

City of Sebastian
Central Indian River Lagoon BMAP
Draft Allocations April 2020

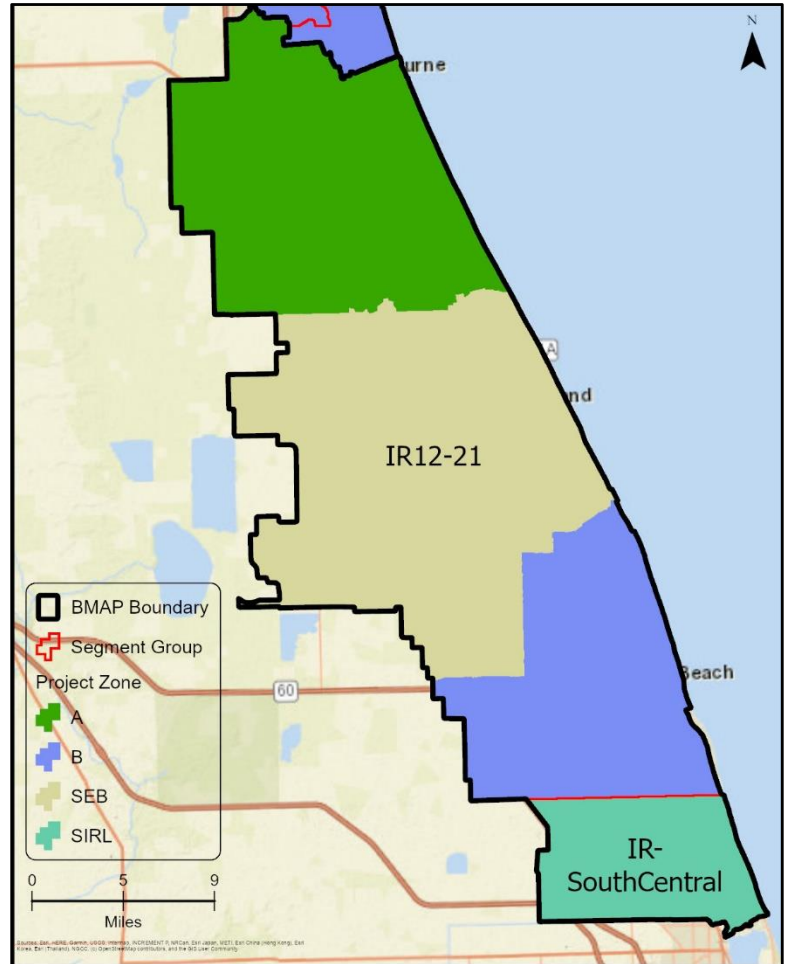
Updated Draft Allocations

Summary:

- Used load estimation tool (LET) developed from SWIL model to calculate total nitrogen (TN) and total phosphorus (TP) starting loads for each total maximum daily load (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.

CIRL BMAP Project Zones and TMDL Segments

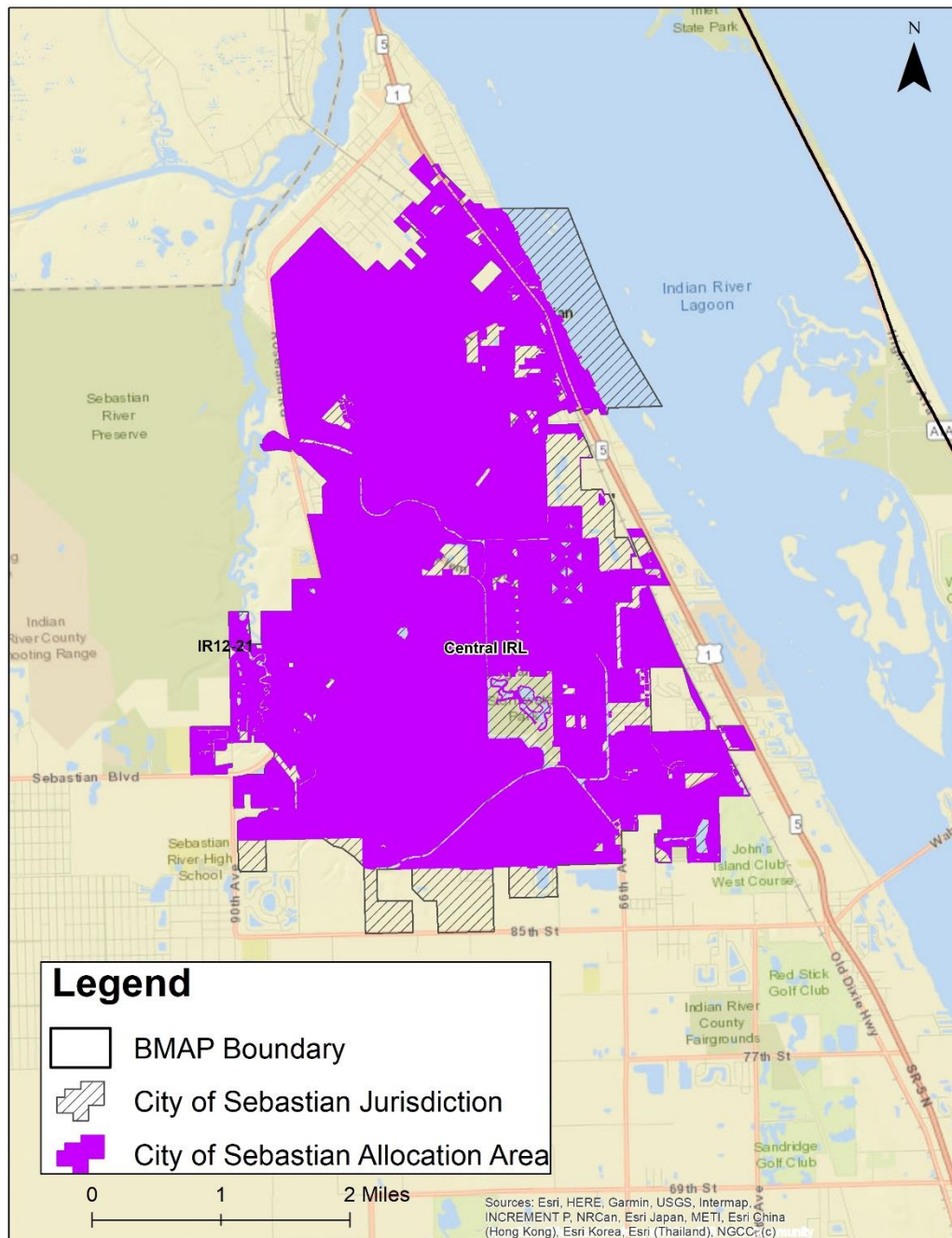


Required Reductions Per TMDL Segment Group

BMAP	Project Zone	TMDL Segment Group	% TN TMDL Total Reduction	% TP TMDL Total Reduction
Central IRL	A, B, SEB	IRL12-21	56%	48%
Central IRL	SIRC	IR-SouthCentral	36%	58%

New Load Calculations from SWIL Model

BMAP	Project Zone	TN (lbs/yr)			TP (lbs/yr)		
		Starting Load	Required Reductions	Allocation	Starting Load	Required Reductions	Allocation
Central IRL	SEB	69,511	55,146	14,365	9,941	6,230	3,711
Total		69,511	55,146	14,365	9,941	6,230	3,711



Draft Project Credit Recalculations

Using the LET and geographic information system (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:

TN (lbs/yr)			TP (lbs/yr)		
Required Reductions	Updated Project Credits	% Reductions Achieved	Required Reductions	Updated Project Credits	% Reductions Achieved
55,146	2,269	4%	6,230	624	10%

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

Notes:

- Projects **SEB-04, SEB-12, SEB-13, SEB-16, SEB-17, SEB-19, SEB-20, SEB-22** are listed as completed; however, we were unable to find treatment area (TA) shapefiles for these projects in our records. These were left out of the reduction calculations but may be incorporated to include additional reduction credits once we have the TA shapefiles.
- Additional information needed to calculate reductions for projects **SEB-15, SEB-21, SEB-23**.
- For **SEB-10**, only 0.5% TN and TP reduction efficiency was applied for fertilizer ordinance. If there are additional components of an overall education/regulatory program, the efficiency could increase to a maximum of 6%.

Potential future reductions - [underway or not yet verified]:

TN (lbs/yr)			TP (lbs/yr)		
Required Reductions	Updated Project Credits	% Reductions Achieved	Required Reductions	Updated Project Credits	% Reductions Achieved
55,530	9,264	17%	13,297	1,684	13%