this determination in the nearest future. The point of contact on my staff for further information is Mr. Elmar Kurzbach at 904-232-2325.

Sincerely,

James C. Duck
Chief, Planning Division

Enclosure

Jon Moulding
12/20/2000 01:31 PM

To:
cc:
Subject: Re[2]:Panther Habitat within Proposed S-332B North Water Det

---------- Forwarded by Jon Moulding/CESAJ/SAJ02 on 12/20/2000 01:31 PM ----------

From: Sonny_Bass@nps.gov on 10/30/2000 04:20 PM

To: Jon Moulding/CESAJ/SAJ02@CESAJ
cc:
Subject: Re[2]:Panther Habitat within Proposed S-332B North Water Det

Jon

The following are responses to your questions.

1) The area in question is on the fringe of panther habitat, and would not significantly effect panthers.

2) The area does serve as a movement corridor, but probably will not limit their movements.

3) The question of how important is the area, I can not say. Based on the location data this would suggest that panthers use the area less than 10% of the time.

4) As you state, the over riding concern is the cumulative loss of habitat.

If you have any questions let me know.

Sonny

_____Reply Separator_____
Subject: Re:Panther Habitat within Proposed S-332B North Water Detent
Author: "Moulding; Jon SAJ" <Jon.Moulding@saj02.usace.army.mil>
Date: 10/26/00 2:59 PM

Sonny,

Thanks for the input. Sorry to impose again, but we need your help in making an "effects determination".

Based on the input in your previous email, subject above, we determined that converting the area into a water detention area was "Not likely to adversely affect the panther". The FWS does not necessarily disagree with this finding, but wants more discussion to substantiate it, such as:

1. Is this fringe habitat, the loss of which would not significantly affect the ability of the panther population to increase?

2. Does it serve as an important movement corridor, the loss of which would limit the ability of panthers to move between other important habitats?

3. How important is it to the individual panther using it (judging from the print found); e.g. what proportion of that panther's range does it likely represent?

4. Anything else you can think of that would be germane to the question of adverse effect?

One general concern with loss of endangered species habitat is that it often is lost in a series of little nibbles here and there that ultimately result in a significant adverse cumulative loss.

THE $64,000 QUESTION: In your best professional judgement as a panther expert, do you believe that, considering all the above, the loss of the 250 acres of habitat in the proposed water retention area would be likely to adversely affect the panther?

Since I will be out next week, please copy my boss, Elmar, in your reply. Thanks for your continued help, and, as always, we would be very appreciative of a quick response. // Jon

CESAJ-PD-ES November 17, 2000

1999-2000 Annual Report on Conditions Pertinent to Protection of the Cape Sable Seaside Sparrow under the Experimental Program of Water Deliveries to ENP

Background. This report provides information requested under item 9 of the Reasonable and Prudent Alternative included in the U.S. Fish and Wildlife Service's Biological Opinion on the Experimental Program of Water Deliveries to Everglades National Park (ENP), dated February 19, 1999.

Wildfires in the Sparrow's Marl Prairie Habitat and Results of Additional Corps Funding

1999. No information on wildfire occurrence available.

2000. Information provided by the Florida Fish and Wildlife Conservation Commission (FWC) indicates that one lightning wildfire occurred in sparrow habitat in the Southern Glades on Jun3 7, 2000 and burned 1800 acres. Under existing guidelines, no attempt was made to extinguish this fire. ENP has not provided requested information on their wildland fires.

The Corps has not provided funds for additional fire prevention or suppression measures.

Results of Woody Vegetation Control Supported by the Corps

1999. The Corps lacked authority to fund the woody vegetation control program in sparrow habitat previously identified by FWS (reference CECW letter of April 27, 2000, enclosed).

2000. The Corps is determining whether it has authority to fund an exotic vegetation mitigation program at a level of $300,000 per year for two years, followed by an annual sum of $100,000 through 2003 to mitigate for the impacts of the operation of the C&SF Project on sparrow habitat in Federal and State lands. These funds would be used to contract for the removal of target vegetation under a Corps' contract, or provided to ENP or the FWC to incorporate into their existing eradication activities.

Water Release Schedule Implemented to Meet Water Level and Flow Targets in the Eastern Marl Prairie Sparrow Habitat

1999. This information is contained in the Final EA on the 1999 Emergency Actions to Protect the Cape Sable Seaside Sparrow (copy previously provided).

2000. This information is contained in the Final EA on the 2000 Emergency Actions to Protect the Cape Sable Seaside Sparrow Interim Structural and Operational Plan (ISOP), dated March 2000 (copy previously provided).

Water Levels at NP-205

1999. There were 60 consecutive days between March 1, 1999 and July 15, 1999 when water levels at NP-205 were at or below 6.0 feet, NGVD.

2000. There were 40 consecutive days from March 5 to April 13, 2000 and 43 consecutive days from April 26 to June 7, 2000 when water levels at NP-205 were at or below 6.0 feet, NGVD. Water levels rose slightly above 6.0 feet at NP-205 from April 14 to April 25, 2000 due to near record levels of direct rainfall over the area, followed by runoff from upstream areas. The onset of wet season rainfall brought water levels above 6.0 ft. on June 8, 2000. However, water levels were low enough to provide habitat until June 7, 2000.

Real Estate Acquisition within the 8.5 SMA and Everglades Expansion Area

1999-2000. The NPS acquired fee title to 17,946 acres of land Area since February 19, 1999. The Corps acquired fee title to 1063 acres of land and acquired six acres of flowage easements since February 19, 1999.

The Status and Timetable for Completion of MWD Project

1999-2000. The Modified Water Deliveries to Everglades National Park involves construction of modifications to the Central and Southern Florida Project (C&SF) water management system and related operational changes to provide improved water deliveries to Everglades National Park. The project includes water control structures to restore more natural hydrologic conditions within ENP and mitigation for the Tiger Tail Camp and the 8.5 square mile area. The project has three components: 8.5 SMA, Conveyance and Seepage Control and Tamiami Trail.

8.5 SMA - The authorized components of the 8.5 SMA include the construction of flood control canals and seepage levees starting

on the north side of the area and extending along the northern and western perimeters of the area. Two pump stations are also specified. A Final supplement to the original Environmental Impact Statement has completed a 30 day public review. The Recommended Plan consists of perimeter and interior levees as well as a seepage canal. The perimeter levee on the western boundary of the Recommended Plan ranges from approximately 500 to 5000 feet east of the westernmost boundary of the authorized plan. To implement this plan, a total of 2,335 acres would be purchased in fee simple and flowage easements would be required for 546 acres. A new proposed pumping structure (S-357) located at the southern terminus of the seepage canal, would discharge seepage water south into a treatment area in the C-111 project area. Completion of construction and all Real estate outside footprints will be completed by December 2003.

Conveyance and Seepage Control - The conveyance portion of the project consists of (1) water control structures in the L-67A/C canal and levee to discharge water from WCA 3A to WCA 3B; (2) water control structures in the L-29 canal to discharge water from WCA 3B into Northeast Shark River Slough (NESRS) and; (3) removal of the existing levee and canal that runs along part of the park's original eastern boundary and cuts across the center of Shark River Slough (L67 Extension canal and levee), and (4) seepage control of increased water levels in NESRS is handled by S-356. Currently an interagency effort is underway to modify the authorized structures to use less expensive, passive structures (weirs). If a ROD is executed on 8.5 SMA in September 2000, there is the possibility to weave the ongoing SEIS effort into the Operational EIS for MWD and C-111 project which will begin scoping efforts in Fall 2000.

- Schedule: Will probably stop SEIS efforts and weave into the Operational EIS for MWD and C-111 which will initiate scoping in Fall 2000. The modification to less expensive, passive structures will be handled under a Value Engineering Study. The VE Study is currently scheduled in Fall 2000.

Tamiami Trail - The Tamiami Trail under the authorized project, would be raised over a short distance to accommodate the original conveyance feature design flows. Based on improved hydrological information it is now anticipated that up to a 10-mile length of the road would need to be raised 2 feet to accommodate increased water flows and levels. The authorized project also specified the construction of two structures (S355A and S355B), which have been completed. Tamiami Trail

modification is scheduled to complete construction by December 2006.

Additional Structures or Changes to Existing Structures made by the Corps to Meet RPA Targets

During November and December, 1999, modeling was conducted to evaluate various impacts and implementation possibilities for the RPA. The model version was limited in ability to model various closing dates of the S-12 structures, so a request was sent to the SFWMD to revise the South Florida Water Management Model (SFWMM). The changes were written into the newest revision of the model that also allowed for Position Analysis. Modeling in direct support of the ISOP began in February of 2000 with all Corps products being posted on the website for immediate evaluation by all parties. The modeling configurations and performance measures from the Modified Water Deliveries modeling effort were used for the ISOP/IOP modeling.

On April 10-11, the first modeling coordination meeting was held. Attendees represented the Corps, SFWMD, USFWS, ENP, FDEP, DERM, and the FFWCC. During the meeting, USFWS indicated their view based on ENP analysis was that the wet season performance of the ISOP would not meet the requirements of the RPA. Additionally, several questions were raised about the model configuration for the initial round of modeling. Subsequently, the Corps resolved the outstanding configuration questions, removed past modeling results from the web-site and re-initiated all modeling for ISOP and IOP. It should be noted that the configuration used for the initial modeling was the same as that used for the entire CERP modeling effort. Additionally, the Corps modeled the IOP configuration suggested by the group as well as investigated other issues. Modeling was conducted to resolve the issue and ISOP9d, a variation of the original ISOP was implemented. A request was made to the SFWMD to further refine the SFWMM to include the seepage reservoir at S-332B.

On May 15, 2000, a second modeling coordination meeting was held with the same agencies being represented. Additionally, more modeling was done to evaluate the IOP possibilities. At the request of the SFWMD, the Corps provided a Short Paper on why using a single, 4-day event peak difference of 0.1 foot (in a single cell) was inappropriate to be used as a major decision factor in determining system-wide operations. The Short Paper stated that this was beyond the model's capability. By the end of May 2000, the basic set of IOP possibilities was completed and posted. Throughout June, various possibilities for ISOP and

IOP were investigated. To evaluate the possibility of preventing the April 2000 stage rise above 6.0 feet at NP-205, the Corps asked the SFWMD to develop a database that would include the April 2000 event in each of the 31 years of the modeling record. Thus, the April 2000 event was modeled and it was shown that a November 1 closing of S-343A&B, S-344, and S-12s would not have performed better than ISOP under a variety of hydrologic conditions. A request was also made to the SFWMD to update the existing modeling period of record to include the April 2000 event. SFWMD personnel indicated this would be completed by March or April of 2001. Modeling to evaluate localized impacts and tweaking possibilities for ISOP and IOP continued throughout August and into September.

During the first week of September, a new version of the SFWMM was delivered and direct modeling of the seepage reservoir at S-332B was possible. Early results show that modeling the reservoir with an overflow weir is necessary to meet the RPA. With a pumping rate of 325 cfs maximum at S-332B (when L-31N is at or above 4.7 feet) will exceed the requirements of the RPA, while something greater than a maximum of 200 cfs is required to meet the requirements of the RPA. Currently, S-332B is operated at 250 cfs when the stage in L-31N is at or above 4.7 feet. The seepage rate of the reservoir has been observed to be about 100 cfs during the wet season.

The following structural and operational changes were made in an effort to provide optimum nesting conditions for all sub-populations as well as meet the non-nesting season RPA targets.

Actions in 1999

- 12 Nov - Closed S-11's
- 16 Dec - Closed S-12 A
- 18 Dec - Closed S-343, S-344A&B, Opened culverts in L67 ext
- 29 Dec - Closed S-12 B, Started Pumping at S-332D

Actions in 2000

- 5 Jan - Opened S-333, 334
- 14 Jan - Awarded contract for S-332B
- 27 Jan - Posted ISOP 1 on Web
- 31 Jan - Completed Model Revisions
- 15 Feb - Closed S-12 C & D
- 17 Feb - Reduced S-332D pumping & inflows to SDCS

- 17 Feb - Completed BO Base Modeling & ISOP 1, 2, 3, 4, 5 Modeling
- 22 Feb - Conducted Tamiami Trail Flow Test
- 1 Mar - Reduced discharges at S-332 & 332D to 165cfs
- 1 Mar - Implemented new operating schedule for SDCS

OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

REPLY TO
ATTENTION OF

01 NOV 2000

Honorable George Frampton
Chair, Council on Environmental Quality
Old Executive Office Building
Washington, DC 20503-0001

Dear Mr Frampton:

On December 14, 1999, the Army Corps of Engineers requested that the Council on Environmental Quality (CEQ) provide alternative arrangements under the National Environmental Policy Act (NEPA) for dealing with the emergency threat to the endangered Cape Sable Seaside Sparrow (CSSS) caused by extremely high water levels in South Florida associated with Hurricane Irene. The Corps had previously obtained alternative arrangements under NEPA in 1998 for emergency water management actions to meet the needs of the critically endangered CSSS.

On December 23, 1999, CEQ specified several alternative arrangements under the CEQ NEPA regulations. CEQ noted that the Interim Structural and Operational Plan for Compliance with the Cape Sable Seaside Sparrow Biological Opinion (ISOP) contemplated staged implementation beginning on December 15, 1999, with monitoring and evaluation throughout the project. CEQ noted the opportunity for continued sharing of information, responding to issues raised by non-Federal parties, and, if appropriate, making some adjustments in the ISOP. Among other things, the alternative arrangements required that by September 30, 2000, the Corps conclude appropriate NEPA compliance for the operation of the Central and Southern Florida Flood Control Project (C&SF Project) as needed for compliance with the U.S. Fish and Wildlife Service's (FWS) biological opinion for the 2001 breeding season.

The ISOP plan contemplated an interim change in water management operations of the C&SF Project for the 1999-2000 breeding season which included routing water around the sparrow habitat but avoiding private property and minimizing impacts on other parts of the ecosystem. These water management operations would be aided by construction of a temporary pumping station (S-332B) to meet the hydrologic equivalent of the Reasonable and Prudent Alternative (RPA) of FWS' biological opinion in the Eastern CSSS habitat and to assist in routing water from Water Conservation Area 3A when the S-12 structures were closed. The ISOP anticipated a refined Interim Operating Plan (IOP) beginning in the 2000-2001 breeding season, which would continue until implementation of the Modified Water Deliveries Project, which is planned for 2003. However, the ISOP NEPA document noted that it would remain in effect until agreement is reached on an IOP.

Because we must implement operational procedures for the next breeding season before the formal IOP EIS process can be completed, the Army Corps of Engineers requests that the alternative arrangements schedule be adjusted to allow the ISOP to remain in effect for the upcoming breeding season. A substantial amount of modeling has been required and Federal agencies are still consulting on the results of the ISOP and on several issues relating to the IOP. The Army Corps of Engineers and FWS have discussed refinements to the ISOP for the upcoming breeding season. The agencies have also met with the South Florida Water Management District (SFWMD), Native American Tribes and community groups.

The modifications of ISOP for the sparrow breeding season of 2001 include:
November 1: close S-343 A&B, S-344 and S-12A
November 1-February 10: raise Zone D of the WCA-32 regulation schedule by 0.5 feet
October November: Construct new S-332B detention area
November: complete modeling of higher L-31N canal levels; implement, if Appropriate
January 1: close S-12B, reopen L-67E culverts
February 1: close S-12C
February15: begin gradual reduction of S-332D pumping
March 1-July 15: monitor system response and rainfall.

The ISOP 2001 plan was discussed at an interagency meeting on October 11, and was presented at the SFWMD Governing Board meeting on October 12. The reaction to the plan was mixed. Most agree that the plan will work well in years of average rainfall. There is concern in the agricultural community about higher canal stages and the ability of the system to deliver design flood protection during periods of above average rainfall. FWS and ENP expressed concerns on the closure of the S-12s and the actual performance of the plan in the eastern habitats. SWFWD had concern regarding the implementation of the ISOP, and while not endorsing the ISOP, is willing to work with the federal agencies. Our position has been that it is not possible to try to guess every variable and predicate every water management action. We have sufficient experience with the system to believe with confidence that we can meet the requirements of the CSSS and maintain appropriate levels of flood protection to agriculture and residents.

Here is a summary of other events to date:

A public workshop on scoping for the IOP EIS was held on November 16, 1999. CEQ's alternative arrangements letter was issued December 23, 1999. The draft Environmental Assessment (EA) for the ISOP was published on January 10, 2000, followed by a public workshop. The initial modeling results for the ISOP were finished February 17, 2000. The final ISOP EA was published March 2000. The Corps set up a public internet site to keep the public informed of water management monitoring data and modeling results. IOP alternatives were proposed in March and posted to the

website. An interagency meeting to draft an IOP was held April 10, at which time the initial modeling impact analysis was discussed. In May additional modeling results and alternatives were posted to the internet site and FWS provided a Planning Aid Letter. On May 15, 2000, an interagency meeting was held to discuss the second round modeling impact analysis.

In June, the third round of modeling results and alternatives was posted to the internet site. On June 7, 2000, a public workshop was held on the ISOP and IOP. That same month, the Corps sent FWS a recommended plan for the Draft EIS. On June 23, 2000, a conference call was held involving, among others, this office, CEQ, FWS, and the Corps to discuss issues relating to the 8.5 Square Mile Area General Reevaluation Report\Supplemental EIS for Modified Water Deliveries to Everglades National Park (8.5 SMA GRR\SEIS) and related issues, including the CSSS. It was determined that completion of the 8.5 SMA GRR\SEIS had priority over the formal IOP EIS and that resolution of the agency consultation process involving the IOP should be deferred until completion of the 8.5 SMA GRR\SEIS. In subsequent consultations on modeling for the IOP, the FWS and Everglades National Park (ENP) requested changes in the modeling code. The Corps requested these changes from the SFWMD, which had developed the model. The code changes were completed in September. Discussion of the modeling with FWS has continued, including a meeting this month.

In addition to modeling, the Corps and other agencies have consulted on the performance of S-332B. The Corps received two requests for percolation tests to measure the performance of S-332B, one was carried out in April, a second in June. The Corps, the FWS, ENP, Florida Department of Environmental Protection and the SFWMD are also consulting about the water quality impacts and additional water detention areas for S-332B. As a result of these extensive consultations we will be unable to finalize the IOP until September 2001. However, while later than we expected, this schedule will allow implementation of the IOP for the 2002 breeding season. Further, this office will work with the Corps over the coming months to ensure that they meet this schedule.

Please note that CEQ's alternative arrangements letter required several other items that are not affected by this request. These include: preparation of an EA on the ISOP (draft published January 2000; final EA published March 2000); and preparation of a report to CEQ summarizing the results of monitoring and evaluation of the ISOP (report, enclosure 1). Your alternative arrangements letter also required other items which have been and will continue to be, part of our process. These include public meetings and notification to interested and affected non-Federal parties of progress reports, including monitoring and evaluation results; government-to-government consultation with the Miccosukee Tribe and the Seminole Tribe regarding the ISOP; and close coordination with the US FWS, the National Park Service, the SFWMD, and other State and local agencies with special jurisdiction and expertise.

For these reasons, we respectfully request your guidance on alternative arrangements and request that you permit the ISOP, with the modifications for 2001 described above, to remain in effect until full modeling and coordination for the IOP has been finished, and the formal EIS process for the IOP can be completed.

Sincerely,

Michael L. Davis
Deputy Assistant Secretary
(Policy and Legislation)

Enclosure 1 (Report to CEQ on ISOP 2000)

2000 Annual After Action Report on the Status of the Cape Sable Seaside Sparrow under the Interim Structural and Operational Plan

Background. This report addresses the stipulations of the CEQ letter of December 23, 1999 to provide an analysis of the status of the sparrow under the first year of the ISOP. A separate report has been prepared which specifically provides information requested under item 9 of the Reasonable and Prudent Alternative included in the U.S. Fish and Wildlife Service's Final Biological Opinion of February 19, 1999.

Introduction. The extremely high water levels, as a result of Hurricane Irene, October 14 - 16, 1999, made preparing for the 2000 nesting season very challenging. According to the South Florida Water Management District (SFWMD) Surface Water Conditions report for October 1999, this October was the wettest in 30 years, being only surpassed by the heavy rainfall at the end of the 1995 wet season. The 1999 wet season, June through October, ended as the second wettest since 1960 at 43.09 inches or 131% of the historic average." Figures 1-3 are hydrographs of Water Conservation Area (WCA) 2A and 3A and the ENP/South Dade Conveyance System (SDCS) showing the effect of Hurricane Irene on water levels throughout the Central and Southern Florida Project (C&SF). Due to above normal water levels late in 1999, in order to provide the best opportunity for a successful nesting season, operational changes to the system began in November 1999, well before the March 1 start of breeding.

In December 1999, the Department of the Army (Army) met with the Department of Interior (DOI), the Department of Justice (DOJ), and the President's Council on Environmental Quality (CEQ) in order to develop an operating plan for the 2000 nesting season. From that meeting, the Interim Structural and Operational Plan (ISOP) was developed to meet the 2000 nesting season requirements. In addition, the ISOP was developed to meet the non-nesting season requirements which are the hydrologic equivalent of discharging 30 percent of all regulatory water releases, described as the "supplemental regulatory component" in appendix C of the Final EA for Test 7, across the Tamiami Trail and enter ENP east of the L-67 Extension and the hydrologic equivalent, or better, of Test 7 Phase II water levels for sub-population C, D, and F.

In March 2000, the Corps issued a Final Environmental Assessment (EA) for the ISOP. The EA detailed the operational changes that

the Corps believed could be implemented to meet the requirements of the U.S. Fish and Wildlife Service's (FWS) Biological Opinion, while maintaining other authorized C&SF project purposes. The Corps noted that operations could be modified by further modeling and/or testing and monitoring through coordination with the FWS and others as deemed appropriate. This coordination has been ongoing and we have had two interagency meetings regarding the ongoing modeling efforts and two public workshops. These meetings and exchange of information between FWS, ENP and Corps has resulted in a set of operations that the Corps believes provides the best chance of protecting the CSSS, will meet the non-nesting season targets of the RPA, and maintains other project purposes of the Central and Southern Florida (C&SF), such as flood control and water supply. These operations, specifically, ISOP-9d, are detailed on the following web site :
http://www.saj.usace.army.mil/h2o/lib/documents/hw-isop/isop.htm
as well as the ongoing modeling efforts at
http://hpm.saj.usace.army.mil/index.html.
These operations are currently being used and will be utilized until the Environmental Impact Statement (EIS) for the Interim Operational Plan (IOP) is complete.

Summary of the 1999/2000 ISOP operations:

Actions in 1999

- 12 Nov - Implemented temporary deviation to the WCA-2A regulation schedule and closed the S-11's.
- 16 Dec - Closed S-12 A.
- 18 Dec - Closed S-343, S-344A&B, Opened culverts in L67 extension.
- 28 Dec - Delivered sand bags to National Park Service for plugging of the culverts along the Shark Valley Tram Road to reduce likelihood of S-12C flow impacting western area.
- 29 Dec - Closed S-12 B, Opened S-151 and began Pumping at S-332D.

Actions in 2000 - January through July 15

- 5 Jan - Opened S-333 and S-334 to move additional water from WCA-3A via the SDCS.
- 13 Jan - NPS completed blocking of culverts in Shark Valley Tram Rd.
- 14 Jan - Awarded contract for S-332B.
- 27 Jan - Posted ISOP 1 modeling results on Web.
- 31 Jan - Completed Model Revisions.
- 1 Feb - Start temporary deviation to WCA-3A, Zone E1.
- 15 Feb - Closed S-12 C & D.
- 17 Feb - Reduced S-332D pumping & inflows to SDCS.

- 17 Feb - Completed BO Base & ISOP 1, 2, 3, 4, 5 Modeling.
- 22 Feb - Conducted Tamiami Trail Flow Test.
- 1 Mar - Reduced discharges at S-332 & 332D to 165cfs.
- 1 Mar - Implemented new operating schedule for SDCS.
- 12 Apr - Completed S-332B and began pumping on 13 Apr.
- 12 Jun - Began wet season operations.
-

Operational changes began in November 1999 with approval of a temporary deviation to the WCA-2A regulation schedule. This deviation allowed water to be held in WCA-2A rather than be discharged to WCA-3A, which already had above normal water levels, and subsequently lessened the amount of water that would have been released toward western sparrow habitat or retained in WCA-3A.

The water levels for WCA-2A, figure 1, show that prior to closing the S-11's in November, the recession rate in WCA-2A was such that WCA-2A may have receded to below the regulation schedule by late December or early January. By closing the S-11's, water levels remained high in WCA-2A. The benefit for WCA-3A, however, was a decrease in inflows. As a result, water levels in WCA-3A, figure 2, show a constant recession rate rather than a flattening, or slowing, of the recession that would have occurred due to inflow from WCA-2A. In mid-December, S-12A was closed as well as the structures in L-28, S-343A, S-343B, and S-344. The culvert structures in the L-67 extension were also opened at this time. S-12B was closed at the end of December. The culverts in the Shark Valley Tram road were sandbagged, and S-333 and S-334 were opened the first week in January to move water via the SDCS. Both the Fish and Wildlife Conservation Commission (FWCC) and the South Florida Water Management District (SFWMD) urged the Corps to leave structure S-12C and S12D open to offset the early closure of S-12A and S-12B and as part of the temporary deviation for WCA-3A Zone E1 to minimize the likelihood of water levels in WCA-3A increasing back above regulation schedule. Due to rainfall they were closed on February 15 and remained closed until July 20, when S-12D was reopened.

Water levels at NP-205, the indicator gage for sub-population A receded to 5.99 ft-NGVD, on March 5, and remained below the target of 6.00 ft-NGVD or less until heavy rainfall in mid-April caused a rapid increase in water levels, see figure 4. The BO target was for water levels at or below 6.0 ft-NGVD for 60 consecutive days between March 1 and July 15, 2000. The period from March 5 to April 13, was 40 consecutive days. The BO does have a provision for granting an exception if a rain event occurs that is extreme and if the Corps has met all other

provisions of the RPA. The rainfall occurred over a 5-day period and, based on analysis, was an extreme event.

An analysis of the April 12-16, 2000 rainfall event indicates that this was an unusual meteorological occurrence for the month of April, which is in the middle of the dry season. The historical average for the entire month of April for this area is 2.44 inches. The rainfall was widespread and the areas that received the heaviest rainfall were S-12D, east of NP-205, and 3A-SW, directly north of the sub-population A, as shown in figure 5. A total of 8.65 inches of rain fell over the NP-205 basin area as delineated from the NEXRAD image. The 8.65-inch rainfall event matched the 500-year return frequency for April rainfall. Clearly it was an extreme event based on this analysis. In addition, a return frequency analysis for TAMITR40, which is approximately two miles north of NP-205 (also known as 40 Mile Bend) was performed. TAMITR40 was chosen because it has a long and continuous record dating back to 1949. This rain gage recorded a total of 6.26 inches over the period April 12-16, 2000. The frequency analysis based on total monthly rainfall (April) for a period of record of 51 years indicated that the April 2000 event at 40-Mile Bend exceeded the 25-year return frequency. Again, the latter return frequency analysis supports the position that the rainfall event in April 2000 was a rare occurrence.

Water levels remained above 6.0 ft-NGVD for approximately 10 days between April 14 and 25. From April 26 through June 7, 2000 water levels were below 6.0 ft-NGVD, until rainfall again caused the water levels to increase above 6.0 ft-NGVD, a total of 43 consecutive days. In total, ISOP operations for the 2000 nesting season provided for over 80 days below 6.0 ft-NGVD, in spite of the extreme rainfall event in April. Additional modeling analysis, based on a 31 year period, indicated that regardless of what operational changes were made, the rainfall that occurred in 2000 would have fallen short of the RPA targets. Therefore, the Corps believes that an exception should be granted.

Water removed from WCA-3A was routed to the South Dade Conveyance System (SDCS) as capacity was available. Water was rerouted, as per the ISOP, to help rehydrate eastern habitat area while reducing water levels in WCA-3A. In February, the FWS, through informal consultation, recommended that pumping to Taylor Slough should be cut back in order to begin a recession rate favorable to the start of the nesting season on March 1. In On February 17, inflows to the SDCS via S-334 were stopped, though flows to L-29 via S-333 continued. On February 18, pumping at S-332 and S-332D was reduced in an effort to begin a

recession rate in advance of the March 1 start of the nesting season for subpopulation C and D. On February 25, the Corps was contacted by NPS that a large fish kill occurred in Taylor Sough due to the sudden reduction in pumping. As a consequence, pumping on a reduced scale was restarted. The lesson learned was that gradual changes are advisable when transition from high flows to low flows to allow the natural system to adjust.

From March 1 until the start of wet season operations, the pumping at S-332 and S-332D did not exceed the nesting season maximums as recommended in the BO. Once the wet season began in late May/early June, the Corps held a phone conference with the FWS to determine the status of the eastern sub-populations, the phone conference was followed up by an email, enclosed, and verified that the FWS stated that the Eastern sub-populations had opportunity for a least two broods before wet season rainfall necessitated the beginning of wet season operations during the week of June 12th.

The following are specific questions asked the Corps by CEQ:

Sparrow Monitoring and Evaluation of the ISOP in Terms of it Meeting Projected Goals. Based on population research on the species by ENP, the minimum recovery goal for the overall sparrow population envisioned in the BO and the implementing RPA includes at least two successful broods in each sub-population each year. Each brood requires about 40 days of optimal water conditions to successfully fledge. Year-to-year population trend estimates from a singing-male count in a particular area depend on the following two factors: the reproductive success in the previous year (which provides the recruitment of fledgling birds into the population to potentially increase the population size) and the water levels at the time of the count (which determines whether the males present would be detectable - a water level in excess of two inches inhibits singing, which is the principal indication of presence in this species).

Table 1 shows a comparison of the sparrow population estimates for 1999 and 2000 based on the monitoring of singing males during the breeding season each year. The overall population counts decreased by about 2% in 2000 compared with 1999. Habitat B showed a 11% decrease in counts, but it is widely agreed that, in contrast with all the other sparrow habitats, the hydrology of Habitat B is not affected by water management operations. In the other habitats affected by water management operations (A, C, D, E and F), there was an 11% collective increase in counts. Sub-Population A showed a 22% increase in counts since 1999. Collectively, the eastern sub-populations affected by water management operations (C, D, E,

and F) showed a 7% increase over 1999, resulting entirely from a 33% increase in Sub-Population E. The declines in the eastern sub-populations (C, D, and F) occurred despite meeting the hydrologic targets for the habitats in 1999. It could be concluded that meeting, or not meeting, the criteria for water management operations and hydrology in the BO is not the best predictor of population trends.

Although the 60 continuous-dry-days target in the RPA was not met for the critical Sub-Population A, the two separate 40-day dry periods obtained in Sub-Population A may be the reproductive equivalent, since that could have allowed double brooding this year. Next year's counts may allow this to be evaluated.

It should be noted that there may be considerable variation inherent in the sparrow count methodology. Table 2 shows the counts in Sub-Population D made by the Florida Fish and Wildlife Conservation Commission (FWC) using identical methodology employed by ENP. From their results, it would be concluded that Sub-Population D has the potential to do exceedingly well this year, whereas the Park data would lead to the opposite conclusion. To better assess such variables, ENP conducted replicate censuses this year, and will be reporting on them in the near future.

Effects of ISOP on Other Natural and Cultural Resources. Modified operations for the S-12 structures to protect sparrow Population A from high water had the potential to result in higher than normal water levels in WCA 3A by reducing the discharge of water out of the area. However as part of the overall system operating modifications, the S-11 structures that would normally discharge water into WCA 3A from WCA 2A were closed in conjunction with closing the S-12s. ISOP performed well throughout the area. The high water in WCA 3A continued to recede and was below normal regulatory schedules by February, 2000. Hydrologic analysis indicated that ISOP resulted in an overall lower stage in WCA 3A than would have occurred under normal operations. Therefore, it is concluded that there were no adverse effects to natural and cultural resources in WCA 3A beyond that which would have occurred absent the sparrow emergency operations. Water levels in WCA 2A were considerably higher and of longer duration than that which would have occurred under normal operations. WCA 2A is an area that has been stressed from many years of higher than optimal water levels. Tree islands have largely been decimated in the past. As such, the primary effect in WCA 2A expected from the ISOP would be a retardation of the slow biological recovery of the system from excessive water levels in the past. The St. Lucie

and Caloosahatchee estuaries would have experienced high flows of fresh water under the ISOP. But these would not likely have resulted in any greater harm to estuarine productivity than the flows that would have been required under normal operations to remove excess water from the 1999 storm from the system. Pumping at S-332B has moved about 20,000 acre-feet of water into the region near sub-population F. Pumping at S-332D has moved more than 51,000 acre-feet of water into the region near sub-population C. During periods when G-3273 was above 6.8 feet and WCA 3A was above regulatory schedule, water was passed through S-344 and into L-31N (more than 42,000 acre-feet). No flood impacts on private properties have been reported along L-31N since the ISOP has been in place.

NEPA Compliance and Decision-Making for 2001 Sparrow Breeding Season. A Draft EIS on an Interim Operating Plan (IOP) has been prepared and is expected to be noticed in the Federal Register during the last quarter CY2000. If approved, the IOP will replace the ISOP for the duration of the period until the Mod Waters and C-111 project features are constructed and ready for operation in 2003. In FY 2001, an EIS will be started on an overall Combined Operational Plan for the C&SF Project that will integrate operations for Mod Waters and C-111. This will replace the IOP in 2003, or whenever all the structural features are ready to be operated.

Table 1. CSSS Population Estimates

Year	Sub-Population Estimate*						
	A	B	C	D	E	F	Total
1999	368	2048	144	192	784	16	3552
2000	448	1824	112	64	1040	0	3488

*Note: Reported by Everglades National Park (Estimate = Number of singing males counted x 16)

Table 2. Population Estimates by the Florida Fish and Wildlife Conservation Commission (FWC)

	Cape Sable Seaside Sparrow Population D Estimates													
	1981	1985	1987	1989	1990	1992	1993	1994	1995	1996	1997	1998	1999	2000
ENP	400	-	-	-	-	112	96	-	0	80	48	48	176	64
FWC	352	672	400	288	192	32*	-	32	80	32	160	64	112	224

* Note: FWC postulated that a May 1990 wildfire that burned 5000 acres, including 50% of the survey area, caused a decline in counts for years to follow.

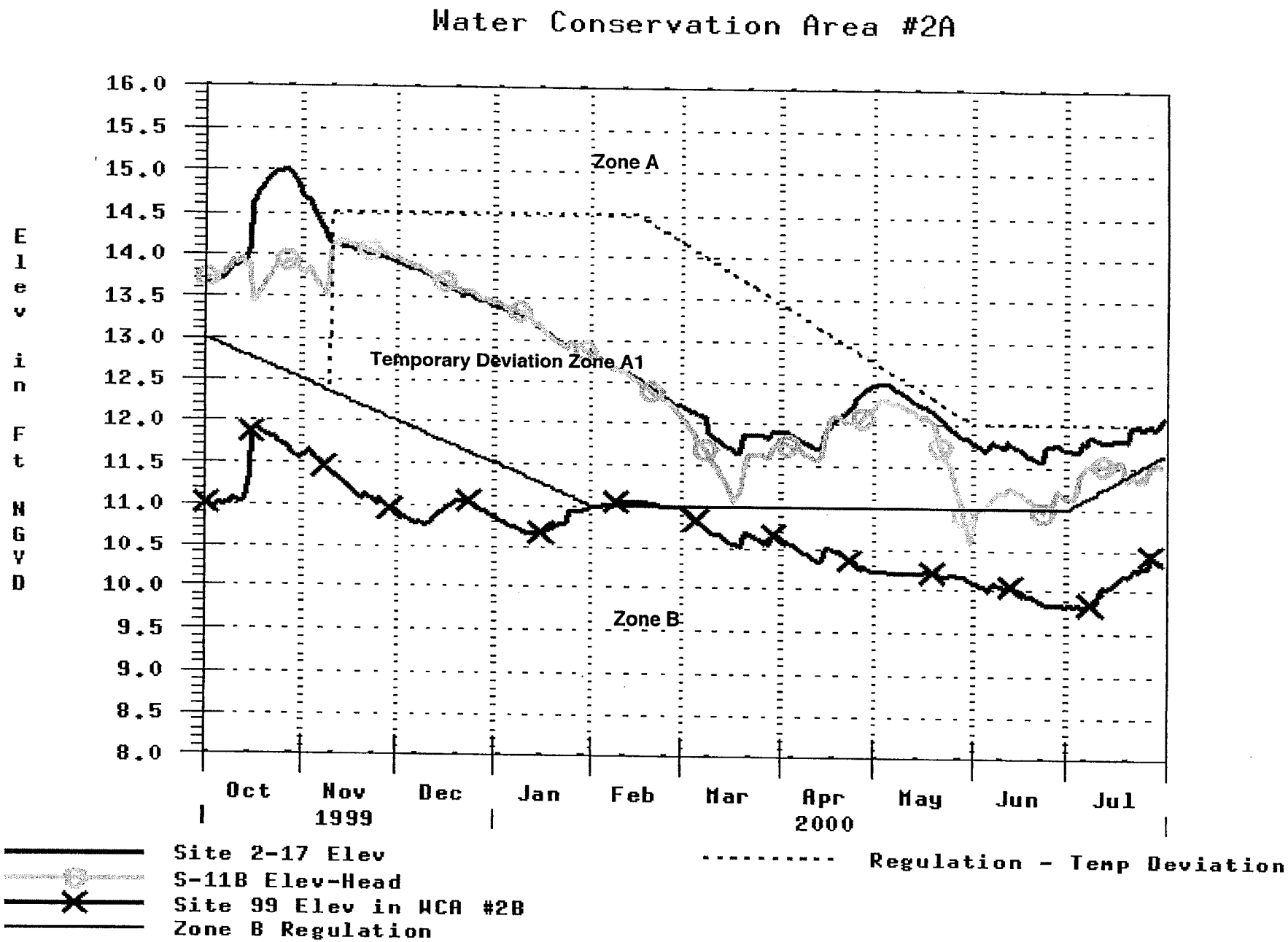

Figure 1. Water Conservation Area 2A hydrograph.

Data are provisional and subject to revision

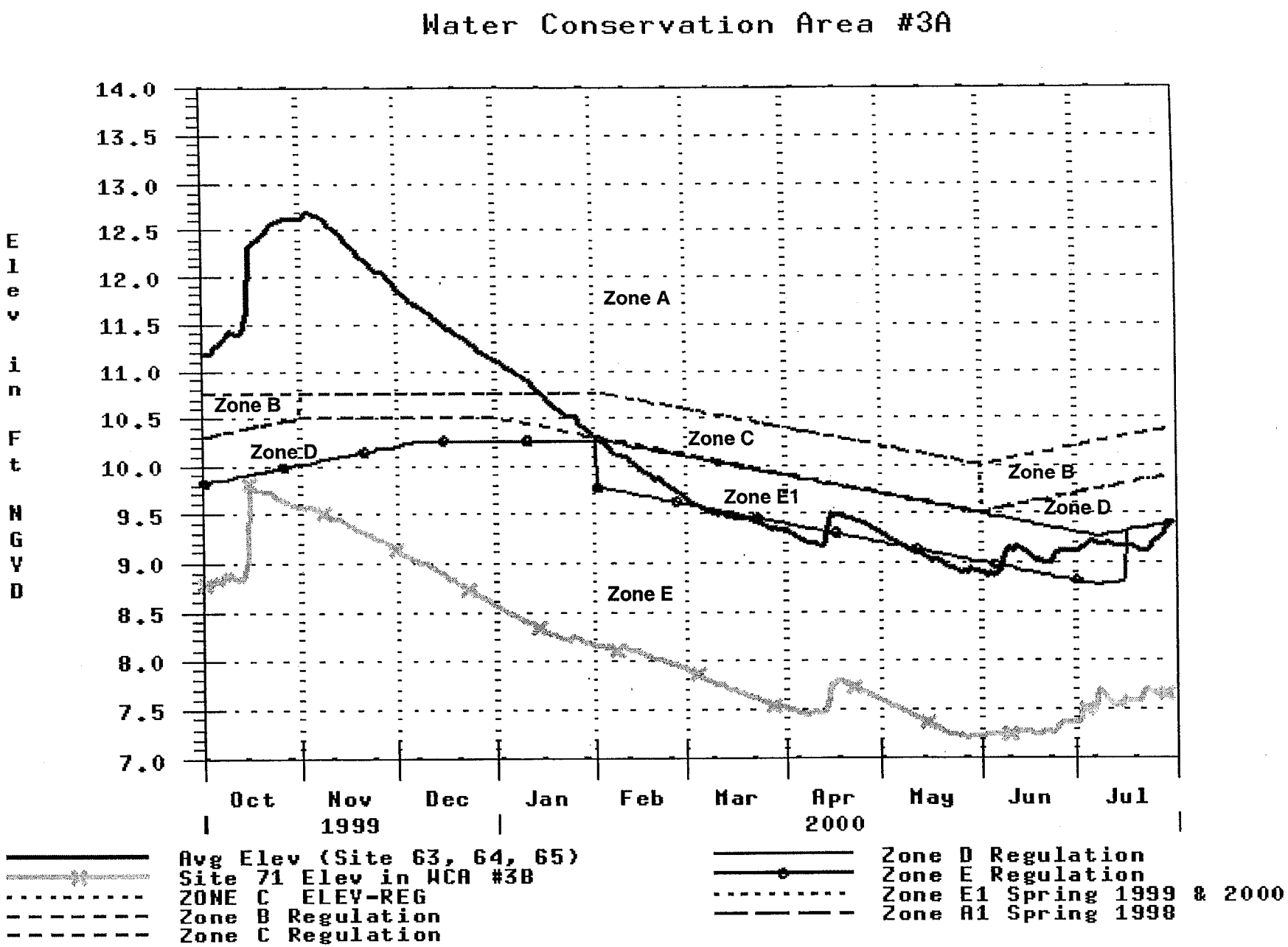

Figure 2. Water Conservation Area 3A hydrograph.

Data are provisional and subject to revision

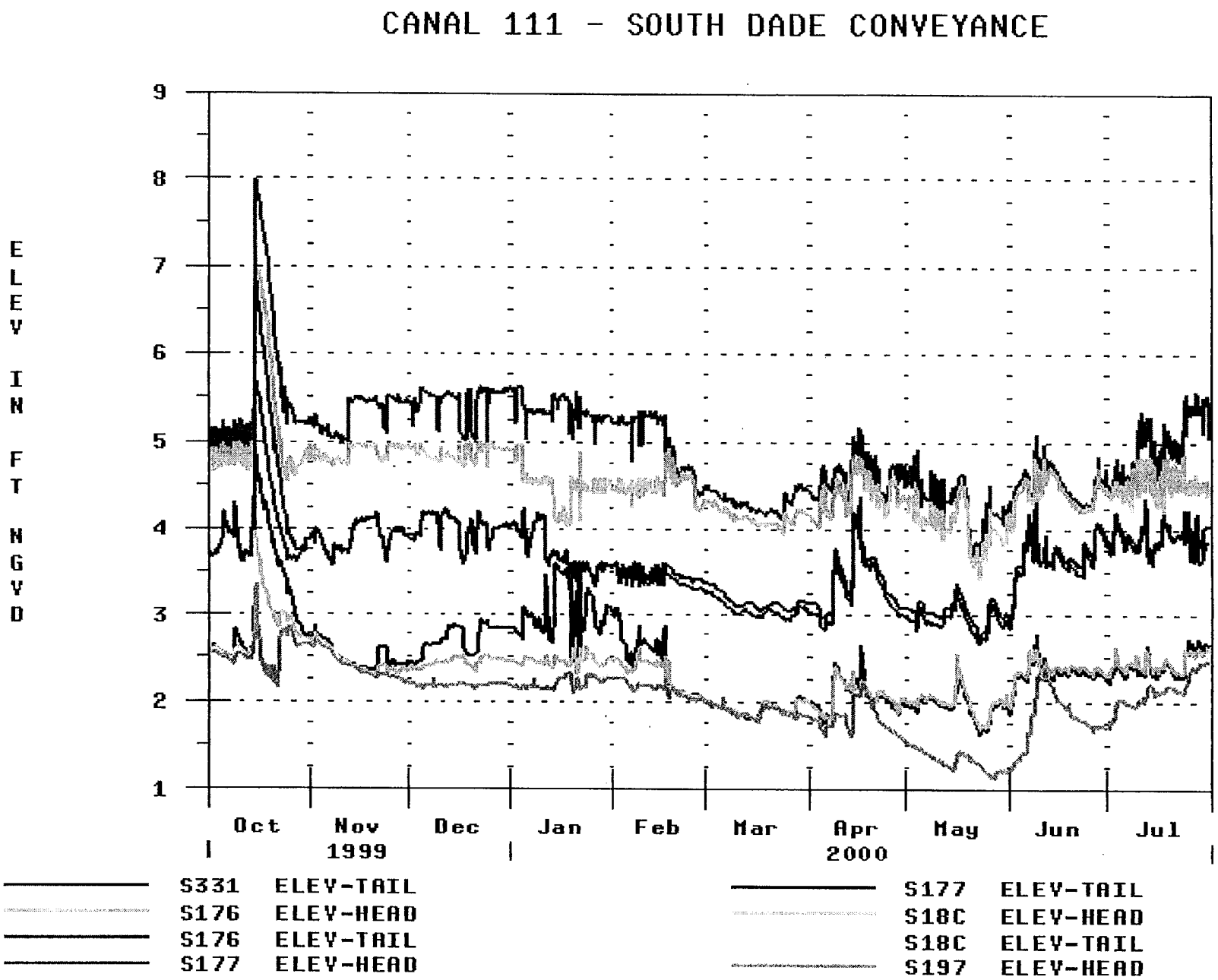

Figure 3. South Dade Conveyance System, L-31N and C-111, water levels.

Data are provisional and subject to revision