida Key's special way of life.

Sincerely,

Greg Farkas

MR. STEVEN SUTTERFIELD
U.S. ARMY CORPS OF ENGINEERS
P.O.BOX 4970
JACKSONVILLE, FLA
32232-0019

3/30/94

Mr. Sutterfield,

I am writing to support immediate action on Alternative 6A.

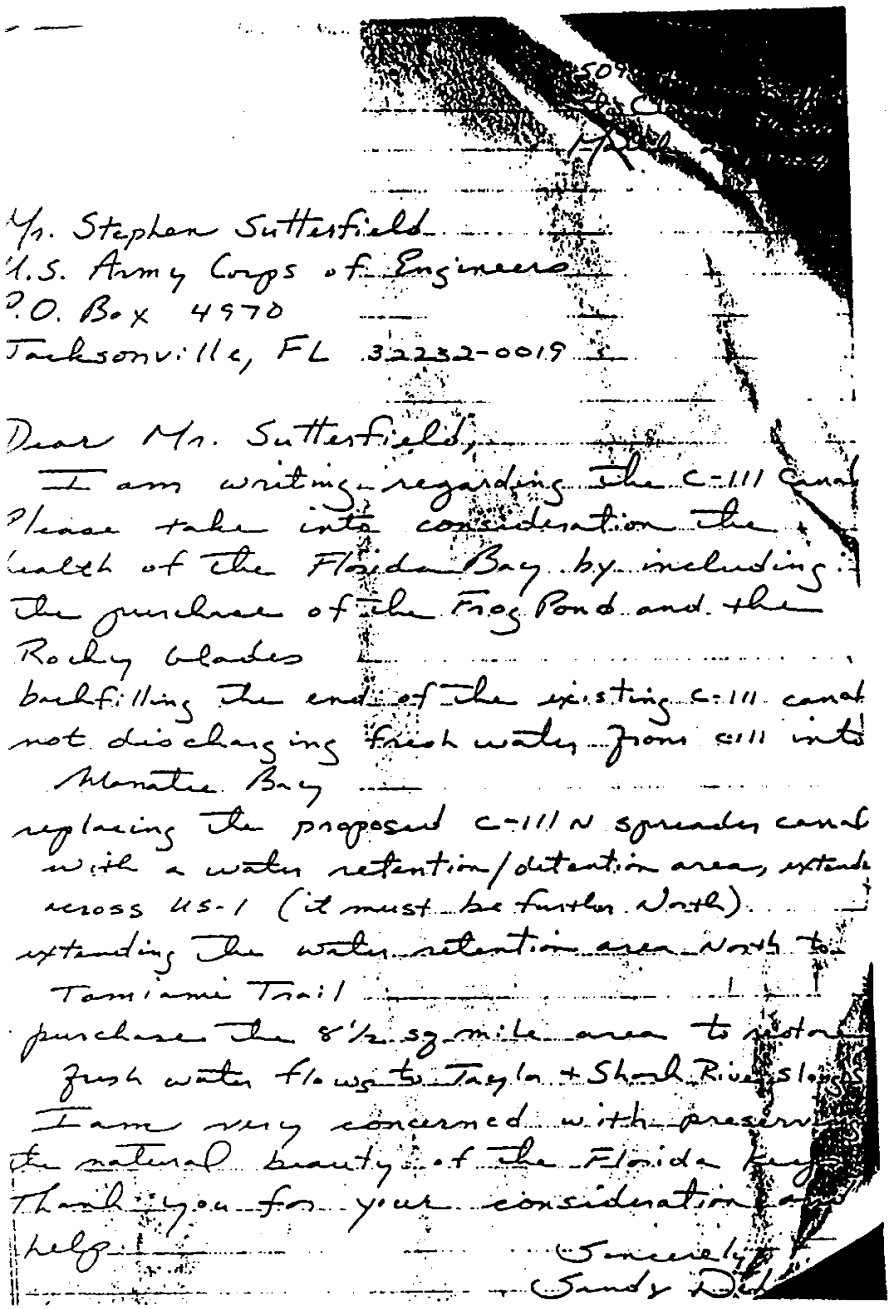
After attending a half dozen public hearings with the Corps, I am left with the impression that a "popular comprimise" has been sought by the politicians at the expense of the resource. This delaying tactic is not compatible with the rate of decline in Florida bay and can only result in more costly and complicated solutions.

I am already aware of salt water intrusions into wellfields in certain parts of the county. As the media begins to investigate this threat to our drinking water, I doubt there will a place to hide behind inaction or a public hearing on the matter.

I urge you to buy the lands, fill in C-111 and do the best job that only the best plumbers in the world can do.

JUST DO IT!

Vincent L. Maggio
7980 SW 99 ST
Miami Fl. 33156



Mr. Stephen Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield,

I am writing regarding the C-111 canal. Please take into consideration the health of the Florida Bay by including the purchase of the Frog Pond and the Rocky Glades

backfilling the end of the existing C-111 canal not discharging fresh water from c-111 into Manatee Bay

replacing the proposed C-111 N spreader canal with a water retention/detention area, extend across US-1 (it must be further North)

extending the water retention area North to Tamiami Trail

purchase the 8½ sq. mile area to restore fresh water flows to Taylor + Shark River Slough

I am very concerned with preserving the natural beauty of the Florida Bay

Thank you for your consideration and help.

Sincerely,

Sandy Del[illegible]

PRINCETON FINANCIAL CORP.
MORTGAGE BANKERS

March 25, 1994

Mr. Steven Sutterfield
US Army Corps of Engineers
P.O. Box 4970
Jacksonville, Fl 32232-0019

Dear Mr. Sutterfield:

It is my understanding the the US Army Corps is holding a hearing on restoring flows into Taylor Slough and Florida Bay through the proposed C-111 Project.

I am sure you realize this area provides important habitat for endangered species such as the Wood Stork, American Crocodile Cape Sable Sparrow and the Snail Kite. In the last decade problems in the system have been aggravated by water management practices which have overdrained the Everglades and prevented water from going into Florida Bay.

I understand the Corps has reviewed all alternatives and is leaning toward 6A. While this alternative is a good one it can be improved in the following ways

1. The proposed C-111N canal should be designed as a retention/detention area linked to the area to the north.
2. The use of a 500 cfs pump instead of a smaller one at S-332B would allow waters pumped into a larger area along C-111N which would allow natural sheetflow to move down through the southern Everglades area.
3. Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8.
4. C-111N should be extended east of US 1 to allow maximum flexibility and water deliveries to all parts of this system.

Your support of these measures will be appreciated.

Gilbert O. Lucas
5315-Glenmore Drive
Lakeland, Fl 33813

215 Imperial Boulevard, Suite A-2, Lakeland, Florida 33803 • (813) 648-1200 • FAX (813) 648-1300

"Registered Mortgage Brokerage Business"

RCH 31, 1994

STEVEN SUTTERFIELD
ARMY CORP OF ENGINEERS
O. BOX 4970
CKSONVILLE, FL 32232-0019

: C-111 PROJECT..RESTORING FLOWS INTO TAYLOR SLOUGH AND FLORIDA
Y

AR MR SUTTERFIELD:

A NATIVE BORN FLORIDIAN AND A AVID FISHERMAN, DIVER, AND
TURALIST, I AM IN FAVOR OF ALTERNATIVE 6A AND WISH THAT THE
LLOWING IMPROVEMENTS BE MADE:

CANAL C-111 SHOULD BE FILLED AND NO LONGER USED.

PROPOSED CANAL C-111N BE DESIGNED AS A RETENTION/DETENTION AREA
NKED TO THE AREA TO TO THE NORTH

CORPS SHOULD USE A 500CFS PUMP INSTEAD OF A 50 CFS PUMP AT S-
2B TO ALLOW A NATURAL SHEET FLOW

EXPAND THE RETENTION/DETENTION AREA ALONG THE WEST SIDE OF L-31N
RTH TO TAMIAMI TRAIL AS SUGGESTED BY ALTERNATIVE 8.

CANAL C-111N SHOULD BE EXTENDED EAST OF US 1

ANK YOU FOR TAKING THE TIME TO READ MY RECOMENDATIONS AND I HOPE
AT THINGS WORK OUT.

NCERELY,

SUSAN W. HOERBER
53 DONNELLEY DR
NTANA, FL 33462

March 28, 1994
3501 Prado Drive
Sarasota, FL 34235

Mr. Steven Sutterfield
US Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield:

I support Alternative 6A to restore overland flow into southeastern Everglades National Park and the northeast corner of Florida Bay. I regret that the public hearing is held only in a location that allows the local agricultural interests to conveniently attend and testify, but is impractical for other Floridians who have a strong interest in protecting Florida Bay and Everglades National Park as valuable national and, indeed, global resources.

The economic analysis for the project should incorporate the cost of the collapse of Florida Bay and the impact on fishing. The proposed retention/detention area, in what is now the Rocky Glades and Frog Pond is essential for protecting water quality and providing flood control.

The proposed C-111N canal should be designed as a retention/detention area linked to the area to the north to provide flood control. Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8. The Corps should use a 500 cfs pump instead of a 50 cfs pump at S-332B so that waters are pumped into a large retention/detention area along C-111N which allows natural sheetflow to move through the Everglades. C-111N should be extended east of US 1 to allow maximum flexibility and water deliveries to all parts of this system.

Sincerely,

Robin L. Hart, Ph.D.

MRS. BENJAMIN B. LITTMAN
18081 BISCAYNE BOULEVARD, NO. 601
NORTH MIAMI BEACH, FLORIDA 33160-2526

March 26, 1994

Dear Mr. Sutterfield

We are unable to attend the March 29 meeting.

We hope alternative 6 A can be improved the C111N canal should be a retention / detention area levees to the north. The corps should use a 500 cfs pump at S-332B. Expand the retention / detention area along the west side of L-31N north to Tamiami Trail.

C-111N should be extended east of U.S. 1.

Respectfully,
Ruth W. Littman
Benjamin B. Littman M.D.

Dear Col. Salt,

Thank you for hearing [illegible] concern about the future of the Everglades. We would like to see C111 filled in and proposal # 6A enacted.

Thank you.

A concerned citizen

Sincerely yours,
Voter # 001471080
[illegible]

28 March 1994
563 Washington Road
Gatlinburg, TN 37738

r. Steven Sutterfield
S Army Corps of Engineers
.O. Box 4970
acksonville, FL 32232-0019

ear Mr. Sutterfield:

am unable to attend the March 29 hearing on restoring flows nto Taylor Slough and Florida Bay through the proposed C-111 roject but I would like to provide a written response.

he Everglades are a national treasure and should be treated in hat way for future generations. The opportunity we have now to orrect the system may be the last for a long time. Wildlife is eing lost or threatened as we procrastinate. C-111 provides ater to not only threatened or endangered species but to an ntire habitat and water must be provided in appropriate amounts t appropriate times.

e must restore the ecological integrity of Taylor Slough and the astern panhandle area of the Everglades (including Florida Bay) nd Alternative 6A will provide operational flexibility for this art of the system. Alternative 6A can be enhanced and the roposed C-111N canal should be designed as a retention/detention rea linked to the area to the north. A 500 cfs pump should be sed instead of a 50 cfs one at S-332B so that waters are pumped nto a large retention/detention area along C-111N which allows a atural sheetflow to move down through the southern Everglades nto the marine environment. Please expand the etention/detention area long the west side of L-31N north to amiami Trail as suggested by Alternative 8. C-111N should be xtended east of US 1 to allow maximum flexibility and water eliveries to all parts of this system.

hanks for your consideration.

W. Eugene Cox

. Eugene Cox

Carolyn Shields

March 28 1994

Steven Sutterfield
US Army Corps of Engineers
PO Box 4970
Jacksonville. FL 32232-0019

Mr. Sutterfield:

re: restoring the flows into Taylor Slough and Florida Bay

The necessity to take action now on the plight of the Everglades life-cycle continues with the hearings on the C-111 system restoration for the Everglades.

C-111 is a *key* avenue for freshwater into the Everglades. Efforts of restoration at this point in the Everglades sheet flow will quantify results of recovery both wildlife and economically to industries around Florida Bay. The C-111 canal should be extended east of US 1 to allow maximum flexibility and water deliveries to all parts of the system.

The Corps of Engineers needs to be a forerunner in the recovery of the Everglades, which is now on the minds of more Floridians than ever. The restoration of the Kissimmee Basin is underway; this continues those identical efforts at the other end of the sheet flow. While the system's operation from inbetween will be the real battle, these two milestones will squeeze the pus out of the pimple.

Sincerely,
C. Shields
Carol Shields

4631 Wenhart Road Lake Worth Florida 33463-6942

HENRY LEE MORGENSTERN
ATTORNEY AT LAW

TELEPHONE: (305) 294-7838
FAX: (305) 294-4711

624 WHITEHEAD STREET
KEY WEST, FLORIDA 33040

March 24, 1994

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

RE: Public hearing on C-111 Project

Dear Mr. Sutterfield,

We in Monroe County appreciate the need to save Florida Bay in a very personal way. But the Bay is also a national resource that all Americans need to keep healthy for future generations.

Thank you for your leadership on this project, and please say YES to Alternative 6A.

In addition, please make the following improvements:

1. Design C-111N as a retention/detention area.

2. Use a 500 cfs pump instead of a 50 cfs pump at S-332B to allow a greater and more natural sheet flow along C-111N.

3. Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested in Alternative 6.

4. Extend C-111N east of Highway 1.

I thank you, and my children thank you.

Very truly yours,

HENRY LEE MORGENSTERN

9955 South Forestline Avenue
Inverness, FL 34452
March 24, 1994

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield:

I am writing to express my concern about the future health of the Everglades National Park. This vital link in the viability of an enormous ecological system is on the verge of collapse. Many factors have contributed to this collapse, one of them being the system of canals and dikes that divert water away from the Everglades.
I understand that some alternatives to the present water diversion projects have been proposed. I would like to urge you to adopt Alternative 6A which would increase the operational capacity and flexibility of the C-111 system. This would help restore the ecological integrity of Taylor Slough and the eastern panhandle area of the Everglades.
I would also urge that the retention/detention area along the west side of L-31N north to Tamiami Trail be increased, as suggested in Alternative 6. Canal C-111 N should be designed as a retention/detention area linked to the north to help reestablish historic timing and distribution of sheetflow to this part of the Everglades.
Lastly, I feel it is imperative that Frog Pond and Rocky Glades agricultural area be purchased to help further preserve the Everglades/Florida Bay system. For too long we have let these agricultural interests dominate the decisions about where and how Florida's precious water supplies are used. It's time to give the water back to the natural ecosystem it is a part of.
Thank you for listening to my views. I would like to be informed about what decisions are finally reached concerning this issue by the Army Corps of Engineers.

Sincerely,

Martha Clutter

Miss Martha Clutter

MARCH 24, 1994

MR. STEVEN SUTTERFIELD
US ARMY CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232

RE: HEARING ON THE RESTORING WATER FLOWS INTO TAYLOR SLOUGH AND FLORIDA BAY THROUGH C-111 PROJECT.

DEAR MR. SUTTERFIELD:

I AM A CONCERNED CITIZEN WHO WILL BE UNABLE TO ATTEND THE MEETING IN HOMESTEAD ON MARCH 29TH REGARDING THE ABOVE MENTIONED PROJECT. I DO WISH TO PLACE MYSELF AMONG THOSE WHO BELIEVE THAT THE NATIONAL AUDUBON SOCIETY HAS SOME SUGGESTIONS WHICH MAY BE OF VALUABLE ASSISTANCE.

1- THE BEST ALTERNATIVE APPEARS TO BE 6A, BUT THIS COULD BE AMELIORATED BY ADOPTING SOME OF THE FOLLOWING:

A- TO ENSURE FLOOD PROTECTION TO COMMUNITIES TO THE NORTH, AS WELL AS RESTORE HISTORIC TIMING AND DISTRIBUTION OF SHEETFLOW IN THIS PART OF THE EVERGLADES, THE PROPOSED C-111N CANAL SHOULD BE DESIGNED AS A RETENTION\DETENTION AREA LINKED TO THE AREA TO THE NORTH.

B- TO EXPAND THE RETENTION\DETENTION AREA ALONG THE WEST SIDE OF L-31N NORTH TO TAMIAMI TRAIL AS SUGGESTED BY ALTERNATIVE 8. ONLY BY DOING THIS WILL THE CORPS ENSURE THAT ENOUGH CLEAN WATER CAN BE MADE AVAILABLE IN HISTORIC PATTERNS FOR BOTH SHARK AND TAYLOR SLOUGH.

C- C-111N SHOULD BE EXTENDED EAST OF US 1 TO ALLOW MAXIMUM FLEXIBILITY AND WATER DELIVERIES TO ALL PARTS OF THIS SYSTEM.

THANK YOU VERY MUCH FOR YOUR TIME, AND I KNOW THAT YOU WILL ATTEMPT TO COMBINE ALL THESE SUGGESTIONS INTO A SOUND AND FAIR PROGRAM WHICH WILL BE BENEFIT ALL FLORIDIANS.

SINCERELY YOURS,
Paul E. Matelis
PAUL E. MATELIS

MARCH 27, 1994

To Mr. Sutterfield,

After reviewing information on the restoration of flows into the Taylor Slough and Florida Bay through the proposed C-111 Project I encourage you to support the 6A ~~[illegible]~~ alternative. 6A provides operational flexibility for this part of the system. It also provides the same amount of flood protection as Alt. 8.

Farmers of the Frog Pond area over the last decade have successfully prevailed upon the government to give them more & more drainage benefits not provided by law. Because of this the Park and Florida Bay have been harmed. When Frog Pond is drained adjacent marshes in Taylor Slough will be drained. Therefore purchase of the Frog Pond and Katy Hendes agricultural area contemplated by this proposal is essential to the health of the Everglades/Fl. Bay system. To help save the economy of the Florida Keys 6A and 8 are the best plans.

Thank you for your time.

Sincerely,
Joyce Robelen

* To expand the retention/detention area on the west side of L-31N.

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

Att: Mr. Steven Sutterfield

Re: Water flow restoration to eastern Everglades and Florida Bay.

Dear Sir;

As a nature tour guide who shows our natural areas and wildlife to many persons each year, I am vitally concerned with the health of the Everglades and Florida Bay. Since my arrival in 1954, I have seen both bird and fish populations in the affected area drop by as much as 95 percent. A healthy system would restore our dying grass beds, which are the breeding grounds of our many aquatic species, large and small. These species are the base of our entire sport fishing and shrimping industries and the food supply of our formerly huge avian population. A healthy system would return our wildlife and enhance the tourist industry so vital to Florida.

In reviewing your various plans for the restoration of sheet water flow to the eastern Everglades, it seems to me that plan 6A has the best chance of success. But to prevent continued water loss to the Taylor Slough area of the Everglades and restoration of a natural sheet water flow to Florida Bay, it is essential to create a buffer zone by the purchase of the Frog Pond and Rocky Glades agricultural areas.

While alternative 6A is a good plan, I feel it can be improved by those methods:

1. Canal C-111 should be at least partially filled in to raise ground water levels in the near Everglades and prevent massive surges of farm-poisoned water from reaching and further ruining Barnes Sound.

2. The proposed C-111N canal should be implemented as a retention area to the north and as a protection to the nearby community.

3. Larger pumps, 500cfs, should replace the 50cfs pump at S-332B to increase the flow into the retention area along C-111N to allow the natural sheet flow to reach Florida Bay.

4. Expand the retention area along the west side of L-31N north to the Tamiami Trail. Only by doing this can enough clean water be supplied to restore historic patterns of water to both the Shark Valley and Taylor Sloughs.

Yours truly,

A. Morton Cooper, Jr.
7625 SW 97th Court
Miami, Florida 33173-3133

Orange Audubon Society

(A Chapter of National and Florida Audubon Societies)

P.O. Box 1142, Maitland, FL 32751

March 28, 1994

Mr. Steven Sutterfield
US Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

RE: Water flow restoration, Taylor Slough and Florida Bay

Dear Mr. Sutterfield:

The Board of Directors of Orange Audubon Society has asked me to write you concerning the above mentioned issue. Orange Audubon is a chapter of both National and Florida Audubon Societies located in Orange County with a membership of approximately 1900 individuals and families. We are all concerned about the Everglades and are committed to its restoration.

We congratulate you on your choice of Plan 6A which provides flood protection to agricultural interests, provides the greatest benefit to the environment and maximizes operational flexibility. Please stick to your guns and restore fresh water flow into a system that served Florida long before agricultural interests were a question.

We ask you to consider the following improvements to Plan 6A that expand and underscore your commitment to this endangered environment.

* Design the proposed C-111N canal as a water retention/detention area linked to the area to the north. This will help restore sheet flow and ensure flood protection to the northern communities.

* Use a 500 cfs pump at S-332B allowing waters to be pumped into a large water retention/detention area along C-111N. This provides for natural sheetflow to move south into the marine environment and provides flood protection.

* Alternative 8 allows for enough clean water to enter both Shark Slough and Taylor Slough by expanding the water retention/detention area along the west side of L-31N, north to Tamiami Trail, thus restoring historic water patterns.

* Extend C-111N east of US1 to allow maximum flexibility and water deliveries to all parts of this system.

10305 NW 5th St
Plantation Fl 33324
March 25, 1994

Mr. Steven Sutterfield
US Corps of Engineers
PO Box 4970
Jacksonville Fl 32232-0019

Dear Mr. Sutterfield:

I am in favor of restoring natural water flows into Taylor Slough and Florida Bay through the proposed C-111 Project, alternative 6-A.

With the press of a large population in south Florida and the certainty of that population doubling, land areas become more vulnerable to human use. What more valuable use than preserving our food chain which could be helped if we are careful and wise in this project.

While Alternative 6-A is good, it could be improved. Please consider: designing the C-111 N. Canal as a retention/detention area linked to the northern area; extending C-111 N east of U.S. 1; and expanding the retention/detention area along the west side of L-31 N to Tamiami Trail.

Thanks for your time

Sincerely,
Cynthia Holbar

MARCH 25, 1994

MR. STEVEN SUTTERFIELD
US ARMY CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FL. 32232-0019

RE: C-111 PROJECT - RESTORING FLOWS INTO TAYLOR SLOUGH AND FLORIDA BAY

DEAR MR. SUTTERFIELD:

THERE IS GOING TO BE A PUBLIC HEARING AT HOMESTEAD ON THE 29th OF MARCH. I CANNOT ATTEND BUT WOULD LIKE TO LET YOU KNOW BY THIS LETTER THAT I AGREE WITH THE CORPS OF ENGINEERS THAT ALTERNATIVE 6A MEET THE CRITERIA TO PROVIDE OPERATIONAL FLEXIBILITY FOR THIS PART OF THE SYSTEM.

AND IT CAN BE IMPROVED IN THE FOLLOWING WAYS:

- To more fully ensure flood protection to communities to the north, as well as restore historic timing and distribution of sheetflow in this part of the Everglades, the proposed C-111N canal should be designed as a retention/detention area linked to the area to the north.
- The Corps should use a 500 cfs pump instead of a 50 cfs one at S-332B so that waters are pumped into a large retention/detention area along C-111N which allows natural sheetflow to move down through the southern Everglades area into the marine environment. This provides ecological benefits while allowing for greater flood protection as well.
- Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8. Only by doing this will the Corps ensure that enough clean water can be made available in historic patterns for both Shark Slough and Taylor Slough.
- C-111N should be extended east of US 1 to allow maximum flexibility and water deliveries to all parts of this system.

Martha B. Roy
MARTHA B. ROY
5201 N.W. 4 AVE.
POMPANO BEACH, FL. 33064

2404 Antigua Circle, Apt. N-4
Coconut Creek, Fl 33066

April 13, 1994

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970

Dear Sir:

Re: Everglades/Florida Bay Restoration.
Re-establish Freshwater Flows to Taylor Slough and Florida Bay.

I have been requested by the National Wildlife, as a member of that organization, to write to you in support of Canal 111 Project.

I am enclosing a page of their letter with their suggestions for improvement in the Project.

Sincerely,
Pauline Wachtel

Encl.
NWF letter

The Corps reviewed 10 alternatives including a no action alternative, and alternatives 6A, 8 and 9. The Corps found that Alternative 6A meets all of the criteria to provide operational flexibility for this project. The tomato farmers offered Alternative 9 which does not provide flexibility to restore natural water levels along the boundary and headwaters of upper Taylor Slough. Also, Alternative 9 does not control the timing of water flows into Taylor Slough -- essential to re-establishing the historic freshwater flows in this area. The Corps noted that Alternative 6A provides the same amount of flood protection as the farmers proposal. The Corps chose Alternative 6A because it provides the greatest benefit to the environment, maximizes operational flexibility and provides flood damage prevention capability to agriculture.

Points You Can Make About the Proposal

- (The proposal includes the purchase of the Frog Pond and Rocky Glades agricultural area, which is essential to the future of the Everglades/Florida Bay ecosystem.

In the last decade, farmers in the Frog Pond area have successfully prevailed upon the government to give them more and more drainage benefits not provided by law. By providing these tax-funded benefits, the Corps and The South Florida Water Management District have severely harmed Everglades National Park and Florida Bay, because when they drain the Frog Pond the adjacent marshes in Taylor Slough are also drained.

- √ The proposed retention/detention area, in what is now the Rocky Glades and Frog Pond, is essential to ensuring water quality in this area and for providing flood control for areas east of L-31/C-111 canals.

- √ The economic analysis for this project is flawed because it does not incorporate the cost of the collapse of Florida Bay vs. the benefits of restoring the Bay.

The health of the economy of S. Florida is completely dependent on the quality of the environment. The degradation of Florida Bay has endangered the economy of the entire Florida Keys. Monroe County's economy is based on commercial and recreational fishing, diving and tourism-based businesses. Scientists agree that re-establishing freshwater flows to the Everglades is

absolutely essential to the restoration of Florida Bay. Because Canal 111 is a major avenue for providing freshwater into Florida Bay, the benefits of economic recovery and viability to these industries in Monroe County should be quantified in the economic analysis of the Corps' Canal 111 Project, to further justify the economic benefits of restoring historic hydrologic conditions.

While Alternative 6A is a good one it can be improved in the following ways:

- √ The proposed Canal 111N should be designed as a retention/detention area linked to the area to the north, to more fully ensure flood protection to communities to the north, and to restore the historic timing and distribution of sheet flow in this part of the Everglades.

- √ The Corps should use a 500 cfs (cubic feet/second) pump instead of a 50 cfs pump at S-332B so that waters are pumped into a large retention/detention area along C-111N. This would allow natural sheetflow to move down through the southern Everglades area into the marine environment, providing ecological benefits while allowing for greater flood protection.

- √ The Corps should expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested in Alternative 8. Only by doing this will the Corps ensure that enough clean water can be made available in historic patterns for both Shark and Taylor Sloughs.

- √ Canal 111N should be extended east of U.S. Highway 1 to allow for maximum flexibility and water deliveries to all parts of this system.

Thank you for raising your voice for the Everglades/Florida Bay,

Carolyn Waldron
Director

Please share this letter with a friend:
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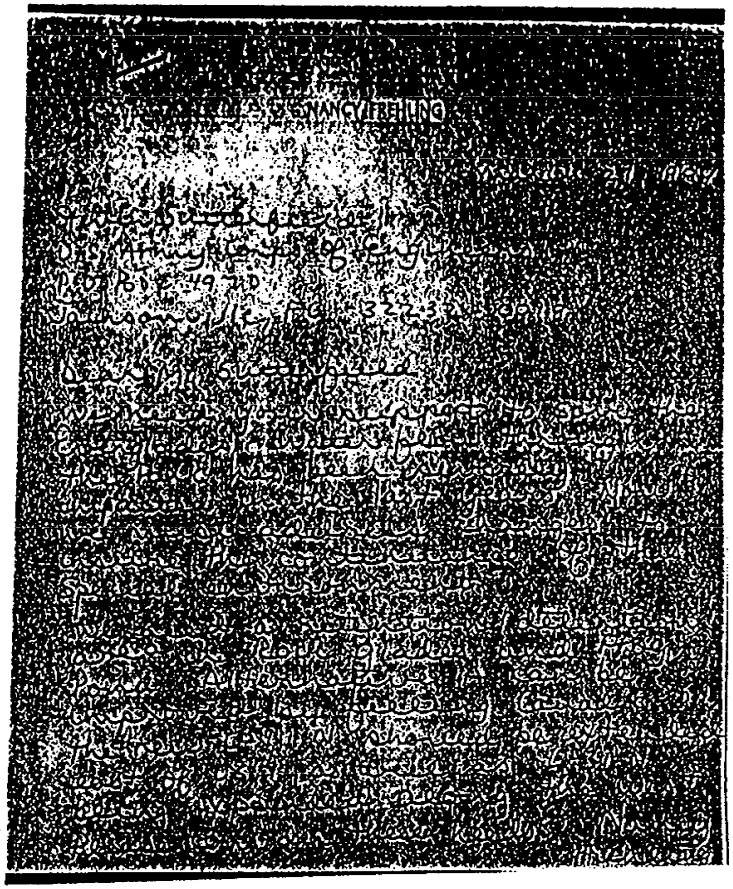

March 27, 1994

Mr. Steven Sutterfield
U.S. Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Sutterfield:

I am writing because of my grave concern about the very serious problems in the Everglades and the Florida Bay. Now that these huge problems are finally being addressed, I hope the courses of action chosen are aggressive enough to allow adequate solutions. Which brings me to the project being undertaken to select a plan to increase the operational capability & flexability of the C-111 system & thereby the Taylor Slough & eastern panhandle area of the Everglades.

I feel the Corps' selection of Alternative 6A is a good one for the most part, but does not adequately consider the potential cost of the collapse of Florida Bay vs restoring it. Even that aspect is factored in based the endangerment of the entire economy there would be muc additional justification for resto historic conditions. Since scientis agree the restoration of freshwa flows is absolutely essential Bay restoration and since the C District have caused great harm to both the Park & Ba by flooding & far more drainag benefits to the Frog Pond area fa than the law required, and because the drainage of the Fro Pond area is tied to the Tay Slough, steps must now be taken to remedy the [redacted] situation. Therefore, purchase of the Frog Pond and Rocky Glad agricultural areas contemplated this proposal is essential.

In addition, I feel alterna 6A should be strengthened to

canal to be a retention/detention area linked to the area to the north

2. extending the C-111N area east of US 1 to allow maximum flexibility and water delivery

3. Expanding the retention/detention area along the west side of L-31N north to Tamiami Trail to ensure enough clean water can be made available to both Shark & Taylor Sloughs

4. Utilizing a 500 cfs pump instead of a 50 cfs pump at S-332B so larger amounts of water would be in a retention/detention area along C-111N to allow natural sheet-flow to move down through the southern Everglades into the marine environment to provide both Environmental benefits & greater flood control.

Thank you for your attention to my comments

Sincerely,
June R. Long [illegible]
3133 Nyakka, [illegible] 33718

[illegible] you can make about the proposal: Mr. Satterfield:

The economic analysis for this project is flawed because it does not incorporate the cost of the collapse of Florida Bay vs. the benefits of restoring it. The degradation of Florida Bay has endangered the economy of the entire Florida Keys which is based on large part on fishing and diving. Scientists agree restoration of freshwater flows is absolutely essential to restoration of the Bay. Since the C-111 area is a key avenue for input of freshwater into Florida Bay, the benefits of economic recovery to these industries in Florida Bay should be quantified and will add additional economic justification for restoring historic conditions.

In the last decade farmers in the Frog Pond area have successfully prevailed upon the government to give them more and more drainage benefits not provided by law. By providing these benefits, the Corps and District have harmed the Park and Florida Bay, because when they drain the Frog Pond they also drain the adjacent marshes in Taylor Slough. Therefore, purchase of the Frog Pond and Rocky Glades agricultural area contemplated by this proposal is essential to the future of the Everglades/Florida Bay system.

The proposed retention/detention area, in what is now the Rocky Glades and Frog Pond, is essential to ensuring water quality in this area as well as providing flood control for areas east of L-31/C-111 canals.

While Alternative 6A is a good one it can be improved in the following ways.

- To more fully ensure flood protection to communities to the north, as well as restore historic timing and distribution of sheetflow in this part of the Everglades, the proposed C-111N canal should be designed as a retention/detention area linked to the area to the north.
- The Corps should use a 500 cfs pump instead of a 50 cfs one at S-332B so that waters are pumped into a large retention/detention area along C-111N which allows natural sheetflow to move down through the southern Everglades area into the marine environment. This provides ecological benefits while allowing for greater flood protection as well.
- Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8. Only by doing this will the Corps ensure that enough clean water can be made available in historic patterns for both Shark Slough and Taylor Slough.
- C-111N should be extended east of US 1 to allow maximum flexibility and water deliveries to all parts of this system.

Please try to restore the Everglades, protect Florida Bay + Keys, not just drain for tomato growers!

Carol Lu Sellers, P.O. Box [illegible], [illegible] 33[illegible]

3/25/94

Mr. Steve Smithfield
US Army Corps of Engineers

Sir

Going to go away to attend the public hearing on 3/29 & write something up in which Alternative 6A can be made look effective

John K. Mahon

John K. Mahon
4129 SW 2nd Ave
Gainesville FL 32607

Background: C-111 is in the far southeast region of the Everglades system. It is the key area for providing overland flows into southeastern portion of Everglades National Park and the northeast corner of Florida Bay. This area provides important habitat for endangered species such as the Wood Stork, Cape Sable Sparrow, American Crocodile and the Snail Kite. However, the ditching and draining of this area has disrupted the natural timing, distribution and flow of water. Instead of a gentle sheet of water, fed by rain, moving slowly through this area, canals drain water out of marshes and quickly out of the system. In the last decade problems in the system have been aggravated by water management practices which have overdrained the Everglades and prevented water from going into Florida Bay - all to benefit a few tomato growers in the area known as the Frog Pond. This over draining has done visible and significant harm to the Everglades/Florida Bay and prevented vital freshwater flows from reaching the key areas of the Bay.

How you can help:

1. Attend the public hearing on March 29
2. Attend the public hearing on March 29 and write a letter to the Corps of Engineers
3. Write a letter to the corps of engineers

You can help by attending the public hearing at Homestead on the 29th. It is clear that the

posed retention/detention area, in what is now the Rocky Glades and Frog Pond, is l to ensuring water quality in this area as well as providing flood control for areas -31/C-111 canals.

lternative 6A is a good one it can be improved in the following ways.

To more fully ensure flood protection to communities to the north, as well as restore historic timing and distribution of sheetflow in this part of the Everglades, the proposed C-111N canal should be designed as a retention/detention area linked to the area to the north.

The Corps should use a 500 cfs pump instead of a 50 cfs one at S-332B so that waters are pumped into a large retention/detention area along C-111N which allows natural sheetflow to move down through the southern Everglades area into the marine environment. This provides ecological benefits while allowing for greater flood protection as well.

Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8. Only by doing this will the Corps ensure that enough clean water can be made available in historic patterns for both Shark Slough and Taylor Slough.

C-111N should be extended east of US 1 to allow maximum flexibility and water deliveries to all parts of this system.

You can help by attending the public hearing at Homestead on the 29th. It is clear agricultural community intends to turn out many of its workers to oppose this restoratio and is using scare tactics to recruit homeowners from other areas of South Dade County can't attend the hearing then please submit written comments, prior to April 20, 1994, to:

Mr. Steven Sutterfield
US Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

What the Corps proposes: This project is being undertaken to select a plan to increas operational capability and flexibility of the C-111 system to provide restoration for the ecol integrity of Taylor Slough and the eastern panhandle area of the Everglades. The project n maintain existing authorized levels of flood protection for agricultural interests adjacent t C-111. Restoration of these flows will provide freshwater necessary for restoring Florida E Corps recognizes that the present system is harming the ecology of the southeastern Everg

SERVANCY
1450 Merrihue Drive • Naples, Florida 33942 • (813) 262-0304 • Fax (813) 262-5872

April 4, 1994

r. Steven Sutterfield
.S. Army Corps of Engineers
.O. Box 4970
acksonville, Florida 32232-0019

e: Restoration of flows into Taylor Slough and Florida Bay through the proposed C-111 project

ear Mr. Sutterfield:

The Conservancy, Inc. (TCI) strongly supports the ngoing efforts to restore natural water flows to the verglades. With this in mind, we believe that the efforts o restore the ecological integrity of Taylor Slough and the astern panhandle of the Everglades by increasing the perational capability and flexibility of the C-111 system s critical to achieving this goal. Of the options valuated by the U.S. Army Corps of Engineers (ACE), TCI oncurs with your agency's finding that option 6A meets all he criteria to provide the needed flexibility to release resh water into the Everglades and Florida Bay without owering flood protection for farmers. This is the option CI believes should be adopted.

In weighing the economics of your decision, ACE must onsider the cost of the collapse of Florida Bay versus the ost of restoring it. The economy of the Florida Keys very uch depends on the health of Florida Bay. The purchase of he Frog Pond and Rocky Glades as considered by this roposal will also reduce drainage in marshes adjacent to aylor Slough and provide for water quality improvement and lood control.

Additional modifications that would improve option 6A hould also be given serious consideration. To prevent lugs of agricultural and urban runoff canal C-111 should be lugged or filled. The proposed C-111N canal should be esigned as a retention/detention area linked to the orthern area. This would provide flood protection for ommunities to the north and restore historic timing and istribution to this part of the Everglades. ACE should use larger pump 500 cfs vs. 50 cfs) at S-332B to pump waters nto a large detention area along C-111N to allow natural heetflow to the southern Everglades and Florida Bay. The

retention area west of L-31N north to the Tamiami Trail should be expanded as suggested in option 8. This will help insure an adequate water supply in the historic pattern for both Taylor Slough and Shark Slough. Finally C-111N should be extended east of U.S. 1 to permit maximum flexibility and water deliveries to all of part of this system.

TCI appreciates the opportunity to provide comment on this important step in restoring adequate and properly timed fresh water flow to the Everglades and Florida Bay. There is indeed only one Everglades!

Sincerely,

John H. Fitch, Ph.D.
President

93

1001 Pelican Bay Blvd - Naples FL 33963

April 5, 1994

Mr Steven Sutterfield
US. Army Corps of Engineers
P.O. Box 4970
Jacksonville Fl 32232-0019

Comments:

While Alternative 6A is a good one, it can be improved in the following ways:

— C-111N canal should be designed as a detention/retention area in addition to the area to the north.

— The Corps should use a 500 CFS pump instead of a 50 cfs - provide ecological benefits while allowing for greater flood protection as well.

— Expand retention/detention areas along west side of L-31N north to Tamiami Trail - Then clean out water can be made available for both Shark Slough + Taylor Slough

2/ C-111N should be extended east of US 1 to maximize flexibility and water deliveries to all parts of the system.

Thank you for taking the time to read this. We hope you consider the changes.

Sincerely Yours,
Bertram S and
Nancy L Silver

Mr. & Mrs. Gerald Gura
5657 Willow Creek Lane
Delray Beach, FL
33484

3/30/94

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Fl 32232

Dear Mr. Sutterfield:

On the C111 system please use 6A Alternate and follow Audubon suggestions attached.

Thank you

The best way to prevent the second year of this experiment from continuing to harm the Everglades and Florida Bay, is for the Congressional Natural Resources Committee to hold a field hearing to investigate the mismanagement of the experiment by the Corps and the SFWMD. Reasons for doing so are as follows:

- Despite claims by the Corps and District that more water is being sent to Florida Bay, Everglades National Park scientific studies show that, to the contrary, more water is now being drained from Taylor Slough and diverted from Florida Bay into Barnes Sound and Manatee Bay.

- The SFWMD and the Corps, violated the public trust when they privately agreed to different and more harmful operating criteria for the Demonstration Project than were legally and publicly permitted by the Corps' Finding of No Significant Impact (FONSI).

- The SFWMD and the Corps repeatedly ignored specific requests and recommendations made by Everglades National Park and substituted their own provisions which inflicted great harm on Taylor Slough and Florida Bay.

- In November 1993, the SFWMD and the Corps created an artificial "dry season" for a nearby special interest (South Dade Land Corporation and its tomato farming tenants) by draining water from Taylor Slough and surrounding areas more than 3 months before they would have naturally receded. This amounts, in effect, to delivering a public benefit to a private interest -- drainage to assist them in making more money from agriculture -- that far exceeds what these agencies are legislatively directed or authorized to deliver. And all at the expense of Florida Bay and Taylor Slough which are directly impacted and harmed as a result of these actions.

While Alternative 6A is a good one it must be improved in the following ways.

- To restore historic timing and distribution of sheetflow in this part of the Everglades, as well as more fully ensure flood protection to communities to the north, the proposed C-111N canal should be replaced by a retention/detention area. This retention/detention area should be locate north of the proposed site of the C-111N canal and borrow levee (which, a proposed, would cut off sheetflow from wetlands to the north) and shoul accept stormwater runoff from Homestead and Florida City.

- The Corps should use a 500 cfs pump instead of a 50 cfs one at S-332E so that stormwater runoff from the southern areas of Homestead and Florida City are pumped into the retention/detention area, rather than down the C-111 canal. This will provide full flood protection in a manner that reestablishes natural sheetflow rather than destroying the marine environment (as does use of the C-111 canal during flood events).

- Fill the C-111 canal south of the retention-detention areas. This will eliminate the current disruption of sheetflow (timing and distribution) in the C-111 basin, and prevent unnatural water transfers from the Taylor Slough basin to the C-111 basin.

- Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8. Only by doing this will the Corps ensure that enough clean water can be made available in historic patterns for both Shark Slough and Taylor Slough.

- The retention-detention areas which replace C-111N, should be extended east of US Highway 1 to allow maximum flexibility and water deliveries to all parts of the C-111 basin and coastal Everglades.

Dear Mr. Sutterfield,

I encourage you to accept alternative 6A for restoration of the C-111 system essential for input into the Florida Bay.

C-111N should be extended east of U.S. 1 to allow maximum natural water flow to all parts of this system.

Sincerely,

Robin DeVaurney
3829 SW 149th Place
Ocala, Fla 34473

Terra Systems
ENVIRONMENTAL CONSULTANTS, INC.
2020 Shelfield Road • Post Office Box 9115 • Winter Haven, FL 33883-9115 •(813) 533-0200

April 4, 1994

Mr. Steven Sutterfield
US Army Corps of Engineers
Post Office Box 4970
Jacksonville, FL 32232-0019

Study for Structural and Non-Structural Modifications to the C-111 Basin, South Dade County, Florida

I have reviewed the General Reevaluation Report and Environmental Impact Statement findings with respect to protecting the natural values of Everglades National Park while maintaining the flood control in the basin. I would like to offer my support in favor of implementing the proposed project which would allow the continuation of the Taylor Slough iteration of the Experimental Program to restore more natural hydrological conditions in the Everglades.

However, based on the National Audubon Society's review I would like to offer the following points for consideration:

- The proposed retention/detention area, in what is now the Rocky Glades and Frog Pond is essential to ensuring water quality in this area as well as providing flood control for areas east of L-31/C-111 canals.

- While Alternative 6A is a good one it can be improved in the following ways:

  - To more fully ensure flood protection to communities to the north, as well as restore historic timing and distribution of sheetflow in this part of the Everglades, the proposed C-111N canal should be designed as a retention/detention area linked to the area to the north.

  - The Corps should use a 500 cfs pump instead of a 50 cfs one at S-332B so that waters are pumped into a large retention/detention area along C-111N which allows natural sheetflow to move down through the southern Everglades area into the marine environment. This provides ecological benefits while allowing for greater flood protection as well.

  - Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8. Only by doing this will the Corps ensure that enough clean water can be made available in historic patterns for both Shark Slough and Taylor Slough.

  - C-111N should be extended east of US 1 to allow maximum flexibility and water deliveries to all parts of this system.

Thank you for your attention to this very important issue.

Sincerely,

TERRA SYSTEMS ENVIRONMENTAL CONSULTANTS, INC.

TJ Coburn

TJ Coburn, President and Senior Ecologist

TJC:tfe:WP51\M\LTR.16

Mr. Sutterfield,
"It seems the story repeats itself over and over. It destroy what Mother nature has created".
Would be nice to give back some of what man has taken from the Everglades. Florida fights for wetlands but in my area, I am seeing these areas clear cut and at times filled in. When do we begin to listen to what we know must be done to protect what it seems to take to protect man in the long run?
Good Luck. Ann Garrett

AUDUBON SE REGIONAL OFFICE

ACTION ALERT

NATIONAL AUDUBON SOCIETY

MARCH 18, 1994

Urgent Everglades/Florida Bay Action Alert

The US Army Corps of Engineers is holding a hearing on restoring flows into Taylor Slough and Florida Bay through the proposed C-111 Project.

March 29, 1994
7:00 pm
Homestead High School
351 S.E. 12 Street
(East of Hwy 1)
For information about buses, call Theresa Ashley at (305) 296-3880

Background: C-111 is in the far southeast region of the Everglades system. It is the key area for providing overland flows into southeastern portion of Everglades National Park and the northeast corner of Florida Bay. This area provides important habitat for endangered species such as the Wood Stork, Cape Sable Sparrow, American Crocodile and the Snail Kite. However, the ditching and draining of this area has disrupted the natural timing, distribution and flow of water. Instead of a gentle sheet of water, fed by rain, moving slowly through this area, canals drain water out of marshes and quickly out of the system. In the last decade problems in the system have been aggravated by water management practices which have overdrained the Everglades and prevented water from going into Florida Bay - all to benefit a few tomato growers in the area known as the Frog Pond. This over draining has done visible and significant harm to the Everglades/Florida Bay and prevented vital freshwater flows from reaching the key areas of the Bay.

How you can help:

1. Attend the public hearing on March 29
2. Attend the public hearing on March 29 and write a letter to the Corps of Engineers
3. Write a letter to the corps of engineers

You can help by attending the public hearing at Homestead on the 29th. It is clear that the agricultural community intends to turn out many of its workers to oppose this restoration project and is using scare tactics to recruit homeowners from other areas of South Dade County. If you can't attend the hearing then please submit written comments, prior to April 20, 1994, to:

Mr. Steven Sutterfield
US Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

What the Corps pr... This project is being undertaken to select a plan to increase the ... ability of the C-111 system to provide restoration for the ecological

National Audubon Society
Southeast Regional Office
102 East Fourth Avenue
Tallahassee, FL 32303

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Tallahassee
FL
Permit 462

MS. ANN GARRETT
PO BOX 421
CRESTVIEW, FL 32536-0421

The Corps reviewed 10 alternatives including a no action alternative, and alternatives 1-6A, 8 and 9. The Corps found that alternative 6A met all of the criteria to provide operational flexibility for this part of the system. The tomato farmers offered Alternative 9 which did not provide flexibility to restore natural water levels along the boundary and headwaters of upper Taylor Slough or to control the timing flows into Taylor Slough - essential to the restoration of historic flows in this area. The Corps noted that Alternate 6A provides the same amount of flood protection as the farmers proposal. The Corps chose Alternative 6A because it provides the greatest benefit to the environment, maximizes operational flexibility and provides flood damage prevention capability to agriculture.

Points you can make about the proposal:

- The economic analysis for this project is flawed because it does not incorporate the cost of the collapse of Florida Bay vs. the benefits of restoring it. The degradation of Florida Bay has endangered the economy of the entire Florida Keys which is based on large part on fishing and diving. Scientists agree restoration of freshwater flows is absolutely essential to restoration of the Bay. Since the C-111 area is a key avenue for input of freshwater into Florida Bay, the benefits of economic recovery to these industries in Florida Bay should be quantified and will add additional economic justification for restoring historic conditions.
- In the last decade farmers in the Frog Pond area have successfully prevailed upon the government to give them more and more drainage benefits not provided by law. By providing these benefits, the Corps and District have harmed the Park and Florida Bay, because when they drain the Frog Pond they also drain the adjacent marshes in Taylor Slough. Therefore, purchase of the Frog Pond and Rocky Glades agricultural area contemplated by this proposal is essential to the future of the Everglades/Florida Bay system.
- The proposed retention/detention area, in what is now the Rocky Glades and Frog Pond, is essential to ensuring water quality in this area as well as providing flood control for areas east of L-31/C-111 canals.
- While Alternative 6A is a good one it can be improved in the following ways.
- To more fully ensure flood protection to communities to the north, as well as restore historic timing and distribution of sheetflow in this part of the Everglades, the proposed C-111N canal should be designed as a retention/detention area linked to the area to the north.
- The Corps should use a 500 cfs pump instead of a 50 cfs one at S-332B so that waters are pumped into a large retention/detention area along C-111N which allows natural sheetflow to move down through the southern Everglades area into the marine environment. This provides ecological benefits while allowing for greater flood protection as well.
- Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8. Only by doing this will the Corps ensure that enough clean water can be made available in historic patterns for both Shark Slough and Taylor Slough.
- C-111N should be extended east of US 1 to allow maximum flexibility and water deliveries to all parts of this system.

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The proposed retention/detention area, in what is now the Rocky Glades and Frog Pond, is essential to ensuring water quality in this area as well as providing flood control for areas east of L-31N/C-111 canals.

While Alternative 6A is a good one it can be improved in the following ways.

- To more fully ensure flood protection to communities in the march, as well as restore historic timing and distribution of sheetflow in this part of the Everglades, the proposed C-111N canal should be designed as a retention/detention area linked to the area to the north.
- The Corps should use a 500 cfs pump instead of a 50 cfs one at S-332B so that waters are pumped into a large retention/detention area along C-111N which allows natural sheetflow to move down through the southern Everglades area into the marine environment. This provides ecological benefits while allowing for greater flood protection as well.
- Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8. Only by doing this will the Corps ensure that enough clean water can be made available in historic patterns for both Shark Slough and Taylor Slough.
- C-111N should be extended east of US 1 to allow maximum flexibility and water deliveries to all parts of this system.

MANLEY K. SMITH
5430 WOODWIND TERRACE
JACKSONVILLE FL 32211

5605I

National Audubon Society

AUDUBON SE REGIONAL OFFICE

ACTION ALERT

NATIONAL AUDUBON SOCIETY

MARCH 18, 1994

Urgent Everglades/Florida Bay Action Alert

The US Army Corps of Engineers is holding a hearing on restoring flows into Taylor Slough and Florida Bay through the proposed C-111 Project.

March 29, 1994
7:00 pm
Homestead High School
321 S.E. 12 Street
(East of Hwy 1)
For information about buses, call Theresa Ashley at (305) 294-3880

Background: C-111 is in the far southeast region of the Everglades system. It is the key area for providing overland flows into southeastern portion of Everglades National Park and the northeast corner of Florida Bay. This area provides important habitat for endangered species such as the Wood Stork, Cape Sable Sparrow, American Crocodile and the Snail Kite. However, the ditching and draining of this area has disrupted the natural timing, distribution and flow of water. Instead of a gentle sheet of water, fed by rain, moving slowly through this area, canals drain water out of marshes and quickly out of the system. In the last decade problems in the system have been aggravated by water management practices which have overdrained the Everglades and prevented water from going into Florida Bay - all to benefit a few farms in growers in the area known as the Frog Pond. This over draining has done visible and significant harm to the Everglades/Florida Bay and prevented vital freshwater flows from reaching the key areas of the Bay.

How you can help:

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2. Attend the public hearing on March 29 and write a letter to the Corps of Engineers
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You can help by attending the public hearing at Homestead on the 29th. It is clear that the agricultural community intends to turn out many of its members to oppose this restoration project and is using scare tactics to recruit homeowners from other areas of South Dade County. If you can't attend the hearing then please submit written comments, prior to April 20, 1994, to:

Ms. Steven Butterfield
US Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

What the Corps proposes: This project is being undertaken to select a plan to increase the operational capability and flexibility of the C-111 system to provide restoration for the ecological integrity of Taylor Slough and the eastern panhandle area of the Everglades. The project must maintain existing authorized levels of flood protection for agricultural interests adjacent to C-111. Restoration of these flows will provide freshwater necessary for restoring Florida Bay. The Corps recognizes that the present system is harming the ecology of the southeastern Everglades.

JOEL N. KUTZ
695 Spanish Drive S.
Longboat Key, Florida 34228
(813) 383-4542

3/24/94

Mr. Steven Sutterfield
U.S. Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Sir,

The purpose of this letter is to let you know that I am one more citizen of Florida concerned about the degradation of our everglades area. I believe the Corps should do more to restore the everglades to its natural condition. The enclosed clipping, which I'm sure you have seen, explains ideas which I think deserve your favorable consideration.

Very Truly yours,

Joel N. Kutz

Urgent Everglades/Florida Bay Action Alert

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Very Truly yours,

Joel N. Kutz

Karen Swanson
2555 PGA Blvd. #47
Palm Beach Gardens, Fl
33410

r. Steven Sutterfield
s Army Corps of Engineers
P.O. Box 4970
acksonville, Fl. 32232-0019

ear Mr. Sutterfield:

I would like to make some points about the roposal to restore flows into Taylor Slough and Florida Bay through the proposed C-111 project.

- The Economic analysis for this project is flawed because it does not incorporate the cost of the collapse of Florida Bay vs. the benefits of restoring it. The degradation of Florida Bay has endangered the economy of the entire Florid Keys which is based on large part on fishing & diving.

- In the last decade farmers in the Frog Pond area have successfully prevailed upon the government to give them more and more drainage benefits not provided by law. By providing these benefits, the Corps and Distric have harmed the Park and Florida Bay, because when they drain the Frog Pond they also drain

the adjacent marshes in Taylor Slough.

- The proposed retention/detention area in what is now the Rocky Glades and Frog Pond, is essential to ensuring water quality in this area as well as providing flood control for areas east of L-31/C-3111 canals.

- While Alternative 6A is a good one it can be improved in the following ways.

  - To more fully ensure flood protection to communities to the north, as well as restore historic timing and distribution of sheetflow in this part of the Everglades, the proposed C-111N canal should be designed a a retention/detention area linked to the area to the north.

  - The Corps should use a 500 cfs pump instead of a 50 cfs one at S-332B so that waters are pumped into a large retention/ detention area along C-111N which allows natural sheetflow to move down throug the southern Everglades area into the marine environment. This provides ecological benefits while allowing for greater flood protection as well.

(3)

- Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8. Only by doing this will the Corps ensure that enough ~~water~~ clean water can be made available in historic patterns for both Shark Slough and Taylor Slough.

- C-111N should be extended east of US1 to allow maximum flexibility and water deliveries to all parts of this system.

Thank You

Karen Swanson

Karen Swanson

Dear Mr. Sutterfield,

I favor the acceptance of Alternative 6A for restoration of the C-111 system, essential for input into FL. Bay. C-111N should be extended east of U.S. 1 to allow maximum natural water flow to all parts of this system. I hope you will support this very important system.

Sincerely,

[redacted]

Mary Gehring
5132 S.E. 189th CT.
Ocklawaha, FL- 32179

3703 Fallen Timber
Louisville, Ky. 40241

April 11, 1994

Col. Terrence Salt
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida

Dear Col. Salt,

We have just returned from a trip to the Everglades. They are dying!! The commercial and recreational fishing industry, not to mention wildlife, depends on the changes you can make.

Please reintroduce historical amounts of fresh water to Florida Bay, in the historic places and at the historic times. The C and the District must deter the historic natural water of the Bay and then meet Please implement the plans lined for Taylor Slough/C Basin and Shark Slough, by Audubon Society and other vironmental groups. No m drawing of wetlands for agriculture.!! Please im ment the Shark Slough S Design Memorandum, or ne plan, with changes to rete water flows to historic p

Thank you!

Sincere
John & Candac
McBrid

March 30, 1994

Mr. Sutterfield
US Army Corps of Engineers

Dear Sir:

I attended the hearing on Homestead last night. I have been reading about the Florida Bay retention in the papers for some years, and my friends in the Keys have been hit hard. Last night was pretty heated, and I wanted to thank Col. Sault (I hope I have spelled his name correctly) and the Corps staff for their attention.

I have lived in Florida since 1955, and our area is each day under more stress. Much of the proposed plan sounds fine — I only wish something could be done more quickly. Though agricultural land is at a premium — so much of it has been rezoned to housing — there is still land: but there's only one bay. Its problem is all of our problem, not just the fishermen.

One thing that came up over and over again. Please, close down C 111 so that it can't be used to pump fresh water into Manatee Bay. We need

to set up retention areas in the southern as well. We are just beginning to see the fight for water down here. The retention lands would provide flexibility, help with salinity intrusion, and be a great buffer. Also this would allow even more water to return to the normal westward course — Florida Bay needs as much as possible to get back its old Taylor Slough.

The curtain wall sounds like yet another expensive boondoggle. To keep pockets of land being farmed in areas where they will need to place pumps on the Water District to drain extra for them, or to wangle extra water, is to ask for trouble. The border area can only be farmed at the expense of the bay and the natural water flow.

How soon can we move more water through Taylor Slough? We're coming into the dry season, and I find it difficult to express how concerned I am.

Please let me know what is do.

Sincerely,

L Conesa

LILLIAN CONESA
209 NW 60 CT
MIAMI FL 33126

VOTER # 000 17432:

Ruth H Clark
1120 Seminole Dr # 4
Fort Lauder, FL 33304-4545

March 29, 1994

Mr. Steven Sutterfield
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

or Homestead, FL Hearing

Re: Restoring Flows into Taylor Slough, Everglades National Park, and Florida Bay

The public interest is best served by purchasing the Frog Pond and Rocky Glades areas needed to put into effect Alternative 6A without further delay. The U.S.C.O.E. must provide the quantity of freshwater to an expanded retention-detention area to ensure water quality in this area as well as providing flood control for areas east of L-31/C111 canals. Scientists agree that providing sheet flow distribution and as close to natural timing as possible to the Taylor Slough marshes is the key to restoration of the ecological integrity of Taylor Slough and the southeastern Everglades to Florida Bay.

The true cost of continued degradation of Florida Bay from lack of freshwater is more than will be spent to buy the necessary wetland retention-detention areas. The cost of losing the juvenile fish and shellfish nurseries and the wildlife(including the last 10% of wading birds who depend upon this part of the food chain), is not quantified properly in the economic analysis for this project. Public interest on a national and international level reflects itself economically here.

Suggestions to improve alternative 6A should be explored: 1) To improve linkages to the north; 2) To extend water deliveries east of U.S. 1; 3) To increase the size of pump at S-332B; and 4) to expand the area (see Alternate 8) to ensure enough clean water in historic patterns for both Shark Slough and Taylor Slough.

We must correct the hydrologic mistakes and planning and zoning mistakes that endanger our water resources and food chain for future generations.

Yours truly,

Ruth H. Clark

Ruth H. Clark

Copies to
SFWMD Chairman
LWV
ECBC
Friends of the Everglades

Lake Region Audubon Society

March 23, 1994

Mr. Steven Sutterfield
US Army Corps of Engineers
P. O. Box 4970
Jacksonville, Florida 32232-0019

Dear Mr. Sutterfield,

Although we cannot attend the public hearing in Homestead on March 29, our 658 members are vitally interested in restoring the Everglades ecosystem. Historic flows of water into Taylor Slough and Florida Bay are an important step in restoration. We ask you to consider the following points when making your decision.

- The degradation of Florida Bay has endangered the economy of the entire Florida Keys. This economy is based largely on fishing, diving, and tourism. Since C-111 is a key avenue for freshwater flow in Florida Bay, the benefits of economic recovery to these businesses depending on the bay should be quantified and will add economic justification for restoring historic water conditions.

- Purchase of the Frog Pond and Rocky Glades agricultural area is essential to the future of the Everglades/Florida Bay ecosystem.

Although Alternative 6 is a good proposal it can be improved in the following ways:

- The proposed C-111N canal should be designed as a retention/detention area linked to the area to the north to ensure flood protection to communities. This will also restore historic timing and distribution of sheetflow of water in this area of the Everglades.

- Increase the size of the pump to 500 cfs at S-332B so that waters are pumped into a large retention/detention area along C-111N. This allows natural sheetflow to move through the southern Everglades area into the marine environment.

- Expand the retention/detention area along the west side of L-31N north to Tamiami Trail as suggested by Alternative 8. By doing this, enough clean water will be available in historic patterns for both Shark Slough and Taylor Slough.

- C-111N should be extended east of US 1 to allow maximum flexibility and water deliveries to all parts of this system.

115 Lameraux Road • Winter Haven • Florida • 33884

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The Corps has a long history of draining and ditching the Everglades at the urgings of state and federal government. This is a part of Florida history from which we can learn. Environmental mistakes are extremely costly to remedy. We urge you now to set this history aside and begin the restoration of the Everglades for future generations.

Sincerely,

Linda Cooper

Linda Cooper
Corresponding Secretary
Lake Region Audubon Society

AMANDA EVERETTE
535 E 44TH ST
SAVANNAH GA 31405

MR. STEVEN SUTTERFIELD
US ARMY CORPS OF ENGINEERS
PO BOX 4970
JACKSONVILLE FL 32232-0019

31 MARCH 1994

DEAR MR. SUTTERFIELD:

I AM WRITING TO YOU ABOUT THE C-111 SYSTEM. I WOULD LIKE TO MAKE A FEW POINTS ABOUT THE PROPOSAL:

1) THE ECONOMIC ANALYSIS FOR THIS PROJECT IS FLAWED BECAUSE IT DOES NOT INCORPORATE THE COST OF THE COLLAPSE OF FLORIDA BAY VS. THE BENEFITS OF RESTORING IT. THE DEGRADATION OF FLORIDA BAY HAS ENDANGERED THE ECONOMY OF THE ENTIRE FLORIDA KEYS WHICH IS BASED ON LARGE PART FISHING AND DIVING. SCIENTIST AGREE RESTORATION OF FRESHWATER FLOWS IS ESSENTIAL TO RESTORATION OF THE BAY. SINCE THE C-111 AREA IS KEY AVENUE FOR INPUT OF FRESH WATER INTO FLORIDA BAY, THE BENEFITS OF ECONOMIC RECOVERY TO THESE INDUSTRIES IN FLORIDA BAY SHOULD BE ~~[illegible]~~ QUANTIFIED

AND WILL ADD ADDITIONAL ECONOMIC JUSTIFICATION FOR RESTORING HISTORIC CONDITIONS.

2) IN THE LAST DECADE FARMERS IN THE FROG POND AREA HAVE SUCCESSFULLY PREVAILED UPON THE GOVERNMENT TO GIVE THEM MORE AND MORE DRAINAGE BENEFITS NOT PROVIDED BY LAW. BY PROVIDING THESE BENEFITS, THE CORPS AND DISTRICT HAVE HARMED THE PARK AND FLORIDA BAY, BECAUSE WHEN THEY DRAIN THE FROG POND THE ALSO DRAIN THE ADJACENT MARSHES IN TAYLOR SLOUGH. THEREFORE, PURCHASE OF THE FROG POND AND ROCKY GLADES AGRICULTURAL AREA CONTEMPLATED BY THIS PROPOSAL IS ESSENTIAL TO THE FUTURE OF THE EVERGLADES/FLORIDA BAY SYSTEM.

3) THE PROPOSED RETENTION/DETENTION AREA, IN WHAT IS NOW THE ROCKY GLADES AND FROG POND, IS ESSENTIAL TO ENSURING WATER QUALITY IN THIS AREA AS WELL AS PROVIDING FLOOD CONTROL FOR AREAS EAST OF L-31/C-111 CANALS

ALTERNATIVE 6A IS GOOD, BUT NEEDS IMPROVEMENT AND CAN BE IMPROVED IN THE FOLLOWING WAYS:

1) TO MORE FULLY ENSURE FLOOD PROTECTION TO COMMUNITIES TO THE NORTH, AS WELL AS RESTORE

1) HISTORIC TIMING AND DISTRIBUTION OF SHEETFLOW IN THIS PART OF THE EVERGLADES, THE PROPOSED C-111N CANAL SHOULD BE DESIGNED AS A RETENTION/DETENTION AREA LINKED TO THE AREA TO THE NORTH.

2) THE CORPS SHOULD USE A 500 cfs PUMP INSTEAD OF A 50 cfs ONE AT S-332B SO THAT WATERS ARE PUMPED INTO A LARGE RETENTION/DETENTION AREA ALONG C-111N WHICH ALLOWS NATURAL SHEETFLOW TO MOVE DOWN THROUGH THE SOUTHERN EVERGLADES AREA INTO THE MARINE ENVIRONMENT. THIS PROVIDES ECOLOGICAL BENEFITS WHILE ALLOWING FOR GREATER FLOOD PROTECTION AS WELL.

3) EXPAND THE RETENTION/DENTION AREA ALONG THE WEST SIDE OF L-31N NORTH TO TAMIAMI TRAIL AS SUGGESTED BY ALTERNATIVE 8. ONLY BY DOING THIS WILL THE CORPS ENSURE THAT ENOUGH CLEAN WATER CAN BE MADE AVAILABLE IN HISTORIC PATTERNS FOR BOTH SHARK SLOUGH AND TAYLOR SLOUGH.

4) C-111N SHOULD BE EXTENDED EAST OF US 1 TO ALLOW MAXIMUM FLEXIBILITY AND WATER DELIVERIES TO ALL PARTS OF THIS SYSTEM.

THANK YOU.

IN ECOLOGY,

AMANDA EVERETTE

April 24, 1994

Dear Mr. Sutterfield,

I encourage you to accept Alternative 6A for restoration of the C-111 system, essential for the flow into the Florida Bay. C-111N should be extended east of US1 to allow maximum natural water flow to all parts of this system.

Sincerely,

Lorraine Klein
P.O. Box 850
Altoona, FL 32702

March 27, 1994

Patricia B. Miller
2500 N.E. 19 Avenue
Wilton Manors, Florida 33305

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

Dear Mr. Sutterfield:

I am writing in support of the Florida Audubon Society's efforts to save Florida Bay. I have lived in South Florida since 1937 and have watched the destruction of so many of our natural resources. I am unable to attend the hearing in Homestead

Dear Mr. Butterfield 3/29/94

Providing restoration for the ecological integrity of Taylor Slough & the eastern area of the Everglades is an absolute necessity. We drove the highway years ago, took a water-boat ride, saw the birds - and a crocodile! Exquisite!! 2 years ago we flew over it on our way to Miami to catch a flight to Spain - we were appalled at the sight. Returning at night, we were horrified to see the lights of houses & moving cars along a roadway! As a resident of Fl., I am impelled to urge action not to sacrifice this unique gift & nature. to our state Very truly yours Mrs. Ruth H. Radimersky

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[illegible] [illegible]

I appreciate that the Corps is moving in the right direction for restoring water flow into Taylor Slough and Florida Bay to return to ecological integrity. Of the proposed alternatives regarding Project C-111 I support your choice of 6A which appears the better among the ten. However, to prevent further drainage [illegible] Park and Florida Bay it is absolutely essential to purchase Frog Pond and Rocky Glades areas. That proposed retention/detention area will also ensure water quality.

Furthermore, I urge you to pay close attention to suggestions by the Audubon Society [illegible] to improve Alternative 6A, namely that 1) C-111 N canal should be a retention/detention area; 2) a larger pump at S-332 B would allow ecological benefits and greater flood protection; 3) expansion of retention/detention area west of L-31 N proposed in Alternative 8; 4) C-111 N should be extended east of US [illegible]

Thank you.

[illegible signature]

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30 March '94

Dear Mr. Butterfield:

The health of the Everglades and Florida Bay is important to all of us - Floridians and others -

It seems shortsighted and poor long-range policy to allow farmers to use the fertile land of the eastern panhandle of the Everglades to grow tomatoes (In short [illegible] sugar cane).

I have confidence in the National Audubon Society's studies and recommendations regarding the Everglades - in this case Alternative 6-A - with consideration of its recommendations for improvements.

Irene [illegible]

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8 April, 1994

Dear Mr. Butterfield,

I wish to express my support for Canal 111 Project, Alternative 6A or even an improvement over 6A: Design the proposed Canal 111 N as a retention/detention area linked to the area to the north; Use a 500 cfs pump instead of a 50 cfs pump at S-332B. Also, expand the retention/detention area along the west side of L-31 N to Tamiami Trail as suggested in Alternative 8. Also extend Canal 111 N east of U.S. Highway 1.

Very truly yours,

Katherine M. Clark

April 7, 1994

Dear Mr. Sutterfield,

I must express my support for Canal 111 Project, Alternative 6A – or even an improvement over 6A: Design Canal 111N as a retention/detention area limited to the area to the North; Use a 500 cfs pump instead of a 50 cfs pump at S-332B. Also, expand the retention/detention area along the west side of L-31N north to Tamiami Trail. Also, extend Canal 111N east of U.S. Highway 1.

Mr. Owen Sutterfield
U.S Army Corps of Engineers

Dear Mr. Sutterfield:

I encourage you to accept alternative 6A for restoration of the C-111 system, consistent for input into the Florida Bay. C-111N should be extended east of U.S. 1 to release maximum natural water flows to all parts of this system.

Sincerely,

Betty Adams
4300 S.W. 43 Ct.
Ocala, Fla 34471

8 April, 1994

Dear Mr. Satterfield,
I wish to express my support for Canal 111 Project, Alternative 6A: or even an improvement over 6A: Design the proposed Canal 111N as a retention/detention area linked to the area to the north; Use a 500 cfs pump instead of a 50cfs pump at S-332B. Also, expand the retention/detention area along the west side of L-31N to Tamiami Trail as suggested in Alternative 8. Also extend Canal 111N east of U.S. Highway 1.

Very truly yours,
Katherine M. Clark

E5

Dear Mr. Satterfield [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
Except Backpumping [illegible]
[illegible] pumps
[illegible]
[illegible]
C111N should be extended
east of U.S. 1 to allow
the maximum sheetflow
to all parts of the system.
I appreciate all you can do
to help preserve this
small area of Earth.

Nancy Faith Woman MacFarlane
3115 SE 165 Ct. Rd.
Silver Springs FL 34488