



*Florida Department of
Environmental Protection*

Indian River Lagoon Basin Management Action Plans

Briefing to the Space Coast League of Cities

November 12, 2012



Indian River Lagoon (IRL) Basin

- Listed as impaired due to seagrass loss in the lagoon compared to historical depths. Nutrient loadings identified as the cause.
- FDEP adopted total maximum daily loads (TMDLs) in March 2009 to reduce total nitrogen (TN) and total phosphorus (TP).
- Basin Management Action Plan (BMAP) meetings with stakeholders began in June 2009.





2011 and 2012 Algal Blooms

- In 2011, the algal “superbloom” occurred in the North IRL and Banana River Lagoon, with a separate bloom affecting part of Central IRL.
- Research is still underway to understand the causes of these blooms.
 - Appears to be due, in part, to legacy loads in the lagoon.
 - FDEP is assigning BMAP credit for removal of these legacy loads.
 - Impact to seagrass depths currently unknown.





2011 and 2012 Algal Blooms, continued

- Currently, there is a brown algae bloom affecting much of the IRL and Banana River Lagoon.
- The agencies are working together to determine the cause of this bloom.
- The first iteration of the BMAPs identifies nutrient load reduction projects that might mitigate typical bloom conditions.
- When better information on the causes of the blooms and impacts to seagrass is available, the BMAP can be revised.





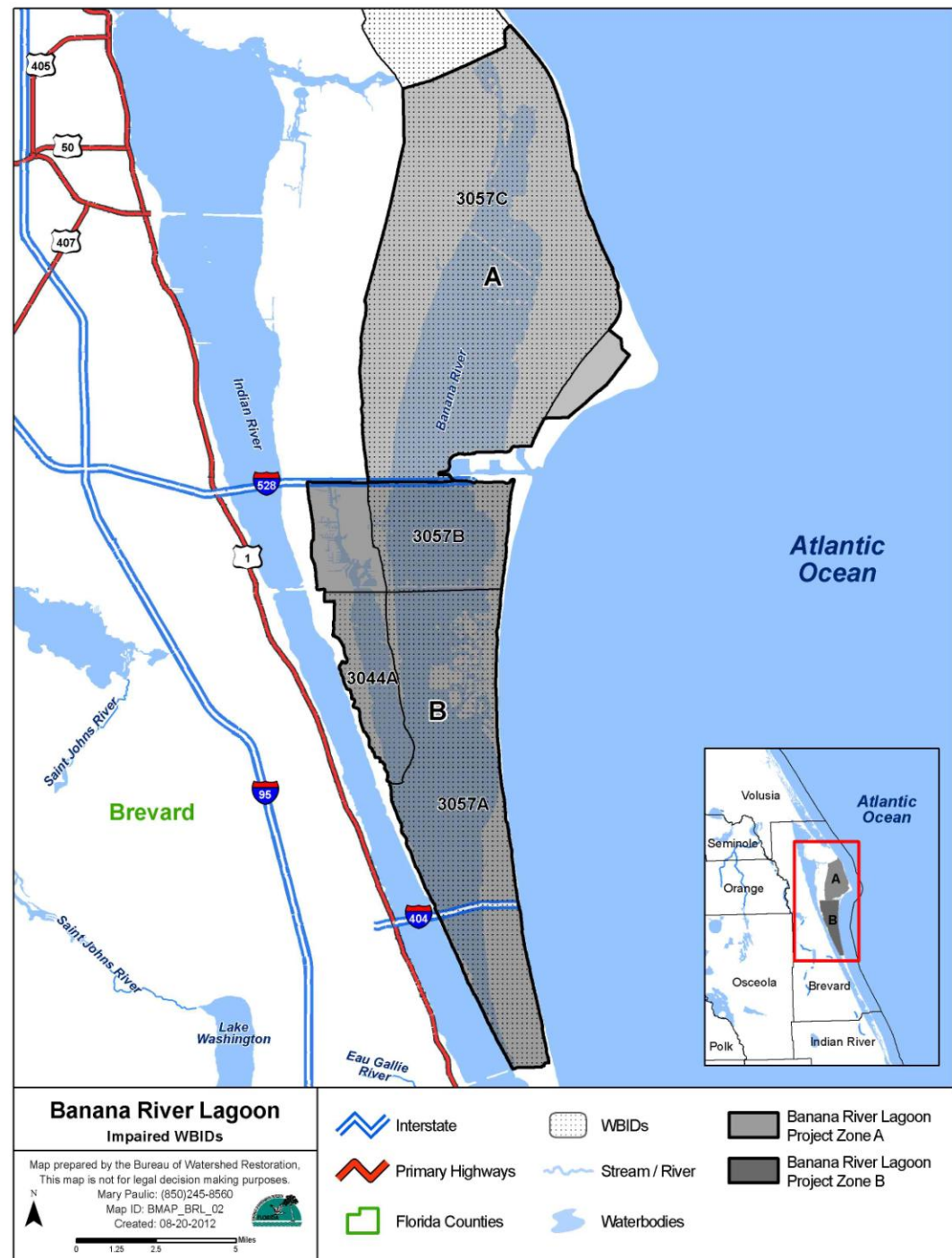
BMAP Approach

- Due to the large extent of the IRL Basin, separate BMAPs were prepared for the following subbasins:
 - Banana River Lagoon;
 - North IRL; and
 - Central IRL.
- Each BMAP addresses the TMDLs for that subbasin to achieve seagrass depth targets.



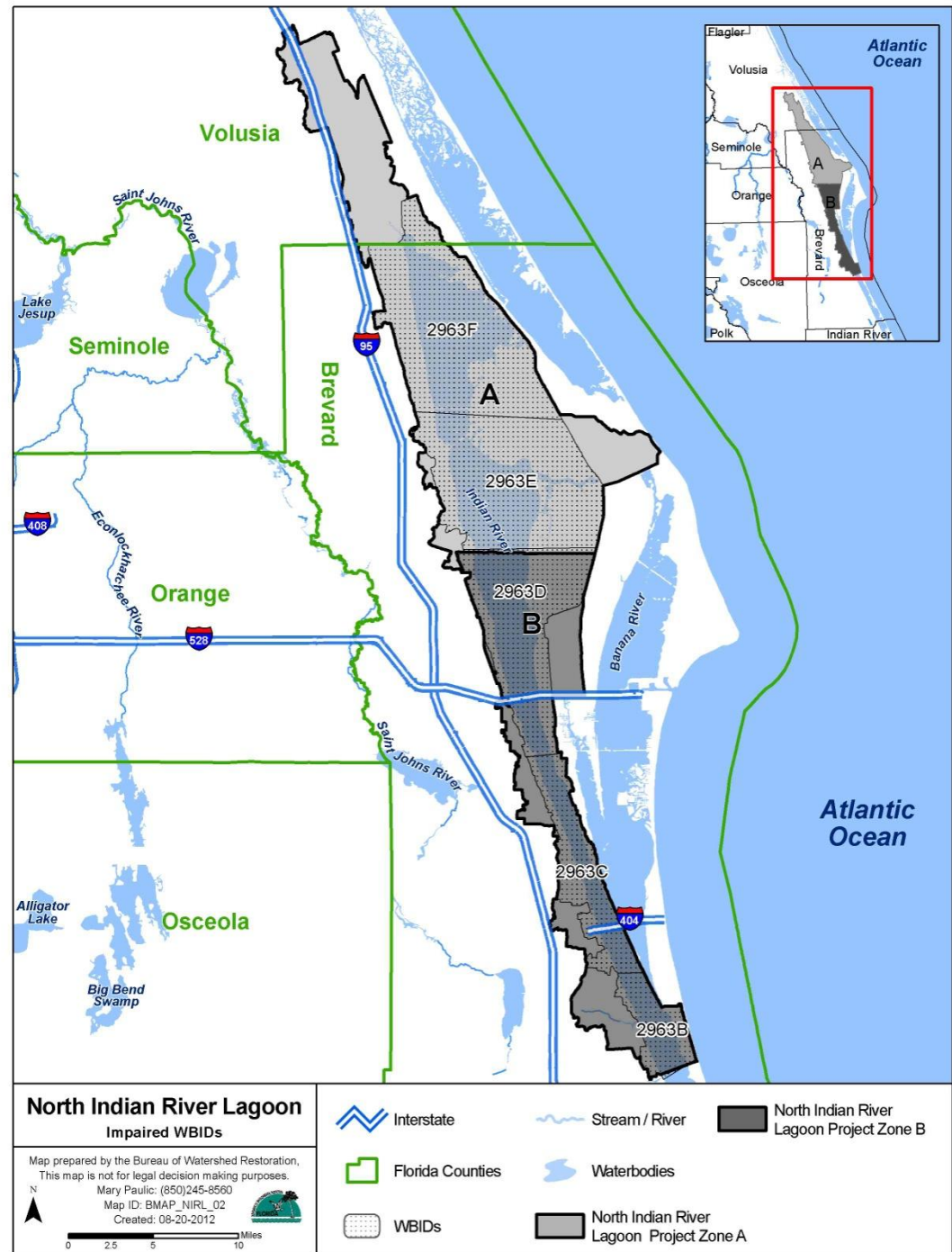


- The BRL subbasin includes the entire BRL watershed.
- 2 project zones.

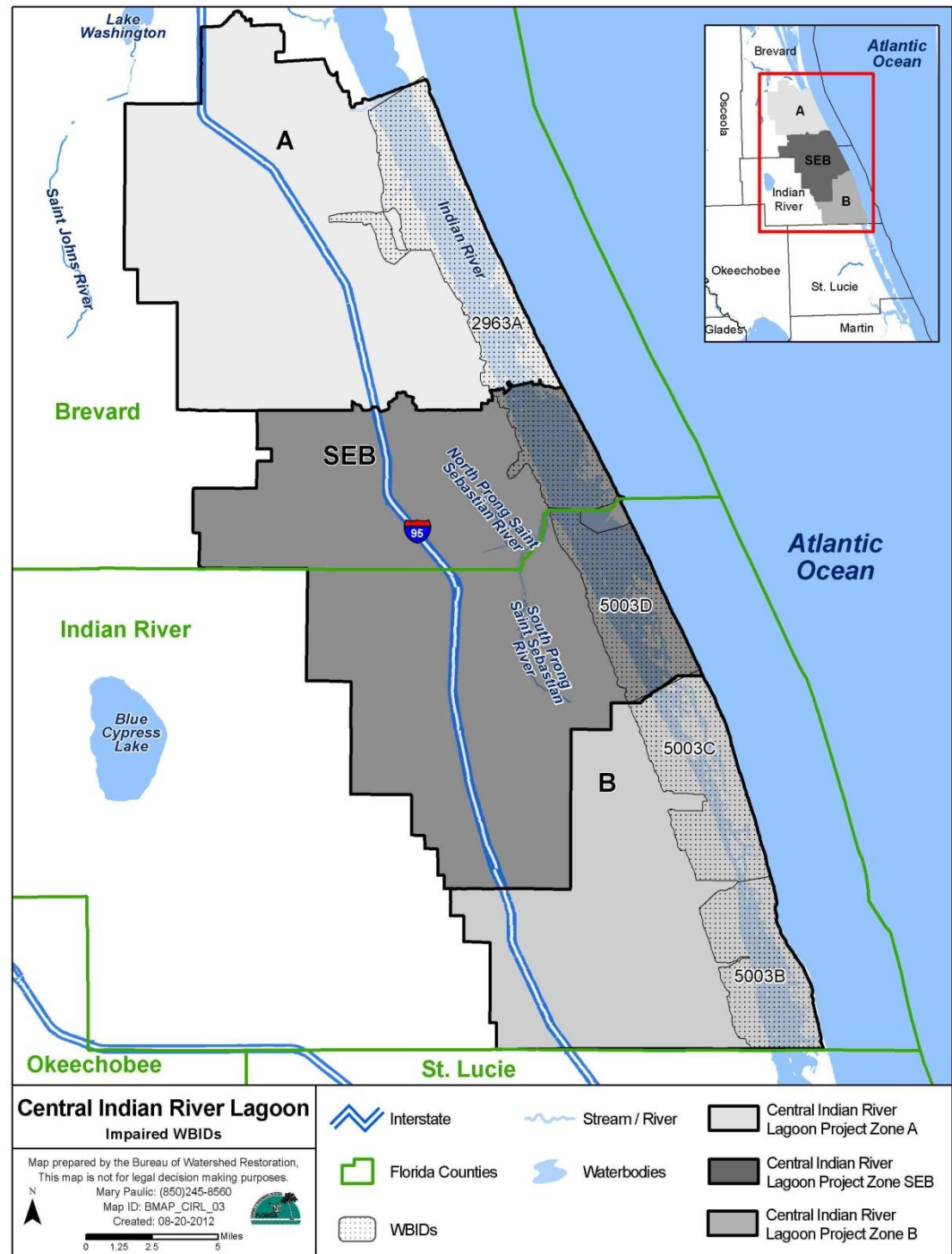




- The North IRL subbasin extends from Turnbull Creek to the Melbourne Causeway (U.S. 192).
- 2 project zones.



- The Central IRL subbasin extends from the Melbourne Causeway (U.S. 192) to the boundary between Indian River County and St. Lucie County.
- 3 project zones.





IRL Load Reductions

- The stakeholders in the North IRL and BRL B project zone are required to make reductions.
- The table shows the percent reductions that will be achieved by the end of the first 5 years through completed, ongoing, and planned projects.

Area	Total Nitrogen % of Reductions	Total Phosphorus % of Reductions
North IRL	43.3%	57.2%
BRL B	21.2%	23.8%





IRL Load Reductions, continued

- The stakeholders in the BRL A project zone and Central IRL were not required to make additional reductions.
- The table shows the pounds of reductions that will be achieved by the end of the first 5 years through completed, ongoing, and planned projects.

Area	Total of Nitrogen Lbs of Reductions	Total Phosphorus Lbs of Reductions
BRL A	18,780.0	2,917.3
Central IRL	112,929.5	49,258.4



Seagrass Evaluation

- Over the coming years, seagrass depths will be reevaluated in all three subbasins.
- The recent algal blooms indicate that water quality problems still exist, and the science is underway to understand what caused these blooms.
- Nutrient load reductions will be required in the second BMAP cycle based on available seagrass data.
- Additional projects will be needed in at least the North IRL subbasin and BRL B project zone.





First 5 Years of the BMAPs

- Continued priority for grant funding to local governments for water quality improvement projects:
 - 319 grants; and
 - TMDL water quality restoration grants.
- Monitoring plans to measure water quality success and ensure continued seagrass restoration are included in each BMAP. New seagrass data will be collected in 2013.
- Annual meetings will be held for each BMAP to track the status of projects.





Comments on the Draft BMAPs

- The BMAPs are available on FDEP's website at:
http://publicfiles.dep.state.fl.us/DEAR/BMAP/IndianRiverLagoon/BMAP_Documents/.
 - Local projects are outlined in Appendix E of each BMAP.
- Comments are welcome on the draft BMAPs and can be submitted through December 7, 2012.
- The BMAPs will be adopted by FDEP in early 2013.





FDEP Contacts

- To submit questions or comments on the BMAPs, please contact:
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