

**OFFICE OF THE CITY COUNCIL**

**RESEARCH DIVISION**

117 WEST DUVAL STREET, SUITE 425

4TH FLOOR, CITY HALL

JACKSONVILLE, FLORIDA 32202

904-255-5137

**CITY COUNCIL SPECIAL COMMITTEE ON RESILIENCY**

**SUBCOMMITTEE ON INFRASTRUCTURE AND CONTINUED OPERATIONS**

**Virtual meeting via Zoom – no physical location**

 **August 27, 2020**

**8:00 a.m.**

**Location:** Virtual meeting via Zoom – no physical location

**In attendance:** Subcommittee members Garrett Dennis (Chair), Angela DeMonbreun, Bruce Fouraker, Sandra Fradd, Ahantae Green, Lisa King, Joe Loretta, Amanda Polematidis, Jim Robinson, Jim Seaton, Nikole Ward

**Also**: Special Committee members Randy DeFoor, Joyce Morgan, Guillermo Simon; Jeff Clements, Yvonne Mitchell – Council Research Division; Steve Cassada, Eric Grantham and Melanie Wilkes – Council Support Services; Susan Stewart – Jaxport; John Pappas – Public Works Department; Bill Killingsworth and Kristen Reed – Planning and Development Department; Susan Grandin – Office of General Counsel; Paul McElroy Kurtis Wilson and Hai Vu – JEA; Sean Lahav – North East Florida Regional Council; Phillip Peterson, Heather Reber and Tommy Carter – Council Auditor’s Office; James Richardson – Environmental Protection Board

**Meeting Convened**: 8:01 a.m.

Chairman Dennis convened the meeting and a roll call of the attendees was taken. Special Committee Chair Randy DeFoor reported that she had gotten a call from Ethics Officer Carla Miller regarding the application of the Sunshine Law to subcommittee members. The only members of the Special Committee on Resiliency will be the Council members, who will also be the chairs and vice-chairs of the subcommittees; everyone else will be listed as “interested citizens”.

JEA Resilience Plan

Hai Vu, Interim General Manager of Water and Wastewater at JEA, gave an overview of a resilience study and risk assessment that JEA has commissioned of its water and wastewater facilities. Hurricane impacts in recent years identified weaknesses including power failures that knocked out pumping and treatment facilities and caused sewage overflows. A consultant was hired to study the system, identify weaknesses, and develop remediation plans. The 3 main tasks of the study were to develop a system resilience plan, upgrade electrical and control systems, and upgrade wastewater treatment plans. Climate scenario planning took place on time frames of 2040 and 2070 regarding predicted sea level rise and increasing rainfall intensity. Seven models were run on 25 year, 100 year and 500 year storms with varying levels of increased greenhouse gas emissions and rising sea levels. JEA has chosen 3 models for sea level rise – 1-2 feet by 2040, 2-4.5 feet by 2070, 4-9 feet by 2100. Hurricane Matthew and Hurricane Irma data were used to verify the flood surge modeling. Risk vulnerability was assessed based on exposure, sensitivity, and adaptive capacity and redundancy. 142 high vulnerability installations were identified. Remediation strategies include elevation (raising the facility above predicted flood levels), hardening (i.e. installation of waterproofing features on windows, doors, vents, etc.) and installation of perimeter barriers, and combinations thereof. Various options were developed and subjected to cost-benefit analysis. One of the largest vulnerabilities is in sewage lift stations, of which there are over 1,500. The most important facilities to be protected are the major wastewater treatment plants, followed by major pumping stations and several potable water wells. Some of the identified top priority projects are already in JEA’s capital improvement program and planning has begun on some of those projects.

Amanda Polemitidis asked if the analysis took into account the socioeconomic characteristics of areas served by the different facilities to ensure that the benefits of the remediation work is spread fairly across the community. Mr. Vu said that the analysis did include subjective factors provided by JEA system managers representing different parts of the city who advocate for their areas’ particular circumstances. Ms. Polemitidis asked about planning for adaptation to increasing temperatures due to global warming. Mr. Vu said that scenario planning is done and the chilled water plants will be sized accordingly to deal with the increased cooling demand. Contingency planning for the impact to JEA’s electrical system due to climate change was not included in this study, which is restricted to water and wastewater facilities. Jim Robinson asked if JEA’s storm modeling matches the City’s storm modeling parameters and whether the City and JEA are coordinating their efforts. Mr. Vu said the City and JEA are both using Jacobs Engineering for their studies so the City’s upcoming study should be based on the same baseline information. Guillermo Simon asked if alternative hurricane tracks were considered because Hurricane Irma was such a peculiar storm and produced unexpected and unprecedented effects. Mr. Vu will pose that question to Jacobs. Bud Para asked if the JEA electric system had performed a similar resilience study on its facilities. Mr. Vu knows that some work is underway and will inquire about its extent. JEA Interim CEO Paul McElroy said that the electric system has not had as comprehensive a review as water and sewer, but generally speaking the electric system is somewhat less vulnerable (at least on the generation side) because the plants are not as close to rivers and tributaries and therefore less at risk for flooding.

Chairman Dennis asked about the impact of undergrounding utilities on system reliability. Mr. McElroy said that undergrounding electric distribution is extraordinarily expensive (estimated at $4 billion for all JEA lines citywide, and $1 billion each for Comcast and AT&T for their overhead lines). A balancing act must be performed between fewer outages for underground facilities, but the outages on those facilities tend to take longer to find and repair. Bruce Fouraker said he has previously gotten information from JEA on undergrounding of the electric system and was told that a large percentage of the outages and the manpower to restore those outages is incurred by overhead lines. In response to a follow-up question from Mr. Dennis, Mr. McElroy said that the fact of increasing flooding events and a rising water table makes it questionable whether it makes sense to put more electrical facilities underground where they might be more subject to water impacts. He will start an evaluation process at JEA on the electrical side and will attempt to come up with an estimate of the cost and benefit of undergrounding. He said that an undergrounding project is underway in Ortega that will service about 150 homes and the cost for that project is $12,000 to $18,000 per home, being paid for by the homeowners. Jim Seaton said that using Hurricanes Matthew and Irma as validation for the model makes sense as being very recent, but it would be good to validate the model with other hurricane tracks as well. He asked that the committee be given an update on the City’s resilience study. Bruce Fouraker asked about the cost of changing out a septic tank and connecting to a central sewer system. Mr. Vu said the Biltmore C project currently underway (about 300 homes connecting to a gravity sewer system) costs about $47,000 per lot. He said JEA has a consultant study underway to evaluate less costly methods of dealing with septic tanks. Mr. Fouraker suggested that replacing the existing septic tanks with new tanks might be more cost effective. In response to a question from Angela Polemitidis about alternative energy sources, Mr. Vu said that on the water and sewer side their power backup is in the form of generators running on diesel fuel.

Bond Issue for Infrastructure Development

Assistant Council Auditor Phillip Peterson said his office worked with the City’s Treasury Office and its financial manager, PFM, to come up with some figures on bonding for debt. The City has an additional half cent cent sales tax for infrastructure available, requiring voter referendum approval. At current collections it would produce $93 million per year, which could be bonded for 30 years to produce $1.1 billion. A general obligation bond would require an additional property tax dedicated to a particular project. A 1 mill levy would produce $65-69 million currently (which varies as property values change over time), producing $850 million in bonding capacity over 30 years. The City’s annual debt affordability study looks at how much is prudent to borrow using 6 debt ratios. We are currently at or better than each of those parameters. Issuing big bonds would push us to the limit on one of the parameters, which might impact the debt rating agencies and how they see the City’s financial stability. The debt rating agencies also look at the combined debt of the City and the School Board because the same citizens pay both. If the School Board sales tax passes in November and the City were to adopt a sales tax or sell GO bonds backed by an additional millage, that could impact bond ratings. Bruce Fouraker asked if new revenue would have to be bonded or could be used on a pay-go basis. A sales tax could be used either way. The Office of General Counsel is looking at how a GO bond would work – it’s been over 40 years since the City last went that route so it will take some research. Chairman Dennis said it is incumbent on the subcommittee to come up with a recommendation on a funding source to deal with the City’s long-standing problems.

CIP Project List Discussion

Jim Robinson asked about the Finance Committee’s actions in the recent budget hearing on the CIP. Council Member DeFoor said that no changes were made in the CIP during the budget hearing. She believes the committee needs to hear from Public Works Director John Pappas about his “wish list” of needed projects if money were no object. Bill Byers asked how the properties being acquired for demolition of flood-prone homes will be used in the future to promote resiliency. The question will have to be posed to Public Works for a response. Angela Polemitidis said that the City needs to be factoring sustainability and resilience into all of its capital project planning. Council Member DeFoor said that federal funding will be vital to meeting all of the community’s needs and she thinks that the City has to get itself into the federal water projects authorization bill when it is next considered by Congress. The Mayor is on board with that process as is Congressman John Rutherford, so the City should be ready for its next opportunity. The subcommittee should make that as a recommendation to the full Special Committee.

**Motion** (DeFoor): recommend to the full Special Committee on Resiliency that it make a finding and recommendation that the City propose a project to the Army Corps of Engineers for inclusion in the next Congressional water resources act – **approved 12-0.**

Jim Seaton suggested that Jacksonville’s Congressional delegation be asked about possibilities for speeding up the process before the next water projects bill in 2 years.

Next meetings – September 10 and 24, 8:00 a.m. Chairman Dennis asked the members to suggest agenda topics. Lisa King asked for a presentation about the use of new parkland as green infrastructure and a presentation on environmental impact bonds (suggested by St. Johns Riverkeeper Jimmy Orth). Bruce Fouraker suggested hearing from the Fire and Rescue Department about the resilience planning for their several new fire stations and a presentation on stormwater impact fees as a potential source of revenue. Sean Lahav said that he is planning to invite guest speakers to the full Special Committee’s September meeting about funding sources for resilience. He has talked with the National Park Service about potential federal funding for recreational resilience purposes which may be a topic for a future meeting. Jim Robinson said that the subcommittee needs to hear from John Pappas about the department’s “wish list” of projects if funding was no object. He also thinks that a presentation on the projects in the City’s stormwater management plan would be of interest. Jim Seaton suggested that Jaxport and JTA be asked about their resilience planning.

**Meeting adjourned:** 9:42 a.m.

Minutes: Jeff Clements, Council Research Division

jeffc@coj.net 904-255-5137

8.28.20 Posted 5:30 p.m.