



AGENDA REPORT
December 7, 2017

ADD ON 12-7-17
II A 2

SUBJECT:

Save Our Indian River Lagoon Project Plan – Change in Cost Share for Substitute Projects

FISCAL IMPACT:

This action does not change the cost of specific projects listed in the Save Our Indian River Lagoon Project Plan (SOIRLPP). It modifies the potential for cost savings associated with future Substitute Project requests to be considered by the County Commission during annual SOIRLPP updates.

DEPT/OFFICE:

Natural Resources Management

REQUESTED ACTION:

It is requested that the Board: 1) approve Replacement Table ES-1 (recommended by the Save Our Indian River Lagoon Citizen Oversight Committee on November 17, 2017) to be incorporated into the 2018 annual update of the Save Our Indian River Lagoon Project Plan; and 2) direct the associated changes in cost share eligibility be implemented for all future Substitute Project Requests including those due in December 2017 and January 2018, for consideration in the 2018 SOIRLPP update.

SUMMARY EXPLANATION and BACKGROUND:

Table ES-1 from the Executive Summary of the Save Our Indian River Lagoon Project Plan (SOIRLPP) is used to determine the eligible cost-share per pound of Total Nitrogen (TN) removed from the lagoon per year for each type of Substitute Project that is considered for funding by the Citizen Oversight Committee and the Brevard County Commission. The County-wide average costs shown in Table ES-1 (below) were calculated by averaging the sub-lagoon specific costs for each project type adopted in the original SOIRLPP.

Table ES-1: Summary of the Project Types, Costs, and Nutrient Reductions from the Save Our Lagoon Project Plan

Project Category	Project Type	Estimated Total Project Cost	Nitrogen Reductions (lbs/yr)	Average Cost/lb/yr of TN	Phosphorus Reductions (lbs/yr)	Average Cost/lb/yr of TP
Reduce	Fertilizer Management/Public Education	\$625,000	6,123	\$102	813	\$769
	WWTF Upgrades for Reclaimed Water	\$9,400,000	40,778	\$214	TBD	TBD
	Septic System Removal	\$41,764,000	56,509	\$852	N/A	N/A
	Septic System Upgrades	\$22,192,000	27,659	\$802	N/A	N/A
	Stormwater Projects	\$10,800,000	118,440	\$88	17,026	\$612
Remove	Muck Removal	\$198,100,000	491,300	\$408	73,650	\$2,733
Restore	Oyster Reef Living Shorelines	\$10,000,000	21,120	\$473	7,181	\$1,393
Respond	Projects Monitoring	\$10,000,000	N/A	N/A	N/A	N/A
Total	Total	\$302,881,000	761,929	N/A	98,670	N/A

Beachfront municipalities requested that the average cost per sub-lagoon for stormwater bio-activated media (BAM) projects, as reported in Table 26 (below), rather than the county-wide average reported in Table ES-1, be used to determine the eligible amount of cost share from the Lagoon Trust Fund for their Substitute Stormwater Projects. The average cost of stormwater treatment for the Banana River is more expensive than other sub-lagoon watersheds primarily because the drainage areas on the barrier island are smaller than the drainage areas on the mainland and require the construction of more small projects instead of fewer, larger, more cost-effective projects.

Table 26: Estimated TN and TP Reductions and Costs for BAM Projects

Sub-lagoon	Number of Basins	Estimated Total Project Cost	TN Reductions (lbs/yr)	Cost/lb/yr of TN	TP Reductions (lbs/yr)	Cost/lb/yr of TP
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Sub-lagoon	Number of Basins	Estimated Total Project Cost	TN Reductions (lbs/yr)	Cost/lb/yr of TN	TP Reductions (lbs/yr)	Cost/lb/yr of TP
Banana River Lagoon	41	\$4,625,000	48,391	\$96	6,896	\$671
North IRL	37	\$4,850,000	52,936	\$92	7,632	\$635
Central IRL	6	\$1,325,000	17,113	\$77	2,497	\$531

In response to the cost share change requested by municipalities, the Citizen Oversight Committee recommended to the County Commission that the cost share be modified per Table 26 of the plan to \$96/lb/yr of TN for the Banana River Lagoon and \$92/lb/yr of TN for the North Indian River Lagoon (IRL). They also recommended that the cost share for Central IRL stormwater projects remain at the current cost share of \$88/lb/yr of TN for existing contracts but be reduced to the Table 26 cost of \$77/lb/yr of TN for future substitute projects. This recommendation was not approved by the County Commission. Concerns were voiced about reducing the cost share for future substitute projects submitted by Central IRL partners. On October 10th, the Board asked the Citizen Oversight Committee to reconsider.

In response to the County Commission's request to reconsider, the Citizen Oversight Committee requested that staff recalculate the average removal cost for stormwater projects listed in the SOIRLPP using a different spatial variable – mainland, Merritt Island, and the barrier island – instead of by sub-lagoon. This calculation is shown below.

Estimated TN Reductions and Costs for Mainland, Merritt Island and Barrier Island Stormwater BAM Projects

Location	Estimated Total Project Cost	TN Reductions (lbs/yr)	Cost/lb/yr of TN
Mainland	\$5,325,000	60,521	\$87.99
Merritt Island	\$2,200,000	24,714	\$89.02
Barrier Island	\$3,275,000	33,205	\$98.63
Total	\$10,800,000	118,440	\$91.19

The results of this spatial analysis for stormwater projects brought to light the method used to calculate the average cost shown in Table ES-1. The original Table ES-1 was based on simple averages. For example, stormwater was calculated as $(\$96 + \$92 + \$77)/3 = \88 . However, the weighted average of the county-wide stormwater project costs is \$91.19 per pound of TN per year ($\$10,800,000$ divided by the total of 118,440 lbs of TN removed = \$91.19/lb of TN reduced/year). Staff recalculated the county-wide costs for each project type in the SOIRLPP using weighted averages. In addition, staff separated the lower cost of connection to existing sewer lines from the more costly projects that require extension of sewer lines before connections can begin.

On November 17th, the Save Our Indian River Lagoon Citizen Oversight Committee considered the varying spatial costs for stormwater projects and using weighted averages for calculating Substitute Project cost share eligibility. They recommended that the County Commission consider approving the following replacement for Table ES-1 of the SOIRLPP.

Replacement Table ES-1: Summary of Project Types, Costs, and Nutrient Reductions using Weighted Averages

Project Category	Project Type	Estimated Total Project Cost	Nitrogen Reductions (lbs/yr)	Average Cost/lb/yr of TN	Phosphorus Reductions (lbs/yr)	Average Cost/lb/yr of TP
Reduce	Fertilizer Management/Public Education	\$625,000	6,123	\$102	813	\$769
	WWTF Upgrades for Reclaimed Water	\$9,400,000	40,778	\$231	TBD	TBD
	Septic System Removal by Sewer Extension	\$34,000,000	38,979	\$872	N/A	N/A
	Septic System Removal by Sewer Connection	7,764,000	17,530	\$443	N/A	N/A
	Septic System Upgrades	\$22,192,000	27,659	\$802	N/A	N/A
	Stormwater Projects - Mainland	\$5,325,000	60,521	\$87.99	8,678	\$614
	Stormwater Projects – Merritt Island	\$2,200,000	24,714	\$89.02	3,290	\$669
	Stormwater Projects – Barrier Island	\$3,275,000	33,205	\$98.63	5,057	\$648
Remove	Muck Removal	\$198,100,000	491,300	\$403	73,650	\$2,690
Restore	Oyster Reef Living Shorelines	\$10,000,000	21,120	\$473	7,181	\$1,393
Respond	Projects Monitoring	\$10,000,000	N/A	N/A	N/A	N/A
Total	Total	\$302,881,000	761,929	N/A	98,670	N/A

Although the cost of specific projects listed in the SOIRLPP does not change, the cost share that would be offered to partners submitting future Substitute Project Requests would change for the following project types: WWTF Upgrades for Reclaimed Water, Septic System Removal, Stormwater, and Muck Removal. While these cumulative changes have the potential to reduce the gain in overall cost effectiveness that results from approving Substitute Projects, they also have the potential to increase municipal participation and other partnerships, thereby accelerating project delivery, lagoon response and associated economic growth.

ATTACHMENTS:

Description

No Attachments Available

REVIEWERS:

Department

**Natural Resources
Management**

**ACM Development
County Manager**

Reviewer

Barker, Virginia

Denninghoff, John

Abbate, Frank



Action

Approved

Approved

Approved



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December 8, 2017

MEMORANDUM

TO: Virginia Barker, Natural Resources Management Director

RE: Item II.A.2., Change in Cost Share for Substitute Projects for Save Our Indian River Lagoon Project Plan (SOIRLPP)

The Board of County Commissioners, in regular session on December 7, 2017, approved the Replacement Table ES-1 to be incorporated into the 2018 annual update of the SOIRLPP; and directed the associated changes in cost share eligibility be implemented for all future substitute project requests including those due in December 2017 and January 2018, for consideration in the 2018 SOIRLPP update.

Your continued cooperation is always appreciated.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
SCOTT ELLIS, CLERK

Tammy Rowe

Tammy Rowe, Deputy Clerk

cc: Finance
Budget