



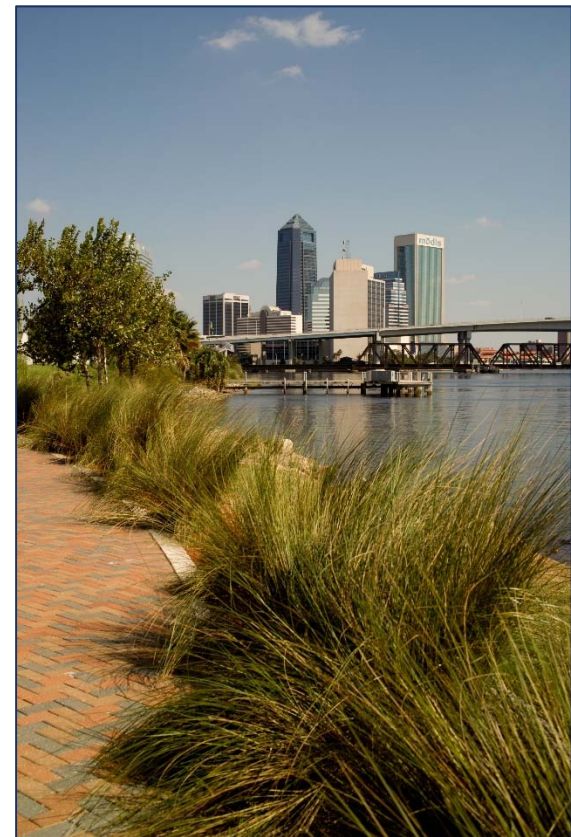
City of Jacksonville Storm Resiliency and Infrastructure Development Review Committee



June 25, 2019

AGENDA

- Committee Charge
- Process
- Presentation Highlights
- Identified Challenges
- Committee's Response



Northbank, St. Johns River

COMMITTEE CHARGE

- Jacksonville Waterways Commission, August 2018
- “to evaluate drainage and flood control; tidal impacts and water levels in the St. Johns River; the effects of failing or deficient drainage infrastructure and improvements, the loss of wetlands and natural habitats; and development activities within the floodplain and to offer recommendations as to opportunities for maintenance and preservation of wetlands and floodplains and various drainage and stormwater system improvements, which would contribute to the resiliency of the St. Johns River and Northeast Florida.”

PROCESS

Schedule

- Bi-weekly meetings from February 15, 2019 – June 7, 2019
- Bi-weekly meetings held in the Sunshine



Committee Members

- Chair: Sam Mousa, Chief Administrative Officer
- Vice-chair: Lori Boyer, Council Member
- City of Jacksonville, Public Works Director - John Pappas
- City of Jacksonville - Jim Love, Council Member
- Federal Emergency Management Agency – Marc May
- JEA – Deryle Calhoun
- United States Navy – Eric Denfeld

PROCESS

Committee Liaisons

- City of Jacksonville, Planning Director – Bill Killingsworth
- Florida Department of Environmental Protection – Greg Strong
- Florida Department of Environmental Protection – Jim Maher
- Florida Department of Environmental Protection – Tom Kallemeyn
- St. Johns River Water Management District – Geoff Sample
- US Army Corps of Engineers – Susan Kaynor
- US Army Corps of Engineers – Mark Evans
- Federal Emergency Management Agency – Patricia Smithline
- Federal Emergency Management Agency - David Kulberg
- JEA – Steve McInall

Committee Website:
www.coj.net/sraidrc

PRESENTATION HIGHLIGHTS FROM USACE SEA LEVEL RISE CONCERNS IN NE FL

- Direct impacts of sea level rise and coastal storms on communities, businesses, and Mayport NAS
- Increase in flood risks due to flood frequency and drainage issues
- Impacts on water supply and storage related to saltwater intrusion and rising groundwater levels
- Impacts to natural systems



*Hurricane Irma – Roosevelt Square Shopping Center,
September 11, 2017*

PRESENTATION HIGHLIGHTS FROM FDEP RESILIENT FLORIDA COASTLINES

- Looking at coastal resilience planning from the State perspective
 - Comprehensive Plans for coastal communities require a Coastal Management Element
 - Requirements within Florida Statutes: Peril of Flood and Adaptation Action Areas
- Florida Resilient Coastlines Program
 - Resources, funding, and coordination
- Living shorelines
 - Restoration techniques that use natural materials to stabilize shorelines and prevent erosion.



Hurricane Irma - Riverside, September 11, 2017



Coastline image from FDEP



Hurricane Irma - Hogan & Water Street, September 11, 2017

PRESENTATION HIGHLIGHTS FROM JEA

JEA'S RESILIENCY PROGRAM

Goals

- Understand current & future severe weather & climate risks
- Identify JEA system vulnerabilities to identified risks
- Update design & construction standards
- Develop adaptation strategies
- Develop resiliency plan
- Benchmarking and using best practices from leading utilities

Activities

- Establish future extreme weather scenarios
- Perform vulnerability assessment & risk analysis of select JEA facilities
- Develop mitigation & adaptation strategies
- Perform economic cost-benefit analysis
- Prioritize strategies
- Update design & construction standards
- Develop resiliency plan and implementation roadmap

CHALLENGES

NEW DEVELOPMENT - INFRASTRUCTURE

- Extent of survey data on adjacent properties is insufficient to evaluate off-site impacts and contributions.
- Incomplete implementation of Floodplain Management Code, Chapter 652
- Timeframe for installation and completion of development's drainage system
- Quality and permeability of fill material
- Rear lot swales (vs. pipes) may hinder City access and may be exacerbated by the actions of subsequent lot owners
- Impact of eliminating the existing tree canopy
- Design standards for impervious surface area vs. lot coverage
- Timeframe for expiration of a 10-set approval and floodplain permit
- Alternative to bulkheads – site specific living shorelines

CHALLENGES EXISTING SYSTEMS - INFRASTRUCTURE

- Siltation and maintenance issues for existing stormwater facilities – older systems may not have permits (or cannot be located) and access may be restricted
- Outfall elevations and designs impacted by higher tide levels in River
- Bulkhead heights inadequate for storm surge and higher tidal impacts
- Long-term strategy for infrastructure resiliency and hardening



Major Outfall, City of Jacksonville Public Works



Hurricane Irma - Riverside, September 11, 2017

COMMITTEE RESPONSE DEVELOPMENT & INFRASTRUCTURE

- Ordinance 2019-331 amends Chapter 652, Floodplain Management Ordinance
 - Requires A-3 soil or permeability analysis for fill material.
 - Adds definition for “*Floodway setback*. The area between the outer boundary of the regulatory floodway associated with natural named wetland systems shown on the FIRM and a line parallel thereto at a distance of 25 feet. The purpose of this 25-foot floodway setback is to minimize encroachments, and to protect floodplain storage and natural floodplain functions.”
 - Responsibility for hearing and deciding on requests for appeals and requests for variances from Ch. 652 shifts from the Subdivision Standards Policy and Advisory Committee (SSPAC) to the Chiefs of Building Inspection, Engineering & Construction Management, and Development Services sitting as a committee of three.
 - Requires that floodway setbacks be shown on preliminary subdivision plats.
 - Adds floodway setbacks to the locations where no development shall be allowed, unless a floodway encroachment analysis demonstrates no increase in BFE.
 - Adds new section that requires the finished floor elevation in special flood hazard areas to be two feet above the base flood elevation.

COMMITTEE RESPONSE DEVELOPMENT & INFRASTRUCTURE

- Ordinance 2019-375 amends Chapter 656, Zoning Code, and Chapter 654, Code of Subdivision Regulations
 - Requires that all subdivisions be designed using Impervious Surface Ratios (ISR) – table added to Chapter 654
 - Requires ISRs in addition to maximum lot coverage within Chapter 656, per each Zoning District
- Recommended ordinance change to create a wetland buffer that is an average of 25 feet and a minimum of 15ft
 - Applies whether or not there are impacts to the wetlands
 - OGC and Planning to draft and file.

COMMITTEE RESPONSE DEVELOPMENT & INFRASTRUCTURE

- Updates and revisions to Land Development Procedures Manual through Subdivision Standards and Policy Advisory Committee (SSPAC)
 - Soil permeability on filled lots – Require A-3 Soil for fill or allow for a Pre vs. Post analysis to ensure that the fill material will not adversely impact groundwater levels.
 - Maintenance of drainage plans – Plans submitted for review shall include a proposed “Maintenance of Drainage” (MOD) plan which identifies the site-specific method to maintain stormwater drainage patterns during the construction of a project.
 - Backyard drainage swales – All rear-lot drainage systems shall be included as a part of the ongoing development’s stormwater management certification requirements. An access easement shall be dedicated to the City of Jacksonville and the appropriate State Agency for access to rear-lot drainage systems for inspection by the City of Jacksonville or such State Agency.
 - 6-month site development inspection – Once a project begins, a 6-month inspection report will be required. Formal inspection reports will be required to be submitted every 6-months until construction is complete.
 - Required topography to include 100 feet off site in all directions.

COMMITTEE RESPONSE INTERAGENCY COORDINATION

- The goal is to mitigate and resolve poor stormwater system performance that cause adverse impacts to citizens and the environment by improving current processes and looking for proactive solutions.
- Documents stormwater jurisdiction and processes
- Interagency database and GIS resource training (COJ, DEP, SJRWMD)
- Discuss long-term efforts for stormwater improvements
- Post-storm season interagency stormwater followup



Hurricane Irma - Riverside, September 11, 2017

COMMITTEE RESPONSE LONG-TERM STRATEGY

- RFP to be released to provide the City with professional services related to Master Stormwater Management Plan modeling and resiliency analysis and design implementation services.



Hurricane Irma - Hogan & Water Street, September 11, 2017

- Identify specific critical infrastructure based on the updated MSMP
 - Stormwater
 - Roadways
 - Seawalls/Bulkheads
 - City Emergency Facilities
- Determine “critical” infrastructure improvements
- Prioritize Infrastructure Improvements
- Develop CIP (5yr – 10yr – 25yr – 50yr)



QUESTIONS

For additional information, please visit the Committee's website at www.coj.net/sraidrc