

MANATEE COUNTY BOARD OF COUNTY COMMISSIONERS
WORK SESSION
COUNTY ADMINISTRATIVE CENTER
1112 Manatee Avenue West
Bradenton, Florida
October 31, 2019

Meeting video link: <https://www.youtube.com/channel/UCUlgjuGhS-qV966RU2Z7AtA>

Present were:

Stephen R. Jonsson, Chairman
Betsy Benac, First Vice-Chairman, entered later in the meeting
Misty Servia, Second Vice-Chairman
Carol Whitmore, Third Vice-Chairman
Vanessa Baugh, entered later in the meeting
Reggie Bellamy
Priscilla Whisenant Trace

Also present were:

Cheri Coryea, County Administrator
William Clague, Chief Assistant County Attorney
Robin Toth, Deputy Clerk, Clerk of the Circuit Court



Chairman Jonsson called the work session to order at 9:01 a.m.

AGENDA

BC20191031DOC001

1. **RETIREMENT AWARD**



A Retirement Award was presented to Kaycee Ellis, Citizen Action Center Manager, County Administration, honoring her 28 years of service.

BC20191031DOC002

(Enter Commissioners Baugh and Benac)

2. **PEARCE DRAIN/GAP CREEK WATERSHED MANAGEMENT PLAN – PROJECT ALTERNATIVES**



Tom Gerstenberger, Stormwater Engineering Division Manager, stated the presentation has been broken into two, separate topics: the Pearce Drain Canal/Gap Creek Watershed Plan and the Bowlees Creek Watershed Plan. It cannot be overly emphasized in either one of these watersheds that any improvements or enhancement projects will entirely solve flooding or drainage problems. Improvement projects, either individually or cumulatively in either watershed, will typically be measured in inches and not in feet. Inches in either watershed can make the difference to property owners experiencing or avoiding flooding to homes.



Benjamin Pernezny, Civil Engineer with CDM Smith, Inc. (CDM, f/k/a Camp, Dresser and McKee), used a slide presentation to review the findings and analyses of the Pearce Drain Canal/Gap Creek Watershed Management Plan, and to discuss alternative flood control and flood management strategies evaluated for this watershed. Particular emphasis is on the recurrent, severe flooding over the past few years in Centre Lake Subdivision.



The Pearce Drain Canal/Gap Creek Watershed is an 11-square mile watershed. It is urbanized and developed, with residential development to the east and north, and industrial and commercial activity to the west along the U.S. 301 corridor. It is bordered by University Parkway to the south and State Road (S.R.) 70 to the north. The general direction of drainage is to the northeast, flowing through Pearce Drain Canal to a confluence with Gap Creek, just south of S.R. 70, continuing underneath S.R. 70, and discharging into Braden River. Pearce Drain Canal/Gap Creek Watershed can flow and interact with the Bowlees Watershed to the west, as well as the Whittaker Bayou Watershed to the south. It is a flood-prone watershed

that has experienced significant flooding to several roads over the past few years, as well as inundation to Centre Lake Subdivision by past storm events (Hurricane Hermine, August 2016 and August 2017 storm event).

CDM built a stormwater model simulating the major drainage systems of the Pearce Drain Canal/Gap Creek Watershed, in order to calibrate and validate the accuracy of model data against data from the past storm events. Model Development and Calibration shows a comparison of the August 2017 event with simulated inundation at Centre Lake Subdivision. A Centre Lake Flooding Summary Existing Conditions graph was shown on how many of the 61 homes in Centre Lakes are anticipated to experience structural flooding above the finished floor elevation.

 CDM, in partnership with the County and Southwest Florida Water Management District (SWFWMD), performed a comprehensive alternative analyses of 14, regional alternatives (Alternative 3 under revision), to address flooding throughout the watershed. CDM looked at using more conventional flood management strategy, the creation of new treatment ponds or floodplain compensations ponds, unavailable undeveloped area, or modifying existing ponds to provide additional storage. It was technically challenging to achieve significant reductions in flood stages in Pearce Drain, even at a significant cost.

 CDM subsequently looked at more complex alternatives, involving large pump stations with the capability to pump water out to the east or west, and the widening of Pearce Drain by 50 feet, which would have significant impact on adjacent properties and structures. CDM also evaluated one particular alternative, focusing on Centre Lake Subdivision, to determine what it would take to remove the 61 homes from the 100-year floodplain.

 Mr. Pernezny outlined four, particular alternatives that, while providing regional benefit to the entire watershed, do not achieve the desired results in Centre Lake. He also outlined an Alternative 3, which specifically addresses flooding in Centre Lake.

- Alternative 8: Centre Lake Subdivision Buyout and Storage – \$35.5 million: Buy out all 61 residences; remove existing structures from the floodplain; and convert the naturally low lying area to floodplain compensation storage. In terms of a regional benefit, this alternative only lowers the flood stage for the 100-, 50- and 25-year storms by one-tenth of a foot.
- Alternative 9: Pearce Drain Channel Widening – \$41.8 million: 50-foot widening of Pearce Drain/Gap Creek, from its crossing at U.S. 301 to discharge at Braden River; and extensive parcel and necessary structure acquisition in order to obtain drainage easements for the widening. This alternative provides significant, regional benefit.
- Alternative 13: Centre Lake Storage, Diversions, Pumping – \$55.7 million: Removes only one Centre Lake structure; includes new storage ponds and retrofitted ponds, from Tallevast Road to S.R. 70; construct a pump station in Centre Lake to remove water, construct a partial flood wall; and gravity diversion storm sewers to Braden River and Sarasota Bay. This alternative offers limited benefits, with an estimated eight-tenths of a foot of flood-stage reduction.
- Alternative 14: Ten-foot Channel Widening and Whitfield Avenue Storage Improvements – \$17.3 million: Widen the channel for Pearce Drain by ten feet in select locations to not impact existing structures; construct three floodplain compensation ponds on privately-owned property (about 25 acres around the Whitfield area, including one pond directly across Pearce Drain from Centre Lake); improve drainage along 33rd Street East; and modify existing control structures to provide more storage. All 61

homes would still be inundated with the 100-year storm event.



CDM, in conjunction with the County, developed a revised Alternative 3:

- Alternative 3: Centre Lake Improvements/Construction of a Floodwall – \$8.4 million: This alternative focuses on Centre Lake Subdivision; the major component is the construction of a floodwall surrounding Centre Lake and raise/reconstruct the entrance road off Prospect Road; construct a pump station in Centre Lake to remove water; implement existing pond modifications as recommended in the other alternatives to equalize offsite impacts to the floodplain; and install baffle boxes through the major outfalls to improve water quality that could be considered a regional benefit to the entire watershed. The County has submitted a Cooperative Funding Initiative (CFI) Application to Southwest Florida Water Management District (SWFWMD) for 2021 for 50/50 cost sharing.

Through initial modeling, CDM estimated that Alternative 3 offered the best solution by reducing the flood stage for the 100-year storm in Centre Lake by 2.2 feet and removes all 61 homes out of the 100-year floodplain, at a cost of \$138,000 per structure.



Discussion ensued that more information is needed on the floodwall, all 61 homes would have to be sold with Alternative 3, stormwater would ultimately drain to Braden River, effects to other properties surrounding Braden River, property values in Centre Lake, what are the alternatives to property owners, and more cost information is needed on Alternative 3.



Mr. Gerstenberger stated the focus has been on Pearce Drain since the 2016 and 2017 storm events. Based on CDM's analyses, each alternative has challenges; however, the most cost savings solution is the floodwall (Alternative 3). Staff anticipates presenting Alternative 3 to SWFWMD as a CFI Application, with a 50/50 cost share with the County. SWFWMD will examine each alternative to determine cost effectiveness and benefit; not just for Centre Lake, but for the entire watershed. It is the position of staff that Alternative 3 provides the most flood reduction and is the best option for Centre Lake.



Sia Mollanazar, Public Works Deputy Director, Engineering Services, spoke of his involvement with Centre Lake Subdivision since 1988. Centre Lake could hold its own if it could control flooding from Pearce Drain. A flap gate (36-inch pipe from Centre Lake connecting to Pearce Drain) was installed in 1993 and lasted until 2016. Earlier studies offered no solution to the flooding issue. CDM built a storm water model involving the construction of a four-foot-high masonry floodwall around Centre Lake and the construction of two speed bumps at the entrance road to Centre Lake off Prospect Road. This model lowered the flood stage by two feet.

Mr. Mollanazar further explained how impoundment and lake area could affect flooding displacement. Based upon the analyses and first floor elevation in the watershed in this area, all structures were built one foot above flood elevation. Even if the floodwall caused the displacement of water, this would not cause flooding to any other property.

Mr. Mollanazar stated it was his personal opinion that the County has an obligation, and emphasized that he was not speaking on behalf of the Public Works Department.



Commissioner Baugh questioned if there was flooding prior to 2016 when the flap gate existed and was functioning.

Mr. Gerstenberger stated the last major storm event prior to 2016 and 2017 was in 2003. After the flap gate was installed, no flooding was observed in Centre Lake until the 2016 and 2017 storm events.

Upon question, Mr. Mollanazar stated this is the first time that all of this information is being presented, and it has not yet been discussed with the residents of Centre Lake.



Discussion occurred that Centre Lake Subdivision is in unincorporated Manatee County and Commissioner Servia's district, \$8.4 million should accomplish the project, placing a floodwall around Centre Lake removes the subdivision from the 100-year floodplain, compensatory storage volume must be provided elsewhere in the watershed, what can be done to modify lakes in adjacent residential developments; the Centre Lake project is priority, SWFWMD rules are restrictive, this is not a simple project, County must produce 50 percent of the funds toward a CFI project, the main reason stormwater projects have not been funded is due to lack of a dedicated funding source, and what funding source paid CDM for the study.



Chad Butzow, Public Works Director, stated the costs of the Pearce Drain and Bowlees Creek studies by CDM, as requested by the Board, were funded by the stormwater operating budget (\$200,000-\$400,000) over the course of two budget cycles.



Mr. Mollanazar reviewed the series of events leading up to the studies. The goal is to have a study performed on all 28 of the County's major drainage basins. He emphasized that the Centre Lake project is a priority at this time.



Mr. Gerstenberger stated the remaining stormwater projects could ultimately be accomplished by Finance Plan Option 2 to implement the stormwater utility fee (presented to the Board 9/24/19).



There was further discussion that growth is part of the solution, Centre Lake flooded before the flap gate was installed, why Centre Lake floods when the subdivision to the south does not flood, at the time of construction/design the existing studies stopped north of Centre Lake and flood elevation was much lower, best available information and flood zone map at that time showed the property was in an X (dry) zone and the elevations had no effects, this is the reason for the goal to have a study performed on all 28 of the County's major drainage basins, Federal Emergency Management Agency (FEMA) is an insurance industry and does shortcuts on floodwater studies, Centre Lake was constructed with plans and a FEMA Flood Insurance Rate Map (FIRM) with a base flood elevation, Manatee County standards for storm water management are SWFWMD standards, Manatee County requires a reduction of one half of post-development runoff up to a 25-year storm event in identified flood-prone areas, this regulation was put in place in 1997, any funding opportunity from FEMA, and research on the flood losses to properties in Centre Lake revealed that only a handful of the 61 lots reported flood losses beyond 2016 and 2017.



Mr. Gerstenberger and Mr. Butzow explained that staff is pursuing a CFI Application to SWFWMD to split the costs associated with any drainage improvement (floodwall for Centre Lake). As to the County's 50 percent share, Mr. Butzow explained staff made the decision, given the urgency of the matter, to apply for funding as a concept operation without a plan. The deadline for this cycle of CFI Funding to SWFWMD makes the County eligible for 2021 funding. The County does not have a designated funding source at this time.

 Discussion continued that Alternative 3 offers the best solution, permitting process for Alternative 3, SWFWMD funding is not 100 percent guaranteed, this is a localized flooding issue and SWFWMD does not fund localized flooding issues, the watershed management plan study results are based on a 12-1/2-inch rainfall, keeping lake levels as low as possible, staff's recommendation to pursue Alternative 3, suggestion to re-install the flap gate, today's presentation is a result of the 2016-2017 flood events, Pearce Drain overwhelmed Centre Lake with too much water and volume, the need for professional engineers to come up with a solution, and the need to look at the total cost and the budget.

 Mr. Gerstenberger emphasized that there is no recommendation from staff to proceed today on any specific alternative. Staff is proceeding with a CFI Application on the floodwall option, as it offers the most benefit based on the study results identified by CDM.

(Commission Whitmore absent for a portion of discussion)

 There was further discussion regarding trying to alter the natural flow of water, the County has a responsibility to help the residents of Centre Lake Subdivision, the sidewalk from Prospect Road going to the school to the south, the extension of a pipeline from the main stormwater lake to Prospect Road for the future expansion on Prospect Road, few residents of Centre Lake have made themselves available to FEMA to help offset flood damage/costs, the FEMA study of Pearce Drain was done in 1992, staff is utilizing the three most recent stormwater studies (Gamble Creek, Buffalo Canal Frog Creek and Braden River) that were done in the past decade, beyond that the County is relying upon 25-year flood plain data and FIRMs that date back to the 80's and 90's, much of the information being relied upon is obsolete, watershed studies are required to provide modernized and best available information, residents want to know why stormwater improvements are not covered by impact fees, the County does not have a separate impact fee for stormwater, the County's road impact fee program funds some stormwater improvements for retention ponds that handle runoff from the impervious surface of County thoroughfare paved roads, but does not serve subdivisions or other properties, and Florida Statute regulations on impact fees.

 In response to question as to how often watershed management studies should be conducted in view of the growth that is occurring in the County, Mr. Mollanazar stated the Board reviewed a Basin Prioritization Study and authorized staff to negotiate with CDM (f/k/a Camp, Dresser & McKee, 4/21/98), for stormwater drainage master planning to prioritize those watersheds and determine which watersheds should be addressed first. Staff has continued to use that same Study.

 Kenneth Piper, Parrish resident, stated his comments apply to all stormwater projects. The storage of water is not free, but it is a regulatory taking. Homeowner Associations are already paying assessments, and there has been no discussion on district assessments to pay for stormwater improvements. Priorities have not been established for any potential project, and no information has been presented as to the amount of funding that should be needed.

There being no further public comment on Pearce Drain/Gap Creek Watershed Management Plan – Project Alternatives, Chairman Jonsson closed public comment. BC20191031DOC003

RECESS/RECONVENE: 10:44 a.m. – 10:57 a.m. All Commissioners were present.

3. **BOWLEES CREEK WATERSHED MANAGEMENT PLAN – PROJECT ALTERNATIVES**

 Tom Gerstenberger, Stormwater Engineering Division Manager, stated this presentation was to discuss the Bowlees Creek Watershed Management Plan Flood Mitigation Alternatives identified by the consultant team of Geosyntec Consultants, Inc.

 Tom Amstadt, Geosyntec Consultants, Inc., used a slide presentation to discuss Bowlees Creek Watershed (N809) Flood Mitigation Alternatives. Bowlees Creek is nine square miles, located in west Manatee County, generally flowing from the north end of the Watershed south, continuing southwest and discharging into Sarasota Bay. There are weirs within Bowlees Creek. The Creek is flashy (large/quick rise after rain) and the low-lying areas and older developments near the Creek are subject to flooding. Due to the built-out nature of the Watershed, little area remains for flood mitigation. Based on modeling, there are cross-basin flows between Gap Creek Watershed, Pearce Drain and Bowlees Creek Watershed.

He continued with slides of an existing conditions analyses of Magellan Drive (south of Lake Brendan) and areas of inundation, Shadybrook Village and 17th Street Court East during the unnamed August 2017 flood event, focus areas, existing conditions model, flood depth and mitigation alternatives, and implementation considerations and cost effectiveness.

The County has been proactive in submitting CFI Applications and has applied to SWFWMD for \$559,000 of CFI 2021 cycle funding. Slides were shown of CFI Application preliminary model results, CFI with channel dredging to create a smooth channel slope toward the gulf, regional storage model results, Pennsylvania Avenue flow diversion and model results, additional alternatives (not discussed), and recommendations.

 In removing additional structures from the 100-year flood plain along Bowlees Creek, a regional storage alternative was considered, involving the construction of 41.5 acres of pond with no structures, at a cost of \$6.6 million. The improvement of flood reduction increases significantly, removes 91 of the 256 structures from the 100-year floodplain, and increases the cost to approximately \$74,000 per structure.

Based on modeling results, there are 18 structures in Meador's Subdivision within the 100-year floodplain. The proposed alternative is to construct 2,660-foot dual, 48-inch diversion pipe, from 9th Street East to the west to Pittsburgh Drain, which has surplus flood conveyance capacity, at a cost of \$2 million. This alternative would remove nine of the 18 structures from the 100-year floodplain, at a cost of \$222,000 per structure.

(Depart Commissioner Trace)

Additional, more extreme alternatives (not discussed), based on an analyses of not being cost effective and extremely difficult to implement, include: (1) widening Bowlees Creek Channel by 40 feet, at a cost of \$41.9 million, including the removal of 157 structures from the 100-year floodplain (\$267,000/structure); (2) Shadybrook Village Pump station and floodwall at a cost of \$6.7 million, including the removal of all 11 structures from the 100-year floodplain (\$609,000/structure); and (3) Buyout of flood-prone structures (not cost effective).

In summary, modeling confirmed known and suspected problem locations in Bowlees Creek Watershed. The recommendation by Geosyntec is to proceed with the CFI Application to SWFWMD and consider additional steps, including regional storage, i.e., potentially the Pennsylvania Avenue flow diversion alternative for Meador's Subdivision. Based on the analyses by Geosyntec, mitigation of the 100-year flooding for most vulnerable structures along Bowlees Creek is not cost effective. The existing conditions analyses and draft analyses

are complete, and, the next step by Geosyntec is to finalize the alternative analyses report and proceed with floodplain delineation for the watershed area.

Discussion ensued that many areas along Bowlees Creek were built prior to current stormwater regulations and discharge directly into the Creek, these areas have no on-sight flood or water quality control, dredging appears to be a good idea to incrementally improve stages on the Creek but would need to be cost out, and the storage of dredged materials.



Kenneth Kohn, project engineer, stated the dredged material is hauled to the landfill per County policy. This process would be a separate activity and included in the CFI Application for 2021 cycle funding. Bowlees Creek Golf Course has been grandfathered in (using fresh water supply), as it existed before regulations were in effect and water use permitting does not apply.

There was discussion regarding paying for improvements benefitting a specific area, whether those areas should be included in a stormwater tax or some other mechanism, residents along Phillippi Creek pay a special assessment for improvement projects, the regional storage alternative involving the construction of a 41.5-acre pond, several undeveloped locations along Bowlees Creek (outlined in red on the Alternatives Location slide) could be acquired and used for flood storage, Shadybrook Village has looked into funding from FEMA, what are FEMA's options for repetitive loss mitigation, FEMA is looking to pass more responsibility for natural disasters down to local government, make sure the County is applying for all eligible funding, and what can be done to seek additional funding for these projects.



Representatives of Shadybrook Village met with staff to share mitigation solutions, which include the placement of flood control bladders to contain flooding during major storm events. Shadybrook residents are examining their internal drainage system and actively pursuing solutions as a community, either through upsizing or the installation of flap gates. Individual homeowners can pursue flood proofing mitigation grants through FEMA; however, in certain cases, FEMA funding is disbursed after the flood event.



Dennis Ragosta, SWFWMD Government Affairs Manager, stated SWFWMD representation for Manatee County is vacant at this time. Appointment by the Governor is underway.



Discussion ensued that one of the next steps involves proceeding with a request by the Board for staff to look into current stormwater standards, and what can be done in the future.

Mr. Gerstenberger stated that staff has relied on outdated hydrographs and drainage modeling information from the 1960s/1970s. Along with the most recent watershed studies, staff is examining the implementation and use of National Oceanic and Atmospheric Administration (NOAA) Atlas 14, which is an updated, radar-generated rainfall accumulation tool, based upon a square-mile grid of rainfall estimates generated from the National Weather Service, based on rainfall accumulation data. What is seen today as a 100-year storm event is different than what was being designed and modeled for a 100-year storm event. Staff reviews land use items under both single- and multi-base storm event scenarios, which is required by the Florida Department of Transportation (FDOT) along State highways. FDOT requires a strategy of different drainage and storm event modeling, whereas, the County and SWFWMD reviews a single-day storm event, whether it be for a 25-year, or 100-year storm for the rationale of runoff and floodplain mitigation calculations. Staff plans to discuss the implementation of higher requirements in the County's stormwater standards, based on storm events for water quality or uses of other practices related to stormwater management.

 John Lindsey, Property Manager of Shadybrook Village, commended Stormwater Division staff for their involvement. He stated Melissa Woodbridge (FEMA Representative), is an asset regarding repetitive loss funds. Mr. Lindsey stated he would attend the November 19 Board meeting to further discuss flood mitigation solutions in Shadybrook Village.

 Discussion continued that today's meeting was to address two specific flooding areas, other major areas east of U.S. 41 have flooding issues, other flooding areas being monitored, staff is preparing to advertise a drainage improvement project for the village of Rubonia, the drainage ditches in Samoset is another area, past flood-prone problems, and other hotspots.

 Mr. Gerstenberger explained developments after 1985 are required to provide individualized, dedicated stormwater facilities for water quality treatment and attenuation to regulate the rate of runoff and flow reductions in stormwater, flood-prone areas. Newer developments are only designed to withstand up to a certain point and provide water quality up to one inch of accumulation. During the August 2017 storm event, the Tara area received six inches of rainfall in one hour and 12 inches in an eight-hour period. In looking ahead, staff is surpassing these numbers based on the most recent storm events. Eight-inch rainfall events in a 24-hour period are going to occur more frequently and exceed current numbers, based on quantity and intensity.

 Further discussion occurred on the purpose of the presentations on Pearce Drain and Bowlees Creek studies was to address regional improvements for enhanced maintenance and a policy decision on the creation of a dedicated annual funding source for capital projects (i.e. stormwater), east residents and in newer developments already pay a stormwater fee, Myakka residents do not understand why they would be assessed more stormwater fees, citizens are currently part of the solution, continue discussions and further clarify the purpose of the fee, developments have designed to County stormwater standards for flood protection, stormwater conveyance occurring outside of subdivisions, citizens are against a stormwater tax, SWFWMD regulations need to be examined, and clarification of the term repetitive loss.

 Mr. Gerstenberger stated this is the first of a series of workshops to address study results performed on watersheds. A County stormwater fee is being explored, because there is no dedicated, stormwater funding source to construct countywide, needed improvements.

 Kenneth Piper, Parrish resident, commented that the County is performing studies based on 100-year storm events, but the Land Development Code still uses 25-year storm events for developers. He urged the Board to consider the \$9.6 million in the Solid Waste Fund as a funding resource versus the implementation of an additional stormwater fee.

 Commissioner Baugh commented on opposition expressed by the Lakewood Ranch community and the need for equity to all citizens on the implementation of a stormwater fee.

BC20191031DOC004

ADJOURN

There being no further business, Chairman Jonsson adjourned the work session at 12:16 p.m.

Minutes Approved: _____