



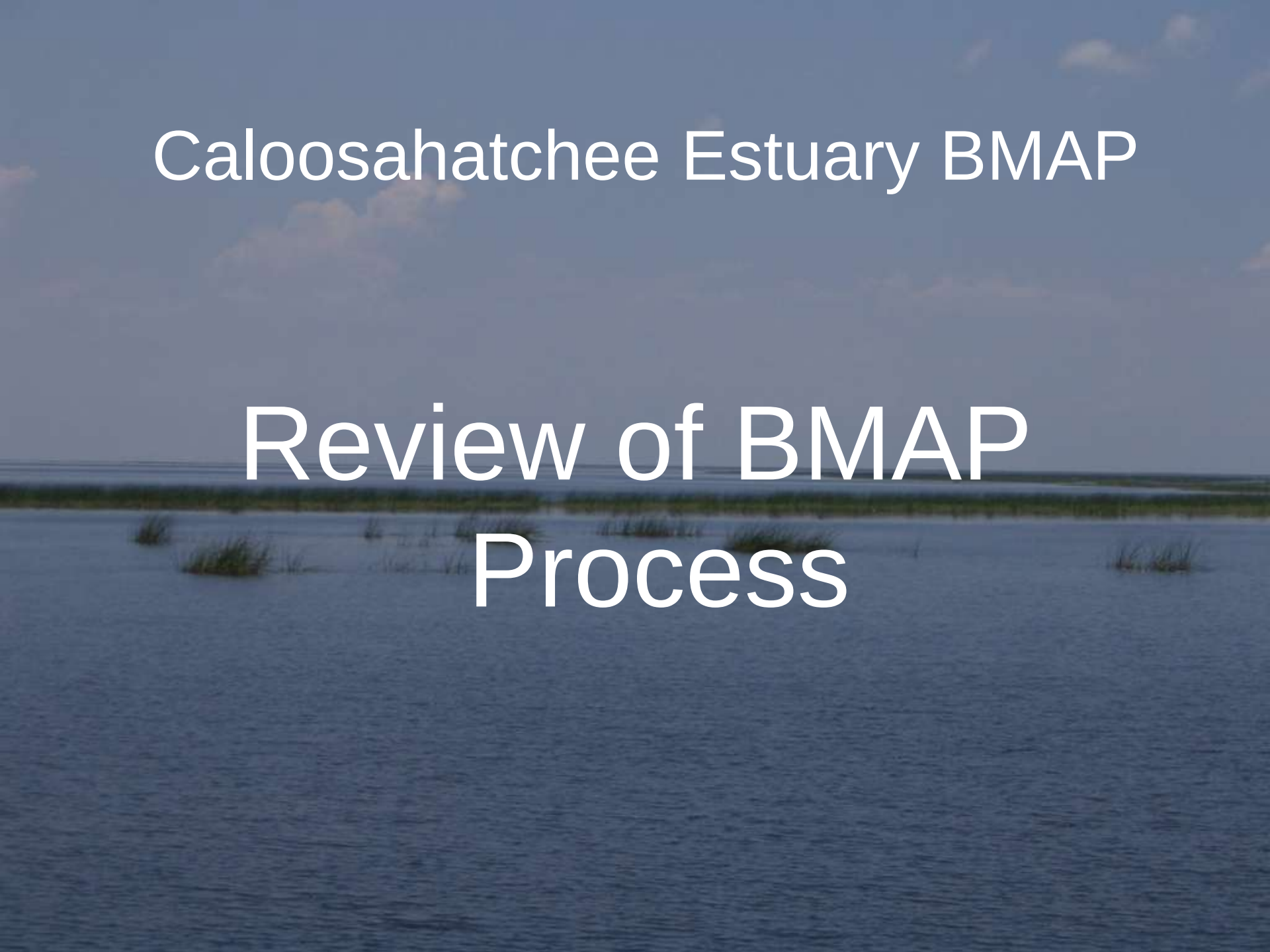
Caloosahatchee Estuary BMAP 3rd TECHNICAL MEETING

September 22, 2010 ❖ 9:30 am

South Florida Water Management District
2301 McGregor Boulevard, Ft. Myers Florida 33901

Agenda

1. Welcome and Opening Remarks
2. Review of BMAP Process
3. Summary of Loading and Interim Targets
4. Basin Working Groups
5. Project Credit Information



Caloosahatchee Estuary BMAP

Review of BMAP Process

Caloosahatchee Estuary TMDL 3240A, 3240B, 3240C

■ TMDL for Nutrients

- ❖ **Causative Pollutant** – Total Nitrogen (TN)
- ❖ **Target** : Seagrass light requirements in San Carlos Bay

- ## ■ TMDL= 23% Reduction in Total Nitrogen (over the entire river basin)

Caloosahatchee BMAP

- Current Total Load at the Estuary – 11,799,762 lbs/yr
- Current Load from Tidal Portion - 2,063,723 lbs/yr
- Required Reduction – 2.71 million pounds
- Target TN load at Estuary – 9,085,817 lbs/yr

Summary of TMDL

Source of Total Nitrogen		Existing Loading		
		Load (lb/yr)	Load (tons/y)	% of Total
Upstream of S-79				
	Lake Okeechobee at TMDL	6,222,155	2,822	52.7%
	Load to be Removed from Lake O	782,224	355	6.6%
	NPS Loading	2,731,660	1,239	23.2%
Subtotal From S-79		9,736,039	4,416	82.5%
Estuarine (Below S-79)				
	WWTP Loads	136,875	62	1.2%
	NPS Loads	1,926,848	874	16.3%
Subtotal Below S-79		2,063,723	936	17.5%
Total to Estuary		11,799,762	5,352	100.0%
Load at TMDL		9,085,817	4,121	77.0%
Amount Reduced		2,713,945	1,231	23.0%

Caloosahatchee Estuary BMAP

- Current Loads - Loads Calculated From 2004 Land Use (Used In The TMDL).
- Geo-processing Steps Were The Same Except As Previously Described.
 - ❖ Water and wetlands were not clipped from the coverage, since they were included in the TMDL.
- The Total Current Calculated Load Is Essentially The Same As The TMDL Nonpoint Source Load Published In The TMDL.

Caloosahatchee Estuary BMAP

Summary of Stakeholder Loading

Key Stakeholders - Tidal Caloosahatchee Basin

- Lee County
- Charlotte County
- City of Cape Coral
- City of Ft. Myers
- East County Water Control District
- Lucaya CDD
- FDOT
- FDACS

Summary of Loading

Caloosahatchee EstuaryNPS Loads			
Area Name (Within Tidal Caloosahatchee Watershed)	Total Area (Acres)	Average Annual TN Load (lb)	Load Expressed as % of Tidal NPS Load
City of Cape Coral	36,621	360,239	20.2%
City of Fort Myers	11,802	168,805	9.5%
ECWCD	32,984	140,145	7.9%
Lucaya CCD	134	871	0.0%
Unincorp. Lee County	64,304	556,429	31.2%
Charlotte County	72,097	205,952	11.5%
FDOT	2,256	28,635	1.6%
Agriculture	39,048	324,076	18.2%
Total Load	259,247	1,785,153	100.0%

Notes:

1. Total Area slightly different (< 0.1%) than TMDL as it is based on model subbasin boundaries, not WBID boundaries.
2. In the process, it was discovered that there was double counted loads – existing load shown here is slightly lower (3.7%) than shown in TMDL

Load Reductions at 23%

Caloosahatchee Estuary NPS Loads - 23% Reduction

Area Name (Within Tidal Caloosahatchee Watershed)	Average Annual TN Load (lb)	23% Reduction of Current Load
City of Cape Coral	360,239	277,384
City of Fort Myers	168,805	129,980
ECWCD	140,145	107,912
Lucaya CCD	871	671
Unincorp. Lee County	556,429	428,450
Charlotte County	205,952	158,583
FDOT	28,635	22,049
Agriculture	324,076	249,538
Total Load	1,785,153	1,374,568

- Pros - All With Same Reduction %
- Cons - Unfair To Minimally Developed Lands

Background Load

Area Name (Within Tidal Caloosahatchee Watershed)	Existing Loading				
	Total Area (Acres)	Average Annual TN Load (lb)	NPS Background Loading (lb/yr)	Non- Background Load (Total - Natural Load, lb/yr)	% of Total Non- Background Load
City of Cape Coral	36,621	360,239	185,333	174,906	26.2%
City of Fort Myers	11,802	168,805	102,000	66,805	10.0%
ECWCD	32,984	140,145	106,667	33,478	5.0%
Lucaya CCD	134	871	620	251	0.0%
Unincorp. Lee County	64,304	556,429	306,000	250,429	37.5%
Charlotte County ¹	72,097	205,952	195,654	10,298	1.5%
FDOT	2,256	28,635	11,333	17,302	2.6%
Agriculture	39,048	324,076	209,333	114,742	17.2%
Total Load	259,247	1,785,153	1,116,941	668,212	100.0%

Background Load = Total Load from Natural Land Uses

Allocation Process

- Start with The TMDL Requirement
- Calculate Background Load
- Difference Between the Two is Non-Background Load
- Allocate by Stakeholders Percent of Non-Background Load
- Add Background Load
- Result is Allocated Loading

Allocation by % of Non-Background Loading

Area Name (Within Tidal Caloosahatchee Watershed)	Existing Loading			Allocation by % Non-Background				1st 5-Year Load Reduction (lb/yr)
	Total Area (Acres)	Average Annual TN Load (lb)	NPS Background Loading (lb/yr)	Allocated Load by % Non- Background	Background + Allocated Load	Load Reduction (lb/yr)	% Reduction	
City of Cape Coral	36,621	360,239	185,333	67,434	252,768	107,472	29.8%	35,824
City of Fort Myers	11,802	168,805	102,000	25,757	127,757	41,049	24.3%	13,683
ECWCD	32,984	140,145	106,667	12,907	119,574	20,571	14.7%	6,857
Lucaya CCD	134	871	620	97	717	154	17.7%	51
Unincorp. Lee County	64,304	556,429	306,000	96,552	402,552	153,877	27.7%	51,292
Charlotte County ¹	72,097	205,952	195,654	3,970	199,625	6,327	3.1%	2,109
FDOT	2,256	28,635	11,333	6,671	18,004	10,631	37.1%	3,544
Agriculture	39,048	324,076	209,333	44,239	253,572	70,504	21.8%	23,501
Total Load	259,247	1,785,153	1,116,941	257,627	1,374,568		23.0%	

Non-Background Load at TMDL = TMDL Load – Background Load
 = 1,347,568 - 1,116,941 = 257,627



Caloosahatchee Estuary BMAP

Basin Working Group
Discussion

Historical Need for BWG

- Provide Policy Input to the BMAP Process
- Forum for Discussion, Critique:
 - ❖ Allocation Approach
 - ❖ BMAP Document
 - ❖ Monitoring Requirements
- Official Endorsement of BMAP

What Has Changed for BMAPs?

- FDEP Has Established, and Is Establishing Common Approaches for BMAP Allocations and Policies
- The Sunshine Requirements on the BWG Members Hindered Communications
- Since BMAP Approaches Have Been Established, There are Limited Options Subject to a Vote
- Difficulty in Establishing BWG Membership

Approach to BMAP Input

- Continue The Technical Working Group, All Of Which Are Advertised
- Hold Special Informational Meetings with Local Policy Makers
- Offer Potential for FDEP Presentation to Councils and Commissions
- No Formal Appointments or Elections of Representatives to Group/Committee

Reasons for a Modified Approach

- Feedback from stakeholders: the Sunshine communication restraints on inter-organization collaboration are significant when trying to coordinate joint projects, MS4 permittee efforts, etc.
- Communications are still needed between policy makers and FDEP to engage them in the BMAP and implementation requirements, and to ensure that FDEP hears concerns from the policy level.
- Designing meetings that preserve and target these communications while removing the “membership” label is a better approach.

Caloosahatchee Estuary BMAP

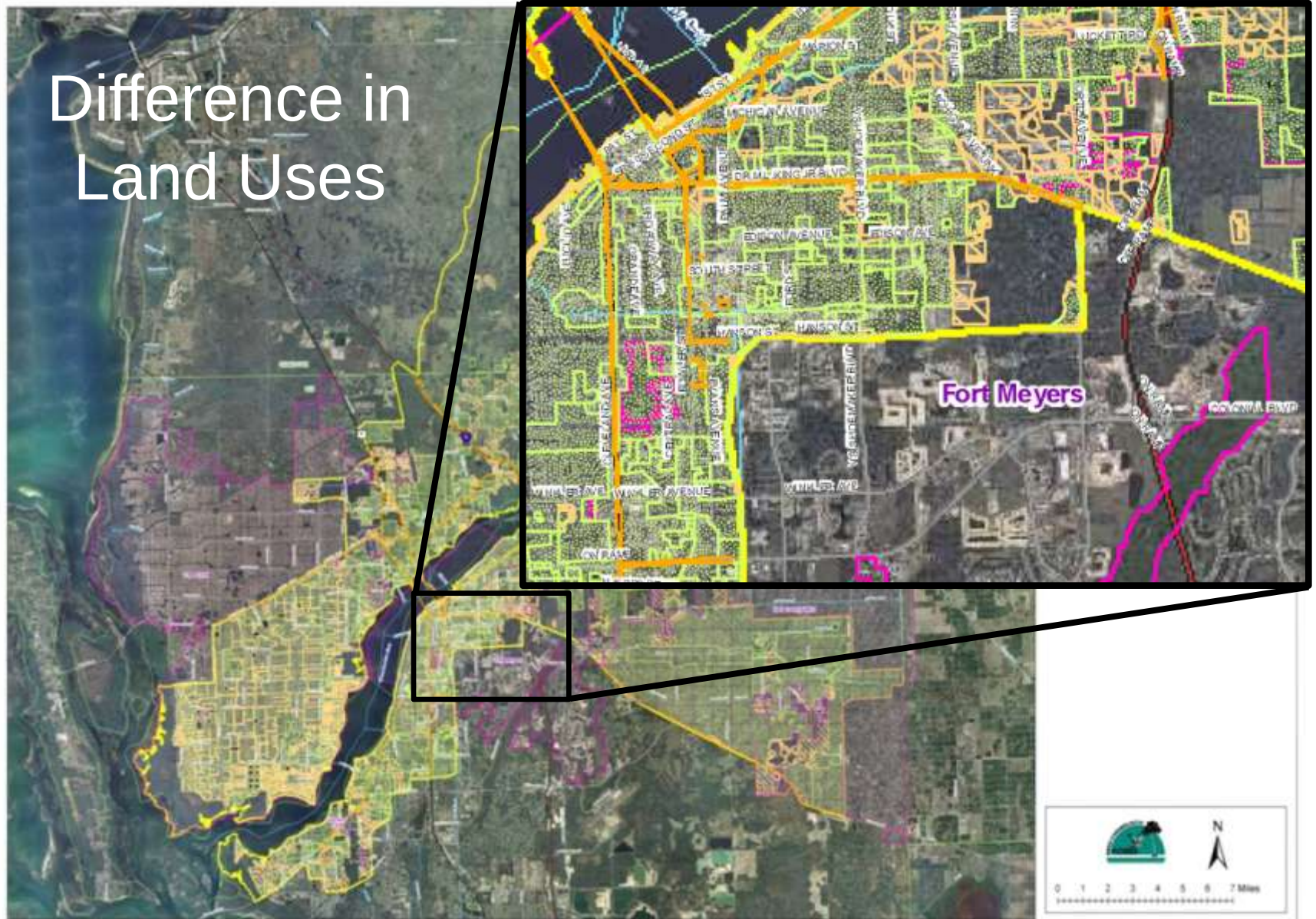
NUTRIENT REDUCTION PROJECTS

Areas of Urban BMPs

Caloosahatchee Estuary NPS Loading - Urban BMPs In Existing Loading

Area Name (Within Tidal Caloosahatchee Watershed)	Total Area (Acres)	% of Area with Urban BMPs
City of Cape Coral	36,621	14.1%
City of Fort Myers	11,802	19.1%
ECWCD	32,984	30.0%
Lucaya CCD	134	0.0%
Unincorp. Lee	64,304	11.5%
Charlotte County	72,097	0.1%
FDOT	2,256	
Agriculture	39,048	
Total Load ¹	259,247	

Difference in Land Uses



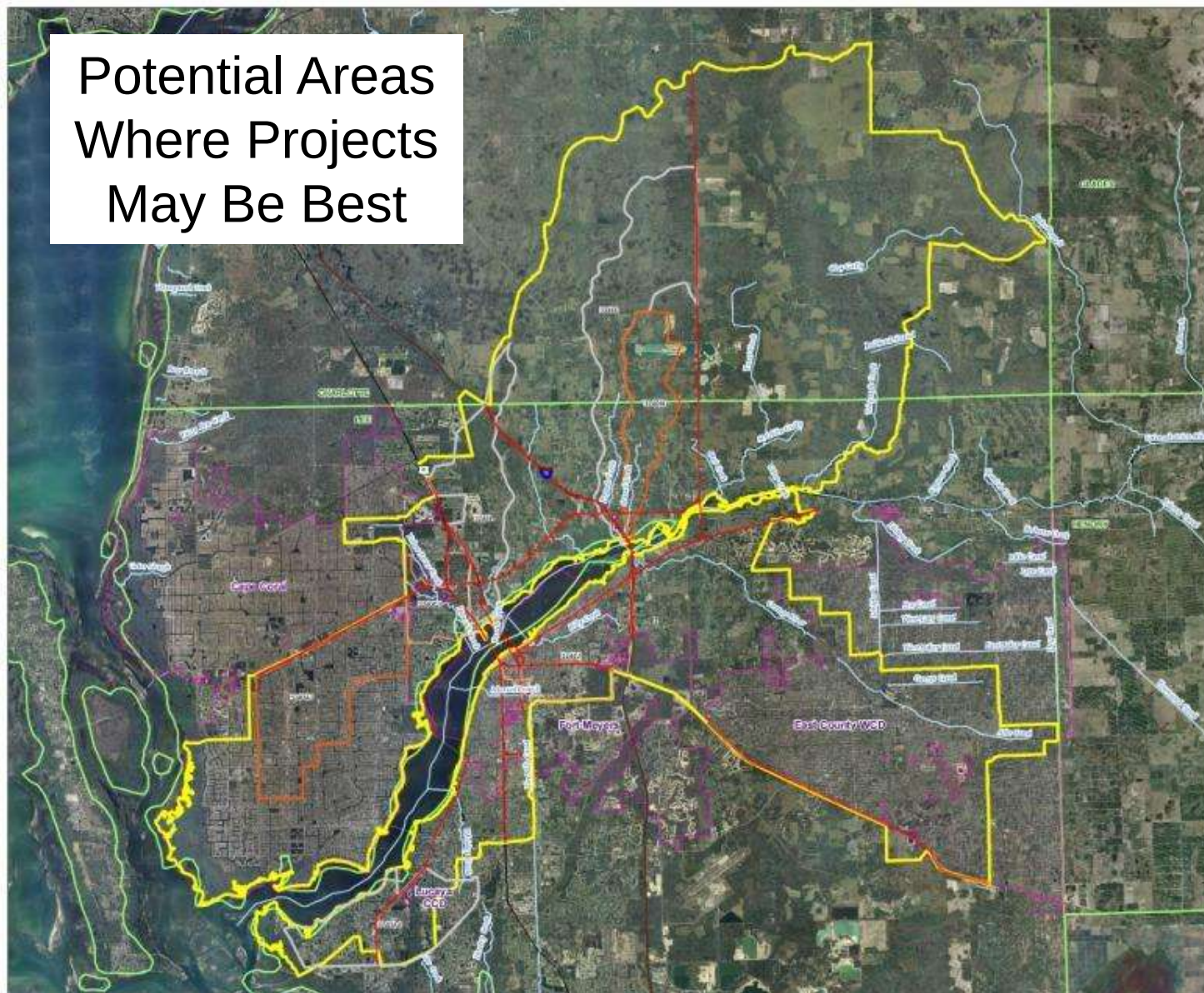
BMAP Project Credits

- Eligibility Dates for BMAP Load Reduction Credits are Based on the Data Period Preceding the TMDL
- Pounds reduced will be subtracted from the total allocation for those projects completed **July 1, 2000** and later.
- Credit counts for treatment above and beyond permit requirements.
 - ❖ Example 1 – BMP To Mitigate Construction
 - ❖ Example 2 – Regional BMP
 - ❖ Example 3 – Retrofit BMP

BMAP Project Credits

- Projects Must Be Operated and Properly Maintained as Permitted.
- Operation and Maintenance records may be Requested as Part of the Project Review Process.
- Projects Not Operated as Permitted, Including Older Projects Not Included for Specific Credit, Could Result in Additional Reduction Requirements by the Responsible Entity.

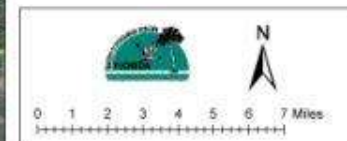
Potential Areas Where Projects May Be Best



Caloosahatchee Tidal BMAP Basin Impaired WBID Waterbodies

Map prepared September 16, 2011. This map is a representation of ground conditions and is not intended for administrative use or for the purpose of determining liability. For more information or copies, contact Russell H. Allen at (813) 241-4501, or russell.h.allen@flh.com.

- Rivers and Larger Streams
- FDOT1 Caloosahatchee Jurisdiction
- Jurisdictions
- Counties
- Impaired WBIDs**
 - DO
 - Nutrients
 - Both



Stakeholder Projects and Management Activities

PROJECTS

- Structural BMPs
 - ❖ Quantifiable Load Reductions
 - ❖ Reductions Not Currently Quantified
- Restoration and WQ Improvement Projects
- Basic Stormwater Management Program Implementation

ACTIVITIES

- Regulations, Ordinances, and Guidelines
- Special Studies and Planning Efforts
- Streetsweeping
- Enhanced O&M Program
- Certain Agricultural BMPs
- Public Education and Outreach Efforts

Assessment of Stakeholder Projects & Practices Information

■ Goals

- ❖ Transparent Assessment Process
- ❖ Realistic Estimates of Nutrient Load Reductions
- ❖ Consistency Between the BMAPs

■ Process

- ❖ Stakeholders Complete the Matrix for Their Individual Projects
- ❖ FDEP Assembles the Master Project Matrix for Each BMAP
- ❖ FDEP Conducts Completeness Checks
- ❖ FDEP Confirms the Estimates
- ❖ FDEP Calculates the Initial Estimate of Reductions
- ❖ Stakeholders Review the Projects Matrix

Preliminary Projects Eligible for Credit

- Structural BMPs (Wet Detention, Baffle Boxes, etc.)
- Source Controls (Street Sweeping, Education)
- Special Consideration:
 - Conservation Land Purchases If Land Use Changed After Purchase
 - Note – May be Exchange of Loading from Original Owner to New Owner

Caloosahatchee Estuary BMAP

NEXT
STEPS

Action Items

- Stakeholders - Finalize Project List Including Spatial Information (i.e., Project Location and Drainage Area)
- FDEP – Provide BMP % Reductions to be Allowed
- Begin Monitoring Plan Development

Questions & Comments?

