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COMMITTEE MEMORANDUM

TO: Finance and Citywide Projects Committee

FROM: Jimmy L. Morales, City Manager

DATE: May 15, 2013

SUBJECT: Discussion Regarding the Implementation of the Regional Climate Action Plan

At the February 6, 2013 Commission Meeting, the City Commission adopted a resolution approving the implementation of the Southeast Florida Regional Climate Change Compact Regional Climate Action Plan (RCAP) as appropriate. As part of this approval, it was requested that the City identify the RCAP recommendations that are applicable to GO Bond projects and determine which of these initiatives should be incorporated now to avoid the need for future retrofits. Additionally, the City Commission referred a review of the RCAP recommendations to the Finance and Citywide Projects Committee (FCWPC) to determine what can be done when performing City projects, to avoid doing double work and increasing the cost.

BACKGROUND

In 2010, the Southeast Florida Regional Climate Change Compact began as a collaborative effort among Palm Beach, Broward, Miami-Dade and Monroe Counties, their municipalities, and their partners. The purpose of the Compact is to unite, organize, and assess the southeast Florida region through the lens of climate change and develop unified action over the next five years.

In October 2012, the Southeast Florida Regional Climate Change Compact released the RCAP with the objective of integrating climate adaptation and mitigation into existing decision-making systems and of developing a plan that can be implemented through existing local and regional agencies, processes and organizations. The RCAP provides a framework with 110 actionable recommendations to help guide policies and serves as a living document with options that each regional or local government may adopt and utilize based on their interests and vision of the future.

ANALYSIS

Of the 110 RCAP recommendations, 20 are applicable to GO Bond projects. Attached is a matrix that shows these recommendations and their implementation status. Of the 20 recommendations, 12 are long-term goals that require decision-making and separate action at the Regional and City levels and eight (8) are short-term goals that require decision-making or direct implementation at the City level. The City has begun implementing these eight (8) recommendations through current policy.

As part of the Stormwater Management Master Plan, the City also developed minimum design criteria for construction within the right-of-way that are based on current sea level rise predictions. The implementation of these criteria should ensure that the City will not need to retrofit its infrastructure over its intended design life. The City will continue to review all projects, including GO Bond projects, to verify that they take into consideration all applicable RCAP recommendations, as well as the City's minimum design criteria.

CONCLUSION

The above information is provided for discussion by members of the FCWPC.

Attachments: A. Regional Climate Action Plan Implementation Status Matrix

MT/JJF/RWS/ESW/MKW

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Regional Climate Action Plan Implementation Status

Item No.	Recommendation	Level	Status	Existing Initiatives	Long-term or Short-term	Type	Staff Action	Comission Action
SP-2	Develop policies, strategies and standards that will serve as guidance for climate change related planning efforts. Municipal and county planning authorities are encouraged to develop policies to improve resilience to coastal and inland flooding, salt water intrusion, and other related impacts of climate change and sea level rise in their Comprehensive Plans, Sustainability Action Plans, Vision Plans, Stormwater Master Plans, Transit Development Plans, Long Range Transportation Plans, Adaptation Action Area Plans, Climate Change Plans and other green planning efforts.	Both	In Progress	1. SWMMMP 2. Sustainability Plan 3. Comprehensive Plan (Coastal Element)	Long-term	Policy and Planning	Continue existing initiatives and identify areas for growth	No Commission action needed
SP-8	Identify locations within Adaptation Action Areas or similarly vulnerable areas where targeted infrastructure improvements, new infrastructure, or modified land use and/or development practices could reduce vulnerability and/or improve community resilience.	Local	Not Started	None	Long-term	Planning	None	Commission to develop policy for historic areas

Regional Climate Action Plan Implementation Status

Item No.	Recommendation	Level	Status	Existing Initiatives	Long-term or Short-term	Type	Staff Action	Comission Action
SP-10	Work with appropriate local, regional and state authorities to revise building codes and land development regulations to discourage new development or post-disaster redevelopment in vulnerable areas to reduce future risk and economic losses associated with sea level rise and flooding. In these areas, require vulnerability reduction measures for all new construction, redevelopment and infrastructure such as additional hardening, higher floor elevations or incorporation of natural infrastructure for increased resilience.	Both	In Progress	1. Interdepartmental review and coordination.	Long-term	Policy	Staff to develop and codify vulnerability reduction measures	Commission to approve Staff Action and to develop policy for new construction and redevelopment
SP-15	Modify or develop new design standards for transportation infrastructure located in identified vulnerable areas to include environmentally supportive road materials, bridge design, elevation, and stormwater management. Include different pitches combined with stormwater design to effectively remove water from the roadway; explore roadway materials that may be utilized in road construction that are more tolerant of extended periods of extreme temperatures.	Local	In Progress	1. SWMMP 2. Pervious concrete	Long-term	Planning	Continue existing initiatives and identify areas for growth	No Commission action needed

Regional Climate Action Plan Implementation Status

Item No.	Recommendation	Level	Status	Existing Initiatives	Long-term or Short-term	Type	Staff Action	Commission Action
SP-16	Develop policies to address new transportation infrastructure development in light of anticipated future climate impacts, such as consideration of future floodplain conditions and vulnerable areas which could require the rerouting of roads because of potential flooding and related damage.	Local	In Progress	1. Raised roads in certain areas 2. Pump stations to reduce flooding on existing roads	Long-term	Policy	Continue existing development of policy	No Commission action needed
WS-1	Develop local and, where appropriate, regional inventories of existing potable water supply delivery and collection systems, vulnerable wellfields, wastewater collection and/or treatment infrastructure, septic tanks/drainfields, and stormwater drainage and treatment facilities; assess the potential impact from climate change of each component; and develop different climate change scenarios and adaptation strategies for high-risk utilities and/or infrastructure which may require replacement, reinforcement, or relocation to ensure the long-term viability of the system (e.g., modified site, depth, elevation, materials, or connection requirements).	Both	In Progress	1. SWMMP	Short-term	Planning	Continue existing initiatives and identify areas for growth	No Commission action needed

Regional Climate Action Plan Implementation Status

Item No.	Recommendation	Level	Status	Existing Initiatives	Long-term or Short-term	Type	Staff Action	Comission Action
WS-3	Utilize existing and refined inundation maps and stormwater management models to identify areas and infrastructure at increased risk of flooding and tidal inundation with increases in sea level, to be used as a basis for identifying and prioritizing adaptation needs and strategies.	Local	In Progress	1. SWMMP	Short-term	Planning	Continue existing initiatives and identify areas for growth	No Commission action needed
WS-4	Evaluate the impacts of rising sea and groundwater levels on soil storage, infiltration rates and inflow to stormwater and wastewater collection and conveyance systems; consider longer-term influences on water quality; and develop strategies for implementing reclaimed water and stormwater reuse projects that account for current and future conditions.	Local	In Progress	1. SWMMP 2. CS-ID means of stormwater reuse	Short-term	Planning	Continue existing initiatives and identify areas for growth	No Commission action needed
WS-5	Develop and apply appropriate hydrologic and hydraulic models to further evaluate the efficacy of existing water management systems and flood control/drainage infrastructure under variable climate conditions. Quantify the capacity and interconnectivity of the surface water control network and develop feasible adaptation strategies.	Local	In Progress	1. SWMMP	Short-term	Planning	Continue existing initiatives and identify areas for growth	No Commission action needed

Regional Climate Action Plan Implementation Status

Item No.	Recommendation	Level	Status	Existing Initiatives	Long-term or Short-term	Type	Staff Action	Commission Action
WS-6	Coordinate with the South Florida Water Management District, Drainage/Water Control Districts, and utilities/public works officials to identify flood control and stormwater management infrastructure already operating below the design capacity. Further examine water control structures to ensure that they can provide for inland or upstream migration of riparian species as freshwater habitats become more saline.	Local	In Progress	1. SWMMP	Short-term	Planning	Continue existing initiatives and identify areas for growth	No Commission action needed at this time
WS-7	Develop Integrated Water Management Plans that present a joint assessment and planning strategy involving local water utilities, wastewater service providers, water managers, and partners to the Southeast Florida Regional Climate Change Compact, for coordinated consideration of stormwater use and disposal, traditional and alternative water supplies, wastewater disposal and reuse, and water conservation measures for use by local leadership to guide planning decisions as well as amendments to applicable codes and regulations.	Both	In Progress	1. SWMMP	Long-term	Planning	Continue existing initiatives and identify areas for growth	No Commission action needed at this time

Regional Climate Action Plan Implementation Status

Item No.	Recommendation	Level	Status	Existing Initiatives	Long-term or Short-term	Type	Staff Action	Commission Action
WS-8	Develop and test water management and drainage system adaptation improvements needed to maintain existing levels of service relating to drainage, flood control, and water supply, and use cost-benefit analyses to prioritize potential improvements.	Local	In Progress	1. SWMMP	Short-term	Planning	Continue existing initiatives and identify areas for growth	No Commission action needed
WS-9	Incorporate and prioritize preferred climate adaptation improvement projects in capital improvement plans and pursue funding.	Local	In Progress	1. SWMMP	Long-term	Planning	Initiate prioritization of adaptation improvement projects and pursuit of funding, when needed.	No Commission action needed

Regional Climate Action Plan Implementation Status

Item No.	Recommendation	Level	Status	Existing Initiatives	Long-term or Short-term	Type	Staff Action	Comission Action
WS-10	<p>Encourage, foster, and support investigative work and scientific research that improves the understanding of local and regional climate change impacts specific to Southeast Florida, including:</p> <ul style="list-style-type: none"> • Improved down-scaling of global climate models for representation of precipitation at the regional/local scales • Identification and targeting of gaps in monitoring to improve quantification of the hydrologic system and its response to climate change, such as evapotranspiration, groundwater levels, and precipitation, and local sea level • Development of risk-based decision support tools and processes for application in analysis of infrastructure design, water resource management, natural systems management, and hazard mitigation alternatives. Tools should provide for consideration of potential economic costs of comparative planning scenarios, management decisions, and infrastructure investments and the evaluation of potential tradeoffs. 	Both	In Progress	<ol style="list-style-type: none"> 1. Support of FIU Studies 2. Monitoring of local precipitation 3. Monitoring of GW levels 	Long-term	Planning	Continue existing initiatives and identify areas for growth	Provide financing for risk-based decision support tools

Regional Climate Action Plan Implementation Status

Item No.	Recommendation	Level	Status	Existing Initiatives	Long-term or Short-term	Type	Staff Action	Comission Action
WS-11	Undertake efforts to fill identified data gaps through local program efforts, agency collaborations, and advocacy for additional state/federal resources, as needed.	Both	In Progress	1. Support of FIU Studies 2. Monitoring of local precipitation 3. Monitoring of GW levels	Long-term	Planning	Initiate efforts to fill identified data gaps	Allocate necessary funding
WS-13	Develop agency capabilities to provide rapid deployment of resources in immediate response to intense precipitation and storm events through use of NEXRAD technology.	Both	Not Started	None	Long-term	Planning	Research and identify NEXRAD technology options.	Allocate necessary funding
WS-14	Cultivate partnerships with federal and state agencies and professional associations with expertise in integrated water resource planning (such as the U.S. Army Corps of Engineers Institute for Water Resources, the United States Geological Survey, and Water Foundations) as sources of important research, reports, and information regarding climate change, and efforts being undertaken in other communities.	Both	In Progress	1. SFWMD 2. USACE	Long-term	Planning	Continue existing initiatives and identify areas for growth	No Commission action needed

Regional Climate Action Plan Implementation Status

Item No.	Recommendation	Level	Status	Existing Initiatives	Long-term or Short-term	Type	Staff Action	Comission Action
WS-15	Monitor changes in rainfall patterns, temperature means and extremes and sea level rise through coordination with NOAA and other key organizations/partners to better predict future wet-season and dry-season rainfall. Monitor emerging science in order to assess the adequacy of regional climate models. Choose an annual conference or other venue at which such trends can be reviewed at regular intervals.	Both	In Progress	1. Monitoring Rainfall 2. Monitoring Tides 3. Monitoring Groundwater Fluctuations	Long-term	Planning	Continue existing initiatives and identify areas for growth	No Commission action needed
NS-14	Maintain/restore urban tree canopy.	Local	In Progress	1. Urban Reforestation Program 2. Tree Ordinance	Short-term	Planning	Continue existing initiatives and identify areas for growth	No Commission action needed
RR-5	Enforce Coastal Construction Control Line and build upon goals, objectives and policies related to Coastal High Hazard Area designations in Comprehensive Plans.	Local	In Progress	1. PW Plan Review	Short-term	Policy and Planning	Continue existing initiatives and identify areas for growth	Commission to develop policy for developing coastal high hazard areas