

CITY OF JACKSONVILLE  
ADAPTATION ACTION AREA WORKING GROUP  
MEETING

Proceedings held on Monday, April 8, 2019,  
commencing at 9:00 a.m., Ed Ball Building, 214  
North Hogan Street, 8th Floor Conference Room,  
Jacksonville, Florida, before Wendy E. Rivera,  
a Notary Public in and for the State of Florida  
at Large.

PRESENT:

- EMILY PIERCE, Chairwoman.
- MICHELLE TAPPOUNI, Vice Chair.
- SHANNON BLANKINSHIP, Working Group Member.
- AMANDA ASKEW, Working Group Member.
- JOSEPH LORETTA, Working Group Member.
- JEFF MARTIN, Working Group Member.
- SAM NEWBY, Working Group Member.
- CHIRADIP CHATTERJEE, Working Group Member.
- ERIK OLSEN, Working Group Member.
- MATT GALNOR, Working Group Member.
- SHANE CORBIN, Working Group Member.

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1 PROCEEDINGS  
2 April 8, 2019 9:00 a.m.

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4 THE CHAIRWOMAN: All right. Let's get  
5 started because we already have a quorum, which  
6 is fabulous.  
7 Welcome to our April 8th meeting. Let's  
8 start with going around the room and doing  
9 introductions like we do each time.  
10 Let's start with Susan.  
11 MS. KELLY: Oh, introductions?  
12 THE CHAIRWOMAN: Yeah.  
13 MS. KELLY: Okay. Susan Kelly, Planning  
14 Department.  
15 MS. REED: Kristen Reed, Planning and  
16 Development Department.  
17 W/G MEMBER ASKEW: Amanda Askew, City of  
18 Neptune Beach.  
19 W/G MEMBER CHATTERJEE: Chiradip  
20 Chatterjee, Assistant professor at the  
21 University of North Florida.  
22 W/G MEMBER LORETTA: Joe Loretta, land  
23 planner with Genesis/Half here in town.  
24 COUNCIL MEMBER NEWBY: Sam Newby,  
25 Jacksonville City Council.

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1 ALSO PRESENT:

- 2 KRISTEN REED, Chief, Community Planning Div.
- 3 SUSAN KELLY, Planning and Development Dept.
- 4 CHRIS SCHOENIG, Planning and Development Dept.
- 5 SHANNON ELLER, Office of General Counsel.

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1 THE CHAIRWOMAN: All right. Back over  
2 here.  
3 MR. SCHOENIG: Chris Schoenig, Planning  
4 Department.  
5 THE CHAIRWOMAN: Emily Pierce, Rogers  
6 Towers.  
7 W/G MEMBER TAPPOUNI: Michelle Tappouni,  
8 Ability Housing.  
9 W/G MEMBER OLSEN: Erik Olsen, Consulting  
10 Engineer.  
11 W/G MEMBER BLANKINSHIP: Shannon  
12 Blankinship, St. Johns Riverkeeper.  
13 W/G MEMBER GALNOR: Matt Galnor, Jax  
14 Chamber.  
15 W/G MEMBER MARTIN: Jeff Martin,  
16 climatologist at Jacksonville University.  
17 W/G MEMBER CORBIN: Shane Corbin, Atlantic  
18 Beach.  
19 MS. ELLER: Shannon Eller, City's Office  
20 of General Counsel.  
21 THE CHAIRWOMAN: All right. Thank you,  
22 everyone.  
23 Let's start with approval of the March  
24 25th minutes. Everybody should've gotten those  
25 by email.

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1 W/G MEMBER TAPPOUNI: Move to approve.  
2 W/G MEMBER OLSEN: Actually, may I --  
3 THE CHAIRWOMAN: Yes.  
4 W/G MEMBER OLSEN: Minor changes.  
5 THE CHAIRWOMAN: Yes. Absolutely.  
6 W/G MEMBER OLSEN: The transcriber did an  
7 excellent job with the PowerPoint, but as far  
8 as the acronyms, there's two changes, which  
9 I've given to the transcriber here.  
10 THE CHAIRWOMAN: Thank you.  
11 W/G MEMBER OLSEN: AVD should be NAVD,  
12 which is a survey datum. The other minor  
13 change is B-Zone. B, as in boy, there's no  
14 such thing. V-Zone, it's V as in Victor.  
15 Those are the only two changes I have.  
16 THE CHAIRWOMAN: Thank you. And you said  
17 AVD?  
18 W/G MEMBER OLSEN: AVD should be NAVD.  
19 THE CHAIRWOMAN: NAVD.  
20 W/G MEMBER OLSEN: Actually,  
21 theoretically, it should be NAVD88.  
22 THE CHAIRWOMAN: We'll go with NAVD.  
23 Michelle, would you like to amend your  
24 motion to make those two changes?  
25 W/G MEMBER TAPPOUNI: Yes. Move to  
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1 approve with the stated changes.  
2 COUNCIL MEMBER NEWBY: Second.  
3 THE CHAIRWOMAN: All right. Can I see a  
4 show of hands to approve the minutes?  
5 W/G MEMBER CORBIN: I'm going to abstain.  
6 I wasn't here.  
7 THE CHAIRWOMAN: Got it. Anybody oppose?  
8 WORKING GROUP MEMBERS: (No response.)  
9 THE CHAIRWOMAN: Excellent. All right.  
10 We have approved the minutes.  
11 We are going to start -- today we're going  
12 to be talking about storm water management and  
13 drainage and public infrastructure. And we  
14 have two wonderful gentlemen with us today from  
15 the City. We have Mike Sands, who's the chief  
16 of Development Services, and Bill Joyce, who is  
17 the operations director for Public Works.  
18 And I think we're starting with Mike; is  
19 that correct?  
20 MR. SANDS: Good morning. Thank you.  
21 Development Services is responsible for  
22 all the engineering review for plans submitted  
23 in Jacksonville. And we do the inspections on  
24 subdivisions, roadway projects, right-of-way  
25 permitting; everything that goes on basically  
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1 out in the right-of-way. And about -- it was  
2 last month, we gave a presentation to the Storm  
3 Resiliency & Infrastructure Development Review  
4 Committee, which is out in the Mayor's office.  
5 And this is just a recap of that presentation  
6 we did.  
7 We're looking at the adverse impacts and  
8 the types of impacts, potential design criteria  
9 revisions -- in other words, taking our  
10 standards we're currently designed to and  
11 possibly upping the standards or revising them.  
12 And our plan forward also is being discussed by  
13 this committee. Upstream of new development,  
14 we've got flooding issues upstream and  
15 downstream. The restricted conveyance through  
16 new developments -- elevated conveyance means  
17 bringing in fill. People look at that and say,  
18 well, you're going to flood. Well, not  
19 necessarily, but sometimes we have adverse  
20 impact. The biggest one right now that we  
21 don't really regulate or inspect is the impacts  
22 to groundwater. So -- and I'll explain that a  
23 little bit further on down.  
24 Downstream, increased flow, of course,  
25 from new development. And we try to match  
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1 pre-post development criteria, making sure that  
2 what's happening today will still remain  
3 happening after the development so there's no  
4 adverse impact. And then we have one other  
5 issue, failure to maintain drainage during  
6 construction. And I'll talk about that a  
7 little on down too.  
8 This soil permeability on filled lots is  
9 what we're talking about. And here's a good  
10 example. We have a wetland adjacent to a  
11 property, and now the development is going to  
12 fill that wetland, for instance. And it  
13 changes -- it changes the curve as far as what  
14 groundwater -- what happens to groundwater.  
15 The biggest impact we have though is if we  
16 don't use material that's capable of -- not  
17 capable, in other words, like a clay material,  
18 something that just got a lot of plastics in  
19 it, if we use that in that fill area, it's  
20 almost like a blocker down so that the  
21 groundwater can't do what it needs to do and it  
22 creates problems on existing developments. So  
23 that's something that we're looking at.  
24 The other problem we have is expanding the  
25 survey outside of the boundaries of the  
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1 development or the pre to make sure that we're  
2 picking up all the -- you know, all the  
3 contributing areas outside. So we have, at  
4 this point, and we've already implemented this,  
5 moved our topo survey requirement to at least  
6 100 feet outside of the property line to make  
7 sure that there's no drainage that's coming to  
8 the development that should be accepted.  
9 W/G MEMBER LORETTA: And Mike, what's the  
10 sizing criteria on that, like, for the  
11 development? Meaning, are you talking about  
12 one acre site you're requiring 100 feet off?  
13 Or is it five acres in perimeter you're  
14 requiring 100 feet off?  
15 MR. SANDS: Anything.  
16 W/G MEMBER LORETTA: Anything.  
17 MR. SANDS: And another interesting deal  
18 that we've implemented is called MOD,  
19 Maintenance of Drainage. And just a basic  
20 quick -- what this does is during a 10-set  
21 process, we're asking the design engineer to  
22 think through the development of the project  
23 from clearing, all the way to final product,  
24 and make sure there's no adverse impacts  
25 anywhere during construction. A good example  
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1 of that is a contractor putting in a temporary  
2 pipe to get this project and he puts in a  
3 12-inch pipe, when it really should have been a  
4 24 there. Those kinds of things, it's small,  
5 but we've had flooding on several projects just  
6 because of that one little thing or perimeter  
7 ditch not being maintained properly.  
8 The developers are using multiple  
9 contractors. They've got a guy that does the  
10 clearing, then they've got a guy that does the  
11 underground pipe work. The clearing guy  
12 doesn't know anything about drainage. The pipe  
13 guy gets there and he's got a miss because now  
14 the whole site's, you know, flooded and  
15 whatever. Beginning of January, we started  
16 asking for this MOD, Maintenance of Drainage,  
17 as another sheet in a -- in the design.  
18 For years, we've had trouble with backyard  
19 drainage swales. You know, people move in  
20 their homes, live there a couple of years, the  
21 wife complains about the water in the backyard  
22 all the time because every time it rains,  
23 there's going to be a little water in that  
24 swale. So they fill it. Then you got flooding  
25 everywhere. Everybody upstream is having a  
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1 problem because you've now blocked drainage.  
2 Well, that's my property. I can block drainage  
3 if I want to. Well, no, you can't.  
4 So we've been working on that, and about  
5 five years ago, the SSPAC changed the land  
6 developer procedures manual to require all  
7 backyard swales to be closed systems. In other  
8 words, not only are they a swale, but they're  
9 piped. And there's an inlet every third lot.  
10 The reason we did that is if somebody does  
11 block it, now we're only affecting two homes,  
12 not 20. So that's one thing that we changed,  
13 and we believe the criteria is working right  
14 now.  
15 Education is something that we need to do  
16 with people that actually live in homes with  
17 backyard drainage swales. Before the  
18 downturn -- I don't want to mention that, but  
19 before the downturn, 10-set plans were only  
20 good for two years. When everything started  
21 slowing down, we upped that, our land  
22 development procedures manual. And the SSPAC  
23 upped that to five years. It just so happens  
24 that the five years matches the water  
25 management district permit. So we thought it  
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1 was the right thing to do. The committee is  
2 actually looking at the possibility of changing  
3 that and maybe bringing it to a different  
4 number, but we didn't get much activity on  
5 that. It seemed like there were so many other  
6 things that needed to be done.  
7 Enhancing the bypassing of off-site storm  
8 water, bypass system, let's call it passthrough  
9 water, it's water that doesn't need to be  
10 collected by the development and treated  
11 onsite. We currently are bypass swales and  
12 conveyance pipes. So in swales, we use 25-year  
13 storm design criteria. We're looking at that  
14 criteria and making sure that we are capable of  
15 handling these storms and we look at the  
16 enhance requirement.  
17 Our standard design is basically, ponds,  
18 at this point, for a 25-year storm. Onsite  
19 conveyance is a 5-year storm. We're looking at  
20 those numbers also. And, you know, impervious  
21 is another issue that we have right now. What  
22 happens on a single family residential when a  
23 lot of concrete gets poured? You don't have to  
24 permit it. Now we're adding impervious area.  
25 In the initial design, most criteria is around  
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1 -- between 65 and 85 percent impervious.  
 2 That's what's factored in for design. We're  
 3 looking at those numbers and better ways to  
 4 figure out how much impervious is allowed.  
 5 Zoning currently looks at that when they come  
 6 through for a building permit, but what happens  
 7 after that? We don't have any idea. I mean,  
 8 you go out and pour a big patio in your  
 9 backyard. Everybody does it. Then we got a  
 10 real problem because you're adding that much  
 11 impervious area. So is it possible we need to  
 12 up that number in the initial design so the  
 13 pond is sized right, the conveyance is sized  
 14 right, and everything else works?  
 15 We -- one of the committee members  
 16 actually brought up Palm Coast and what they're  
 17 doing. So we did a comparison. We're pretty  
 18 close as far as the design. I know they all  
 19 use the same methods, either rational or SES or  
 20 -- but not volumetric, which we do have some  
 21 volumetric basins in Jacksonville. Most of  
 22 those terms you guys won't understand. But we  
 23 looked at Palm Coast and we were really very,  
 24 very similar. So that's one of the things we  
 25 did. I guess the only thing that is not

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1 similar about Palm Coast and Jacksonville is --  
 2 Bill will mention that a little bit later on in  
 3 his piece of the presentation -- they're about  
 4 this big, and we're about that big.  
 5 Forestry is another consideration we've  
 6 never thought about, water consumption by  
 7 trees. So we're working on a study to evaluate  
 8 tree impacts on storm water drainage. How much  
 9 does that tree drink a day? They've actually  
 10 got numbers to and figures to come up with  
 11 that. So we're working with The Florida  
 12 Forestry Service and green infrastructure on  
 13 that.  
 14 And I'm not sure -- Bill, have you -- when  
 15 are they supposed to have that?  
 16 MR. JOYCE: Very soon.  
 17 MR. SANDS: They're working on that now.  
 18 So part of the committee, we've been -- they've  
 19 been tasked to formalize the detail of design  
 20 criteria modifications, if any. Then at that  
 21 point, we've got to get back to the SSPAC,  
 22 Subdivision Standards Policy Advisory  
 23 Committee, to get approval. Then the next step  
 24 -- it's only approval to revise the land  
 25 development procedures manual and we're -- I'm

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1 support to that group. Bill here is the  
 2 chairman. We worked ahead to get those  
 3 revisions done quickly.  
 4 So I can take any questions if you have  
 5 any.  
 6 Yes, ma'am?  
 7 W/G MEMBER BLANKINSHIP: How many people  
 8 on staff do you have to inspect anything after  
 9 construction is done, all of these things that  
 10 you've permitted?  
 11 MR. SANDS: I've got eight inspectors in  
 12 the field, one project engineer, I've got --  
 13 Ellyn here is my drainage engineer.  
 14 And you have five?  
 15 MS. CAVIN: Four.  
 16 MR. SANDS: She has four inspectors  
 17 currently.  
 18 We're getting another one or just four?  
 19 MS. CAVIN: We're trying to.  
 20 MR. SANDS: Okay.  
 21 Ellyn does the after the fact stuff. If  
 22 there's a drainage complaint, she reviews them.  
 23 Our group has citation capability. If we go  
 24 out and find somebody blocking drainage, we can  
 25 actually work with them and get that corrected

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1 or we can give them citations. And that's been  
 2 working out real good. The other group, the  
 3 actual inspectors, they do the day-to-day  
 4 inspection on construction from start to  
 5 finish. We do have a lot of private  
 6 inspection, which has created us a little bit  
 7 of a problem in some cases, but we still try to  
 8 -- even if it's a privately inspected job, to  
 9 look out for the City's interest. We still do  
 10 some level of inspection on private inspection  
 11 jobs.  
 12 Yes, ma'am?  
 13 MS. REED: Am I next?  
 14 THE CHAIRWOMAN: Yes.  
 15 MS. REED: Thank you.  
 16 Mike, can you clarify for the group what  
 17 all the storm water drainage system, the  
 18 conveyance, consists of in the development from  
 19 the street to the piping to the storm water  
 20 pond.  
 21 MR. SANDS: Okay. You've got your  
 22 conveyance through pipes. Most of them are  
 23 pipes. Some of them are swales, but most are  
 24 pipes. You've got some over here that are  
 25 swales that get picked up, pipe to the pond,

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1 and the ponds there, with controlled  
2 structures, is designed to handle a 25-year  
3 storm. We have one-foot freeboard in the pond.  
4 So there's extra things there.

5 A lot of the terminology really is  
6 technical. So it's hard to explain that, but  
7 every system is modeled. They're run through a  
8 model and everything is sized per that model to  
9 make sure that the conveyance is going to work,  
10 the pond is going to work during a storm event.

11 W/G MEMBER CHATTERJEE: (Inaudible) but --  
12 so if I'm -- I'm just thinking that in the new  
13 developments that are -- quite a few new  
14 developments that are going on right now, and  
15 they are large in terms of landing. And  
16 eventually -- at least in the ponds system,  
17 eventually, they're discharging the water or  
18 the storm water or whatever in the ditch  
19 system, if I'm not wrong. Is it true or no?

20 MR. SANDS: I'm not sure --

21 W/G MEMBER CHATTERJEE: Okay. So are they  
22 discharging eventually the water in the  
23 ditches?

24 MR. SANDS: Uh-huh.

25 W/G MEMBER CHATTERJEE: So I'm just  
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1 thinking that I personally don't think that the  
2 ditch that we have -- like, the system that we  
3 have, if I'm not wrong, they're based on  
4 elevation. So the water is going downward, and  
5 sometimes if the water flows into the ditch in  
6 high volume, there's certain neighborhoods that  
7 I know personally where the water is basically  
8 going back because it's not flowing that fast.

9 MR. SANDS: Right.

10 W/G MEMBER CHATTERJEE: And I have some  
11 personal, you know, situation going on about  
12 this. So for example, Beach Boulevard, there  
13 is a certain minimum that you can go because  
14 you have a cable line underneath so there's  
15 certain roads which are already below that  
16 level. So instead of the water going out, the  
17 water is getting in and it stays there. So I'm  
18 just thinking, like, what's your plan about  
19 that?

20 MR. SANDS: That's just one of those  
21 challenges that a design engineer has to deal  
22 with just to make sure that the conveyance is  
23 designed properly. If he has restrictions on  
24 the conveyance, then he may have to come up  
25 with a different method to move the same amount  
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1 of storm water.

2 W/G MEMBER CHATTERJEE: So at this point,  
3 there's no plan?

4 MR. SANDS: At this point, we leave it up  
5 to the design engineer to submit for us to  
6 review.

7 W/G MEMBER CHATTERJEE: Okay.

8 MR. SANDS: And I know what you're talking  
9 about is -- you know, is a ditch really sized  
10 right? A drainage swale or ditch should  
11 recover just like a storm water pond. In a  
12 storm event, it's going to fill to a level and  
13 it's got a mechanism, the orifice that let's it  
14 recover. It's no different with a drainage  
15 ditch or a swale, whether it's flowing out or  
16 there's some percolation.

17 W/G MEMBER CHATTERJEE: My question is a  
18 bit different because I remember it was a  
19 couple of meetings before we had this  
20 discussion about that the roads are going up,  
21 suddenly the roads are coming down, like, in  
22 terms of elevation and stuff. So there are  
23 certain roads -- I mean, we are thinking in the  
24 futuristic idea, but there are certain places  
25 which have already been developed. So a number  
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1 of houses which have been impacted inversely  
2 because of this new development -- so I'm just  
3 thinking that maybe we have to think about them  
4 as well. I don't know whether this is a  
5 suggestion or not, but I kind of think that  
6 some places, you need to have a pond so the  
7 water can, you know, drain properly or  
8 collected from these neighborhoods.

9 MR. SANDS: We've seen ponds utilized  
10 before. The design engineer certainly has to  
11 come up with this.

12 MR. JOYCE: That's the next one.

13 MR. SANDS: Bill's going to cover all of  
14 that.

15 THE CHAIRWOMAN: He's back there doing  
16 this.

17 MR. SANDS: Here's the problem guys, were  
18 running out of good -- solid good developable  
19 property and, you know, you've got to deal with  
20 all these adverse impacts. And the engineer of  
21 record has to make sure that he's covered all  
22 the bases. And to make sure that he's covered  
23 all the bases, we do a plan review. We work  
24 back and forth with him. We require the model,  
25 we require that pipe tabs and the sizing of the

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1 pipes to be right. So it's a lot going into  
2 it. It's not just digging a hole and putting  
3 water in it. You have to be able to let it  
4 fill to a certain level.  
5 Then we've got the flood zone issues and  
6 all the other issues that are going on. And  
7 that's a whole other ball game. So it's quite  
8 interested. Designing for drainage is very,  
9 very interesting.  
10 THE CHAIRWOMAN: So I presume you are --  
11 if a developer goes in, they're required to  
12 keep the same quantity and quality of water  
13 going off at their site as a new development?  
14 MR. SANDS: That's called pre-post  
15 analysis.  
16 THE CHAIRWOMAN: But they don't really --  
17 getting I guess to his question, the  
18 developer -- an individual developer is not  
19 tasked with resolving the bigger drainage  
20 issues in an area?  
21 MR. SANDS: If he's contributing to that  
22 bigger drainage issue, he will be asked to  
23 resolve it.  
24 THE CHAIRWOMAN: Okay.  
25 MR. SANDS: There are some cases when the  
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1 engineer has to do some work downstream to make  
2 sure his system will work properly. So it's  
3 case by case. And we have to look at each job,  
4 each plan that's submitted and -- to see if  
5 there's any impacts or anything that can be a  
6 alleviated by the developer.  
7 THE CHAIRWOMAN: Joe?  
8 W/G MEMBER LORETTA: I've got two  
9 questions. One, I'll stick -- stay on the  
10 storm water topic, and the second is a survey  
11 question. But I guess it was more of my  
12 understanding that really the City just  
13 followed the water management district method  
14 and/or model. As long as we've got a permit  
15 with the water management district, we really  
16 didn't have to do anything with the City, but  
17 that's not actually what you just said.  
18 MR. SANDS: No. We're very different. We  
19 review all this -- the pipe tabulations --  
20 W/G MEMBER LORETTA: But the City of  
21 Jacksonville is not currently reviewing the  
22 full gamut of storm water --  
23 MR. SANDS: Have been.  
24 W/G MEMBER LORETTA: Okay.  
25 MR. SANDS: Always do. Actually, Bill  
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1 worked down with me five years ago.  
2 MR. JOYCE: We've been doing it a long  
3 time.  
4 MR. SANDS: We've been doing it a long  
5 time.  
6 W/G MEMBER LORETTA: Do you have similar  
7 exemptions that the water management district  
8 has? So under 9500, 9000, you know, 5500  
9 square feet --  
10 MR. SANDS: No exemption with the City.  
11 And we have -- you know, we have --  
12 W/G MEMBER LORETTA: It just all comes  
13 down to pre versus post.  
14 MR. SANDS: Yeah.  
15 W/G MEMBER LORETTA: So if you're adding,  
16 then you have to take, but if you have a  
17 95 percent impervious site and you bring it  
18 down to 75 percent, then you're good basically.  
19 MR. SANDS: Right.  
20 W/G MEMBER LORETTA: So my other question  
21 is, you know, on surveys stuff. A lot of the  
22 times, I don't really feel like the surveys are  
23 being fully incorporated or included within the  
24 10-set plans. Is that our requirement that the  
25 surveys are kind of being required in there?  
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24

1 Or how are you guys forcing --  
2 MR. SANDS: They've always been required.  
3 It's just that in the past, what the engineer  
4 would do would be to hire a surveyor to work  
5 strictly on his site. You need to see what the  
6 neighbors are doing too. So that's that  
7 additional 100 feet outside the boundary of  
8 your project. A lot of the engineers were  
9 relying on LIDAR that we have. I'll probably  
10 need to explain LIDAR, but that's the --  
11 THE CHAIRWOMAN: Can you give her the  
12 initials, please.  
13 MR. SANDS: The LIDAR was done in --  
14 MR. JOYCE: '07.  
15 MR. SANDS: -- '07. We actually flew the  
16 City. They use a radar-like device, but they  
17 have to factor in some computer work to take  
18 out the trees and the buildings. And it's  
19 fairly accurate. Our LIDAR elevations are  
20 probably within plus or minus a foot, but we  
21 wanted a actual field survey. You cannot get  
22 any better than on-the-ground surveys.  
23 So that should -- that's required in our  
24 predesign now, where our reviewers can look at  
25 it and make sure there's not a contributing  
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1 area that got missed. I mean, and we found  
 2 half a dozen of these in the last year where  
 3 the engineer simply missed an area, put the  
 4 development in, first thing you know, you got  
 5 drainage complaints. Every time it rains,  
 6 you've got two inches of water in my backyard.  
 7 Or like another example, the MOD,  
 8 Management of Drainage plan -- we had a  
 9 development here just recently. He did his two  
 10 phases, but we failed to really put two and two  
 11 together. When the engineer put in phase one,  
 12 he built out everything completely phase one.  
 13 Phase two didn't get done. All the drainage  
 14 came to phase one previously. Eventually,  
 15 he'll pick that up, but he can't pick that up  
 16 until he gets phase two built. He's going to  
 17 build phase two a couple of years from now. We  
 18 started getting calls about flooding. All he  
 19 was doing, he filled the phase one side. He  
 20 was channelizing the water to two neighbors.  
 21 So all the water that trickled across his  
 22 property before without any problems, now got  
 23 channelized and we had two neighbors flooding.  
 24 So it's just -- that's -- the MOD should  
 25 stop that. It's going to make the engineer to  
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1 think about it. Okay. We build this in  
 2 phases, he's going to have to put a berm in on  
 3 his property line because we're going to have  
 4 to keep this water on the side. We can't let  
 5 it channelize and go over there. It's as  
 6 simple as that.  
 7 Yes, sir?  
 8 W/G MEMBER MARTIN: When you say we are  
 9 running out of developable property, do you  
 10 mean -- by we, do you mean the City?  
 11 MR. SANDS: All over the city. All the  
 12 good stuff is gone.  
 13 W/G MEMBER MARTIN: Okay. And yet, we're  
 14 still getting growth?  
 15 MR. SANDS: We're still getting growth.  
 16 W/G MEMBER MARTIN: How does that happen?  
 17 MR. SANDS: You've got a lot of wetlands  
 18 that are being impacted, legally impacted.  
 19 You've got all kinds of other things. You've  
 20 got properties that are challenged, you know,  
 21 just from drainage issues.  
 22 W/G MEMBER MARTIN: One of the things that  
 23 I would want to ask not just for drainage  
 24 issues, but what is required to start a  
 25 development? What is required to start  
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1 construction on the site? There are numerous  
 2 sites along the St. Johns River that I was  
 3 looking at yesterday that are developing, what  
 4 I would think would be in a flood, soon to be  
 5 in a flood zone. You've got -- and they're  
 6 large developments. You've got Fishweir Creek.  
 7 It's very big right on Fishweir Creek. You've  
 8 got another development just to the west of the  
 9 Cummer that is right on the river. And I don't  
 10 know what's -- you know, how does the -- I  
 11 don't know the process how they get approved  
 12 and how they get inspected to -- in the process  
 13 of development and predevelopment, how that  
 14 happens. And so --  
 15 THE CHAIRWOMAN: I was going to say, can  
 16 we get staff to maybe in our next meeting get  
 17 back on that?  
 18 Give us just a very directory brief  
 19 overview of the steps it takes to get developed  
 20 and what happens if you are in the floodplain,  
 21 what happens if you're in coastal flood  
 22 hazards, and some of the little exceptions to  
 23 the --  
 24 MR. SANDS: It's actually more deeper than  
 25 that. We have restricted basins in  
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1 Jacksonville also --  
 2 THE CHAIRWOMAN: True.  
 3 MR. SANDS: -- that require a special  
 4 consideration as far as your drainage designs.  
 5 But really the answer to that question is  
 6 simply a 10-set of engineering plans. A civil  
 7 engineer, a licensed engineer, has to submit a  
 8 design, we review it, we go from there.  
 9 Now, my division looks at everything,  
 10 floodplains, storm drain, traffic, drainage,  
 11 planning, landscaping; all of it. Every piece  
 12 comes through my division for review. And we  
 13 have specialists in each discipline that do the  
 14 review.  
 15 W/G MEMBER MARTIN: How long does the  
 16 process take?  
 17 MR. SANDS: Anywhere from 40 to 60 days,  
 18 depending on how long it takes you to make your  
 19 corrections and resubmit. So you submit a set  
 20 of plans, we review, and mark them up. And  
 21 we're actually doing electronic plan review  
 22 right now. So this is something new for  
 23 Jacksonville. We've been doing it for almost  
 24 -- a little over a year now.  
 25 W/G MEMBER MARTIN: And of course, you're  
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1 using established city code?  
 2 MR. SANDS: I'm sorry?  
 3 W/G MEMBER MARTIN: You're using  
 4 established city code?  
 5 MR. SANDS: Right. We're using the land  
 6 development procedures manual, which pulls in  
 7 pieces from the code all over the Municode, and  
 8 it explains development from one end to the  
 9 other. My group also does easements and  
 10 platting; all those things.  
 11 W/G MEMBER MARTIN: I would imagine that  
 12 code is constantly evolving?  
 13 MR. SANDS: Yes. Through the SSPAC, which  
 14 is a committee. It's the Subdivisions  
 15 Standards Policy Advisory Committee. It  
 16 reviews the land development procedures manual  
 17 on a regular basis. Any issues that come up  
 18 goes on the agenda, we generally form a  
 19 committee, the committee goes away and works on  
 20 it, brings it back, and if it gets approved, it  
 21 gets changed in the book.  
 22 Yes, sir?  
 23 W/G MEMBER OLSEN: This group is basically  
 24 looking at major areas that drain into the  
 25 river, and of course, these are the flood areas  
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1 that you sort of said are another phenomena,  
 2 which is sort of the root of some of these  
 3 questions. Do the codes at all address -- how  
 4 do the codes and how do your staff address  
 5 tidal situations where your outlet is obviously  
 6 into the river, where you have normal  
 7 fluctuations, you've got Nor'easters, you've  
 8 got long term sea level rise, and now we're  
 9 talking about accelerated sea level rise? How  
 10 are any of those factors considered into the  
 11 10-set plans?  
 12 MR. SANDS: That's currently what the  
 13 other committee is looking on, but right now,  
 14 the first map you saw was 2013. There's been a  
 15 revision since then of the flood maps that  
 16 actually take into consideration the surge  
 17 model. And FEMA revised that last year.  
 18 MR. JOYCE: I think so.  
 19 MR. SANDS: Yeah, we got it last year.  
 20 W/G MEMBER OLSEN: Right, but what I'm  
 21 asking is how do you address that when Peter  
 22 Rome (phonetic) comes to you and wants to build  
 23 this project on the river with drainage into  
 24 the river? How does your staff evaluate these  
 25 phenomena with respect to his drainage plan?  
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1 Do you just defer to some engineer to something  
 2 he -- you assume he understands that there's no  
 3 explicit criteria?  
 4 MR. SANDS: No. The first thing we have  
 5 to determine, is it riverine or coastal? Then  
 6 at that point, we simply look at the flood  
 7 zones and where they're at. And if they're  
 8 development falls within the flood zone and  
 9 they intend to develop in there, then they've  
 10 got to compensate one to one, floodplain  
 11 compensation in the same basin.  
 12 So every -- to the development that's in  
 13 the flood zone -- most of them along the river  
 14 are -- they are special, get special  
 15 considerations. And our guys -- the engineer  
 16 knows this and they should be designing for  
 17 that, but our guys review to make sure they  
 18 design for that.  
 19 W/G MEMBER OLSEN: But I don't think  
 20 there's any criteria. You've got onsite  
 21 retention -- maybe this is the next topic.  
 22 MR. JOYCE: I think -- yes.  
 23 THE CHAIRWOMAN: I was going to say, let's  
 24 move -- if we don't mind, can we --  
 25 MR. JOYCE: I think the simple answer is,  
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1 that's what we're trying to figure out.  
 2 W/G MEMBER OLSEN: Okay.  
 3 MR. JOYCE: That 100-year elevation --  
 4 whatever that -- you know, that projected sea  
 5 level rise is -- when do we factor that in,  
 6 now? Later? You're correct. And I don't  
 7 think there's no design criteria currently that  
 8 says you design for that 50-year, you know,  
 9 projected elevation.  
 10 W/G MEMBER OLSEN: I don't think there's  
 11 any criteria right now that even says you show  
 12 to us, the City, how tidal fluctuations and sea  
 13 level fluctuations affect your drainage plan.  
 14 MR. SANDS: That's true.  
 15 MR. JOYCE: Mean, average, high tides is  
 16 what we use if you're discharging to the river,  
 17 correct.  
 18 W/G MEMBER OLSEN: Right. And that's not  
 19 good.  
 20 MR. JOYCE: I think both -- I think this  
 21 committee as well --  
 22 W/G MEMBER OLSEN: Maybe that's where  
 23 you're going.  
 24 MR. JOYCE: But the other committee will  
 25 also evaluate. So --  
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1 THE CHAIRWOMAN: All right. Let's --  
 2 MR. SANDS: It's part of that criteria.  
 3 THE CHAIRWOMAN: Let's take a quick --  
 4 switch over to Bill. If you don't mind, we'll  
 5 stop questions right now and switch over to  
 6 Bill and let him do his presentation.  
 7 MR. JOYCE: And this is the second part of  
 8 this presentation. Mike gave the first one.  
 9 This is the second one that's given at the  
 10 committee over here. So basically following  
 11 the same idea, but here, what we wanted to look  
 12 at was our existing infrastructure, was our  
 13 challenge to kind of come up with an inventory  
 14 with that, which we have, which is the  
 15 challenges with the systems in some of the low  
 16 lying areas, potential hardening of that  
 17 system.  
 18 This is our system. This is what you  
 19 heard Mike say. We're 840 square miles. Duval  
 20 County is a big county. I think it's the  
 21 largest landmass county in the United States.  
 22 We have over 3800 miles worth of roads, 1500  
 23 miles of pipes, 7200 drainage structures, 345  
 24 storm water facilities. Those are the ponds  
 25 that are ours that are actually the City's.

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1 And we thought this was important, 10,000, we  
 2 believe, privately maintained ponds. Those are  
 3 the ones that are in small divisions, small  
 4 commercial sites, you know, ponds that aren't  
 5 maintained by the City. All right.  
 6 1200 miles of outfall ditches. We've got  
 7 a lot of those as well, we have major outfall  
 8 ditches, which are the bigger systems that lead  
 9 to the tributaries, creeks, and things that  
 10 lead to the St. Johns. And roadside ditches,  
 11 for example, make up most of the 994 miles of  
 12 roadside ditches. We have ten of our own storm  
 13 water pump stations. This is typically what  
 14 the system looks like. Our pipes and our  
 15 drainage structures, you know, you have some  
 16 pipe systems, inlets, manholes, you know, stuff  
 17 you see typically out in the curb and gutter  
 18 system when you're driving through downtown.  
 19 Storm water ponds, you heard that  
 20 mentioned, and control structures. These are  
 21 designed to attenuate and treat. In other  
 22 words, they're designed to slow down the peak  
 23 rate. I heard a reference to volume and the  
 24 amount of water. It's not the amount of water  
 25 it's a peak rate in time. That's what current

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1 criteria the district uses and we do as well  
 2 outside of our restrictive basins. And I'll  
 3 jump into that in a little bit.  
 4 Control structures, that's basically what  
 5 they do. They restrict the flow of discharge  
 6 so that you meet pre versus post, on a peak  
 7 rate. Major outfalls, we've got 209 of those  
 8 and those are 36-inch pipes or larger, which  
 9 leads to, you know, our creeks and tributaries  
 10 that drain down eventually to the river.  
 11 Ditches, 900 -- over 900 miles of these.  
 12 You-all see these in some of our rural  
 13 neighborhoods. We have roadside ditches.  
 14 Swales are the shallower ones. These are the  
 15 outfall ditches that lead typically to the  
 16 creeks that are smaller and carry less volume  
 17 than the major ditches.  
 18 Ten pump stations, I'm showing the one  
 19 here on Children's Way, right over here in San  
 20 Marco. I'll get to that in a little bit, but  
 21 that's probably the most -- the newest one we  
 22 constructed. It's been about, I'd say about  
 23 ten years. But it's right there off Children's  
 24 Way in San Marco. And these are the other ten  
 25 that we've got throughout the county.

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1 This is what the system looks like  
 2 countywide. I mean, these are our ponds.  
 3 These are our major outfalls, and they're not  
 4 just laying on top of each other. Pump  
 5 stations, you don't see too much there, but  
 6 then you add in those ditches, those miles of  
 7 ditches, a lot of miles of pipes, a lot of  
 8 manholes, controls structures, and all of the  
 9 inlet's. You see it's pretty dense -- pretty  
 10 dense stuff.  
 11 Existing drainage system, age of it, we  
 12 have -- don't really have any true records, but  
 13 we do have some plans that tell us when some of  
 14 this stuff was built. And in general, the  
 15 older stuff was built on the riverine areas,  
 16 the stuff that's closer to the river, closer to  
 17 the creeks. That's where everybody wanted to  
 18 be developed. McCoy's Creek, San Marco,  
 19 Ortega, I mean, you know, the rivers, Ribault,  
 20 Cedar, those are where are lot of those older  
 21 communities are. Systems are older. What they  
 22 have are brick pipe. Believe it or not, they  
 23 used to build pipe out of bricks and we still  
 24 have some. Hogan's Creek, we've got -- I think  
 25 there's like a 56-inch. It's amazing. I went

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1 inside that thing. It's huge.  
 2 And I mention four-foot joints. Concrete  
 3 pipe nowadays comes in eight-foot sections  
 4 instead of four-foot sections. The more joints  
 5 you have, the more potential you have for  
 6 problems. So it's what it boils down to.  
 7 Corrugated metal pipe, pretty obvious. If it's  
 8 back then, I don't think they used the analysis  
 9 that we use today for aggressive environment.  
 10 So we see a lot of old rusted -- I think we  
 11 coat stuff nowadays that makes it better to  
 12 use.

13 Challenged system components and areas,  
 14 again, flood zones -- what I'm going to do is  
 15 I'm going to go through some of these areas  
 16 that we had some flooding during Irma. I'm  
 17 going to plot the flood zones and tell you some  
 18 of the things that we've done to harden or help  
 19 them out. This is again, countywide. This is  
 20 what it looks like if you just kind of back  
 21 out. The blue is the 100-year, yellow is the  
 22 500-year. What the reference to these storms,  
 23 I think I heard it last time, was a percent  
 24 reoccurrence. I think it's how -- everybody  
 25 thinks it's a 100-year storm. Well, it's a one

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1 percent chance of that storm happening every  
 2 year. You could have two of them back to back,  
 3 you know, and three or four over the year. But  
 4 that represents kind of the impacted areas  
 5 countywide if you zoom out.

6 And this is just some of the definitions.  
 7 Basically, in my mind, I always have an AE,  
 8 which is the 100-year and you have the  
 9 500-year, which is the X. I think they  
 10 might've changed that designation.

11 Mike, are there newer ones or are they  
 12 still the same?

13 MR. SANDS: Same.

14 MR. JOYCE: Still the same. Okay.

15 And there's different AEs and things like  
 16 that where -- that are prone to flooding two  
 17 feet of this and all that good stuff, but yeah,  
 18 basically two areas that are inland, if you  
 19 will, that are along the coast. And these are  
 20 the definitions of those. So I won't go  
 21 through those, but basically, you have a  
 22 100-year storm and you have a 500-year storm.

23 This is the San Marco area. This is the  
 24 current flood zone over-imposed on top of --  
 25 over San Marco. And you can see the 100-year

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1 and the 500-year. 500-year being the stronger  
 2 event; therefore, it reaches a little bit  
 3 further inlet or upstream.

4 There's another area, McCoy's Creek. I  
 5 think everybody's heard of this one. I mean,  
 6 when it rains, you know, it makes the news.  
 7 And it's just -- just a really challenged area  
 8 ever since I've been here for 23 years. Again,  
 9 blue referencing 100-year and yellow  
 10 referencing the 500-year storm. This is South  
 11 Hampton. This is right across -- San Marco is  
 12 right down here. That's 95 right there, and  
 13 then Channel 4 I think is right over here. But  
 14 that's the 100-year event there and there's a  
 15 500-year storm imposed on that. We had some  
 16 serious flooding. A lot of homes in here  
 17 experienced, you know, inhouse flooding during  
 18 and after Irma.

19 This is a area we had challenges. It's  
 20 called Port Arthur, which is off San Pablo.  
 21 It's kind of right at the top left, almost a  
 22 little bit in the floodway -- floodway area to  
 23 the left of that or to the west of that. It  
 24 experiences flooding even on those average high  
 25 tides, you know, the king tides and the

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1 Nor'easters.

2 Of course, this is Downtown. I think  
 3 everybody -- it's amazing how accurate these  
 4 maps are. I mean, sometimes we wonder. When  
 5 we saw this, I kind of pointed to it, but right  
 6 across Main Street, it literally flooded all  
 7 the way to Bay. So I think everybody's seen  
 8 some of those pictures. And that's Hogan's  
 9 Creek that's running along the eastern boundary  
 10 there.

11 Storm water system weakness, impacts,  
 12 here's what we're looking at. I think what the  
 13 committee is looking at are the components.  
 14 You know, Downtown, San Marco, there's  
 15 bulkheads. Drainage systems that are connected  
 16 directly to creeks and rivers, you know, they  
 17 backflow through our drainage pipe systems or  
 18 private systems. So we're looking at the tides  
 19 in those impacts there.

20 This is San Marco. Again, the elevation  
 21 is critical. That's 4.7. That's the top of  
 22 the bulkhead. When you look at San Marco, this  
 23 is what happens. It's a little bit less than  
 24 the map I showed you before because it's a  
 25 little bit lower elevation. 100-year elevation

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1 is a little higher than the top of the  
2 bulkhead, but this is the area that's impacted  
3 the bulkhead's first breached.

4 This is Riverside. This is the other side  
5 of the river. You can see the yellow  
6 represents the same thing. The bulkheads  
7 breached over there. And that elevation varies  
8 a little bit. I think it's about the same  
9 elevation. It's very close, but you can see  
10 the red line represents Riverside and it  
11 reaches -- and we saw this all the way out past  
12 Riverside along Osceola.

13 And you have two different systems -- or  
14 not systems. You have -- no, they are, but you  
15 have different areas. This area, you have a  
16 bulkhead, but then you have an almost  
17 inclination going up, if you will, a change in  
18 elevation. If you go back to San Marco, you  
19 almost have a bowl. You have a bulkhead at 4.7  
20 and inland, you have drainage inlets that are  
21 elevation 2. So you've got a different  
22 scenario. So you almost have a bowl effect  
23 over here in San Marco and we have just a  
24 bulkhead with a rise in elevation as you move  
25 away from the bulkhead over here on Riverside.

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1 Potential hardening of drainage system,  
2 this is what we're looking at. Tideflex  
3 valves, these are valves which you insert into  
4 or put in line with your existing pipe system  
5 that are backflow preventers. Bulkheads, what  
6 do we do with those? Do we raise them? Storm  
7 water pump stations, do we add them? What do  
8 we do with those?

9 Beach re-nourishment, we threw this in  
10 there because we think it's important obviously  
11 to the coastal communities. Currently, we  
12 re-nourish about every five years, and they  
13 have a certain template they use. And the  
14 dunes as well have become really important  
15 after Irma and Matthew. So they're, of course,  
16 looking at that, but they have a template,  
17 which is the amount of sand they bring back up  
18 onto the beach and the dunes. You know, we  
19 increase that. That's just something we were  
20 talking about.

21 Impacts to low lying areas, increase  
22 capacity. Do we look at the systems that we're  
23 currently designing, like Mike said, change the  
24 capacity? They're also looking at the design  
25 frequency of these storms and the intensity of

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1 these storms. I heard some of that last --  
2 absolutely. I think that's got to be looked  
3 at. Increase, you know, some of these low  
4 lying areas, do we say, you can't develop them?  
5 You know, or just shouldn't be developed in?  
6 And also, removal of homes from areas that are  
7 flooding, I'll get into that.

8 This is San Marco and this bulkhead's  
9 breached. This is -- just a reminder, this is  
10 what we've done in San Marco. We've got,  
11 again, that Children's Way pump station I told  
12 you about. There's actually another pump  
13 station down in Landon. This is a proposed  
14 pump station. If you take San Marco and you  
15 kind of cut it into wedges -- and they're not  
16 -- it's not exactly that equal, but you have  
17 drainage breaks where Children's Way is on the  
18 north side and services there, and Landon  
19 services kind of the south side, and the new  
20 pump station, which is currently under design,  
21 is kind of the middle section. We also have a  
22 Tideflex valve we installed because we have a  
23 little system that gets into the kind of right  
24 off line there that we want to help alleviate  
25 from the high tides.

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1 McCoy's Creek, this one, we got a --  
2 started a big, big improvement effort this  
3 year. And it's going to look at the creek, and  
4 these are some of the proposed activities that  
5 we're looking at. Currently, when you go  
6 through McCoy's Creek, it goes under the Times  
7 Union and it's constricted or -- so we're  
8 looking and we're trying to work with a  
9 developer, I think, to open that up so that we  
10 get increased capacity through the whole  
11 system. We've got a couple bridges that we're  
12 removing. We're very close to starting that --  
13 those two projects and a couple that we're  
14 going to raise up. And also, the creek itself,  
15 we're looking at restoring wetlands, really  
16 cool stuff. So the capacity is there. That  
17 effort is just started this year and underway.

18 This is South Hampton. This is on the  
19 other side of 95 across from San Marco. And  
20 this is -- there again, that's the 100-year.  
21 We actually got, I call it a buyout program.  
22 They're looking to purchase the homes in there.  
23 We've got 17 that have agreed to sell, of  
24 course, it's voluntary, and 21 others that are  
25 still pending that they're working on. They're

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1 actually looking at purchasing the homes and  
2 return that to floodplain. It becomes  
3 undevelopable, remove the structures, and it's  
4 basically access floodplain.  
5 Here's a summary of the countermeasures  
6 we've put in place. In San Marco, we have our  
7 two pump stations, we have Tideflex valves,  
8 and, again, the third pump station is coming  
9 online hopefully within the next year or so.  
10 McCoy's Creek, I just talked about that.  
11 Really, all of those improvements, if you can  
12 imagine, 2-foot low, that's huge in Duval  
13 County. I mean, Duval is pretty flat in a lot  
14 of areas. So we're really excited about that.  
15 I think that, again, preliminary modeling, but  
16 they're in the middle of that design as well.  
17 So we're looking for big improvements there.  
18 Port Arthur, that was that subdivision  
19 that's challenged by the tides. There, we  
20 just, I think about six months ago, put in a  
21 flex -- Tideflex valve there as well, which,  
22 again, restricts inflow as long as water -- you  
23 know, tide -- it's not raining, it'll keep the  
24 tide out until you reach the bulkhead and then  
25 you've got other challenges. South Hampton,  
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1 that's the area where we're looking at  
2 voluntary buyout. We're going to purchase  
3 those homes and return that area to the  
4 floodplain.  
5 That's it.  
6 THE CHAIRWOMAN: All right. Does anybody  
7 have any questions?  
8 W/G MEMBER OLSEN: What about Riverside?  
9 MR. JOYCE: As far as --  
10 W/G MEMBER OLSEN: Pump station.  
11 MR. JOYCE: -- plans? Well, see, that's  
12 the thought. Right now, that infrastructure,  
13 if you will, you have to raise the bulkhead and  
14 install a pump station. So that's something  
15 that we're kind of starting to look at. I  
16 think this committee is -- and this one as well  
17 is kind of doing just that. Now, what do you  
18 do? How high do you raise the bulkhead? You  
19 know, in San Marco, if I live on a bulkhead and  
20 I raise it five feet, my value of my property  
21 is gone. All these things are being talked  
22 about.  
23 W/G MEMBER OLSEN: And Stockton Street is  
24 the obvious candidate.  
25 MR. JOYCE: Uh-huh. Now, there's  
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1 definitely potential --  
2 W/G MEMBER OLSEN: That data on the  
3 bulkhead, that seems awfully high. That must  
4 be NGVD.  
5 MR. JOYCE: Yeah. I think so. Yes, sir.  
6 I think it's -- the bulkhead is 4.7, I think is  
7 the -- I think it's 88 -- no. It might be 25.  
8 W/G MEMBER OLSEN: I think it's 29.  
9 MR. JOYCE: I think it's 29. It might be  
10 29.  
11 W/G MEMBER OLSEN: And that makes it 3.4  
12 NAVD -- 3.4 feet NAVD88.  
13 MR. JOYCE: Yes, about a foot difference.  
14 W/G MEMBER OLSEN: Yes.  
15 MR. JOYCE: 7 -- 4.7.  
16 W/G MEMBER OLSEN: Yes. Yeah. And all of  
17 the bulkhead in front of St. Vincent's, St.  
18 Catherine's, all of that area there is  
19 3.5 feet --  
20 MR. JOYCE: And that's the challenge. I  
21 mean, you think about the area, right, a lot of  
22 it is private and, you know, if you don't  
23 address a bulkhead in it's totality, you've got  
24 a breach. So you've got to -- I think it's  
25 down -- somebody was talking at the committee  
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1 down south -- a different criteria. In other  
2 words, if the City were to raise all of these  
3 bulkheads -- our typical bulkheads -- in the  
4 San Marco area, we do have one on -- right  
5 along Riverside there that we just put in and  
6 we're looking at. What do we do now? But a  
7 lot of them would be on the streets and then  
8 you have a private bulkhead. So if you raise  
9 this one, you still have a breach for water to  
10 get into the system. So it's a challenge.  
11 It's going to be a challenge I think  
12 addressing, you know, the miles of bulkhead,  
13 both on north and south.  
14 W/G MEMBER OLSEN: It seems like there  
15 ought to be a phase system. The instant  
16 gratification is pumping stations.  
17 MR. JOYCE: Correct, but they're only good  
18 until the bulkhead breaches.  
19 W/G MEMBER OLSEN: Exactly, but I mean,  
20 the pumping stations also address rainfall  
21 events. Like, Riverside Avenue and Stockton  
22 goes under water during rainfall events.  
23 MR. JOYCE: Correct.  
24 W/G MEMBER OLSEN: So you can solve that  
25 through a pumping station.  
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1 MR. JOYCE: Correct.

2 W/G MEMBER OLSEN: Lost the other -- train

3 of my thought. Oh, the other thing that you

4 might want to look at is that after Irma on the

5 other side of Stockton -- I think it's

6 Riverplace -- there are all kinds of bulkheads

7 that are -- the caps are gone because it's

8 private property and apparently, there's no

9 city code that requires anybody to come back

10 and remediate the bulkhead even though there's

11 public infrastructure right behind it in the

12 roadway. And it's all subgrade.

13 MR. JOYCE: Correct. You have a unique

14 scenario where you have the road, the property

15 owners home, and they have the house over here

16 and you have a sliver on the other side of the

17 road. That's correct, on Riverside.

18 W/G MEMBER OLSEN: And you have the

19 infrastructure -- you probably have

20 infrastructure in between that.

21 MR. JOYCE: That's ours. That's correct.

22 W/G MEMBER OLSEN: But it seems like there

23 ought to be a code that requires the property

24 owner to repair that bulkhead to protect the

25 infrastructure or at least that would be at the

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1 top of --

2 MR. JOYCE: You're thinking that -- the

3 community down south -- I can't remember. It

4 has just that. It's part of their ordinance.

5 AUDIENCE MEMBER: Palm Coast?

6 MR. JOYCE: I think so. Well, let me --

7 (Simultaneous crosstalk.)

8 THE CHAIRWOMAN: We can't talk all at the

9 same time because our court reporter can't take

10 it. So we have to do one at a time.

11 MR. JOYCE: I think it's further south,

12 but yeah. They require, once you touch it,

13 bring it up to a certain given elevation. I

14 think they set that elevation based on sea

15 level rise, if I understand it. You're right.

16 I mean, that's -- the challenge is getting it

17 all because if you let this piece go, it just

18 takes one breach and you let the floodgates in.

19 It's a challenge.

20 Yes, sir?

21 W/G MEMBER MARTIN: Again, on Riverside,

22 Memorial Park was overcome by Irma and now all

23 the -- all the banisters have been removed

24 because of Irma and the -- and are they --

25 nothing as been returned. Are they planning on

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1 increasing the bulkhead there?

2 MR. JOYCE: I don't know about that, but

3 do know they're planning on bringing everything

4 back. But that's the question. That's the big

5 question. You know, where do -- and when do

6 you decide to, you know, design now for sea

7 level rise event that's 100 years, 50 years?

8 How do you phase that in?

9 And a lot of -- some of the things that

10 we're looking at up here is the useful life of

11 something. You know, when we build something,

12 it's got a 50-year life. So if you're building

13 something that has a 50-year life, do you

14 project out, you know, to that 50-year

15 elevation and say, we're going to take that sea

16 -- and we're going to build that bulkhead to

17 that elevation? So that's kind of some of the

18 things this committee over there is considering

19 for these low lying areas.

20 But yeah, no. Right now, I don't know

21 that there's any plan to raise them higher

22 because we don't know what the elevation will

23 be. It's not set. We use just current design

24 standards, which are mean, high tide from

25 pre-post.

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1 Yes, sir?

2 W/G MEMBER LORETTA: Three questions. The

3 Tideflex valves --

4 MR. JOYCE: Uh-huh.

5 W/G MEMBER LORETTA: -- has that become a

6 issue of water quality within the upstream

7 portion no longer being tidal so a lot of the

8 fish are turning over and causing some issues?

9 Has that --

10 MR. JOYCE: No, sir. Through the Chair.

11 It's really simply a device. It's a backflow

12 prevention. Okay. It has very -- if you come

13 in and you have a pipe, you insert this valve.

14 It's a very unique design. It's got low --

15 it's got low head differential. In other

16 words, the upstream, once it rains, if you have

17 a tide, it takes just about four to

18 three inches of upstream head to let the water

19 out. It's solely not a water quality

20 component. It is just meant to keep water from

21 backflowing in the system.

22 W/G MEMBER LORETTA: Well, yeah, but since

23 the current situation in the past, it was tidal

24 water -- brackish water was coming upstream and

25 it's no longer coming upstream, and so just in

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1 my community, we had that same situation out at  
2 Jacksonville Beach where we put on -- we didn't  
3 use the wash down valve like you're probably  
4 using, but we put in a backflow or a metal  
5 gauge and so then we had fish die off in that  
6 because we no longer had brackish water. It's  
7 now becoming -- you know, it's turning over --  
8 after 20 years of brackish water, it's turning  
9 into none-brackish water. And so there's a lot  
10 of that fish died off and killed, so on and so  
11 forth. So that's another environmental issue.

12 MR. JOYCE: Our two valves we put in  
13 aren't connected to ponds. They just drain the  
14 roadway.

15 W/G MEMBER LORETTA: Okay. They're not  
16 connected to ponds?

17 MR. JOYCE: Correct. They're not draining  
18 back into a system that might accept water,  
19 just truly a curb and gutter guided water  
20 system.

21 W/G MEMBER LORETTA: The buyout program,  
22 how is the City stating values for that?

23 MR. JOYCE: They go through appraisal  
24 process and -- I'm not an expert there, but  
25 yeah, they --

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1 W/G MEMBER LORETTA: Are they getting like  
2 reasonable market rate? Or --

3 MR. JOYCE: I think so. And I can tell  
4 you there's also -- that's a major area, but  
5 there's -- and Mike can maybe expand on  
6 repetitive loss program. In other words, if  
7 your house just happens to be in a bad area and  
8 you have, you know, history of flooding, you  
9 can go through it individually as well if you  
10 qualify and you've got all these things. And  
11 they -- yeah, I think they go through -- I  
12 think they get a fair market value.

13 THE CHAIRWOMAN: If the -- as a side note,  
14 if the City is following their condemnation  
15 procedures, what happens is the City will get  
16 an appraisal for a decent property. The  
17 homeowner can get an appraisal as well. If the  
18 values are not within a certain percentage of  
19 each other, the two entities can also get a  
20 third appraisal if you're looking to actually  
21 sell and the parties can agree on the third  
22 appraisal point or the City can use  
23 condemnation, in which case it's -- the value  
24 of condemnation falls between the low and the  
25 high.

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1 Michelle?

2 W/G MEMBER TAPPOUNI: You mentioned there  
3 are 10,000 privately maintained, approximately?

4 MR. JOYCE: Estimate.

5 W/G MEMBER TAPPOUNI: Estimate. We think.  
6 This is coming from my CPAC meeting.

7 MR. JOYCE: Uh-huh.

8 W/G MEMBER TAPPOUNI: You know, people in  
9 their neighborhood saying their privately  
10 maintained are not being maintained, and  
11 there's no -- there's no mechanism for that.  
12 And obviously, if we're talking about 10,000  
13 plus or minus ponds that are not doing their  
14 job, that's having an impact. Does the City  
15 have any thoughts about that? Or I mean, I  
16 think everyone's kind of like not sure what to  
17 do at this point.

18 MR. JOYCE: I tell you, go back years  
19 because the way ponds -- they were designed  
20 different criteria. But even as older  
21 subdivisions, when you read the plat, because  
22 it comes up many times, assigned the  
23 maintenance responsibility to the abutting  
24 property owners, just the people that live  
25 along the pond. Not saying this was fair, but

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1 that's the way it was done years ago. And  
2 through Mike and I, we've adjusted plat  
3 language to state -- because what we're seeing  
4 now is the developers and the engineers are  
5 putting them in tracks. So it used to be that  
6 the property lines ran right through ponds.  
7 They don't do that anymore. Well, sometimes  
8 they do, the majority don't. They're putting  
9 them in separate tracks.

10 So we have amended the plat language to  
11 include if and when HOAs typically are supposed  
12 to maintain the ponds, that's who gets the  
13 responsibility. They just go out of business,  
14 do whatever they do, just stop meeting, if that  
15 happens, we got language that says, those that  
16 are a party to the plat are responsible to be  
17 maintaining. Because everybody's getting --  
18 even though I may not live on that pond, it's  
19 the reason that I'm there and in my home and I  
20 live, you know, two streets off. So I should  
21 participate in the maintenance so that it's not  
22 a burden for those that just live right around  
23 the storm water pond itself. So we've got that  
24 language in there.

25 But the big picture, no, there is -- the

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1 district is typically compliance group, St.  
2 Johns river water management district. I can  
3 tell you ponds, even in my subdivision, they're  
4 dug to be about eight feet deep and there's a  
5 permit pulled. There's these different  
6 treatment elements that go into the pond, but  
7 there's a lot flexibility in there. But to  
8 your point, some of them are reaching that  
9 point where they're losing the water quality  
10 effort. Pre-post, that's usually very end  
11 because that's the top part of the pond. So  
12 from that standpoint, you don't lose that  
13 functionality of the pond until really late in  
14 the process with the pond.

15 W/G MEMBER TAPPOUNI: I think one of the  
16 complaints from some of the neighborhoods is  
17 they're seeing -- even on the commercial ponds  
18 for the commercial properties, which you would  
19 expect that the businesses would take care of  
20 them, but they're not operating. The pumps are  
21 not operating. The lawn people are blowing all  
22 their clippings in there, so basically the  
23 bottom of the pond is now much higher than when  
24 it was originally built and the water is not  
25 percolating. It's sitting, which is becoming a

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1 concern because of mosquito -- all the mosquito  
2 warnings we're getting from the City.  
3 So I don't know what the answer is. I  
4 just know that when we see -- especially if we  
5 go to the Westside and north northwest Jax, you  
6 see a lot of these ponds not properly  
7 maintained. They're not part of a HOA or a  
8 subdivision. I don't know how many ponds those  
9 are, if that's even included in your 10,000-ish  
10 number.

11 MR. JOYCE: Believe it or not, what we did  
12 -- well, I say we. Tom did it before or --  
13 gosh -- he looked at the number of permits and  
14 did an average that were done through St.  
15 Johns. So I think it does include the  
16 commercial ponds, but still that's a tremendous  
17 number of ponds.

18 And to your point, I mean, the current  
19 enforcement group at St. Johns, I mean, if they  
20 are put on notice -- I don't think they  
21 proactively go out and inspect, but if  
22 something's brought up to our attention --  
23 because we also have, you know, the storm water  
24 fee, which you can receive a discount on. And  
25 if your pond is out of compliance, and it's

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1 brought to our attention, that gets revoked as  
2 well from our side.

3 But yeah, the district is -- typically  
4 gets a call from a compliance standpoint.

5 THE CHAIRWOMAN: Shannon?

6 W/G MEMBER BLANKINSHIP: This might be  
7 more from Mike again, but I'm just trying to  
8 understand. If you have a piece of property  
9 and it's forested wetland, so you know that all  
10 of those trees are able to absorb a lot of  
11 water, you know that the wetland itself is able  
12 to store and absorb a lot of water and maybe  
13 even have a waterway so it serves as floodplain  
14 as well, and then you come in and clearcut and  
15 raise the elevation of it, what kind of  
16 calculation goes into trying to compensate for  
17 all of the water that that land had before?

18 MR. JOYCE: She needs to be in our  
19 committee.

20 MR. SANDS: Yeah. Actually, that's what  
21 we we're talking about, you know, coming up  
22 with numbers on what trees do for us, coming up  
23 with numbers on what happens when you fill a  
24 flood -- you know, a wetland. We're still  
25 reaching for those answers.

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1 W/G MEMBER BLANKINSHIP: I mean, are the  
2 ponds your solution or are there more things  
3 that I don't, you know, understand that are  
4 going into these -- the engineering plans that  
5 we can just talk about? Or is it just we are  
6 just hoping that the ponds take up rainwater  
7 and then there is, you know, loss of all that  
8 function?

9 MR. JOYCE: There's a specific design  
10 criteria they use from a drainage area  
11 contributing area perspective that sizes that  
12 facility. But you brought up groundwater.  
13 There's no pre-post analysis right now and  
14 we're thinking we should be looking at that  
15 because when you have these points like that  
16 one graph that Mike had, when you remove that  
17 or fill that, once you change the groundwater  
18 elevation or change everything you designed  
19 for, you may not even know it. So that's one  
20 element.

21 And we're looking at trees too. That  
22 study I think we're looking at -- what is -- I  
23 can tell you I remember years ago out at Cecil,  
24 when they did their thing, groundwater came up  
25 a foot or two. You know, all of a sudden, you

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1 had standing groundwater out there. It was  
 2 really eye-opening.  
 3 But that's what we're looking at, those  
 4 types of things because what's supposed to  
 5 happen is, if you look at your side, I know you  
 6 guys see the new developments of two, three,  
 7 four feet higher. That's the way they're  
 8 designed now. I think that's passing -- ponds  
 9 and I get it. But they're supposed to -- as  
 10 Mike said, the contributing area, they've got  
 11 to take care of that. That, to me, is the  
 12 hardest part of a new development.  
 13 You can engineer the center -- I call it  
 14 the internal. That's pretty standard. It's  
 15 those what happens when you dug, you fill the  
 16 low area, you haven't picked up something, and  
 17 properly routed around the system? That's when  
 18 we see problems. And especially if you get it  
 19 and don't maintain it, get it right, that's  
 20 another -- so -- but to your point, yeah,  
 21 there's some elements that we just haven't --  
 22 we don't look at them.  
 23 You know, groundwater I think is a big one  
 24 because that sets our -- we have what's called  
 25 pre-design. You're designing high water

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1 elevations. So that's when you design a pond  
 2 recovery to it with an orifice to it in certain  
 3 elevation. Well, if you change that, then you  
 4 probably see your design may not meet criteria.  
 5 So that's something that we're all looking at  
 6 right now. It's really interesting. It's  
 7 going to be -- be some good stuff coming out  
 8 there.  
 9 MR. SANDS: That's why we have freeboard.  
 10 That's why we have the other pieces also, to  
 11 make sure that we've got a safety margin in our  
 12 design. It is a science. Everything is  
 13 modeled. We do the best we can to predict all  
 14 of this that happens during a rain event, but  
 15 you know, you've got the unknowns and you've  
 16 got the seasonal high water level that  
 17 fluctuates. It's just a -- it's a challenge.  
 18 W/G MEMBER TAPPOUNI: I always hesitate to  
 19 bring up things that I'm working on on my own  
 20 projects, but I think this might be a good  
 21 example, recently working with Mike on a  
 22 project on the Westside. And we had one side  
 23 -- we we're going through our 10-set review.  
 24 We had one side that we were building a  
 25 sidewalk to take people out to the road where

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1 the bus stops and -- access to transportation.  
 2 We were leaving the other side as much as  
 3 nature as we could with the trees -- the tree  
 4 line that was there. It was a heavily wooded  
 5 lot. We were required to add a second sidewalk  
 6 to the other side of the property. So we had  
 7 to clear the trees that we had planned on  
 8 keeping. And I think if I had time, we might  
 9 have found a resolution with the City, but, you  
 10 know, timing with the founding didn't allow us  
 11 to really go back and try to fix it.  
 12 But I think looking at things more  
 13 ballistically with even the 10-set review as  
 14 you're going through and -- you know, we get  
 15 through landscaping and we're good, and then we  
 16 go to another department and likely, you don't  
 17 have enough sidewalk or you don't have enough  
 18 parking lot. And we're adding more impervious  
 19 than even if the -- you know, we're a little  
 20 different as a developer because of who we're  
 21 serving, but we do try to keep as much of the  
 22 natural. We don't fill in wetlands and things  
 23 like that.  
 24 So I don't -- again, so I'm not sure what  
 25 the answer is, but I think that, you know,

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1 being able to have that look as you're doing  
 2 the 10-set review of -- is one sidewalk from --  
 3 and maybe some of this is ADA and there's a  
 4 federal requirement or a requirement that's  
 5 above the City of Jacksonville's purview in  
 6 allowing the waiver of that. But really  
 7 looking at it, do you really need all that  
 8 impervious surface if there's enough access and  
 9 egress to serve the site?  
 10 MR. SANDS: I think that's more of a  
 11 self-imposed thing. ADA is a requirement,  
 12 certainly, with the sidewalks on both sides.  
 13 We're the worse city in the country for  
 14 pedestrian versus car deals, and, you know, the  
 15 sidewalks are very poor.  
 16 THE CHAIRWOMAN: All right. Let's jump  
 17 over to staff deliverables. So the one thing  
 18 that we talked about here is getting just some  
 19 sort of a summary from staff on the development  
 20 process. When a developer comes in, what steps  
 21 do they go through to get to actually pulling a  
 22 permit for development? In addition to going  
 23 through 10-set, what are the things that they  
 24 have to check off before then? Which I think  
 25 the staff can provide to us.

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1 Is there anything else that anybody would  
2 like to request from staff right now based on  
3 what we just heard?

4 Jeff -- Joe, sorry.

5 W/G MEMBER LORETTA: That's okay. I  
6 wouldn't mind like a 15-minute presentation  
7 from the floodplain coordinator to kind explain  
8 the pre versus post and walk us through that.  
9 It all comes down to your contours on your  
10 property. And so you may be in the floodplain,  
11 but if you have contours on your property that  
12 are above the floodplain elevation, then it  
13 doesn't matter. You know, so I think we just  
14 all need to understand that a little bit.

15 THE CHAIRWOMAN: Yeah. Good request.  
16 Anyone else?

17 WORK GROUP MEMBERS: (No response.)

18 THE CHAIRWOMAN: All right. Let's jump  
19 real quick to old business because we had asked  
20 staff to give us some information this last  
21 time around.

22 And so let's start with -- one of the  
23 requests was hurricane Irma claims, and Susan  
24 or Kristen are going to address that.

25 MS. KELLY: So honestly, we didn't find  
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1 insurance in upping regulations and have that  
2 impact some of these insurance costs and the  
3 number of claims and those types of things. So  
4 maybe when we have that person come to speak,  
5 they might have access to information that the  
6 staff couldn't get to. So we can try that  
7 then.

8 The next thing from staff was, you were  
9 going to give us the recommendations from the  
10 Comp Plan Assessment Major Issues Committee.

11 MS. REED: All right. That is a one-page  
12 handout. There's two recommendations that are  
13 provided to you. They talk about  
14 infrastructure and the St. Johns River and the  
15 tributaries.

16 The first recommendation is to include  
17 strategies and processes to assess the  
18 effectiveness of drainage and flooding  
19 infrastructure in areas of the city that were  
20 developed prior to the imposition of the  
21 current storm water management regulations.  
22 And we can go into a little more of that storm  
23 water management regulations in our development  
24 review process. But that is one recommendation  
25 of the report.

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1 much. I think we all knew that that was maybe  
2 not going to happen. So we are providing what  
3 we did find. It's this that has a little pie  
4 chart on it. It's pretty easily accessed  
5 information.

6 But this is about the Hurricane Irma  
7 claims data. Most of this is entirely for the  
8 State of Florida; however, on page 2, it does  
9 call out Duval County. So if you're interested  
10 in terms of number of claims compared to the  
11 state and just in terms of just the number of  
12 claims, it's in there. And then you can also  
13 see on page -- what would that be? 1 -- 2 -- 3  
14 -- 4 -- page 4, there's a map in terms of,  
15 like, how we compare with the rest of state.

16 But honestly, that's the best we could  
17 find. I don't know if there's some proprietary  
18 data for insurance claims information. I hope  
19 this is responsive to what the group was asking  
20 for. So we've got this, and this will be  
21 posted on the website as well.

22 THE CHAIRWOMAN: Okay. Thank you.

23 One of the things we had talked about was  
24 trying to get somebody from the insurance  
25 industry to come talk to us about the play of

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1 The second one is considering  
2 opportunities to incorporate resiliency  
3 projects into waterfront activation planning,  
4 which I saw -- I believe you saw with the  
5 presentation of the creek that Bill Joyce had  
6 presented to us and how they're restoring the  
7 floodplain and increasing the capacity of that  
8 floodplain.

9 These recommendations in the major issues  
10 -- from the local major issue committee are  
11 incorporated into the overall assessment of the  
12 effectiveness of the comprehensive plan. That  
13 report is actually introduced or filed for  
14 introduction on the 9th, tomorrow night, for  
15 the city council to consider the  
16 recommendations. And then once the council  
17 goes through their legislative process and  
18 approves that, we'll initiate making changes to  
19 the comprehensive plan to address those.

20 THE CHAIRWOMAN: So who is on this local  
21 major issues committee?

22 MS. REED: Let me go through my --

23 THE CHAIRWOMAN: Just generally.

24 MS. REED: Generally, we had  
25 representatives from the development community,

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1 from nonprofit agencies, we had a council  
2 member, Council Member Schellenberg, who is the  
3 Land Use and Zoning Committee chair, was the  
4 chair in that committee as well -- I'm trying  
5 to think -- economic development, the civic  
6 council, we had representatives from there. So  
7 a lot of diversity among that group as you see  
8 with this one as well.

9 THE CHAIRWOMAN: Okay. And how does that  
10 group overlap with this group?

11 MS. REED: The Major Issues Committee --  
12 actually, they completed their recommendations.  
13 What they did is they looked at local major  
14 issues. Sea level rise was not one of those,  
15 but local major issues for the City in guiding  
16 growth and development and came up with their  
17 own list of recommendations. Some of that was  
18 based on work that the City had done  
19 previously. The mayor had a transition team,  
20 subcommittees -- group of subcommittees that  
21 made different recommendations on growth and  
22 development, infrastructure planning,  
23 recreation. They took some of those  
24 recommendations and considered those in  
25 implementation in the comprehensive plan and

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1 similar to our elements.  
2 They're looking at sea level rise. And  
3 I'm not going to, you know, read to you, but  
4 one of the ones that I want to point out to you  
5 is in their chapter 6, Promoting Environmental  
6 Sustainability, which is probably similar to  
7 our conservation and coastal management  
8 element, which is where our a adaptation action  
9 area policies fall.

10 They've got Action ES2.1.3, the third  
11 bullet point down there, Revise development  
12 regulations to respond to the impact of  
13 potential sea level rise. So that one  
14 specifically, if we sort of track it down into  
15 what they've done for their land development  
16 regulations within their zoning ordinance --  
17 and this is very new. This was adopted January  
18 2018. So I don't have any information as to  
19 how successful they've been or, you know, have  
20 they had any challenges.

21 But one of the approaches that they have  
22 taken is zoning overlays. And if you're not  
23 familiar, a zoning over -- so we have the  
24 zoning code, which is in our ordinance code.  
25 And then a zoning overlay basically sets

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1 also the blueprint on consolidation  
2 recommendations.  
3 The -- so there was a lot of public input  
4 on the initial part of those and then they fed  
5 down into the comprehensive plan's  
6 recommendations.

7 THE CHAIRWOMAN: So we're a much more  
8 targeted committee than that group?

9 MS. REED: Absolutely.

10 THE CHAIRWOMAN: Any questions or comments  
11 from the group on those two?

12 WORK GROUP MEMBERS: (No response.)

13 THE CHAIRWOMAN: Okay. So the next thing  
14 that we asked for was to look at Norfolk's  
15 approach.

16 And staff, can you explain the information  
17 you found on that.

18 MS. KELLY: So you have in your packet --  
19 it says Research Norfolk Adaptation Resilience  
20 Approach in your items. So we looked at --  
21 Norfolk is doing a lot and so we looked at it  
22 with a lens of how it relates to this group.

23 So their general plan, which would be  
24 similar to our comprehensive plan, it looks  
25 like within four of their chapters would be

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1 regulations for performance standards or just  
2 an additional set of regulations on top of that  
3 code. So they have a few different overlays.  
4 And you can read through this. And I'll also  
5 post a link on the website to their page. But  
6 they have, like, a floodplain coastal hazard  
7 overlay and then they also have coastal  
8 resilience overlay, upland resilience overlay.  
9 And attached at the end of this information --  
10 because they're shorter so we went ahead and  
11 included them -- are the coastal resilience  
12 overlay and the upland resilience overlay.

13 So you can take a look at that. The first  
14 one, the coastal, has a longer -- was longer so  
15 -- so I didn't include it here, but it gives  
16 you an idea as to what they're putting in their  
17 zoning code for these locations. And then when  
18 you break it down even further, what they're  
19 doing is a resilience quotient.

20 So as I understand it -- and actually let  
21 me kind of read from their executive summary.  
22 Their resilience quotient requires all  
23 development within the city to meet a  
24 resilience quotient. The requirement is  
25 measured on a point system covering three

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1 separate resilience elements: Risk reduction,  
 2 storm water management, and energy resilience  
 3 because they're looking at sort of climate big  
 4 picture, so they're also just talking a lot  
 5 about energy.  
 6 And this is from their same section.  
 7 Innovative point system ensures that new  
 8 development will be more resilient and  
 9 environmentally-friendly while providing  
 10 flexibility to builders by allowing them to  
 11 choose which measures to include in the  
 12 development. Additionally, new or expanding  
 13 development must meet minimum requirements for  
 14 first floor elevations 1.5 to 3 feet above  
 15 flood level.

16 So -- and again, I'll put a link to all of  
 17 that on our website. But their resilience  
 18 quotient -- did I include -- I did a little  
 19 snapshot. It's not very clear, but a little  
 20 snapshot of what it looks like. It's like a  
 21 little menu. You have these action items and  
 22 then a point system. I do not know, like, what  
 23 point number you have to get to do -- to get  
 24 built or -- you know, however they're using it,  
 25 but it is for -- everything that's going

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1 through site plan review needs to have this  
 2 resilient quotient applied to it.

3 Again, it's very new, but I wanted to  
 4 present you with what their approach is. So  
 5 this is the approach that they've taken.

6 THE CHAIRWOMAN: Could we ask staff to  
 7 look -- to call Norfolk and talk to them about  
 8 this resilience quotient and find out if it's  
 9 you have to meet a certain minimum number  
 10 before you can develop? Or if you meet certain  
 11 numbers, you get bonus things? I don't --  
 12 bonus density or something to that effect. How  
 13 it works -- basically how that works.

14 MS. KELLY: Yeah. Absolutely. I did  
 15 email them. I just haven't heard back. We'll  
 16 call and find out how that's working out for  
 17 them.

18 THE CHAIRWOMAN: Yeah. So that's  
 19 interesting. Okay.

20 Any questions about the Norfolk  
 21 information?

22 WORK GROUP MEMBERS: (No response.)

23 THE CHAIRWOMAN: That's something I think  
 24 we're probably going to need to really all look  
 25 at and then probably talk again next meeting

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1 once we've had a chance to review that.

2 Michelle?

3 W/G MEMBER TAPPOUNI: Just glancing  
 4 through this guide, the table that's in the  
 5 back, I'm wondering how much of this might  
 6 overlap with the low impact development manual.  
 7 We don't talk about that very much, but it's  
 8 out there. It might be something that the  
 9 committee also might want to take a look at or  
 10 workgroup.

11 THE CHAIRWOMAN: Good idea. All right.

12 The next thing we're going to get to was  
 13 the topic from last time, which is the mapping.  
 14 And we voted to look at expanding the AAA  
 15 boundaries, and staff -- we asked staff to  
 16 prepare some maps for us and we had the  
 17 gentleman from the National Weather Service who  
 18 was here who was able to provide some  
 19 additional information to staff.

20 So can you run down that for us.

21 MS. KELLY: Sure.

22 Chris, can you zoom in to, like, the  
 23 middle so we can see sort of the layers a  
 24 little bit?

25 Okay. So what you're looking at is the  
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1 CHHA, which is currently designated as the AAA.  
 2 And that is like a crosshatch. Let me see it  
 3 clearly.

4 Do you have a little -- do you have a  
 5 little pointer?

6 And then you also have the flood zones and  
 7 we've got the 500 -- the 500 and the AE. Is  
 8 this okay? Good, but did that zoom in?

9 So that little crosshatch is the CHHA for  
 10 example. The light blue is the AE, the  
 11 100-year, and the pink is the 500-year.

12 Can you -- do you have control of it? Can  
 13 you -- because I don't know how to do this form  
 14 here. Can you zoom over to like downtown?  
 15 Yeah. Perfect.

16 Those dots are the data that we received  
 17 from the gentleman last time, Al Sandrik, with  
 18 The National Weather Service. So if you look  
 19 at where the dots are, for example, personally,  
 20 I thought this was pretty interesting, but  
 21 they're within the 500-year like I think Bill  
 22 Joyce mentioned. Those flood zone layers, they  
 23 do match up, don't they? Or on Riverside -- so  
 24 yeah, you can see -- am I doing that? I'm not  
 25 going to touch it either.

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1 Anyway, so that's with the overlay and you  
 2 can kind of take a look and sort of see what  
 3 you think about the layering of the data.  
 4 THE CHAIRWOMAN: So I was going to ask  
 5 Bill, but we're going to ask Kristen because  
 6 Bill is not here today.  
 7 I thought that we could probably hone in  
 8 our recommendation for what we gave last time,  
 9 but I'm not really sure where we should go with  
 10 this. Do we make a recommendation that you,  
 11 you know, adopt this map? Do we recommend that  
 12 you work with -- my understanding is JEA is  
 13 looking at a map. There are -- the resiliency  
 14 group may be looking at the information. So  
 15 would it be most helpful to the City if we make  
 16 our recommendation to say, based on the  
 17 information that Erik Olsen gave us, based on  
 18 the information that you have now gathered,  
 19 that we recommend that this map be considered  
 20 in conjunction with the other groups that are  
 21 looking at maps? Because we don't want to end  
 22 up with six different maps around the city. Or  
 23 do we say, we like this map best, we think this  
 24 is the one you should go with, and let you guys  
 25 work it out with the other groups? What would

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1 be most helpful to the planning department.  
 2 MS. REED: Emily, you're correct. There  
 3 are several factors that are playing into this  
 4 and several groups that are looking into it.  
 5 JEA, which hopefully we'll have come present  
 6 later, has their own resiliency studies they're  
 7 working on in hardening of their  
 8 infrastructure.

9 The storm water resiliency and  
 10 infrastructure group was focussing on immediate  
 11 changes to address current flooding, but is  
 12 recognizing that it's missing that component of  
 13 sea level rise and how far they need to look  
 14 out in prioritizing their infrastructure. And  
 15 I know Bill Joyce and Mike Sands talk a little  
 16 bit about what they're talking about. So they  
 17 are considering the impacts of sea level rise  
 18 also in those areas or boundaries as we are.

19 And I think the ideal recommendation would  
 20 be that these are things that we've considered  
 21 and we found and should be taken holistically  
 22 with their considerations also to come with one  
 23 boundary and one future perspective on how we  
 24 develop our infrastructure.

25 THE CHAIRWOMAN: So could we recommend --  
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1 I just jotted some notes here. I'm looking at  
 2 those -- that the staff consider and review and  
 3 coordinate based upon the map that the staff  
 4 has been able to prepare for us to coordinate  
 5 with the Storm Water Resiliency Committee, JEA,  
 6 and other organizations to try to adopt a  
 7 citywide map to put in place the AAA?

8 MS. REED: Personally, I think that would  
 9 be a good direction to go. It's at the will of  
 10 the committee.

11 W/G MEMBER MARTIN: Yeah. Sorry I missed  
 12 it. What are the point data there? The black  
 13 dots, what are those?

14 MS. KELLY: So those are from the last  
 15 meeting when Al Sandrik from National Weather  
 16 Service, the gentleman who was sitting over  
 17 there --

18 W/G MEMBER MARTIN: Yeah.

19 MS. KELLY: -- he said he had data based  
 20 on -- if I can say this correctly -- where they  
 21 had identified flooding from Irma. And they  
 22 went out and they documented each one of those  
 23 points. So this -- those -- that point data is  
 24 representation of damage from flooding from  
 25 Irma.

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1 THE CHAIRWOMAN: Joe?

2 W/G MEMBER LORETTA: I mean, if I read  
 3 this map correctly, light blue is the 100, the  
 4 gray is the 500, and then the bold blue line is  
 5 the current CHHA. So it seems to me a pretty  
 6 simple modification that we may be recommending  
 7 would just be going, the AAA map should include  
 8 the 500-year flood and then we're done. I  
 9 mean, why would we be thinking too much further  
 10 than that. It seems like it aligns with the  
 11 Erik's information, it aligns with the National  
 12 Weather Service, and you know, it would be  
 13 within range of what would be reasonable based  
 14 on what we've all been talking about.

15 THE CHAIRWOMAN: Shannon?

16 W/G MEMBER BLANKINSHIP: And I heard the  
 17 JEA presentation now twice about the work that  
 18 they're doing, which is incredible, but I do  
 19 think they're looking at different things than  
 20 we are because they're looking at critical  
 21 infrastructure of JEA's resources. So it's not  
 22 that we shouldn't coordinate, but I feel like  
 23 this group, it seems pretty clear what we  
 24 should be focussing on for the conversations we  
 25 need to continue having. And it would

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1 additionally be helpful to have something come  
 2 out of this conversation that would be helpful  
 3 to what they're doing, but I don't think it's  
 4 going to change necessarily what, you know, JEA  
 5 is looking at and all of the, you know, energy  
 6 and funding and resources they put into  
 7 identifying the critical areas.  
 8 THE CHAIRWOMAN: Erik?  
 9 W/G MEMBER OLSEN: Yeah, I would embrace  
 10 that. I mean, our objective is to look at sea  
 11 level rise, to look at low frequency flooding  
 12 in existing areas versus in new areas. Most of  
 13 it is already developed. And our area of  
 14 interest would be different than theirs and/or  
 15 potentially other groups, groups who may be  
 16 looking just at drainage. So I would recommend  
 17 that we sort of take a lead on this and then  
 18 try to guide them, if anything, other interests  
 19 within the city to embrace this and understand  
 20 this and to factor into their particular  
 21 considerations.  
 22 W/G MEMBER TAPPOUNI: Can you pull that  
 23 map out so we can see how -- what the impact  
 24 may be on the north northwest and the Westside?  
 25 MR. SCHOENIG: Actually, that map only  
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1 goes out that far. We don't have the whole  
 2 county.  
 3 W/G MEMBER TAPPOUNI: It doesn't go any  
 4 further north side then?  
 5 MR. SCHOENIG: Not this map that we have  
 6 with us today.  
 7 THE CHAIRWOMAN: Yes, Kristen.  
 8 MS. REED: Through the Chair.  
 9 Just to clarify, we focussed on this area  
 10 because that's where the NOAA point data was.  
 11 They didn't have -- they prioritized their  
 12 sampling. So we could pull that map and show  
 13 you later -- I don't think even on the online  
 14 system, the extent of the whole city, you would  
 15 get a good picture. Just the layers don't show  
 16 at that extent. But we can certainly bring  
 17 back a map that shows those flood zones.  
 18 There's certainly areas, I think on the  
 19 website, that aren't going to be related to  
 20 this and we wouldn't want to regulate them  
 21 based on flood zones associated with sea level  
 22 rise. And I don't know how you separate those  
 23 two things, how you define where to stop.  
 24 THE CHAIRWOMAN: Joe?  
 25 W/G MEMBER LORETTA: Is the buyout program  
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1 that was discussed earlier in one of the  
 2 neighborhoods, is that shown on this current  
 3 map or is that in a different region?  
 4 MS. REED: Actually, I think if you zoom  
 5 in east of I95 -- right.  
 6 MR. JOYCE: That's --  
 7 MS. REED: It is not the repetitive loss  
 8 properties?  
 9 MR. JOYCE: Yeah, right there.  
 10 MS. REED: Yeah.  
 11 W/G MEMBER LORETTA: All right. So it's  
 12 in the San Marco --  
 13 MR. JOYCE: Uh-huh.  
 14 W/G MEMBER LORETTA: Okay.  
 15 MR. JOYCE: Yeah, all up in San Marco  
 16 right down to the parking lot.  
 17 W/G MEMBER TAPPOUNI: Is that -- are you  
 18 referring to the groundwork project when you're  
 19 calling it the bio (phonetic)?  
 20 W/G MEMBER LORETTA: No. He's just --  
 21 THE CHAIRWOMAN: Buyout.  
 22 W/G MEMBER TAPPOUNI: Oh, buyout. Sorry.  
 23 THE CHAIRWOMAN: So it's essentially  
 24 across the Main Street Bridge over in that WJCT  
 25 area; is that correct?  
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1 MS. REED: Correct.  
 2 MR. SANDS: South and east of the storm  
 3 water building.  
 4 MR. JOYCE: Yeah, this is -- you-all heard  
 5 about the District, JEA's property? That's it  
 6 right there. The stadium is over there  
 7 straight across.  
 8 THE CHAIRWOMAN: It's on the Southbank.  
 9 Erik?  
 10 W/G MEMBER OLSEN: It many not have been  
 11 clear, but actually, I sort of put boundaries  
 12 on my recommendation, which was from the  
 13 Matthews Bridge down to the south county line  
 14 and up, principally because this is the section  
 15 of the river that was impacted by Irma that was  
 16 not predicted. It has not been predicted as  
 17 being to that level of impact. Implicit in all  
 18 that is the fact that particularly from  
 19 Downtown southward, in my opinion, anyway, the  
 20 flood maps that we recently adopted are  
 21 unconservative. That's because this section,  
 22 the riverine section of the Downtown really  
 23 doesn't get modeled in the methodologies that  
 24 are used for storm surge modeling.  
 25 And the remainder of the county, the  
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1 Beaches and -- the Beaches, it's highly  
2 accurate because what's happened -- what the  
3 methodology does is it predicts what the storm  
4 surge is in the ocean and it propagates it up  
5 the river. So the closer you -- and that's why  
6 it's a coastal model. It's not a riverine  
7 model with respect to the type of impacts that  
8 we've experienced recently. There's some  
9 riverine aspects where they'll put wind in and  
10 things of that nature, but nobody models a  
11 storm of the type of Irma. It falls out of the  
12 methodology unfortunately statistically.

13 So my recommendations actually were to put  
14 some of level of boundary on this, which was  
15 from the bridge southward down to the county  
16 line because I believe this is the area that  
17 has -- the CHHA is the most unconservative and  
18 most unrealistic. So I don't know if that's  
19 really understood.

20 THE CHAIRWOMAN: Okay. No. I did  
21 understand that, but thank you.

22 MR. OLSEN: My pleasure.

23 THE CHAIRWOMAN: As a group, do we want to  
24 revise the recommendation, particularly with  
25 what Erik just said, to have staff consider

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1 redoing the boundaries of the AAA limited, as  
2 Erik said, based on the river to add the areas  
3 that are impacted by the river likely following  
4 the -- is it the 500-year flood plan?

5 W/G MEMBER OLSEN: Yeah. I think that's  
6 realistic. It turns out that it matches both  
7 of them, which is an experience today.

8 W/G MEMBER TAPPOUNI: I guess I would go  
9 back to what are the impacts on the  
10 neighborhoods that are north of the Matthews  
11 Bridge including -- that are on Hogan's Creek  
12 and McCoy's Creek, if we would be excluding  
13 those areas?

14 THE CHAIRWOMAN: Erik, do you know?

15 W/G MEMBER OLSEN: I don't, but the  
16 effects of Irma actually sort petered out the  
17 further you got beyond Downtown. The real --  
18 realistically, what happened is all this water  
19 blew up the river, it pounded itself, backed up  
20 along the shorelines and that's what caused  
21 that type of flooding phenomenon. We can look  
22 at it.

23 W/G MEMBER TAPPOUNI: I think it's  
24 important to -- you know, I stated it before,  
25 but I feel like we're looking at areas -- and I

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1 don't want to get outside the purview of the  
2 workgroup, but to not look at the impacts that  
3 may have happened maybe not specific just to  
4 Irma, but anyone living near McCoy's Creek or  
5 Hogan's Creek that maybe was a secondary impact  
6 or a secondary effect related to that or future  
7 surge or future sea level rise.

8 THE CHAIRWOMAN: So --

9 W/G MEMBER TAPPOUNI: Can you lower the  
10 map a little bit? I thought McCoy's was north  
11 of the Matthews Bridge, but it kind of comes  
12 down south. And Hogan's Creek is definitely  
13 not south of the Matthews.

14 MR. JOYCE: There's McCoy's up there.  
15 (Simultaneous crosstalk.)

16 THE CHAIRWOMAN: Shannon?

17 W/G MEMBER BLANKINSHIP: I was just going  
18 to say, the dots, I remember at the last  
19 meeting, Al said that they did not gather data  
20 off of it, but the 500-year flood plan, I mean,  
21 that mapping is taken into account I think a  
22 lot more property up into the tributaries at  
23 least more than, you know, what we had been  
24 looking at before.

25 THE CHAIRWOMAN: Is it -- would it be this  
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1 group's request to staff to look at or make a  
2 recommendation that with regard to the creeks,  
3 McCoy's, Hogan's, and others, that we review if  
4 the AAA boundary is sufficient or if it should  
5 include the 500-year flood plan based on past  
6 flooding events and proposed sea level rise?  
7 Does that work?

8 W/G MEMBER LORETTA: May I add that we  
9 also look at the Intracoastal off San Pablo?  
10 You've got rivers going north, you know, off  
11 that by, you know, Dames Point also. It's a  
12 lot more than just downtown, I would think. So  
13 I know San Pablo may not have been hit as bad  
14 in Irma, but it was in the year before.

15 THE CHAIRWOMAN: So maybe we can divide  
16 this into two recommendations. It looks like  
17 we have very good data for the downtown area,  
18 but maybe our recommendation is that the City  
19 consider expanding the AAA to match this map in  
20 conjunction with still working to come up with  
21 some sort of a citywide map.

22 And our second recommendation would be  
23 that the city look -- staff work with coastal  
24 engineers, climatologist, others in reviewing  
25 other areas outside of the downtown and

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1 potentially expanding the AAA as well. Does  
2 that work?  
3 Does that work, Joe?  
4 W/G MEMBER LORETTA: Yeah, I was just  
5 going to say that he can actually go on COJ.net  
6 maps and we can open up the 500-year floodplain  
7 right now.  
8 W/G MEMBER MARTIN: Yeah.  
9 W/G MEMBER LORETTA: So that way, we can  
10 look at it.  
11 W/G MEMBER MARTIN: We can see the  
12 500-year -- sorry.  
13 THE CHAIRWOMAN: My only concern would be  
14 I wouldn't want to recommend that the City  
15 simply adopt a 500-year floodplain as the AAA  
16 boundaries if in fact in other parts of the  
17 city that are not impacted by the river, the  
18 500-year floods impact happen every 500 years.  
19 If -- we need data. Staff needs to have data  
20 to support expanding the AAA. We certainly  
21 have data in the downtown area, but I think  
22 that we would need to provide staff with data  
23 or direct staff to find data to extend the AAA  
24 in areas where we don't currently have that  
25 information.

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1 W/G MEMBER TAPPOUNI: I would suggest that  
2 there's probably anecdotal data for north  
3 northwest, but I know that's not a dot on the  
4 map, but it's petty apparent that we've been  
5 having issues up there.  
6 W/G MEMBER LORETTA: I guess -- so I live  
7 in south Jacksonville Beach. I've got a map  
8 that I created that shows the 80 homes that  
9 flooded in Matthew and then the six homes that  
10 flooded in Irma. So we can compare that map to  
11 the 500-year flood, and if it's within range,  
12 it's probably pretty similar than on San Pablo  
13 or just off San Pablo would be my guess, if  
14 that makes sense.  
15 THE CHAIRWOMAN: If we've got information  
16 that we can -- if we have data that we can give  
17 to staff for any areas that are outside of  
18 downtown, let's see what we can do on gathering  
19 that. I keep staring at Erik because we hired  
20 him as our consultant here. But I think for  
21 right now, unless the workgroup gives us  
22 direction otherwise, I think we should keep our  
23 recommendations as a two-part recommendation.  
24 One is that we recommend that the planning  
25 department and staff look at adopting this AAA

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1 area with Erik's caveat for the downtown and  
2 the river influenced areas. And the second is  
3 gathering data information about potentially  
4 expanding it in other parts of the city.  
5 Do we have a consensus? Heads are  
6 nodding. Okay.  
7 And the -- let's see what time it is.  
8 Okay. So the next thing that we need to look  
9 at is the Broward comp plan policies, which  
10 were provided to us in the last group meeting.  
11 Hopefully you have all had a chance to review  
12 them. They have some very I think helpful  
13 goals.  
14 I know staff doesn't want us writing  
15 policy for them because that's not what we do,  
16 but, like, one of the things that I personally  
17 got from reading this is Broward has a  
18 resiliency coordinator. And I know we right  
19 now have a resiliency group looking at current  
20 things, but a lot of other cities and counties  
21 -- I went online and checked, and a lot of  
22 other cities and counties have a person who's  
23 either with their engineering department or  
24 with their planning department -- so maybe  
25 development services with Mike's department --

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1 that acts as their resiliency coordinator for  
2 the City.  
3 So one of my recommendations just from  
4 reading through Broward's comp plan is the City  
5 consider appointing a resiliency coordinator  
6 for the City. Any thoughts on that?  
7 Shannon?  
8 W/G MEMBER BLANKINSHIP: In a lot of the  
9 talks that we've been doing, the  
10 recommendations for a resiliency coordinator  
11 out of some of the cities have said, this is  
12 what would work. You would have to have  
13 someone that is not above planning or public  
14 works or environmental quality, but just  
15 someone who can maybe work with all those  
16 departments to coordinate so that you don't  
17 have resiliency in planning that isn't talking  
18 to resiliency in public works for example. But  
19 it really has a lot to do with so many  
20 different departments, especially with  
21 environmental issues. And for example, trees  
22 you know, all these other things that maybe the  
23 different departments are talking, but the  
24 resiliency coordinator can do that.

So I would add to sort of what you had  
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1 suggested, instead of finding a department that  
2 they fit in, having it be something above that.  
3 THE CHAIRWOMAN: Maybe someone at the  
4 mayor's office.  
5 W/G MEMBER TAPPOUNI: I think the original  
6 -- and this was a couple of years ago, the  
7 original intent of the resiliency officer, that  
8 they would be in the mayor's office.  
9 THE CHAIRWOMAN: So I don't know how we  
10 would put that in the comp plan provision, but  
11 that the City, you know, create a position of  
12 resiliency officer.  
13 Did anybody else have anything that they  
14 wanted to have us consider from the Broward  
15 County comp plan provisions?  
16 WORK GROUP MEMBERS: (No response.)  
17 THE CHAIRWOMAN: Okay. Being a -- I'm  
18 just going to jump in here. Being a attorney  
19 that works with developers, I really liked the  
20 concept that Broward County has incentive areas  
21 where they are trying to drive development into  
22 higher level land, land that's not wetlands and  
23 those types of things. And then they have  
24 definite -- it appears from reading this that  
25 they have definite incentives in their land

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1 development code when you avoid what they call  
2 their sea level rise map, and -- which I think  
3 probably translates to our AAA areas.  
4 So I would be interested in -- and it may  
5 tie in with this information we just got from  
6 Norfolk. That's why I wanted to know more  
7 about that resiliency quotient information and  
8 a having this group look -- maybe we don't have  
9 a recommendation right now for staff, but  
10 having this group look at -- once we've  
11 reviewed the Norfolk information, having us  
12 look at some sort of a recommendation to staff  
13 about maybe some revisions to the zoning code  
14 or land development codes that gives priority  
15 to high and dry areas with some incentives to  
16 developers to stay out of the wet areas.  
17 So I would ask everybody if we could just  
18 review the information that we got from Norfolk  
19 as well and compare it with the Broward County  
20 comp plan information, and then we can come  
21 back with recommendations at our next meeting.  
22 It would be helpful if -- if you guys  
23 want, at this point, we can actually write  
24 recommendations and bring them to our next  
25 meeting. Obviously everybody is going to come

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1 up with something different, but I think it  
2 would be helpful if we start individually  
3 writing some thoughts down and bringing them  
4 back to the group and talk about them.  
5 W/G MEMBER TAPPOUNI: One of the things  
6 that stood out to me was the building code and  
7 design section -- incentives because I think  
8 that's one of the things we've been hearing  
9 from Miami is that they're not necessarily  
10 saying, you can't build here, but if you are  
11 going to build here, this is what the structure  
12 is going to have to look like. This is the  
13 hardening that'll have to be done. Your  
14 basement is not a real basement. It's going to  
15 be a water tank at some point. So be prepared  
16 for that.  
17 And I think that could help alleviate some  
18 of the concerns that if these areas are being  
19 marked, that we say, well, can't develop there  
20 or we can't build there and no, we -- and I  
21 know down in Pinellas County, if you build on  
22 the beach or anywhere near any of the gulf  
23 areas, you can have a first floor, but it's  
24 basically you're not allowed to put anything  
25 there, a garage or -- but you can't have living

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1 space or electrical down there. So it just  
2 might be something to look at.  
3 THE CHAIRWOMAN: So it would be reviewing  
4 our building codes. It would be reviewing our  
5 building codes and floodplain codes,  
6 definitely.  
7 The other thing that I took from Broward  
8 that I would like to make a recommendation is  
9 that Broward has in there as a policy that they  
10 review what they call their sea level rise map,  
11 which I think that would be our AAA, every five  
12 years. I think that we should make a  
13 recommendation that -- I would hate for this  
14 group to do this work and make recommendations  
15 and have it just stall at that point because  
16 this is clearly -- we don't know what's going  
17 to happen in 2060. We don't know -- all the  
18 scientists are giving us a variety of  
19 information and it's all based on their best  
20 scientific information that they have available  
21 on whether we're going to see two feet, four  
22 feet, six feet, zero feet.  
23 So I would certainly recommend that we put  
24 something in our comprehensive plan that  
25 reviews the AAA at least every five years or on

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1 an as-needed basis.  
 2 Any comments?  
 3 WORK GROUP MEMBERS: (No response.)  
 4 THE CHAIRWOMAN. Okay. All right. Let's  
 5 run real quick -- because we've run over a bit  
 6 -- to public comment. I have a card from Todd  
 7 Sack.  
 8 Mr. Sack, would you like to speak? Yes?  
 9 MR. SACK: Thank you. I'll be very quick.  
 10 My name is Todd Sack. I'm a local physician  
 11 and past chair of the Environmental Protection  
 12 Board and I ran environmental health for the  
 13 Florida Medical Association for a decade. And  
 14 I deal with environmental health between AMA  
 15 and (inaudible).  
 16 I have three recommendations I'd like to  
 17 suggest for your report when you finish this  
 18 summer. The first has to do with energy use.  
 19 We have now three public commissions in  
 20 Jacksonville looking at flooding. We have nine  
 21 other governmental and nongovernmental  
 22 organizations looking at flooding, but we're  
 23 missing the other piece, which is how we use  
 24 energy as a community. Norfolk has touched on  
 25 this and south Florida -- and south Florida

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1 regional climate comp plan is looking at energy  
 2 use as well. And it misses opportunity for  
 3 both economic benefit and for health benefit if  
 4 we fail to lead on energy. That means ensuring  
 5 energy efficiency is in any comprehensive  
 6 program with a transition to clean renewable  
 7 energy, fossil fuels and transition to --  
 8 there's many opportunities here. I want to  
 9 recommend that we put that as one of the  
 10 recommendations for our city following these  
 11 commissions sometime this summer.  
 12 The second is public awareness. I haven't  
 13 heard of really initiative to teach the public  
 14 about all these topics, flood planning and  
 15 energy use. It's really very important. And  
 16 the third is if we think about the resilience  
 17 officer and other components to continuing this  
 18 process, the five-year reassessment, et cetera,  
 19 we really need a long term commission. And I  
 20 would recommend that the City create an energy  
 21 resilience commission to be on a long term  
 22 basis formulating the ten-year and 20-year  
 23 plans with public input so that we're on the  
 24 long term footing for this. Thank you.  
 25 THE CHAIRWOMAN: Thank you very much.

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1 Jim Seaton.  
 2 MR. SEATON: Hi. I'm Jim Seaton. I live  
 3 in Riverside. I just want to endorse your  
 4 ideas on the chief resilience officer,  
 5 particularly one that has a little bit broader  
 6 purview, kind of like Shannon was discussing  
 7 there because Norfolk has one, there's Miami,  
 8 Broward County, there's -- all over the  
 9 country. And typically, the most effective  
 10 ones do work out of the mayor's office.  
 11 The chief resilience officer, they --  
 12 they're crosscutting, they break down stoke  
 13 pipes because for the longest time, folks  
 14 didn't realize all the good work that JEA is  
 15 doing, for instance. You know, it's only when  
 16 some of these other groups formed that they  
 17 found out. When -- I think it's already been  
 18 discussed in here that that's the kind of stuff  
 19 we should be doing citywide. That person would  
 20 also help with the public awareness piece of  
 21 it, but there's also a huge business community  
 22 to mention to this too when we look at  
 23 solutions. See it would have to be somebody  
 24 senior enough with the gravitas to be able to  
 25 reach out, you know, at a chief sort of level.

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1 So again, I think that's a great  
 2 recommendation, but chief resilience officer is  
 3 probably what you want to call it. You might  
 4 even consider describing it to be something  
 5 that is crosscutting and isn't in plans or  
 6 public works or something like that. Thanks.  
 7 THE CHAIRWOMAN: Okay. All right. Very  
 8 quickly -- that's our last -- did anybody else  
 9 want to speak? I'm sorry.  
 10 Okay. We have two meetings coming up that  
 11 we have issues with. The April 22nd meeting,  
 12 we are not likely to have a quorum the day  
 13 after Easter. We also are not likely to have  
 14 staff here. So -- and we are so close to that  
 15 meeting, I -- unless people are really adamant  
 16 about trying to reschedule it, my suggestion  
 17 would be to simply cancel the April 22nd  
 18 meeting. That means our next meeting won't be  
 19 for a month from now. So I look to the  
 20 workgroup.  
 21 We've made good progress that might push  
 22 us in another two weeks beyond our deadline or  
 23 we might be able to squeeze it all in. What is  
 24 the pleasure of the board on dealing with the  
 25 April 22nd meeting?

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1 Shannon?  
2 W/G MEMBER BLANKINSHIP: This is kind of I  
3 guess a question with that, but with these --  
4 like, starting to come up with recommendations,  
5 do you see us all just like verbally presenting  
6 them at the meeting? Or is there a way that  
7 maybe we can make up for lost time by  
8 submitting something? And I don't know based  
9 on Sunshine, you know, how -- what we can --  
10 how we can make that work.  
11 THE CHAIRWOMAN: Shannon, we need to work  
12 with you because I know we can submit  
13 recommendations to staff and staff could  
14 collate them and come up within their own that  
15 they could -- is that correct, they could just  
16 send it out to everyone?  
17 MS. ELLER: You can submit recommendations  
18 to staff and then staff could just distribute a  
19 package, but you just couldn't comment back and  
20 forth to one another or comment -- I would  
21 prefer you not even comment back to staff what  
22 you've received, but if everybody wanted to  
23 submit the information to staff, they could put  
24 it all together, distribute it to the group,  
25 and then you can discuss it the next meeting.  
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1 THE CHAIRWOMAN: Perfect. Does that work?  
2 W/G MEMBER BLANKINSHIP: Yeah. And I  
3 would just say maybe we can make up for lost  
4 time by trying to submit comments by this  
5 Monday meeting, and then having that next two  
6 weeks to sort of be able to review that and  
7 then so we can actually discuss at in a month  
8 rather than just learning about what others  
9 have sort of proposed at that time.  
10 THE CHAIRWOMAN: Yes. I would ask the  
11 group to -- because we're -- I think we're  
12 going to miss a meeting, to take the  
13 information from Broward, take the information  
14 from Norfolk, and whatever information you've  
15 gathered, and if you have any recommendations,  
16 that you go ahead and submit them to staff  
17 sooner rather than later. And hopefully they  
18 can get them out to us within the next two  
19 weeks or so even if we miss that meeting so  
20 that everybody can start reviewing them so that  
21 we can discuss them at the next meeting, again,  
22 so we don't -- as Shannon just said, don't miss  
23 anything in between.  
24 So is -- can I get a -- yes?  
25 W/G MEMBER MARTIN: You think four weeks  
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1 might be too long? Maybe three weeks --  
2 THE CHAIRWOMAN: Then we wouldn't --  
3 W/G MEMBER MARTIN: -- until the next  
4 meeting and then from that point on, just  
5 continue every two weeks. That's just my  
6 thoughts of it. I can --  
7 THE CHAIRWOMAN: That would throw us into  
8 committee weeks if we switch Mondays, which  
9 isn't going to work for --  
10 COUNCIL MEMBER NEWBY: That won't work.  
11 THE CHAIRWOMAN: That's one of the  
12 problems, is that we've picked a date that fits  
13 everybody's calendar that as far as -- not only  
14 the fact that it's on a Monday, but the fact  
15 that it's on city council Monday versus  
16 committee meetings Monday.  
17 W/G MEMBER TAPPOUNI: If we didn't want to  
18 wait, would there be another day that week when  
19 staff would be back and we would just meet  
20 later on the week? So we would just have a  
21 short period between the next two weeks, if  
22 there's a concern that we can't wait.  
23 THE CHAIRWOMAN: So I know Tuesdays are  
24 not good because that is city council. What  
25 about Wednesday, the 24th, Thursday, the 25th  
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1 or Friday, the 26th? Let me look back on my  
2 notes. I think Thursday was not good for  
3 somebody on the committee. What about Friday  
4 the 26th? What does that look like on  
5 everybody's calendar? Does that look good?  
6 Staff, could you -- what about the morning  
7 of Friday the 26th, does that work for you  
8 guys?  
9 MS. KELLY: It does for me.  
10 THE CHAIRWOMAN: Kristen, does that work?  
11 MS. REED: We can make it work. I think  
12 there'll be more staff present.  
13 THE CHAIRWOMAN: Okay. And what we can do  
14 is we can have staff -- so let's plan on doing  
15 Friday, April 26th. That way we don't lose any  
16 day.  
17 W/G MEMBER MARTIN: Is there a time?  
18 THE CHAIRWOMAN: The 9:00 a.m. still work,  
19 9:00 to 11:00?  
20 And staff, if you could -- I know you do  
21 this anyway, but if you could send out your  
22 request a little bit early to make sure that  
23 we're going to get quorum.  
24 MS. REED: The only other factor is just  
25 we're going to have to make sure that we have a  
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1 room for the meeting. I just don't know what  
 2 the calendar looks like or what other  
 3 opportunities there are, but we'll do our best.  
 4 THE CHAIRWOMAN: Thank you. We'll just  
 5 all go to Kristen's office. Okay.  
 6 And the other one -- actually, if  
 7 everybody would keep their calendars open -- is  
 8 May 27th, which is Memorial day. We have the  
 9 same issue. That one, I know we have more time  
 10 to work on. So what does May 31st look like  
 11 for everybody, which is Friday, again? Okay.  
 12 We're getting nods. All right.  
 13 Since we've got a little bit more time on  
 14 it, staff, if you can look and see if we can  
 15 move it to Friday, May 31st, and see if we can  
 16 find a place to meet. And then that way, we  
 17 don't miss a day. And same, 9:00 to 11:00.  
 18 Excellent. All right.  
 19 Does anybody else have anything that they  
 20 would like to discuss? We have four minutes  
 21 left.  
 22 Erik?  
 23 W/G MEMBER OLSEN: Just a comment. As you  
 24 read these -- if you read Broward County and  
 25 these other coastal community reports, notice  
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1 CERTIFICATE OF REPORTER  
 2  
 3 STATE OF FLORIDA )  
 4 COUNTY OF DUVAL )  
 5  
 6 I, WENDY E. RIVERA, Florida Professional Reporter,  
 7 do hereby certify that I was authorized to and did  
 8 stenographically report the foregoing proceedings and  
 9 that the transcript is a true and complete record of my  
 10 stenographic notes.  
 11  
 12  
 13 DATED this 23rd day of April, 2019.  
 14  
 15  
 16 \_\_\_\_\_  
 Wendy E. Rivera  
 17  
 18  
 19  
 20  
 21  
 22  
 23  
 24  
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1 that they are coastal communities. Most of  
 2 them deal with beaches. They're talking about  
 3 control lines, dunes, and things like that. I  
 4 would submit that Duval County is certainly a  
 5 coastal county, but it's also a riverine  
 6 county, and somewhere in our mission we need to  
 7 make sure that that's not lost in translation,  
 8 like the movie, that we have a dual system, by  
 9 -- a different system here.  
 10 THE CHAIRWOMAN: So we need the City to  
 11 focus on coast and river.  
 12 W/G MEMBER OLSEN: Coastal and riverine.  
 13 We're both a coastal community and a riverine  
 14 community.  
 15 THE CHAIRWOMAN: Thank you.  
 16 All right. Anything else?  
 17 WORK GROUP MEMBERS: (No response.)  
 18 THE CHAIRWOMAN: All right. We are  
 19 adjourned. We will see you on Friday,  
 20 April 26th at 9:00 a.m. somewhere.  
 21 (The above proceedings were adjourned at  
 22 10:57 a.m.)  
 23 - - -  
 24  
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