

City of Cocoa

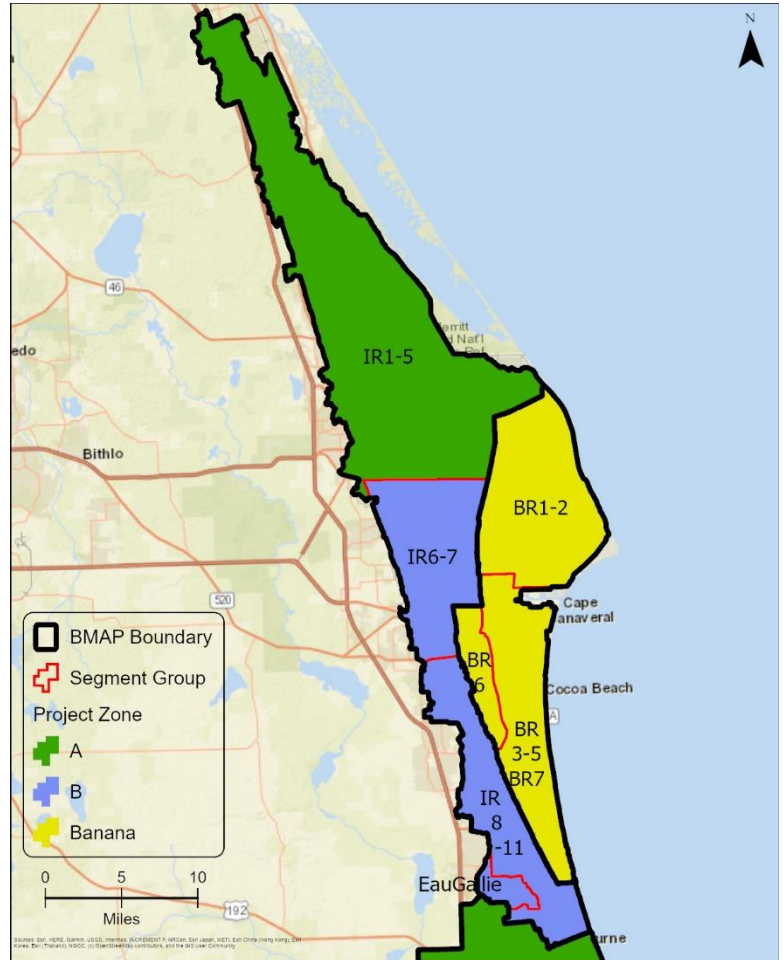
North Indian River Lagoon BMAPs

Draft Allocations March 2020

Summary:

- Used load estimation tool (LET) developed from SWIL model to calculate total nitrogen (TN) and total phosphorus (TP) starting loads for each TMDL “Segment Group”
- Applied percent reduction from TMDL for each Segment Group (see tables below) to calculate total TN and TP load reduction required for each Segment Group
- Used LET to calculate total anthropogenic starting load in each Segment Group and determine the percent each entity contributed to the total anthropogenic starting load.
- Multiplied the load reduction required in the Segment Group by the percent each entity contributed to the total anthropogenic starting load to calculate each entity’s required reductions within each Segment Group.

Note: Numbers have been rounded for display in this document but were not rounded during the full calculation process.

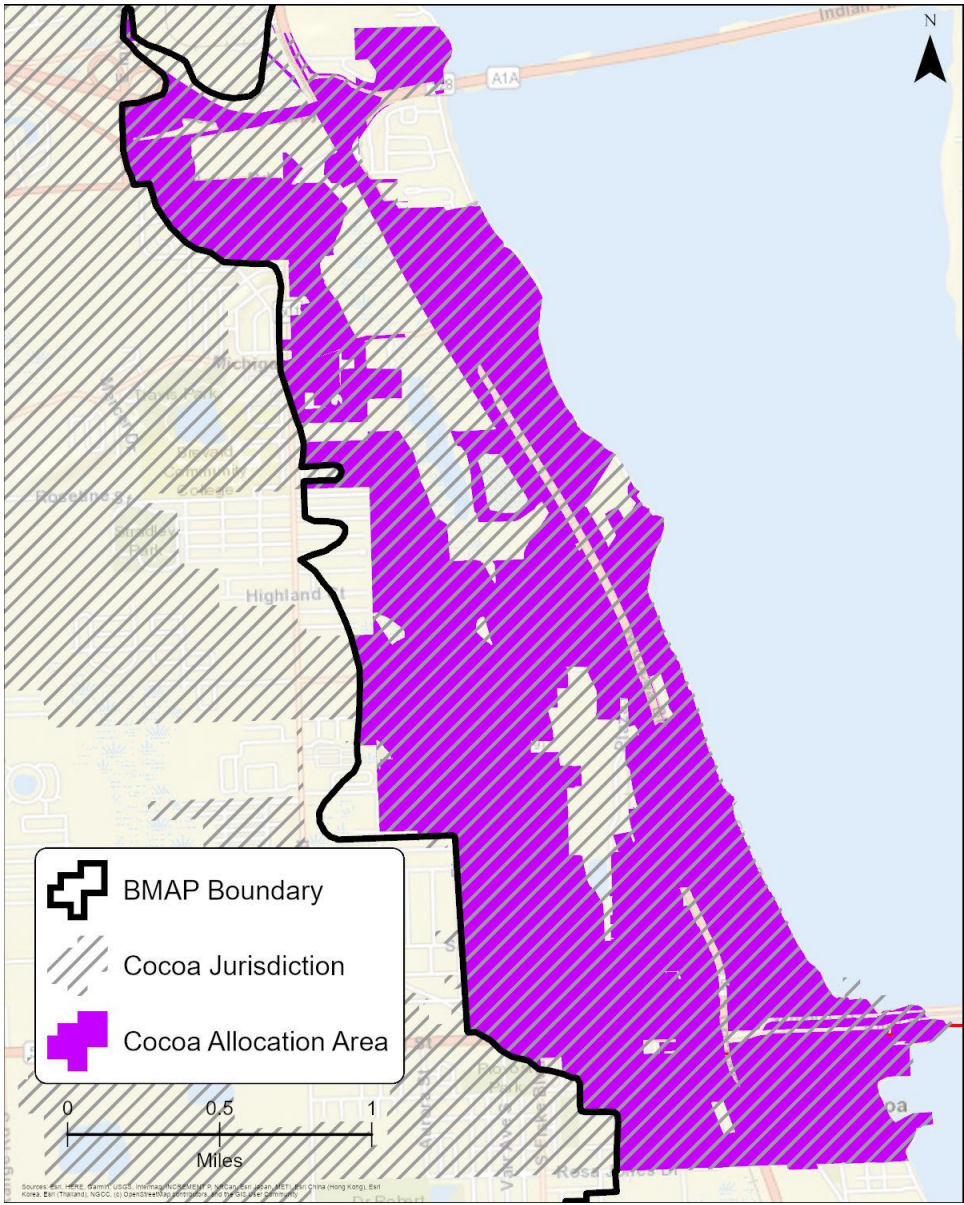


Required Reductions Per TMDL Segment Group

BMAP	Project Zone	TMDL Segment Group	% TN TMDL Total Reduction	% TP TMDL Total Reduction
North IRL	A	IR1-5	35%	47%
North IRL	B	IR6-7	36%	53%
North IRL	B	IR8-11	36%	48%
North IRL	B	IR8-11, EauGallie	51%	58%

New Load Calculations from SWIL Model

BMAP	Project Zone	TN (lbs/yr)			TP (lbs/yr)		
		Starting Load	Required Reductions (Adjusted)	Allocation	Starting Load	Required Reductions (Adjusted)	Allocation
North IRL	B	18,189	8,912	9,278	2,645	1,740	905
Total		18,189	8,912	9,278	2,645	1,740	905



Draft Project Credit Recalculations

Using the LET and geographic information systems (GIS) tools, base loads for the project treatment areas were updated for all projects that require a base load for credit calculations. This allowed the project credits to be recalculated using the same foundation that was used for the updated allocations.

Current verified and completed projects:

North Indian River Lagoon

TN (lbs/yr)			TP (lbs/yr)		
Required Reductions	Updated Project Credits	% Reductions Achieved	Required Reductions	Updated Project Credits	% Reductions Achieved
8,912	6,723	75%	1,740	1,351	78%

These credits represent the City of Cocoa's status as of March 2020 – there will continue to be opportunities to submit new projects and obtain additional credits.

Notes:

- There were large acreage differences between the shapefiles and project table acres for 4 projects: **CC-01, CC-02, CC-16, and CC-17**
- Our records indicate that CC-16 and CC-17 have the same treatment area shapefile, is this correct?
- Project **CC-15** is listed as a completed project, however we were unable to find a treatment area (TA) shapefile in our records and additional necessary details to run the BMPTRAINS model. This project was left out of the reduction calculations but may be incorporated to include additional reduction credits once we have the TA.
- For **CC-11**, only 0.5% TN and TP reduction efficiency was applied for fertilizer ordinance; and additional 3% was applied for FYN participation; if there are additional components of an overall education/regulatory program, the efficiency may increase.
- For **CC-02** and **CC-10**, project efficiencies reflect additional treatment above and beyond that which is required for permitting
- Several projects (**CC-12, CC-13, CC-14, CC-15, CC-20, CC-21, CC-23, and CC-24**) with load reductions listed as "TBD" can be calculated with the LET or other methods and added to total reductions once additional project information is received.