

IRL-North PDT Meeting #6
July 30, 2003

To: Attendees

From: HDR Engineering, Inc.

Subject: USACE and SJRWMD Indian River Lagoon (IRL) North
Restoration Feasibility Study
Project Delivery Team Meeting Summary – July 30, 2003

Attendees: See attached sign-in sheet

Handouts: Meeting Agenda
Draft Article on “Pulsed Inflow of Seawater for Water Quality
Improvement of Degraded Estuaries”, dated November 2002
Presentation by Gannett Fleming to PDT on Seagrasses and Alternatives
for improvement (ephemeral inlets)
IRL-North Problems and Opportunities – Potential Management Measures

The sixth Project Delivery Team (PDT) meeting for the Indian River Lagoon-North (IRL-North) Feasibility Study was held in Palm Bay, Florida at the St Johns River Water Management District (SJRWMD) Field Office in Palm Bay, FL on July 30, 2003. The Meeting began at 10:04 am. following the attached agenda and is summarized below.

WELCOME, INTRODUCTION, AGENDA, AND FACA REMINDER

Debbie Peterson, Planning Technical Leader for the United States Army Corps of Engineers (Corps or USACE) welcomed the PDT members. She requested that all attendees introduce themselves and the agency they are representing. As an icebreaker Debbie requested that each individual describe his or her favorite water sport (today was lobster-mini season) as the opening activity.

Debbie provided an overview of the attached agenda and used a PowerPoint presentation to highlight the key points. The agenda included the following items:

- Team Member Roles (Federal Advisory Committee Act(FACA))
- Six Step Corps Planning Process
- Lessons Learned IRL-South
- Ocean/Estuary Connection System
- Shoreline Performance Measures
- Corps Responsibility—Tie In to Comprehensive Everglades Restoration Plan (CERP) and Cost Sharing
- NEPA Public Meetings Summary
- Problems and Opportunities

- Breakout Groups
- Next Steps
- Adjourn

TEAM MEMBER ROLES (FACA)

Debbie reviewed Federal Advisory Committee Act (FACA) requirements:

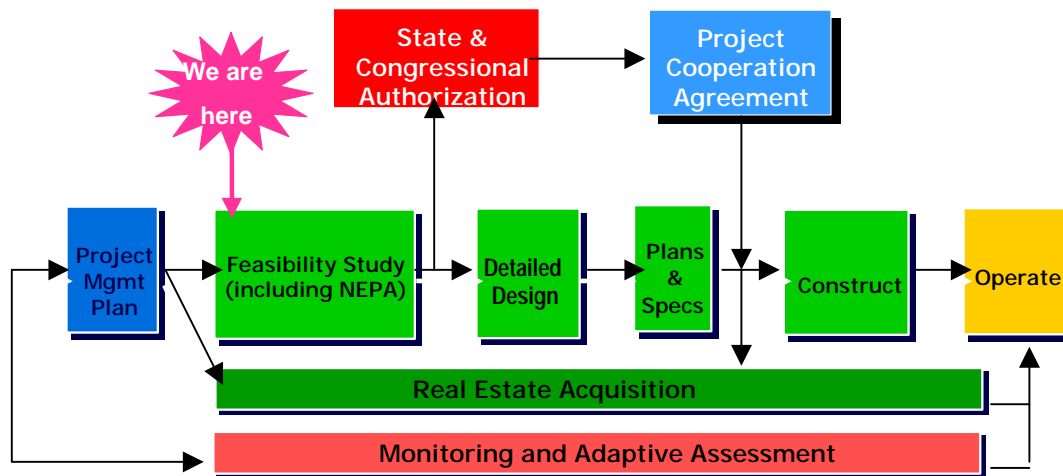
- Definition of PDT: consists of federal, state, local and tribal government representatives
- Time for public comments will be provided throughout the meeting
- Public may fill out speaker registrations cards to provide comments

SIX STEP CORPS PLANNING PROCESS

Debbie reviewed the standard Corps Project Development Process. The process is quite lengthy. The goal of the PDT is to obtain Congressional authorization for the recommended plan in the Water Resources Development Act (WRDA) of 2008. The next steps are appropriation of funding in subsequent legislation, Design, Plans and Specifications, Project Cooperation Agreement (legal), Construction, and Operation. For CERP and ecological restoration projects, monitoring is performed in order to adaptively assess projects in terms of performance.

The discussion was based on the following figure:

Standard Corps Project Development Process



In the Feasibility Study, the following components need to be completed:

- Plan formulation
- Economic and Environmental Analysis
- Engineering and Design

- Water Quality Analysis
- Real Estate Analysis
- Supplemental Environmental Impact Statement (EIS) (National Environmental Policy Act (NEPA) documentation)

Question from the PDT: Does the Feasibility Study require state approval?

Answer: Although forwarded to the State for information, the federal document does not require local or state approval.

Next, Debbie reviewed the Corps Six Step Planning Process. The following notes represent information provided through Power Point presentation as well as additional discussion points:

The Six Step Planning Process consists of:

1. *Specify Problems & Opportunities*
2. *Inventory & Forecast Conditions*
3. *Formulate Alternative Plans*
4. *Evaluate Effects of Alternative Plans*
5. *Compare Alternative Plans*
6. *Select Recommended Plan*

Step 1 - Specify Problems & Opportunities

- Problems represent the negative aspects
- Opportunities represent the positive aspects.

Objectives and constraints indicate what is important to people. The objective is to "do good". The constraints are what "can't be done" or the "don't do", e.g. development, flood control and management, etc.

Step 2 - Inventory & Forecast Conditions

Involves much data collection. Not all data provides important information. A good without project condition description is essential to a good decision. It is important to quantify the "without project condition" so the plan has a restoration benefit (i.e. habitat units). Recall that for restoration projects, there are no benefit to cost ratios. The benefits are quantified as habitat units rather than a dollar amount.

Step 3 Formulate Alternative Plans

- Doing nothing is always the default action
- Any plan must be better than doing nothing
- Management Measures - feature or activity to address problems
- Alternative Plan - one or more management measures
- Alternative plans must address one or more of the planning objectives

Step 4 - Evaluate Effects of Alternative Plans

- Look at plan on its own merits.
- Forecast effects of each plan (Forecast with project conditions).
- Describe effects
- Benefit-Cost or other analysis – habitat units for restoration projects

Step 5 - Compare Alternative Plans

- Compare with project and without project conditions for each alternative plan
- Contrast the merits among plans
- Compare effects
- Describe differences
- Describe trade-offs: in environmental restoration projects, there tend to be lots of trade-offs.

Step 6 - Select Recommended Plan

Recommended plan should meet planning objectives and meet federal/non-federal sponsors' objectives as well as public's objectives. A locally preferred plan may result.

LESSONS LEARNED IRL-SOUTH

Mike Rogalski, Project Manager for the IRL-South project presented a "Lessons Learned" presentation based on his team's experience in the preparation of the IRL-South Feasibility Study.

The following are based on Power Point presentation along with additional comments captured during the presentation:

Background of Project:

Final Feasibility Report completed in August 2002.

Division Engineer's Notice signed in September 2002.

Final Feasibility Report sent to Headquarters/Assistant Secretary of the Army for Civil Works (HQ/ASA(CW)) in September 2002 for review and Chief of Engineer's Report/Notice.

Per Mike, this was a very proactive, interactive team. They had a lot of public comments being the first feasibility study completed in CERP. The final Feasibility Study is much like telling a story to HQ. You want to make sure it is ready to read for a non-technical audience.

Background of HQ/ASA(CW) Comments

Value Engineering Study on C-44 West Component in November 2002.

Chief of Engineer's Notice expected in early January 2003.

Although Jacksonville District was communicating through vertical matrix team concerning recommendations/edits to Chief of Engineer's Notice, there was no warning of HQ/ASA comments. In late January 2003, HQ/ASA informed project team that there would be an assessment/comments on Final Feasibility Report.

IRL South Background

The Indian River Lagoon – South Project is the first Report since the Yellow Book to go for HQ approval. The \$995,935,000 project cost is part of the \$8.4 billion CERP program and is in part due to new ideas about solving old problems.

IRL-South Resultant Actions

HQ draft assessment follow-on actions:

- Incremental analysis
- Alternative Analysis of Watershed and Estuary Plans (Reformulation)
- C-44 West Reservoir site analysis
- Real estate concerns of level of estate chosen will be analyzed, volume of land acquisition (50% of total project cost)
- Quantification of benefits (Habitat Units)
- Final Report will include an addendum that will satisfy WRDA 2000 requirements and will be entitled a Project Implementation Report

HQ wants follow-up actions in order to better tell the story to non-engineering types in Congress. Additional analysis on reservoirs was necessary.

There is no actual guidance on many of the above actions so there has been a lot of interaction with HQ.

The goal is to have:

- Division Engineer's Notice in Fall 2003,
- Chief of Engineer's Report in March/April 2004
- Construction authorization under WRDA 2004.

Lessons Learned

1. Incorporate Value Engineering (VE) Studies into the formulation process. Offer invitation to SAD to VE study. By incorporating VE in the formulation process, it allows for less chance of NEPA concerns if the recommendation involves resiting of a project component. Will not raise concerns of re-formulation from one phase to another.

The IRL-North PDT asked when they should begin VE studies. Mike suggested to begin VE as soon as recommended plan is selected.

2. Ensure that all levels of Real Estate (SAJ/SAD and HQ) are involved in the site selection process. Large-scale ecosystem restoration projects can involve large pieces of land acquisition that is a new philosophy from traditional Corps' projects.

Strongly recommends documentation of results of all meetings and analyses. The IRL-N FS PDT has been very diligent in this effort.

PDT members raised the question if there has been difficulty involving HQ in the process. Mike said that in the beginning, it was a bit difficult. Currently, there has been more involvement even at the PDT level because the staff is more stable. In the past there had been a lot of turnover in HQ. Mike recommended to submit intermediate products for HQ review so they are aware of all the aspects of the study during all stages and to get on their agenda ahead of time.

3. Try to resolve any issues in current phase rather than tabling to future phase. IRL-S had a Real Estate issue that was to be resolved in the Pre-Construction Engineering and Design (PED) phase concerning the choice of citrus vs. pastureland for reservoirs and stormwater treatment areas (STAs). Issue will be resolved through analysis with SAD and will be incorporated into component VE studies in the PED phase.

Mike strongly recommended that the Team address problems as they arise. It is important to resolve issues in the current stage rather than waiting for resolution during future phases; especially if the belief is to put the issue aside just to get a report out in the current phase.

4. Work with HQ/ASA(CW) in a small team environment to allow deeper discussion and resolution of issues. Smaller team meetings allowed for deeper discussion of specific issues, joint buy-in and resolution.
 - Increased understanding by team members of actions required to resolve assessment and comments.
 - Understand that HQ and ASA(CW) need to "Sell" the project to Office of Management and Budget (OMB) and Congress (accountants, analysts etc.). OMB is interested in the cost of restoration (\$) compared to the acres of habitat restored (\$/acre of habitat).

Offer opportunities for interim meetings, e.g. Feasibility Scoping Meeting, Alternative Formulation Briefing and other In-Progress Reviews. Allows for transition of new staff, review of reports, etc.

The PDT asked if typically HQ wants to play more of a "review" role. Mike said that they typically do want to be more in the "reviewer" side. They like to provide feedback so that the report is appropriate for Congress.

The PDT asked at what time are the landowners contacted. Mike responded that interaction with the landowners doesn't actively occur until the recommended plan is selected. A good way to obtain feedback from local landowners is through public meetings. Public meetings are announced through local papers. If during the public meeting, there is a landowner presenting opposition, it is a good idea to work with them and resolve the underlying issues.

Another question came up regarding the timeframe from the time of purchase of lands to time of actual construction. Mike reviewed the process for IRL-South. The local sponsor

(South Florida Water Management District) was responsible for purchasing land. For IRL-North, Debbie explained the process in terms of who is responsible for each part. SJRWMD (non-federal sponsor) is responsible for real estate issues.

The PDT also asked about inter-basin water transfers. Did this become an issue? At this point, Mike didn't consider it an issue with his project but it has been discussed. It may become an issue in the future. It should be handled in a case-by-case basis.

More up-to-date information can be obtained at www.evergladesplan.org. Mike's phone number is 904-232-1460 and email address is: Michael.B.Rogalski@usace.army.mil

OCEAN / ESTUARY CONNECTION SYSTEM

Bruce French and John Dougherty, of Gannet Fleming (GF) presented information about subsurface inlets and how they can provide some of the restoration benefits important for IRL-North. See attached slide presentation.

Using current technology, the primary indicator of the environmental condition of the IRL would be seagrass. By considering seagrass temperature and salinity ranges, the habitat indicators can be defined.

Bruce discussed 13 issues in the formulation of alternatives for the IRL-North. They include: improve timing, quantity, and quality of freshwater flows; improve circulation in the IRL North (review other means – including electric pumps and other strategies, review opening Canaveral locks); improve water quality in the IRL North; restore ephemeral inlets by horizontal directional drilling (HDD) – subsurface inlets. This is where their company comes in. They can offer this technology.

What happens when subsurface inlets are installed? There are more than 30 geologic features on the barrier island. Ephemeral inlets create a natural effect on water quality. Many water quality problems occur naturally during storm events.

Examples of subsurface inlet applications were discussed. A comparison of water quality parameters present in the Atlantic Ocean and Barnegat Bay, NJ was presented to show how estuary water quality could benefit rapidly with the introduction of cleaner ocean water. The installation of a pipeline 6,000 feet in length by directional drilling under Jordan Lake, NC was exhibited to show the capability of HDD technology for installing subsurface inlets.

The typical barrier island is 1500 – 2000 ft wide. The subsurface inlet intake is located approximately 1200 – 2000 ft offshore and submerged in the ocean. A pump station is attached to the pipeline outlet in the bay/estuary. A saltwater wedge is produced by the delivery of ocean water creating a benthic salinity insulation layer in the vicinity of the estuarine tidal node. SAV and associated biota are more protected during storm events to improve survivability.

Another example included the Destin harbor flushing station in northwest Florida. During the planning phase of the project, computer modeling by the NFWFMD predicted the existing pollutant concentration in the square-mile estuary would be decreased to non-detectable levels after 17-days of pumping at 50,000 GPM only on the falling tide. Since operation of the facility in 1993, water quality monitoring has been sporadic. Anecdotally, the project is viewed as a success because odors have been eliminated and fish kills have not occurred since startup.

In analyzing the IRL North situation, the following components were considered:

- runoff coefficients in the watershed
- assimilative capacity of terrestrial vegetation
- nutrient loading rate
- tidal prism
- coastal processes
- residence time in the estuary
- assimilative capacity of aquatic biota – mesotrophic

The economic benefit was estimated at a 61% return of investment. This was a conservative estimate. It was compared to Destin, which had a residence time of 17 days while the residence time of the IRL is estimated to be in the order of 100 days.

The estimated initial time for clean up is approximately 18 months.

Members of the PDT asked a number of questions regarding the application of subsurface inlets for the IRL. Group discussion on various topics followed. The following is a summary of topics discussed:

- First, they discussed how many inlets would be needed. Gannet Fleming stated that, based on the natural conditions that exist in the IRL, the natural inlets would not appear unless there was an extreme event such as a hurricane. They are not sure how many will be needed and they encourage additional investigation. They suggest installing one and conducting more hydrology and hydraulic studies to determine how many more would be needed. Currently, they estimate 1 water exchange volume per year for the lagoon.
- The PDT asked how far north would they need to go to install subsurface inlets. Gannet Fleming suggested evaluating the situation based on the geological and infrastructure barriers that exist in the area.
- There was concern from members of the PDT regarding salinity levels for different organisms (such as the blue crab). Gannet Fleming staff stated that a need exists to evaluate what was there before. It is currently a managed system. They would need to consider what is the condition they want to achieve. There was further discussion regarding the baseline condition they want to achieve as part of this restoration project. This is an evaluation the PDT will have to face during this process. It would have to depend on existing biota, and the determination of sustaining it in the future. In this same issue, concerns of salinity levels on shellfish were raised. No studies have been done; they would need to evaluate this. The Gannet Fleming staff noted

that application of this technology in the IRL is still at primary phases. They recommend conducting pilot studies before considering implementation in a watershed basis.

- The PDT asked why the preference of electric vs. diesel pumps. The preference exists based on noise control.
- Gannet Fleming began some preliminary discussions with permitting agencies regarding the level of permits necessary for implementation of subsurface inlet technology. There was no resolution on the level of permitting that would be required.
- The "ballpark" turn-key installation cost (including baseline environmental studies) is around \$3,000/linear foot for a 48" diameter pipeline/subsurface inlet. The operation costs for 24 hours per day continuous pumping is around \$900 per day; total annual costs (ownership + operating costs) based on 10-year straight-line depreciation is around \$1million/year. At the beginning it is estimated that the system will run continuously until steady state is reached. Then, only run to maintain the established levels expecting 4 hours per day for 100 days per year.
- The number of pumps needed for the lagoon was asked; however, Gannett Fleming Staff was unwilling to speculate on numbers although there are estimated to be 30 natural ephemeral inlets identified to date.
- When asked about active vs. passive approaches, Debbie explained that there is no preference between active vs. passive restoration practices. The PDT should look at all possibilities including Best Management Practices (BMPs).
- When asked about the Blind Creek Study, it was stated that it is under review.
- There was no frequency and direction study conducted thus far.
- When asked about impact to shellfish with changes due to increased exchange of ocean vs. current lagoon seawater, GF staff stated there was no in-depth research. They had only reviewed the mechanics of increasing inlet flow. The Destin project was implemented in response to several fish kills in the late 1980's. No fish kills have been observed since operations commenced in 1993. Operating permit requirements for WQ monitoring have not been performed.
- It was agreed that baseline environmental studies would be needed in order to analyze the frequency vs. duration effects of ephemeral inlets.
- Further research is needed to establish the environmental baseline of ephemeral inlets. Clearly, the goal is not to re-establish ephemeral inlets, but to create the desired environmental condition.

SHORELINE PERFORMANCE MEASURES

Debbie began a discussion on shoreline performance measures; however, she stated it had not progressed as far as the other performance measures.

The subteam has begun to review how to restore the shoreline of the spoil islands (~100 total) as a means of replacing a functioning intertidal and lagoon shoreline that has been lost to development along the barrier island and mainland shorelines, although, not all of the spoil islands will be restored. There is no recent data. The only background documentation found are some Spoil Island Management Plans from the 1980s.

According to Step 1 of the Corps Planning Process, they need to identify problems, opportunities and constraints for spoil islands. Currently, they are conducting site visits to update the data in the management plans. Debbie requested any available information on the spoil islands anyone might have. The goal is to prioritize restoration of the spoil islands.

CORPS RESPONSIBILITY

A discussion that lingered from previous meetings included the following:

- Project tie-in to CERP. A management measure or alternative plan doesn't have to tie into any previously implemented Corps project, e.g. Central and South Florida (C&SF), for restoration plans within CERP. The project/issues need to be looked at holistically.
- Cost-sharing. Some performance measures and problem statements look into rehabilitation of wetlands and some of those wetlands are located on federal property, specifically National Aeronautics and Space Administration (NASA). The Corps cannot cost-share on federal lands. (One federal agency cannot augment another agency's budget)

Debbie stated that the PDT should focus right now on the analysis and look at cost-sharing later.

Regarding the question of whether the measures are focused on specific areas, Debbie stated that this should not be a limitation. They should consider all areas.

NEPA PUBLIC SCOPING MEETINGS SUMMARY

Summary verbally presented by Paul Stodola:

- Scoping letter, Notice of Intent (NOI) in November 2002. Specific responses included environmental, cultural, conservation, fisheries, and parks issues.
- Scoping Meetings held July 2003.
 - 1st meeting was held in Edgewater, 30 people attended
 - 2nd meeting was held in Vero Beach, 19 people attended
 - 3rd meeting was held in Sebastian, 7 people attended
- Comments ranged widely and included timeframe, bird habitat, growth, public use, recreation opportunities, manatee issues, muck removal, tie in to other plans, modeling, TMDLs, shellfish, dredging, drinking water and urban stormwater runoff.

Comments were documented and are to be posted on the website. The information will be included in the EIS.

PUBLIC COMMENT

There were no public comments presented during the morning public comment period at the meeting.

PDT Comment: Need to note that the IRL restoration program will have more future infrastructure development program than other geographical locations such as South Florida. This will provide more opportunities for synergistic intercommunication between various entities during the planning process.

PROBLEMS AND OPPORTUNITIES

Debbie led the discussion. Breakout sessions at the 26 March 2003 PDT meeting began to address problems and opportunities statements, including performance measures and management measures. Each group discussed and edited each of the statements (see 26 March 2003 PDT meeting minutes).

The revised Problems and Opportunities statements were presented and discussed. A comment was provided that based on the previous subsurface inlet presentation, the issue of salinity or inlets as a potential management measure should be addressed.

During the last PDT / Independent Technical Review team meeting on 28 May 2003, a comment was made that some of the problems, or issues, are not as bad in certain geographical areas as they are in other geographical areas. It was suggested that a matrix be created to deal with regional variances. A regional matrix, based on water quality, has already been created and is included in the most recent Surface Water Improvement Management (SWIM) Plan. The IRL-N may want to use the sub-lagoons from the SWIM Plan matrix.

It should be noted that the U.S. Environmental Protection Agency is in the process of establishing Total Maximum Daily Loads (TMDL's) for the IRL and its tributaries. The draft TMDL's are currently under public and agency review.

Breakout Sessions:

The PDT met in smaller breakout groups to continue to discuss and edit the problems and opportunities statements. The following is a summary of each of the breakout group's discussions:

Group 4

Members: Mario Basacca, NASA
Robert Day, SJRWMD
Marc Epstein, U.S. Fish and Wildlife Service (USFWS)

Statement 6. Performance Measure: Identify, characterize sources

Statement 7. No change

Statement 8. Performance Measure: Establish baseline seagrass and drift algae target ratio. Potential management measure: Assuming pollutant loads are the cause, go to problem statement 1.b.

Statement 9. Some impoundments are disrupting many historic Lagoon wetlands from performing their historic physical, chemical, and biological functions.

Performance Measure: Number of acres of impacted wetlands

Potential management measure: Restore, reconnect and enhance impounded (impacted) wetlands.

Statement 10. Human related impacts to the diversity and extent of habitats in the IRL-N have not been quantified. These impacts include: loss of transitional habitat between wetlands and uplands, and development, commercial and recreational activities.

Performance measure: Identify and quantify these sources

Potential management measures: Recommendations for regulatory actions

Statement 11. No change

Statement 12. Definition needs further discussion and will be added to next PDT meeting agenda.

Performance measure: Identify and quantify these habitats

Statement 13. Performance measure: Identify species, locations, and extent

Potential management measure: Remove/manage/control

Statement 14. May not be an issue. Discussions indicate that deep water habitat could be included in problem statement 10.

Question from PDT: What about sea level rising?

Answer: This was not taken into account. It seems more appropriate to address sea level rise during the modeling efforts or when designing management measures during plan formulation.

Group 3

Members: Mark Crosley, Florida Inland Navigation District (FIND)
Getachew Belaineh, SJRWMD
Ron Brockmeyer, SJRWMD
Steve Williams, Florida Department of Environmental Protection (FDEP)
Brian K. Files, USACE

Statement 4. Potential management measure: Pulse release of freshwater

Statement 5. Title: removal or modification of manmade structures or features (causeways, docks, spoil islands, etc) which impede circulation in order to improve water circulation/quality and transport/movement of flora/fauna

Potential management measure: number b.iii: Maintenance of relief spans

Statement 6. Performance measure: Identify sources and locations of areas of higher concentration and meets water classification

Potential management measure: Number of waterfront communities from septic to sewer, reduction of local atmosphere sources

Statement 7. Performance measure: water quality, maintenance or increases of aquatic vegetation habitat (elevation)

Statement 8. Performance measure: Water quality, nutrient reduction

- Potential management measure: bio-harvesting
- Statement 9. Title: Impoundments and other impacted wetlands
 Performance measures: acres of rehabilitated/reconnected
 Potential management measures: rehabilitate impacted marshes, blueways, purchase of privately held wetlands
- Statement 10. Not discernable
- Statement 11. Performance measures: Presence or absence acreage, increase of shellfish harvesting area (FDEP classification)
 Potential management measure: Artificial habitat seeding re-stocking and muck removal.
- Statement 12. Identify specific population
 Potential management measure: Decrease of impacted area
- Statement 13. Performance measure: Identify source of exotic species, decrease of abundance and acreage
 Potential management measure: (aquatic and terrestrial) re-plant with native, long-term maintenance, removal of exotics from private lands and canals
- Statement 14. Title: (?) Maintenance of existing habitat
 Potential management measure: muck removal
- Statement 15. Potential management measure: Optimize dock design and orientation
- Statement 16. Potential management measure: Public purchases and restore acreage

Group 2

Members: John Proni, National Oceanic and Atmospheric Administration (NOAA)
 Wayne Mozo, SJRWMD
 Tim Cera, SJRWMD
 Steve Kent, FDEP
 Marc Adkins, SJRWMD
 Lora Sanders, Brevard County
 Sharon Kroenig, U.S. Geological Survey (USGS)
 Kathy LaMartina, SFWMD
 Marguerita Engel, SJRWMD

- Statement 5. Title: Change "of causeways" to "impact"
 Performance measures: i. Water quality standards being met? ii. exchange rates, etc.
 Potential management measures: iii. Subsurface inlets, iv. Improve models and modeling data, v. increase inlet size
- Statement 6. Performance measure: quantify loading sources. i. Identify, characterize, and tabulate sources and loads, ii. Reference TMDL, iii. Atmospheric (wet and dry), rainfall on lagoon and stormwater runoff (direct) and groundwater loads (indirect)
 Potential management measures: i. Control loading and sources, ii. Implement and educate about Best Management Practices (BMPs)
- Statement 7. Title: SAV decline
 Performance measure: i. Coverage, ii. Light availability, iii. Timed sediment level
- Statement 8. Combine with problem statement 7, then add:
 Potential Management Measure: Study to quantify and improve total nutrients and turbidity, insure SAV quality, salinity, temperature, available sediment type.

Boating related practices: 1) wave sensors, 2) acoustic signatures, 3) improve channel marking and education

Add a category: Exchange of water (nutrient, temperature, salinity, etc.) at inlets – what's going out and what's coming in.

Group 1

Members: Chris Harnden, Florida Fish and Wildlife Conservation Commission (FFWCC)
Bob Ulevich, St. Johns Water Control District/Sebastian River Water Control District (SJWCD/SRWCD)
Paul Stodola, USACE
Troy Rice, SJRWMD

- Statement 4. Potential management measure: i. Change "interfere" with "interface", ii. Subsurface inlets for water quality improvements (ephemeral inlets)
- Statement 5. Title: change "causeways" to "impact (notable causeways)"
Potential management measure: iii. Maintenance of relief areas
- Statement 6. Performance measure: Identify sources – use inventory permitted areas
Potential management measures: i. Identify problem areas – hook-up to existing sewerage system where available, identify/influence future utility hook-up, phase-ins
- Statement 7. Performance measures: add the term "acres of coverage" rather than just "coverage"
Potential management measure: Change "boating practices" to "boater education", e.g. effects of propeller dredging, etc.
- Statement 8. Performance measures: Ratio of acres of drift algae / acres of SAV
Potential management measure: Identify reasons/conditions conducive to algae growth.
- Statement 9. Title: Add "some" at the beginning (Some impoundments...)
Performance measures: add "acres of" at the beginning (acres of restore...)
Potential management measures: i. Restore, rehabilitate marshes, ii. Implement long-term management regimes
- Statement 10. Performance measures: Identify/quantify/prioritize
Potential management measures: Establish inventory of impacts and alternatives to cure
- Statement 11. Performance measure: add "improve" at the beginning ("improve shellfish density") – measurement?
Potential management measure: (add) historic habitat
- Statement 12. Title: Add term "native" before "species" (Native species)
Performance measure: Identify/prioritize/quantify
Potential management measure: "Effect of" managed habitat
- Statement 13. Performance measure: Identify/prioritize/quantify
Potential management measure: measure amount – manage/control
- Statement 14. Performance measure: Identify problem areas of spoil build-up, etc.
Potential management measure: Effect of removal of spoil areas

Statement 15. Add "certain" at the beginning and make "habitat" plural "habitats" ("Certain man-made habitats..."). Remove "and is not always optimized for species."

Statement 16. Performance measure: Amount of upland, wetlands, and blueways habitat preserved/protected/restored

Potential management measure: Public purchase. Amount preserved, protected, restored. Identify targets.

Statement 18. Certain areas prone to flooding. Use FEMA, Insurance, USGS Storm surge, WMD database be used to identify potential flood prone areas. Performance measure: Use standard project flood criteria; also, abatement studies and future landuse plans.

Statement 19. Water supplies. Identify water resources (potable and reuse). Performance measure: Water supply plans.

Statement 20: Group Access. Identify recreational facilities at access points. Quantity recreational needs. Performance measure: Land management plans.

Question from PDT: Item 6b & 19. Can they be linked?

Answer: Need to develop a linkage between water supply and infrastructure development.

Question from PDT: What about areas prone to flooding as it relates to developed areas or natural habitats?

Answer: Purchase lands that are potential development areas and are flood prone to keep them from being developed by the public. It is not the natural areas being reviewed.

Following the group reports, the PDT discussed some issues that had come up as part of their group sessions.

For statement #16, it was suggested that oysters and oyster beds could be a performance measure.

Debbie mentioned that Group #4 had made an interesting suggestion regarding problem and opportunity statement 12 in that the definition needs further discussion. This will be added as a separate agenda item at the next PDT meeting

The issue of "deep-water habitat" was discussed. Should the "lack of deep-water habitat" be considered an issue? Existing "dredged holes" may need to be maintained because they have been there for over 40-years and are being utilized by certain species of concern. Debbie suggested the "deep water habitat" problem and opportunity statement be held outside of the main list; i.e.place it at the end as a supplemental statement (put it in a parking lot). The PDT agreed. Previous experience has suggested that deep water habitat is not an issue.

Another PDT comment addressed the "layer of muck". Just because the layer exists, doesn't mean the Lagoon was originally deep.

PUBLIC COMMENT

Suggest that the "dredged holes" be considered because it is a new habitat that has been created. Similar to a situation where a hole is dug up during construction and migratory birds start using the site. It becomes a wetland and some entities want to protect it. There may be a lot of opposition to removing these "holes".

A similar case can be considered with the spoil islands. They have created fish habitat and bird habitat. There have been man-made features that have been environmentally beneficial. This issue could be captured as opposing statement #15. That is why it was suggested to state "certain man-made habitats" rather than assuming all of them.

NEXT STEPS/ADJOURN

What's next..

- PDT to finish problem and opportunity statements
- Complete alternative plans
- Convene the modeling sub-team and discuss 7 step process for developing a model, plus other modeling processes
- New schedule soon to be out for everyone
- No further public comment was received.
- Next meeting: October 9th, 2003. 10:00 am – 4:00 PM, SJRWMD Palm Bay Field Office

Meeting adjourned at 4:12 pm.