

Issue Groups from Public Meetings & Jan 23, 02 PDT Brainstorming Sessions

1. Project Delivery Team (PDT)

- Finding a common meeting spot (favorite).
- Competing workloads.
- Working with different personalities/backgrounds/philosophies.
- Agency finances (for meetings and travel).
- Videoconferencing.
- Disconnect between scientific research and political system.
- Technology – political changes.
 - Too much money, pessimistic for success.
 - Too many competing interests.
- Accomplish.

PDT--Coordination

- Provides forum to exchange information.
- Communication/governmental partnerships within study and beyond.
- Coordination of efforts (programs/projects).
- Coordinating between government agencies and levels of government.
- Common action.

PDT—Coordination--Projects

- Connect with current projects inventory.
- Enhance what is already being planned.
- Opportunities to coordinate w/other USACE projects (e.g., spoil islands).
- IRL spoil island group and other IRL restoration orgs.

Brainstorm – Current/Future Projects Inventory

2. Interagency

- Conflicting agency goals (i.e., environmental restoration and flood control).
- Multiple agendas.
- Communication/cooperation
- Coordinate and integrate management and restoration activities with other agencies' efforts in the Lagoon.
- Public/private partnerships.
- Partnership.
- Opportunity to deal with the big issues – those issues that are too large to be addressed by any one governmental agency.
- \$ to be a challenge.
- Opportunity to have large enough pot of money to actually address problems and issues.
- Finance
- Relieve local government from burden for restoration.
- Getting funding.

3. Water Quality

- Improve water quality in the IRL North.
- Identify water quality problems & causes (sources).
- Improve timing, quantity, and quality of freshwater inflows.
- Integration of this project with the treatment of human wastes.
- Tie in to water supply/waste management/energy needs.
- Storm water issues (county/city level/local governments).
- Watershed management plan to assist in meeting TMDL and CWA compliance.

Potential Alternatives

- Sebastian Canal System Dredging (9 mi).
- Decrease fresh water inputs to lagoon system.
- Tie-in to water supply/waste management/energy needs
- Review major drainage systems discharging to the IRL North.
- Investigate the feasibility of re-directing flow in the C-25 canal crossing the S-99 structure toward the Upper St. Johns River.
- Examine stormwater upgrades for major roadways and causeways, and urbanized areas.
- Review effects of springs on Lagoon
- Identify sources of pollution and provide recommendations to address these sources.
- Review reductions of wastewater discharges to the Indian River Lagoon by diverting flows to reuse irrigation or deep well injection.
- Review the role of septic tanks (on-site sewage disposal systems or OSDS) in bacteriological or pollutant loadings to the Indian River Lagoon. Develop recommendations to address any identified problems.
- Review existing water quality and habitat monitoring programs to determine their adequacy for modeling, project alternative review and long-term assessment of project success.
- Review the contribution of 'spoil' islands to turbidity.
- Review whether marinas are contributing to pollutant loading.
- Assess the St. Sebastian River south prong nutrient contribution to the IRL, particularly the nine miles of canals that flow into the prong.
- Review growth plans and provide recommendations as appropriate.
- Review the use of a centralized IRL database developed in cooperation with NASA.

Best Management Practices (BMP's)

- Determine BMP's and recommend.
- Address public use of resources to appropriate level.
- Balance growth with plan objectives.
- Provide recommendations for management of future urban development to protect the natural resources and water quality of the Indian River Lagoon.

Brainstorm –

Problems & Sources

Additional Potential Water Quality Alternatives Solutions, including BMP's & Integration of Water Supply/Waste Management/Energy Needs

4. Ecosystem

- Understanding coupling of this program with the coastal ocean and south project.
- Tie-in to St Lucie River initiative, if successful.

Brainstorm – Tie-in to St Lucie River initiative, if successful.

5. Public Outreach and Education

- Make technical document understandable to lay person.
- Improve public awareness. Reinforce lagoon's importance before the public
- Educating the public.
- Increase public awareness and education.
- Address public use of resources to appropriate level.
- Stakeholder involvement and buy-in to restoration plan.
- Stakeholder issues (who are they?).
 - Resolution of conflicts.
 - Varied uses.

6. Problem Definition/Identification

- Different Issues for IRL-S and IRL-N.
- What historical perspective do we use? What is the benchmark.
- Global problem into small pieces
- What's broke.
- How far can we take this program (level of detail)?
- Focusing/narrowing to what we will study.
- Growth challenges.
- Sedimentation/muck sources and sinks.
- Reservoir storage capabilities

Brainstorm—

IRL-N Problem Identification

Focus/Narrow Scope on What to Study

Sedimentation/Muck Sources and Sinks

Reservoir Storage Capabilities

7. Potential Alternatives/Benefits

Water Circulation

- Causeway water circulation.
- Relief bridges/culverts.
- Reconnect different segments of lagoon, impacts associated with causeways
- Increase potential circulation pathways.
- Coordinate with FDOT highway widening projects and studies of causeways for hurricane vulnerability and scour.
- Reconnect Banana Creek areas severed by the NASA/space shuttle crawlerway and U.S. Air Force Titan launch railway.
- Review creation of culvert systems from the Lagoon to the ocean to improve circulation.
- Review other means of circulation improvement such as removal or reduction of causeways, electric pumps or other alternative strategies.

- Review opening Canaveral locks to improve circulation in the Indian River Lagoon.

Habitat

- Restore or protect important habitats in the Indian River Lagoon.
- Recreational benefits/habitat benefits.
- Habitat restoration.
- Restoring habitat for fisheries.
- Review placement of oyster shell mounds and other improvements that might promote restoration of the oyster fishery in the Mosquito Lagoon. Placement of oyster shell mounds should enhance water quality as well. Also, review restoration of the hard clam fishery.
- Review creation of artificial reefs in the Indian River Lagoon to enhance fish habitat.
- Review the role of non-seagrass areas as beneficial fish habitat.
- Review the use of informational signs to warn boaters of the presence of seagrass beds in the Lagoon.
- Establish blue ways/green ways.
- Improve pathways.
- Review restoration and protection of linkages of critical upland and wetland habitats and blueways.
- Freshwater wetlands--maintain and improve.
- Review restoration of wetlands and impoundments.
- Opportunity to control exotics.
- Remove or manage exotic species from important habitats and restore native species.
- Examine Federal environmental projects within the Merritt Island National Wildlife Refuge that have been on hold pending resolution of issues.
- Spoil Island potential habitat restoration.
- Review potential for restoration of habitat on spoil islands.

Water Storage/Supply

- Reservoir storage capabilities
- Increase water storage for everglades.
- Increase H₂O supply through interbasin transfers.
- Address recurrent flooding losses and assist with water shortage problems. Review consumptive use, and diversion of freshwater resources. Review possible recharge areas including the coastal ridge. Review lessons learned from pilot study of Aquifer Storage and Recovery (ASR).

Develop Basin Sediment Management Strategy.

- Remove muck and other sediment that has accumulated in IWW and major tributaries.
- Review removal of muck sediment from other sediment traps, man-made or otherwise.
- Review options for disposal or reuse of muck sediment.
- Identify sources of muck and develop strategies to reduce these sources.
- Stabilize eroding shorelines.
- Review inlet sand bypass projects to reduce the amount of sediment material accumulating as the result of ocean inlets.

- Update flood control.
- Military components to improve appeal.
- Review archaeological resources in the Lagoon.
- Review sunken boat and derelict/abandoned boat obstructions.
- Review weather conditions impact on the ecosystem.

Brainstorm—Others?

8. Models/Evaluations/Performance Measures

- Develop estuarine models/multi-purpose.
- A few meaningful performance measures.
- Look at watershed holistically to approach large scale solutions
- Opportunity to do more broad studies and innovative techniques/approaches.
- Comprehensive evaluation of ICWW to lagoon system.

Discuss—

PMP Models

Performance Measures

Brainstorm--

Innovative Techniques/Approaches

9. Real Estate

- Potential to do great things on public/private lands.
- Land ownership – multiple and saying here’s what we need to do on your land.
- Working with federal land owners.
- Large public ownership and natural resource base.
- Purchase – Patrick AFB
- Key properties privately owned
- Review acquisition policies to acquire private properties.

10. Lessons Learned

- Look at historical mistakes and future problems, create enduring document.
- Counties approach to storm water management - learn from each other.

Brainstorm—All

Reality

- Recession/economy.
- Florida legislature.
- Too many special interest groups.