

**Indian River Lagoon North Feasibility Study
First Series of Public Meetings, September 2001**

1. The first series of public meetings on the Indian River Lagoon North Feasibility Study (IRL-N FS) were held September 25 – 27, 2001, in Vero Beach, Viera, and Edgewater, Florida, respectively. Each of the meetings began at 6:30 pm. A sign-in sheet is attached. David Schmidt, U.S. Army Corps of Engineers (Corps), Planning Division, Section Chief of Coastal/Navigation, and Troy Rice, St. Johns River Water Management District (SJRWMD), Executive Director of the Indian River Lagoon National Estuary Program (NEP), provided a joint overview for the Indian River Lagoon North Feasibility Study (IRL-N FS) (see attached presentation). The IRL-N FS will build upon work and studies that have already been done, including major projects already implemented by SJRWMD and the NEP. Questions, comments and discussions at each of the three public meetings follow.

**Vero Beach, Florida (approximately 15 attendees)
25 September 2001, 6:30 pm**

2. Question: Fellsmere canal was dug in 1917-18 and parallels Canal 54 (C-54) all the way to the basin. Normally the water level in Fellsmere Canal is approximately 5 feet lower than the C-54 canal. Has there been a study to combine the two canals?

Response: The Fellsmere canal was not built by the Corps. C-54 was built by the Corps as a relief valve for the Upper St. Johns River (USJR) project. Fellsmere canal is used by residents and farmers in the area.

3. Comment: Fellsmere Canal continuously flushes into the St. Sebastian River and IRL. There is a lot of muck in Fellsmere Canal (approximately 15 – 17 feet). Sediment traps could be dug in the appropriate places, and mother nature could do most of the work. Why can't the muck be pumped onto the buffer preserve land, conservation property, and pasture land? Also, sediment traps could be dug on C-54 canal.

4. Comment: The muck in C-54 should be removed.

5. Comment: Convert bottom opening flood gates to flow over flood gates.

6. Comment: Pertinent recommendations from the Indian River Farms watershed study, currently underway by Indian River County, should be incorporated into the IRL-N FS.

7. Question: Are there any Environmental Endangered Lands (EEL's) in Indian River County that are slated to be purchased?

Response: Part of Sebastian Buffer Preserve is in Indian River County. The SJRWMD has primarily acquired impoundments.

8. Question: Indian River County in the past has dredged out portions of IRL, particularly around the Wabasso area. The muck source may be the shell and marl on the unpaved roads in the county. An aggressive program to pave roads would eliminate the source of the fine material. Is there an opportunity to help with this?

Response: If it's cheaper to pave the roads than to construct retention basins to catch the sediment, then yes. The Corps doesn't pave roads on a large scale. Coordination with the Federal Highway Authority would be required. If Indian River County has good data, the IRL-N FS could benefit from using it.

9. Question: With the terrorist attacks and budget constraints, does the Corps have any plans to go back and tighten up some legislative contacts so these projects can be funded?

Response: The funding for Fiscal Year (FY) 2003 is uncertain. For all Corps projects, everything's up in the air at this time. If the process must slow down for a year or two, it will be picked back up when the funding returns. Congress typically does Water Resources bills every two years. The current Administration supports environmental and deep draft navigation projects, but is not too fond of shore protection projects.

**Viera, Florida (approximately 21 attendees)
September 26, 2001, 6:30 pm**

10. Question: Congress appropriates \$15 million for small projects?

Response: The \$15 million is appropriated for all small projects in the nation and it varies between years. Small projects start with a small report. The goal is to finish the feasibility study in 18 months. Instead of 7 years to construction, the goal is 3 years. Past and current Administrations have supported ecosystem restoration projects.

11. Question: What is the Class of waters in Brevard? And is it average throughout? Could a study goal be to achieve Class II waters from Class III?

Response: The waters are Class III if not otherwise classified.

12. Question: There's a significant amount of algae in the IRL. Is that due to nutrients?

Response: Yes.

13. Question: Will there be a more structured process to respond to public comment?

Response: Referred to the process used during another Corps study, which was a Public Feedback section on the study's website.

14. Question: When referring to causeways, will the IRL-N FS recommend opening them up?

Response; Bridges or culverts are plausible.

15. Comment: We're studying the causeways in Brevard County for their vulnerability to hurricanes and have found that reducing the length of the causeway and increasing the length of relief bridges decreases their vulnerability. One reason the IRL-N FS will be evaluating causeways is to improve circulation.

16. Comment: IRL-N has had fish kills due to dissolved oxygen, a direct economic deterrent.

Response: One of the work items for the IRL-N FS that the SJRWMD has funded is a circulation model by the University of Florida and that should point out what you're seeing physically and what needs to be done.

17. Question: In keeping with the causeway question, are you coordinating with other folks, e.g. Florida Department of Transportation (FDOT) to look at large scale projects, i.e. those kinds of projects that should be tied together? Does the Corps work close enough with FDOT to coordinate certain project features? Could a local project be incorporated into this? Some of these small projects could be looked at on a regional basis.

Response: A Project Delivery Team of local, county, regional, state and federal agencies will be convened and meet regularly.

18. Question: Encountering projects with water quality, there's development adjacent to the IRL with septic tanks. There is no system to monitor their input into the IRL. How would this connect with your responsibility?

Response: The IRL-N FS will consider septic contributions and develop recommendations. Normally, septic is looked at by the county.

19. Question: SJRWMD has done something with looking at septic?

Response: SJRWMD has yet to come up with adequate information to be able to point a finger at potential problems. SJRWMD has come up with potential problem areas.

20. Question: Is that something we could fund to implement more treatment facilities?

Response: One significant public policy issue dealing with septic tanks is that no one can identify the loading. Unless we know and can measure where it (the loading) is, we can't spend the dollars. More than 90% of the load comes from stormwater and non point source (NPS) loading. The other 10% is still unknown. The key is to know the amount of load reduction by proposed project.

21. Question: Can direct Corps dollars be used to pay for a sewer project?

Response: Ordinarily those dollars come through the U.S. Environmental Protection Agency, but there would be nothing wrong to incorporate that into the IRL-N FS recommendation going to the Congress.

22. Question: Will the IRL-N FS be looking at non-structural solutions?

Response: Yes.

23. Question: Provide more information about water supply issues.

Response: C-1 may be a source of water supply and other tributaries may also be looked at.

24. Question: Is there a timetable for removing fill across the lagoon?

Response: It will probably be a 5 – 7 year timeframe.

25. Comment: You have to do an economic evaluation showing benefits of restoration exceed the costs of restoration alternatives.

26. Question: In your presentation, what would be possible targets for invasive species and where?

Response: Australian pines and brazilian pepper wherever they occur.

27. Comment: Hopefully the IRL-N FS will determine the source of the 90% of nutrient loading and other contaminants so we can really help deal with it, e.g. fertilizer from Home Depot, pressure treated wood, etc.

Edgewater, Florida (approximately 28 attendees)

27 September 2001, 6:30 pm

28. Question: Are there any ongoing IRL-N projects underway?

Response: C-1 project is connected and discharges water into IRL-N, maintenance of the Intracoastal Waterway (ICWW), and Fort Pierce Harbor.

29. Question: Is there a dredging schedule for IRL-N?

Response: The dredging schedule for the next 1 – 5 years used to be posted on the SAJ webpage: <http://www.saj.usace.army.mil>.

30. Question: What's the problem in the IRL-N?

Response: Muck infilling the lagoon and ICWW and when a storm comes in it disturbs the muck and covers seagrass, killing the seagrass. Propeller scarring is also a problem. It takes seagrass beds decades to recover from propeller scarring.

31. Comment: The manatees are the problem with the grass beds.

32. Comment: The Wildlife Refuge is in the process of developing a conservation plan. There's a lot of rumor floating around that they're planning on closing Mosquito Lagoon.

Response: At this point, the IRL-N FS has no plans to close Mosquito Lagoon.

33. Question: IRL-N FS area goes north to Ponce Inlet. Will IRL-N FS include the rest of Volusia County?

Response: No, the rest of Volusia County is hydrologically disconnected from the IRL. The Corps does have 2 separate small projects in the vicinity of Ponce Inlet.

34. Question: (Displayed a map of drainage ditches and canals in Volusia County which are going to contribute to degradation of lagoon.) SJRWMD Palatka has told Volusia County it is facing a water shortage. IRL-N FS mentions water supply. Has an alternative been considered of taking these ditches and using that water as water supply as the water shortage progresses?

Response: SJRWMD recently let a contract to study the feasibility of Reverse Osmosis.

35. Question: There are many documented and undocumented prehistoric sites buried under the muck in the IRL-N. What are the plans to address those sites, e.g. during field work.

Response: The National Environmental Policy Act (NEPA) document includes cultural resources and archeology work with the State Historic Preservation Officer to identify those sites. It is an important part of IRL-N FS.

36. Comment: Silt is a problem in the lagoon. We have 3 ½ mile long canals with a lot of silt. This is probably a problem with little canals along the IRL.

37. Question: Regarding flood protection, what type of flooding?

Response: The flood protection is more in reference to the Central and South Florida flood control project. For example, C-54 has a flood gate that's opened periodically and it's also depositing muck in the lagoon. Those types of pulse charges are not good for fish and invertebrates because they don't like a pulse of fresh water. We want to either operate it differently or modify it so that it doesn't deposit muck, but we do want to maintain the flood protection it currently provides.

38. Question: What kind of challenges do you expect? Major issues?

Response: It's hard to say how much remediation and fixes will be needed, but we intend to address major problems, however, we won't be able to do it all.

39. Comment: Our institute is working on circulation units that create circulation. These units can be implemented quickly, unlike dredging and turning dirt. These units could involve our fishermen, using their docks, to treat our water and provide habitat, shifting to more active and less expensive approaches.

40. Question: Have you considered opening another inlet at the southern end of lagoon?

Response: Historically, IRL-N has been a fresh water system with little tidal exchange. To change to a saline system will have a lot of biological impacts.

41. Question: Seagrasses are being damaged and dying, but I still see an awful lot of seagrass. What method is being used to determine the condition of seagrass.

Response: Aerial photography interpretation dating back to the 1940's.

42. Comment: There was an article in the Orlando Sentinel that stated seagrasses are coming back, not disappearing. If signs were placed in 2 foot of water delineating the seagrass areas, most folks would come down off the plane (in their boat) and avoid the area.

43. Question: Two years ago this past April, the water level in Lake Okeechobee was at a high point and the decision was made to release that water. That pulse of fresh water wiped out shellfish beds and seagrasses and devastated fishing in the vicinity for a few months. Since that time, has any thought been given in preventing future releases like that and distributing that water up here?

Response: The Comprehensive Everglades Restoration Plan is designed for dealing with that project. The IRL-South FS deals with basin runoff and C-44 deals with the lake. We have gotten those releases down to 1 time in 31 years, but it takes 20 years to implement that change. Most of that water will go south into the Everglades where it went historically, but we could use similar methods in the IRL-N FS.

44. Question: Would that water in Lake Okeechobee be of quality to inject into an aquifer?

Response: We are running pilot studies on Aquifer Storage and Retrieval. There is a huge debate regarding kinds of permits and treatment required before the water can be put in the ground.

45. Comment: About 10 years ago almost every community up and down the IRL discharged all wastewater into the lagoon. Since that time, discharges have been reduced by 80%. The problem is we still can't determine how to handle the reclaimed water during wet periods.

46. The City of Port Orange has a massive water reclamation project going on now. They are building a large lake, and runoff will be diverted there, none into the IRL or Halifax River. These sort of projects can be done if we have land and political leaders with vision.

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