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**5.b. Project Specific Solutions**

Areas of known flooding during Tropical Storm Fay and other prior storm events are presented for Board consideration of County actions that may be directed to mitigate or prevent reoccurrence of flooding situations in future storm events.

It must be noted that the solutions for many of these problem areas will be based on design criteria that exceeds the Level of Service by which the remainder of Leon County has been and will be developed. Many of these areas have experienced these problems on a recurring basis, and in virtually all events, the storm events have exceeded Level of Service design standards. However, these areas are also unique in Leon County in their exposure to almost catastrophic impacts from these storms when the remainder of the County does not have such impacts.

*Background:*

Leon County has experienced a number of significant storm events that have exceeded normal design capacity for stormwater handling facilities. It is also to be noted that the Leon County topography, comprised of many closed basins of varying dimensions, is particularly vulnerable to even normal stormwater events, and when the events exceed the range of normal, the impacts quickly become significant to catastrophic.

Tropical Storm Fay was one of those excessive storm events that measured in excess of the 100 year event that is the customary most extreme event used for any stormwater design. TS Fay was also unusual in that it did not deliver uniform impacts across the county. The primary impacts of this storm were felt in the eastern half of the county while areas on the western side of the county that usually are the first to experience flooding did not have that problem at all.

*Discussion:*

This Discussion Item will present a detailed discussion of each of the neighborhoods that were impacted by TS Fay and/or other prior storm events. The information presented will include:

- Type of problem experienced
- Root cause of the problem
- Whether the area impacted is in public or private ownership/maintenance
- Whether or not the area has been identified in prior stormwater studies
- Solution Options
- Costs of solutions
- Regulations in effect at the time of development

The information presented is summarized in Attachment #16. The more detailed information packages for each neighborhood or area is also included in Attachment #17.

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The proposed projects have been categorized as follows:

- County funded project
- County acceptance of road and drainage systems (CARDS, old 2/3's program)
- Flooded property acquisition
- Large scale river basin projects

County funded capital improvement projects: \$6.506 million

This list consists of projects that are located in a public sub-division and involve improvements on public lands. Overall, a minimum of 318 individual parcels would benefit from these projects. The projects range in size from \$26,000 to \$2,000,000. To maximize the funds available, the County would complete as many projects during the current fiscal year and provide the balance of the funds during next fiscal year. Staff recommends allocating \$4.084 million of the currently allocated CIP towards these projects. This would require approximately \$2.422 million in funding during the next budget year. Given the complexity and lead time for design and property acquisition, the phased funding will not impact the implementation of these projects.

Joint Participation Projects: \$3,020,000

Two projects have been identified that involve improvements associated with the CSX Railroad and the National Forest. Both of the projects would require working with the entity to define the scope of the project and determine a joint funding arrangement. The County has initiated contact with CSX. However, at this point in time no formal action has been taken by either party. Based on past experience working with these entities, this will be a long term process.

County acceptance of road and drainage systems (CARDS, old 2/3's): \$26,120,000

This list consists of projects that are located in private subdivisions. As discussed above, the proposed ordinance amends the County code to allow the CARDS program to be utilized to support the drainage projects being proposed. It is recommended that for projects that are specifically being done to address neighborhood flooding, that the County match 20% of the funds for the project. To start the program, \$1,000,000 is recommended to be set aside from the existing stormwater/flooding CIP.

Given the nature of the program, these projects will take some time to develop. County staff will provide the individual neighborhoods information regarding the projects. Petitions will need to be collected and ROW acquired. Some of the project costs versus the number of individual parcels benefiting will not result in a cost feasible solution for the neighborhood. In situations where individual parcels are receiving structural flooding, but would not benefit from the improvement being proposed the parcels is included on the flooded acquisition list.

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Flooded Property Acquisition Program (FPAP): \$93,000,000

As discussed previously, the County FPAP was discounted several years ago. At the current time, the acquisition list contains 216 parcels with a total estimated cost of \$40.67 million. The costs are all inclusive of acquisition, expenses and ultimate demolition of the structures. The balance of the \$93,000,000 million is proposed acquisitions of structures that have been identified through recent storm events but were not included on the original list.

If funded, the FPAP would be voluntary. To fund the acquisitions, staff is proposing the Board consider the issuance of general obligation bonds. General obligation bonds are voted on by the public and supported by an ad valorem millage levy established by the Board annually. As the property acquisitions are all occurring in the unincorporated area, the referendum would be conducted outside the city and the corresponding millage would be levied there as well.

Given that the individual acquisitions would be voluntary it is unknown what the exact dollar amount of parcels would be acquired. Assuming the entire list was acquired, the bond would have the following assumptions: 30 year term, 5% interest rate, \$95.0 million in proceeds (includes expenses, etc.). Based on current property values in the unincorporated area, the millage to support this debt would be 1.29 mills for the unincorporated area the first year. Over the 30 years, assuming modest growth (3%) in property values, the millage rate in year 30 would be 0.55 mills.

If the referendum was approved, the actual bond would be issued in a series of issues which would allow time to negotiate for individual parcels and determine which properties would be acquired. This would reduce the possible size and payments and the corresponding millage rate.

The ballot can be prepared for a special election to be conducted in the unincorporated area only. Based on information provided by the Supervisor of Elections Office, the cost of this special election would cost between \$290,000 and \$327,000. The low end of the range is based on an all mail ballot election and the high end is a traditional precinct based election with early voting. Alternatively, the ballot could be prepared for the November 2010 general election.

Large Scale River Basin Projects: \$82,070,000

Included in the attached schedule are a series of large scale projects that are needed as the result of massive river basin flooding. These projects involve regional areas (Benjamin Chaires, Fairbanks Ferry). Staff has evaluated various solutions, and in these areas the properties in question literally become part of the river basin during large scale rain events. Solutions would involve entire roadways to be raised; however, while this may solve road flooding issue, it may also create the road structure to act as a dam and cause flooding elsewhere. In the Fairbanks Ferry area, solutions would require a massive levee system (similar to New Orleans) to be constructed around the entire neighborhood. The cost would be significant and would require extensive study to determine the feasibility.

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Given the massive undertaking of these types of projects it is highly unlikely that they will be constructed anytime in the foreseeable future. As such any parcels in these neighborhoods that have received structural flooding have also been included in the flooded property list.

***Recommendation***

***#17: Direct staff to proceed with \$6.1 million in capital projects that provide relief to public subdivisions; given the required lead time for design and property acquisition, authorize the funding to be phased (\$4.084 million in the current year and \$2.422 be included in next fiscal year) to complete the project list.***

***#18: Authorize \$1.0 million in funding be set aside to be utilized as a 20% matching fund for the County Accepted Roadways and Drainage Systems (CARDS; old 2/3s) and direct staff to contact neighborhoods that have been identified for this program.***

***#19: Direct staff to work with the CSX Railroad and United States Forestry Service to develop joint participation agreements to address stormwater issues involving these two entities.***

***#20: Provide direction to staff regarding a General Obligation (GO) bond referendum for the purpose of acquiring \$95 million in flooded property in the unincorporated area of Leon County.***

**Options:**

1. Approve recommendations #1 through #19 contained in the workshop packet.
2. Provide staff with direction regarding recommendation #20 relating to a General Obligation (GO) bond referendum to acquire \$93 million in flooded property in the unincorporated area of Leon County.
3. Board Direction

**Recommendation:**

Option #1 and Board direction on #2.

**Attachments:**

1. National Weather Service's official rainfall total for Tropical Storm Fay
2. Actual total of rainfall from Tropical Storm Fay as recorded at solid waste facility
3. Ochlocknee and St. Marks River Basin Map

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4. Excerpts from the October 28, 2003 Volume Control Workshop
5. Typical volume control pond
6. Leon County Map of Closed Basins
7. Total volume of stormwater ponds
8. Example of 10% credit toward Natural and Landscape Area Requirements
9. Seller's Real Property Disclosure Statement
10. Proposed ordinance regarding disclosure of known flood conditions
11. Draft ordinance regarding creation of a new stormwater management special assessment program
12. Tallahassee-Leon County Local Mitigation Strategy
13. 1991 Northwest Florida Water Management District Stormwater Master Plan and 1995 CDM Stormwater Management Master Plan
14. 2009 Stormwater Capital Improvement Projects
15. Map of 2009 Stormwater Master Plan and Capital Improvement Project Locations
16. List of Leon County neighborhoods impacted by flooding and associated map
17. Detailed information on Leon County neighborhoods impacted by flooding