



Memorandum

To: Environmental Advisory Council
From: Mac Hatcher, Senior Environmental Specialist
Date: August 5, 2011
Subject: Draft Staff Summary – September 7, 2011 Watershed Management Plan Workshop

Objective: To protect water resources in Collier County by implementing the recommended Watershed Management Plan (WMP) initiatives. We will present the conclusions and recommendations to the Environmental Advisory Council (EAC) and request their approval of the WMP and recommend initiatives for implementation. The WMP was developed to satisfy a Growth Management Plan commitment to assess and protect water resources, the plan is not intended to be regulatory. The WMP recommended initiatives may lead to regulations and or policies if supported through future vetting and approval by the Board of County Commissioners. Nothing contained in the WMP or these recommendations shall bind the Board of County Commissioners in any way except that where these recommendations result in a program, policy, ordinance or regulation, the recommendation shall serve as a guide for staff in developing the resultant policy, program, ordinance or regulation. Any action taken pursuant to these recommendations shall be approved by the Board of County Commissioners by Ordinance or by Resolution, as appropriate.

The final draft of the Collier County Watershed Management Plan is attached. The WMP consists of 4 parts; Volume 1 contains the executive summary, assessment of resources, and development of performance measures. Volume 2 provides the alternatives analysis and prioritized projects. Selected non structural initiatives are in Volume 3 and Volume 4 includes all of the technical memos. The conclusions and recommendations, which includes the projects and initiatives selected to best protect the county's water resources, are in Volume 3. identified and summarizes. If additional edits are necessary they will be made prior to presentation to the BCC.

General information and the original support documents for the WMP are available at our [web page](#). The Collier County WMP final draft will be posted to the web page soon.

Considerations: The WMP has been discussed at 14 EAC meetings since 2007. The WMP has identified concerns regarding:

- Excessive discharges from canals especially to Naples Bay;

- The drainage system does not provide the desired level of flood protection;
- Pollutant discharges associated with development hydrologic impacts;
- Ground water system impacts due to reduced recharge and potable and agricultural withdrawal demands.

Projects, regulations and policy changes were evaluated to mitigate these identified concerns. The recommended projects and initiatives are listed below and discussed in the Recommendations. Implementation of the WMP recommendations is to be accomplished by utilizing existing staff to manage the ranked recommended projects (Table 1) and non structural initiatives (Table 2) as time and existing budget allow.

Implementation of the projects is to be accomplished with existing stormwater budget, partnering, and grants as funds become available following Lely Area Stormwater Improvement Project completion. The projects can be phased into the Capital Project schedule as budget permits. Non structural initiatives are to be implemented by developing policy, standards, and or criteria in scheduled LDC and Growth Management Plan amendment cycles utilizing existing staff, committees and with only minor consulting technical assistance. A general strategy for implementing the non-structural initiatives is presented in Volume 3. The Low Impact Development Program will be an incentive based program where Land Development Code (LDC) requirements will be relaxed to encourage the Low Impact Development (LID) components. The Flood Protection Level of Service (LOS) program will be contingent on 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 BCC 7/26/11.

Table 1. Projects ranked by estimated Benefit to cost ratio.

Project Name	Discharge to Estuary	Water Quality	Wetland Hydrology / Habitat	Ground-water	Total Score	Estimated Cost (\$ million)	Benefit-to-Cost Ratio
Corkscrew Regional Ecosystem Watershed	0.00	0.00	2.01	0.00	2.01	0.10	20.95
North Golden Gate Estates Flowway Restoration	0.05	10.00	10.00	10.00	30.09	2.37	12.71
North Belle Meade Spreader Swale	8.60	2.58	2.70	2.76	25.24	7.03	3.59
Henderson Creek Diversion	10.00	0.00	0.00	0.00	20.00	5.71	3.50
South I-75 Canal Spreader Swale	0.13	1.04	7.81	1.38	10.49	3.13	3.35
Wolfe Road Wetland Treatment System	0.00	0.11	0.00	3.34	3.45	1.42	2.44
Upper Golden Gate Estates Canal Weir Construction	0.00	0.00	0.00	0.67	0.67	0.55	1.21
Orange Tree Canal Control Structure Installation	0.00	0.00	0.00	0.67	0.67	0.55	1.21
Henderson Creek Off-Line Storage Reservoir	1.06	0.14	0.00	0.07	2.33	2.93	0.79
US HWY 41 Stormwater Treatment Area	0.00	0.03	0.12	0.00	0.15	0.54	0.28

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

1	Low Impact Development Program
2	Stormwater Retrofit Program
3	Fee-Based Stormwater Utility Incentive Program
4	Allowable Maximum Site Discharges
5	Runoff volume Control for Large Storm Events
6	Verification of No-Floodplain Impact
7	Flood Protection Levels of Service Criteria
8	Golden Gate Estates Transfer of Development Rights Program
9	Golden Gate Estates Watershed Mitigation Program
10	Improved Operations of Water Control Structures
11	Water Quality Monitoring Program
12	Additional Watershed Protection Programs
13	Detention Pond Certification Program
14	Florida Friendly Fertilizer Ordinance

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.

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

RECOMMENDATION: That the EAC recommend the following cost neutral and incentive based initiatives are implemented to mitigate water resource concerns identified in the WMP.

1. Implementation of the ranked projects in Table 1 as funding can be obtained using existing Stormwater budget funds, grants, and by partnering with other entities.
2. Develop a LID 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 upgrade public systems with LID and other treatment Best Management Practices to maximize water quality and recharge benefits as grants and stormwater budget funds are available.
4. Consider switching to a Fee-Based Stormwater Utility that could create incentives for improved 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. Utilizing existing staff develop flood protection LDC requirements for stormwater treatment system standards proposed in Initiatives 4, 5, and 6 from Table 2 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 within the North Golden Gates Flowway Restoration Area to encourage restoration of resource protective lands, and improve recharge of surficial aquifers. 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 Collier County Planning Commission reviews and BCC 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 add additional stations and include focused stormwater runoff sampling will be accomplished through contract negotiation with partners, reevaluation of the existing monitoring program during TMDL or BMAP development, 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 ecologically valuable 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 a Florida-Friendly Fertilizer Use on Urban Landscapes ordinance and complimentary public education program utilizing existing staff.

PREPARED BY: Mac Hatcher, Senior Environmental Specialist, Growth management Division / Planning and Regulation