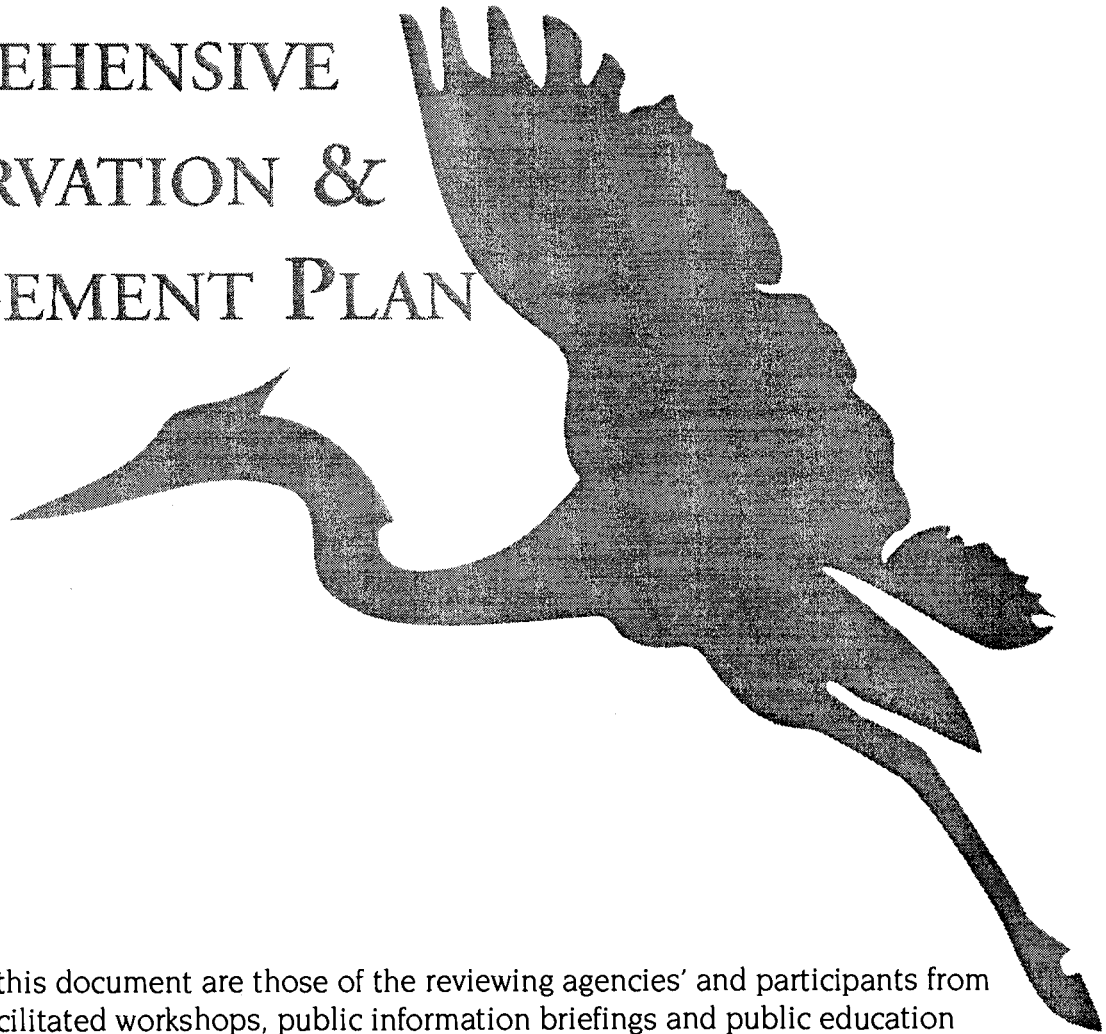


PUBLIC
PARTICIPATION
INITIATIVES FOR
THE INDIAN
RIVER
LAGOON
COMPREHENSIVE
CONSERVATION AND
MANAGEMENT PLAN



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COMPREHENSIVE
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The opinions expressed in this document are those of the reviewing agencies' and participants from the public who attended facilitated workshops, public information briefings and public education events sponsored by the Indian River Lagoon National Estuary Program. These opinions do not necessarily reflect the views and policies of the U.S. Environmental Protection Agency, the St. Johns River Water Management District or the South Florida Water Management District, in particular. Mention of trade names, corporations, or commercial products does not constitute endorsement or recommendation by the sponsoring agencies or the Indian River Lagoon National Estuary Program.

This report summarizes the public comments the Indian River Lagoon National Estuary Program Management Conference received from elected officials, environmental managers, scientists and the public throughout the public participation initiative for the Indian River Lagoon Comprehensive Conservation and Management Plan (CCMP) during the last five years. This report serves as a companion publication to the CCMP and is intended to provide a comprehensive summarization of how the public has played an integral part in shaping the plan and future restoration efforts to protect the Indian River Lagoon.

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MESSAGE TO THE READER

This document contains the letters received from all involved agencies following their review of the Indian River Lagoon Comprehensive Conservation & Management Plan (CCMP) in its evolving stages. All agencies and members of the public were asked to comment on the CCMP. This document presents the public and agency comments, as well as IRLNEP's response.

Introduction

The introduction section provides an overview of public and agency participation which shaped the final CCMP. The importance of public participation and the means of getting the public involved are discussed. The agency review process which generated the enclosed letters and comments is described, as well.

Appendix 1-Governmental Agency Letters and Responses

All letters of review received from agencies are included in this appendix. Included are comments from federal, state and county agencies. State agencies also submitted comments as part of the Florida State Clearinghouse review. Therefore a summary from the State Clearinghouse Office has also been included. Some agencies have provided comments over a period of time after reviewing several drafts; therefore, a number of letters are included for those agencies. All letters from agencies are located on the left-hand side of the page. The responses provided by IRLNEP are located on the right-hand side of the same page where the comment is located. All comments and responses are numbered to allow for greater ease in cross-referencing between comment and response.

Appendix 2-Public Consensus-Building Workshops Results

This appendix provides a summary of the public participation recorded during the Sub-Regional and Lagoon-Wide Consensus-Building workshops. It emphasizes the importance of this public participation in shaping the Final CCMP.

INTRODUCTION

"The public is invited to share the heat in the kitchen of public policy."

--Harry S. Truman

The goal of public involvement within the Indian River Lagoon National Estuary Program (IRLNEP) was to develop the public consensus necessary to ensure long-term support for, and implementation of, the Indian River Lagoon Comprehensive Conservation & Management Plan (CCMP). Consensus signifies substantive agreement among groups who have input into the decision-making process affecting the management of the natural resources of the Lagoon. These groups include elected officials, environmental managers, scientists, agriculture, business and the public. These groups have developed consensus on the actions recommended within the plan (CCMP). The criteria used during discussions considered the technical validity, fairness, and likelihood for success of proposed actions.

Informing and involving all groups in the decision-making process has been no small undertaking. Public participation as defined and demonstrated within the IRLNEP, has involved citizens to all practicable levels in the decision-making process. To achieve full public participation in the development of the CCMP, a Public Involvement and Education (PIE) Strategy was developed during the early months of the program. This PIE strategy was approved by the Management Conference during the first six months of the program.

Many public outreach methods were developed to carry out the PIE strategy. These were used by the CAC and other Management Conference members to foster understanding of the Lagoon system, threats to the systems and the IRLNEP's efforts to maintain and improve the estuary. Key public education tools were also developed during the first year of the program. In particular, the program's CAC has played a vital role in carrying out the Pie strategy. The following is a list of the educational tools developed and utilized throughout the course of the programs directed by the program's PIE Strategy.

Public Involvement and Education Tools

Multi-marketing

Brochures	(A <i>Fragile Balance</i> -fold-out poster size with Lagoon map and interesting Lagoon facts. This brochure is distributed to all interest groups and general public.)
Video Brochures	(A one-hour documentary- <i>Driven By the Wind</i> produced in conjunction with the public broadcasting station WMFE-Channel 24.-This video is shown by CAC speaker bureau representatives and IRLNEP staff weekly at group presentations.)
Slide Shows	(A 90-slide show program on the IRLNEP- shown alternatively by CAC speaker bureau representatives and IRLNEP staff weekly at group presentations. Individual custom slide presentations have been produced by IRLNEP staff to address specific issues arising in the IRL.)
Posters	(Premiere <i>Indian River Lagoon</i> poster designed by Dr. Duane DeFreese; Aerial of IRL from the clouds, designed by IRLNEP staff; Challenge for the 21st Century, designed by the IRLNEP staff. All three posters were used to educate the public. All posters were very popular and reprinted several times.)
Newsletter	(The <i>Indian River Lagoon Update</i> , a quarterly 8-page newsletter produced by IRLNEP staff, covering topical events, a Lagoon calendar, special CAC/Non-Profits page,

- USEPA column, Director's Remarks column, and a spotlight TAC scientific article. This newsletter is mailed quarterly to more than 4,800 recipients.)
- Letterhead stationary (The IRLNEP program letterhead is utilized for all general program correspondence. A special letterhead was developed by IRLNEP staff and the Biodiversity Committee and used for the IRL *Biodiversity Conference* to distinguish all correspondence for that special event.)
- Television Specials ("Our Heritage At Risk"; "Our Resources At Risk"; "Our Natural Habitats at Risk"; September's program to be announced--four live call-in programs with panel of expert speakers, a moderator--a local, Orlando news anchor, documentary-style roll-ins, with a 10-member, toll-free number phone bank to answer on site to answer phone calls from the public.)
- Infomercials/Public
- Service Announcements (Three IRLNEP program-related PSAs--*Nature (highlights the biodiversity of the Lagoon)*; *Don't Pollute the Lagoon (targeting toxic dumping, i.e. oil changes, road grime)*; *The Lagoon is not a Compose Landfill* (targets lawn clipping dumpers); and two special PSAs donated from the Tampa Bay NEP on the Florida Yards & Neighborhoods program with IRLNEP's logo attached.
- Program Displays (One six-panel, table-top, Nimlock display with laminated photographic and artwork images that have been duplicated in a poster entitled *Challenge for the 21st Century*--used by the CAC speakers bureau and IRLNEP staff for presentation requests and all festival/fairs; a second display included laminated photographs, artwork and text which was provided to the City of Melbourne for the Manatee Park Pavilion at Crane Creek.)

Targeted Media

- Mailing List (This mailing list of more than 4,800 is used weekly to inform members of the general public and interest groups about the program's developments and issues concerning the Lagoon.)
- Direct Mail Post Cards (These mailers are used to notify the general public, interest groups and the Management Conference about upcoming meetings.)
- Direct Mail (Specific event announcements including specific announcement mailers for the Environmental Professional Grants Network meetings, the Finance Task Force meetings, Coastal Management Workshops, and other special IRLNEP sponsored events.)
- Editorials (Specific newspaper Lagoon editorial or Letters to the Editor, either written by the press or by IRLNEP Management Conference membership regarding lagoon issues.)
- Promotional Items (Promotional items include pens promoting the IRL as "America's Most Diverse Estuary" IRLNEP lapel pins, IRLNEP mugs, and IRLNEP t-shirts)
- Press Publicity (Including articles written about the lagoon either prompted by press releases or by IRLNEP events. Environmental issues receive press coverage from both newspapers and local television weekly in the IRL region.)
- Lagoon License Plate (In 1993, the IRLNEP in conjunction with the IRL Surface Water Improvement and Management Program, initiated a promotional campaign to raise 11,000 signatures from the public to sponsor legislation for a specific Lagoon license tag for automobiles. The legislation passed in early 1994 and the tags have been issued since early 1995. All revenues generated from the sale of tags are directly applied to Lagoon restoration and educational projects. None of the revenues are used to pay for salaries or administrative costs.)

Telephone

- Telephone Surveying (Under the direction of the program's CAC, occasionally the IRLNEP staff canvases the public to gain information about educational approaches and timeframes for tar-

	getting issues of public concern and educational events, i.e. coastal management workshops.)
Toll-free number	(A toll-free number is available within the state of Florida to the general public to call the IRLNEP office. This phone number has encouraged citizens to contact the IRLNEP as a clearinghouse for information and has promoted interactions from the public.)
Non-Media	
Name and Logo	(The IRLNEP name creates an identity for the program, while the graphic image of a great blue heron has been used consistently throughout the program's correspondence as shorthand.)
Affinity Marketing	(The IRLNEP has partnering on a regular basis to distribute program information including Boater's Guides at tax collector offices, public informational material at local lagoon environmental education facilities and planning materials at state and local governmental agencies. These efforts have fostered the need for environmental restoration and environmental stewardship for the region.)
Specialized Marketing	(Special slide show and speaking engagements have been provided by the CAC speakers bureau and IRLNEP staff to special interest groups. These engagements include presentations at special meetings, scheduling state representative tours, and coordinating coastal management workshops on issues.)
IRLNEP Accessibility	(The various committees associated with the IRLNEP Management Conference have purposely scheduled meetings in southern, central and northern locations of the Lagoon to allow for accessibility to the IRLNEP program to the general public, other agencies and elected officials.)
Education Events	(The IRLNEP CAC has regularly participated in special public educational events including the Annual IRL Day at Melbourne Square Mall, River Days in Indian River and St. Lucie County and others.)
Technology/Trade Conferences	(IRLNEP Management Conference members and IRLNEP staff have continually provided professional presentations and technical papers to specific technology and trade conference to promote the goals, share technology and findings of the program.)
Lagoon Partners Fund	(A mini-grant program, providing grants of \$2,500-\$5,000 for 12-month educational demonstration projects was provided to more than 50 groups during the last four years. The CAC provided review of all submitted competitive proposals and awarded the monies.)
Coastal Management Workshop Series	(During the second year of the program, a partnership was established between IRLNEP and the Florida Coastal Management to provide quarterly educational workshops on topical issues for the general public and environmental professionals. These workshops typically drew between 50 and 100 people and were typically hosted at city and environmental learning center locations throughout the Lagoon.)
Lagoon-Net BBS	(During the first year of the program, the Volusia County Environmental Management Division and the IRLNEP established an electronic bulletin board system, accessed through a toll-free phone number by computer modem. Meeting announcements, grants information, data information, electronic mail, and all CCMP information have been accessible through this BBS.)

The public information specialist on staff at the program typically provides 20 hours weekly for presentations and public education interaction at schools, community and local clubs.

GAINING PUBLIC AND GOVERNMENTAL INPUT

The IRLNEP has hosted several interactive sessions to promote the integration of public opinion and perception into the decision-making process during the drafting and development of the CCMP. The following events chronicle this evolutionary process in the integration of public opinion into the Indian River Lagoon CCMP.

The development of the CCMP for the protection and restoration of natural resources in the Indian River Lagoon has been a highly public process. The events leading up to the Final Draft of the CCMP has been targeted at gaining public input and consensus on the plan for restoration and protection of the Lagoon. These public participation events have in some cases perpetuated products. Conversely, the production of some of the milestone products in the IRLNEP program, required by the USEPA, have precipitated some of these educational events. These public participation events and associated products include the following:

Coastal Lagoons Assembly

During October 1991, the IRLNEP hosted the Coastal Lagoons Assembly (CLA), a two-day American Assembly, at which lagoon issues were identified and prioritized. One month prior to the CLA, a six-page survey was distributed to the public via mail, local libraries and local community colleges in the five-county region. The survey solicited the public's perception about the issues facing Lagoon water quality. This tool served environmental managers with an effective gauge identifying public perceptions of environmental issues facing the IRL region.

During December 1992, proceedings conveying the results of the two-day Coastal Lagoons Assembly was issued to the general public and participants to the IRLNEP Management Conference. This proceedings provided a consensus list of environmental issues identified and prioritized by the identified groups including elected officials, environmental managers, scientists, agriculture, business and the public participating in the two-day American Assembly.

IRL Summer Institute

From June 15-26, 1992, the IRLNEP co-hosted the IRL Summer Institute at Vero Beach Junior High School in Vero Beach with East Central Florida Environmental Education Service Project and the St. Johns River and South Florida water management districts. The Summer Institute provided an on-the-ground, in-the-field classroom experience for teachers. It was directed by several environmental professionals who dedicated their time to field trips and conducting field presentations to small inter-active groups. These groups listened to mini-lectures in the field followed by demonstration activities, such as water quality testing or sea-grass planting. The Summer Institute was repeated two months later at the Atlantic Center for the Arts in New Smyrna Beach. This event was co-hosted by IRLNEP, the East Central Florida Environmental Education Service Project and the Halifax/Indian River Task Force. The four weeks of field classes covered a number of topics currently impacting the health of the Indian River Lagoon including storm water and water quality threats, the

role of mosquito ditches and impoundments, plant and animal taxonomy, benthic organisms, salinity and density labs and an oyster dissection. This Summer Institute spurred the membership and initiation of the Indian River Lagoon Environmental Education Coalition (IRLEEC), a group of environmental educators from various organizations and institutions, to coordinate environmental education activities for the Lagoon region.

Visioning Conference

In August 1992, "A Visioning Conference with Lessons Learned from Other NEPs," was hosted by the IRLNEP at Brevard Community College in Cocoa. Several speakers from Tier I-III NEP programs around the U.S. were invited to present their experiences to the IRLNEP. Several key lessons were learned from the conference including the importance of Management Conference interaction and avenues to strengthen public involvement in the program, the option of developing a future non-profit foundation for the Lagoon, the use of existing non-profit foundations to develop and implement the CCMP, and the development of NEP milestone products, such as the Characterization Report, the Final CCMP.

SAVI Conference

In September of 1992, the two-day Submerged Aquatic Vegetation Initiative Conference was co-hosted by IRLNEP and the St. Johns River Water Management District. The conference yielded several key presentations provided by well-known sea-grass scientists. During the second day of the conference a strategy to protect sea-grass beds in the Indian River Lagoon, known as the Submerged Aquatic Vegetation Initiative (SAVI), was developed by conference leaders and adopted by the IRLNEP as a major goal of the program's CCMP. The proceedings to the conference and the established SAVI Initiative for the IRL was published and released to public in December of 1992.

PAR Conference

In January of 1993, a two-day Photosynthetically Active Radiation Conference was sponsored by IRLNEP and St. Johns River Water Management District to develop common methodologies and monitoring strategies for assessing PAR on submerged aquatic vegetation. Experts in PAR provided technical presentations. These presentations were later provided in a proceedings for the conference issued to the public in September 1993.

Preliminary Draft CCMP

In January of 1993, the IRLNEP released its preliminary draft of the CCMP. This draft reviewed management efforts to date in the IRL region and the adoption of the Surface Water Improvement and Management Act (SWIM) in 1987. The Preliminary Draft of the CCMP not only summarized the history of environmental efforts to date, it also outlined several key areas of concentration for environmental improvement in the Lagoon and set forth preliminary recommendations to address these issues.

Preliminary Draft CCMP Public Information Briefings

To gain public input, seven public information briefings were co-sponsored by the IRLNEP Management Conference and three different chapters of the the League of Women Voters in the five-county region during April, May and June 1993. These briefings included a slide presentation and question and answer period.

Advertisement of the briefings was accomplished by direct mail, postings at local libraries in the five-county region, newspaper ads and local newspaper and television stories notified through press releases. Notes from these meetings were incorporated into the Interim Draft of the CCMP released to the public and Management Conference for comment in December 1995.

Public Education Survey for the IRLNEP

In May of 1994, the IRLNEP sponsored a report to investigate how the public prefers to receive its environmental information. A telephone survey was conducted by the Florida Atlantic University's Joint Center for Environmental & Urban Problems to 407 people residing in the five-county Lagoon region. The analysis of the statistically random survey yielded that 90 percent of the respondents preferred as their first choice to receive their information from television through news programs, documentaries, public service announcements and special programs. More than 85 percent listed their second choice preference as newspapers. This information gained from the survey armed the program's CAC with vital information about how to amend its PIE strategy and resulted in the production of four live call-in programs with local PBS stations in Orlando and West Palm Beach during 1995 and 1996.

Sub-Regional CCMP Consensus-Building Workshops Series

As a result of the public comments gained during the public information briefings, the Preliminary Draft CCMP's recommendations were amended to incorporate all public comments received to date. These new recommendations were labeled as either a "consensus recommendation" or a "in-conflict recommendation." To gain both a public and professional review of the new set of recommendations, the recommendations were reviewed and voted on by members of identified interest groups during sub-regional consensus-building meetings in October, November and December of 1993.

In order to gain better understanding of the recommendations and their potential impacts at the local level, these consensus meetings were conducted sub-regionally at northern, central and southern locations.

Northern Sub-Regional Meeting (Oct. 29, 1993)

The northern group discussed, ranked and agreed upon recommending the following ten highest priority actions or groups for inclusion in the CCMP for implementation.

- Coordinate Lagoon management
- Manage storm water
- Implement public education
- Establish a research/education institute
- Secure permanent funding sources

- Establish a Volusia County Estuarium
- Perform substantive research
- License boaters
- Develop a jobs program to retrofit for clean water (i.e. the Civilian Conservation Corps)
- Develop a systems approach to mitigation funding

Central Sub-Regional Meeting (Nov. 20, 1993)

The central group discussed, ranked and agreed upon recommending the following ten highest priority actions or groups for inclusion in the CCMP for implementation.

- Implement public education
- Coordinate and/or consolidate governmental activities for Lagoon protection/restoration
- Improve storm water and water quality
- Develop land and water use plans and regulation
- Secure permanent funding sources
- Reconnect salt marshes and impoundments to the Lagoon
- Establish Lagoon buffers
- Limit the use of pesticides, herbicides and fertilizers
- Develop a comprehensive Lagoon monitoring program
- Define the carrying capacity of the Lagoon and manage the activities accordingly

Southern Sub-Regional Meeting (Dec. 3, 1993)

The southern group discussed, ranked and agreed upon recommending the following ten highest priority actions or groups for inclusion in the CCMP for implementation.

- Target land acquisition to reflect Lagoon issues and pursue available funds aggressively
- Establish priority pollution sources and attack them in order
- Return water quality in the Lagoon to its life sustaining quality
- Evaluate and communicate economic benefits of the Lagoon and its restoration
- Execute basin assessment and prioritize areas for retrofit
- Identify and implement mechanisms to achieve peak attenuation
- Implement a comprehensive sewage and storm water utility plan
- Enforce land development regulations that maximize soil and water conservation
- Have the U.S. Army Corps of Engineers connect the C-23, C-24 and C-25 canals to retention or diversion facilities
- Promote the belief that each person must believe that water quality and quantity are a personal responsibility, not just a responsibility of government, and that restoration will include monetary responsibility

Indian River Lagoon Biodiversity Conference

In February of 1994, the IRLNEP co-sponsored the *Indian River Lagoon Biodiversity Conference*. This conference, which was open to the public, explored technical problems in the Lagoon and developed a model strategy for the management of biodiversity in the east central region of Florida. Technical papers presented at the three-day conference were published in a special edition of the *Bulletin of Marine Science* journal (BMS). A paper authored by H. Swain et al. provided specific recommendations for inclusion in the CCMP.

The BMS edition was released to the public in July of 1995.

Lagoon-Wide CCMP Consensus-Building Workshop

In November of 1994, the IRLNEP hosted a one-day meeting bringing all three sub-regional groups back together where the group as a whole re-addressed the top priority issues identified during the individual sub-regional meetings held the previous year (see above results). IRLNEP staff categorized these priority issues into 13 different categories or "action plans" and provided background for the action plans and individual issues prioritized by the sub-regional groups. One-page fact sheets were sent by mail and were available at the office for public review. At the lagoon-wide meeting, both staff and scientific experts from the Technical Advisory Committee provided overviews introducing each action plan category and summarizing the priority issues or "actions" for the group.

The whole group then voted and ranked the priority recommendations listed in 13 action plans. The participants reviewed and addressed a total of 193 initial draft recommendations and suggested more than 60 additional recommendations. In an open forum, for each action plan, participants first evaluated the draft recommendations, then suggested additions or deletions or changes to make them better or more generally acceptable.

The action plans include:

- Freshwater and Urban Discharges
- Point Source Discharges
- Marinas and Boat Impacts
- On-Site Sewage Disposal
- Public Education
- Oversight and Management
- Data Information and Management
- Monitoring in the IRL
- Sea Grasses of the IRL
- Fisheries of the IRL
- Endangered and Threatened Species
- Land Acquisition in the Lagoon
- Regional Impounded Marshes

Characterization Report to the IRL

Following the release of the Biodiversity Conference to the IRL proceedings was the release of the Characterization Report produced by Woodward-Clyde Consultants, Inc. in October of 1995. This report summarized the state of natural resources and uses in the Lagoon and provided critical information about the gaps that currently occur in research to address many of the management questions for fisheries, endangered and threaten species, endangered ecological habitats and native vegetation in the IRL region. The characterization included nine volumes of technical reports and the "public consumption" summary of the technical information "A Fragile Balance of Man & Nature." This public consumption version of the Characterization Report was distributed throughout the IRL region.

Interim Draft CCMP

In December of 1995, the interim draft of the CCMP was released to the public and the IRLNEP Management Conference for review. This interim draft reflected the inputs gained from participants at the Lagoon-Wide CCMP Consensus-Building Workshop held in November of 1994. This draft allowed staff to gain input from the program's Management Conference prior to forwarding the document to the State's Clearinghouse Office for preliminary agency review and to the public for comments. The Management Conference requested clarification on some of the technical terms in the plan and requested that a chapter on the estuary's valuation study be included as well as all estimated costs associated with implementing the plan. The plan was amended to reflect the changes and prepared for release to all agencies and the public for a preliminary review of the Final Draft in February of 1996.

"Our Heritage At Risk" Live Call-In Television Program

On Nov. 16, 1995, the IRLNEP co-hosted with the public broadcast station WMFE-Channel 24 in Orlando, the television program "Our Heritage At Risk." The program, modeled after televised Town Meetings, aired at 8 p.m. with a simulcast via satellite on WXEL in West Palm Beach, providing access to all IRL television viewers in the Lagoon five-county region. The program covered all sections of the CCMP and allowed viewers to call-in toll free with their questions to speak with a phone bank respondent or have their question answered live by an on-air panel. The program's ten-person phone bank received more than 200 phone calls during the one-hour program and the hour following the program. These calls related to action plans covered in the Final Draft CCMP. Many callers told phone bankers that they felt the program was a great success and requested that future programs continue to educate the public about the IRL. It is estimated that the program reached more than 120,000 resident households in the five-county region. Major concerns were expressed by callers about the ability to raise funds needed to fully implement the CCMP and the level of political commitment currently directed toward Lagoon restoration.

State Clearinghouse & Public Review for Final Draft CCMP

In February of 1996, the Final Draft CCMP was released to the State's Clearinghouse Office, all public agencies and the public for preliminary comments on the final draft. These comments have been addressed and attached in this document.

Economic Assessment & Analysis of the IRL

Shortly after the Final Draft of the CCMP was transmitted to the State's Clearinghouse Office and public for preliminary final review, the IRLNEP received the *Economic Assessment & Analysis of the IRL Report* produced by Apogee Research, Inc. in association with Resource Economics Consultants, Inc. in March 1996. The report was prepared according to guidance provided by a finance and implementation task force which consisted of primary implementors, financial industry representatives and the public. This report summarized the total economic value of natural resources in the IRL region, including both market values and nonmarket preferences.

"Our Resources At Risk" Live Call-In Television Program

Implementing requests gained from the public during the previous November regarding the on-air program, IRLNEP co-hosted with the public broadcasting station WMFE-Channel 24, the television program "Our Resources at Risk" on April 4, 1996.

The program aired at 8 p.m. with a simulcast via satellite on WXEL in West Palm Beach and on radio with a local radio station in Fort Pierce, providing access to all IRL television viewers and some radio listeners in the Lagoon five-county region.

Unlike the first program which covered all actions plans in the CCMP, this program targeted improvements in water and sediment quality in the IRL and again allowed viewers to call-in toll free with their questions to speak with a phone bank respondent or have their question answered live on-air. The program's fifteen-person phone bank received more than 200 phone calls during the one-hour program and the hour following the program. These calls related to actions included in the water and sediment quality improvements section of the Final Draft CCMP. Callers again informed phone bankers that they felt the program was successful in gaining public input and requested that future programs continue to educate the public about the IRL on air. It was estimated that the program reached more than 120,000 resident households in the five-county region.

Final State Clearinghouse & Public Review on Final CCMP

In June of 1996, the Final CCMP was released to the State's Clearinghouse Office, all public agencies and the general public for comments and final review. To facilitate review, both the comments received on previous drafts and responses to these comments were included in the final document. This Final Draft CCMP is in the process of being transmitted to the Florida Governor's Office and USEPA Administrator's Office for final review and approval.

Final Draft CCMP Public Information Briefings

To gain final public input, seven public information briefings will be held in the five-county region during June, July and August 1996. These briefings will include a slide presentation and question and answer period.

Advertisement of the briefings will be accomplished by direct mail, postings at local libraries in the five-county region, newspaper ads and local newspaper and television coverage. Notes from these meetings will be incorporated into the Final CCMP for approval by the Florida Governor and USEPA Administrator during the fall of 1996.

The following is a list of the dates and locations of the briefings:

- Tuesday, June 18, Indian River County Commission, Vero Beach 9:00 a.m.
- Tuesday, June 18, City of Vero Beach, Vero Beach, 7 p.m.
- Tuesday, June 25, Martin County Commission, Stuart 9:00 a.m.
- Tuesday, June 25, City of Stuart, Stuart, 7 p.m.
- Tuesday, July 2, Brevard County Commission, Viera 9:00 a.m.
- Wednesday, July 10, City of Cape Canaveral, Cape Canaveral, 7 p.m.
- Monday, July 8, City of Melbourne, Melbourne, 7 p.m.

- Thursday, July 11, City of Rockledge, Rockledge, 7 p.m.
- Tuesday, July 16, St. Lucie County Commission, Ft. Pierce, 7:00 p.m.
- Wednesday, July 17, City of Fort Pierce, Ft. Pierce, 7 p.m.
- Thursday, July 18, Volusia County Council, DeLand, 8:30 a.m.
- Thursday, July 18, City of New Smyrna Beach, New Smyrna Beach, 7 p.m.
- Tuesday, July 23, Palm Beach County Commission, West Palm Beach, 2:00 p.m.
- Tuesday, July 23, City of Jupiter, Jupiter, 7 p.m.

All meetings will be open to the public and have been scheduled to allow for the greatest access to the general public and elected officials.

"Our Natural Habitats At Risk" Live Call-In Television Program

The IRLNEP will continue to co-host with WMFE-Channel 24, the television program "Our Natural Habitats at Risk" on July 23, 1996. The program will air at 8 p.m. with a simulcast via satellite on WXEL in West Palm Beach, providing access to all IRL television viewers in the Lagoon five-county region.

This program will address natural habitats and the actions being taken to preserve the Lagoon's natural biodiversity. Viewers will again be able to call in toll-free with their questions to speak with a phone bank respondent or have their question answered live by on-air panelists.

CONCLUSION

Thus far, the Draft CCMP has been presented to the public during public information briefings, sub-regional prioritization and consensus-building workshops, a Lagoon-wide consensus-building workshop, and two live call-in television programs. The IRLNEP will present the Final Draft CCMP to the public during local commission meetings in June, July and August. Centralized meetings will be held for cities and the public during the same time frame to allow for greater ease attending locations. All comments recorded during past public forums held to date were reviewed by the Citizens Action Committee, the Technical Advisory Committee, the Management Committee and the Policy Committee for integration into the Final CCMP. These comments contained within the proceedings of the consensus-building workshops and have been included in this document as Appendix 2. As future comments warrant, they will be treated in a similarly and integrated in the plan.

A limited number of agency comments were received following the release of the Preliminary Draft CCMP in January 1993. During the Interim Draft release of the CCMP in December 1995, 2-3 comments were received. Finally during the February 1996 release of the Final Draft CCMP, 21 agency letters were received providing extensive comments on the CCMP. All of the letters responding to the various drafts were reviewed by the IRLNEP's Citizens Action Committee, Technical Advisory Committee, the Management Committee and Policy Committee prior to integration into the Final CCMP. The original letters with an explanation of how the comments were addressed have been included in this document. The CCMP is now being transmitted a final time for review by all agencies and the public prior to approval by the Florida Governor and the USEPA Administrator.

Efforts to protect and restore the Indian River Lagoon directly depend on the support of the Lagoon region's residents and the political representatives. Without the support of the general public it is unlikely that the protection and restoration of the Indian River Lagoon will be a high priority issue for agencies or local governments.

In recent years the general public has expressed an increasing interest in the environment and more specifically, an increasing concern over the present and future condition of the Indian River Lagoon. Interestingly, this concern occurs during a time of severe constraints on both governmental and private sector funding. Now, more than ever, a diverse educated public can help provide the time, effort, expertise and leadership needed to protect and monitor the Indian River Lagoon.

Since public participation and public education are critical elements for the long-term successful management of the Indian River Lagoon, it is important that the public play a major role in determining the direction and focus of the restoration program.

The Indian River Lagoon CCMP has evolved into a dynamic, public consensus document to guide the protection and restoration of the Lagoon's living resources. The success of the CCMP is dependent on public support for the actions included in the plan. In addition to the numerous public participation events scheduled by the IRLNEP, the inclusion of a Citizens Action Committee (CAC) in the IRLNEP's plan development and review structure provides for representation of the diverse opinions present within the Lagoon region regarding the Lagoon's future. Regular meetings of the CAC have allowed public input to occur throughout the process.

APPENDIX 1

GOVERNMENTAL AGENCY

LETTERS AND

RESPONSES

CCMP Comments Received

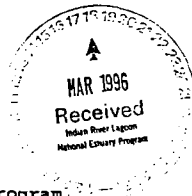
Responses to Comments



REPLY TO
ATTENTION OF
Environmental Branch
Planning Division

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

MAR 12 1996



Mr. Derek Busby
Program Director
Indian River Lagoon National Estuary Program
Suite 109
1900 South Harbor City Boulevard
Melbourne, Florida 32901

Dear Mr. Busby:

Thank you for the opportunity to review and comment on The Draft Indian River Lagoon Comprehensive Conservation And Management Plan (CCMP) January 1996. Included are our comments as listed below.

- a. Page 8 of the CCMP, the rosette spoonbill illustration overlaps text on the page.
- b. Page 12, para. 1: *H. johnsonii* range should be stated as from Sebastin Inlet to Biscayne Bay.
- c. Page 22, para. 2: Reference to the C&SF Project should be changed from "...Central and Southern Florida Flood Control Project (CSFFCP)..." to the Central and Southern (C&SF) Project.
- d. Page 70, para. 3: See comment c.
- e. Page 81, concerning muck removal from the IRL, Corps support of muck removal, ACTION FSD-6, no funding is mentioned as with the other groups who are listed under Support. Recommend the funding considerations be stated as "TBD" (To Be Determined) until appropriate details are available.
- f. Page 91, para. 4: See comment c.
- g. Page 92, para. 1: Sentence reading "...Early drafts of the restoration plan have included options which would reduce freshwater discharges to the Indian River Lagoon..." should be revised to read as follows: Proposed components of restoration plans to be evaluated in the C&SF Project Comprehensive Review Study include options which would reduce freshwater discharges to the Indian River Lagoon.

Response to Army Corps of Engineers, Jacksonville District letter dated March 18, 1996 (requested by IRLNEP)

- a. Graphics have been changed and none overlap text.
- b. Section A Intro, Diverse Biological Communities, Submerged Aquatic Vegetation: Changed sentence beginning "One species, Johnson's sea grass..." to "One species Johnson's sea grass (*Halophila johnsonii*) is a rare species found only in a range from Sebastian Inlet to Biscayne Bay."
- c. Current State of the Lagoon, Water & Sediment Quality: Reference to the C&SF Project, in paragraph beginning "Many of the major drainage systems..." has been changed from "Central and Southern Florida Flood Control Project (CSFFCP)..." to the "Central and Southern (C&SF) Project."
- d. FSD Action Plan, Recommended FSD Management Actions: Changed "Central & South Florida Flood Control project" to "Central and Southern (C&SF) Project."
- e. FSD-6: Federal funding has been identified as potential funding sources. However, federal costs were not estimated in the overview of costs.
- f. FSD-12, Background ¶ 4: Changed "Central & South Florida Flood Control project" to "Central and Southern (C&SF) Project."
- g. FSD-12, Background ¶ 4: Changed sentence beginning "Early drafts..." to "Proposed components of restoration plans to be evaluated in the C & SF Project Comprehensive Review Study include options which would reduce freshwater discharges to the Indian River Lagoon."

CCMP Comments Received

Army Corps of Engineers Letter cont.

h. Page 92, 12.04, the plan discusses a restudy of the C&SF Projects by the Corps affecting the IRL but mentions no Federal dollars to undertake the studies, nor any estimated time schedule of the studies or effects. Also, see comment c.

i. Page 92, para. WHO: Include the Water Management Districts as primary agencies as opposed to secondary. The SFWMD will cost share in the study and implementation of C&SF Project modifications to reduce detrimental discharges to the Indian River Lagoon.

j. On page 122, the pie chart as printed is very dark to the point where the pie slices are not individually recognizable.

k. Page 7, para. 2: IWW "project" depth north of Ft. Pierce is 12 feet deep. South of Ft. Pierce is 10 feet deep (note: a 12 foot deep channel is not considered "deep water" by navigation standards and should not be described as such in the CCMP). Also, the IWW is not a "dredge shipping channel" but is actually a "shallow draft navigation channel" and should be recognized as such in the CCMP.

l. On page 185, recommend paragraph 4 be removed or be based on scientific data, such as DEP reports. Much of the anecdotal report is primarily perception and is often misleading.

m. On page 186, recommend the addition of comments concerning clamming effects on the environment (i.e. seagrasses) be included.

n. On page 196, the largest part of the pie chart is Public Information & Education which seems to be mentioned the least throughout the IRL CCMP.

o. On page 211, legislative representation is probably a more important item than most IRL members realize and might need to be contracted for desired impact.

p. On page 223, concerning computer support and outreach to the public. The InterNet could be the most efficient way to develop community support, develop

Responses to Comments

Response to Army Corps of Engineers, Jacksonville District cont.

- h. FSD-12 HOW 12.04: Changed "Central & South Florida Flood Control project" to "Central and Southern (C&SF) Project."
- i. FSD-12 WHO: Moved WMDs from Support to Primary.
- j. The graphics will be clearer in the final two-color printed version.
- k. Physical Features of the IRL, Alterations for Navigation: Paragraph 2, changed "(maintenance depth of 12 ft.)" to "(maintenance depth 12 ft. north of Fort Pierce, 10 ft. south of Fort Pierce)." Deleted "a 12-foot dredge shipping channel..."
- l. Wildlife Fisheries AP Intro: Comment noted. The information is identified as anecdotal in the report. This is the best information available at this time. Actions address the need for additional data.
- m. Human use impacts, which would include clamming, are considered as part of the Sea Grass Preservation and Restoration Diagnostics Plan which is referenced in the SG Action Plan.
- n. Public & Governmental Support and Involvement Costs Pie Chart: Public Information & Education is cross referenced in other action plans. Advocacy is included in the function of the Lagoon Follow-On (modified management) Organization, which would include providing information to legislators and other elected officials.
- o. Public & Governmental Support and Involvement: Comment noted. This has been addressed in action PIE-2.
- p. Comment suggesting use of the Internet for community support has been noted.

CCMP Comments Received

Army Corps of Engineers Letter cont.

educational information concerning the IRL NEP to the public.

q. Page 3, the pie chart slices do not appear to be proportional to the dollar amounts adjacent to the slices.

r. Many of the maps throughout the CCMP are difficult to read or illegible.

Sincerely,



A. J. SALEM,
Chief, Planning Division

Responses to Comments

Response to Army Corps of Engineers, Jacksonville District cont.

- q. The pie chart on estimated costs for implementation have been redone for clarity.
- r. Maps have also been redone for clarity.

CCMP Comments Received

Responses to Comments



STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS

EMERGENCY MANAGEMENT • HOUSING AND COMMUNITY DEVELOPMENT • RESOURCE PLANNING AND MANAGEMENT

LAWTON CHILES
Governor

JAMES F. MURLEY
Secretary

March 6, 1996

Ms. Keri Akers
State Clearinghouse
Department of Community Affairs
2740 Centerview Drive
Tallahassee, Florida 32399-2100

RE: Indian River Lagoon National Estuary Program - Draft
Comprehensive Conservation and Management Plan - Brevard,
Indian River, Martin and St. Lucie Counties, Florida
SAI# FL9601160021C

Dear Ms. Akers:

The Department of Community Affairs (Department), pursuant to its role as the state's land planning agency, has reviewed the Draft Comprehensive Conservation and Management Plan (CCMP) for the Indian River Lagoon National Estuary Program (NEP) for consistency with our statutory responsibilities under the Florida Coastal Management Program (FCMP). The Department has determined that, at this stage, the above-referenced document is consistent with our FCMP responsibilities. In addition, the Department has reviewed the relevant local governments' comprehensive plans to determine whether the project is in accord with the objectives and policies contained in these plans. The following comments outline the issues which should be considered in future updates of the CCMP.

- 1.
- 2.
3. The Department notes that several sections in the CCMP identify the Florida Coastal Management Program (FCMP) and/or the Department as responsible for implementation, support or funding for identified actions. The CCMP does not clearly describe the role of the FCMP. The CCMP should clarify the responsibilities of the FCMP, as well as those of other participating agencies. In addition, it should be noted that the NEP is not an eligible agency for funding from the FCMP. The non-federal agencies responsible for implementation of specific projects and actions may be eligible for funding through the FCMP's subgrant application process provided that they meet the Program's funding

Response to Department of Community Affairs letter received
March 6, 1996 (requested by State Clearinghouse)

1. Comment noted: The CCMP is consistent with FCMP responsibilities.
2. Comment noted: The DCA found the CCMP consistent with local government comprehensive plans. It is in accord with the objectives and policies in these plans.
3. The role of FCMP will be clearly described as either a primary or support responsibility for each action and will be stated in the Action Plan Costs Timelines for Implementation, Appendix I.

2740 CENTERVIEW DRIVE • TALLAHASSEE, FLORIDA 32399-2100

FLORIDA KEYS AREA OF CRITICAL STATE CONCERN
FIELD OFFICE
2796 Overseas Highway, Suite 212
Marathon, Florida 33050-7277

SOUTH FLORIDA RECOVERY OFFICE
P.O. Box 4022
8600 N.W. 36th Street
Miami, Florida 33159-4022

GREEN SWAMP AREA OF CRITICAL STATE CONCERN
FIELD OFFICE
155 East Summerlin
Bartow, Florida 33830-4641

CCMP Comments Received

Ms. Keri Akers
March 6, 1996
Page Two

Department of Community Affairs Letter cont.

criteria. However, only a limited amount of funds are available on a competitive basis during each grant cycle for subgrant awards to applicants.

4. The type of participation which the Department could provide includes advisory support for issues relating to septic tanks, federal consistency and local government comprehensive plans. In addition, the FCMP's Citizens Advisory Committee and public outreach program could provide opportunities for public education activities and partnerships.
5. Some of the actions contained in the CCMP recommend amendments to the comprehensive plans of the local governments in the NEP's planning area and/or will require close coordination with the affected local governments. The local governments in the planning area will soon be submitting their Evaluation and Appraisal Reports (EAR) to the Department. The EARs include recommended changes to the comprehensive plans. The local governments will have one year from the adoption of their EARs to amend their plans. This process provides an opportunity to incorporate the relevant recommended CCMP strategies and actions into the EARs and in future related amendments to the comprehensive plans. The Department encourages close coordination with the local governments to incorporate the appropriate revisions to their plans.

Thank you for the opportunity to comment on the draft CCMP. If you have any questions, please contact James Farr or Rosalyn Kilcollins, Florida Coastal Management Program, at the address above or at (904) 922-5438.

Sincerely,


G. Steven Pfeiffer
Assistant Secretary

GSP/rk

Responses to Comments


Response to Department of Community Affairs cont.

4. Comment noted: DCA could provide advisory support for issues relating to septic tanks, federal consistency and local government comprehensive plans. The FCMPs Citizens Advisory Committee and public outreach program could provide opportunities for public education activities and partnerships.
5. Comment noted: Local governments are required to submit EARs - opportunity for NEP recommendations to be incorporated at that time.

Response to Department of Community Affairs (requested by State Clearinghouse)

See preceding pages for comments.

Department of Community Affairs response to State Clearinghouse review request DATE: 01/16/96
 COUNTY: State DATE: 3/17 04/30/96 #3
 LEADANCE DUE DATE: 03/02/96
 STATE: FL9601160021C

STATE AGENCIES	LOCAL/OTHER	OPB POLICY UNITS
<input checked="" type="checkbox"/> Community Affairs <input type="checkbox"/> Environmental Protection <input type="checkbox"/> Game and Fresh Water Fish Comm <input type="checkbox"/> Marine Fisheries Commission	<input type="checkbox"/> South Florida WMD <input type="checkbox"/> St. Johns River WMD <div style="text-align: center;">  </div>	<input type="checkbox"/> Environmental Policy/C & ED
<p>The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:</p> <p><input checked="" type="checkbox"/> Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.</p> <p><input type="checkbox"/> Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.</p> <p><input type="checkbox"/> Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.</p> <p><input type="checkbox"/> Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.</p>		
<p>Project Description:</p> <p>Indian River Lagoon Draft Comprehensive and Management Plan - Volusia, Seminole, Orange, Brevard, Indian River, St. Lucie, Martin Counties, Florida.</p>		

To: Florida State Clearinghouse
 Department of Community Affairs
 2740 Centerview Drive
 Tallahassee, FL 32399-2100
 (904) 922-5438 (SC 292-5438)
 (904) 487-2899 (FAX)

EO 12372/NEPA

Federal Consistency

☐ No Comment
☒ Comments Attached
☐ No Comment/Consistent
☒ Consistent/Comments Attached
☐ Inconsistent/Comments Attached
☐ Not Applicable

From: DCA
 Division/Bureau: FCT, CMP, RPH
 Reviewer:
 Date: 8 Mar 96

CCMP Comments Received



Lawton Chiles
Governor

Department of Environmental Protection

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

February 23, 1996

Mr. Derek Busby
Program Director
Indian River Lagoon National Estuary Program
1900 South Harbor City Boulevard, Suite 109
Melbourne, FL 32901

Draft CCMP
Indian River Lagoon

Dear Derek:

Thank you for providing the opportunity to review the draft Comprehensive Conservation and Management Plan (CCMP) for the Indian River Lagoon. The following is a compilation of comments received from the Divisions of Environmental Resource Permitting, Water Facilities and Waste Management in the DEP Central District. The proprietary (submerged lands) staff of ERP also reviewed the draft as did the Surface Water Monitoring Program of Water Facilities. Some observations relate to the substance of the document while others address the graphics. Where comments are provided addressing specific sections of the CCMP, the corresponding page numbers are identified.

1. Several photographs (pp. 10, 11 and 16) did not reproduce clearly and/or were too dark to show any details. The suggestion was made that line drawings might be more effective than photos in some situations. Figure A-6, although apparently a computer-generated illustration, was not considered very legible.
2. *Page 21, 3rd paragraph:* The ratio of the basin area:surface area of lagoon does not change the assimilative capacity. A segment may actually assimilate more or less but the ratio does not relate to capacity.
3. *Page 23, last paragraph:* The "cease direct discharge" date is April 1, 1996.
4. *Page 23, first paragraph:* The phrase "...domestic waste effluent flow will stop entering the lagoon" is unintentionally misleading, since the Indian River Lagoon Act does allow WWTP discharge under certain conditions (Apricot Act, LWWD, etc.).
5. *Page 24:* The report states that there are two regional and ten subregional wastewater facilities that discharge to the Lagoon. The Water Facilities Division is not certain of the

Responses to Comments

Response to Fl. Department of Environmental Protection, Central District letter received February 27, 1996 (requested by IRLNEP)

1. Design of plan has been changed, everything will be legible when reproduced.
2. Water & Sediment Quality: The sentence beginning "This ratio difference..." has been changed to "The difference in these ratios is an important factor for the particular segment's pollutant loadings."
3. Water & Sediment Quality: The "cease direct discharge" date has been changed to April 1, 1996.
4. Water & Sediment Quality: The phrase "...domestic waste effluent flow will stop entering the lagoon" has been changed to "...domestic wastewater plants will no longer use the Indian River Lagoon as their primary means of effluent disposal."
5. Water & Sediment Quality: The following has been added after the sentence beginning "There are four categories of WWTPs...": "These categories are as follows: 1) Regional wastewater treatment plants (average daily flow > 5 MGD); 2) Sub-regional wastewater treatment plants (average daily flow 1 MGD or greater but < 5 MGD); 3) Package wastewater treatment plants (average daily flow < 1 MGD); and 4) Industrial wastewater treatment plants."



CCMP Comments Received

Dept. of Environmental Protection Letter cont.

accuracy of this number, primarily since the number of facilities in the DEP Southeast District segment of the Lagoon is not clear.

Page 27: The illustration is missing.

6. In one version of the CCMP received, pages 38 and 39 were part of a large chart comparing the IRLCCMP with the IRLSWIMP. Pages 40 and 41 were a discussion of consensus. In a second version of the draft, however, the last two pages of the chart were missing completely and pages 38 and 39 comprised the consensus issues.
7. *Page 38, bottom of page:* A block appears which states "Inadequate environmental protection rules and criteria." This appears to conflict with the governor's desire to reduce state rules and regulations.
8. *Pages 43 & 44 (Water & Sediment Quality Improvement):* The Department currently is considering a marina certification program which will evaluate marinas for environmental concerns. For more information, contact Richard Williams at 904/921-5328. See Action MB-1. In addition, the Indian River Lagoon Act requires all domestic WWTPs to cease discharge to the Indian River Lagoon except for limited wet weather discharge.
8. *Page 47 (48):* In regard to wastewater, there is no mention of the previous Indian River Act to allow LWWD, etc., or that higher levels of treatment must be provided to qualify for the exception provisions. In addition, the Indian River County landfill has stormwater discharge, MSSW, and borrow pit discharge permits only.
9. *Page 51 (52): Action PS-2.* Again, there is no mention of the provisions in the Act allowing higher levels of treatment for back-up discharges to the Lagoon. It is suggested that the last sentence of the first paragraph under **Background** be modified as follows: "This may cause some to seek a less expensive means of effluent disposal, asking for an exemption from or changes to the act to allow *highly treated* wastewater discharges to the lagoon."
10. *Page 53 (54): Action PS-3.* The reduction or elimination of industrial discharges to the Indian River Lagoon is not presently covered by the Act. **How** could translate into a potentially huge workload for the Industrial Waste program.
11. *Page 55 (56): Action PS-4.* If a WWTP has > 5 % industrial waste, then it becomes an industrial waste facility. In **Background**, the statement is made that "The Indian River Lagoon Act and the recommendations found in this plan for industrial discharges may result in significant expenditures for the owners and customers of WWTPs." Industrial discharges and WWTPs are addressed differently in state statutes and are separate entities.
12. *Page 56 (57): How 5.01* Isn't encouraging reuse doing that?

Responses to Comments

Response to Fl. Department of Environmental Protection, Central District cont.

6. Intro - Stewardship of the IRL Flowcharts: Flowcharts have been addressed.
7. Intro - Stewardship of the IRL Flowcharts: The block stating "Inadequate environmental protection rules and criteria." is a SWIM plan element reiterated here.
8. PS Action Plan Intro: After the sentence "The act established July 1, 1995 as the date for elimination of all domestic WWTP discharges from the Indian River Lagoon." added "The act allowed FDEP to grant exceptions to the no discharge requirement for three reasons: 1) there is no other practical alternative to discharge to the Indian River Lagoon and the discharge will receive advanced waste treatment or a higher level of treatment; 2) the discharge will not result in violations of water quality standards or impair efforts to restore water quality in the Indian River Lagoon; 3) the discharge is intermittent, occurring during wet weather conditions and subject to FDEP requirements."
9. PS-2: Modified last sentence of first paragraph as follows: "To reduce the cost of effluent disposal, this may result in requests for exemptions or changes to the Act to allow highly treated wastewater discharges to the Lagoon as the primary means of effluent disposal."
10. Comment noted.
11. Comment noted.
12. PS-5 HOW 5.01: Encouraging reuse does reduce the dependency on deep well disposal of wastewater but there may be other alternatives.

CCMP Comments Received

Responses to Comments

Dept. of Environmental Protection Letter cont.

13. *Page 57 (58): Priority Problem.* As a result of revisions to Chapter 10D-6, the OSDSs are limited to a treatment capacity of 10,000 gallons per day.
14. *Page 62 (63): Background.* The implementation of a septic tank installation program would mean a substantial additional workload for HRS. How does this fit with the current political thinking of downsizing government?
15. *Page 73 (74): Background.* DEP is not scheduled for NPDES delegation until the late 1990's for stormwater.
16. *Page 89 (90): How 10.01.* The use of backyard swales is recommended.
17. *Page 96 (97): Background.* Daytona Beach and Volusia County would be good candidates for stormwater utilities.
18. *Page 101 (102): Action MB-1.* The proposed marina action is a voluntary program for marina certification. DEP inspections for stormwater, boat wastes, fueling, facilities and all environmental aspects would be looked at and certification would be published in a state list for advertising facilities. Contact Richard Williams at 904/921-5328 for additional information.
19. *Page 104 (105): Action MB-3.* Mention might be made of all the new speed zones and restricted operating areas for manatee protection.
20. *Page 106 (107): Action MB-4.* All petroleum storage tanks, lines and dispensers should meet the same standards. Marinas and similar facilities should not have separate rules as they currently do.
21. *Page 110 (111): Action MB-6.* Training should include natural resource impact avoidance.
22. *Page 114 (115): Action MB-8. (How):* Many public facilities (i.e., marinas, county, city and state parks) are already available. Simply listing and mapping them would be a benefit to transient boaters or those new to the area.
23. *Page 129 (130): Action BD-3.* An initiative is recommended to make homeowners remove all exotics before receiving building permits.
24. *Pages 134 - 189 (134 - 190)* were missing from one volume of the draft CCMP.
25. *Page 151 (152): Action W-4.* It is recommended that a single substantial area be acquired to be used as a mitigation bank rather than smaller mitigation sites at separate location.
26. *Page 155 (156): Action W-6:* Revegetation will succeed only with removal of invasive exotics.

Response to Fl. Department of Environmental Protection, Central District cont.

13. OSDS Action Plan Intro, Priority Problem: Changed "5,000 gallons per day" to "10,000 gallons per day."
14. Comment noted.
15. FSD-2, Background: Yes this action supports delegation.
16. FSD-10, HOW 10.01: This is but one of many means to accomplish - no change.
17. FSD-14, Background: Daytona Beach is out of the IRL and Volusia County has a storm-water utility.
18. MB-1: This is a mandatory permitting action: Perhaps this refers to MB-2.
19. MB-3: Added information to Action MB-9, resource protection zones.
20. It is our understanding that marine facilities will be required to meet these underground storage tank standards in the next few years.
21. MB-6: Included in 6.03 "environmental awareness."
22. MB-8, HOW: Changed 8.01 to "Develop and undertake a study to identify existing facilities and the need for rest rooms and waste disposal facilities for boaters using the Indian River Lagoon."
23. Comment noted.
24. Comment noted and incorporated.
25. W-4: This action does not address mitigation banking but this may be one way of obtaining ownership/easements.
26. Comment noted.

CCMP Comments Received

Dept. of Environmental Protection Letter cont.

27. *Page 168 (169), 3rd paragraph:* The word "group" was omitted after the first use of the word "working".
28. *Page 177 (178):* It is recommended that speed zones and other area designations be mentioned along with the cost of enforcement and signage, and the dates of expected results.
29. *Page 180 (181): Action ETS-3.* The Department does encourage habitat enhancement either as mitigation or permit requirements!
30. *Page 189 (190):* Under the BIODIVERSITY heading, the letter "n" was omitted from the words "Action Plan".
31. *Page 200 (201): Action PIE-2.* Is not the MRC already doing this?
32. The Water Facilities Division also offers the following observations: The discussion on domestic waste indicates that all wastewater discharges will be eliminated by April 1, 1996 without recognizing that the Act allowed for continued discharges for basically wet weather in association with a reuse system. Almost every facility will have a discharge of this type, i.e., Barefoot Bay (AWT), Vero Beach, Edgewater, Cocoa, Cocoa Beach, Cape Canaveral and New Smyrna Beach. The draft CCMP also proposes to find alternatives to deep well injection. Most of the coastal facilities using deep wells did so to remove the discharge from the lagoon. There are not really any other alternatives for reuse that will eliminate a need for a backup discharge to either a deep well or the lagoon.

Again, thank you for providing us with the opportunity to comment on this draft CCMP. If you have any questions regarding the observations made, please contact me or the individual programs for clarification.

Sincerely,

Barbara Bess

Barbara Bess
Ecosystem Management Coordinator

cc: Vivian Garfein
Deborah Valin

Responses to Comments

Response to Fl. Department of Environmental Protection, Central District cont.

27. Natural Communities, LA Action Plan Intro, Priority Problem: The word "group" has been inserted after the first use of the word "working."
28. Manatee zones are mentioned in actions MB-3 and MB-7. Costs can only be determined in the final action recommendation.
29. ETS-3, Background ¶ 1: Changed "management is limited" to "management is often limited." Deleted "seldom" from "Regulatory programs seldom encourage." Added to end of last sentence "but their activities are generally as part of mitigation or other permit requirements."
30. Pg. 189: The letter "n" has been reinserted for the words "Action Plan" under the BIODIVERSITY heading.
31. Several organizations are involved in public education. This action would coordinate and expand these activities.
32. See comment # 8.

CCMP Comments Received

Responses to Comments

FLA. COASTAL MGMT.

TEL: 904-487-2899

Mar 14 96 15:40 No.009 P.02



Department of Environmental Protection

Lawton Chiles
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Virginia B. Wetherell
Secretary

March 4, 1996

RECEIVED
MAR 05 1996

State of Florida Clearinghouse

Keri Akers
State Clearinghouse
Department of Community Affairs
2740 Centerview Drive
Tallahassee, Florida 32399-2100

RE: Draft Indian River Lagoon Comprehensive Conservation and Management Plan
SAI: FL9601160021C

Dear Ms. Akers:

1. The Department has reviewed the draft Indian River Lagoon Comprehensive Conservation and Management Plan (IRLCCMP). Based upon the information provided, it is consistent with our authorities in the Florida Coastal Management Program. The Department supports the plan and the inclusion of the Indian River Lagoon in EPA's National Estuary Program (NEP).
2. Coordination of the IRLCCMP under the NEP will likely enhance *ecosystem management* in the region by giving "scientists and managers the opportunity to study the Lagoon and its problems in a holistic fashion" (*Ecosystem Management Implementation Strategy*, Department of Environmental Protection, September, 1995). Based upon our review of the draft IRLCCMP, we have several general comments and suggested revisions. We offer these with the intent of improving the plan document and the broader goals for which it was developed.
3. The Department's Division of Recreation and Parks (DRP) conducts activities within the Indian River Lagoon that could likely benefit the future implementation of the proposed management plan. DRP actively manages considerable resources within a number of parks on the Indian River Lagoon. In addition, the division's Bureau of Parks, District 3 has been involved in an ongoing effort to sample and survey fish in the vicinity of Sebastian Inlet. DRP has also participated in other fishery surveys conducted in the Lagoon. Because of its past and current involvement in the region, DRP could play a more active role in the continued development of this plan. For further information in this regard, please contact Mickey Bryant of DRP in Tallahassee at (904) 488-8666.
4. With respect to mosquito control, the plan provides goals and objectives to restore the functions of the impounded marshes in a manner that is compatible with the Department's policy. Rotational impoundment management (RIM) and open marsh water management (OMWM) are both encouraged. These strategies have been previously implemented in most publicly owned impoundments in Brevard and Volusia counties. As a result, many impoundments that were formerly freshwater are now returning to salt marsh habitat. The Department supports the use of land acquisition and conservation easements to further implement RIM and OMWM in areas where these strategies are not currently being utilized. The Indian River Lagoon ecosystem will continue to benefit from the implementation of regional impoundment management strategies and improvements in management techniques to provide mosquito control.

Response to Department of Environmental Protection, Tallahassee letter received March 5, 1996 (requested by State Clearinghouse)

1. Comment noted: The CCMP is consistent with authorities in the Florida Coastal Management Program and FDEP supports the plan.
2. Comment noted: The plan will likely enhance ecosystem management in the region by giving "scientists and managers the opportunity to study the Lagoon and its problems in a holistic fashion."
3. Comment noted: FDEP has resources available for CCMP implementation at Sebastian Inlet State Park.
4. Comments noted: regarding FDEP's Rotational impoundment management and open marsh water management strategies, and regarding FDEP's efforts toward land acquisition.

Dept. of Environmental Protection Letter cont.

5. Six proposed actions in the *Marina and Boat Impacts Action Plan* would require a large degree of participation by the Department's Division of Law Enforcement. The Division supports and has already been involved to some extent in five of these proposed actions including: increased protection of Lagoon resources from oil spills (MB-4); reduced impacts of in-water hull cleaning activities (MB-5); improved enforcement of boating safety and resource protection regulations through an increased Florida Marine Patrol presence (MB-7); minimization of the impacts of waste discharges and marine sanitation devices (MB-8); and establishment of resource protection zones in the Lagoon (MB-9). The Division also supports the remaining proposed action, mandatory education for owners and operators of boats and personal watercraft (MB-6), and will be willing to participate if appropriate legislation is passed.

To assist future management efforts, the Department's Division of State Lands has compiled a listing of publicly managed natural areas and Conservation and Recreation Lands (CARL) acquisition projects located in the Indian River Lagoon region. In addition, the Florida Natural Areas Inventory (FNAI) has conducted a search of its database for the presence of threatened or endangered species. In summary, eleven CARL projects and 993 endangered or threatened elements occur in the subject area. The complete results of these searches are attached (Attachments 1 & 2). *FNAI does caution that its database represents a compilation of information extracted from published and unpublished literature, museums and herbaria, personal communications, and other sources. FNAI cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Florida. Element occurrence reports summarize existing information at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered.*

The following, in page order, are comments and suggested revisions regarding specific parts of the plan document.

6. *Page 18, Boating and Marine Services, paragraph 1:*
The average statewide increase in boat registration is reported as .05 percent. Please double check this figure, as it seems too low. Five percent would be more accurate, and this may simply be a typographical error. The reported 10 percent increase in growth for Volusia and Brevard counties in the text's next sentence is incorrect. Amy Adams of the Indian River Lagoon National Estuary Program has the correct figures for Brevard and Volusia counties, which range between four and five percent. The fifth and sixth sentences of the Boating and Marine Services paragraph are poorly worded; the statements in these sentences are not readily apparent based upon the ten percent figure. In addition, the facts may change once the new boat registration figures are incorporated. The following is a recommended rewording to improve clarity: "Volusia County has the second fastest growing boating population in the state, second only to Levy County. Brevard County has the fourth fastest growing boating population..."
7. *Page 28, last paragraph:*
Recommend the following editorial changes for this paragraph.
- Two species of marine turtles, the green turtle and the loggerhead, inhabit the Indian River Lagoon. The green turtle is state and federally listed as endangered while the loggerhead is state and federally listed as threatened. Both are listed as endangered by the FCREPA. The Indian River Lagoon serves as important developmental habitat for the immature life stages of these two species. Boat collisions and entanglement with nets and fishing lines are believed to be the principal causes of sea turtle mortality in the lagoon. In addition, many sea turtles in the lagoon are infected with a disease known as fibropapillomatosis. Data

5. Comment noted: FDEP currently supports these actions and is willing to participate in mandatory education for boat owners and personal watercraft owners (MB-6).
6. Section A Intro, Boating and Marine Services, ¶ 1: Modified sentence starting "For Brevard and Volusia counties..." to "In Brevard and Volusia Counties the annual increase in boat registrations has averaged 10% over the last decade. Statistically, Volusia has the second fastest growing boating population in the state, following Levy County. Brevard County is ranked fourth in increased boat registrations, close behind Monroe County."
7. Section A Intro, Living Resources, last ¶: Changed paragraph to "Two species of marine turtles, the green turtle and the loggerhead, inhabit the Indian River Lagoon. The green turtle is state and federally listed as endangered while the loggerhead is state and federally listed as threatened. Both are listed as endangered by the Florida Committee on Rare and Endangered Plants and Animals (FCREPA). The Indian River Lagoon serves as important developmental habitat for the immature life stages of these two species. Boat collisions and entanglement with nets and fishing lines are believed to be the principal causes of sea turtle mortality in the lagoon. In addition, many sea turtles in the lagoon are infected with a disease known as fibropapillomatosis. Data collected between 1986 and 1990 indicate that 33 to 61% of the green turtle population is infected with the disease. The disease was first documented in the lagoon in 1982 and has become more prevalent since that time. The cause of the disease has not been determined, but habitat degradation (e.g., water quality) may play a role in the disease process."

CCMP Comments Received

FLA. COASTAL MGMT. TEL:904-487-2899 Mar 14 96 15:41 No.009 P.04

Dept. of Environmental Protection Letter cont.

collected between 1986 and 1990 indicate that 33 to 61 percent of the green turtle population is infected with the disease. The disease was first documented in the lagoon in 1982 and has become more prevalent since that time. The cause of the disease has not been determined, but habitat degradation (e.g., water quality) may play a role in the disease process.

8. *Page 100, Marina and Boat Impacts Action Plan, bullet 3:*
A fourth bullet regarding manatees should be created from bullet 3, since the manatee information has nothing to do with erosion and wake damage. Bullet 4 should begin with the third sentence of bullet 3.
9. *Page 105, Marina and Boat Impacts Action Plan, paragraph 2:*
Should be updated as follows:

As of February 1, 1996, none of the counties within the Indian River Lagoon region had completed a manatee protection plan (MPP). Brevard County appointed an ad hoc committee which recommended an MPP to the Brevard County Board of County Commissioners. Indian River and Volusia counties completed boating use studies and are developing MPP's. St. Lucie and Martin counties are in the preliminary stages of MPP development and a boating use study is being conducted for both of these counties.
10. *Page 105, Marina and Boat Impacts Action Plan, paragraph 3, sentence 1:*
Please delete "marina" from this sentence. The MPP contains boat facility siting policies which address marina siting as well as other facility siting issues.
11. *Page 105, Marina and Boat Impacts Action Plan, paragraph 3, sentence 3:*
Please add the following underlined portion: "...protection for the manatee and other Lagoon inhabitants, provide protection..."
12. *Page 111, Marina and Boat Impacts Action Plan, paragraph 1, sentence 1:*
Please add "reported" to this sentence as follows: "...there were 1,107 reported boating accidents..."
13. *Page 111, Marina and Boat Impacts Action Plan, paragraph 2, sentence 2:*
The tone of this sentence could be offensive to boaters, and the following rewording is suggested: "Many of these boaters have little training or experience in proper boat operation."
14. *Page 130, paragraph 3, lines 6 and 10:* "melaleuca" and "Carina" are misspelled.
15. *Page 130, paragraph 4, line 5:* capitalize the word "many."
16. *Page 131, 3.01:*
The intended action for this section is to control or eradicate invasive exotics from the IRL region (taken from comments on page 130), but the section only proposes to have a committee to determine where everybody else is with respect to exotic species control. Ideally, the actions listed should cover:
 - a) efforts to organize or facilitate the organization of work days;
 - b) efforts to help buy equipment and herbicides; and
 - c) plans to contract or employ people to control the exotics, etc.

Responses to Comments

Response to Department of Environmental Protection, Tallahassee cont.

8. Marinas & Boats Impact Action Plan Intro, bullet 3: Added a fourth bullet regarding the manatee information that was previously under the third bullet.
9. Action MB-3, ¶ 2: Updated as follows "As of February 1, 1996, none of the counties within the Indian River Lagoon region had completed a manatee protection plan (MPP). Brevard County appointed an ad hoc committee which recommended an MPP to the Brevard County Board of County Commissioners. Indian River and Volusia counties completed boating use studies and are developing MPP's. St. Lucie and Martin counties are in the preliminary stages of MPP development and a boating use study is being conducted for both of these counties."
10. Action MB-3, ¶ 3: Deleted "marina" from first sentence.
11. Action MB-3, ¶ 3: Added "and other Lagoon inhabitants" after "increased protection for the manatee".
12. Action MB-6, ¶ 1: Added "reported" after "...there were 1,107" in first sentence.
13. Action MB-6, ¶ 2, sentence 2: Reworded sentence as follows: "Many of these boaters have little training or experience in proper boat operation."
14. Action BD-3, ¶ 3, lines 6 & 10: Corrected spelling of "melaleuca" and "Carina."
15. Action BD-3, ¶ 4, line 5: Capitalized the word "many."
16. Action BD-3, 3.01: Comment noted. The recommendation is to have a committee, representing experts from the region, decide how to eradicate invasive exotics from the Indian River Lagoon region. Once the committee has been formed they may undertake the listed actions.

CCMP Comments Received

FLA. COASTAL MGMT. TEL: 904-487-2899 Mar 14 96 15:42 No. 009 P.05

Dept. of Environmental Protection Letter con.

17. Page 132, paragraph 2, line 8: "melaleuca" is misspelled.
18. Page 133:
No specific actions were identified with respect to the biodiversity section except to direct attention to sections addressing actions on seagrasses, wetlands, marshes, and acquisition of sensitive lands. Perhaps an effort should be made to develop action plans in relation to this category separate from those set for other categories mentioned above.
19. Pages 134-142, Sea Grass Action Plan:
Although the text focuses on seagrass restoration activities, it appears that it does not adequately address the preservation of existing submerged aquatic vegetation.
20. Page 174, paragraph 4, line 2: "dusky" needs to be lower case.
21. Page 176, line 5: "Trichechus" is misspelled.
22. Page 176, Wildlife, Endangered & Threatened Species Action Plan:
Please correct the header of this section. On all of the even pages, the "n" is left off of "Action."
23. Page 176, Wildlife, Endangered & Threatened Species Action Plan, paragraph 2, last sentence:
Recommend the following editorial changes: "The ocean beaches of the region provide critically important nesting habitat for at least two species of marine turtles."
24. Page 176, Wildlife, Endangered & Threatened Species Action Plan, paragraph 5, sentence 2:
Please reword as follows: "As an example, the largest identified cause of mortality is collisions with watercraft."
25. Page 176, Wildlife, Endangered and Threatened Species Action Plan, Priority Problem, paragraph 6:
Recommend the following editorial changes for this paragraph.

Man's activities may have affected several species in the Indian River Lagoon in other ways as well. Many of the green turtles (*Chelonia mydas mydas*) found in the Indian River Lagoon are affected with fibropapillomatosis, a debilitating disease characterized by large growths on the skin, scales, scutes, eyes, oral cavity and viscera, or shell of an infected turtle. This disease is apparently limited to the lagoonal green turtle population as turtles captured nearby in the Atlantic Ocean are not afflicted with this disease. Although the cause of fibropapillomatosis is not known, it is suspected that habitat alteration and degradation may play a role. Degraded water quality may be a factor in the presence of the disease.
26. Page 177:
An additional section should be added as follows:

1.05 Develop and incorporate a policy in regional plans and Local Government Comprehensive Growth Management Plans relating the importance of listed species to the Indian River Lagoon system, supporting the recovery and protection of these species and establishing management strategies for enhancing and maintaining the population of listed species throughout the Indian River Lagoon region.
27. Page 179, Action ETS-2, Background and Expected Benefits, sentence 1:

Responses to Comments

Response to Department of Environmental Protection, Tallahassee cont.

17. Biodiversity (now Living Resources) Natural Communities Intro: Corrected spelling of "melaleuca."
18. BD Action Plan: BD-1 is designed to coordinate biodiversity research and management activities within the Indian River Lagoon region. BD-2 and BD-3 are aimed at helping protect and restore biodiversity.
19. Sea Grass Action Plan: Management activities aimed at improving water quality will, in turn, preserve existing submerged aquatic vegetation.
20. Wildlife Intro, ¶ 4, sentence 2: Changed "Dusky" to lower case.
21. Wildlife Endangered & Threatened Species Intro, line 5: Corrected spelling of "Trichechus."
22. Wildlife Endangered & Threatened Species Intro: Headers have been corrected.
23. Wildlife Endangered & Threatened Species Intro: Made the following editorial changes: "The ocean beaches of the region provide critically important nesting habitat for at least two species of marine turtles."
24. Wildlife Endangered & Threatened Species Intro: Reworded as follows: "As an example, the largest identified cause of mortality is collisions with watercraft."
25. Wildlife Endangered & Threatened Species Intro, Priority Problem, ¶ 6: Reworded paragraph as follows: "Man's activities may have affected several species in the Indian River Lagoon in other ways as well. Many of the green turtles (*Chelonia mydas mydas*) found in the Indian River Lagoon are affected with fibropapillomatosis, a debilitating disease characterized by large growths on the skin, scales, scutes, eyes, oral cavity and viscera. Although the cause of fibropapillomatosis is not known, it is suspected that habitat alteration and degradation may play a role in the presence of the disease."
26. ETS-1, HOW: The proposed section 1.05 is covered in 1.04.
27. ETS-2, Background & Expected Benefits, sentence 1: Made the following editorial change: "Many federal, state and local regulations have been enacted to provide protection for endangered, threatened or species of special concern found in the Indian River Lagoon region."

CCMP Comments Received

FLA. COASTAL MGMT. TEL: 904-487-2899 Mar 14 96 15:42 No. 009 P.06

Dept. of Environmental Protection Letter cont.

Recommend the following editorial change:

Many federal, state and local regulations have been written ~~and~~ to provide protection for the ~~several~~ endangered, threatened or species of special concern found in the Indian River Lagoon region.

28. Page 183, Background and Expected Benefits:
Replace "papillomatosis" with "fibropapillomatosis."
29. Page 183, Background and Expected Benefits, sentence 2:
Replace sentence which begins "At present, these diseases..." with "Fibropapillomatosis primarily affects green turtles inhabiting the Indian River Lagoon as opposed to green turtles inhabiting adjacent Atlantic Ocean waters."

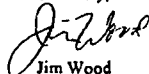
30. Page 183, 4.01:
Recommend the following editorial and functional change:

Design a study of wildlife diseases suspected to be human-caused such as fibropapillomatosis and *Lobo mycosis* to determine the causes of these diseases. Integrate these studies with ongoing research.

31. In summary, the document adequately addressed most categories and was well organized. The Department recognizes that the plan is in the draft stage, but still maintains concern over the lack of information regarding funding sources for the proposed actions. This type of information is necessary to appropriately evaluate if certain recommendations are feasible. It is hoped that the final document will provide greater detail in this regard to enable a more thorough evaluation.

The Department appreciates the opportunity to review and comment on the IRLCCMP, and we look forward to participating in continuing efforts to manage this valuable ecosystem. The Department's Central District Office has commented directly to Derek Busby of the Indian River Lagoon National Estuary Program. For your reference, we have attached the District's letter (Barbara Bess, February 23, 1996) (Attachment 3). If you have any questions, please feel free to contact me at (904) 487-2231.

Sincerely,



Jim Wood
Office of Intergovernmental Programs

/jmw

Attachments

cc: Mickey Bryant
Alex Cordero
Kathleen Parker Greenwood
George Henderson
Barbara Lenczewski
Laura Ruhana
Mickey Watson
Fritz Wettstein

Responses to Comments

Response to Department of Environmental Protection, Tallahassee cont.

28. ETS-4, Background & Expected Benefits: Replaced "papillomatosis" with "fibropapillomatosis."
29. ETS-4, Background & Expected Benefits, sentence 2: Replaced sentence which begins "At present, these diseases..." with "Fibropapillomatosis primarily affects green turtles inhabiting the Indian River Lagoon as opposed to green turtles inhabiting adjacent Atlantic Ocean waters."
30. ETS-4, HOW 4.01: Reworded as follows: "Design a study of wildlife diseases suspected to be human-caused such as fibropapillomatosis and *Lobo mycosis* to determine the causes of these diseases. Integrate these studies with ongoing research."
31. Possible funding sources for the proposed actions have been addressed.

CCMP Comments Received

Responses to Comments



FLORIDA DEPARTMENT OF STATE

Sandra B. Mortham

Secretary of State

DIVISION OF HISTORICAL RESOURCES

R.A. Gray Building

500 South Bronough Street

Tallahassee, Florida 32399-0250

Director's Office
(904) 488-1480Telecopier Number (FAX)
(904) 488-3353

March 26, 1996

Ms. Amy W. Adams
Indian River Lagoon National Estuary Program
1900 South Harbor City Blvd., Suite 109
Melbourne, Florida 32901

In Reply Refer To:
Frank J. Keel
Historic Sites Specialist
(904) 487-2333
Project File No. 960785

RE: Cultural Resource Assessment Request
Draft Comprehensive Conservation and Management Plan, Indian River Lagoon
National Estuary
Indian River and St. Lucie Counties, Florida

Dear Ms. Adams:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), we have reviewed the referenced project for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places*. The authority for this procedure is the National Historic Preservation Act of 1966 (Public Law 89-665), as amended.

1. Upon review of the referenced document, we note that historic properties are not addressed. A review of our records indicates that numerous archaeological sites are recorded in the Estuary and there is a high probability that additional unrecorded sites are present. Although the majority of the objectives identified in the management plan may have no effect, objectives that involve ground disturbance activities, or shoreline protection could effect these properties. Therefore, we would recommend that the final document address these properties and methods to protect historic properties in the Estuary.

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,

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

GWP/Kfk

Archaeological Research
(904) 487-2299Florida Folklife Programs
(904) 397-2192Historic Preservation
(904) 487-2333Museum of Florida History
(904) 488-1484

Response to Department of State, Division of Historical Resources letter dated March 26, 1996 (requested by IRLNEP)

1. After personal communication with Mr. Percy, IRLNEP agreed to add a new subheading in Section A History & Growth of the IRL Region entitled "Historic and Cultural Resources." The potential negative impacts upon historic and cultural resources will be assessed as recommendations are put into action, and where possible avoided. Many proposed actions, such as land acquisition and shoreline restoration could aid in the protection of these resources.

CCMP Comments Received

Responses to Comments

State Clearinghouse review form received from Florida Governor's Office

Response from Florida Governor's Office, Environmental Policy/C & ED form letter received February 1, 1996 (requested by State Clearinghouse)

COUNTY: State

DATE: 01/16/96
COMMENT DUE DATE: 01/30/96
CLEARANCE DUE DATE: 03/01/96
SAI#: FL9601160021C

No Comment.

STATE AGENCIES	LOCAL/OTHER	OPB POLICY UNITS
<input type="checkbox"/> Community Affairs <input type="checkbox"/> Environmental Protection <input type="checkbox"/> Game and Fresh Water Fish Comm <input type="checkbox"/> Marine Fisheries Commission	<input type="checkbox"/> South Florida WMD <input type="checkbox"/> St Johns River WMD <div style="text-align: center;"> RECEIVED FEB 01 1996 State of Florida Clearinghouse </div>	<input type="checkbox"/> Environmental Policy/C & ED

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

- ☐ Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.
- ☒ Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.
- ☐ Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.
- ☐ Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is an analogous state license or permit.

Project Description:

Indian River Lagoon Draft Comprehensive and Management Plan - Volusia, Seminole, Orange, Brevard, Indian River, St. Lucie, Martin Counties, Florida.

To: Florida State Clearinghouse
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-2100
(904) 922-5438 (SC 292-5438)
(904) 487-2899 (FAX)

EO. 12372/NEPA

Federal Consistency

- ☒ No Comment
☐ Comments Attached
☐ Not Applicable

- ☐ No Comment/Consistent
☐ Consistent/Comments Attached
☐ Inconsistent/Comments Attached
☐ Not Applicable

From:

Division/Bureau: OPBENV
 Reviewer: NATHAN BUREAU
 Date: 1-30-96

CCMP Comments Received

Responses to Comments

INDIAN RIVER COUNTY, FLORIDA
M E M O R A N D U M

TO: Amy W. Adams, Water Resources Planner
Indian River Lagoon National Estuary Program

THROUGH: Robert M. Keating, AICP
Community Development Director
Indian River County

FROM: Roland M. DeBlois, AICP
Chief, Environmental Planning
Indian River County

DATE: March 19, 1996

SUBJECT: Comments on January 1996 Draft Indian River Lagoon CCMP

I've reviewed the January draft of the Indian River Lagoon Comprehensive Conservation & Management Plan (CCMP) and generally it looks good. However, following are a few comments (some non-substantial) for your consideration as the plan is finalized.

1. Page 8 - The spoonbill picture obscures some of the text.
2. I did not see the Pelican Island National Wildlife Refuge mentioned in the Plan. I suggest some reference to the refuge in the "History & Growth of the IRL Region" section of the Introduction (pp. 12-18).
3. Page 91 - Is the Upper St. Johns River Basin restoration project part of the Central & Southern Florida (C&SF) Flood Control Project? If not, I recommend some reference to the Basin project since it will substantially reduce stormwater discharge to the Indian River Lagoon via the C-54 Canal.
4. Page 115 - Concerning establishment of resource protection zones, some mention should be made in this section regarding "interim" manatee protection speed zones that have been established by the State (in coordination with local governments) in the IRL over the past few years.
5. Page 145 - Although no net-loss of wetland acreage should be encouraged, a "no net-loss of wetlands" policy should be focused on wetland functions rather than acreage.
6. Page 168 - (first paragraph) I believe St. Lucie County's approved land acquisition bond referendum is \$20 million (not \$25 million).

Also, attached is a memorandum with comments from Indian River County Engineer Roger Cain concerning the CCMP. If you have any questions, please do not hesitate to contact me (407/567-8000, ext. 258).

cc: Robert Keating

\\r1\ir1ccmp.men

Response to Indian River County letter dated March 19, 1996
(requested by IRLNEP)

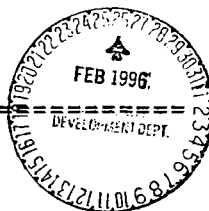
1. Graphics have been changed and do not obscure text.
2. A paragraph on Pelican Island National Wildlife Refuge reference has been added to the Bird section of the Intro - Current State of the IRL - Living Resources.
3. FSD-12, Background: Yes the Upper St. Johns River Basin restoration project is part of the Central & Southern Florida Flood Control Project.
4. MB-9, Background: Has been addressed.
5. Natural Communities, Wetlands AP Intro, Priority Problem: Wetland function is addressed in the sentence following the one referred to.
6. Natural Communities, Land Acquisition AP Intro, Priority Problem: Changed from "\$25 million" to "\$20 million."

CCMP Comments Received

Responses to Comments

INDIAN RIVER COUNTY, FLORIDA

MEMORANDUM



=====

TO: Roland DeBlois, AICP
Chief, Environmental Planning & Code Enforcement

FROM: Roger D. Cain, P.E.
County Engineer

SUBJECT: Indian River Lagoon Comprehensive Conservation & Management Plan Draft
January 19, 1996

DATE: February 23, 1996

=====

7. I have totaled up the costs to local governments and cities which are listed in the water and sediment quality section; that total comes to \$51,555,878.00. No where in the report does it say where the money for these programs is going to come from, or where the local governments and cities are to come up with the money to implement these policies. Is the federal government going to provide some assistance? If Indian River County's share of this is 10%, that would be \$5,000,000.00, if the programs are implemented over ten years, that would be a half a million dollars per year, which on a \$49,000,000.00 budget, is an increase of about 1%. That is a significant increase in the budget for one item, and probably not possible to implement especially when the impacts on the water control districts are included which will be an additional burden on taxpayers. It also should be noted that some costs have not even been identified.
8. It would seem to me that some prioritizing of the implementation should be made. As an example, it is mentioned in the report that the goal established for the Indian River Lagoon is reduction of pollutant loadings to the extent that adequate water quality conditions exist allowing the growth of sea grasses to a depth of approximately 1.7 meters. Yet, it is not stated in the report what amount of treatment, and what technologies will need to be employed to achieve that goal. For instance, in an extreme case, all of the programs in this report could be implemented and it still might not be possible to achieve the goal stated in the report. Has sufficient study been made to guarantee that the program goal can be met if these programs are implemented? What benefits will be gained with the expenditure of this money? In other words, will the costs be balanced by the benefits. There should be some discussion as to what conditions the public will support as far as the conditions of the lagoon. How is it determined that the goal of the program is to establish the growth of sea grasses to 1.7 meters? Does this return the lagoon to a pristine condition? Who determined this was to be the goal?

Response to Indian River County cont.

7. A finance chapter has been added and possible funding sources have been identified.
8. A prioritization of action plans has also been added as Appendix II: Prioritization of Actions.

CCMP Comments Received

Indian River County Letter cont.

Page 2
Indian River Lagoon
February 23, 1996

9. It is apparent in the report through actions FSD 7 and FSD 9 the recommendations would remove local authority from setting land development regulations around the Indian River Lagoon, this is a policy matter that should be discussed with the Board of County Commissioners. The report does not state what effect different setback regulations have on water quality. Again, this is a priority question, is this a substantial problem that requires the implementation of the reduction of local authority in this area, or is the problem with the Indian River Lagoon, and its water and sediment quality affected little by the inconsistencies in local ordinances as compared to some of the other problems.
10. The Public Works Department would welcome the recommendations for existing systems, if certain conditions are met. We have long held that water quality is improved when roads are paved and the sediment loaded is decreased into the lagoon. It is not mentioned whether or not you can achieve the goals using the baffle boxes or other technologies mentioned, or whether this would provide just a marginal improvement. The report is correct in that there is no land available in developed areas for the traditional retention pond or swale methodology. A cost effective means of retrofitting systems to improve the water quality while not being expensive should be developed. Public Works would oppose any program that would mandate retrofitting, however.
11. It is apparent that the report is probably leaning toward funding sources being stormwater utilities. I would recommend that the adoption of this overall program be done as a referendum vote, much like the environmental lands purchase was done in Indian River County. A properly executed program, if the citizens feel that it is in the best interest of themselves and the lagoon, would pass as evidenced by the environmental lands purchase passing. It would also remove the political issues from the table, and the citizens, I believe, would accept the results either way. Whether this is done, or not, before pursuing this further, a better idea of the costs and revenues should be presented in this report.
12. The report suggests FDEP Delegation of the EPA NPDES Stormwater Program. If this is implemented, small counties with population less than 300,000 will be required to get EPA permits. We are concerned that this will be costly to the county.

/gfk

cc: James W. Davis, P.E., Public Works Director
file

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Responses to Comments

Response to Indian River County cont.

9. In regards to FSD-7, land use controls always reside with the local government. FSD-7 simply requests local government to review land use controls in light of water quality needs. FSD-9 calls for a review of storm water standards at all levels of government and any recommendations may or may not be implemented by local government. In the final CCMP local government will be added as a support organization. The effect that different setback regulations will have on water quality may be determined during evaluation.
10. Specific programs will be designed on a site specific basis in cooperation with local governments.
11. Comment noted.
12. Counties will ultimately be faced with these cost as NPDES is implemented by either FDEP or EPA. Delegation to DEP has the potential to reduce requirements to comply with current NPDES permitting requirements.

CCMP Comments Received

State Clearinghouse review form received from Marine Fisheries Commission.

Responses to Comments

Response from Marine Fisheries Commission received February 6, 1996 (requested by State Clearinghouse)

No Comment.

COUNTY: State

DATE: 01/16/96
COMMENT DATE: 01/30/96
CLEARANCE DUE DATE: 03/01/96
SAI#: FL9601160021C

STATE AGENCIES	LOCAL/OTHER	OPB POLICY UNITS
<input type="checkbox"/> Community Affairs <input type="checkbox"/> Environmental Protection <input type="checkbox"/> Game and Fresh Water Fish Comm <input checked="" type="checkbox"/> Marine Fisheries Commission <div style="text-align: center;"> RECEIVED JAN 17 1996 MARINE FISHERIES COMMISSION </div>	<input type="checkbox"/> South Florida WMD <input type="checkbox"/> St Johns River WMD <div style="text-align: center;"> RECEIVED FEB 06 1996 State of Florida Clearinghouse </div>	<input type="checkbox"/> Environmental Policy/C & ED

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

- ☐ Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.
- ☒ Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.
- ☐ Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.
- ☐ Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.

Project Description:

Indian River Lagoon Draft Comprehensive and Management Plan - Volusia, Seminole, Orange, Brevard, Indian River, St. Lucie, Martin Counties, Florida.

To: Florida State Clearinghouse
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-2100
(904) 922-5438 (SC 292-5438)
(904) 487-2899 (FAX)

EO. 12372/NEPA

Federal Consistency

- | | |
|--|---|
| <input type="checkbox"/> No Comment | <input checked="" type="checkbox"/> No Comment/Consistent |
| <input type="checkbox"/> Comments Attached | <input type="checkbox"/> Consistent/Comments Attached |
| <input type="checkbox"/> Not Applicable | <input type="checkbox"/> Inconsistent/Comments Attached |
| | <input type="checkbox"/> Not Applicable |

From: MARINE FISHERIES COMMISSION
2540 EXECUTIVE CENTER CIRCLE WEST
SUITE 106
TALLAHASSEE, FLORIDA 32301

Division/Bureau: *[Signature]*

Reviewer: *[Signature]*

Date: *[Signature]*

CCMP Comments Received

Responses to Comments

EXECUTIVE DIRECTOR
DAVID D. RAY
P.O. BOX 430746
MIAMI, FLORIDA 33143-0746
305/443-3381 FAX 305/442-2758

MARINE
INDUSTRIES
ASSOCIATION
OF FLORIDA, INC.



PRESIDENT
WILLIAM E. GUY, JR.
55 EAST OCEAN BOULEVARD
POST OFFICE BOX 3386
STUART, FLORIDA 34999-3386
407/286-7372 FAX 407/220-3318

Reply to: Stuart

May 13, 1996



Derek Busby, Project Director
Indian River Lagoon National
Estuary Program
1900 South Harbor City Blvd., Ste. 109
Melbourne, Florida 32901

re: Lagoon Management Plan

Dear Derek:

I have been informed that the current version of the Management Plan calls for marina operating permits. In our opinion, marina operating permits accomplish nothing other than more paperwork, reports, and/or bureaucrat positions to handle them.

We have long encouraged the use of best management practices by our marinas, and even give an award each year to the member marina that has most fully implemented best management practices. Most marinas in Florida seem to be striving to achieve those practices in general, although it obviously takes time because it is quite expensive.

1. The marina operating permit concept was explored by the DEP a few years back and abandoned. The IRL/NEP should also abandon it as it has not been shown to accomplish anything for the environment and simply adds more taxpayer and private industry expense.

Sincerely,

Dictated but signed in his absence to avoid delay
William E. Guy, Jr.

WEG/mna

cc: David Ray
Dennis Barton

MEMBER ORGANIZATIONS
BREVARD MARINE ASSOCIATION - MARINE INDUSTRIES ASSOCIATION OF CENTRAL FLORIDA - COLLIER COUNTY MARINE TRADES ASSOCIATION
MARINE INDUSTRIES ASSOCIATION OF GREATER MIAMI - MARINE INDUSTRIES ASSOCIATION OF GREATER TAMPA BAY - JACKSONVILLE MARINE ASSOCIATION
MARINE INDUSTRIES ASSOCIATION OF THE MIDDLE KEYS - NORTHWEST FLORIDA MARINE INDUSTRIES ASSOCIATION - MARINE INDUSTRIES ASSOCIATION OF PALM BEACH COUNTY
MARINE INDUSTRIES ASSOCIATION OF SOUTH FLORIDA - SOUTHWEST FLORIDA MARINE TRADES ASSOCIATION - SUNCOAST MARINE INDUSTRIES ASSOCIATION
MARINE INDUSTRIES ASSOCIATION OF THE TREASURE COAST

FLORIDA BOATING: A FAMILY TRADITION

Response to Marine Industries Association of Florida, Inc., received May 15, 1996 (requested by IRLNEP)

1. Comment noted.

CCMP Comments Received

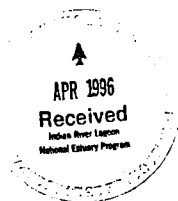
Responses to Comments



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, Florida 33702

April 3, 1996



Ms. Amy W. Adams
Water Resources Planner
Indian River Lagoon National Estuary Program
1900 South Harbor City Boulevard
Suite 109
Melbourne, Florida 32901

Dear Ms. Adams:

The National Marine Fisheries Service (NMFS) has reviewed the draft Comprehensive Conservation and Management Plan (CCMP) dated January 1996. We reviewed the following action plans: biodiversity (BD), seagrasses (SG), endangered and threatened species (ETS), wetlands (W) impounded marshes (IM) and fisheries (F). The following comments are provided for your consideration:

1. **BD-1:** NMFS is involved in research and data collection within the Indian River Lagoon and should be included as a supporting organization for this element.
2. **BD-2, IM-2, LA-1, LA-2, ETS-3 and W-4:** While we support these elements, the NMFS does not have the resources or mechanisms available for land acquisition programs. We have no recommended changes for this element.
3. **W-1, W-2:** Due to our responsibilities under the Fish and Wildlife Coordination Act, the NMFS should be included as a primary organization for 1.01, 1.02 and 1.03 and as a supporting organization for 1.05, 2.01, 2.02 and 2.04.
4. **W-5:** NMFS is an active member of SOMM, and support this element and have no comments or recommended changes to offer.
5. **W-6:** This element suggests that priority restoration sites could be used as mitigation sites for authorized wetland impacts. Therefore, the COE as a wetland regulator, and the Federal resource agencies responsible for advising the COE, the NMFS, FWS and EPA, should be included as supporting organizations.
6. **ETS-1, ETS-2, ETS-4:** The NMFS should be included as a primary organization for 1.01, 1.03, ETS-2 and ETS-4.

Response to National Marine Fisheries Service letter received April 8, 1996 (requested by IRLNEP)

1. **BD-1 WHO:** NMFS included as a supporting organization.
2. **BD-2, IM-2, LA-1, LA-2, ETS-3 and W-4:** Comment noted - NMFS supports these actions but does not have the resources available for land acquisition programs.
3. **W-1, W-2 WHO:** NMFS included as support for 1.05, 2.01, 2.02 and 2.04.
4. **W-5:** Comment noted - NMFS support for this action recognized.
5. **W-6 WHO:** NMFS included as support.
6. **ETS-1, ETS-2, ETS-4 WHO:** NMFS included as primary organization for 1.01, 1.03, ETS-2 and ETS-4.



CCMP Comments Received**Responses to Comments**

**Second page to National Marine Fisheries Service letter
(page left blank).**

NMFS Letter cont.

We appreciate the opportunity to provide these comments. Please direct related comments or questions to Mr. David N. Dale of our St. Petersburg Area Office. He may be contacted at 813/570-5317.

Sincerely,



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

cc:
F/SEO2
F/SEO23-ST PETE

CCMP Comments Received

Responses to Comments

Board of County Commissioners

Ken L. Foster, Chairman
Burt Aaronson, Vice Chairman
Karen T. Marcus
Carol A. Roberts
Warren H. Newell
Mary McCarty
Maude Ford Lee

County Administrator

Robert Weisman

Department of Environmental Resources Management



March 5, 1996

Amy W. Adams, Water Resources
Planner III, Indian River Lagoon
National Estuary Program
1900 South Harbor City Blvd.
Suite 109
Melbourne, FL 32901

Dear Ms. Adams:

SUBJECT: COMMENTS ON THE INDIAN RIVER LAGOON DRAFT COMPREHENSIVE
CONSERVATION & MANAGEMENT PLAN

1. We have reviewed with much interest, the above mentioned plan and enthusiastically support sending it to the Governor's Office for review. In general, the format is easily readable and the goals are well understood. This document will help Palm Beach County develop its own management plan for the Lake Worth Lagoon. Most of the priority problems to be addressed in this plan are the same for Palm Beach County's estuarine waters. We are particularly interested in the protection of natural resources such as seagrasses and mangroves.

Best of luck to you in your endeavor to restore the Lagoon. If you need any specific information or expertise that we may have available through our staff, please call us.

Sincerely,

A handwritten signature in cursive script that reads "Richard E. Walesky".

Richard E. Walesky, Director
Environmental Resources Management

Response to Palm Beach County letter received March 11, 1996 (requested by IRLNEP)

1. Comment noted: Palm Beach County supports the CCMP.

"An Equal Opportunity - Affirmative Action Employer"

3323 Belvedere Road, Bldg. 502 West Palm Beach, Florida 33406
(407) 233-2400 Suncom 274-2400

printed on recycled paper

CCMP Comments Received

Responses to Comments



South Florida Water Management District

3301 Gun Club Road, West Palm Beach, Florida 33406 • (407) 686-8800 • FL WATS 1-800-432-2045

PRO SWIM IRL

January 3, 1996

Mr. Derek S. Busby, Project Director
Indian River Lagoon National Estuary Program
1900 Harbor City Blvd, Suite 109
Melbourne, Florida 32901

Dear Mr. Busby:

Thank you for the opportunity to review the November 1995 Draft Indian River Lagoon (IRL) Comprehensive Conservation and Management Plan (CCMP). The South Florida Water Management District has been a long-time participant in the preservation and restoration of the IRL through our efforts in the IRL SWIM program and Upper East Coast Regional Water Supply Plan. In addition, the District is the local sponsor of the U. S. Army Corps of Engineers (USACE) IRL Feasibility Study, which will look at opportunities to enhance and protect the St. Lucie Estuary and IRL through modifications to the existing primary canal system. Therefore, it is with these programs in mind that we have conducted our review of the CCMP in order to coordinate and maximize the benefits to the lagoon.

1. Overall, the CCMP agrees well with the efforts outlined by the 1994 IRL SWIM Plan Update.
2. Items for which the Water Management Districts (WMD) have been designated as the lead agencies are, for the most part, compatible with existing programs. However, there is some confusion over what is a lead function and what is a support function. In addition, the WMDs are clearly not the lead agency with respect to the action item related to on-site sewage disposal systems, OSDS-1. This item needs to be the responsibility of the Florida Department of Environmental Protection, rather than the WMDs, as the Districts have no authority in this area. WMD support for those action items regarding industrial discharges are also out of our purview. Finally, WMD participation in the action items addressing the salt water fisheries of the lagoon (F-1 through F-3) is not consistent with the mission or expertise of our agency.
4. The action items related to wetlands preservation and protection need to be updated to reflect the implementation of the Environmental Resource Permit, which became effective on October 3, 1995. Delegation of ERP responsibility to the local governments would be more effective to strengthen wetland programs, as discussed in action item W-1, than the development of an updated model wetlands policy. Agencies have generally moved away from the development of policies to that of rules/ordinances.
5. The November draft CCMP did not include any financial information. Although we did obtain a copy of the January 1996 draft late in the review process, we have not had an opportunity to fully examine these implementation costs. However, any financial participation by our District would be dependent upon our annual budget process and competition from other projects.

Response to South Florida Water Management District letter dated January 3, 1996 (requested by IRLNEP)

1. Comment noted: The CCMP agrees well with the 1994 IRL SWIM Plan Update.
2. Comment noted: The Actions designated to WMDs as lead agency are for the most part compatible with existing programs.
3. To distinguish between primary functions and support functions a description has been included in the "How to use this plan." With respect to OSDS-1, WMDs have been moved from primary to support. In regards to F-1 through F-3, this participation is largely in an advisory capacity which will be limited to the capabilities and mission of the WMDs.
4. The Wetlands Action Plan has been updated to reflect the implementation of the Environmental Resource Permit, effective on October 3, 1995.
5. A financial chapter has been added along with the identification of possible funding sources for each action.

Governing Board:

Valerie Boyd, Chairman
Frank Williamson, Jr., Vice Chairman
William E. Graham

William Hammond
Betsy Krant
Richard A. Machek

Eugene K. Pettis
Nathaniel P. Reed
Miriam Singer

Samuel E. Poole III, Executive Director
Michael Slayton, Deputy Executive Director

Mailing Address: P.O. Box 24680, West Palm Beach, FL 33416-4680

CCMP Comments Received

Responses to Comments

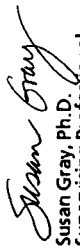
Response to South Florida Water Management District letter cont.

SFWMD Letter cont.

Derek S. Busby
January 3, 1996
Page 2

6. This letter summarizes our major comments on the CCMP. Additional editorial comments have been indicated on the enclosed report. We look forward to continuing to work with you on the Indian River Lagoon National Estuary Program and the CCMP.

Sincerely,



Susan Gray, Ph.D.
Supervising Professional
Upper East Coast/Kissimmee Planning Division

SG:ce
Enclosure

CCMP Comments Received



South Florida Water Management District

3301 Gun Club Road, West Palm Beach, Florida 33406 • (407) 686-8800 • F1.WATS 1-800-432-2045

GOV 04-12 RF#96268

January 29, 1996

Florida State Clearinghouse
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-3000

RECEIVED
JAN 31 1996

State of Florida Clearinghouse

To whom it may concern:

Subject: Indian River Lagoon Comprehensive Conservation and Management Plan
SA#: FL9601160021C

The South Florida Water Management District has previously reviewed the Indian River Lagoon Comprehensive Conservation and Management Plan (CCMP) and provided comments directly to the Indian River Lagoon National Estuary Program. Most of those comments continue to be applicable to this draft of the CCMP.

- In general, the CCMP matches with the strategies described in the 1994 Indian River Lagoon SWIM Plan Update. The District is concerned, however, over the lack of distinction between lead and support functions provided by this document. The document assigns the water management districts with lead responsibility in one area, action items dealing with on-site sewage disposal systems, which is the responsibility of other agencies (the Florida Department of Health and Rehabilitative Services through County Public Health Units and the Florida Department of Environmental Protection). In addition, participation of the water management districts in the development of fisheries management regulations, as described in the sections on salt water fisheries, is not consistent with the expertise of our agency.
1. The District is also concerned that the CCMP offers only very limited financial information. Estimates of the implementation costs are provided with no information indicating how these costs were determined. The costs assigned to the water management districts for implementation of the CCMP exceed \$18 million; the South Florida Water Management District cannot commit to these expenditures at this time. Any financial participation by our agency will be dependent upon our annual budget process and competition from other projects.

Sincerely,

Frank M. Duke, AICP
Supervising Professional Planner
Comprehensive Planning Division
Planning Department
FD/ng

State Clearinghouse
SF#9601160021C

Governing Board:

Valerie Boyd, Chairman
Frank Williamson, Jr., Vice Chairman
William E. Graham

William Hammond
Betty Krant
Richard A. Machek

Eugene K. Petrie
Nathaniel P. Reed
Miriam Singer

Samuel E. Poole III, Executive Director
Michael Slayton, Deputy Executive Director

Mailing Address: P.O. Box 24680, West Palm Beach, FL 33416-4680

Responses to Comments

Response to South Florida Water Management District letter received January 31, 1996 (requested by State Clearinghouse)

1. To distinguish between primary functions and support functions a description has been included in the "How to use this plan."
2. With respect to OSDS-1, WMDs have been moved from primary to support.
3. In regards to F-1 through F-3, this participation is largely in an advisory capacity which will be limited to the capabilities and mission of the WMDs.
4. A financial chapter has been added along with the identification of possible funding sources for each action.
5. Comment noted regarding financial participation.

CCMP Comments Received

State Clearinghouse review form received from South Florida Water Management District.

Responses to Comments

Response from South Florida Water Management District form letter received January 31, 1996 (requested by State Clearinghouse)

Comments attached.

UHSIHL:MGMT TEL:904-487-2899 Feb 27 96 14:06 No.005 P.05

COUNTY: State

DATE: 01/24/96
COMMENT DUE DATE: 01/30/96
CLEARANCE DUE DATE: 03/01/96
BIB: FL960118002

STATE AGENCIES	LOCAL/OTHER	OPS POLICY UNITS
<input type="checkbox"/> Community Affairs <input type="checkbox"/> Environmental Protection <input type="checkbox"/> Game and Fresh Water Fish Comm <input type="checkbox"/> Marine Fisheries Commission	<input checked="" type="checkbox"/> South Florida WMD <input type="checkbox"/> St. Johns River WMD	<input type="checkbox"/> Environmental Policy/C & ED

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

☐ Federal Assistance to State or Local Government (16 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.

☒ Direct Federal Activity (16 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.

☐ Outer Continental Shelf Exploration, Development or Production Activities (16 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.

☐ Federal Licensing or Permitting Activity (16 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.

Project Description:

Indian River Lagoon Draft Comprehensive and Management Plan - Volusia, Seminole, Orange, Brevard, Indian River, St. Lucie, Martin Counties, Florida.

To: Florida State Clearinghouse
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-2100
(904) 922-5438 (SC 292-5438)
(904) 487-2899 (FAX)

EO. 12372/NEPA

Federal Consistency

☐ No Comment
☒ Comments Attached
☐ Not Applicable

☐ No Comment/Consistent
☐ Consistent/Comments Attached
☐ Inconsistent/Comments Attached
☐ Not Applicable

From:
Division/Bureau: Comprehensive Planning
Reviewer: Frank Pike

CCMP Comments Received

**** South Florida Water Management District's additional comments were made directly on the draft pages of the CCMP. The actual pages have not been included here. Comments based on grammar, punctuation and wording were directly incorporated.**

6. Current State of the IRL, Water & Sediment Quality: "There are four categories of WWTPs..." Need to define.
7. Current State of the IRL, Water & Sediment Quality: In paragraph beginning "The largest industrial wastewater sources" need to explain why "high temperature" is a problem.
8. Management Committee Affiliations: FDEP = DNR + DER.
9. Technical Advisory Committee Affiliations: FDEP = DNR + DER. Add SJRWMD and SFWMD.
10. PS-3, WHO Support: Not a WMD responsibility - unclear what would constitute support.
11. PS-4, WHO Support: Delete WMDs from Support.
12. OSDS-1, WHO Primary: Add FDEP and HRS to Primary. Move WMDs (IRLSWIM) from Primary to Support.
13. OSDS-2, WHO Support: Remove WMDs from Support and add FDEP to Support.
14. FSD Action Plan Intro, ¶ 5: "will be required..." or "may be required?"
15. FSD Action Plan Intro, Priority Problem ¶ 13: Change "viable shellfish population" to "viable shellfish and sea grass population."

Responses to Comments

Response to South Florida Water Management District's letter dated January 29, 1996 (requested by IRLNEP)

6. Added to the end of nonpoint source ¶ "There are four categories of WWTPs located in the Lagoon region, and categorized by discharge volume and treatment type. Volumes are usually stated in Million Gallons Daily discharged. These categories are as follows:
 - Regional wastewater treatment plants (average daily flow > 5 MGD)
 - Sub-regional wastewater treatment plants (average daily flow 1 MGD or greater but < 5 MGD)
 - Package wastewater treatment plants (average daily flow < 1 MGD) (Woodward-Clyde, 1994)
7. Paragraph beginning "The largest industrial wastewater sources" added to the end of last sentence "which can adversely impact sea grass and other communities in the discharge plumes."
8. Deleted "Florida Department of Natural Resources."
9. Deleted "FDNR" and added "SJRWMD and SFWMD."
10. WMDs (IRL-SWIM) have a support role by providing water quality and SAV data, PLRG modeling, etc.
11. Same as above.
12. WMDs are support. See # 2.
13. Added FDEP and kept WMDs for Support.
14. Replaced "will be required..." with "may be required."
15. Changed "viable shellfish population" to "viable shellfish and sea grass population."

CCMP Comments Received

Responses to Comments

South Florida Water Management District's requested changes cont.

16. FSD Action Plan Intro, Priority Problem ¶ 13: Start "Similarly..." as a new paragraph. Add "The SLE is the highest priority area for developing and implementing PLRGs in the southern end of the Lagoon (Segment 4). Appendix I of the 1994 Indian River Lagoon SWIM Plan Update provides a complete description of SFWMD efforts to develop PLRGs for the SLE."
17. FSD Action Plan Intro, Priority Problem ¶ 14: Add "and the 1994 IRL SWIM Plan Update" to the end of the last sentence.
18. FSD-3, Background: Last sentence - Change "shellfish community" to "oyster and sea grass community." After the last sentence add "The SLE is the highest priority area for developing and implementing PLRGs in the southern end of the Lagoon (Segment 4)."
19. FSD-3, HOW 3.01: Add "The SLE will receive highest priority for PLRG development in the southern end of the Lagoon (see Appendix I of the 1994 IRLSWIM Plan)."
20. FSD-3, WHO Support: Add "298 Districts."
21. FSD-4, WHO Support: Add "298 Districts."
22. FSD-5, WHO Primary: Add "298 Districts."
23. FSD-6, WHO: Move FDEP from Support to Primary because they must issue permits.
24. MB-1, WHO Support: Not within SFWMD purview.
25. MB-4, WHO: Add FDEP to Primary.
26. BD-2, WHO: Delete "IRLSWIM" from Support and add "SOR" in place.
27. BD-3, WHO: Doesn't DEP have a state council focused on exotics?

Response to South Florida Water Management District's letter cont.

16. Started a new paragraph with "Similarly..." and added "The SLE is the highest priority area for developing and implementing PLRGs in the southern end of the Lagoon (Segment 4). Appendix I of the 1994 IRLSWIM Plan Update provides a complete description of SFWMD efforts to develop PLRGs for the SLE."
17. Added "and the 1994 IRLSWIM Plan Update." to "Indian River Lagoon Action Plan."
18. Changed "shellfish community" to "oyster and sea grass community." After last sentence added "The SLE is the highest priority area for developing and implementing PLRGs in the southern end of the Lagoon (Segment 4)."
19. Did not add to HOW 3.01.
20. Added "WCDs" (298 Districts) to support.
21. Added "WCDs" (298 Districts) to support.
22. Added "WCDs" (298 Districts) to primary.
23. Yes, permitting will be required but the Primary agency will be WMDs so FDEP will be Support.
24. Kept WMDs as Support - they provide information on water quality, SAV, PLRGs, etc.
25. Added "FDEP" to Primary.
26. Deleted "IRLSWIM" from Support and added "SOR."
27. Agreed that DEP has a state council focused on exotics but the effort still needs to be made.

CCMP Comments Received

South Florida Water Management District's request for change cont.

28. Natural Communities Wetlands AP Intro, Priority Problem: In paragraph beginning "Certain construction activities in wetlands..." add "at the state/federal level" to "permitting requirements."
29. Natural Communities Wetlands AP Intro, Priority Problem: In paragraph beginning "The Environmental Resource Permitting..." delete "will be implemented" and add "became effective on October 3, 1995 and is being implemented."
30. Natural Communities Wetlands AP Intro, Priority Problem: In paragraph beginning "The Environmental Resource Permitting..." delete "in the near future."
31. Natural Communities Wetlands AP Intro, Priority Problem: In paragraph beginning "Unpermitted activities..." change "While most violations" to "While most large violations."
32. W-1, Background: It is difficult for regulatory agencies to get away with "policy" decisions anymore - replace with "rules."
33. W-1, HOW 1.01 - 1.02: These actions are in place through ERP program. To reiterate them will result in no change. How about things like: 1) Develop quality/connectedness/importance criteria now to determine which wetlands can be mitigated for in the future; and 2) ID priority pieces for acquisition or restoration now to send future mitigation dollars to.
34. W-2, Background: Replace "policy" with "rules."
35. IM Action Plan Intro, Priority Problem ¶ 5: In the sentence "RIM or OMWM has not been implemented in all impounded marshes, however..." change "however" to "because."

Responses to Comments

Response to South Florida Water Management District's letter cont.

28. Added "at the state/federal level." to "permitting requirements."
29. Deleted "will be implemented." and added "became effective on October 3, 1995 and is being implemented."
30. Deleted "in the near future."
31. Changed "While most violations" to "While most large violations."
32. Replaced "policy" and "policies" with "rules."
33. Ideas 1 & 2 should occur as part of W-2.
34. Replaced "policy" with "rules."
35. Changed "however" to "because."

CCMP Comments Received

South Florida Water Management District's request for change cont.

36. IM-1, WHO: Mosquito districts more important than RPC - Move "Subcommittee on Managed Marshes (SOMM), Local Mosquito Control Districts, Florida Medical Entomology Laboratory (FMEL)" from Support to Primary.
37. IM-1, HOW 1.02: Redundant See W-5 HOW 5.01.
38. DIM-5, WHO: Move FDEP from Support to Primary.
39. MON-3, WHO Primary: Change "WMDs (IRLSWIM)" to "SWIM Plan."


Responses to Comments

Response to South Florida Water Management District's letter cont.

36. Moved "SOMM, Local Mosquito Control Districts and FMEL" from Support to Primary.
37. The consensus of the Management Conference was that action plans would be independent of each other; as a result, certain actions are repeated.
38. FDEP remains as support - EPA operates STORET, therefore they are the only agency that can make these changes.
39. WMDs (IRLSWIM) are responsible not the SWIM Plan.

Response to St. Johns River Water Management District's letter dated November 29, 1995 (requested by IRLNEP)

1. Section C has been named "Living Resources" with a Natural Communities Subsection.
2. The consensus of the Management Conference was that action plans would be independent of each other; as a result, certain actions are repeated.
3. The consensus of the Management Conference was that action plans would be independent of each other; as a result, certain actions are repeated.
4. Sea grass is two words throughout document and Lagoon is capitalized throughout.



ST. JOHNS RIVER
WATER
MANAGEMENT
DISTRICT


POST OFFICE BOX 1429 PALATKA, FLORIDA 32761-1429
TELEPHONE 804-326-4500 FAX 804-326-4500
SUNCOM 804-326-4500
(PERMITTING) 326-4515 (ADMINISTRATION/FINANCE) 326-4508

HARRY CAMP, Executive Director JOHN R. WATKINS, Assistant Executive Director CHERRY L. HARRIS, Deputy Assistant Executive Director

INDIAN RIVER LAGOON - SWIM PROGRAM
1900 S. HARBOR CITY BLVD., SUITE 107 MELBOURNE, FLORIDA 32901
TELEPHONE 407-722-5393 SUNCOM 350-5393 FAX 407-964-4937 800-228-3747

11/29/95

TO: Derek/Bob

FROM: Bob Virmstein 

RE: Review of CCMP

Ron, Gilbert, and I have looked over parts of the CCMP. Generally, the Plan is much improved and in pretty good shape. Most comments are made directly on the copy. Unless you had further questions on our comments, I have no burning desire to review the Plan an additional time.

A few general comments:

1. *Natural communities*, not *Biodiversity* seems the focus of Section C. I suggest you make *Biodiversity* one of the aspects of *Natural Communities*, not vice versa.
2. Action W-5 ("Reconnect impounded wetlands to the IRL") sounds the same as IM-1 and IM-2 ("Restore the functions of marshes impounded for mosquito control purposes").
3. Actions F-1 and F-2 sound mostly the same (fisheries research).
4. For consistency sake: "seagrass" (one word); "Lagoon" (CAP "L" throughout?).

c: Joel

William M. Segal, CHAIRMAN MIAMI	Dan Roach, VICE CHAIRMAN FERNANDIA BEACH	James T. Swann, TREASURER COCA	Chris Mason, SECRETARY ST. AUGUSTINE	Red Hughes DAYTONA BEACH
Kathy Chirney JACKSONVILLE	Griffin A. Greene VERDE BEACH	James H. Williams COCA	Patricia T. Harden SAFORD	

CCMP Comments Received

St. Johns River Water Management District's additional comments were made directly on the Final Draft CCMP pages. Comments based on grammar, punctuation and wording were directly incorporated.

5. Comments: Change "percent" to "%", change "non-point" to "nonpoint", and change "mosquito impoundments" to "impounded marshes."
6. Unique Features of the Lagoon Region, ¶ 2: Insert "other" into "surface waters that once flowed into ___ basins."
7. Physical Features of the IRL, Alterations for Expansion, ¶ 2: Change "marine wetlands" to "salt water wetlands."
8. Section A Intro: Rename "Arrangement of Diverse Biological Communities."
9. Diverse Biological Communities, Intertidal Communities: Change "Intertidal Communities" to "Saltwater Wetlands."
10. Diverse Biological Communities, Intertidal Communities, ¶ 4: Change "Some salt marshes" to "Most salt marshes."
11. Diverse Biological Communities, Spoil Islands, ¶ 2: Reword "encrusting invertebrates such as sponges."
12. Diverse Biological Communities, Open Water Communities: Delete this section.
13. Current State - Water & Sediment Quality: Change "acres" to "square miles."
14. Current State - Water & Sediment Quality, ¶ 17: "a primary saline system" - Has it been?
15. Current State - Water & Sediment Quality, ¶ 17: "In addition, the discharge from the extended watershed..." - Think the primary human-induced impact is what the freshwater carries, not the freshwater per se.
16. Current State - Water & Sediment Quality, ¶ 24: "...domestic waste effluent flow will stop entering the Lagoon." - But not from OSDS.

Responses to Comments

Response to St. Johns River Water Management District's requests dated November 29, 1995

5. Comments incorporated in text as requested.
6. Changed sentence "surface waters that once flowed into other basins."
7. Changed "marine wetlands" to "salt water wetlands."
8. Renamed "Arrangement of Diverse Biological Communities" to "Diverse Biological Communities."
9. Changed "Intertidal Communities" to "Saltwater Wetlands."
10. Changed "Some salt marshes" to "Most salt marshes."
11. Changed "encrusting invertebrates such as sponges" to "many other species."
12. Deleted section.
13. Changed "acres" to "square miles."
14. Changed "A basic effect..." to "A basic effect is the introduction of additional fresh water into what is presently a primarily saline system."
15. Changed "In addition, the discharge from the extended watershed..." to "In addition, nutrients, metals, pesticides, suspended solids and organically stained waters are carried by freshwater discharge from the extended watershed into the Lagoon."
16. Added "such as storm water or OSDS." to "from WWTPs is small compared to nonpoint sources..."

CCMP Comments Received

St. Johns River Water Management District's request for changes

17. PS Action Plan Intro, Priority Problem, ¶ 6: "The conclusion of these studies..." - This statement contradicts the second paragraph in the Intro of Water & Sediment Quality Improvement "Most of the Lagoon meets minimum water quality standards..."
18. PS Action Plan Intro, Priority Problem, ¶ 14: "This may cause some..." Is this a fact or an assumption only?
19. PS Action Plan Intro, Priority Problem, ¶ 14: C-54 canal - industrial discharges?
20. PS-2: First sentence - "effectiveness?" Specify. Background - "This may cause some???"
21. PS-2, HOW: Feasibility studies could be another way to convince the operator of WWTPs.
22. PS-3, Background, ¶ 1: C-54 canal - industrial discharges?
23. PS-3, Background, ¶ 3: "...other resources..." What other resources in IRL are favored by heated effluent discharge?
24. PS-5, HOW: Add "enforce stricter permitting policies, require sufficient geological and underground strata data for applicability for deep injection."
25. OSDS-1, HOW: Add "Update OSDS count beginning from 1950 to present."
26. OSDS-2, Background, ¶ 3 "It is suggested that an initial effort..." Reason?
27. OSDS-2, HOW: Add "Funding for a pilot project."

Responses to Comments

Response to St. Johns River Water Management District's requests cont.

17. Changed "The conclusion of these studies..." to "The conclusion of these studies were generally the same: the Indian River Lagoon's water quality has been degraded by the combined pollutant loadings from storm-water..."
18. Changed "This may cause some..." to "To reduce the cost of effluent disposal, this may result in requests for exemptions from or changes to..."
19. C-54 canal has NFDES permit for industrial discharge.
20. Deleted "effectiveness" and added "implementation." Background - Changed "This may cause some..." to "To reduce the cost of effluent disposal, this may result in requests for exemptions or changes to the Act to allow highly treated wastewater discharges to the Lagoon as the primary means of effluent disposal."
21. Did not add "2.03 Feasibility studies..." because it does not prevent changes.
22. C-54 canal has NFDES permit for industrial discharges.
23. Changed last sentence to "In this particular case, careful consideration will need to be given to protection of the manatee as well as the protection of other resources of the Indian River Lagoon which may be adversely affected by the thermal discharge."
24. Did not add "5.02 Enforce stricter permitting policies..." because it has nothing to do with developing alternatives.
25. Did not add "1.04 Update OSDS count..." This was what SWIM already did.
26. Added "as a pilot program." to the end of the sentence "It is suggested that an initial effort..."
27. Did not add "2.05 Funding for a pilot project."

CCMP Comments Received

St. Johns River Water Management District's request for changes

28. FSD Action Plan Intro: Last sentence "Maintenance of Sea grasses" - Section location?
29. Biodiversity Intro - 7 Action Plans Flowchart - LA Action Plan: "Preserve, protect, restore and enhance the wetland..." - only? What about upland transition/buffer?
30. Biodiversity Intro: "Biodiversity Preservation & Restoration" Needs a new title - "Natural Communities?" Suggest making biodiversity one aspect of natural communities.
31. Implementation Costs Pie Chart: In reference to the value for LA - Where does this # come from?
32. Biodiversity Research & Management Action Plan Intro: Why highlight Research? Isn't restoring marshes and protecting sea grasses part of this?
33. BD-2, WHO: Change WMDs (IRLSWIM) from support to primary.
34. BD-3, HOW 3.01: Sounds big and vague - All/every exotic species?
35. Biodiversity: Last paragraph "habitat issues" - why not the theme of Natural Communities?
36. Natural Communities Sea Grass AP Intro, Priority Problem: Figure C-2 - "Good Management" should be in figure above "Good Water Quality."
37. Natural Communities Sea Grass AP Intro, Priority Problem: "This model is based upon" - What about water quality?
38. Natural Communities Sea Grass AP Intro, Priority Problem: "By coupling this model with the continued monitoring of biological production" - We now monitor this?

Responses to Comments

Response to St. Johns River Water Management District's requests cont.

28. "Maintenance of Sea grasses" section location has been identified.
29. Changed to correct objective which is "Develop and implement mechanisms to acquire lands for the purposes of protecting biodiversity, enhancing critical habitat linkages and protecting environmentally endangered habitats within the Indian River Lagoon basin."
30. Changed "Biodiversity" to "Living Resources."
31. In reference to the value for LA - spreadsheets for all cost information are provided as an appendix.
32. Deleted "Research & Management."
33. Changed WMDs (IRLSWIM) from support to primary.
34. Changed to "Coordinate activities within the Indian River Lagoon region to assess the extent of invasion of exotic species as well as efforts to control or eradicate these species."
35. Changed "habitat issues" to "natural community issues."
36. "Good Management" was added to figure above "Good Water Quality."
37. Changed "This model is based upon" to "This model is based on the assumption that biological productivity is dependent on healthy sea grasses, which depend on good water quality, which, in turn, is dependent on the establishment and..."
38. Changed "by coupling this model..." to "By coupling this model with the continued monitoring of the sea-grass community and water quality, management activities..."

CCMP Comments Received

St. Johns River Water Management District's request for changes

39. W-5, Background, ¶ 3: Delete "Regional."
40. W-6, WHO: ELC program funded by FWS, WMDs, FIND, NEP, ...
41. IM Action Plan, Priority Problem ¶ 3: "While little consideration..." - Evidence? Delete sentence. We don't know what bird use was prior to impounding.
42. IM Action Plan Intro, Priority Problem ¶ 6: Last sentence add "and the U.S. Fish and Wildlife Service."
43. IM Action Plan Intro, Priority Problem, last ¶: Delete "regional" from "regional impoundment."
44. IM-1, Background: Change last two sentences to: "OMWM is primarily used in Volusia County's herbaceous marshes. RIM is used throughout the remainder of the Lagoon in mangrove-dominated impoundments."
45. IM-2, Background ¶ 1: Change "reducing its development potential" to "reducing its development or mitigation potential."
46. IM-2, Background ¶ 2: Change "operate" to "manage."
47. IM-2, WHO: Delete "WMDs (IRLSWIM)" from support and add "WMDs" to primary.
48. LA Action Plan Intro, Objective: Add "and ecosystem integrity" to "critical habitat linkages."
49. LA-1, HOW 1.03.03: "Factors for consideration..." Why pick these now?
50. LA-2, Background, ¶ 4: Change "operate" to "manage."
51. LA-2, WHO: Add "WMDs" to primary and delete from support.
52. Wildlife Fisheries AP Intro, Overview of Actions F-2: "Undertake a regular review and updating of wetlands protection rules and regulations." Why only this one habitat? Why not sea-grass? Why not oyster bars?
53. Wildlife Fisheries AP Intro, Priority Problem ¶ 9: Change "predominant fishery" to "predominant shellfish fishery."

Responses to Comments

Response to St. Johns River Water Management District's requests cont.

39. Deleted "Regional."
40. Added new ¶ after ¶ 3 "An example of this type of program is the mangrove planting project presently being undertaken by the Environmental Learning Center. This project involves several agencies and private groups in a project to plant mangroves on barren shorelines in the southern portion of the Indian River Lagoon."
41. Changed "inadvertently resulted" to "appeared to result."
42. Last sentence added "and the U.S. Fish and Wildlife Service."
43. Deleted "regional" from "regional impoundment."
44. Changed last two sentences to: "OMWM is primarily used in Volusia County's herbaceous marshes. RIM is used throughout the remainder of the Lagoon in mangrove-dominated impoundments."
45. Changed "reducing its development potential" to "reducing its development or mitigation potential."
46. Changed "operate" to "manage."
47. Deleted "WMDs (IRLSWIM)" from support and added "WMDs" to primary.
48. Added "and ecosystem integrity" to "critical habitat linkages."
49. Deleted factors.
50. Changed "operate" to "manage."
51. Added "WMDs" to primary and deleted from support.
52. Wrong action- changed to "Develop a coordinated fisheries research agenda to improve the present knowledge of the fisheries of the Indian River Lagoon."
53. Changed "predominant fishery" to "predominant shellfish fishery."

CCMP Comments Received

Responses to Comments



Henry Dean, Executive Director
John R. Wehle, Assistant Executive Director
Charles T. Myers III, Deputy Assistant Executive Director

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818 E. South Street Orlando, Florida 32801 407-897-4300 TDD 407-897-5960	2133 N. Wickham Road Melbourne, Florida 32935-8109 407-254-1782 TDD 407-253-1293
7775 Baymeadows Way Suite 102 Jacksonville, Florida 32256 904-730-4270 TDD 904-730-7900	305 East Drive Melbourne, Florida 32904 407-884-4960 TDD 407-727-5368

MEMORANDUM

DATE: January 11, 1996

TO: Derek Busby, Program Director
IRLNEP

THROUGH: Margaret Spontak, Director
Division of Policy and Planning

FROM: Denis W. Frazel, Ph.D. *DWF*
Water Resources Planner

SUBJECT: Indian River Lagoon Comprehensive Conservation & Management Plan

I have reviewed the Indian River Lagoon CCMP and have enclosed those pages where either typographical errors occur, or where I have suggested a modification (which are very few!).

1. It is obvious that a lot of people have spent a lot of time putting this plan together. The thing I cannot find though, is some substantive description of how (or where) you have come up with the costs shown in the specific action plans. The example I have included is from page 189, where the plan shows a cost of almost 5 million dollars for fisheries research. How is this number derived? Is it for one year? Is this the cost to implement all fisheries actions?

I think that if dollar figures are to be included in the plan, then some discussion as to how the particular dollar figures were derived should also be presented.



Response to St. Johns River Water Management District's letter received January 19, 1996 (requested by IRLNEP)

1. A financial chapter has been added describing the derivation of costs and spreadsheets of individual costs will be included as an appendix.

William Segal, CHAIRMAN
MAYLAND

Dan Roach, VICE CHAIRMAN
FERNANDINA BEACH

James T. Swinn, TREASURER
OCALA

James H. Williams, COCHA

Olis Mason, SECRETARY
ST. AUGUSTINE

Kathy Chiray
JACKSONVILLE

Griffin A. Greene
VERO BEACH

Patricia T. Harden
SANFORD

Reid Hughes
DAYTONA BEACH

CCMP Comments Received

Responses to Comments

St. Johns River Water Management District provided additional comments directly on the pages of the Final Draft CCMP. The following are the transcribed comments.

Response to St. Johns River Water Management District's request for changes

2. Unique Features of the Lagoon Region: The major water bodies (Mosquito Lagoon, Indian River Lagoon and Banana River) should be identified on the map.
 3. Stewardship of the IRL: In sentence beginning "The SWIM Act of 1987..." "surface waster systems" needs to be corrected.
 4. Stewardship of the IRL: In paragraph beginning "The SWIM Act of 1987..." add "the" to "it is ___ duty."
 5. Stewardship of the IRL: "Grants Central Station" needs to be moved to next page.
 6. Water & Sediment Quality, Intro: Last sentence of paragraph beginning "While many of these WWTPs..." change "WWTPs cease discharge" to "discharging" or "discharges."
 7. F-2, Header: Correct the word "action" in the header.
 8. FI-1, Background ¶ 3: Change "insure" to "ensure."
 9. Summary of the Indian River Lagoon Biodiversity Conference: Not all citations are referenced in the reference section of the paper.
2. The major water bodies have been included on the map of the region.
 3. "Waster" has been corrected to "water."
 4. Added "the" to "it is ___ duty."
 5. "Grants Central Station" has been moved to next page.
 6. Did not change "WWTPs cease discharge."
 7. Corrected the word "action" in the header.
 8. Changed "insure" to "ensure."
 9. References will be completely furnished for Final CCMP.

CCMP Comments Received

Responses to Comments

Response from St. Johns River Water Management District's form letter received January 22, 1996 (requested by State Clearinghouse)

No comments.

COUNTRY: State

DATE:	01/16/96
COMMENT, DUE DATE:	01/30/96
CLEARANCE DUE DATE:	03/01/96
SAIT:	FL9601160021C

STATE AGENCIES	LOCAL/OTHER	OPB POLICY UNITS
<input type="checkbox"/> Community Affairs <input type="checkbox"/> Environmental Protection <input type="checkbox"/> Game and Fresh Water Fish Comm <input type="checkbox"/> Marine Fisheries Commission	<input checked="" type="checkbox"/> St. Johns River WMD South Florida WMD	<input type="checkbox"/> Environmental Policy/C & ED

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

☐ Federal Assistance to State or Local Government (16 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.

☒ Direct Federal Activity (16 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's Outer Continental Shelf Exploration, Development or Production Activities (16 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.

☐ Federal Licensing or Permitting Activity (16 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.

Project Description:

Indian River Lagoon Draft Comprehensive and Management Plan - Volusia, Seminole, Orange, Brevard, Indian River, St. Lucie, Martin Counties, Florida.

To: Florida State Clearinghouse
Department of Community Affairs
2740 Centerville Drive
Tallahassee, FL 32399-2100
(904) 922-5438 (SC 292-5438)
(904) 487-2899 (FAA)

EO, 12372/NEPA
Federal Consistency

<input type="checkbox"/> No Comment	<input type="checkbox"/> Not Applicable
<input type="checkbox"/> Comments Attached	<input type="checkbox"/> Comments Attached
<input checked="" type="checkbox"/> No Comment/Consistent	<input type="checkbox"/> Inconsistent/Comments Attached
<input type="checkbox"/> Not Applicable	

From: Division/Bureau: Division of Policy and Planning
Reviewer: Margaret H. Spontak, Director
Date: January 19, 1996

CCMP Comments Received

Responses to Comments

BOARD OF COUNTY
COMMISSIONERSPUBLIC WORKS
DEPARTMENT

March 25, 1996

Derek Busby, Program Director
Indian River Lagoon National Estuary Program
U.S. Environmental Protection Agency
1900 S. Harbor City Blvd., Suite 109
Melbourne, FL 32901

Subject: Indian River Lagoon Comprehensive Conservation and
Management Plan - Draft

Dear Mr. Busby:

1. From a review of the Draft Management Plan it appears that several of the proposed actions of the "Freshwater and Storm-Water Discharges" subsection would have a substantial economic impact on St. Lucie County. Listed below are some of the proposed actions that would have the greatest economic impact on the County.

- 1994 SWIM Plan Projects Completion (Action FSD-1)
- Inclusion into the NPDES Permitting Program (Action FSD-2)
- Development of a Comprehensive Drainage Map (Action FSD-5)
- Muck (Ooze) Reduction (Action FSD-6)
- Fertilizer, Herbicide, and Pesticide Education Program (Action FSD-10)
- Retrofitting Large Drainage Systems (Action FSD-12)
- Retrofitting Small Drainage Systems (Action FSD-13)

St. Lucie County currently has no funding mechanism for stormwater management projects. With extensive flooding problems throughout the County, any monies which do become available from the Transportation Trust Fund are used for high priority drainage improvements rather than water quality improvements. However, the County is pursuing the concept of creating a stormwater utility to establish a dedicated funding source for a stormwater management program.

Response to St. Lucie County letter received March 27, 1996 (requested by IRLNEP)

1. This is a long term plan and it is recognized that local government will bear the brunt of the financial burden if the goals of the plan are to be met. To address these financial needs a cooperative effort will be needed. Additional outside funding sources, some of which are identified in the plan, will be needed.

CCMP Comments Received

Responses to Comments

Response to St. Lucie County cont.

2. Comment noted: regarding the Regional Attenuation Facility Task Force proposed for the St. Lucie River watershed.

St. Lucie County Letter cont.

In the mean time, every road construction project conforms to SFWMD criteria for retention and detention. We are also installing water control structures at NSLRWCD Canals C-9, C-10, C-38, and C-39 using in-kind services and grant funds from the EPA, DEP, and SFWMD which will improve water quality.

2. The St. Lucie and Martin County Commissions created the Regional Attenuation Facility Task Force by resolution in the Spring of 1995. The purpose is to study the 775 square mile St. Lucie River Watershed to determine potential locations for one or more regional attenuation facilities to address the much needed upland retention of fresh water to prevent further degradation of the Indian River Lagoon and St. Lucie River.

Sincerely,


Ronald K. Brown, P.E.
Public Works Director

cc: Tom Kindred, County Administrator
Don West, County Engineer
Mike Wrock, Engineer Intern

CCMP Comments Received

Responses to Comments

indian river

st. lucie

palm beach

treasure
coast
regional
planning
council

April 9, 1996

Mr. Derek S. Busby, Project Director
Indian River Lagoon National Estuary Program
1900 Harbor City Blvd., Suite 109
Melbourne, FL 32901

Subject: Review of The Draft Indian River Lagoon
Comprehensive Conservation & Management Plan

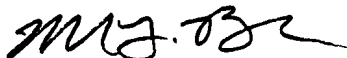
Dear Mr. Busby:

Thank you for the opportunity to review the Draft Indian River Lagoon Comprehensive Conservation & Management Plan (CCMP). Staff found the plan to be consistent with the Council's Strategic Regional Policy Plan (SRPP). The Indian River Lagoon is recognized in the SRPP as a Significant Regional Resource containing highly productive natural communities and ecosystems which have been impacted through major changes.

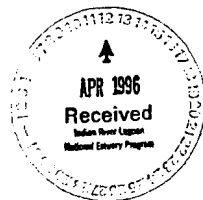
1. When implemented, the CCMP will help fulfill several Regional Goals including Goal 6.5 which encourage the protection of estuarine resources through maintenance and enhancement of their functions and values. Policy 6.5.1.1 specifically recognizes that the Indian River Lagoon as well as other estuarine systems should be improved and restored. Regional Goal 6.6 pertains to the protection of wetlands and deepwater habitats. Policy 6.6.1.5 calls for the cooperation of all affected local governments in the Region and participation in ongoing efforts to improve or restore the Lagoon.

If there are any questions, please call.

Sincerely,



Michael J. Busha, AICP
Executive Director



Response to Treasure Coast Regional Planning Council letter received April 12, 1996 (requested by IRLNEP)

1. Comment noted: Staff found the plan to be consistent with the Council's Strategic Regional Policy Plan (SRPP).
2. Comment noted: The CCMP will help fulfill several Regional Goals which encourage the protection of estuarine resources through maintenance and enhancement of their functions and values.

CCMP Comments Received

02/15/96

09:18

EPA WATER DIV ENF/COASTAL 7TH FL

001

Derek Dueby, Director
Indian River Lagoon National Estuary Program
1900 South Harbor City Boulevard
Suite 109
Melbourne, Florida 32901
February 15, 1996

Dear Derek,

I have reviewed the January, 1996 draft Comprehensive Conservation and Management Plan (CCMP) for the Indian River Lagoon National Estuary Program (IRL NEP). My comments/suggestions are as follows.

Overall

1. It is difficult to depict in detail the entire length of the IRL on a standard size sheet of paper. Perhaps a large detailed map could be developed, inserted in a pocket, and referred to as needed.
2. Since all of the various action plans will not be implemented at once (if ever), which plans are of the greatest priority? How will these priorities be determined?
3. How do these various action plans complement and overlap with each other? This needs to be considered in greater detail.
4. Opportunities for consolidation of these action plans should be addressed.
5. The introduction section is too long, and appears to be a rehash of the Woodward-Clyde Public Consumption Document.
6. The issue of demographic change in Florida and IRL needs to be emphasized in the introduction as it is usually the driving force behind all environmental problems. Often the rate of population growth in Florida makes maintaining the environmental status quo an accomplishment.
7. At the beginning of the CCMP, there needs to be a set of instructions for the reader on how to best access specific information. Tabbing (doesn't that word make you cringe) of the various sections would facilitate this effort.
8. The cover pages for each of the various sections should be illustrated with IRL specific photos or graphics. Generic line drawings are really not useful.
9. Strict adherence to the EPA Purple Book tends to make the CCMP an incredibly unreadable bureaucratic document. Although it is necessary to satisfy the requirements, anything that can be done to make the CCMP more reader friendly should be done. For example the use of historical photos, interesting facts, graphics, relevant quotes, etc should be employed whenever possible.
10. There needs to be an executive summary which contains the primary action plans on a page or two (see Sarasota CCMP).
11. A reviewer comment page (see Tampa CCMP) at the beginning of the CCMP needs to be included.
12. The committee membership lists should be included as an appendix. Presenting this information at the start of the CCMP tends to create unnecessary confusion (see Sarasota CCMP).

Responses to Comments

Response to U.S. Environmental Protection Agency Region IV letter dated February 15, 1996 (requested by IRLNEP)

1. New maps have been created which will be much easier to read.
2. An appendix has been added that prioritizes the actions.
3. A "Related Actions" heading for each action shows overlap of action plans.
4. The consensus of the Management Conference was that action plans would be independent of each other; as a result, certain actions are repeated.
5. The purpose of the Introduction section is to provide a review of the characterization work.
6. This has been addressed by the Management Conference and is included in the plan.
7. A section titled "How To Use This Plan" has been added to facilitate reading.
8. The cover pages of each section have been redone using photos.
9. Historical photos and more graphics have been added.
10. The Management Conference voted to have this as a separate public consumption version from the large CCMP.
11. A reviewer's comment page will be included.
12. The Management Conference voted to keep it in the initial pages of the CCMP.

CCMP Comments Received

Responses to Comments

02/15/96 09:18 EPA WATER DIV ENF/COASTAL 7TH FL 002

EPA, Region IV Letter cont.

13. The font size and paper type used by Tampa looks good, I suggest that we do the same thing.
 14. At the beginning of each section, the IRL NEP goals are stated, and then tied in with the particular action plans. I find this approach to be exceedingly tedious and repetitious. These program goals should be discussed in the introduction only.
 15. Any information that is not ready by press time should not be highlighted with empty spaces.
 16. Technical and/or policy rationale for action plan implementation should take precedence over financial information. This is especially true due to the educated guesswork involved with putting a price tag on specific actions.
 17. I do not care for the format in which the action plans are presented. I realize that you are copying the suggested format in the purple book, but I think that we need to not emphasize the cost information in individual tables, but instead incorporate this information into the text as appropriate.
 18. The CCMP is easier to read and photocopy if it is spiral bound. This enables the document to lay flat.
 19. Where appropriate, those action plans which need to be implemented on a state wide level should be highlighted. Have we done much coordination with the other Florida NEPs?
 20. Selected illustrations in the glossary section would be helpful.
 21. I assume that the next edition of the IRL NEP CCMP will contain legible photos and graphics.
 22. I suggest that we hire professional writers/reviewers to help assemble the final CCMP.
- Specific Comments
23. P 1 In the first paragraph, last line, you need to also mention EPA as being involved in adoption of the CCMP.
 24. P 1 You address the subject of Watershed Perspective without defining what a watershed is.
 25. P 3 Eliminate this page. I think that people may be misled into thinking that this pie chart represents the total cost of doing all of the environmental work in the IRL.
 26. P 14 This population growth graphic is useful, but it should be recognized that early censuses did not include Native Americans or Blacks.
 27. P 15 In the first line, pesky mosquito population, is too colloquial. Mosquitoes are far more than just a pest.
 28. P 32 Under Common goals, The Federal Water Pollution Control Act of 1972 should also be referred to as the Clean Water Act.
 29. P 36 Can we make this flow chart more readable? If not, I suggest that we eliminate it.
 30. P 73 The background section needs to be rewritten. The NPDES program has delegated industrial and domestic permitting to FDEP, but storm water permitting has not been delegated. The second paragraph and first line of the next paragraph should be deleted. Also eliminate the reference to non point source.

Response to U.S. Environmental Protection Agency, Region IV cont.

13. This is a stylistic comment that has been taken under advisement.
14. Guidance provided by the EPA recommends that the goals be restated in each section.
15. Empty spaces were removed before press time.
16. Financial information has been included as estimations.
17. No change other than layout and design.
18. This is a stylistic comment that is being considered. Cost may dictate the decision.
19. All actions could be implemented on a statewide basis.
20. No illustrations have been included in the glossary.
21. Photos/graphics have been redone and will be legible.
22. Editorial services have been contracted for a editorial review
23. Message From the Director ¶ 1: EPA has been mentioned as being involved in adoption of the CCMP. "IRLNEP Management Conference, the Governor and EPA."
24. Watershed has been defined in the CCMP.
25. IRL CCMP Implementation Costs Pie Chart: Management Conference voted to add all costs to the document.
26. Section A Introduction, The Space Age: After reference to Figure A-4 the following sentence was added "Early censuses did not include native Americans and Afro-Americans however."
27. Section A Introduction, The Modern Age: "Pesky mosquito population" has been changed to "bothersome and potentially disease-carrying mosquito population."
28. Stewardship of the IRL, Common Goals: The Federal Water Pollution Control Act of 1972 has been referred to as the Clean Water Act.
29. Stewardship of the IRL, Flow Charts: The flow chart will be easier to read in the final print with two colors.
30. FSD-1: Deleted appropriate information.

CCMP Comments Received

02/15/96 09:19 EPA WATER DIV ENF/COASTAL 7TH FL 003

EPA, Region IV Letter cont.

31. P 84 Eliminate this action plan. The SRF is tapped out already, so why waste time and effort on this action?
32. P 114 Why is there no mention of pursuing No Discharge Zone Status for the IRL?
33. P 162 There needs to also be a discussion of rotary ditching as another management technique for mosquito control.
34. P 185 In the second paragraph, commercial sea trout landings are discussed. There needs to be a consideration of fishing effort, the impact of recreational catch, and natural stock fluctuations regarding this fishery.
35. P 186 Blue Crabs are stated to account for 80% of the shellfish landings in IRL. I assume this is by weight and not value? There needs to be some dollar figures assigned to these various fisheries.
36. P 198 In the second paragraph, the SWIM program is discussed. Should the fact that SWIM is no longer funded by the state be considered?
37. In the third paragraph, it should be stated that the IRL NEP began in 1990.
38. The discussion of the non profit should be expanded.
39. P 213 A budget of over one million dollars for a non profit seems high. Do you have dollar values for running non profit organizations elsewhere?
40. P 258 Shrimp trawl by catch is stated to have severe effects on fish populations. This is simply not true. In fact, whatever impacts (good or bad) shrimp trawl by catch may have on a fishery is not well defined. I have literature which supports this reasoning.

In conclusion, I think that we already have a CCMP which is better than those which have been produced by some of the older NEPs. However, there is still much more that can be done by all of us working together.

Sincerely,

Drew Kendall
Project Officer

Responses to Comments

Response to U.S. Environmental Protection Agency, Region IV cont.

31. FSD-8: Did not eliminate this action because the State Revolving Funds may be converted/restored.
32. MB-8: The Management Conference voted to not pursue the issue at this time.
33. IM-1: Rotary ditching is part of OMWM.
34. Wildlife Fisheries AP Intro, Priority Problem: This information is currently unavailable.
35. Wildlife Fisheries AP Intro, Priority Problem: This is by dollar value.
36. Public Involvement and Education AP Intro, Priority Problem: Legislation for the SWIM program is still in affect and funding has been provided for 1996.
37. Public Involvement and Education AP Intro, Priority Problem: It has been stated that the IRL NEP began in 1991.
38. Public Involvement and Education AP Intro, Priority Problem: This comment has been taken under advisement but the status of the non-profit is unclear at this point.
39. Non-profit is no longer being considered so functions will likely be dispersed.
40. Appendix 2, Biodiversity Conference Proceedings: This is a research paper published by Bulletin of Marine Science July 1995. Should staff change the author's information?

CCMP Comments Received

Responses to Comments



United States Department of the Interior

FISH AND WILDLIFE SERVICE
P.O. Box 2676
Vero Beach, Florida 32961-2676

May 17, 1995

MAY 1995

Derek Busby
Indian River Lagoon National Estuary Program
1900 South Harbor City Boulevard, Suite 109
Melbourne, FL 32901-4749

Dear ^{Derek}Mr. Busby:

Enclosed are our comments, restricted to content only, on the four action plans sent to us for review.

1. BD-1: The U.S. Fish and Wildlife Service's (FWS) South Florida Ecosystem Office in Vero Beach is currently developing the ecological database for the South Florida Ecosystem Recovery Program. It seems appropriate the FWS, in cooperation with DIMS, could serve as the repository for the actions identified in action item BD-1.03. However, the responsibility for producing GIS maps identified in BD-1.04 needs additional consideration. While the FWS has the capability to accomplish this task, we have some concerns regarding the costs of production as well as the time to produce such maps.
2. EF-1: We are unclear as to what action item EF-1.01 means and how it relates to the FWS.
3. EF-3: Again, with the development of our ecological database, it seems appropriate the FWS could extend the number of GIS coverages in the IRL region to include nonindigenous species.
4. ETS-1: As in EF-1, we are unclear as to what action item ETS-1.01 means and how it relates to the FWS. Also, since action item ETS-1.02 is identical to the actions identified in BD-1.04 and EF-3.02, then the FWS could serve as a repository for this information. If any of the species identified in action item ETS-1.05 are federally listed as threatened or endangered, then the FWS will be developing recovery plans for those species that don't have one.
5. ETS-2: One of the objectives of the South Florida Ecosystem Recovery Program is to reevaluate the status of the West Indian manatee (*Trichechus manatus latirostris*), which has been determined by the FWS to be in jeopardy. Another objective of the Recovery Program is to propose rule-making that identifies the constituent elements (e.g., seagrasses, warm-water refugia, fresh water discharges) of the manatee's designated critical habitat. Achieving these objectives will be necessary in order for the counties to develop their local manatee protection plans.

Response to U.S. Fish & Wildlife Service's letter received May 18, 1995 (requested by IRLNEP)

1. BD-1: The primary role of BD-1 is to organize and maintain a Biodiversity Committee. Individual responsibilities have not been specifically determined. The Biodiversity Committee should assign tasks to the appropriate agencies. Please take note that the tasks have been rewritten.
2. EF-1: Actions EF-1 through EF-3 (Ecological Functions) have been incorporated into other actions and no longer exist.
3. EF-3: Actions EF-1 through EF-3 (Ecological Functions) have been incorporated into other actions and no longer exist.
4. ETS-1: Actions have been rewritten to reflect these comments.
5. ETS-2: Comment noted.

CCMP Comments Received

Responses to Comments

USFWS Letter cont.

6. LP-1: As in EF-1 and ETS-1, we are unclear as to what action item LP-1.01 means and how it relates to the FWS.
7. LP-3: The FWS's National Wildlife Refuges may want to co-lead with other entities on this action item.

Note: The correct acronym for the Endangered Species Act of 1973 is ESA.

In recognizing that these action plans are early in the development stage, we hope to continue our participation in revising these plans. Please keep us informed as to how and when we will be able to contribute on this matter.

Thank you for the opportunity to provide comments. If you have any questions, please contact me at (407)562-3909.

Sincerely,



Kalani D. Cairns
Coastal Coordinator

Response to U.S. Fish & Wildlife Service's letter cont.

6. LP-1: Actions LP-1 through LP-3 (Linkages and Processes) have been incorporated into other actions and no longer exist.
7. LP-3: Actions LP-1 through LP-3 (Linkages and Processes) have been incorporated into other actions and no longer exist.

CCMP Comments Received

Responses to Comments



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE
P.O. Box 2676
Vero Beach, Florida 32961-2676

June 30, 1995

Derek Busby
Indian River Lagoon National Estuary Program
1900 South Harbor City Boulevard, Suite 109
Melbourne, FL 32901-4749

Dear Mr. Busby:

Thank you for the copy of the draft CCMP's Biodiversity Section dated June 19, 1995. The U.S. Fish and Wildlife Service (FWS) has reviewed this version and compared these revisions with those issues of interest we identified in a previous review of the document. We have provided the following comments:

1. W-1: With regards to wetlands protection, our regulatory authority is limited to wetland habitats utilized by federally listed species, migratory birds, and anadromous fishes. We consult with the Corps of Engineers on section 10/404 permit issues, but only in an advisory capacity.
2. W-5, W-6: As of now, our office is currently administering the South Florida Coastal Ecosystem Program (SFCEP). Briefly, this program integrates all the FWS activities in coastal watersheds toward identifying the most important natural resource problems and solutions. These problems and solutions are reviewed by other planning and decision-making agencies (e.g., EPA's National Estuary Program, NOAA's Coastal Zone Management Program, the State of Florida). From this process, partnerships are formed to implement these solutions and actions on-the-ground. The program involves the public and private sector to help solve problems, change behaviors, and promote ecologically sound decisions.
3. The SFCEP is a mechanism that provides funds (i.e., grants) toward implementing the on-the-ground solutions and conducting outreach to catalyze public action. Funds could be available to accomplish these action elements.

Thank you for the opportunity to provide comments. If you have any questions, please contact me at (407)562-3909.

Sincerely,

Kalani D. Cairns
Coastal Coordinator

Response to U.S. Fish & Wildlife Service's letter dated June 30, 1995 (requested by IRLNEP)

1. W-1: W-1 is a policy setting role in an advisory capacity rather than a regulatory role. USFWS will be removed from a primary role and kept as a support role in the final CCMP.
2. W-5, W-6: Comment noted.
3. Funding options have been noted.

CCMP Comments Received



United States Department of the Interior

FISH AND WILDLIFE SERVICE
P.O. Box 2676
Vero Beach, Florida 32961-2676

October 6, 1995

OCT 11 1995

Derek Busby, Project Director
Indian River Lagoon National Estuary Program
1900 South Harbor City Boulevard, Suite 109
Melbourne, FL 32901-4749

RE: Comments on CCMP Action Plans

Dear Mr. Busby:

Thank you for a copy of the latest version of the Indian River Lagoon National Estuary Program's draft Comprehensive Conservation and Management Plan (CCMP). The U.S. Fish and Wildlife Service (FWS) has reviewed those sections (Biodiversity and Wildlife) identifying the FWS' role in the implementation of the CCMP. Our comments refer only to the content of these proposed action elements.

1. Action BD-1 We agree with this action element. The U.S. Army Corps of Engineers (COE), EPA, and the Florida Inland Navigation District (FIND) should be included as support organizations.
2. Action BD-2 We agree with this action element. The FWS administers some grants programs which target land acquisition. Section 305 of the Coastal Wetlands Planning, Protection, and Restoration Act (16 U.S.C. 3954) authorizes the FWS to make grants through the National Coastal Wetlands Conservation Grants Program to coastal states for the restoration, enhancement, preservation, management, and acquisition of coastal wetlands. These cost-share grants are available on a competitive basis to state, regional and local governments who address our nation's highest priorities regarding coastal wetlands. For two consecutive years, St. Lucie County Mosquito Control District has received funding from this program for the acquisition of impounded wetlands known as Bear Point (\$168,750) and Kings Island (\$600,000). The COE, EPA, and FIND should be listed as supporting organizations.
3. Action BD-3 We agree with this action element. Again, the COE, EPA, and FIND should be listed as supporting organizations.
4. Action ETS-1 Delete the word "management"; the FWS does not manage federally listed species, just the human activities that might adversely affect them or their

Responses to Comments

Response to U.S. Fish & Wildlife Service's letter dated October 6, 1995 (requested by IRLNEP)

1. BD-1 WHO: COE and FIND have been included as support organizations.
2. BD-2 WHO: COE, EPA and FIND have been included as support organizations.
3. BD-3 WHO: COE, EPA and FIND have been included as support organizations.
4. ETS-1: The comment regarding "management" has been incorporated into the plan. In regard to implementation the NMFS has been included as a primary organization.

CCMP Comments Received

Responses to Comments

USFWS Letter cont.

designated critical habitat. Include NMFS as a primary organization since they have regulatory authority under the Endangered Species Act.

5. Action ETS-2 The FWS has a Law Enforcement Division located in Miami. Their primary responsibility is oversight over the illegal importation and exportation of wildlife; however, they do enforce regulations under the Endangered Species Act. Our office will need to coordinate with them regarding this action element. Again, NMFS needs to be included as a primary organization.
6. Action ETS-3 This action element is similar to BD-2 and LA-1; isn't this redundant?
7. Action ETS-4 We agree with this action element. Last year, we submitted a proposal addressing this problem to the FWS' Environmental Contaminants (EC) Program, but our request was not approved for funding. Nevertheless, it is possible we may be able to obtain some EC funds for these kinds of issues.
8. One final comment. As you know, our office is currently administering the South Florida Coastal Ecosystem Program (SFCEP). Briefly, this program integrates all the FWS activities in coastal watersheds toward identifying the most important natural resource problems and solutions. These problems and solutions are reviewed by other planning and decision-making agencies (e.g., EPA's National Estuary Program, NOAA's Coastal Zone Management Program, the State of Florida). From this process, partnerships are formed through cooperative agreements to implement these solutions and actions on-the-ground. The program involves the public and private sector to help solve problems, change behaviors, and promote ecologically sound decisions. The SFCEP is a mechanism that provides funds toward implementing the on-the-ground solutions and conducting outreach to catalyze public action. Funds could be available to accomplish these action elements. For FY95, we obligated \$201,793 toward seven projects for a total cost of \$6,323,198.

Thank you for the opportunity to provide comments. If you have any questions, please contact me at (407)562-3909.

Sincerely,

Kalani D. Cairns

Kalani D. Cairns
Coastal Coordinator

Response to U.S. Fish & Wildlife Service's letter cont.

5. ETS-2 WHO: Included NMFS as a primary organization.
6. The consensus of the Management Conference was that action plans would be independent of each other; as a result, certain actions are repeated.
7. Comment noted.
8. Comments noted regarding future partnerships with FWS on solutions.

CCMP Comments Received



United States Department of the Interior

FISH AND WILDLIFE SERVICE
P.O. Box 2676
Vero Beach, Florida 32961-2676

March 11, 1996



Derek Busby, Project Director
Indian River Lagoon National Estuary Program
1900 South Harbor City Boulevard, Suite 109
Melbourne, FL 32901-4749

RE: Final comments on the draft CCMP

Dear Mr. Busby:

Thank you for the copy of the Indian River Lagoon National Estuary Program's draft Comprehensive Conservation and Management Plan (CCMP) dated January 1996. The U.S. Fish and Wildlife Service (FWS) has reviewed the plan as well as the attached comments from those federal and state agencies that have already responded.

Many of the agencies' comments have identified some inconsistencies we noted from our review of the plan. Furthermore, most of our comments to earlier versions of the plan have been included in this latest edition. With the following exceptions, we do not have any additional comments to make on the draft CCMP.

1. Action ETS-1 Include National Marine Fisheries Service (NMFS) as a primary organization since they have regulatory authority under the Endangered Species Act.
2. Action ETS-2 To date, our office has not coordinated with the FWS's Law Enforcement Division located in Miami. Again, NMFS needs to be included as a primary organization.
3. We understand that NMFS has not participated very much, if at all, with the Indian River Lagoon National Estuary Program. Nevertheless, they are the primary agency charged with protecting marine mammals and with sea turtles when they are not nesting.

Thank you for the opportunity to provide comments. If you have any questions, please contact me at (407)562-3909.

Sincerely,

Kalani D. Cairns

Kalani D. Cairns
Coastal Coordinator

Responses to Comments

Response to U.S. Fish & Wildlife Service's letter received March 13, 1996 (requested by IRLNEP)

1. ETS-1 WHO: Included NMFS as a primary organization.
2. ETS-2 WHO: Included NMFS as a primary organization.
3. NMFS did provide review on the recent draft of the CCMP and supports the plan (See NMFS Letter in this document).

Letter of Response from Florida State Clearinghouse

Accompanied all agency letters from Clearinghouse review



STATE OF FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS

EMERGENCY MANAGEMENT • HOUSING AND COMMUNITY DEVELOPMENT • RESOURCE PLANNING AND MANAGEMENT

LAWTON CHILES
Governor

March 20, 1996

JAMES F. MURLEY
Secretary

Ms. Amy W. Adams
Indian River Lagoon National Estuary Program
1900 South Harbor City Boulevard
Suite 109
Melbourne, Florida 32901

RE: National Estuary Program - Indian River Lagoon Draft
Comprehensive Conservation and Management Plan -
Volusia, Seminole, Orange, Brevard, Indian River, St.
Lucie, and Martin Counties, Florida
SAI: FL9601160021C

Dear Ms. Adams:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended, has coordinated a review of the above-referenced project.

The South Florida Water Management District (SFWMD) indicates that the Indian River Lagoon Comprehensive Conservation and Management Plan (CCMP) has been previously reviewed by the SFWMD and comments were provided directly to the Indian River Lagoon National Estuary Program. The SFWMD indicates that most of the previous comments continue to apply to this draft of the CCMP. The SFWMD is concerned that there is a lack of distinction between lead and support functions referenced in the document. The document assigns the water management districts with lead responsibility for action items dealing with on-site sewage disposal systems; this function is actually the responsibility of the Department of Health and Rehabilitative Services and the Department of Environmental Protection. Additionally, participation of the water management districts in the development of fisheries management regulations is not consistent

Ms. Amy W. Adams
March 20, 1996
Page Two

with the expertise of the SFWMD. The SFWMD also is concerned that the CCMP offers very limited financial information. Estimates of the implementation costs are provided with no information as to how these costs were determined. The costs assigned to the water management district for implementation of the CCMP exceed \$18 million; however, the SFWMD cannot commit to these expenditures at this time. The SFWMD indicates that financial participation by the SFWMD is dependent upon the annual budget process and competition from other projects. Please refer to the enclosed SFWMD comments.

The Department of Environmental Protection (DEP) offers several general comments and suggested revisions. The DEP's Division of Recreation and Parks (DRP) conducts activities within the Indian River Lagoon that may benefit the future implementation of the proposed management plan. These activities include management of the considerable resources within a number of the parks on the Indian River Lagoon, and sampling and surveying fish in the vicinity of Sebastian Inlet and elsewhere within the Lagoon. To assist future management efforts, the DEP's Division of State Lands has compiled a listing of publicly managed natural areas and Conservation and Recreation Lands (CARL) acquisition projects located in the Indian River Lagoon region. The Florida Natural Areas Inventory (FNAI) has conducted a search of its database for the presence of threatened or endangered species. The results from both CARL and the FNAI are attached. Please refer to the enclosed DEP comments and attachments.

The Department of Community Affairs (Department), pursuant to its role as the state's land planning agency, has reviewed the referenced project for consistency with its statutory responsibilities under the Florida Coastal Management Program (FCMP). The Department has also reviewed the relevant local government comprehensive plans to determine whether the project is in accordance with these plans. The Department notes that several sections in the CCMP identify the Florida Coastal Management Program (FCMP) and/or the Department as responsible for implementation, support or funding for identified actions, but do not clearly describe the role of the FCMP. The CCMP should clarify the responsibilities of the FCMP and other participating agencies. The type of participation which the Department could provide includes advisory support for issues relating to septic tanks, federal consistency and local government comprehensive plans. The FCMP's Citizens Advisory

2740 CENTERVIEW DRIVE • TALLAHASSEE, FLORIDA 32399-2100

FLORIDA KEYS AREA OF CRITICAL STATE CONCERN
FIELD OFFICE
2796 Overseas Highway, Suite 712
Marathon, Florida 33050-7227

SOUTH FLORIDA RECOVERY OFFICE
P.O. Box 4022
8600 N.W. 36th Street
Miami, Florida 33159-4022

GREEN SWAMP AREA OF CRITICAL STATE CONCERN
FIELD OFFICE
155 East Summerlin
Barlow, Florida 33830-4641

Letter of Response from Florida State Clearinghouse Accompanied all agency letters from Clearinghouse review

Florida State Clearinghouse Letter cont.

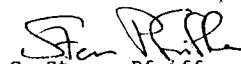
Ms. Amy W. Adams
March 20, 1996
Page Three

Committee and public outreach program could provide opportunities for public education activities and partnerships. The Department also encourages close coordination with the local governments to incorporate the relevant recommended CCMP strategies and actions into their Evaluation and Appraisal Reports and future related amendments to their local comprehensive plans. Please refer to the enclosed Department comments.

Based on the information contained in the above-referenced document and the enclosed comments provided by our reviewing agencies, the state has determined that the above-referenced project is consistent with the Florida Coastal Management Program.

Thank you for the opportunity to review this project. If you have any questions regarding this letter, please contact Ms. Keri Akers, Clearinghouse Coordinator, or Ms. Jasmin Raffington, Florida Coastal Management Program, at (904) 922-5438.

Sincerely,


G. Steven Pfelffer
Assistant Secretary

GSP/cc

Enclosures

cc: Frank M. Duke, South Florida Water Management District
Jim Wood, Department of Environmental Protection

APPENDIX 2

CONSENSUS-BUILDING

WORKSHOPS

RESULTS

THE INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM

Proceedings

SOUTHERN LAGOON COMPREHENSIVE CONSERVATION MANAGEMENT PLAN

CONSENSUS BUILDING WORKSHOP

Friday
December 3, 1993

9:00 a.m. to 5:00 p.m.

The opinions expressed in this document are those of the speakers and participants who attended the facilitated meeting and do not necessarily reflect the views and policies of the U.S. Environmental Protection Agency, or the St. Johns River Water Management District, or any other agency mentioned in the text. Mention of trade names, corporations or commercial products does not constitute endorsement or recommendation by the sponsoring agencies or the Indian River Lagoon National Estuary Program Management Conference.

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EXECUTIVE SUMMARY

On December 3, 1993, the Indian River Lagoon National Estuary Program convened a Comprehensive Conservation Management Plan workshop for the southern region of the Indian River Lagoon. Thirty participants representing environmental and citizen groups, and local, regional, state and federal governments and agencies from St. Lucie to Martin counties met to discuss and agree upon the most pressing management actions to protect, preserve and enhance the Indian River Lagoon. After a full day of discussion first in small groups and then in plenary, the participants agreed upon the following ten highest priority actions and group of actions.

- Target land acquisition to reflect lagoon issues, and pursue available funds aggressively.
- Establish highest priority pollution sources and attack them in order.
- Return water quality in the lagoon to its life sustaining quality.
- Evaluate and communicate economic benefits of the lagoon and its restoration.
- Execute basin assessment and prioritize areas for retrofit.
- Identify and implement mechanisms to achieve peak attenuation.
- Implement a comprehensive sewage and stormwater utility plan.
- Enforce land development regulations that maximize soil and water conservation.
- Have U.S. Army corps of engineers connect the C-23, C-24, and C-25 canals to retention or diversion facilities.
- Each person must believe that water quality and quantity are a personal responsibility, not just a responsibility of government, and that this will include monetary responsibility.

Recommendations addressing the issues of stormwater and sewage, land acquisition, and public education were independently identified by all of the small groups as high priority.

The plenary concluded with a preliminary discussion by the participants of action plans to implement the public education and stormwater/water quality recommendations.

INTRODUCTION

This report contains the proceedings of the southern region Comprehensive Conservation Management Plan Consensus Building Workshop convened by the Indian River Lagoon National Estuary Program (IRLNEP) on November 20, 1993, at Vero Beach Junior High School, in Vero Beach, Florida. The workshop involved thirty participants representing environmental and citizen groups, and local, regional, state and federal governments and agencies from St. Lucie and Martin counties in identifying the most pressing management actions to include in the CCMP and implement to protect, preserve and enhance the Indian River Lagoon.

This workshop was one of three similar workshops convened by the IRLNEP from October to December of 1993, in the northern, central, and southern parts of the lagoon. As of this writing it is anticipated that the results of all three workshops will be presented at a lagoon-wide conference for further development and refinement in the first half of 1994.

The consensus building workshops were designed and facilitated by the Florida Growth Management Conflict Resolution Consortium. Organizational and logistical support, and small group recorders were provided by the FAU Institute of Government, and the FAU/FIU Joint Center for Environmental and Urban Problems.

GUIDELINES FOR INTERPRETING WORKSHOP RESULTS

Participants in the consensus-building workshop were invited as representatives of particular groups or interests and were asked to informally represent the concerns of their constituencies.

The consensus recommendations of the workshop were identified as such by participants in plenary session using a prioritization poll, from lists generated by discussion groups earlier in the day (for a fuller description of the prioritization process, see page 30 of this report). The resulting list of ten was confirmed as the consensus priorities of the group and further refined using a consensus ranking scale (for a fuller description of the consensus ranking scale, see page 35 of this report).

All actions identified as consensus recommendations of the workshop enjoyed some degree of support (in most cases quite strong) from all participants. The results of the workshop have not yet, however, been presented to any of the groups represented for formal approval or endorsement.

PROCESS AND AGENDA

During the first half of the workshop, participants were asked to form three small groups for discussion and initial identification of management action priorities. Throughout the day, participants were asked to divide their discussion of issues and management actions into the categories of estuarine (below the mean high-water line), land-based (above the mean high-water line) and human element (related to broader social trends or man-made structures).

Before beginning discussions, participants were asked to quickly brainstorm an initial list of management actions as a starting point for later discussions. During Session I, the small groups were asked to identify the most pressing issues in the southern part of the lagoon under each of the three categories.

Sessions II-IV were devoted to discussing and developing management action recommendations addressing each of the categories (estuarine, land-based, and human element). At the end of the discussion of each category, the groups were asked to revise and re-prioritize the list of management actions they had generated before beginning their discussion. In this way each group developed a single list of ten priority actions which reflected its discussion of each successive category of actions.

In Sessions V and VI the groups reported to each other their lists, and then in plenary session engaged in a discussion of the results, identifying and further refining a consensus list of recommended actions for the workshop as a whole.

In Session VII, the participants began a discussion of the parties who might be called upon to implement the consensus recommendations, and realistic timeframes for doing so.

CONCLUSIONS

This section of the report sets forth the conclusions of the workshop. These include the ten highest priority actions or categories of actions identified by the workshop as a whole, and the preliminary action planning discussions related to them. Also included as conclusions are the ten highest priorities of each of the three small discussion groups (from which the top ten priorities for the workshop as a whole were drawn.)

Throughout the day, participants were repeatedly asked to prioritize their recommendations. The top ten priorities of the workshop, and the broader set of small group priorities, represent the distillation of over 100 possible actions discussed in the small groups.

Final Recommendations of the Workshop

Consensus Recommendations

The following were the recommended actions identified in the afternoon plenary as the highest priorities of the workshop as a whole.

- Target land acquisition with prioritization of acquisition priorities to reflect lagoon issues, benefits, and pursue available funds aggressively (i.e. P-2000 et. al.)
- Establish highest priority pollution sources and attack them in order.
- Return water quality in the lagoon to its original (i.e. - life sustaining) status and ensure that future development does not degrade it.
- Evaluate and communicate economic benefits of the lagoon and its restoration.
- Execute basin assessment and prioritize areas for retrofit.
- Identify and implement mechanisms to achieve peak attenuation.
- Implement a comprehensive sewage and stormwater utility plan.
- Enforce land development regulations that maximize soil and water conservation.
- U.S. Army Corps of Engineers should connect the C-23, C-24, and C-25 canals to retention or diversion facilities.
- Each person must believe that water quality and quantity is a personal responsibility, not just a responsibility of "faceless" government, and includes monetary responsibility.

CONCLUSIONS

After the above items had been confirmed as workshop priorities using the consensus ranking scale, the following refinements and comments were offered by participants.

- Return water quantity as well as quality in the lagoon to original (i.e. - life sustaining) status.
- Stop further degradation of the lagoon - including lifestyle changes (you cannot return to the past).
- Non-navigable inlets with floodgates and flushing.
- Evaluate of land uses.
- A research recommendation combining the pure and applied research recommendations of two of the small groups might have received enough votes to make the top ten list.
- Would more fully support "package" if the order of priorities changed and funding and freshwater inflows ranked higher (i.e.- all the items in top ten priority list belong there but are not necessarily in the right order).
- Restore and reconnect impoundments.
- Land acquisition has a negative connotation.
- Implementation stage.

CONCLUSIONS

Preliminary Action Plans for Final Recommendations

Participants selected the most pressing or important of the top ten priority recommendations for preliminary action planning.

Have U.S. Army Corps of Engineers connect the C-23, C-24, and C-25 canals to retention or diversion facilities.

Responsible agencies

- Army Corps of Engineers
- Department of Environmental Protection
- Water Management District (lead governmental agency)
- Regional Planning council
- The public
- River restoration groups (advocacy role)
- Congressman Lewis
- Federal Environmental Protection Agency
- U.S. Fish and Wildlife Service
- Florida Game and Freshwater Fish commission

Distinguish between advocacy and permitting roles.

Cost

- IRLNEP should do an economic cost/benefit study of the proposal

Issues addressed by the recommendation

- Reducing watershed (routing water back to Lake Okeechobee)

Timeframes

- Yesterday (Begin at Monday night's meeting.)

Implement a comprehensive sewage and stormwater utility plan.

Responsible agencies

- Local governments. Counties should lead - i.e., Indian River County model.
- Public advocacy
- Citizens Action Committee
- Water Management District (to coordinate and fund a voter and public education project)

CONCLUSIONS

- Execute basin assessment and establish priorities first
- Department of Environmental Protection (on a consulting basis)
- Consider public health benefits

Issues addressed or to be addressed

- Federal funding
- How to hold water
- How to treat water
- Coordinated solution (who moves first?)
- Fair and equitable assessment

Timeframes

- July 1994 - septic tanks
- July 1994 - wastewater

CONCLUSIONS

Final Recommendations of the Small Groups

Numbers to the left of a recommendation indicate its priority.

Group 1

1. Evaluate and implement a comprehensive stormwater management plan.
2. Target land acquisition with prioritization of acquisition priorities to reflect lagoon issues, benefits, and pursue available funds aggressively (i.e., P-2000 et. al.).
3. Enforce land development regulations that maximize soil and water conservation (assure consistent and effective land development regulations throughout the lagoon).
4. Complete removal of package plants affecting lagoon water quality and reuse.
5. Implement remediation of septic systems that impact the lagoon (including drainfields and private wells).
6. Public education and compliance: education to decrease need for government actions; foster community involvement; target youth.
7. Identify and implement mechanisms to achieve peak attenuation.
8. Evaluate and communicate economic benefits of the lagoon and its restoration.
9. Establish localized targets for environmental restoration.
10. Target research to guide action (applied research) to the following: sediments, grassbeds, non-point sources, water-borne pollution, oceanic exchange, effectiveness of unsolicited funds to public-private peer review.
11. Consider economic welfare of primary users.

Group 2

1. Establish highest priority pollution sources and attack them in order.
1. Return water quality in the lagoon to its original (i.e. - life sustaining) status and ensure that future development does not degrade it.
2. Implement a comprehensive sewage and stormwater utility plan.
3. Purchase all undeveloped land fronting the lagoon.
4. Discontinue inappropriate land uses, force agriculture to adopt current best management practices.

CONCLUSIONS

4. Department of Education should challenge school system to develop programs with university, secondary and primary schools.
5. U.S. Army Corps of Engineers should connect the C-23, C-24, and C-25 canals to retention or diversion facilities.

Group 3

1. Control and reduce freshwater input and associated sediments and construct one or more projects planned for freshwater inflow mitigation for immediate benefits.
2. Reduce urban and suburban point and non-point source pollutant loading.
3. Each person must believe that water quality and quantity is a personal responsibility, not just a responsibility for "faceless" government, and includes monetary obligation.
4. Institute best management practices for existing urban and agricultural areas and retrofit.
5. Execute basin assessment and prioritize areas for retrofit.
6. Institute local fisheries management.
7. Perform defined, focused studies to determine actual composite loadings from urban and rural sources. Develop appropriate inflow targets and implement strategies for St. Lucie Estuary.
8. Promote better public understanding of use of resource (access, use and education).
9. Restore function of impoundment areas.
10. Restore and protect natural areas (purchase).

SESSION II RESULTS

Numbers to the left of a recommendation indicate the number of votes received within its small group. Higher numbers indicate higher priority.

Session II - Estuarine Issues

Group 1

7. Target land acquisition. Prioritize all acquisition based on benefit to the estuary. Amend selection criteria in existing acquisition programs to reflect priorities. Aggressively pursue funds for acquisitions. (P - 2000 10% set aside for lagoon).
5. Establish localized targets for environmental restoration.
3. Public education; compliance; public education to decrease need for government action.
3. Target research to guide action. Develop targeted research for lagoon on: sediments, grassbeds, non-point sources, pure water as pollution; changes in ocean exchange, the effectiveness of unsolicited funds to public-private by peer review.
2. Enforce land development regulations that maximize water and soil conservation.
2. Assure consistent effective land development regulations throughout the lagoon.
2. Consider economic welfare of primary users.

Group 2

4. Identify the sources of contamination and control them.
4. Purchase all undeveloped land fronting the lagoon.
3. Discontinue inappropriate land uses, force agriculture to adopt current best management practices.
3. Implement comprehensive sewage and stormwater utility plan.
3. Control land development sediment discharge.
2. Create upland filtration marshes.
2. Return water quality in lagoon to its original status and ensure future development does not degrade it.
2. Remove ooze from lagoon.
2. U.S. Army Corps of Engineers connect C-23, C-24, and C-25 to retention or diversion areas.
2. Identify and support funding sources.

SESSION II RESULTS

Group 3

5. Assume collective monetary obligation to improve the lagoon.
5. Institute best management practices for existing urban and agriculture areas and retrofit.
4. Perform defined, focused studies to determine actual composite loadings from urban and rural sources and develop appropriate inflow targets and implement strategies for St. Lucie Estuary.
4. Restore function of impoundment areas.
3. Control and reduce freshwater input and associated sediments and construct one or more projects planned for freshwater inflow mitigation for immediate benefits.
3. Reduce urban and suburban point and non-point source pollutant loading.
3. Each person must believe that water quality and quantity are personal responsibilities, not just for "faceless" government, and include monetary obligation.

SESSION III RESULTS

Numbers to the left of a recommendation indicate the number of votes received within its small group. Higher numbers indicate higher priority.

Session III - Land Based Actions

Group 1

6. Evaluate and implement a comprehensive stormwater management program.
6. Enforce land development regulations that maximize water and soil conservation.
5. Target land acquisition. Prioritize all acquisition based on benefit to the estuary. Amend selection criteria in existing acquisition programs to reflect priorities. Aggressively pursue funds for acquisitions. (P - 2000 10% set aside for lagoon).
4. Complete removal of package plants affecting lagoon water quality and reuse.
4. Establish localized targets for environmental restoration.
4. Public education; compliance; public education to decrease need for government action.
3. Identify and implement mechanisms to achieve peak attenuation.
3. Target research to guide action. Develop targeted research for lagoon on: sediments, grassbeds, non-point sources, pure water as pollution; changes in ocean exchange, the effectiveness of unsolicited funds to public-private by peer review.
1. Consider economic welfare of primary users.

Group 2

7. Purchase all undeveloped land fronting the lagoon.
6. Discontinue inappropriate land uses, force agriculture to adopt current best management practices.
4. Establish highest priority pollution sources and attack them in order.
4. Implement comprehensive sewage and stormwater utility plan.
3. Identify the sources of contamination and control them.
3. Return water quality in lagoon to its original status and ensure future development does not degrade it.
2. Create upland filtration marshes.

SESSION III RESULTS

2. U.S. Army Corps of Engineers connect C-23, C-24, and C-25 to retention or diversion areas.
 1. Remove ooze from lagoon.
 1. Coordinate improvements to septic tank and stormwater quality based on priority problem areas.
 1. National Estuary Program should organize and collate studies on septic tank and similar problems.
 1. Include lagoon basin in the Corps re-study of C.N.S.F.
 1. Implement a buffer plan that is legally sustainable.
 1. Reevaluate the adequacy of the buffer provisions in the local comprehensive plans.

Group 3

7. Institute best management practices for existing urban and agriculture areas and retrofit.
6. Control and reduce freshwater input and associated sediments and construct one or more projects planned for freshwater inflow mitigation for immediate benefits.
6. Reduce urban and suburban point and non-point source pollutant loading.
5. Each person must believe that water quality and quantity are personal responsibilities, not just for "faceless" government, and include monetary obligation.
4. Execute basin assessment and prioritize areas for retrofit.
4. Restore function of impoundment areas.
3. Perform defined, focused studies to determine actual composite loadings from urban and rural sources and develop appropriate inflow targets and implement strategies for St. Lucie Estuary.
2. Institute local fisheries management.

SESSION IV RESULTS

Numbers to the left of a recommendation indicate the number of votes received within its small group. Higher numbers indicate higher priority.

Session IV - Human Element Actions

Group 1

7. Evaluate and implement a comprehensive stormwater management program.
6. Target land acquisition. Prioritize all acquisition based on benefit to the estuary. Amend selection criteria in existing acquisition programs to reflect priorities. Aggressively pursue funds for acquisitions. (P-2000 10% set aside for lagoon.)
5. Enforce land development regulations that maximize water and soil conservation.
3. Implement remediation of septic systems, drainfields, and private wells that impact the lagoon.
3. Evaluate and communicate economic benefits of the lagoon and its restoration.
3. Complete removal of package plants affecting lagoon water quality and reuse.
3. Public education; compliance; public education to decrease need for government action.
3. Identify and implement mechanisms to achieve peak attenuation.
2. Establish localized targets for environmental restoration.
2. Target research to guide action. Develop targeted research for lagoon on: sediments, grassbeds, non-point sources, pure water as pollution; changes in ocean exchange, the effectiveness of unsolicited funds to public-private by peer review.
2. Consider economic welfare of primary users.
2. Assure consistent and effective land development regulations throughout the lagoon.

Group 2

6. Establish highest priority pollution sources and attack them in order.
6. Return water quality in lagoon to its original (i.e., life sustaining) status and ensure future development does not degrade it.
5. Implement comprehensive sewage and stormwater utility plan.

SESSION IV RESULTS

4. Purchase all undeveloped land fronting the lagoon.
3. Discontinue inappropriate land uses, force agriculture to adopt current best management practices.
2. U.S. Army Corps of Engineers connect C-23, C-24, and C-25 to retention or diversion areas.
1. Identify the sources of contamination and control them.
1. Create upland filtration marshes.
1. Implement a buffer plan that is legally sustainable.
1. Reevaluate the adequacy of the buffer provisions in the local comprehensive plans.

Group 3

8. Control and reduce freshwater input and associated sediments and construct one or more projects planned for freshwater inflow mitigation for immediate benefits.
6. Reduce urban and suburban point and non-point source pollutant loading.
5. Each person must believe that water quality and quantity are personal responsibilities, not just for "faceless" government, and include monetary obligation.
4. Institute best management practices for existing urban and agriculture areas and retrofit.
3. Perform defined, focused studies to determine actual composite loadings from urban and rural sources and develop appropriate inflow targets and implement strategies for St. Lucie Estuary.
3. Institute local fisheries management.
3. Execute basin assessment and prioritize areas for retrofit.
2. Promote public access, use and education - promote better public understanding of use of resources.
1. Restore function of impoundment areas.

APPENDIX I - TRANSCRIPTS

Group 1

Group 1 - Brainstorming

- Decrease watershed to historical levels
- Consolidation and removal of undesirable bottom sediments
- Deal with sediment
- Lower volume of freshwater inflow
- Balance economic development and environmental protection at local level
- Identify funding for research and implementation
- Establish a realistic quality level for 1993 and beyond (100 year plan)
- Establish historic conditions, and the future condition with and without interference, and if it can be managed, identify effectiveness (given where the system is going without our influence)
- Increase funding - increase tourism through acquisition and restoration of natural marsh systems
- Increase ocean access (human and ocean flushing)
- Develop superauthority to coordinate

Group 1 - Session I - Estuarine Issues

- Eutrophication in water column versus grass beds.
- Implement land acquisition - place land in public ownership
- Increase restoration - balance management with mosquito control needs
- Use sand inside inlets for beach restoration.
- Select target salinity range
- Maintain control of point sources of pollution
- Create permitting atmosphere that targets inter-agency coordination (and vice versa)
- Optimize hydraulic exchange with ocean
- Increase targeted research - research should be aimed at wise policy and action
- Hypothesis - null hypothesis research
- Coordinate research with available funding and public policy.
- Is turbidity caused by man? Is it detrimental?
- Restore watershed flows
- Public education

Group 1 - Session I - Land-Based Issues

- Enforcement of land development regulations that maximize water and soil conservation on uplands
- Is fresh water a pollutant?
- Is fresh water a conveyor?
- What does it convey (i.e., pollutants)?
- Identify land based issues with greatest negative impacts - target and prioritize issues
- Stormwater management - every local government must have funded plan
- Public education to decrease need for government action
- Public education and compliance
- Consistency of regulation of stormwater management (all levels)
- Label agriculture as a form of development

TRANSCRIPTS

- Identify non-point discharges and their effect on the lagoon
- Identify functionality of wet and dry detention and retention in terms of development of littoral zone systems
- Monitor levels of success in pre-regulated and post-regulated urban and agricultural systems
- Identify and correct deficiencies in pre-regulation systems (both urban and agricultural)
- Address agricultural requirements for drainage (quality and quantity) - identify cumulative impacts
- Identify upland habitats with important biological chemical and hydrological linkages - target for acquisition and regulation - identify all adjacent properties
- Wastewater reuse
- Land clearing causing turbidity

Group I - Session I - Human-Element Issues

- Public health - regarding mosquito control
- Public education - mosquito control support for centralized storage of stormwater for protection of public health
- Monitor whether stormwater regulations (SFWMD, county) cause problems
- Collect data and information on septic tanks, drainfields and private wells
- Balance environmental needs of lagoon with existing human uses: boating and fishing with marine industries, development and agriculture (through mediation and consensus)
- Are golf course and lawn (land) maintenance activities detrimental?
- Increase public education
- Increase interagency exchange of information
- Support, expand and facilitate environmental education coalition
- Peer review of unsolicited proposals (target specific ideas)

Group I - Session I - Issue Priorities - Votes

- 4 Implement land acquisition
- 3 Stormwater management at local level with funded plan
- 3 Balance environmental needs of lagoon with existing human uses
- 2 Optimize hydraulic exchange with ocean
- 2 Enforce land development regulations that maximize water and soil conservation
- 4 Public education, compliance, public education, to decrease need for government action
- 2 Consistency of regulation in stormwater management
- 2 Monitor levels of success in pre-regulation and post regulation urban and agricultural systems
- 1 Identify funding for research and implementation
- 1 Establish realistic quality level
- 1 Develop superauthority for coordination
- 1 Select target salinity range
- 1 Maintain control of point source pollution
- 1 Encourage hypothesis - null hypothesis research
- 1 Coordinate research with available funding
- 1 Restore watershed flow
- 1 Identify and prioritize land-base impacts
- 1 Label agriculture as development
- 1 Identify non-point sources discharges and effect on lagoon

TRANSCRIPTS

- 1 Address agricultural requirements for drainage (quality, quantity, cumulative impacts).
- 1 Collect data and information on septic tanks, drainfields and private wells
- 1 Pubic education - mosquito control and support of centralized storage

Group I - Session II - Estuarine Management Actions Considered

- Open relief channels at causeways
- Target land acquisition - prioritize all acquisitions based on benefit to the estuary
- Amend selection criteria in existing acquisition programs to reflect priorities
- Aggressively pursue funds for acquisition (P-200, 10% set aside for IRL, SWIM and NEP)
- Develop targeted research based on hypothesis-null hypothesis research for IRL on:
sediments, grassbeds, non-point sources, pure water as pollution, changes in ocean exchange,
the effectiveness of management of future lagoon function, unsolicited funds to public-private
by peer review
- Target research to guide action
- Assure consistent and effective land development regulations throughout lagoon
- Consider economic welfare of primary users
- Improve permitting atmosphere for sediment removal
- Establish localized targets for environmental restoration

Group I - Session III - Land-Based Management Actions Considered

- Establish reservoir or centralize stormwater storage
- Identify mechanism to achieve peak attenuation levels (and implement)
- Protect greenways connections to lagoon
- Implement remediation of septic systems, drainfields, and private wells that impact lagoon
- Implement a comprehensive stormwater management programs
- Complete removal of package plants which affect lagoon water quality (Do this completely.)
- Implement wastewater reuse program (Maximize this)

Group I - Session IV - Human Element Actions Considered

- Provide public education
- Evaluate and communicate economic benefits of the lagoon and its restoration
- Evaluate and include human health impacts in stormwater regulations
- Foster community involvement in lagoon restoration activities - target youth

TRANSCRIPTS

Group 2

Group 2 - Session I - Estuarine Issues

- Maintain/enhance biodiversity in the lagoon
- Sediment inflows and contents
- Excessive freshwater inflows
- Protection of seagrass beds (health of seagrass beds as baseline for evaluating protective efforts)
- Return water quality to level that will sustain healthy life
- Return bottom quality to level that will sustain life
- Lifting prohibition on shellfishing as qualify indicator
- Mangrove protection - enforcement
- Live-aboard boaters
- Mosquito impoundment management practices
- Marsh systems
- Fish nursery protection, especially from boaters and anglers
- Protection of shallow flats and grassbeds from boating, fishing, PWC activities by prohibition of motorized activities
- Continuous testing of water quality
- Manatee protection

Group 2 - Session I - Land-Based Issues

- Purchase lands fronting the lagoon
- End permitting of package stations
- Satisfactory plant replacement
- Buffers between land use activities and the lagoon and river (buffer requirements sensitive to local conditions)
- Stormwater retention and detention
- Discharges from boats
- Retrofitting existing septic tank systems
- Identification of areas that produce negative discharges
- Persuasive retrofitting of existing industrial and marine uses - adoption of best management practices
- Linkage between upland conditions and activities and the marine environment should be factor in permitting
- Impact of intensity of development on lagoon
- Continuous testing of discharges
- Better land use planning

Group 2 - Session I - Human Element Issues

- Sensitivity or the lack thereof in government officials
- Government ability and willingness to create creative and innovative approaches to solving problems
- Utilization of resources in public and private universities
- Duplicative funding of research
- Enforcement of existing laws

TRANSCRIPTS

- Public education
- Innovation in government regulation
- Who is hired by government? Do they have vision?
- Bold visionaries
- Support from top down for innovation
- Vision from bottom up
- Re-evaluate and redesign the regulations adopted under the growth management act - effectiveness of land development regulations
- Re-evaluate and redesign state agencies' regulations and regulatory structures for their ability to protect the lagoon.
- Political science versus marine science

Group 2 - Session II - Estuarine Management Actions Considered

- Remove ooze from the lagoon
- Identify the sources of contamination and control them
- Control surface water discharge
- Control land development sediment discharge (including agricultural uses)
- Control sewage discharge
- Identify and support funding sources
- Enforce existing regulations and create additional regulations where necessary
- Creation of marina management plans
- Training programs for marina operators
- Create upland filtration marshes
- Develop pump out solutions, including barges, to control pollution from boats
- Every local government in basin should adopt stormwater quality management plan that is adequately funded
- South Florida Water Management District should re-evaluate on-site water retention regulations for all property (get grandfathered properties)
- U.S. Army Corps of Engineers should connect C-23, C-24, C-25 to retention or diversion areas
- Regulate, monitor and enforce water quality (turbidity, freshwater, contaminants) based on maintaining healthy seagrass beds
- Develop mosquito control programs that address water quality issues
- Keep enough freshwater in the uplands areas to protect the lagoon
- Better water management practices
- Improve water quality
- Balance human and environmental needs
- Remove all sewage and stormwater outfalls into the lagoon
- Control new development to prevent pollution of the lagoon
- Purchase all undeveloped land fronting the lagoon
- Implement a comprehensive sewage and stormwater utility plan
- Discontinue inappropriate land uses, force agriculture to adopt current best management practices, and ban all lawns
- Return water quality in lagoon to its original (i.e. life sustaining) status and ensure that future development does not degrade it

TRANSCRIPTS

Group 2 - Session III - Land-Based Management Actions Considered

- Support permanent funding for P-2000
- Purchase land fronting the lagoon
- Create upland filtration marshes
- All local governments should adopt a stormwater management plan which is funded
- Creation of a regional detention and retention facility that local governments can use (mitigation bank)
- Establish highest priority pollution sources and attack them in order
- Include lagoon basin in the Army Corps re-study of C.N.S.F.
- Re-evaluate the adequacy of the buffer provisions in the local comprehensive plans
- Implement a buffer plan that is legally sustainable
- Each local government should implement a septic tank retrofitting program the includes a problem identification and prioritization component
- National Estuary Program should organize and collate studies on septic tanks and similar problems
- Coordinate improvement to septic tank and stormwater quality based on priority problem areas

Group 2 - Session IV - Human Element Actions Considered

- Agencies should utilize the resources of universities
- Department of Education should challenge school system to develop programs with universities, primary and secondary schools
- Education system should tap their communities for human resources for environmental education (environmental education forum)
- Do not shut private sector out of research
- Build public/private partnerships to develop and coordinate long term research
- Ensure that good, appropriate, and consensus science is available to political actors
- Develop regulatory strategies that employ performance standards and incentives to foster innovation
- Encourage additional media coverage (lagoon column) to promote public knowledge about the issues

TRANSCRIPTS

Group 3

Group 3 - Initial Brainstorming

- Divide the basin
- Retrofit urban areas
- Open mosquito marshes
- Balance inflows
- Re-establish groundwater levels, where appropriate
- Re-establish emergent shoreline

Group 3 - Session I - Estuarine Issues

- Aim for system that can withstand impacts of existing population, and presence of inlets
- Constraints on beach restoration projects
- Defining "good" for the lagoon
- Getting everybody to pay for restoration, management, and protection
- Dredging/contaminants in sediment
- Need effective demonstration projects for public support
- Pollution loadings and water quality standards
- Commercial fishing and netting techniques
- Need to establish thresholds and targets - for example, freshwater inflows to maintain the system - define goals for each area
- Sediment and nutrient loadings
- Raw sewage

Group 3 - Session I - Land-Based Issues

- Elimination of wastewater discharges - a "no discharge" bill
- Package treatment plans - define actions for addressing priority lists and problems
- Septic tanks - what do we do to resolve identified problem areas
- Inequity between urban and rural responses
- Regulations impede effective response, - e.g., wastewater reuse
- Non-point stormwater discharge
- Water quality
- Institute best management practices for every parcel of land, including utilities for stormwater in residential and urban areas
- Every agency and organization to have consistent database and information program sharing
- Prevent widening of the Ft. Pierce inlet
- Charge fees for impacts to lagoon
- Stormwater retrofit, first in older urban areas
- Focus on multi-benefit, multi-use approach
- Consolidate existing studies
- Redirect efforts to resource management
- Direct projects based on funding and what can be completed
- Increase public participation, particularly dollars
- 10% surtax on [for?] environmental restoration
- Increase focus on urban impacts and definition of urban sources and more valid, focused research

TRANSCRIPTS

- Stop degradation - artificial inlets, urban runoff, regulation of freshwater discharges, mosquito lagoons, causeways
- Combine mosquito lagoons for stormwater treatment
- Reservoirs for drainage - C-24, C-23, C-44
- Connection to Lake Okeechobee from C-23
- Replace causeways with clear span bridges
- Distinction between water quality and water quantity
- Constraints on implementing good but not ideal projects
- Study of septic systems, particularly around Manatee Pocket
- Sewage treatment - no effluent including drying of sludge for fertilizer
- More stormwater utilities including retrofitting, retention, detention
- Dredging in worst areas
- Control discharge from Lake Okeechobee

Group 3 - Session I - Human Element Issues

- Cumbersome regulations and overlaps
- Not everyone feels responsible for resolving lagoon issues
- More precise studies on controlling suburban and urban runoff - non-point sources
- Public use of lagoon - collective impacts
- Public understanding of impacts to lagoon
- Economic impacts

Group 3 - Sessions II, III, and IV - Estuarine, land based, and human element management actions considered

- Reduce urban and suburban point and non-point source pollutant loading.
- Institute best management practices for existing urban and agricultural areas and retrofit
- Set standards for obtainable water quality for various areas, - i.e., Hobe Sound, North Fork, and Manatee Pocket
- Assume collective monetary obligation to improve the lagoon
- Control and reduce freshwater input and associated sediments
- Construct one or more projects planned for freshwater inflow mitigation for immediate benefits
- Perform defined, focused studies to determine actual composite loadings from urban and rural sources
- Develop appropriate water quality and quantity inflow targets and implementation strategies for St. Lucie Estuary
- Each person must believe that water quality and quantity is personal responsibility, not just for "faceless" government
- Utilize best available technology and best management practices for cleaning up non-point sources and retrofitting stormwater
- Restore function of impounded areas
- Restore impacted shorelines and bottom lands
- Management of spoil islands
- Simplify communications and responsibilities among major regulatory/management agencies
- Make water management district the lead agency
- Adjust regional regulations to expedite lagoon plan
- Develop appropriate mangrove management
- Institute local fisheries management
- Execute basin assessment and prioritize areas for retrofit
- Streamline regulations

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APPENDIX III - PARTICIPANT WORKSHEETS

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM

Southern Lagoon Sub-Regional Workshop
on the
Comprehensive Conservation Management Plan

December 2-3, 1993

Holiday Inn
1209 South Federal Highway
Stuart, Florida

AGENDA PACKET

WORKSHEETS

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM

Southern Lagoon Sub-Regional Workshop on the Comprehensive Conservation Management Plan

December 2, 1993

AGENDA

- 6:00 Reception and registration
- Video presentation on the Indian River Lagoon National Estuary Program
- 6:20 Speakers
- Dr. Duane DeFreese, Coordinator
Brevard County Environmentally Endangered Lands Program
- Mark Perry, Executive Director
Florida Oceanographic Society
- Daniel Haunert, Senior Environmental Scientist
South Florida Water Management District

WORKSHEETS

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM

Southern Lagoon Sub-Regional Workshop on the
Comprehensive Conservation Management Plan
December 3, 1993

AGENDA

- 8:30 Registration and Coffee
- 9:00 Welcome and Introductions
- 9:30 Initial management action brainstorming
(In small groups)
- 9:45 Session I - Estuarine, land-based, and human element issues
(Small group discussion)
- 10:45 BREAK
- 11:00 Session II - Estuarine management actions
(Small group discussion)
- 11:30 Session III - Land-based management actions
(Small group discussion)
- 12:00 Session IV - Human element management actions
(Small group discussion)
- 12:30 LUNCH
- 1:30 Session V - Small group reports to full group
- 2:00 Session VI - Management action priorities
(Full group discussion)
- 3:00 Break
- 3:15 Session VII - Action plans
- 4:45 Next steps
- 5:00 Adjourn

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Southern Lagoon Sub-Regional CCMP Workshop**

General Instructions

This agenda divides the challenges facing the Indian River Lagoon into "estuarine issues," "land-based issues," and "human element issues." (More detailed definitions of these will be provided later in the workshop.) These categories are only intended to provide a rough but useful framework for discussion. The facilitators realize that many issues and actions overlap these categories. We urge that you make use of the categories without allowing them to inhibit your discussion.

At various times during the day you will be asked to assign priorities to issues or management actions using straw polls. Please use the following guidelines to do so.

- For each prioritization straw poll, you will have four votes.
- You may choose to cast less than four votes.
- You may not cast more than one vote for an item during any given straw poll.

Your facilitator will have further instructions for each straw poll.

Initial Management Action Brainstorming

Please think of at least one answer to the following question:

If you were monarch for a day, what would you do to improve the Indian River Lagoon and its associated biological systems?

Your facilitator will have further instructions for the initial brainstorming.

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Southern Lagoon Sub-Regional CCMP Workshop**

**SESSION I
Estuarine, Land-Based, and Human Element Issues**

Estuarine Issues

For purposes of this discussion, use the following definition of "estuarine issues:" issues whose origins or effects are principally below the mean high water line of the lagoon.

The following are examples of estuarine issues:

- Pollutant loadings
 - Point sources (waterborne)
 - Non-point sources (waterborne)
 - Internal Sources
- Water quality standards
- Submerged aquatic vegetation
- Seagrass shellfish harvesting buffer
- Fisheries
 - Finfish
 - Shellfish
 - Aquaculture
 - Pathogens
- Aquatic habitat

Your facilitator will have instructions to guide your discussion around the following question.

- ***Which are the most important "estuarine" issues facing the southern part of the lagoon?***

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Southern Lagoon Sub-Regional CCMP Workshop**

**SESSION I (Continued)
Estuarine, Land-Based, and Human Element Issues**

Land Based Issues

For purposes of this discussion, use the following definition of "land based issues:" issues whose origins or effects are principally above the mean high water line of the lagoon.

The following are examples of land based issues:

- Point source discharges
 - Domestic wastewater
 - Industrial wastewater
- Non-point source discharges
 - Stormwater
 - Septic tanks
 - Agricultural drainage
 - Freshwater drainage
- Toxic substances
 - Source Control
 - Management and/or removal of existing contamination
- Regulatory
 - Government-owned lands management
 - Mitigation
 - Restoration and/or enhancement
 - Mangrove pruning
 - Pollutant load reduction goals
- Mosquito impoundments
 - Regional management plans
 - Ownership
- Endangered/threatened/listed species
- Wetlands/uplands habitat

Your facilitator will have instructions to guide your discussion around the following question.

- ***Which are the most important "land based" issues facing the southern part of the lagoon?***

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Southern Lagoon Sub-Regional CCMP Workshop**

**SESSION 1 (Continued)
Estuarine, Land-Based, and Human Element Issues**

Human Element Issues

For purposes of this discussion, use the following definition of "human element issues:" issues which directly affect human populations or which stem from broad social trends.

The following are examples of human element issues:

- Public health & safety
 - Pathogens
 - Boating safety
- Public use
 - Access
 - Impacts
- Man-made features
 - Waterways (Intercoastal waterway, channels and canals)
 - Inlets
 - Causeways
 - Marinas
 - Ports
- Growth management
- Economic development/impacts

Your facilitator will have instructions to guide your discussion around the following question.

- ***Which are the most important "human element" issues facing the southern part of the lagoon?***

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Southern Lagoon Sub-Regional CCMP Workshop**

**SESSION II
Estuarine Management Actions**

**Session III
Land-Based Management Actions**

**Session IV
Human Element Management Actions**

During these sessions you will be asked to identify the actions which should be taken to address the issues identified in Session I. Your facilitator will have further instructions.

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Southern Lagoon Sub-Regional CCMP Workshop**

SESSION V

Small Group Reports to the Full Group

Your facilitator will have instructions for this session.

SESSION VI

Management Action Priorities

During Session VI, you may be asked to evaluate various combinations of management actions. Please do so using the following scale.

- 1 - Support wholeheartedly.
- 2 - Support, think it is a good package.
- 3 - Support, but with reservations. Would like further discussion for clarification and refinement.
- 4 - Serious reservations. Do not support as currently under discussion. Might eventually support, but only after considerable additional clarification and refinement.
- 5 - Oppose. ("Over my dead body.")

Your facilitator will have further instructions for this session.

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Southern Lagoon Sub-Regional CCMP Workshop**

SESSION VII

Management Action Priorities

The purpose of this session is to add detail to the management actions agreed upon in Session VI. Your facilitator will have further instructions.

ACTION PLANNING FORM

MANAGEMENT ACTION:

INVOLVED RESPONSIBLE AGENCY OR GROUP(S):

ISSUES ADDRESSED (AND BACKGROUND, IF DESIRED):

INFORMATION SOURCES:

TIMEFRAMES:

IMMEDIATE: (1-2) YEARS:

MEDIUM TERM: (2-5) YEARS:

LONG TERM: (5+) YEARS:

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM

Southern Lagoon Sub-Regional CCMP Workshop

SESSION VI

ACTION PLANNING FORM - EXAMPLE

MANAGEMENT ACTION (S):

Removal of muck deposits from Kit Karson Kreek.
Location and control of muck and kryptonite sources.
Upgrade older stormwater systems.
Restore Kreek wetlands and hydrology.

INVOLVED RESPONSIBLE AGENCY OR GROUP(S):

City of Metropolis
Mid-State Water Management District
Natural Resource Protection Agency

ISSUES ADDRESSED:

Muck deposits with kryptonite contamination in Kit Karson Kreek.

BACKGROUND (OPTIONAL):

Kit Karson Kreek is a tributary of Lois Lane Lagoon. Water quality in the Kreek is classified as "poor." Wastewater treatment discharges to the Kreek ended in 1922, replaced by deep well injection and land application. Stormwater discharge, however, continues. Older areas of Metropolis have no stormwater treatment. The kryptonite levels found in the Kreek do not endanger humans, but may threaten fish, wildlife and superheroes. Muck and kryptonite probably reach the Lagoon during high flow periods. Storm drainage from the old Lex Luther Industrial park is thought to be a major source of muck and kryptonite.

INFORMATION SOURCES:

City of Metropolis
Mid-State Water Management District
Natural Resource Protection Agency

TIMEFRAMES:

IMMEDIATE: (1-2) YEARS:

Locate sources, study restoration techniques

MEDIUM TERM: (2-5) YEARS:

Control sources, remove muck and kryptonite, initiate stormwater upgrading, select and begin implementation of restoration scheme.

LONG TERM: (5+) YEARS:

Complete stormwater upgrade and restoration

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Southern Lagoon Sub-Regional CCMP Workshop

Comments Form

Please use this form to submit any additional comments you would like to make on either the process or the results of today's workshop.

[illegible]

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM

Workshop Report

LAGOON-WIDE COMPREHENSIVE CONSERVATION MANAGEMENT PLAN WORKSHOP

Front Street Civic Center
Melbourne, Florida
November 5, 1994
9:00 A.M. - 3:00 P.M.



INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM

Workshop Report

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Melbourne, Florida
November 5, 1994
9:00 A.M. - 3:00 P.M.**

The opinions expressed in this document are those of the speakers and participants who attended the facilitated meeting and do not necessarily reflect the views and policies of the U.S. environmental Protection Agency, or the St. Johns River Water Management District, or any other agency mentioned in the text. Mention of trade names, corporations, or commercial products does not constitute endorsement or recommendation by the sponsoring agencies or the Indian River Lagoon national Estuary Program Management Conference.

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EXECUTIVE SUMMARY

The Lagoon-Wide Comprehensive Conservation Management Plan (CCMP) Workshop was convened by the Indian River Lagoon National Estuary Program on November 5, 1994. The workshop involved over forty participants in reviewing and refining the thirteen action plans which comprised the draft CCMP. This summary highlights the topics addressed by the forum. Because the forum was designed for review and comment rather than decision-making, no summary of results is presented.

Participants were welcomed and the purpose of the workshop explained by Derek Busby, Program Director for the Indian River Lagoon National Estuary Program, after which Chelsea Swansea, a motivational speaker, addressed the participants. Participants then reviewed thirteen draft CCMP action plans in three sessions. These were:

SESSION I

- Freshwater and Urban Discharges
- Point Source Discharges
- Marinas and Boat Discharges
- On-Site Systems

SESSION II

- Public Education
- Oversight and Management
- Data Information and Management
- Monitoring in the Indian River Lagoon

SESSION III

- Seagrasses of the Indian River Lagoon
- Fisheries in the Indian River Lagoon
- Endangered and Threatened Species
- Land Acquisition in the Lagoon
- Regional Impoundment Management

For each action plan, participants first evaluated the draft recommendations, then suggested additions, deletions, or changes to make them better or more generally acceptable.

In all, participants reviewed and addressed a total of 193 initial draft recommendations, and suggested more than 60 additional recommendations, providing valuable information to the IRLNEP.

INTRODUCTION

Purpose of the Workshop

The Lagoon-Wide Comprehensive Conservation Management Plan (CCMP) Workshop was convened by the Indian River Lagoon National Estuary Program on November 5, 1994. The workshop involved over forty participants in reviewing and refining the thirteen action plans which comprised the draft CCMP.

Contents of Report

This report presents the results of the Lagoon-Wide CCMP Workshop. The INTRODUCTION outlines the purpose of the Workshop, the contents of the report, and guidelines for understanding the results. PROCESS AND AGENDA describes the Workshop agenda as carried out, and the procedures used to review, evaluate, and suggest changes to the draft action plans. SESSION I - RESULTS, SESSION II - RESULTS, and SESSION III - RESULTS, present the draft action plans, and the comments and suggested changes of the participants for all the action plans reviewed in each session. APPENDICES present the worksheets used by participants in their discussions, and the list of workshop participants.

Guidelines For Interpreting Results

The Lagoon-Wide CCMP Workshop was designed to allow participants to review the draft action plans of the CCMP, evaluate them, and suggest improvements, additions and deletions. The suggested additions, deletions, and changes after each action plan in this report constitute a comprehensive list of participant suggestions, rather than consensus list. In addition, while participant comments are categorized according to whether they address an action plan as a whole, specific draft recommendations, or suggested new recommendations, there is considerable overlap between these categories and the comments should be read as a single lists for each action plan.

Participants in the workshop were invited as representatives of particular groups or interests and were asked to informally represent the concerns of their constituencies. The results of the workshop do not, however, represent formal ratification by any of the groups represented.

PROCESS AND AGENDA

The draft action plans were developed by NEP staff based in part on input received at three regional CCMP workshops held in the northern, central, and southern regions of the lagoon during the fall of 1993.

The agenda for the day was divided into three sessions, each of which addressed related action plans. During the beginning of each session, the draft action plans were presented by IRLNEP staff. The facilitator then led the participants in ranking each action plan using the following scale:

1. Support wholeheartedly.
2. Support. Good action plan or recommendation.
3. Support but with reservations. Would like additional discussion for clarification or refinement.
4. Do not support as currently drafted. Serious reservations. May support after additional discussion for clarification or refinement.
5. Over my dead body.

The results of these rankings are presented in the text in the following format.

<u>Level of Support</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Number of Participants	6	18	14	0	0

Numbers on the top line indicate points on the consensus scale. Numbers on the bottom line indicate the number of participants giving an action plan a "1," "2," etc.

After ranking, participants discussed the recommendations, using the ranking results as a guide, and suggested additions, deletions, or changes to make the draft recommendations better or more acceptable.

The Lagoon-Wide CCMP Workshop was designed and facilitated by the Florida Growth Management Conflict Resolution Consortium. The workshop was organized and records provided by the F.A.U. Institute of Government, and the F.A.U./F.I.U. Joint Center for Urban and Environmental Problems.

SUMMARY OF INITIAL ACTION PLAN RANKINGS

Session I

• Freshwater and Urban Discharges	<u>Level of Support</u>	1	2	3	4	5
	Number of Participants	6	18	14	0	0
• Point Source Discharges	<u>Level of Support</u>	1	2	3	4	5
	Number of Participants	2	30	10	0	0
• Marinas and Boat Discharges	<u>Level of Support</u>	1	2	3	4	5
	Number of Participants	0	7	24	7	0
• On-Site Systems	<u>Level of Support</u>	1	2	3	4	5
	Number of Participants	4	9	22	1	0

Session II

• Public Education	<u>Level of Support</u>	1	2	3	4	5
	Number of Participants	3	17	9	0	0
• Oversight and Management	<u>Level of Support</u>	1	2	3	4	5
	Number of Participants	1	13	15	1	0
• Data Information and Management	<u>Level of Support</u>	1	2	3	4	5
	Number of Participants	0	27	7	0	0
• Monitoring in the IRL	<u>Level of Support</u>	1	2	3	4	5
	Number of Participants	1	19	14	0	0

Session III

• Seagrasses of the IRL	<u>Level of Support</u>	1	2	3	4	5
	Number of Participants	1	23	5	0	0
• Fisheries in the IRL	<u>Level of Support</u>	1	2	3	4	5
	Number of Participants	2	13	14	0	0
• Endangered and Threatened Species	<u>Level of Support</u>	1	2	3	4	5
	Number of Participants	2	16	10	0	0
• Land Acquisition in the Lagoon	<u>Level of Support</u>	1	2	3	4	5
	Number of Participants	14	13	0	0	0
• Regional Impoundment Management	<u>Level of Support</u>	1	2	3	4	5
	Number of Participants	1	22	7	0	0

SESSION I - RESULTS

Session I dealt with four action plans. The action plans and their initial consensus ratings are listed below.

- Freshwater and Urban Discharges

<u>Level of Support</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Number of Participants	6	18	14	0	0
- Point Source Discharges

<u>Level of Support</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Number of Participants	2	30	10	0	0
- Marinas and Boat Discharges

<u>Level of Support</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Number of Participants	0	7	24	7	0
- On-Site Systems

<u>Level of Support</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Number of Participants	4	9	22	1	0

Some suggested changes and additions in Session I were voted on by participants. These votes are noted immediately after the suggestion with "Yes" and "No" followed by numbers of participants voting that way. Time did not permit testing suggestions this way in all action plans in this Session, nor in Session II or Session III.

Freshwater & Urban Discharges

Draft Action Plan - Recommended Actions

Lagoon-Wide

1. Complete the diagnostic, management or feasibility projects related to freshwater discharges found in the 1994 SWIM Plan update.
2. Implementation of both the federal and state mandates of NPDES stormwater permitting program and Section 6217 programs within the counties bordering the lagoon.
3. Develop pollution load reduction goals (PLRGs) and ensure their implementation throughout the Indian River Lagoon region through appropriate legislation or rule development.
4. Conduct applied research to develop new or improved best management practices (BMPS) and pilot projects with both urban and agricultural applications to determine the effectiveness of these BMPs. Implement these BMPs through development regulations or restoration/retrofitting projects.
5. Undertake muck removal projects where practicable and where stormwater management projects have been undertaken to control sources of muck.
6. Amend local land-use plans and/or create local development regulations to reduce the impact of development on Indian River Lagoon water quality and natural resources.
7. Develop legislation allowing the use of state revolving funds for non-point source control projects.
8. Form stormwater utilities charged with the operation, maintenance and improvement of stormwater systems.
9. Investigate the potential means and effectiveness of strengthening existing nonpoint pollution control programs. This would include, but not be limited to:
 - a. linking federal funding to effectiveness of the state Section 319 management plan.
 - b. mandating enforcement of Best Management Practices.
 - c. including currently exempt agricultural pollution sources within NPDES requirements.
10. Investigate the potential effectiveness of applying more market-based or economic incentive actions to nonpoint pollution control programs. This would include, but not be limited to:
 - a. deposit/refund programs for pesticide and fertilizer containers.
 - b. point/nonpoint source trading.

SESSION I - RESULTS

Large Drainage Systems

11. Develop a detailed master operating manual outlining standard operating procedures for each system if none exists.
12. Undertake a review of existing operating procedures.
13. Review the mechanics (canals, structures, etc.) of the system.
14. Develop projects to either retain waters within the system or re-divert them to their historic drainage basin.

Urban Stormwater/Smaller Drainage Systems

15. Educate residents and property owners about practices they could undertake to reduce the amount of pollutants generated.
16. Upgrade existing drainage systems by installing baffle boxes, catch basin inserts, and similar technology to provide additional treatment.
17. Retrofit existing stormwater systems to meet current standards.

New Systems

18. All new stormwater systems should, at a minimum, use best management practices to reduce the amount of stormwater and associated pollutants discharged by the system.
19. All agencies should review their stormwater treatment requirements on a regular basis to ensure their effectiveness in protecting surface waters from the impacts of stormwater and associated pollutants.

General Participant Comments and Suggestions

- No Corps of Engineers (they are not mentioned) - add restudy of stormwater into saltwater as well as freshwater
- Change title to "Stormwater Management"
- Address capping artesian springs
- Involve Army Corps of Engineers thoroughly
- Address rate and distribution of discharge
- Address inlet management
- Consider effects of muck removal on shellfish beds and harvest
- Promote interlocal cooperation
- Promote attitude that surface runoff is a wasted resource
- Address actions specific to types of drainage systems/districts (or classify actions this way) - large-small, etc. (nebulous wording)
- Address environmentally desirable releases of water into the lagoon

SESSION I - RESULTS

Participant Suggestions - Numbered Draft Actions

- 5 Address prevention
 Establish who is sending muck down canals
- 8 Conduct a cost benefit analysis
- 9b Educate instead of mandate
- 10a Should include quantity
- 14 Substitute "desirable" for "historic"
 Add regional attenuation facilities

Participant Suggestions - Additional Recommended Actions

None

Point Source Discharges

Draft Action Plan - Recommended Actions

1. Monitor and ensure compliance with the Indian River Lagoon Act.
2. Monitor efforts to seek changes to or exemptions from the Indian River Lagoon Act.
3. Monitor existing industrial discharges and applications for new or expanded discharges.
4. Identification and pursuit of funding alternatives for the upgrading of WWTPs, including utilization of reuse water and advanced treatment technologies.
5. Investigate alternatives to deep well disposal of domestic wastewater and industrial effluents.
6. Investigate alternatives to discharge to the Indian River Lagoon for industrial discharges.

General Participant Comments and Suggestions

- Why should NEP pursue funding for this
- Consider market-based economic incentives

Participant Suggestions - Numbered Draft Actions

- 2 Change to "eliminate exemptions from the Indian River Lagoon Act"

Participant Suggestions - Additional Recommended Actions

- Establish incentive programs for reporting spills

Marina and Boat Discharges

Draft Action Plan - Recommended Actions

For Marinas

1. To ensure adequate resource protection provide adequate enforcement of resources to allow for full implementation of the Environmental Resource Permitting Program.
2. Develop marina siting plans in each lagoon county as part of the manatee protection plans required by the state.
3. Require existing marinas to meet permitting standards for new marinas within 5 years for surface water runoff emanating from work areas.
4. Require the operating permits for fueling facilities to include provisions which contain 100 percent of fuel spills, eliminating the possibility of fuels being discharged to surface waters.
5. Introduce and or support state legislation implementing the Federal Clean Vessel Act and require the installation of pump outs, dump stations and rest room facilities at new or expanded marinas and public boat ramps.
6. Develop a symbol (decal) that will be readily recognizable signifying pump out facilities available at marinas and boat ramps. Develop a decal for boaters to display showing their support for the use of these facilities.
7. Develop adequate resources to support existing or institute new programs in each county where they do not exist which ensure the proper recycling, storage and disposal of hazardous materials used in marina operations.

For Boaters

8. Institute strict fines and community service requirements enforced by the Florida Marine Patrol for any boaters caught discharging untreated sewage within the coast waters of the lagoon.
9. Introduce legislation to institute a boating license with applicable testing requirements and point systems for infractions, similar to the operation of vehicles on the roadway.
10. Prohibit the in-water cleaning of boat hulls.

SESSION I - RESULTS

General Participant Comments and Suggestions

- Why license? What is the benefit to the lagoon?
- Include other personal watercraft users
- Consider buffer zones around shellfish beds for marina siting
- Consider non-regulatory, positive actions
- Require operating permits of marinas
- Operating permits suggestion is overly simplistic
- Establish designated anchorage areas with floating disposal vessels (government supplied)
- Problem of fuel in water too simplistic
- Stronger emphasis on EDUCATION rather than regulation
- Who will pay for monitoring?
- Where will enforcement come from?
- Too much regulation is unrealistic
- Bullet each action plan that speaks to education
- Operating permits pertain to what moving owners can control
- How does public feel on issues of regulation?
- Could include length of stay if disposal sites available

Participant Suggestions - Numbered Draft Actions

- 4 "100 percent" is unrealistic
Add incentive programs for doing this
- 9 Replace with "Continue to support boater education" Yes 19 No 14
- 10 Replace "Prohibit" with "restrict" or "certify (non-chemical)"

Participant Suggestions - Additional Recommended Actions

- Open marinas should be required to have permanent operating permits which include pollution control practices, self monitoring practices, and which entail routine inspections (not self-inspections)
Yes 26 No 4
- Establish Designated anchorage areas with floating disposal
- Promote low impact recreation

On-Site Disposal Systems

Draft Action Plan - Recommended Actions

1. OSDS inspections to be conducted by the County Public Health Unit (CPHU) when a change of ownership occurs to determine if the system is functioning properly and in compliance with current construction standards. If the system fails does not meet these criteria, repairs will be required.
2. As an alternative the CPHU could inspect OSDSs on a regular (2-3 year) basis to determine if the system is functioning properly and in compliance with current construction standards. Once the system passes inspection, the OSDS owner would be issued an "operating permit" for the system.
3. Another alternative is the development of an OSDS "utility" which would be responsible for the inspection, maintenance and repair of all OSDSs in a certain area. Individual home or business owners would support this utility through fees.
4. In areas with severe limitations for OSDS and continued OSDS failures, other solutions may be required. These include, in order of priority, upgrading existing OSDS alternative on-site disposal systems and connection to central sewer service.
5. Further studies are recommended to refine the extent of identified "problem" and "potential problem" areas and to quantify the impacts of OSDS on the Indian River Lagoon. Further recommendations for OSDSs may be based on the findings of these studies.

General Participant Comments and Suggestions

- Need qualified personnel or agency to re-inspect
- Pump tanks when property changes ownership
- Unrealistic to bring older tanks to present standards
- Inspect for discharge to surface water, not for "failure"
- Require periodic tank cleaning (every 1-2 years)
- What scientific data available on septic systems?
- Redesign poorly designed systems
- Practicality of re-inspections?

Participant Suggestions - Numbered Draft Actions

- 2 Change "2-3 year basis" to "yearly basis, during the wet season"
- 4 Add that first priority should be given to waterfront areas

Participant Suggestions - Additional Recommended Actions

- Institute incentive program (similar to that for leaking petroleum tanks) for conversion or connection to sewer systems

SESSION II - RESULTS

Session II addressed four action plans. The action plans along with their initial consensus ratings are listed below.

- Public Education

<u>Level of Support</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Number of Participants	3	17	9	0	0
- Oversight and Management

<u>Level of Support</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Number of Participants	1	13	15	1	0
- Data Information and Management

<u>Level of Support</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Number of Participants	0	27	7	0	0
- Monitoring in the Indian River Lagoon

<u>Level of Support</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Number of Participants	1	19	14	0	0

Public Education

Draft Action Plan - Recommended Actions

1. Implement a lagoon-wide "umbrella" public charity organization which supports and coordinates the activities of nonprofit organizations and learning centers in the region, while not duplicating those activities. These activities may include, but not be limited to, developing long-range adult education programs, establishing specific school curricula for the region's children, developing programs to inform the public about progress made in implement the CCMP and establishing volunteer networks.
2. Establish a program to inform, educate and support local government involvement in the protection of the lagoon.
3. Establish public education programs which support the recommended actions of the management plan and which help promote the plan's success.

General Participant Comments and Suggestions

- Legal hardball organization still needed - for oversight
- No mention of in-service training (in environmental/lagoon issues) for teachers to earn pay raises and/or certificates - need this
- Public education and awareness needed of management of land acquisitions
- Establish in-service school committee (to be functioning) before project terminates
- Contact State Department of Education
- Tool for public education: develop discrete packages of information to include in distribution
- Needs to be educational component in all arenas

Participant Suggestions - Numbered Draft Actions

None

Participant Suggestions - Additional Recommended Actions

- Develop discrete packages of information to include in distribution

Oversight & Management of the CCMP

Draft Action Plan - Recommended Actions

1. To establish a management structure to oversee the implementation of the CCMP and to help coordinate the efforts and resources of the existing non-profit organizations as an "umbrella" federation. This may include the development of an organization which embraces three distinguishable functions.
 - A. The first function would include the responsibilities of a policy making body for implementation activities and incorporate all existing IRLNEP Policy and Management Committee participants, any additional organizations not already in the Management Conference who are identified as being responsible for implementation of any recommended actions, and any selected members of the Technical Advisory and Citizens Action Committees. This function would include responsibilities for developing funding sources for the research needed for CCMP implementation; overseeing CCMP implementation activities; promoting responsible government actions related to the implementation of the CCMP; monitoring and reporting on the physical conditions of the lagoon; and assisting with the application and implementation of the findings and recommendations of scientific studies and research.
 - B. The second function of the federation would be to include the numerous existing environmental non-profit organizations, learning centers, user groups, educators, and interested citizens in activities to support and enhance the efforts of these already successful programs for the betterment of the lagoon. These activities would include the education and involvement of residents in the protection and restoration actions; supporting efforts to increase responsible eco-tourism; and developing funding sources to increase educational and involvement actions which support the goals of the CCMP.
 - C. The third function of the federation would be to provide for the logistical and staff support necessary to assist the post-CCMP management structure and the implementation of the recommended actions within the CCMP.

General Participant Comments and Suggestions

- Ought to be non-profit organization
- Strengthen outreach to other governmental agencies in CCMP (they take the actions)
- Sentient being (organization) that uses whatever tools are available (watch verbs)
- CCMP should/needs to be adopted by municipal/regional governments and agencies
- Network statewide

SESSION II - RESULTS

- Must have independent agency to oversee
- Is it time for Indian River Lagoon to have its own water management district or regional planning council?
- Private sector considerations/drawbacks
- Goal - have rules enforced with dollars behind them
- Assign responsibility for implementation and recommend funding sources
- Prioritize actions

Participant Suggestions - Numbered Draft Actions

- #1 Replace 'oversee' with "monitor" and/or "guide"
- #4 Importance of implementation - non-profit may not be strong enough

Participant Suggestions - Additional Recommended Actions

None

Data Information & Management

Draft Action Plan - Recommended Actions

1. Continued support of the Data Management Coordinator staff positions with funding for implementation of data and information management strategies.
2. Continue support of the Data and Information Coordinating Council.
3. Continue activities to locate and include representatives of all groups which develop or use data and information about the Indian River Lagoon on the Data and Information Coordinating Council.
4. Develop a newsletter for the Data and Information Coordinating Council.
5. Complete and continue to update to present day standards, the Indian River Lagoon Scientific Information System (IRLSIS) and make IRLSIS accessible to the public in an electronic format.
6. Ensure all data and information concerning the Indian River Lagoon is entered into and available through the storage and retrieval (STORET) system.
7. Explore the possibilities of establishing an archive for all data and information developed concerning the Indian River Lagoon and its resources.
8. Work with representatives of the STORET system to develop appropriate screening parameters for entry of estuarine data in STORET.
9. Work with FDEP to ensure monthly operating report (MOR) data from water and wastewater facilities permitted by FDEP is available in a usable electronic format.
10. Provide support for and help facilitate the production of an annual water quality report for the Indian River Lagoon.

General Participant Comments and Suggestions

- Make the data available in public libraries
- Synthesize for easy access and use
- Presentation of action items not consistent with other plans - these read more like tasks
- Regulation and quality control of the data made available

SESSION II - RESULTS

Participant Suggestions - Numbered Draft Actions

#1 Delete this - deals with staffing - no other recommendations do

Participant Suggestions - Additional Recommended Actions

None

Monitoring in the Indian River Lagoon

Draft Action Plan - Recommended Actions

1. Complete or continue the diagnostic projects related to monitoring the resources of the Indian River Lagoon outlined in the 1994 SWIM Plan update.
2. Provide support for and help facilitate the production of regular reports on water quality and the state of the Indian River Lagoon's Resources.

Water and Sediment Quality Monitoring

3. Continue the existing Indian River Lagoon water quality monitoring network, revising and updating the network to meet current information needs. Obtain long-term commitments for funding and maintaining this network.
4. Continue the Citizens' Water Quality Monitoring programs and efforts to coordinate this program among the various sponsors. Obtain long-term funding for this program.
5. Coordinate the efforts of the Indian River Lagoon Monitoring network and the Citizens' monitoring network.

General Participant Comments and Suggestions

- Other communities besides seagrasses important also
- Who will implement?
- Shoreline habitat/vegetation issues - conservation, education (where to place docks, etc.)
- Ecosystem management tie-in
- Biodiversity and holistic approach
- Quantity analysis and monitoring
- Meaningful interpretation of data is needed, especially for policy makers
- Realistic expectations and definitions of monitoring and funding are needed
- Use universities as resources
- Do not narrow focus only to seagrasses - though they are very important

Suggested Amendments to the Recommended Actions

- 2 Analyze and monitor quantity as well as quality

Participant Suggestions - Additional Recommended Actions

- Identify appropriate indicator species (not just seagrasses) in a temporal time frame/scale

SESSION III - RESULTS

Session III addressed five action plans. The action plans and their initial consensus ratings are listed below.

- Seagrasses of the Indian River Lagoon

<u>Level of Support</u>	1	2	3	4	5
Number of Participants	1	23	5	0	0
- Fisheries in the Indian River Lagoon

<u>Level of Support</u>	1	2	3	4	5
Number of Participants	2	13	14	0	0
- Endangered and Threatened Species

<u>Level of Support</u>	1	2	3	4	5
Number of Participants	2	16	10	0	0
- Land Acquisition in the Indian River Lagoon

<u>Level of Support</u>	1	2	3	4	5
Number of Participants	14	13	0	0	0
- Regional Mosquito Impoundment Management

<u>Level of Support</u>	1	2	3	4	5
Number of Participants	1	22	7	0	0

Seagrasses of the IRL

Draft Action Plan - Recommended Actions

1. Complete Project IR-2-201, Seagrass Preservation and Restoration, which is included in the 1994 SWIM Plan update.
2. Develop a pollutant loading budget to document amounts and types of pollutants entering the lagoon.
3. Continue seagrass mapping/monitoring efforts.
4. Develop a new or modify the existing water quality and light monitoring network to collect information needed for seagrass improvement activities.
5. Develop a lagoon-wide bathymetric map to show areas where seagrasses could potentially exist according the depth; i.e., areas six feet or less in depth.
6. Develop a segmentation system to discern portions of the lagoon which are similar in physical and biological characteristics for monitoring and management purposes.
7. Develop a light availability model which relates water quality characteristics to seagrass growth.
8. Develop goals (by segment) for reduction of pollutants most effecting seagrasses and implement a legal mechanism to enforce those goals.
9. Construct urban stormwater retrofit projects where possible.
10. Mark boat channels to protect against prop dredging of seagrass beds.
11. Mark seagrass beds to inform boaters of their location.

General Participant Comments and Suggestions

- Add protection ad enforcement of existing beds - ordinance governing development
- Enhance and restore existing beds
- Consider competing uses
- Set aside recreational areas, channels, boat basins etc. - mark these
- Target sensitive areas for marking
- Consider deeper growing grasses
- Mark areas under regulation and/or enhancement

SESSION III - RESULTS

- Address private docks in preserved areas
- Support stronger Department Environmental Protection rules and management plans
- Fully implement existing plans

Participant Suggestions - Numbered Draft Actions

- #11 Strike this. Regarding signs on seagrass beds, beware of too many signs
- #5 Delete parentheses

Participant Suggestions - Additional Recommended Actions

None

Fisheries in the Indian River Lagoon

Draft Action Plan - Recommended Actions

1. Coordinate the research agendas of the various agencies and institutions to develop a comprehensive fisheries management plan.
2. Determine the economic value of the lagoon's marine resources to the region's economy.
3. Identify the areas and habitats that are the most productive for the lagoon's fisheries and establish strict protection for these areas.
4. Consider biological requirements of fin and shellfish when establishing or refining pollutant reduction goals.
5. Manage mosquito control activities to minimize their adverse impacts on the lagoon's fisheries while maintaining sufficient public health benefits of impoundments.
6. Maximize the economic benefits of the lagoon's fisheries within the biological and environmental constraints of each species.
7. Promote access to the lagoon's resources while protecting the marine environment.
8. Increase funding for enforcement of environmental regulations.

General Participant Comments and Suggestions

- Add percentage of available habitat and what has been lost
- Address fisheries benefit of reconnection
- #8 should have more weight
- Recognize effects on endangered species of #6 and #7. These (access, economic benefit and preservation?) conflict with each other
- Return dollars to regions where collected - fishing licenses program that captures (dollars?)
- Promote low impact access

Participant Suggestions - Numbered Draft Actions

- 1 Add subheadings on inventories and post nets
Educate public on loss of stock/inventory (nets not the only problem)

SESSION III - RESULTS

- 3 Add other than regulatory protection methods
 Add options (management plans)
- 5 Change action verbs to eliminate negative connotations - include
 additional comments about mosquito impoundment management

 Change "manage" to "encourage"
- 6 Change "maximize" to optimize, while recognizing that other species
 will be affected

 Interpret economic benefit broadly - make broad interpretation explicit
2, Should also recognize the recreational value of lagoon
6, 7

Participant Suggestions - Additional Recommended Actions

- Support stronger protection for mangroves and shorelines
- Discourage shoreline armoring

Endangered /Threatened Species

Draft Action Plan - Recommended Actions

1. Adopt the Biological Diversity Conference recommendations and findings.
2. Support development of manatee protection plans for each county in the lagoon region.
3. Expand refuges and preserves.
4. Establish a research agenda needed to support the development of model management plans.
5. Develop model management plans for threatened and endangered species.
6. Concentrate major development activities in area already disturbed by human activity.
7. Protect the remaining upland, wetland, lagoon linkages which provide habitats for the rich biological diversity of the lagoon.
8. Improve enforcement of existing wetland protection laws throughout the lagoon region.

General Participant Comments and Suggestions

- Ecosystem recovery and management plan - #5 as a subset
- Re-title action plan - Ecosystem
- Include umbrella species
- Redesign as Ecosystem Management with Endangered Species as subset of this
- Need explicit recognition of Manatee Protection Plan
- Need to develop plans beyond specific species
- Include funding for enforcement
- Focus on one species at this level is micro-management. Need umbrella statement
- Do not lose focus on endangered & threatened species
- Use endangered and threatened species as indicator species

SESSION III - RESULTS

- Suggested new organization for this action plan
Biodiversity Action Plan
 - Ecosystem
 - National Commission level
 - Species level
 - Rare species
 - Threatened species
 - Endangered species

Participant Suggestions - Numbered Draft Actions

- 1,7 Include regard for biological diversity, especially as in #1 & #7
- 2 Add "effective"
- 2 Insert "continuing"
- 3 Delete - premature prior to review
- 3 Do not delete
- 3 "Consider expansion of ..."

Participant Suggestions - Additional Recommended Actions

None

SESSION III - RESULTS

Land Acquisition in the Indian River Lagoon

Draft Action Plan - Recommended Actions

1. Complete the listing of all wetland properties along the shoreline of the lagoon. The listing includes parcel identification, ownership, acreage, tax assessed value and wetland upland acreage (if available).
2. Determine the current state of the protected areas along the lagoon.
3. Determine areas of public and private ownership.
4. Rank areas for future acquisition, considering quality of the wetlands and long-term management potential.
5. Determine the potential for non-fee-simple mechanisms for management, including conservation easements, preferential tax assessment programs and donations. Consider potential roles of private, nonprofit land trusts and private owner land management.
6. Determine the potential and political support for a multi-program, lagoon land acquisition project to be presented to the CARL program or other funding programs.
7. Determine the value of acquiring wetlands to the lagoon as established by the IRLNEP finance and implementation plan.
8. Develop a management plan as part of the CCMP to identify long-term responsibilities for the conservation and management of wetlands along the lagoon.

General Participant Comments and Suggestions

None

Participant Suggestions - Numbered Draft Actions

- 1 Add "and lagoon-wide mapping"

Get market information as well as appraisals

Participant Suggestions - Additional Recommended Actions

None

Regional Mosquito Impoundment Management

Draft Action Plan - Recommended Actions

1. Obtain ownership or gain conservation easements for all privately owned mosquito control impoundments.
2. Complete impoundment ownership inventory (scheduled for completion by January, 1995)
3. Establish a data base containing impoundment ownership and other pertinent information including GIS data files.
4. Complete the study of wading bird usage of managed impoundments presently under way by Florida Tech and utilize the results of this study in completing the regional impoundment management plan under development by Florida Medical Entomology Laboratory (FMEL).
5. Complete the regional impoundment management plan under development by FMEL and the Subcommittee on Managed Marshes and expand this plan to include all areas of the lagoon.
6. Implement and continue to refine impoundment management practices recommended within the regional impoundment management plan and/or which otherwise benefit the resources of the Indian River Lagoon.

General Participant Comments and Suggestions

- Restoration to natural state or management for specific purposes?
- Action plan should focus on cost/benefit analysis - economic values/benefits
- Coordinate funding sources - identify priorities
- Summary breakdown/benchmark for next year

Participant Suggestions - Numbered Draft Actions

- 5 Include reconnections and adaptive management strategies that employ Best Management Practices

Participant Suggestions - Additional Recommended Actions

None

APPENDIX I

**INDIAN RIVER LAGOON NATIONAL ESTUARY
PROGRAM**

LAGOON-WIDE CCMP WORKSHOP

WORKSHEETS

**Front Street Civic Center
Melbourne, Florida
November 5, 1994**

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
LAGOON-WIDE CCMP WORKSHOP**

CONSENSUS SCALE

During the course of today's discussions, you will be asked to use the following scale to evaluate action plans and individual recommendations.

1. Support wholeheartedly.
2. Support. Good action plan or recommendation.
3. Support but with reservations. Would like additional discussion for clarification or refinement.
4. Do not support as currently drafted. Serious reservations. May support after additional discussion for clarification or refinement.
5. Over my dead body.

SESSION INSTRUCTIONS

In each session you will be asked to do the following. The facilitator will have additional instructions, and help keep discussion focused.

- Listen to short presentations on three to five actions plans.
- Ask questions to clarify or better understand the recommendations in the action plans. In the interests of time, we ask that you do not discuss the recommendations now.
- Evaluate each action plan using the consensus scale outlined above.
- Discuss the action plans with particular emphasis on reservations, highlighted by the consensus poll, which might be addressed by modifications to the recommendations.
- Suggest additions, deletions, and modifications to the recommendations, if appropriate.
- If necessary and if time permits, a second poll may be taken on one or more of the action plans, or individual recommendations.

SESSION WORKSHEETS

After each set of presentations, use the worksheets on the following pages to write down brief reminders of considerations you would like to raise during the discussions.

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
LAGOON-WIDE CCMP WORKSHOP**

Session I - Worksheet

FRESHWATER AND URBAN DISCHARGES

- Pros and Cons
- Recommendations to add or delete
- Modifications for improvement or refinement

POINT SOURCE DISCHARGES

- Pros and Cons
- Recommendations to add or delete
- Modifications for improvement or refinement

MARINAS AND BOAT DISCHARGES

- Pros and Cons
- Recommendations to add or delete
- Modifications for improvement or refinement

ON-SITE DISPOSAL SYSTEMS

- Pros and Cons
- Recommendations to add or delete
- Modifications for improvement or refinement

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
LAGOON-WIDE CCMP WORKSHOP**

Session II - Worksheet

PUBLIC EDUCATION

- Pros and Cons
- Recommendations to add or delete
- Modifications for improvement or refinement

OVERSIGHT AND MANAGEMENT OF THE CCMP

- Pros and Cons
- Recommendations to add or delete
- Modifications for improvement or refinement

DATA INFORMATION AND MANAGEMENT

- Pros and Cons
- Recommendations to add or delete
- Modifications for improvement or refinement

MONITORING IN THE INDIAN RIVER LAGOON

- Pros and Cons
- Recommendations to add or delete
- Modifications for improvement or refinement

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
LAGOON-WIDE CCMP WORKSHOP**

Session III - Worksheet

SEAGRASSES

- Pros and Cons
- Recommendations to add or delete
- Modifications for improvement or refinement

FISHERIES

- Pros and Cons
- Recommendations to add or delete
- Modifications for improvement or refinement

ENDANGERED/THREATENED SPECIES

- Pros and Cons
- Recommendations to add or delete
- Modifications for improvement or refinement

LAND ACQUISITION

- Pros and Cons
- Recommendations to add or delete
- Modifications for improvement or refinement

MOSQUITO IMPOUNDMENT MANAGEMENT

- Pros and Cons
- Recommendations to add or delete
- Modifications for improvement or refinement

IRLNEP - LAGOON-WIDE CCMP WORKSHOP EVALUATION

The background materials and presentations were useful for participating in the workshop.

Disagree Strongly 1 2 3 4 *Agree Strongly* 5

Everyone had a fair opportunity to share his or her views in the full group sessions.

Disagree Strongly 1 2 3 4 *Agree Strongly* 5

The full group facilitator helped the group stay focused and complete its agenda.

Disagree Strongly 1 2 3 4 *Agree Strongly* 5

The full group process used to evaluate recommendations was fair.

Disagree Strongly 1 2 3 4 *Agree Strongly* 5

The agenda allowed all relevant topics to be addressed.

Disagree Strongly 1 2 3 4 *Agree Strongly* 5

The workshop was well organized.

Disagree Strongly 1 2 3 4 *Agree Strongly* 5

Facilities for the workshop were appropriate.

Disagree Strongly 1 2 3 4 *Agree Strongly* 5

The results of this workshop will be seriously considered by the IRLNEP in preparing the CCMP.

Disagree Strongly 1 2 3 4 *Agree Strongly* 5

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM

LAGOON-WIDE CCMP WORKSHOP

Comments

Please use this form to make additional comments or recommendations.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

APPENDIX II

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THE INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM

Proceedings

NORTHERN LAGOON COMPREHENSIVE CONSERVATION MANAGEMENT PLAN

CONSENSUS BUILDING WORKSHOP

Friday
October 29, 1993

9:00 a.m. to 5:00 p.m.

The opinions expressed in this document are those of the speakers and participants who attended the facilitated meeting and do not necessarily reflect the views and policies of the U.S. Environmental Protection Agency, or the St. Johns River Water Management District, or any other agency mentioned in the text. Mention of trade names, corporations or commercial products does not constitute endorsement or recommendation by the sponsoring agencies or the Indian River Lagoon National Estuary Program Management Conference.

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EXECUTIVE SUMMARY

On October 29, 1993, the Indian River Lagoon National Estuary Program convened a Comprehensive Conservation Management Plan workshop for the northern region of the Indian River Lagoon. Thirty-three participants representing environmental and citizen groups, and local, regional, state and federal governments and agencies from Daytona Beach to Titusville met to discuss and agree upon the most pressing management actions to protect, preserve and enhance the Indian River Lagoon. After a full day of discussion first in small groups and then in plenary, the participants recommended the following ten highest priority actions or groups of actions for inclusion in the CCMP and implementation.

- Coordination of lagoon management
- Stormwater management
- Public education
- Establishment of a research/education institute
- Establishment of a Volusia County "Estuarium"
- Securing a permanent funding source
- Substantive research
- Requiring a license for boaters
- A jobs program to address retrofitting for clean-water (*a/a* the Civilian Conservation Corps)
- A systems approach to mitigation funding

The plenary concluded with a preliminary discussion of action plans to implement the four highest priority actions: coordination, stormwater management, public education and the establishment of a research institute.

Also convened on October 29, 1993, was a student shadow conference. This conference involved students from elementary, middle and high schools throughout Volusia County and addressed the same issues as the consensus building workshop. The proceedings and results of the student shadow conference are presented in a companion volume to this report.

INTRODUCTION

This report contains the proceedings of the northern region Comprehensive Conservation Management Plan (CCMP) Consensus Building Workshop convened by the Indian River Lagoon National Estuary Program (IRLNEP) on October 29, 1993, at the Daytona Beach Marriott, in Daytona Beach Florida. The workshop involved thirty-three participants representing environmental and citizen groups, and local, regional, state and federal governments and agencies from Daytona Beach to Titusville in identifying the most pressing management actions to protect, preserve and enhance the Indian River Lagoon. The conclusions of the participants are in the form of recommendations to the IRLNEP for inclusion in the CCMP.

This workshop was one of three similar workshops convened by the IRLNEP from October to December of 1993, in the northern, central, and southern parts of the lagoon. As of this writing it is anticipated that the results of all three workshops will be presented at a lagoon-wide conference for further development and refinement in the first half of 1994.

The consensus building workshops were designed and facilitated by the Florida Growth Management Conflict Resolution Consortium. Organizational and logistical support, and small group recorders were provided by the FAU Institute of Government, and the FAU/FIU Joint Center for Environmental and Urban Problems.

GUIDELINES FOR INTERPRETING WORKSHOP RESULTS

Participants in the consensus-building workshop were invited as representatives of particular groups or interests and were asked to informally represent the concerns of their constituencies. The results of the workshops have not yet, however, been presented to any of the groups represented for formal approval or endorsement.

The management actions described as the consensus recommendations of the workshop were identified initially by one or more of the four small discussion groups convened that day, and confirmed as high priorities by all participants in the final plenary session using a prioritization procedure (for a fuller description of the prioritization process, see page 28 of this report).

PROCESS AND AGENDA

During the first half of the workshop, participants were asked to form four small groups for discussion and initial identification of management action priorities. Throughout the day, participants were asked to divide their discussion of issues and management actions into the following categories: estuarine (below the mean high-water line); land-based (above the mean high-water line); and human element (related to broader social trends or man-made structures.)

Before beginning discussions, participants were asked to quickly brainstorm an initial list of management actions as a starting point for later discussions. Sessions I-III were devoted to discussing and developing, in small groups, management action recommendations addressing each of the categories (estuarine, land-based, and human element). At the end of each session, the groups were asked to revise and reprioritize the list of management actions they had generated before beginning their discussion. In this way each group evolved a single list of ten priority actions which reflected its discussion of each category of actions.

In Sessions IV and V the groups reported to each other their lists, and then discussed the results in plenary session, combining identical or similar items and further refining items which all the groups had independently identified. They then prioritized among the resulting collective list using the same procedures used in the small groups.

In Session VI, the participants began a discussion of who might be called upon to implement the workshop recommendations, and realistic timeframes for doing so.

The agenda for the day and the worksheets provided to participants can be found in Appendix III, beginning on page 26 of this report.

CONCLUSIONS

This section of the report sets forth the conclusions of the workshop. These consist of the ten highest priority actions or categories of actions identified by the participants in the afternoon plenary, as well as the ten highest priorities of each of the four small discussion groups (from which the top ten priorities for the afternoon plenary were drawn). Also included are the preliminary action planning discussions related to the four highest priorities of the workshop.

Throughout the day, participants were repeatedly asked to prioritize their recommendations. The top ten priorities of the workshop, and the broader set of small group priorities, represent the distillation of over 170 possible actions discussed in the small groups.

Final Recommendations of the Workshop

Categories

Workshop participants grouped all of the recommendations of the four groups into the eight categories listed below. Participants then prioritized among the categories. The results were:

<i>Category</i>	<i>Votes</i>	<i>Rank</i>
• Stormwater	19	1
• Coordinated/consolidated management	18	2
• Public education	17	3
• Economic development	9	4
• Funding	8	5
• Research	7	6
• Other management/regulation	4	7
• Incentives	0	8

Actions

Participants then prepared composite list of actions which included all the actions recommended by each of the four groups. (Identical or very similar recommendations were combined.) The result of prioritization among these items was as follows.

CONCLUSIONS

Action	Votes	Rank
• Coordination	24	1
• Stormwater	21	2
• Public education	17	3
• Research/education institute	9	4
• Estuarium	6	5
• Permanent funding source	5	6
• Substantive research	5	7
• Required boat license	5	8
• Retrofit - Clean-water jobs program - Civilian Conservation Corps	4	9
• Mitigation funding - systems approach	2	10

Other actions on the combined list, but which did not make the top ten priorities were:

- Reduce the waste stream program
- Create lagoon-wide agency
- Remove impediments to flow and circulation
- Economic incentives to develop environmentally friendly products
- Monetary incentives to control growth
- Merge existing agencies into Volusia County Estuary commission
- Stop known detrimental activities
- Boater safety - link to DUI and driver's license
- Take fresh look at all regulations
- Regulate land use " no-growth" - public areas
- Plan areas for acquisition
- Implement coastal elements of comprehensive plans

CONCLUSIONS

Preliminary Action Plans for Final Recommendations

Coordination

Responsible agencies

- Local government - cities, counties in lagoon?
- Volusia County Environmental Management (charter county)
- NEP
- Environmental/youth group
- Not for profit - newly established - government, public, private (include students)
- Water management district

What should be done.

- Address broad spectrum of regional issues/actions identified today
- Review what is being done

When

- Within 45 days - called by Volusia County

Stormwater

Responsible agencies

- Local lead coordinating agency - Volusia County
- Water management district (technical capacity)
- New non-profit organization

What should be done

- Stormwater/wastewater treatment
- Taxing ability
- Review what is in process

When

- It's in process
- ASAP

CONCLUSIONS

Research Institute

Responsible agencies

- Institute a new organization
- Anchored within five colleges and universities in Volusia county and other cultural and civic organizations

What should be done

- Bring public together
- Public awareness
- Line to economic development, jobs, and benefits

When

- Commit to something signed, started, and filed by December 31, 1993

Public Education

Responsible agencies locally

- New non-profit organization
- NEP
- Everyone-global
- Volusia county school system

Which audiences should be addressed

- Television time - public TV
- Environmental groups
- Special meetings, festivals, conferences
- Post secondary education - colleges and universities

When

- Start now: this is a long term process

Final Recommendations of the Small Groups

Numbers to the left of a recommendation indicate its priority.

Group 1

1. Coordinated interjurisdictional master drainage plan.
2. Legislation to allow local government to deny activities that are not in the best interest of the community without violating property rights.
3. Permanent funding source for Indian River Lagoon and educate the public to obtain necessary funding.
3. Establish interjurisdictional review and management team (state, Federal, local). Do not create a new agency, but create linkages (horizontal and vertical). Establish institute to pursue linkages and research. Vision.
4. Standards (performance) should take into consideration short-term and long-term economic impacts.
5. Establish an institute (interdisciplinary) to pursue linkages and research. Vision.
5. Require all state and federal permits to comply with local comprehensive plans.
5. Water quality standards/dollars/timeframes (localized).

Group 2

1. Create one agency to manage lagoon resources, budgets, and administrative responsibilities. Empower the agency. Streamline enforcement practices into one agency.
2. Coordinated stormwater runoff management.
2. Remove impediments to flow and circulation.
3. Regulate land use with initiatives for "no-growth" management. Creation of public areas.
3. Regional eco-system management: GIS; regulations and enforcement.
4. Regional coordination and regular meetings of all involved organizations.
5. Economic incentives to promote development of "environmentally friendly" products.
5. Public education - including the creation of an information and education center.
6. Creation of a CCC (conservation corps) for lagoon clean-up, regulation, and enforcement.
6. Promote non-consumptive uses of estuary.
6. Create monetary incentives to control growth and use of resources.

CONCLUSIONS

Group 3

1. Knowledge. Develop definitions and measurement standards that are habitat specific. Conduct region specific inventory of life and habitats (e.g., existing fish and shrimp stock). Locate muck and other sediment deposits and analyze for content: prioritize BMPs.
2. Educate public and public officials/ decision makers on water conservation, wastewater management. Public involvement, awareness, appreciation. Public information program for voluntary compliance.
3. Implement stormwater plans to improve water quality, reduce drainage and increase recharge. Cooperate for a regional stormwater management approach, including cost sharing. Clarify who pays, develop credits option.
4. National, state, regional, local clean water (jobs) retrofitting program. Review local government procedures - retrofit. Involve small businesses in retrofitting. Design program locally. Reduce waste stream.
5. Reduce the waste stream. Incentives/disincentives for manufacturing and retail. Recycle, conserve, reclaim, reuse and educate. Strengthen anti-liter laws. Student advocates for changing parents' behavior.
6. Economic development. Non-regulatory options. Make it profitable to avoid degradation of the lagoon.
7. Stop known detrimental activities.
8. Safety. Point system for boating accidents, DUI. Increase law enforcement and funding of law enforcement for boating.
9. Measure water quality through sampling. (Expand ambient water quality sampling to watershed). Examine historical data and determine trends.
10. Forecast and project future trends in light of existing regulation and future development.

Group 4

1. Required licensing for boat operation including environmental issues.
1. Implement coastal element of comprehensive plans.
2. Merge existing agencies into Volusia County Estuary Commission.
2. Take a fresh look at all regulations: scrap them and start over.
2. Make economic development plan for water-dependent businesses and facilities: ecotourism; recreational fishing; aquaculture; etc.
3. Establish Volusia County Estuarium/research and education facility.
3. Plan for diversion and re-use of stormwater.
3. Plan areas for acquisition.

SESSION I RESULTS

Numbers to the left of a recommendation indicate its priority.

Session I - Estuarine Management Actions

Group 1

1. Educate the public to obtain necessary funding.
2. Water quality standards/dollars/timeframes/(localized).
3. Non-point source, point source control and mosquito impoundment reconnection.
3. Consistency among different agencies.
3. Survey all segments - ocean and lagoon sides - to clean-up and establish new attitudes to properly use the lagoon waterways.
4. Prioritize critical issues.
4. Handle nutrient problems.

Group 2

1. Create one agency to manage lagoon resources, budgets and all administrative responsibilities. Empower the agency. Streamline enforcement practices into one agency.
2. Streamline enforcement practices into one agency.
2. Regulatory powers for: commercial activities; development; dredging activities; recreational activities; boating.
3. Define the eco-system.
4. Consolidate existing information.
5. Public education, including the creation of an information and education center.
5. Land acquisition given to one authority.
6. Protect and enhance wetlands.
6. Creation of CCC (conservation corps) for lagoon clean-up, regulation and enforcement.

SESSION 1 RESULTS

Group 3

1. Develop definitions and measurement standards that are habitat specific.
2. Stop known detrimental activities.
3. Inventory of life and habitats - region specific - (e.g., existing fish and shrimp stock.)
4. Locate muck and other sediment deposits and analyze for content: prioritize BMPs.
5. Measure water quality through sampling. (Expand ambient water quality sampling to watershed).
6. Forecast and project future trends in light of existing regulation and future development.

Group 4

1. Establish Volusia County Estuarium/research and education facility.
2. Diversion and re-use of stormwater.
2. Develop community specific science curriculum for middle and secondary schools.
3. Take a fresh look at all regulations: scrap them and start over.
3. Redevelop water dependent facilities.
3. Promote and develop aquaculture.
3. Enhance recreational fishing.
3. Promote and develop eco-tourism.
2. Develop internships.

SESSION II RESULTS

Numbers to the left of a recommendation indicate its priority.

Session II - Land-Based Management Actions

Group 1

1. Establish an institute (interdisciplinary) to pursue linkages and research. Vision.
2. Coordinated interjurisdictional master drainage plan.
3. Permanent funding source for Indian River Lagoon and educate the public to obtain necessary funding.
4. All permitting and regulation linked to standard GIS system.
5. Establish interjurisdictional review and management team (state, Federal, local). Do not create a new agency, but create linkages (horizontal and vertical). Establish institute to pursue linkages and research. Vision.
5. Develop methodology and create priorities for clean-up and retrofit projects.
5. Water quality standards/dollars/timeframes/(localized).
5. Incorporate CCMP into local comprehensive plans.
5. Educate the public to obtain necessary funding.
5. Require all state and federal permits to comply with local comprehensive plans.

Group 2

1. Create one agency to manage lagoon resources, budgets and all administrative responsibilities. Empower the agency. Streamline enforcement practices into one agency.
2. Regional eco-system management: GIS; regulations and enforcement.
3. Coordinated stormwater runoff management.
4. Regulate land use with initiatives for "no-growth" management. Creation of public areas.
5. Public education - including the creation of an information and education center.
6. Consolidate existing information.
7. Creation of CCC (conservation corps) for lagoon clean-up, regulation and enforcement.
8. Protect and enhance wetlands.

SESSION II RESULTS

Group 3

1. Implement stormwater plans to improve water quality, reduce drainage and increase recharge. Cooperate for a regional stormwater management approach, including cost sharing .
2. Educate public and public officials and decision makers on water conservation, wastewater management. Public involvement, awareness, and appreciation. Public information program for voluntary compliance.
3. National, state, regional, local clean water (jobs) retrofitting program. Review local government procedures - retrofit. Involve small businesses in retrofitting. Design program locally. Reduce waste stream.
4. Locate muck and other sediment deposits and analyze for content: prioritize BMPs.
5. Develop a systems approach to pursue mitigation funding from public sources (e.g. county, FDOT, etc).
6. Measure water quality through sampling (expand ambient water quality sampling to watershed). Examine historical data and determine trends.
7. Forecast and project future trends in light of existing regulation and future development.
8. Identify pollution in wastewater and effects on the lagoon system. Implement effective monitoring program.
9. Stop known detrimental activities.
10. Economic development. Non-regulatory options. Make it profitable to avoid degradation of the lagoon.

Group 4

1. Take a fresh look at all regulations: scrap them and start over.
2. Establish Volusia County Estuarium/research and education facility.
3. Plan for diversion and re-use of stormwater.
3. Develop community specific science curriculum for middle and secondary schools.
4. Plan areas for acquisition.
4. Meet NDPDES stormwater requirements now.
4. Establish community education programs.
5. Required licensing for boat operation including environmental issues.
5. Promote and develop eco-tourism.
5. Re-develop water dependent facilities.
5. Promote and develop aquaculture.

PLEASE NOTE: The results of Session III are reflected in the final recommendations of the small groups.

APPENDIX I - TRANSCRIPTS

Group I

Group I - Initial Brainstorming

- Educating the public to obtain necessary funding
- Return system to its natural state
- Set up committee to brainstorm and pursue actions
- Consistency among different agencies
- Handle nutrient problems to restore viable oyster population
- Fund water managers
- Survey all segments - ocean and lagoon sides - to clean-up and establish new attitudes to properly use lagoon (waterways)
- More people involved as advocates
- Harmonize land use and regulatory authorities and educate the public
- Septic tanks along rivers and boat discharges, water runoff

Group I - Session I - Estuarine Issues

- Septic tank seepage into water
- Sewage treatment plant runoff
- Water quality - too much freshwater, nutrient overloading
- Aquatic habitat (oysters)
- Aquatic vegetation
- Water clarity, water quality standards
- Turbid water, suspended solids
- Mangrove die-offs lead to loss of filtering
- Boat props effect on turbidity
- Imbalance of fisheries and other filtering habitat
- Commercial fisheries
- Changing nature of recreational fishing
- Surrender old values and establish new attitudes
- Use of the water

Group I - Session I - Estuarine Management Actions

- Water quality standards/dollars/localized time frame
- Holistic approach
- Prioritize most critical issues
- Non-point source control
- Point source control
- Mosquito impoundment reconnection
- Survey use of waterfront
- Ban cars on the beach and lagoon frontage
- Aquaculture, commercial and recreation, aquatic harvest, and water recreation
- Regulation and education
- Planting aquatic vegetation

Group I - Session II - Land-Based Issues

- Septic tank seepage
- Sewage treatment plant runoff
- Consistency in regulation
- Unfunded mandates
- Implementation of regulation

- Stormwater discharge/runoff
- Removal of existing contaminators
- Total non-point source discharge
- Drainage for coastal development
- Mosquito impoundment
- Balance between wetlands and upland habitat
- New installations (septic tanks)
- Retrofit of existing septic tanks, sewage plants, infrastructure
- New development - land clearing/drainage
- Retrofitting of infrastructure
- Government owned lands management

Group I - Session II - Land-Based Management Actions

- Coordinated interjurisdictional master drainage plan
- Establish interjurisdictional review and management team (state, federal, local) (horizontal and vertical) not to create a new agency but to create linkages
- Establish an institute (interdisciplinary) to pursue linkages and research - VISION
- Incorporate CCMP into local comprehensive plans
- All permitting and regulation linked to standard GIS system (establish standard)
- Require all state and federal permit activities to comply with local comprehensive plans
- One stop permitting
- Develop methodology and create priorities for clean-up and retrofit projects
- Permanent funding source for Indian River Lagoon

Group I - Session III - Human Element Issues

- Individual responsibility for individual actions - accountability
- Boating safety
- Growth management
- Debt owed to future generations accrued in the interest of growth
- Property rights and traditions
- Impact of economic development
- Economics vs. environment
- Education of lagoon users
- Balance of human interests and lagoon needs
- Level of service on lagoon

Group I - Session III - Human Element Management Actions

- Boating safety course and required license and minimum age (power boats)
- Examine feasibility of establishing level of service on waterways similar to roadways (LOS)
- Boating activity survey to assess impacts ((h.p.)
- Regulating dock construction (permits) needs to be revisited to take into consideration size and cumulative impacts of docks and boats
- Development of an intensive and continuous education program for lagoon users (boaters)
- Developing a rating system to weigh a project against all parts of the comprehensive plan
- Simply comprehensively plan
- Create advisory committee to present technical information
- Legislation to allow local government to deny activities that are not in the best interest of the community without violating property rights
- Standards (performance) should take into consideration SR and LR (?) impacts

Group 2

Group II - Initial Brainstorming

- Utilize existing regulatory programs with enforcement and full compliance
- Treat stormwater and gray water
- Coordinate all management efforts
- Determine/restore original water quality
- Public education
- Purchase all good land next to lagoon
- Temporary moratorium on growth/need responsible growth
- Protect and enhance wetlands
- Research on system
- Monitoring of system
- Protect grass beds
- Enforcement and public education of boating regulations, with the equivalent of a neighborhood watch on Indian River Lagoon
- License boaters
- Monthly meetings with all local organizations involved and interested
- CCC (Civilian Conservation Core) to clean-up lagoon and help enforce regulations
- Establish permanent agency to coordinate and oversee all lagoon efforts
- Remove impediments to flow and circulation

Group II - Session I - Estuarine Issues

- Determine what is in sediments and where they come from
- Fisheries research and education
- Influx of fresh into brackish water
- Water Quality
- Litter, plastics, etc. - materials put in lagoon by man
- Enforcement of regulations
- Education
- Sea plants and grasses
- Septic tanks
- Wastewater treatment plants
- Lack of funding
- Rehabilitation of marine life in lagoon and fisheries

Group II - Session I - Estuarine Management Actions

- One agency to manage lagoon resources and budget - all administrative responsibilities
- Empower the one agency
- Regulatory powers for commercial activities and development and dredging activities
- Regulatory power for recreational activities
- Streamline enforcement practices into one agency
- Define the eco-system to be managed and determine original water quality
- Land acquisition authority given to one agency
- Create an information and education center - public education
- Create committees for research and restoration, stormwater effluent and runoff, boating etc. within the agency
- One telephone number for lagoon - lagoon hotline
- Consolidate existing information

Group II - Session II - Land-Based Issues

- Wetland dependent wildlife - identify wetland-upland connections necessary for survival
- Salt marsh management
- Regional planning needed
- Water runoff at boat ramps - engineering to protect environment needed
- Point source and non-point source discharge
- Acquisitions of sensitive areas with connections needed for wildlife considered
- Chemical use on the land
- Irrigation practices - water use, re-use practices
- Promote best management practices for commercial and residential
- Natural buffers for every water system
- Regulation of land use

Group II - Session II - Land Based Management Actions

- GIS approach to analyze need of water dependent wildlife
- Best management practices for both commercial and residential
- Consolidate available information
- Create a model regulation and enforcement for land based issues
- Tap into and interpret information generated from satellites
- Regulate land use
- Regional management - eco-system GIS a tool to use for this - regulations and enforcement
- Water use - utilize best management practices
- Stable funding mechanism
- Coordinated stormwater runoff management

Group II - Session III - Human Element Issues

- Public health
- Boating safety
- Impediments to natural flow
- Growth management - use of system
- Human population and arithmetic growth of this
- Promoting non-consumptive uses for estuary
- Better controlled use of waterways re: recreational uses
- Education for human values
- Access to river - future needs
- Dredging needs - how to best handle dredge spoil
- Natural management

Group II - Session III - Human Element Management Actions

- Regional coordination and regular meetings of all involved organizations
- Environmental education in schools
- Licensing for boaters
- Enforcement of existing regulations by increasing staff
- Remove impediments for flow
- Create public areas fro buffer zones, retention areas and spoil islands, etc.
- Recognize human limitations to interfere with natural systems
- Positive public relations
- Promoting non-consumptive use of estuary

TRANSCRIPTS

- Promote reproductive education
- Initiate "no-growth" management
- Allocate resources to control growth and use of resources
- Create monetary incentives
- Economic incentives to promote development of "environmentally friendly" products
- Regular meetings of all involved organizations to address the issues, with the goal of being as inclusive as possible

Group III

Group III - Initial Brainstorming

- Implement in-depth study to determine what exists, how it got there, and its impacts
- Place clear value and cost on lagoon
- Stop known detrimental activities
- Manager to allow for human use while protecting the environment
- Immediately clean stormwater - focusing first on macro then micro
- Appoint twelve member multi-agency group - 60 day track - to assimilate 20 years research to an action plan funded as a public works project to implement priority actions plans and hold a special session to initiate appropriate legislation
- To return lagoon towards natural hydrologic and biologic conditions
- Retrofit stormwater system, monitor, remove, illicit discharges
- Make it profitable to avoid degradation of the lagoon
- Lobby EPC to require NPDES for Brevard County

Group III - Session I - Estuarine Issues

- Need to determine existing water quality conditions and standards needed
- Pollutant loading from non-point sources
- Implement 100% of living shoreline initiative
- Address point sources especially sewage treatment
- How retrofitting of systems should proceed (land-based also)
- Dealing with historical deposits in a management plan
- New inlet's impact - Bethune Beach
- How to define water quality
- What are objectives of management?
- Are minimum standards sufficient or do we need standards to restore conditions?
- Should we utilize mosquito impoundments for fish nurseries to a greater extent?
- Encourage submerged aquatic vegetation and seagrass replenishment
- Aquatic habitat - an in-depth study is needed
- Fish stock declines

Group III - Session I - Estuarine Management Actions

- Water Quality
- Develop definitions and measurement standards that are habitat specific
- Implement fully the 100% living shoreline initiative (e.g. existing and future sea walls, replanting grasses)
- Locate muck and other sediment deposits and analyze for content, prioritize for best management practices
- Retrofit and reexamine local government management procedures
- Inventory of "life and habitat" (e.g. existing fish and shrimp stock) region specific
- Measure water quality through sampling (expand ambient water quality sampling to watershed) examine historical data and determine trends)
- Forecast and project future trends in light of existing regulation and future development
- Replenish submerged aquatic vegetation and seagrass
- Utilize mosquito impoundments as fish nurseries

Group III - Session II - Land Based Issues

- Effluent quality and quantity from domestic and industrial sources
- Stormwater quality and quantity
- Regulatory/land use patterns
- Reuse/funding
- Agricultural and freshwater drainage
- Domestic toxins
- Population growth
- Urban sprawl/growth management
- Private property rights/public interest
- Support and subsidize a systems approach to mitigation, protection, and acquisition (e.g. mitigation banking)
- Avoidance first
- Open marsh management, expanding options for impoundment uses

Group III - Session II - Land-Based Management Actions

- Develop a systems approach to pursue mitigation funding from public sources (e.g. county, FDOT, etc.)
- Develop a clear idea of what pollution we are identifying in wastewater and its effects on the system - implementing an effective monitoring program
- Implement stormwater plans - make sure plans achieve water quality improvements and quantity reductions into the lagoon
- Reduce drainage and increase recharge
- Encourage interlocal cooperation to develop a regional approach to stormwater management. Who pays?/credits
- Develop a national clean water/jobs retrofitting program that includes coordination on the state, regional and local levels, driven by local decisions
- Initiate small business incubator to do retrofitting work
- Educate public and public officials about need for water conservation and wastewater management
- Search for new technology to handle water

Group III - Session III - Human Element Issues

- How to take advantage of improved technologies to solve problems
- How growth and populations increases are managed - watershed stewardship
- Education and accessibility to solutions - consensus building, support for investment of resources
 - Economics (e.g. tax base, affordability) of doing the "right thing"
 - Economic development /commercial development
 - Broad based economic development
 - Sustainability
- Voluntary compliance linked to evolving public norms
- Public use and access
- Awareness and appreciation of the resource, of impacts, and appropriate uses
- Measuring the highest and best use - dollars and values
- How to ensure future man-made projects are in harmony with the lagoon
- Stormwater management

Group III - Session III - Human Element Management Actions

- Education: develop a program to make available critical information on problems and solutions
- Public involvement program
- Encourage voluntary compliance
- Reducing the waste stream
- Plastics and effects on the lagoon - incentives and disincentives to manufacturing and retail
- Recycle, conserve, reclaim, reuse and educate
- Strengthen anti-litter laws
- Student advocates for changing parents' behavior
- Identify and protect critical habitat, utilizing systems approach - growth management/highest and best use - watershed management
- Interlocal cooperation and cost sharing to address management and implementation of regulations
- Safety - implement mandatory boat operation licensing, with point system for accidents, and boating DUI ties to driver's license
- Increase law enforcement and funding of enforcement
- Stormwater management implementation
- Economic development - regulatory and non-regulatory ideas

Group IV

Group IV - Initial Brainstorming

- A low requiring education (basics) on environmental issues
- Require science curriculum to be community specific, with required internships
- Mandate pollution control
- Emphasize fishing, eco-tourism
- Development of a Volusia County Estuarium and research facility
- Diversion of stormwater
- Re-use of stormwater

Group IV - Session I - Estuarine Issues

- More practical approach to setting water quality standards
- The standards for monitoring need to be changed
- Design of facilities and implementation and enforcement of existing regulations
- Re-examine and consolidate existing regulations
- Aquaculture
- Multiple jurisdictions and regulations
- Flushing and flow

Group IV - Session I - Management Actions

Existing regulations

- Consolidate agencies
- Eliminate all - fresh start
- One stop permitting
- Miracle team

Stormwater

- Determine impervious area
- Diversion and reuse
- Consolidate legal authority

Education

- Development of Estuarium facility
- Internships
- Community specific science curriculum required
- Awareness festival

Marine Industries

- Develop aquaculture and agriculture
- Enhance recreational fishing and ancillary activities
- Develop eco-tourism
- Water dependent facilities redevelopment
- Retrain for related work
- Sea-farm park

Group IV - Session II - Land Based Issues

- Re-use
- Creation of conservation wetland areas
- Minimize discharge
- Development
- Existing development
- Environmental buffers
- Air quality
- Compatibility

Group IV - Session II - Land Based Management Actions

Re-use wastewater

- More dollars to put in place
- Re-use planning for Southeast Volusia plant
- Inventory sources
- Figure out "total water" costs
- Get NPDES operating
- Meet NPDES requirements now

Air quality

- Local regulations
- Mail boater's guides annually
- Plan areas for acquisition
- Uniformity of regulations
- Help places do the right thing/send money
- Estuarium - marine education
- Community college, continuing education programs

Group IV - Session III - Human Element Issues

- Education
- Required licensing for boat operation, including environmental education
- Require statewide regulation of education
- Boating
- Growth management
- Ensure access to water ways
- Acquire lands for public access
- Carrying capacity
- Redevelopment of water dependent facilities

Group IV - Session III - Human Element Management Actions

- Fix the inlet
- Determine carrying capacity
- Merge existing agencies into Volusia County Estuary Commission
- (Agencies to be merged: Mosquito Control, Port Authority, local governments, County government, Halifax Task Force)
- Implement coastal elements of plan
- Required licensing for boat operation including environmental issues
- Required state-wide regulation of education/boating
- Ensure access to waterways

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APPENDIX III - PARTICIPANT WORKSHEETS

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM

Northern Lagoon Sub-Regional Workshop
on the
Comprehensive Conservation Management Plan

October 28 -29, 1993
Daytona Beach Marriott

AGENDA PACKET

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM

**Northern Lagoon Sub-Regional Workshop
on the
Comprehensive Conservation Management Plan**

October 29, 1993

AGENDA

- | | |
|-------|---|
| 8:30 | Registration and Coffee |
| 9:00 | Welcome and Introductions |
| 9:30 | Initial management action brainstorming
(In small groups) |
| 9:50 | Session I - Estuarine Issues
(Small group discussion) |
| 10:45 | BREAK |
| 11:00 | Session II - Land based issues
(Small group discussion) |
| 12:00 | LUNCH |
| 1:00 | Session III - Human element issues
(Small group discussion) |
| 2:00 | Session IV - Small group reports to full group |
| 2:45 | BREAK |
| 3:00 | Session V - Management action priorities
(Full group discussion) |
| 3:45 | Session VI - Action plans
(Full group session) |
| 4:15 | Next steps |
| 4:30 | Adjourn |

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Northern Lagoon Sub-Regional CCMP Workshop**

General Instructions

This agenda divides the challenges facing the Indian River Lagoon into "estuarine issues," "land-based issues," and "human element issues." (More detailed definitions of these will be provided later in the workshop.) These categories are only intended to provide a rough but useful framework for discussion. The facilitators realize that many issues overlap these categories. We urge that you make use of the categories without allowing them to inhibit your discussion.

At various times during the day you will be asked to assign priorities to issues or management actions using straw polls. Please use the following guidelines to do so.

- For each prioritization straw poll, you will have four votes.
- You may choose to cast less than four votes.
- You may not cast more than one vote for an item during any given straw poll.

Your facilitator will have further instructions for each straw poll.

Initial Management Action Brainstorming

Please think of at least one answer to the following question:

If you were monarch for a day, what would you do to improve the Indian River Lagoon and its associated biological systems?

Your facilitator will have further instructions for the initial brainstorming.

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Northern Lagoon Sub-Regional CCMP Workshop**

SESSION I

Estuarine Issues

For purposes of this discussion, use the following definition of "estuarine issues:" issues whose origins or effects are principally below the mean high water line of the lagoon.

The following are examples of estuarine issues:

- Pollutant loadings
 - Point sources (waterborne)
 - Non-point sources (waterborne)
 - Internal Sources
- Water quality standards
- Submerged aquatic vegetation
- Seagrass shellfish harvesting buffer
- Fisheries
 - Finfish
 - Shellfish
 - Aquaculture
 - Pathogens
- Aquatic habitat

Your facilitator will have instructions to guide your discussion around the following questions.

- ***Which are the most important "estuarine" issues facing the northern part of the lagoon?***
- ***Which management actions should be undertaken to address them?***

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Northern Lagoon Sub-Regional CCMP Workshop**

SESSION II

Land Based Issues

For purposes of this discussion, use the following definition of "land based issues:" issues whose origins or effects are principally above the mean high water line of the lagoon.

The following are examples of land based issues:

- Point source discharges
 - Domestic wastewater
 - Industrial wastewater
- Non-point source discharges
 - Stormwater
 - Septic tanks
 - Agricultural drainage
 - Freshwater drainage
- Toxic substances
 - Source Control
 - Management and/or removal of existing contamination
- Regulatory
 - Government-owned lands management
 - Mitigation
 - Restoration and/or enhancement
 - Mangrove pruning
 - Pollutant load reduction goals
- Mosquito impoundments
 - Regional management plans
 - Ownership
- Endangered/threatened/listed species
- Wetlands/uplands habitat

Your facilitator will have instructions to guide your discussion around the following questions.

- ***Which are the most important "land based" issues facing the northern part of the lagoon?***
- ***Which management actions should be undertaken to address them?***

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Northern Lagoon Sub-Regional CCMP Workshop

SESSION III

Human Element Issues

For purposes of this discussion, use the following definition of "human element issues:" issues which directly affect human populations or which stem from broad social trends.

The following are examples of human element issues:

- Public health & safety
 - Pathogens
 - Boating safety
- Public use
 - Access
 - Impacts
- Man-made features
 - Waterways (Intercoastal waterway, channels and canals)
 - Inlets
 - Causeways
 - Marinas
 - Ports
- Growth management
- Economic development/impacts

Your facilitator will have instructions to guide your discussion around the following questions.

- ***Which are the most important "human element" issues facing the northern part of the lagoon?***
- ***Which management actions should be undertaken to address them?***

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Northern Lagoon Sub-Regional CCMP Workshop**

SESSION IV

Small Group Reports to the Full Group

Your facilitator will have instructions for this session.

SESSION V

Management Action Priorities

During Session V, you may be asked to evaluate various combinations of management actions. Please do so using the following scale.

- 1 - Support wholeheartedly.
- 2 - Support, think it is a good package.
- 3 - Support, but with reservations. Would like further discussion for clarification and refinement.
- 4 - Serious reservations. Do not support as currently under discussion. Might eventually support, but only after considerable additional clarification and refinement.
- 5 - Oppose. ("Over my dead body.")

Your facilitator will have further instructions for this session.

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Northern Lagoon Sub-Regional CCMP Workshop

SESSION VI

Management Action Priorities

The purpose of this session is to add detail to the management actions agreed upon in Session V. Your facilitator will have further instructions.

ACTION PLANNING FORM

MANAGEMENT ACTION:

INVOLVED RESPONSIBLE AGENCY OR GROUP(S):

ISSUES ADDRESSED (AND BACKGROUND, IF DESIRED):

INFORMATION SOURCES:

TIMEFRAMES:

IMMEDIATE: (1-2) YEARS:

MEDIUM TERM: (2-5) YEARS:

LONG TERM: (5+) YEARS:

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM

Northern Lagoon Sub-Regional CCMP Workshop

SESSION VI

ACTION PLANNING FORM - EXAMPLE

MANAGEMENT ACTION (S):

Removal of muck deposits from Kit Karson Kreek.
Location and control of muck and kryptonite sources.
Upgrade older stormwater systems.
Restore Kreek wetlands and hydrology.

INVOLVED RESPONSIBLE AGENCY OR GROUP(S):

City of Metropolis
Mid-State Water Management District
Natural Resource Protection Agency

ISSUES ADDRESSED:

Muck deposits with kryptonite contamination in Kit Karson Kreek.

BACKGROUND (OPTIONAL):

Kit Karson Kreek is a tributary of Lois Lane Lagoon. Water quality in the Kreek is classified as "poor." Wastewater treatment discharges to the Kreek ended in 1922, replaced by deep well injection and land application. Stormwater discharge, however, continues. Older areas of Metropolis have no stormwater treatment. The kryptonite levels found in the Kreek do not endanger humans, but may threaten fish, wildlife and superheroes. Muck and kryptonite probably reach the Lagoon during high flow periods. Storm drainage from the old Lex Luther Industrial park is thought to be a major source of muck and kryptonite.

INFORMATION SOURCES:

City of Metropolis
Mid-State Water Management District
Natural Resource Protection Agency

TIMEFRAMES:

IMMEDIATE: (1-2) YEARS:

Locate sources, study restoration techniques

MEDIUM TERM: (2-5) YEARS:

Control sources, remove muck and kryptonite, initiate stormwater upgrading, select and begin implementation of restoration scheme.

LONG TERM: (5+) YEARS:

Complete stormwater upgrade and restoration

THE INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM

Proceedings

CENTRAL LAGOON COMPREHENSIVE CONSERVATION MANAGEMENT PLAN

CONSENSUS BUILDING WORKSHOP

Saturday
November 20, 1993

9:00 a.m. to 5:00 p.m.

The opinions expressed in this document are those of the speakers and participants who attended the facilitated meeting and do not necessarily reflect the views and policies of the U.S. Environmental Protection Agency, or the St. Johns River Water Management District, or any other agency mentioned in the text. Mention of trade names, corporations or commercial products does not constitute endorsement or recommendation by the sponsoring agencies or the Indian River Lagoon National Estuary Program Management Conference.

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EXECUTIVE SUMMARY

On November 20, 1993, the Indian River Lagoon National Estuary Program convened a Comprehensive Conservation Management Plan workshop for the central region of the Indian River Lagoon. Thirty-one participants representing environmental and citizen groups, local, regional, state and federal governments and agencies from Titusville south in Brevard County and from all of Indian River County met to discuss and agree upon the most pressing management actions to protect, preserve and enhance the Indian River Lagoon. After a full day of discussion first in small groups and then in plenary, the participants agreed upon the following ten highest priority actions or group of actions. These actions were explicitly described by the participants as part of the broader project of goal setting or developing a vision of the condition to which the lagoon should be restored.

Five categories of actions emerged as top priorities in all of the small group discussions and were confirmed as consensus priorities by participants in the concluding plenary. These were:

- Public education
- Coordination and/or consolidation
- Stormwater and water quality
- Land and water use plans and regulation
- Economics

An additional group of five actions or categories of actions were identified by two or more of the small groups and confirmed as top ten priorities by all participants in the concluding plenary through a prioritization poll. These were:

- Reconnecting salt marshes and impoundments to the lagoon
- Lagoon buffers
- Limiting the use of pesticides, herbicides, and fertilizers
- Developing a comprehensive lagoon monitoring program
- Defining the carrying capacity of the lagoon and managing activities accordingly

The plenary concluded with a preliminary discussion by the participants of action plans to implement the consensus categories of public education, stormwater and water quality, and land and water use plans and regulation.

INTRODUCTION

This report contains the proceedings of the central region Comprehensive Conservation Management Plan (CCMP) Consensus Building Workshop convened by the Indian River Lagoon National Estuary Program (IRLNEP) on November 20, 1993, at Vero Beach Junior High School, in Vero Beach, Florida. The workshop involved thirty-one participants representing environmental and citizen groups, local, regional, state and federal governments and agencies from Titusville south in Brevard County and from all of Indian River County in identifying the most pressing management actions to protect, preserve and enhance the Indian River Lagoon. The workshop was convened to assist the IRLNEP in developing a revised version of the CCMP.

This workshop was one of three similar workshops convened by the IRLNEP from October to December of 1993, in the northern, central, and southern parts of the lagoon. As of this writing it is anticipated that the results of all three workshops will be presented at a lagoon-wide conference for further development and refinement in the first half of 1994.

The consensus building workshops were designed and facilitated by the Florida Growth Management Conflict Resolution Consortium. Organizational and logistical support, and small group recorders were provided by the FAU Institute of Government, and the FAU/FIU Joint Center for Environmental and Urban Problems.

GUIDELINES FOR INTERPRETING WORKSHOP RESULTS

Participants in the consensus-building workshop were invited as representatives of particular groups or interests and were asked to informally represent the concerns of their constituencies. The results of the workshops have not yet, however, been presented to any of the groups represented for formal approval or endorsement.

The management actions described as the consensus recommendations of the workshop were independently identified by every discussion group as part of their list of ten top priority items and confirmed as consensus items by all participants in the final plenary. Other actions in the final list of top ten priorities were identified by one or more of the groups and chosen through a prioritization process by participants in the final plenary (for a fuller description of the prioritization process, see page 31 in Appendix II of this report).

PROCESS AND AGENDA

During the first half of the workshop, participants were asked to form four small groups for discussion and initial identification of management action priorities. Throughout the day, participants were asked to divide their discussion of issues and management actions into the categories of estuarine (below the mean high-water line), land-based (above the mean high-water line) and human element (related to broader social trends or man-made structures).

Before beginning discussions, participants were asked to quickly brainstorm an initial list of management actions as a starting point for later discussions. Immediately after, during Session I, the small groups were asked to identify the most pressing issues under each of these categories in the central part of the lagoon.

Sessions II-IV were devoted to discussing and developing in greater depth management action recommendations addressing each of the categories (estuarine, land-based, and human element). At the end of the discussion of each category, the groups were asked to revise and re-prioritize the list of management actions they had generated before beginning their discussion. In this way each group developed a single list of ten priority actions which evolved to reflect that group's discussion of each category.

In Sessions V and VI the groups reported to each other their lists, and then in plenary session engaged in a discussion of the results, identifying and further defining actions which all the groups had recommended. The participants agreed that actions or categories of actions identified by every group should be considered the consensus recommendations of the workshop as a whole. They also agreed to prioritize among the remaining actions (those identified by at least one group but not by all groups) using the same prioritization procedures used in the small groups.

In Session VII, the participants began a discussion of parties who might be called upon to implement the consensus recommendations, and realistic timeframes for doing so.

CONCLUSIONS

This section of the report sets forth the conclusions of the workshop. These consist of the ten highest priority actions or categories of actions identified by the participants in the workshop, and the preliminary action planning discussions related to them. Also included as conclusions are the ten highest priorities of each of the four discussion groups (from which the top ten priorities for the workshop as a whole were drawn).

Throughout the day, participants were repeatedly asked to prioritize their recommendations. The top ten priorities of the workshop, and the broader set of small group priorities, represent the distillation of over 150 possible actions discussed in the small groups.

Final Recommendations of the Workshop

The participants in the concluding plenary felt strongly that all of their final recommendations formed part of a broader project. While not identified as a management action, that project involved defining a vision of what the lagoon's condition should be, and setting the achievement of that condition as a goal.

Consensus Recommendations

The following were the recommended actions or groups of actions which appeared in some form in all of the small group priority lists.

- *Coordination or consolidation of governmental responsibility for the lagoon*

While this item appeared in some form in each group's recommendations, opinions differed as to the form it should take. Some of the possible ways to proceed were:

- create a single new government agency;
- create a regional planning council - like entity;
- create a non-profit coordinating vehicle for the lagoon;
- create an Indian River Lagoon Management District;
- invest whatever agency is responsible with an oversight role;
- invest whatever agency is responsible with final decision-making power;
- whatever option is finally pursued, do it in such a way that a new layer of bureaucracy is not created.

When polled informally on whether to pursue coordination or consolidation of existing functions and agencies in the lagoon, 11 participants preferred coordination, while 13 preferred consolidation.

CONCLUSIONS

- *Stormwater and its relationship to water quality*

Components of this recommendation were:

- silt removal;
- stopping soil runoff;
- stopping discharges to the lagoon;
- setting water quality standards and goals;
- retrofitting stormwater systems;
- reclamation of canal systems;
- treatment of non-point source as well as point source discharges;
- addressing freshwater discharges;
- a possible regional stormwater utility.

- *Land and water use plans and regulation*

Components of this recommendation were:

- consistency among such plans and regulations;
- addressing the relationship of zoning issues to lagoon health (including the possibility of establishing water-use zoning);
- recognizing the differences between the various areas of the lagoon.

- *Public education*

Components of this recommendation included both the audiences to be addressed and the information to be conveyed.

Audiences included:

- public officials;
- youth;
- general public;
- visitors;
- staff of public agencies.

Information to be conveyed included:

- the value of the lagoon;
- the regulatory framework which is in place;
- the balance between regulation and economics (i.e., the cost effectiveness of regulations.)

CONCLUSIONS

- *Economics and incentives*

This category of recommendations addressed the issues of resources for the other recommendations and the related issues of economic incentives for private actors to take necessary steps towards lagoon preservation and enhancement.

Resource and funding related components were:

- a cost/benefit analysis of proposed actions and regulations (which takes into account the value of the resource in its pristine state, as well as the cost of doing nothing to preserve it);
- an analysis of short and long term benefits;
- identification of funding sources.

Incentive related components were:

- tax relief or tax abatements;
- taking some property of the tax rolls to reduce the cost of needed actions.

Other Top Ten Priority Recommended Actions

The following were also identified as top ten priority actions by participants during the concluding plenary session, using a prioritization poll.

- *Reconnecting salt marshes and impoundments to the lagoon*
- *Preserving lagoon buffers*
- *Limiting the use of pesticides, herbicides and fertilizers at the shoreline and beyond*
- *Developing a comprehensive monitoring program for the lagoon*
- *Defining the carrying capacity of the lagoon and managing it accordingly*

Preliminary Action Plans for Final Recommendations

Stormwater

Responsible or involved agencies

- A newly created utility
- FIND (for intracoastal issues)
- Army Corps of Engineers (for intracoastal)
- Water management districts
- Inlet authorities

Timeframe - one year to begin

Land and water use plans and regulation

Responsible or involved agencies

- Local governments
- Department of Community Affairs
- Water management districts
- Water control districts
- Federal Fish and Wildlife Service
- Mosquito control districts
- Army Corps of Engineers
- Tie to Evaluation and Appraisal Reports of local government comprehensive plans
- Need historical data

Public education

Responsible or involved agencies

- Boards of education
- National Estuary Program
- National Estuary Program successor agencies
- NERR
- Marine Resources Council
- Water management districts
- Need flexibility

CONCLUSIONS

Final Recommendations of the Small Groups

Numbers to the left of a recommendation indicate its priority.

Group 1

1. Increase public education and awareness.
2. Establish consistent regulations for water quality and quantity.
 Appropriate regulation.
 Sub-basin considerations.
3. Establish new or consolidated government entity for Indian River Lagoon management (water management district governing body for IRL).
4. Limit the use and application of pesticides, herbicides, and fertilizer at the shoreline and beyond.
5. Improve the quality of stormwater discharge.
6. Re-connect saltmarshes and impoundments.
7. Increase erosion control and reduce septic tanks.
8. Encourage federal participation and funding for non-point source contributions.
9. Promote consistent growth management regulations lagoon-wide.
10. Reduce point and non-point source contributions.

Group 2

1. Set water quality standards, goals, and targets.
2. Cost benefit analysis, and analysis of short term and long term benefits.
2. Silt removal/stop soil runoff.
3. Need non-profit vehicle to facilitate and coordinate lagoon issues.
3. Reconnect impoundments using best management practices.
4. Educate public and governmental agencies about environmental/ecological impact.
4. Ensure comprehensive plans encompass goals set for the lagoon.
5. Bottom-up process to solve local problems.
5. Regional planning council-type entity for lagoon issues.

CONCLUSIONS

Group 3

1. Develop lagoon-wide land and water use plan (e.g., regional HCP, greenway approach, management of impoundments).
2. Education/public awareness.
 - Setup curriculum from elementary level to adult.
 - Priority in school system.
 - Emphasize education for children.
3. Define economic impact of lagoon regulation and establish funding structure for implementation of management actions.
4. Manage activities/usage of the lagoon (define, then manage).
5. Develop regional stormwater utility and reclaim major canals (e.g. C54).
6. Develop and analyze historical database for lagoon for purpose of developing goals.
 - Broad public accessibility.
7. Develop comprehensive monitoring program (including using aerial photography).
8. Coordinate and consolidate permitting process with a focus on priorities and goals.
9. Create single governmental agency for oversight and final decision making based on research of appropriate agencies, looking for uniform standards.
10. Define carrying capacity of activities in lagoon.

Group 4

1. Educate broad population about the value of the lagoon and about regulatory parameters.
2. Eliminate sewage discharge and retrofit all stormwater systems.
3. Create funding sources to improve and maintain lagoon.
4. Better communication among government entities to eliminate duplication.
5. Preserve lagoon buffers (conservation easements).
6. Develop comprehensive plans and land development regulations.
7. Incentives for developers beyond compliance.
8. Improve enforcement (including dollars).
9. Manage freshwater discharges.
10. Monitor impacts of man-made structures and tailor regulations and plans to accommodate.
11. Tax relief and incentives for additional preservation and protection.

SESSION II RESULTS

Numbers to the left of a recommendation indicate its priority.

Session II - Estuarine Management Actions

Group 1

1. Establish consistent regulations for water quantity and quality (lagoon-wide). Establish appropriate water quality/quantity regulations for IRL with consideration for its sub-basin site specific issues.
1. Establish new or consolidated government entity for IRL management (water management district governing board for IRL).
2. Reconnect saltwater marshes and impoundments.
2. Increase public education and awareness.

Visitors/tourists	All residents (part-time, seasonal)
Public official	Local government staff
Builders/developers	Target population
2. Increase erosion control, reduce the use of fertilizer, insecticide, herbicide and pesticide. Reduce septic tanks.
3. Encourage federal participation for funding for non-point source contribution.
3. Establish regulations that will enhance the sustainability of the IRL.
3. Restore submerged habitat.

Group 2

1. Set water quality standards and reach goals.
1. Set water quality standards, goals, targets.
1. Silt removal/stop soil runoff.
2. Educate public and government agencies on issues.
3. Bottom-up process to solve local problems - state implementation.
3. Legislation to eliminate sewage discharge: find funding; implementation mechanism; educate public; provide incentives.
3. Local governments setting standards with regional agencies.

SESSION II RESULTS

Group 3

1. Education and public awareness (especially children).
2. Develop regional stormwater utility - and reclaim major canals.
3. Single governmental agency.
4. Coordinate, consolidate permitting process.
4. Develop lagoon-wide land and water use plan (regional HCP, greenway approach, including management of impoundments).
4. Develop comprehensive monitoring program.
5. Recovery of mangrove habitat, buffer zone.
5. Develop historical database for lagoon and set standards and goals.
6. Purchase and restore native habitat.

Group 4

1. Pressing need for communication.
2. Educate a broad population about the value of the lagoon and regulatory parameters.
3. Eliminate sewage discharge and retrofit all stormwater systems.
4. Retrofit all stormwater systems.
4. Create funding sources to improve and maintain the lagoon.
5. Improve enforcement (including dollars).
5. Purchase of lands for preservation.
5. Review salaries for government employees and upgrade as appropriate. Enhance training and preparation.
5. Create incentives for businesses to improve technology to reduce future spills.
5. Manage freshwater discharges.
5. Zoning of activities on water.

SESSION III RESULTS

Numbers to the left of a recommendation indicate its priority.

Session III - Land-Based Management Actions

Group 1

1. Increase public education and awareness.
Visitors/tourists All residents (part-time, seasonal)
Public official Local government staff
Builders/developers Target population
2. Improve quality of stormwater discharge.
2. Establish consistent regulations for water quantity and quality (lagoon-wide). Establish appropriate water quality/quantity regulations for IRL with consideration for its sub-basin site specific issues.
3. Encourage land acquisitions for endangered lands (stormwater).
3. Establish new or consolidated government entity for IRL management (water management district governing board for IRL).
3. Reconnect saltwater marshes and impoundments.
4. Limit the use and application of pesticides, herbicides, fertilizer - on shorelines and residential properties (everywhere) -emphasize shorelines.
4. Increase erosion control, reduce the use of fertilizer, insecticide, herbicide and pesticide. Reduce septic tanks.
4. Encourage federal participation for funding for non-point source contribution.
4. Establish regulations that will enhance the sustainability of the IRL.

Group 2

1. Set water quality standards, goals, targets.
2. Silt removal/stop soil runoff.
3. Reconnect impoundments using best management practices.
4. Economic analysis of cost to benefit ratio for implementing new standards and cost of retrofitting.
4. Educate public and government agencies on issues.
5. Bottom-up process to solve local problems - state implementation.
5. All discharge problems.
5. Ensure that comprehensive plans encompass goals set for the lagoon.

SESSION III RESULTS

Group 3

1. Develop lagoon-wide land and water use plan (regional HCP, greenway approach, including management of impoundments).
2. Education and public awareness (especially children).
3. Develop regional stormwater utility - and reclaim major canals.
3. Have management deal with political power of agricultural interests.
4. Single governmental agency.
5. Coordinate, consolidate permitting process.
5. Develop historical database for lagoon and set standards and goals.
6. Develop comprehensive monitoring program.
7. Purchase and restore native habitat.

Group 4

1. Create funding sources.
1. Eliminate sewage discharge and retrofit all stormwater systems.
2. Pressing need for communication.
2. Educate a broad population about the value of the lagoon and regulatory parameters.
2. Purchase of lands for preservation.
3. Create funding sources to improve and maintain the lagoon
3. Preserve lagoon buffers.
3. Develop comprehensive plans and land development regulations.
4. Improve enforcement (including dollars).
4. Manage freshwater discharges.
4. Zoning of activities on water.
4. Incentives for developers beyond compliance.

SESSION IV RESULTS

Numbers to the left of a recommendation indicate its priority.

Session IV - Human Element Management Actions

Group 1

1. Increase public education and awareness.
Visitors/tourists All residents (part-time, seasonal)
Public official Local government staff
Builders/developers Target population
2. Establish consistent regulations for water quantity and quality (lagoon-wide.) Establish appropriate water quality/quantity regulations for IRL with consideration for its sub-basin site specific issues.
2. Establish new or consolidated governmental entity for IRL management (water management district governing board for IRL).
3. Improve quality of stormwater discharge.
3. Limit the use and application of pesticides, herbicides, fertilizer - on shorelines and residential properties (everywhere) - emphasize shorelines.
4. Reconnect saltwater marshes and impoundments.
4. Increase erosion control, reduce the use of fertilizer, insecticide, herbicide and pesticide. Reduce septic tanks.
4. Encourage federal participation for funding for non-point source contribution.
4. Promote consistent growth management regulation lagoon-wide.
4. Reduce point and non-point source contribution.

Group 2

1. Set water quality standards, goals, targets.
2. Cost benefit analysis of short term benefits.
2. Silt removal/stop soil runoff.
3. Visioning process.
3. Need non-profit vehicle to facilitate all coordination of organizations and issues dealing with the lagoon.
3. Reconnect impoundments using best management practices.
4. Education of economic environmental impacts.
4. Educate public and government agencies on issues.
4. All discharge problems.
4. Ensure that comprehensive plans encompass goals set for the lagoon.
5. Bottom-up process to solve local problems - state implementation.
5. Need regional planning council entity for lagoon area (public agency).

SESSION IV RESULTS

Group 3

1. Develop lagoon-wide land and water use plan (regional HCP, greenway approach, including management of impoundments).
2. Education and public awareness (especially children).
3. Define economic impact of lagoon regulation and establish funding structure for implementing management structure.
4. Manage activities and usage of lagoon (define then manage).
4. Develop regional stormwater utility - and reclaim major canals.
4. Develop historical database for lagoon and set standards and goals.
5. Develop comprehensive monitoring program.
5. Coordinate, consolidate permitting process.
5. Single governmental agency.
5. Define carrying capacity of activities in lagoon.

Group 4

1. Educate a broad population about the value of the lagoon and regulatory parameters.
2. Eliminate sewage discharge and retrofit all stormwater systems.
2. Create funding sources to improve and maintain the lagoon.
3. Preserve lagoon buffers.
3. Develop comprehensive plans and land development regulations.
3. Improve enforcement (including dollars).
3. Manage freshwater discharges.
3. Incentives for developers beyond compliance.

APPENDIX I - TRANSCRIPTS

Group 1

Group 1 - Brainstorming

- Stormwater runoff issue - retrofit
- Educate public officials
- Control use of grass flats
- Appropriate 1/2 billion - subregional lagoon area
- Limit development - establish buffer zone between development and lagoon - 200 feet
- "What do you want the lagoon to be?" (visioning) (issues: freshwater vs. saltwater)
- Reduce and distribute freshwater into the lagoon
- Establish optimal criteria for salinity/freshwater
- Reestablish water clarity
- Public awareness/education
- Label storm drainage
- No storm drains dumping into the lagoon
- Recreational use (addressing recreational boaters and commercial boaters)
- Speed limits for jet skis, recreational boaters, commercial, etc.
- Wastewater (retrofitting or reuse)
- Adverse impacts of development
- Land acquisition
- Functional limits/geographic definition
- Water quality - non-point source (agriculture) - water quantity
- Retrofit for condition and flow
- Develop best management practices

Group 1 - Session I - Estuarine Issues

- Clear pristine - water quality issues - if appropriate goal
- Increase fisheries
- Increase grass beds
- Increase acreage filter feeders
- Reconnect salt marshes/impoundments
- Species specific education
- Reduction of point and non-point sources
- Non-point source - septic tank usage
- Speed of large boats
- No more dredging
- Controlled dredging
- Increase planting of mangroves
- Removal of muck
- Establish better control and usage and location of marinas
- Establish pump-out stations
- Mandate molecular tracers for sewage source identification
- Propeller protection devices (manatees)
- Increase flushing of river
- Increase sand bottom
- Reduce future land causeways
- Replant/restore submerged vegetation

Group I - Session I - Land-Based Issues

- Sediment control (stormwater runoff, siltation, proper erosion control)
- Limit use of: fertilizer, pesticides, herbicides, point and non-point sources
- Xeriscaping/limit the planting of (non-native) exotic plants
- Limit the use of shoreline application of (see #2)
- Encourage re-vegetation of shoreline - replant submerged vegetation
- Eliminate mitigation (environment usually on the losing side)
- Do not eliminate mitigation
- Review mitigation policies (reevaluate)
- Encourage acquisition of remaining endangered lands
- Improve disturbed areas
- Improve quality of stormwater discharge
- Restore healthy balance of freshwater inflow
- Define healthy balance between saltwater and freshwater
- Determine historic conditions
- Public awareness
- Enforced regulations
- Coordinate/standardize/define goals (NEP)
- Unified consensus (lagoon-wide then address sub-regions)
- Define "What is IRL to be?"
- Control agricultural runoff

Group I - Session I - Human Element Issues

- Educating the public to its impact
- Educate public officials, regulatory officials
- Institutional building (addressing governmental organizations such as water management districts - reduction of government bureaucracy)
- Establish an IRL Management District
- Do not establish an IRL Management District
- Re-establish district boundaries
- New governmental entity for IRL
- Program to minimize the impact of causeways and canals
- Point and non-point source reduction

Group I - Session I - Issue Priorities

	Votes	Rank
• Define goals - what is healthy lagoon?	5	1
• Reduce non point degradation	1	
• Public education - day to day impacts	4	2
• Establish regulatory consistency	1	
• Retrofit/evaluate stormwater/ wastewater runoff	4	2
• Establish single regulatory body	1	
• Land acquisition by mitigation bank	1	
• Land acquisition	2	4
• Increase water quality	3	3
• Improve fisheries	1	
• Establish single IRL district	1	

Group I - Session II - Estuarine Management Actions Considered

- Establish consistent regulation for water quantity and quality (lagoon-wide) - Establish appropriate water quality/quantity regulations for IRL with consideration for sub-basin/site specific issues
- Establish regulations that will enhance the sustainability of the IRL
- Encourage federal participation for funding for non-point source contribution
- Increase erosion control/reduce use of fertilizer, insecticide, herbicide and pesticide, reduce septic tanks
- Increase public education/awareness
 - visitors/tourists
 - public officials
 - builders/developers
 - all residents (including seasonal)
 - staff (legal and government staff)
 - target population
- Establish new or consolidated government entity for IRL management (water management district - like governing board for IRL)
- Reconnect saltmarshes and impoundments
- Wake-related regulations (boat speeds)
- Regulate pollution inputs (boats and marinas)
- Restore submerged habitat

Group I - Session III - Land-Based Management Actions Considered

- Limit the use and application of pesticides, herbicides, fertilizer - on shorelines and residential properties (everywhere) emphasize shorelines
- Define and establish healthy balance (salinity) - implement appropriate freshwater inflow
- Encourage land acquisition - for endangered lands (purchase or mitigation banks or non fee-simple approaches); stormwater
- Improve quality of stormwater discharge
- Enforce existing regulations
- Encourage re-vegetation of shorelines
- Encourage use of native plantings (i.e., planned xeriscape: exotic control and removal)
- Increase public education (with target audiences)
- Erosion control - implement plan
- Define desirable goals for IRL health

Group I - Session IV - Human Element Management Actions Considered

- Establish IRL management district - (from restructure of existing entities - not an additional layer of government)
- Establish new organization for management
- Reduce point and non-point source contributions
- Promote consistent growth management regulation lagoon wide

Group 2

Group 2 - Initial Brainstorming

- Sewage discharge - all
- Water quality of 1950
- Remove silt from river bottom
- Restore wetlands - connect to river
- Save water quality - balance between can do/like to do
- Educate people to area's natural systems and how environment is endangered
- Open impounded marshes to the lagoon
- Maintain minimum runoff standards

Group 2 - Session I - Estuarine Issues

- Discharge issue - point source - odor - chemical - Barefoot Bay - 1 million gallons of effluent daily into the lagoon. Can't treat effluent on land - too close to Citrus.
- Problem: can't reuse effluent to water citrus. Need to find out how to reuse effluent. Education is a big part of the solution.
- Seagrass loss
- Choliform bacteria
- Water quality
- Defining target water quality - need consensus here - consider TDS
- Pollution loads/reduction goals
- Different target levels of water quality for different parts of lagoon
- Standards of water quality for tributaries leading to lagoon
- Need minimum standards for water quality for all tributaries to the lagoon
- How do today's minimum standards for water quality relate to standards of 1940s and 1950s
- Deposits of much sediment at bottom of lagoon

Group 2 - Session I - Land-Based Issues

- Development/economy versus conservation
- Open-up impoundment areas? What are the tradeoffs
- Reuse of effluent to water for non-potable purposes
- Economic model evaluates all mandates - cost to tax payer must be considered
- Non-point source pollution - yards, parking lots, roads
- Sell storm water utility on basis of making money from it. Standards are barrier to start up of storm water utility.
- Growth management versus property rights
- Industrial pollution
- Do economic impact study before enacting legislation. For example: boat repairs and restrictions imposed on them
- Non-point source problem most difficult to solve. Solution: maintain marsh/wetland buffers. Consider: are we willing to remove these pieces of property (wetlands) from the tax roles?
- Property tax relief should be considered to encourage solutions
- Consider river islands legislation
- IRL zone standards impact regulation - Standards for point and non-point source pollution

Group 2 - Session I - Human Element Issues

- People want to live as close to water as possible
- River's value as food source and recreation area
- Problem of values and perception. View of micro versus macro - reality versus perception - for example sewage from boats
- Cost to society to clean-up lagoon
- Poor framework to evaluate costs and benefits of the problem and solutions
- Cost benefit analysis of short term and long term benefits
- Population versus environment - consider ecological education the key to this issue
- Pollution's impact on property values
- Utilize visioning process to resolve problems
- Polarized viewpoints must be addressed
- Need more flexibility in public sector

Group 2 - Session II - Estuarine Management Actions Considered

Water quality

- Set water quality standards to reach resource based goals and targets
- Set goals is first step - one way is vision process
- Legislation to eliminate sewage discharge - must find funding - it needs an implementation mechanism to make it work. Educate public on the issue.
- Find funding for legislation - incentives
- Educate public on the issue and educate public agencies
- Vision process - identify stakeholders
- Governor and legislature must mandate that standards for lagoon be set and charge someone with starting process of clean-up and maintenance

Pollution loads - reduction goals

- Set up standards - legislatively adopted - implement through enforcement
- Local governments setting standards with regional agencies
- Require that large boats travel in ocean, not lagoon
- Dispose of silt/muck from the lagoon - where?
- Fill in deeper canals with dirt, not silt
- Educate boaters and users of equipment
- Government initiation of estuarine management actions involving users
- Bottom-up process - solve problems at local level then go to Tallahassee and have state government implement process

Seagrass loss

- Silt removal and stop soil runoff
- Promote buffers and marshes
- Silt removal as opposed to spreading silt over large area

Group 2 - Session III - Land-Based Management Actions Considered

- Prioritize important properties that affect lagoon
- Insure that comprehensive plans encompass goals set for the lagoon
- Ensure implementation mechanism (adopt land development regulations)
- Compensation for property rights - multi-faceted incentives - mitigation
- Reconnect impoundments using best management practices
- Purchase private property

Point source pollution

- Retrofit existing non-point source stormwater problem - i.e., stormwater utilities and water control districts (include cost/benefit analysis of retrofit)
- Education - promote xeriscape
- Economic analysis of cost benefit ratio for implementing new standards and cost of retrofitting
- Property tax relief should be considered to encourage solutions

Group 2 - Session IV - Human Element Actions Considered

- Visioning process
- Education about economic and environmental impacts
- Cost/benefit analysis of short term and long term benefits
- More creativity and cross-pollination among government agencies on projects - i.e., coordination and communication
- Need non-profit vehicle to facilitate coordination of all lagoon organizations (including public entities) that deal with lagoon issues
- Need regional planning council type entity for lagoon area (public)

Group 3

Group 3 - Initial Brainstorming

- Reduction of nutrient runoff
- Recovery of mangrove habitat, buffer zone
- Purchase land and restore to native habitat
- Buffer zone with native plants
- Comprehensive lagoon-wide monitoring plan (e.g., water quality and quantity)
- Reduce intensive use

Group 3 - Session I - Estuarine Issues

- Submerged aquatic vegetation
- Improvement of water quality through agencies working in one unit
- Management and interaction with fisheries (recreational and commercial)
- Water-based mammals (ecosystem)
- Need to define goal (for water quality)
- Reducing intensity of usage
- Historical database
- Protect biological diversity
- Educate users
- Control of freshwater impact

Group 3 - Session I - Land-Based Issues

- Freshwater drainage
- Development of mangrove marsh habitat (need protection of)
- Have mangroves on causeways
- Revitalize mosquito impoundments
- Stormwater non-point source discharges
- Protection of wetland/upland buffers
- Education of users
- Agriculture drainage
- Industrial pretreatment flow

Group 3 - Session I - Human Element Issues

- Public awareness and education (especially children)
- Public health and safety (boat speed issue)
- Regulation of activity in lagoon (e.g., define location and amount of activity)
- Land use and "lagoon use" planning
- Impacts of public use "we are all part of the problem"
- Dumping of sewage from boats and barge, dumping in marinas
- Enforcement of regulations
- Simplifying permitting process

Group 3 - Session II - Estuarine Management Actions Considered

- Coordination and consolidation of the permitting process with focus on priorities and goals
- Set-up regional stormwater utility (reduction of nutrient runoff)
- Education on lagoon (make it a priority in school system). Set curriculum from elementary to adults
- Develop comprehensive land and water use plan
- Develop and analyze historical database for lagoon for purposes of developing goals with broad public accessibility
- Develop comprehensive monitoring program (using aerial photography)
- Single governmental agency for oversight and final decision-making based on research of appropriate agencies (looking for uniform standards)

Group 3 - Session II - Land-Based Management Actions Considered

- Management must find a way to deal with the political power of agricultural interests - e.g., remove agricultural exclusions and exceptions
- Speed up actions on comprehensive plan of existing land and water use plans
- Create definition of upland and wetland buffers
- Eliminate all point source discharge into lagoon
- Regional plan for management of impoundments
- Regional plan for upland habitats (utilize greenways approach - regional HCP)
- Reclaim major canals (e.g., C 54)

Group 3 - Session II - Human Element Management Actions Considered

- Education and public awareness (especially children)
- Define the carrying capacity of the lagoon for activities
- Manage activities and usage of the lagoon (define, then manage)
- Define economic impact of lagoon regulation and establish funding structure for implementing management actions
- Mandatory boater education for licensing

Group 4

Group 4 - Initial Brainstorming

- Retrofit all stormwater systems
- Create a forum to disseminate information to improve communication
- Remove all sewage discharge and point sources - failing septic tanks
- Test all septic tanks
- Seed fish stocks
- Improve enforcement (including dollars)
- Purchase of lands for preservation
- Remove muck/decrease suspended solids
- Create incentives for business to improve technology to prohibit or reduce future spills
- Review salaries for government employees and upgrade as appropriate (and enhance training and preparation)
- Research and monitoring information exchange (interagency exchange)

Group 4 - Session I - Estuarine Issues

- Enforcement
- Manatee and dolphin habitats - implement
- Canals are major source of pollution
- Marine debris and waterborne litter
- Marine boating traffic and density
- Proper dredging
- Ecosystem imbalance
- Motor (two cycle) oil pollution
- Need to tackle at pollution source
- Disturbance of ecosystem by man's activities
- Water and sediment chemistry
- Boat wake impacts
- Freshwater and sewage discharges
- Mercury contamination - air pollution problems
- The list
 - Point source loadings
 - Non-point source loadings
 - Internal sources
 - Water quality standards
 - SAV
 - Seagrass harvest buffer
 - Finfish
 - Shellfish
 - Aqua
 - Path
 - Aquatic HAB

Group 4 - Session I - Land-Based Issues

- Land use and ownership adjacent to lagoon
- Upland disturbance of wetlands
- Septic tanks
- Stormwater management techniques
- Mosquito impoundments
- Agriculture runoff
- Enforcement
- Lack of intergovernmental communication
- Tax incentive not to develop to full potential - tax on use not on potential for a time period
- Regulatory incentives
- Creative ways to minimize shoreline development
- Domestic wastewater
- Street and urban runoff
- Habitat buffers and corridors
- Lack of symbiotic balance
- Freshwater discharges

Group 4 - Session I - Human Element Issues

- Intergovernmental coordination - Army Corps of Engineers
- Number of boats, jet-skis (capabilities) boat speeds
- Tax relief for density reduction and preservation
- Man-made features
 - Marinas
 - Ports
 - Canals
 - Locks
 - Barge canal
- ICN and associated problems
- Channel dredging
- Contaminated sediments
- Overuse/abuse
- Educate and license users - focus course on users and teenagers
- Regional users (Seminole and Orange, etc.)
- Communication between developers and local government - responsibility on developers

Group 4 - Session I - Issue Priorities

- Water and sediment chemistry
- Land use adjacent to the lagoon
- Lack of symbiotic balance
- Overuse and abuse
- Intergovernmental coordination
- Man-made features

Group 4 - Session II - Estuarine Management Actions Considered

- Pressing need for communication among agencies at federal, state and local levels
- Pressing need to extend communication to outside agencies (nonprofits, businesses, users)
- Create funding sources to improve and maintain lagoon
- Local option boat gas tax
- Tourist tax
- Marina gas/berths tax
- Zoning of activities on water
- Eliminate sewage discharge
- Manage freshwater discharge
- Research problem of canal system discharges
- Need management effort to correct and retrofit stormwater
- Support DEP type processes that monitor discharges (clams)
- Figure out how to keep sediment load in waterway through isolation
- Marine activity leasers need to be responsible for cleaning and restoration (bonded to do so)
- Find out how much property under the lagoon is owned by the property owner
- What effect has the hospital had on the biology of the lagoon
- Educate about value of lagoon, regulatory parameters. Need a user's guide targeted at broad population - understand so as not to abuse it

Group 4 - Session III - Land-Based Management Actions Considered

- Glossary of terms/common language
- Educate so everyone is on the same level
- Create regional and state funding sources
 - Revenue bond
 - Environmental referendum
 - Tax credit
 - User fees
 - Tax on oil and gas (two cycle)
 - Registration fees for boats
 - Pollution recovery trust fund
- Manage wetland corridors - fragmentation corrected
- Develop comprehensive plans and land development regulations (explain native plants, non-intensive sods, xeriscaping, eliminate sprinkler systems)
- Incentives for developers beyond compliance
- More effective management of discharges (domestic, freshwater, stormwater, septic tanks)
- Preservation of lagoon buffers (conservation easements)

Group 4 - Session IV - Human Element Management Actions Considered

- Education
- Monitor impacts of human structures and activities and tailor your regulations to accommodate plans
- Tax relief and incentives for additional preservation and protection
- Better communication among government entities to eliminate duplication

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APPENDIX III - PARTICIPANT WORKSHEETS

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM

**Central Lagoon Sub-Regional Workshop
on the
Comprehensive Conservation Management Plan**

**November 19 -20, 1993
Vero Beach Junior High
1507 19th Street
Vero Beach, Florida**

AGENDA PACKET

FACILITATOR ANNOTATED AGENDA

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Central Lagoon Sub-Regional Workshop on the
Comprehensive Conservation Management Plan
November 20, 1993

AGENDA

- 8:30 Registration and Coffee
- 9:00 Welcome and Introductions
- 9:30 Initial management action brainstorming
(In small groups)
- 9:45 Session I - Estuarine, land-based, and human element issues
(Small group discussion)
- 10:45 BREAK
- 11:00 Session II - Estuarine management actions
(Small group discussion)
- 11:30 Session III - Land-based management actions
- 12:00 Session IV - Human element management actions
(Small group discussion)
- 12:30 LUNCH
- 1:30 Session V - Small group reports to full group
- 2:15 Session VI - Management action priorities
(Full group discussion)
- 3:00 Break
- 3:15 Session V - continued
- 4:00 Session VII - Action plans
(Full group session)
- 4:45 Next steps
- 5:00 Adjourn
- Central CCMP Workshop*

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Central Lagoon Sub-Regional CCMP Workshop

General Instructions

This agenda divides the challenges facing the Indian River Lagoon into "estuarine issues," "land-based issues," and "human element issues." (More detailed definitions of these will be provided later in the workshop.) These categories are only intended to provide a rough but useful framework for discussion. The facilitators realize that many issues and actions overlap these categories. We urge that you make use of the categories without allowing them to inhibit your discussion.

At various times during the day you will be asked to assign priorities to issues or management actions using straw polls. Please use the following guidelines to do so.

- For each prioritization straw poll, you will have four votes.
- You may choose to cast less than four votes.
- You may not cast more than one vote for an item during any given straw poll.

Your facilitator will have further instructions for each straw poll.

Initial Management Action Brainstorming

Please think of at least one answer to the following question:

If you were monarch for a day, what would you do to improve the Indian River Lagoon and its associated biological systems?

Your facilitator will have further instructions for the initial brainstorming.

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Central Lagoon Sub-Regional CCMP Workshop

SESSION I
Estuarine, Land-Based, and Human Element Issues

Estuarine Issues

For purposes of this discussion, use the following definition of "estuarine issues:" issues whose origins or effects are principally below the mean high water line of the lagoon.

The following are examples of estuarine issues:

- Pollutant loadings
 - Point sources (waterborne)
 - Non-point sources (waterborne)
 - Internal Sources
- Water quality standards
- Submerged aquatic vegetation
- Seagrass shellfish harvesting buffer
- Fisheries
 - Finfish
 - Shellfish
 - Aquaculture
 - Pathogens
- Aquatic habitat

Your facilitator will have instructions to guide your discussion around the following question.

- ***Which are the most important "estuarine" issues facing the central part of the lagoon?***

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Central Lagoon Sub-Regional CCMP Workshop

SESSION I (Continued)
Estuarine, Land-Based, and Human Element Issues

Land Based Issues

For purposes of this discussion, use the following definition of "land based issues:" issues whose origins or effects are principally above the mean high water line of the lagoon.

The following are examples of land based issues:

- Point source discharges
 - Domestic wastewater
 - Industrial wastewater
- Non-point source discharges
 - Stormwater
 - Septic tanks
 - Agricultural drainage
 - Freshwater drainage
- Toxic substances
 - Source Control
 - Management and/or removal of existing contamination
- Regulatory
 - Government-owned lands management
 - Mitigation
 - Restoration and/or enhancement
 - Mangrove pruning
 - Pollutant load reduction goals
- Mosquito impoundments
 - Regional management plans
 - Ownership
- Endangered/threatened/listed species
- Wetlands/uplands habitat

Your facilitator will have instructions to guide your discussion around the following question.

- ***Which are the most important "land-based" issues facing the central part of the lagoon?***

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Central Lagoon Sub-Regional CCMP Workshop

SESSION 1 (Continued)
Estuarine, Land-Based, and Human Element Issues

Human Element Issues

For purposes of this discussion, use the following definition of "human element issues:" issues which directly affect human populations or which stem from broad social trends.

The following are examples of human element issues:

- Public health & safety
 - Pathogens
 - Boating safety
- Public use
 - Access
 - Impacts
- Man-made features
 - Waterways (Intercoastal waterway, channels and canals)
 - Inlets
 - Causeways
 - Marinas
 - Ports
- Growth management
- Economic development/impacts

Your facilitator will have instructions to guide your discussion around the following question.

- ***Which are the most important "human element" issues facing the central part of the lagoon?***

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Central Lagoon Sub-Regional CCMP Workshop**

**SESSION II
Estuarine Management Actions**

**Session III
Land-Based Management Actions**

**Session IV
Human Element Management Actions**

During these sessions you will be asked to identify the actions which should be taken to address the issues identified in Session I. Your facilitator will have further instructions.

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Central Lagoon Sub-Regional CCMP Workshop

SESSION V

Small Group Reports to the Full Group

Your facilitator will have instructions for this session.

SESSION VI

Management Action Priorities

During Session VI, you may be asked to evaluate various combinations of management actions. Please do so using the following scale.

- 1 - Support wholeheartedly.
- 2 - Support, think it is a good package.
- 3 - Support, but with reservations. Would like further discussion for clarification and refinement.
- 4 - Serious reservations. Do not support as currently under discussion. Might eventually support, but only after considerable additional clarification and refinement.
- 5 - Oppose. ("Over my dead body.")

Your facilitator will have further instructions for this session.

**INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Central Lagoon Sub-Regional CCMP Workshop**

SESSION VII

Management Action Priorities

The purpose of this session is to add detail to the management actions agreed upon in Session V. Your facilitator will have further instructions.

ACTION PLANNING FORM

MANAGEMENT ACTION:

INVOLVED RESPONSIBLE AGENCY OR GROUP(S):

ISSUES ADDRESSED (AND BACKGROUND, IF DESIRED):

INFORMATION SOURCES:

TIMEFRAMES:

IMMEDIATE: (1-2) YEARS:

MEDIUM TERM: (2-5) YEARS:

LONG TERM: (5+) YEARS:

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Central Lagoon Sub-Regional CCMP Workshop

SESSION VI

ACTION PLANNING FORM - EXAMPLE

MANAGEMENT ACTION (S):

Removal of muck deposits from Kit Karson Kreek.
Location and control of muck and kryptonite sources.
Upgrade older stormwater systems.
Restore Kreek wetlands and hydrology.

INVOLVED RESPONSIBLE AGENCY OR GROUP(S):

City of Metropolis
Mid-State Water Management District
Natural Resource Protection Agency

ISSUES ADDRESSED:

Muck deposits with kryptonite contamination in Kit Karson Kreek.

BACKGROUND (OPTIONAL):

Kit Karson Kreek is a tributary of Lois Lane Lagoon. Water quality in the Kreek is classified as "poor." Wastewater treatment discharges to the Kreek ended in 1922, replaced by deep well injection and land application. Stormwater discharge, however, continues. Older areas of Metropolis have no stormwater treatment. The kryptonite levels found in the Kreek do not endanger humans, but may threaten fish, wildlife and superheroes. Muck and kryptonite probably reach the Lagoon during high flow periods. Storm drainage from the old Lex Luther Industrial park is thought to be a major source of muck and kryptonite.

INFORMATION SOURCES:

City of Metropolis
Mid-State Water Management District
Natural Resource Protection Agency

TIMEFRAMES:

IMMEDIATE: (1-2) YEARS:

Locate sources, study restoration techniques

MEDIUM TERM: (2-5) YEARS:

Control sources, remove muck and kryptonite, initiate stormwater upgrading, select and begin implementation of restoration scheme.

LONG TERM: (5+) YEARS:

Complete stormwater upgrade and restoration

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
Central Lagoon Sub-Regional CCMP Workshop

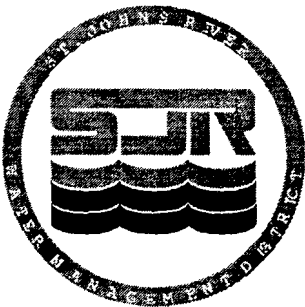
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