

EXECUTIVE SUMMARY

Recommendation for the Board of County Commissioners (Board) to accept the Watershed Management Plan (WMP) and direct the County Manager or Designee to implement the WMP Initiatives utilizing existing Staff and Budget.

OBJECTIVE: To have the Board of County Commissioners accept the WMP and direct the County Manager or designee to implement the recommended Watershed Management Plan (WMP) initiatives utilizing the existing staff and budget.

CONSIDERATIONS: The WMP was developed to satisfy a Growth Management Plan commitment to assess and protect water resources. The project was funded in 2007. Atkins (formerly PBSJ) was hired in 2009 to update the Big Cypress Basin hydrologic / hydraulic model, and develop the WMP. They reviewed existing reports, evaluated existing water resource conditions and developed alternatives to restore or mitigate identified problems.

The WMP in and of itself is not intended to be regulatory. The WMP recommended initiatives may lead to regulations and/or regulatory policies if supported through future vetting and approval by the Board. Nothing contained in the WMP or these recommendations shall bind the Board in any way except that where Board-approved recommendations result in staff developing program, policy, ordinance or regulation for further Board action. The recommendations serve as a guide for staff in developing the resultant policy, program, ordinance or regulation for further consideration by the Board.

The final draft of the WMP is attached. The WMP has been discussed at 7 Environmental Advisory Council (EAC) Meetings, 6 Collier County Planning Commission (CCPC) meetings, and 4 public workshops this year and 31 committee and public workshops have been held since 2007. The WMP has identified water resource concerns regarding:

- Excessive fresh water discharges from canals (including ground water discharges) especially to Naples Bay;
- The drainage system does not provide the desired level of flood protection;
- Pollutant loading associated with development may degrade water quality conditions;
- Aquifer impacts due to canal discharge, reduced recharge, and potable and agricultural withdrawal demands.

Some concerns are being addressed by ongoing and completed restoration projects in South Golden Gate and Lake Trafford. Projects, regulations and policy changes were evaluated to mitigate these remaining identified concerns. The recommended projects and initiatives are listed below and discussed in the Recommendations. (The text of the Recommendations here may vary from the text in the WMP due to vetting with advisory committees and time constraints. The final approved Board recommendations will be inserted in the final WMP.) Implementation of the WMP recommendations is to be accomplished by utilizing existing staff to manage the recommended projects (Table 1) and non structural initiatives (Table 2) as time and existing budget allow.

Implementation of recommended projects will be accomplished with the existing stormwater budget, partnering, and grants as funds become available following the Lely Area Stormwater Improvement Project completion. The projects can be phased into the Capital Project schedule as the budget permits. Non-structural initiatives are to be implemented by developing policy, standards, and or criteria in scheduled Land Development Code (LDC) and Growth Management Plan amendment cycles utilizing existing staff, committees and with only minor consulting technical assistance.

The Low Impact Development (LID) stormwater treatment best management practices (BMPs) will be an incentive based program where target LDC requirements will be relaxed to encourage LID components. The Flood Protection Level of Service (LOS) program will be contingent upon acceptance of the alternate base standard and analysis per the policy development process. The Florida - Friendly Fertilizer Ordinance was developed separately from the report and was approved by the Board on 7/26/11.

Table 1. Projects Benefit to cost ratio (Recommendation 1).

Project Name	Total Normalized Project Score	Estimated Project Cost	Benefit-to- Cost Ratio
		(Millions)	
North Golden Gate Estates Flowway Restoration	30.09	2.37	12.71
North Belle Meade Spreader Swale (1)	25.24	7.03	3.59
Henderson Creek Diversion (1)	20.00	5.71	3.50
South I-75 Canal Spreader Swale	10.49	3.13	3.35
Wolfe Road Wetland Treatment System	3.45	1.42	2.44
Corkscrew Regional Ecosystem Watershed	2.01	0.10	20.95
Upper Golden Gate Estates Canal Weir Construction	0.67	0.55	1.21
Orange Tree Canal Control Structure Installation	0.67	0.55	1.21
Henderson Creek Off-Line Storage Reservoir	2.33	2.93	0.79
US HWY 41 Stormwater Treatment Area	0.15	0.54	0.28

(1) Weighting considers benefits to two (2) watersheds.

Table 2. Non-structural initiatives identified to contribute to hydrologic restoration and or pollutant reduction

Recommendation	Initiative
2	Low Impact Development Program (LID)
3	Stormwater Retrofit Program
4	Fee-Based Stormwater Utility Incentive Program
5	Flood Protection Initiatives
6	Flood Protection Levels of Service Criteria
7	Golden Gate Estates Transfer of Development Rights Program
8	Golden Gate Estates Watershed Mitigation Program
9	Improved Operations of Water Control Structures
10	Water Quality Monitoring Program
11	Additional Watershed Protection Programs
12	Detention Pond Certification Program
13	Florida Friendly Fertilizer Ordinance

Environmental Advisory Council (EAC) Recommendation: On September 7, 2011, the Environmental Advisory Council (EAC) recommended unanimously to approve the Watershed Management Plans with the following conditions:

1. *Staff to review and comment on the conformance of the Plan in staff reports with respect to any environmental applications presented to the EAC for consideration.*
2. *Staff to provide an annual update to the EAC on the status of implementing the Plan.*
3. *Staff to begin the process of developing a Low Impact Development (LID) Manual.*

Collier County Planning Commission (CCPC) Recommendation: On October 20, 2011, The Collier County Planning Commission (CCPC) voted unanimously to move the 13 identified recommendations forward and:

1. *Include SFWMD coordination in the certification program (Recommendation 12). Add a Lake Management Best Management Practices education program to Recommendation 12, including guidance for alternatives to copper based algaecides.*
2. *Evaluate effectiveness of the Watershed Management Plans in 7 years and then every 5th year.*

FISCAL IMPACT: The proposed implementation strategy is to utilize existing staff and advisory committees with minimal consultant technical support to develop Growth Management Plan (GMP) revisions and LDC amendments that are incentive based. Structural Projects may be implemented as stormwater funds, partners, or grants become available. The implementation of the initiatives will be cost neutral.

LEGAL CONSIDERATIONS: This item has been reviewed by the County Attorney's Office and has been found legally sufficient. A majority vote is required for approval. -STW

GROWTH MANAGEMENT IMPACT: Completion of the WMP and implementation initiatives will support objective 2.1 of the Conservation and Coastal Management Element of the County Growth Management Plan.

RECOMMENDATION: That the Board directs the County Manager or designee to consider projects identified in Table 1 during the development of the surface water business plan and continue to develop the other following cost neutral and incentive based initiatives: *(Note: All of the projects and initiatives below will require additional Board approval during subsequent phases as they are brought forward.)*

1. Implementation of the projects in Table 1 as funding is available using existing Stormwater budget funds, grants, and by partnering with other entities.
2. In addition to current stormwater treatment standards (150% water quality volume requirements), develop a LID treatment program with existing staff by creating LDC incentives to encourage and offset any additional startup or operational costs. Focus will be on techniques that maximize water quality and recharge benefits.
3. Start a Stormwater Treatment System Retrofit program to retrofit public stormwater systems with LID and other treatment BMPs to maximize water quality and recharge benefits as grants and stormwater budget funds are available.
4. Evaluate the effectiveness of a Fee-Based Stormwater Utility to create incentives to improve water quality treatment and recharge. Structure of the fees would not increase the total revenues but would reward users with effective treatment systems. This initiative would require an initial fee rate study that would be funded by grant or from existing stormwater funds.
5. Utilize existing staff to develop flood protection LDC requirements for stormwater discharge rates, volume discharge limits, and verification of no downstream floodplain impacts to prevent increased flooding risk to downstream properties.
6. Consider changing the Flood Protection LOS standard by utilizing existing staff to analyze the WMP proposed system to insure it has the intended benefit of expanding the range of grading and identifying critical areas for improvement. If analysis is positive, develop an implementation plan to amend the standards in the Growth Management Plan.
7. Evaluate a North Golden Gate Estates (NGGE) Transfer of Development Rights program with a sending area as the North Golden Gates Flowway Restoration Area to encourage restoration of resource protective lands, and improve recharge of surficial aquifers. The receiving area would not be in the rural Golden Gate Estates area. This will be accomplished utilizing existing staff and an oversight committee to determine if there is support for the program. Final acceptance of the program will be through EAC, and CCPC reviews and Board approval.
8. Evaluate a NGGE mitigation program to ensure stormwater treatment, and floodplain storage capacity within the basin is not lost. This will be a pilot program that can be utilized in other basins if it is effective. Existing staff will work alternatives through the review process during the next Golden Gate Master Plan revision.
9. To maximize ground water recharge, improve water quality, and reduce ground water discharge to the canal network staff will work with South Florida Water Management and Big Cypress Basin staff to improve the operation and or design of the Water Control Structures in future planned basin and structure evaluations.
10. Refinement of the existing Water Quality Monitoring program to prioritize sampling to impairments and include focused stormwater runoff sampling. This will be accomplished through contract negotiation with partners, reevaluation of the existing monitoring program during Florida Department of Environmental Protection Water Quality Assessment, and or grant opportunities.
11. Existing staff will work with state and federal partners to develop the Additional Watershed Protection Program as stormwater funds and or grants are available. This program includes

efforts to encourage storage and treatment of stormwater in fallow agriculture areas and undeveloped estates lots to improve water quality, recharge and delivery of fresh water to the estuaries. The other component of the program is to reevaluate the preservation standards in rural fringe neutral areas with identified resource protective lands.

12. Develop a stormwater treatment system certification program with existing staff and utilizing guidance in the draft State Stormwater Quality Applicant's Handbook and Conservation and Coastal Management Element Policy 2.2.5 in the next LDC. As an alternative staff could be directed to modify CCME Policy 2.2.5 through the EAR Based amendments to eliminate this requirement.
13. Implement the Board adopted Florida-Friendly Fertilizer Use on Urban Landscapes ordinance and complimentary public education program utilizing existing staff.

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Attachments:

1. Collier County Watershed Management Plan*
2. Watershed Management Plan Presentation

*It should be noted that due to the size of the WMP, it was not uploaded to the SIRE viewing system. A Public View Copy has been provided to the County Manager's Office at Building "F", Second Floor, 3299 Tamiami Trail East, Naples FL, 34112. The full report can be found on-line at <http://www.colliergov.net/Index.aspx?page=2302>