

CITY OF MIAMI

SEA LEVEL RISE COMMITTEE

Miami City Hall  
Commission Chambers  
3500 Pan American Drive  
Miami, Florida 33133

January 11th, 2016  
6:08 p.m. - 8:37 p.m.

1 APPEARANCES:

2

3 COMMITTEE MEMBERS PRESENT:

4 WAYNE PATHMAN, CHAIR

5 TABITHA CALE, VICE CHAIR

6 PETE GOMEZ

7 REINALDO BORGES

8 JAMUES MURLEY

9

10 COMMITTEE MEMBERS ABSENT:

11 DAVID MARTIN

12 JOSE REGALADO

13

14 CITY STAFF:

15 AJANI STEWART, LIAISON

16 MATTHEW S. HABER, ASSISTANT CITY ATTORNEY

17

18 ALSO PRESENT:

19 BRAD SCHONHOFF

20 PATRICK SESSIONS

21 SAM VAN LEER

22 HENRY BRICENO

23 ALEJANDRO BURGANA

24 STEPHANIE TASHIRO

25 GLENN TERRY

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ALSO PRESENT (Continued):

GARY HELD

SIMON ROSE

SARA DENKA

LUNDY CLARKE

BEATRIZ RANA

MITCHELL CHESTER

RYAN SHEDD

ALBERT GOMEZ

WALTER MYER

STEVE LIDNER

DR. HAROLD WANLESS

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THEREUPON:

(Meeting Commences.)

(Break in audio.)

CHAIR PATHMAN: -- from the University of Miami. He's the Chair of the geological college there and also has been studying glacial melt for over thirty years.

If you haven't heard him speak he's very interesting, very knowledgeable and has a lot of interesting facts that we should all, I guess, heed in terms of what our future may be.

With that said, Ajani, do you want to mention about the minutes; that we will not --

MR. STEWART: Sure. I've been advised, Mr. Chair, by the Clerk's Office that there has been a little bit of a delay with getting the minutes transcribed from the last meeting. But, they will be ready tomorrow.

So, I will share that with the committee once they're ready.

CHAIR PATHMAN: And then, if they are ready tomorrow, will you send an e-mail individually to everybody so that we can vote to adopt the minutes?

How are you going to handle that, Matt?

1 MR. HABER: I recommend that we adopt the  
2 minutes at the next Sunshine Meeting in February.

3 CHAIR PATHMAN: Okay. All right. Then we'll  
4 follow that procedure and we won't do that until  
5 February's meeting.

6 Moving along, the staff report from city  
7 administration. Ajani?

8 MR. STEWART: Yeah. Actually, I'd like to  
9 invite Dr. Stephanie Tashiro to --

10 CHAIR PATHMAN: Actually, let me do one thing  
11 first before we get started with that.

12 Let me have all of the board members  
13 introduced themselves starting from my left.  
14 Reinaldo?

15 Press the button, the little button in front  
16 of you there.

17 MR. BORGES: Reinaldo Borges, local architect.

18 MR. MURLEY: Jim Murley, resident.

19 VICE CHAIR CALE: Tabitha Cale. I'm an  
20 Everglades Policy Associate with Audubon Florida.

21 MR. GOMEZ: I'm Peter Gomez. I'm the City's  
22 Emergency Manager.

23 CHAIR PATHMAN: Okay. Thank you, committee  
24 members.

25 Staff report, please.

1 MR. STEWART: Yes. So, for our staff report,  
2 this week, I'd like to invite Dr. Stephanie  
3 Tashiro, Hazard, Mitigation and Disaster Recovery  
4 Specialist from the City of Miami to update on our  
5 local mitigation strategy.

6 CHAIR PATHMAN: Stephanie, a pleasure to see  
7 you again. Thank you for being here.

8 DR. TASHIRO: Hi. Thank you for having me  
9 here.

10 So, hazard mitigation and disaster recovery in  
11 the city is under the Department of Fire Rescue,  
12 Division of Emergency Management and we work on  
13 projects that cover all city departments that help  
14 to mitigate the effects of disasters and adapt to  
15 the changing world.

16 So, in the past, -- So, we have seventy-two  
17 projects at this time on the county's local  
18 mitigation strategy.

19 So, Miami-Dade County has the mitigation  
20 strategy in all the municipalities or part of it  
21 and we meet quarterly to discuss mitigation as a  
22 group, to make sure that, you know, the projects  
23 that we do or the projects that we're planning all  
24 work together as a community.

25 And, in the past, in the city, the projects

1 were funded mostly by grant funds which was a great  
2 strategy until very recently.

3 Whenever there's a disaster and FEMA (Federal  
4 Emergency Management Agency) declares a disaster  
5 fifteen percent of those funds are set aside for  
6 mitigation.

7 But, because we haven't had a disaster since  
8 2005 those funds are not there anymore.

9 There is also pre-disaster mitigation funds;  
10 but those have been drastically reduced and now  
11 states are guaranteed just one project of \$250,000.

12 There are some competitive projects; but, the  
13 guarantee is just \$250,000.

14 So, because of that, we've been looking toward  
15 non-traditional grant sources and also looking into  
16 internal city funding.

17 So, the city administration, the Commission,  
18 recently granted a \$350,000 mitigation budget and  
19 while they do fund capital improvement projects and  
20 things like that this isn't the only funding source  
21 for mitigation type projects.

22 It's the only one that's dedicated to  
23 mitigation.

24 And, at this time, we have twelve projects  
25 that are under \$350,000 and so what we did was

1 convened a committee within the city to decide how  
2 those funds will be spent.

3 So the committee consists of Police, Fire,  
4 Emergency Management, Public Works, Solid Waste,  
5 Capital Improvements and Transportation,  
6 Sustainable Initiatives and the Building  
7 Department.

8 And, we're -- Everyone is prioritizing those  
9 projects and voting on how they will be funded and  
10 we will fund the projects as much as we can up to  
11 \$350,000 this year and then repeat the process in  
12 future years depending on, you know, if the funds  
13 -- If we continue to get these funds, if they grow,  
14 we may change our strategy.

15 We also have a state grant called the  
16 Residential Construction and Mitigation Program and  
17 that is to provide wind mitigation measures for  
18 residents' homes in the City of Miami.

19 But, taking a resiliency standpoint and trying  
20 to maximize the dollars what we did is we are  
21 partnering with our Community Development  
22 Department in the city. They have community  
23 development block grant funds where they used to --  
24 that they use to rehab homes of low income  
25 residents and we're combining the RCMP (Residential



1           Constructions Mitigation Program) funding with that  
2           community development block grant funding so that  
3           each home that's rehabbed can be not only rehabbed  
4           on the inside; but also, the RCMP funding can take  
5           care of the wind mitigation needs on the outside so  
6           that you're not just partially improving a home.  
7           But, you're doing as much as you can.

8                     And, that's where we are right now.

9                     We continue to apply for grants for our larger  
10           dollar amount projects and have projects at the  
11           ready in case there is the unfortunate occurrence  
12           of a disaster. We'll have projects ready to go for  
13           the mitigation funds that would follow.

14                    CHAIR PATHMAN: Stephanie, do you have any  
15           targets in terms of a budget, how large you'd like  
16           to see the budget and what are the types of  
17           projects that have been applying?

18                    MS. TASHIRO: For the budget? I mean, I would  
19           -- We have projects that go up to several million  
20           dollars and if we could fund those internally that  
21           would be great. But, you know, --

22                    CHAIR PATHMAN: What types of projects are  
23           those that are --

24                    MS. TASHIRO: A lot of those are drainage  
25           projects --

1 CHAIR PATHMAN: Okay.

2 MS. TASHIRO: -- developed under the Storm  
3 Water Master Plan for Capital Improvements and  
4 Transportation.

5 But, the projects that -- The twelve projects  
6 that fall under the \$350,000 range from the  
7 restoration of natural species at the shore lines  
8 to improving sea walls and generators for fire  
9 stations. These are all small projects. But, --  
10 Improving the keeping of vital records.

11 So we have, you know, a range of projects.

12 CHAIR PATHMAN: Are the projects spec --  
13 Those, the larger ones that affect, maybe, a  
14 broader range of the city, are they already  
15 identified and is the commission aware of them?

16 MS. TASHIRO: They are identified through  
17 Capital Improvement and Transportation's Storm  
18 Water Master Plan.

19 And so, those projects are funded. You know,  
20 every year there is a certain amount funded through  
21 various funding sources. It's not like those  
22 aren't happening. It's just that we also try to  
23 seek funds for those projects.

24 CHAIR PATHMAN: Okay. Does anybody else on  
25 the committee have any questions?

1 MR. GOMEZ: Stephanie, could you give the  
2 board a synopsis of how many storm sewer projects  
3 the city has done in the last few years --

4 MS. TASHIRO: Two.

5 MR. GOMEZ: -- and approximate cost --

6 MS. TASHIRO: Well, two that we've done  
7 through mitigation funding.

8 MR. GOMEZ: Right.

9 MS. TASHIRO: I don't know many CITP (Capital  
10 Improvement and Transportation Program has --

11 MR. GOMEZ: No. I'm talking about the ones  
12 that we, in Emergency Management -- that we were  
13 able to get funded through the grant process.

14 MS. TASHIRO: We did San Marco which is one  
15 the Venetian Islands. We funded a project that was  
16 on the whole island. And then, the Gardens Storm  
17 Sewer Project which the actual bounds of it escape  
18 me. But, it's city mainland.

19 CHAIR PATHMAN: Is there anything,  
20 specifically, that, in your work, you see this  
21 committee helping you with?

22 MS. TASHIRO: I think that, perhaps, from a  
23 resiliency standpoint, we can take another look at  
24 the projects that we have and try to figure out,  
25 maybe, a better way to prioritize them.

1           You know, our focus isn't just sea level rise.  
2           We have, you know, -- We look at all hazards and  
3           all risks for the area from sea level rise to  
4           terrorism. And so, you know, I don't think the  
5           focus is just that. But, I think that sea level  
6           rise usually plays into a lot of the projects.

7           CHAIR PATHMAN: Is it possible that you could  
8           identify the future date and maybe share this with  
9           Matt or Ajani -- which ones are specifically  
10          related to sea level rise --

11          MS. TASHIRO: Sure.

12          CHAIR PATHMAN: -- so that we can decide  
13          whether we wish to get involved or how we can help  
14          or be involved in any of those, whether it be on  
15          the grant side or the issues related to whether  
16          they are worthy projects?

17          MS. TASHIRO: Yeah. I can do that at your  
18          next meeting.

19          CHAIR PATHMAN: Does the rest of the committee  
20          think that's a good idea? We don't need to take --  
21          pass a resolution. But, do you think it's a good  
22          idea that we help out and see and get a report now  
23          and then?

24          Okay.

25          VICE CHAIR CALE: And just to follow up on

1           that. I think it -- you know, in, kind of,  
2           overlapping with our -- one of the agenda items  
3           later on, it might be useful for us to have, maybe,  
4           another presentation that just overviews more  
5           information about the Storm Water Master Plan or  
6           projects that you see as priorities related to sea  
7           level rise; especially since I know that was a big  
8           issue out on Miami Beach which some -- you know,  
9           sometimes the sea level pushing back up into the  
10          storm water system.

11                 So that's something that might be useful for  
12          the committee as a whole to have a bit more  
13          detailed presentation on.

14                 MS. TASHIRO: Right. I don't think I would be  
15          the right person to do that. I think CITP would be  
16          a great -- That would be a great presentation for  
17          you.

18                 MR. BORGES: Mr. Chairman, I have a --

19                 CHAIR PATHMAN: Yes, Reinaldo?

20                 MR. BORGES: -- a few thoughts.

21                 I had the pleasure of meeting with Stephanie  
22          this morning and was very impressed with the  
23          Emergency Management Department and the overall  
24          effort and strategy.

25                 And, one of the things that keeps on getting

1       reaffirmed, to me, in terms of holistic thinking  
2       related to sea level rise and resiliency in the  
3       City of Miami and in the county as well, is the  
4       fact that most of these departments are working, at  
5       times, independently and with inadequate funding,  
6       obviously.

7               The funding that has been identified for these  
8       projects -- even though the projects all have merit  
9       unto themselves, they're, what I would call, micro-  
10      project, you know, when you look at sea level rise  
11      and the large picture of the dangers that we face  
12      in the community.

13              So, what I walked away today with was, sort  
14      of, understanding the fact that, you know, we are  
15      challenged, you know, with the question of funding  
16      and we talked a little bit about where the funding  
17      comes from; because, Stephanie also is an expert on  
18      the politics of disaster management and all kinds  
19      of other things affecting the way that  
20      municipalities manage their disaster program.

21              But, as we know from Miami Beach,  
22      specifically, that, you know, we need to look at  
23      sea level rise and climate change issues affecting  
24      communities like Miami in a more comprehensive and  
25      larger picture type of format.

1           And, even though the focus and what Stephanie  
2           has reported here is very effective at the micro-  
3           level, you know, the funding is just not there.  
4           And, it's -- It's, kind of, painful to see the fact  
5           that we don't have the right funding, the right  
6           approach, the right thinking at a larger scale and  
7           in a more comprehensive format.

8           And, again, this is not a critique on what  
9           Emergency Management is doing in the City of Miami.  
10          It's a critique, more, on the overall approach,  
11          right now, that our community has towards something  
12          that is so significant and effecting the way that  
13          we continue to build our city and provide a more  
14          resilient community for the future. So, --

15          CHAIR PATHMAN: Reinaldo, are you suggesting  
16          that, maybe, in the future we should, again, meet  
17          with Stephanie either in a our workshop or this  
18          forum to work on some of the issues that you've  
19          identified as it specifically relates to sea level  
20          rise?

21          MR. BORGES: Well, what I think is that this  
22          is, sort of, one component and like when we were  
23          talking about it at the workshop, which I'm sure  
24          we'll talk a little more about the workshop we had  
25          a few days ago, it's sort of the idea that we need

1 to bring all of the different departments of the  
2 city, you know, to a broader conversation of more  
3 integrated thinking, more holistic thinking, on how  
4 we move forward with resiliency and planning  
5 towards the impacts of sea level rise.

6 I mean I think that, you know -- For example,  
7 we talked about -- that some of this money is going  
8 to go to -- to deal with wind damage exposure that  
9 some single family homes have in poor  
10 neighborhoods, you know. And, although, those are  
11 great things to do at the micro-level, you know, we  
12 need to look at a greater picture and, perhaps, be  
13 more aggressive in the way that we try to, you  
14 know, reinforce what this department is doing and  
15 try to bring Planning and Zoning, Public Works; you  
16 know, and Building into this conversation of  
17 resiliency at the greater scale of the community.

18 CHAIR PATHMAN: Okay. Pete, you know, as we  
19 get into it further on the agenda, we're going to  
20 talk about the committees and you'd be heading up  
21 the Emergency Management. Maybe there could be  
22 some dialogue with Stephanie. Specifically, the  
23 issues related to sea level rise --

24 MR. GOMEZ: Okay.

25 CHAIR PATHMAN: -- and how those are looked



1 at, both today and, maybe, in the future, to better  
2 plan. And, maybe, that's the role that this  
3 committee could play.

4 MR. GOMEZ: I think what we could do is we can  
5 identify what we see as projects that would relate  
6 to it and we'll bring it back up to this board so  
7 we can have discussion on it.

8 CHAIR PATHMAN: Okay. That would be great.  
9 Thank you, Stephanie. Thank you very much --

10 MS. TASHIRO: Thank you.

11 CHAIR PATHMAN: -- for your report.

12 MR. STEWART: Mr. Chair, before we move on,  
13 Ryan Shedd from -- a planner from our Community  
14 Planning Division in Planning and Zoning has a  
15 quick update.

16 CHAIR PATHMAN: Okay. Nice to meet you, Ryan.

17 MR. SHEDD: Nice to meet you guys. So, really  
18 quickly. Last time, I think it was November, I  
19 mentioned that we had recently done an update to  
20 our Water Supply Plan; one of our sub-elements for  
21 our Comprehensive Neighborhood Plan and that should  
22 be sent out to all of you after today's meeting, as  
23 it was recently -- became effective.

24 So, you'll all have a copy of that.

25 That has adopted some substantial language

1 concerning climate change and sea level rise.

2 We adopted the same language that the county  
3 uses since we are a customer of the county's water  
4 supply. So, essentially, we're dealing with, you  
5 know, the same water supply issues.

6 And on another note, we're in a period of our  
7 evaluation and appraisal review of our  
8 comprehensive plan. We are starting the outreach  
9 in the next month or so. So that's a comprehensive  
10 review of the elements of our comprehensive plan.

11 Do you have a question?

12 UNKNOWN SPEAKER: (Indiscernible).

13 MR. SHEDD: Oh, I thought you were going to  
14 talk.

15 And so, that is our chance to update the  
16 comprehensive plan based on not just statutory  
17 changes on the state level, which is a big  
18 component; but also, local conditions. Everything  
19 from climate change to sea level rise, education  
20 and housing.

21 So, we're going to be reaching out to the  
22 public, elected officials and our pertinent boards  
23 for their input about, you know, changes to the  
24 comprehensive plan.

25 The time line runs that our changes, as part

1 of that review, are due by -- for first review by  
2 November 1st. So, you know, we might --

3 You know, all of our statutory changes from  
4 the state are going to be going through. But, we  
5 can also have goals and policies related to local  
6 conditions, you know, either implemented or have  
7 time lines in place by November 1st to tackle those  
8 issues.

9 CHAIR PATHMAN: Go ahead, Jim. Sure.

10 MR. MURLEY: Yeah. I think what you've just  
11 described is a really great opportunity for the  
12 committee to provide you input.

13 Just thinking of the statutory changes that  
14 have occurred in the last couple of years for  
15 coastal flooding, the language is -- it's  
16 mandatory; but, there is a lot of discretion. So,  
17 I think that, you know, getting the balance that  
18 you guys will be seeking, I'm sure, you know,  
19 there's a place there to help.

20 And, there are some pending bills -- I think  
21 we might have talked about it in the workshop,  
22 Mr. Chair. There is some pending legislation that  
23 follows on the bill that passed last year for  
24 coastal flooding that looks promising this session.  
25 It has money attached to it.

1           So, I think this is a grey area for the  
2           committee to -- and since it's between now and  
3           November it gives us a little breathing room to do  
4           it as --

5           You know, Ajani, can work with the staff and  
6           make sure we're getting input early enough; but,  
7           also, giving them the room to the work.

8           CHAIR PATHMAN: With something as  
9           comprehensive as the comp plan maybe we should, you  
10          know, at some point in the future, hold a workshop  
11          and be able to have some time with the Planning  
12          Department and, maybe, some of the other  
13          departments within the city to, kind of, focus on  
14          what's probably missing from the comp plan as it  
15          relates to sea level rise and get some input and  
16          see if there is anything that is going to be  
17          proposed in the comp plan before the deadline that  
18          deals with some of the issues that we've identified  
19          as a committee.

20          Reinaldo?

21          MR. BORGES: Yes. So could you just give us a  
22          brief education -- sort of, the connection between  
23          modifying the comprehensive plan and what that may  
24          mean to Miami 21 and some of its criteria for  
25          designing buildings in the city?

1 MR. SHEDD: Sure. I mean at the bottom line,  
2 the fundamentals of it -- you know, the comp plan  
3 -- what we're going through right now -- the  
4 process, is state mandated. So, we're responding  
5 to, you know, legislative issues.

6 But, we have a lot of flexibility with it. So  
7 we can, you know, work with our comp plan as the  
8 local community sees fits on top of the legislative  
9 changes that we have to address.

10 The good thing about Miami 21 is that it's  
11 totally local discretion.

12 So, you know, we can tweak and amend as we see  
13 fit.

14 MR. BORGES: Right.

15 MR. SHEDD: So, you know, addressing the  
16 recommendations of this board, particularly.

17 MR. BORGES: So fine tuning Miami 21 to make  
18 it more resilient towards, you know, future  
19 improving South Florida or Miami, specifically, is  
20 not part of the process right now with the  
21 comprehensive plan update when you talk about  
22 elements.

23 Some of the elements may, actually, affects  
24 some of, you know, these components of Miami 21  
25 that specifically affect the way a building meets

1 the street and how you could design flexibility  
2 into buildings?

3 MR. SHEDD: Yes. Typically, the comp plan  
4 doesn't address specifics of the building code, so  
5 to speak -- or the -- you know, our zoning code.

6 But, what it can do is it can set goals to  
7 address issues with the zoning code.

8 So, you know, we've had goals that says, you  
9 know, within six months, a year, two years, we want  
10 to address this specific issue through the zoning  
11 code; something like that.

12 MR. BORGES: Okay.

13 MR. SHEDD: That's really the main way that  
14 the comprehensive plan interfaces with adjusting,  
15 you know, Miami 21.

16 CHAIR PATHMAN: Very well. Ajani, do you  
17 think that we could, maybe, schedule before the --  
18 you know, the summer, some time to meet and have  
19 another workshop to deal with issues related to the  
20 comp plan before the period expires.

21 I know, obviously, over the summer is,  
22 probably, not the best time. But, if everybody is  
23 in agreement we could, maybe, have a meeting.

24 It's, obviously, I think, a very important  
25 issue. Some of the issues that both Jim and

1 Reinaldo have raised should, potentially, be  
2 discussed, you know, with staff.

3 MR. SHEDD: And, I would recommend -- It's our  
4 -- Our deadline is November 1st for first reading  
5 with the city commission. But, before that, we  
6 have to go to the Planning, Zoning and Appeals  
7 Board and we need a thirty day period between the  
8 two and since we have the recess in August we want  
9 little bit of wiggle room for first reading.

10 We're aiming for July for PZAB (Planning,  
11 Zoning and Appeals Board), for the planning board.

12 So, -- And that's not to say, you know,  
13 everything has to be in and complete at that time.  
14 I mean we can have goals and, sort of, time lines  
15 in place as well; because, the next thing with  
16 local condition is they're flexible. So, we don't  
17 have to have everything wrapped up by November 1st.

18 It's mainly for the legislative changes that  
19 we're responding to.

20 But, that is to say, you know, the sooner the  
21 better.

22 CHAIR PATHMAN: Being the new committee and  
23 the black sheep of the city, I think we should, you  
24 know, move forward as quickly and expeditiously as  
25 we can to try to hear and learn more about what's

1 going in the comp plan so, maybe, some of our ideas  
2 and thought and some of the resolutions that we've  
3 passed may be incorporated.

4 So, maybe, the two of you could work together  
5 and see if we can find an agreeably mutual date  
6 when we can, maybe, do another workshop?

7 MR. STEWART: Sure. We can work together on  
8 our end to sort that out.

9 CHAIR PATHMAN: Matt, do you want to add  
10 anything?

11 Do I hear a motion?

12 MR. HABER: I was just about to say that.

13 CHAIR PATHMAN: Reinaldo, would you care to  
14 make a motion?

15 MR. BORGES: Sure. I'll make a motion to  
16 bring this item back to committee for a workshop.

17 I would like to say that we should have a  
18 Miami 21 workshop.

19 I don't know if that happens before this;  
20 because, as I understand it the process could be  
21 different.

22 I mean Miami 21 is a local code and could be  
23 modified and re-calibrated or refined as we see  
24 necessary.

25 Now, what we also see is that other



1 municipalities are hiring outside consultants to  
2 help them, kind of, look at how to modify their own  
3 zoning and design standards.

4 Is that something that Planning and Zoning  
5 Department in Miami is looking at; sort of,  
6 bringing outside consultants for that or are you  
7 trying to do this internally with internal staff?

8 MR. SHEDD: We're actually -- In the past  
9 we've done the appraisal -- the evaluation and  
10 appraisal review through a consultant.

11 The whole process was changed six years ago  
12 and it was scaled back immensely. So it's almost  
13 entirely a different process that we can do  
14 in-house.

15 As far as Miami 21 is concerned and,  
16 specifically, relating to sea level rise and  
17 climate change, it's not something that, as far as  
18 I know, is on the radar yet in terms of  
19 discussions. And, to my knowledge, I'm not sure  
20 that we've used a consultant for, you know, making  
21 changes to Miami 21; because, it's something we've  
22 done incrementally. So, --

23 MR. BORGES: What I'm struggling with is, sort  
24 of, the relationship between modifying the  
25 comprehensive plan and modifying Miami 21.

1           They seem to be two different methods or  
2 processes.

3           Jim, do you want to add something?

4           MR. MURLEY: I mean, I think the city has a --  
5 Each city and county, probably, accommodates this  
6 relationship a little differently. But, legally --  
7 I'm looking to your lawyer. But, the comp plan is  
8 the predominant document.

9           So, if there is anything that the legislative  
10 body decides, ultimately, to put in the comp plan  
11 that, hypothetically, would be inconsistent with  
12 Miami 21, Miami 21 then has to abide by that  
13 change.

14           So, the legal document that is paramount in  
15 this process is the comp plan. But, typically, the  
16 cities and counties don't try to create a conflict.

17           I mean, they're working on these things,  
18 either, in parallel or you're doing what you  
19 suggested, in six months we'll do this.

20           You know, you're making a change and you put  
21 it into the plan and you give yourself the lead  
22 time.

23           So, that makes a lot of sense to me.

24           But, the comp plan is -- You know, that's  
25 supposed to be the long range document for the

1 community and the zoning code is really your  
2 implementation mechanism.

3 So, I think -- I look forward -- I mean I'm  
4 not an expert on the city's plan. So, I look  
5 forward to hearing from the city staff and seeing  
6 how we can help.

7 CHAIR PATHMAN: Again, we need to make a  
8 motion. But, with regards to what you were saying,  
9 Reinaldo, you know, you'll be the sub-committee  
10 chair of Planning and Zoning.

11 So, that's something I know you're going to  
12 bring up and it's close to heart on the Miami 21.

13 So, I assume that is going to be a discussion  
14 on one of our upcoming agendas.

15 But, I think the issue with the comp plan, as  
16 Jim was saying, is, you know, the more  
17 comprehensive and -- I'd like to see this committee  
18 have some role or some input as to what the city  
19 might be thinking along the lines that might affect  
20 sea level rise or flooding.

21 So, I'd like to see if we can get a motion to  
22 schedule a workshop where we're dealing with the  
23 city staff on the comprehensive plan and learning  
24 from what direction they're going in.

25 So, would someone like to make a motion?

1 Reinaldo?

2 MR. BORGES: Yes. So based on where you're at  
3 now, in the process, how soon could we have this  
4 workshop, do you think?

5 MR. SHEDD: In the next month and a half, two  
6 months, we're really going to be doing the bulk of  
7 our public outreach in terms of -- you know,  
8 directly with neighborhoods and commission  
9 districts. But, you know, that's like our prime  
10 meeting time. So, I mean, we can -- The next  
11 meeting, we can aim for it, I think.

12 MR. BORGES: If you consider, this is being  
13 part of the public outreach. Right?

14 MR. SHEDD: Yeah. I mean --

15 MR. BORGES: I mean, getting input from --

16 MR. SHEDD: Right. Yeah.

17 MR. BORGES: -- this body and from --

18 MR. SHEDD: It's part of our cycle with  
19 meetings that we'll be having. Yeah.

20 MR. BORGES: Because, I would suggest that we  
21 try to have it before the summer, --

22 CHAIR PATHMAN: Yeah, absolutely.

23 MR. BORGES: -- you know. So, if we could have  
24 it in the next couple of months that would be --

25 MR. MURLEY: Shoot for March.

1 CHAIR PATHMAN: Why don't we shoot for March  
2 if we can. I think we're going to have a lot to do  
3 over the next month with what we're currently  
4 trying to do. This will give us time if we could  
5 schedule a meeting.

6 So, Reinaldo, if you want to make a motion to  
7 --

8 MR. BORGES: So, I make a motion that we  
9 schedule a workshop with the Planning and Zoning  
10 Department to provide input and understand their,  
11 sort of, attack on the plan with the elements --  
12 what are these elements -- and provide input  
13 sometime in March.

14 CHAIR PATHMAN: Okay. Any second?

15 VICE CHAIR CALE: Second.

16 CHAIR PATHMAN: Second by Tabitha. Do we just  
17 a roll call, Matt? Is that sufficient?

18 MR. HABER: Yes, sir.

19 CHAIR PATHMAN: Okay. So, all of those in  
20 favor say aye.

21 (Thereupon, responses were in the affirmative.)

22 CHAIR PATHMAN: All of those opposed.

23 (Thereupon, no responses were heard.)

24 CHAIR PATHMAN: No abstentions?

25 (Thereupon, no responses were heard.)

1 CHAIR PATHMAN: Seeing none, the motion  
2 passes.

3 We'll see you in March.

4 MR. BORGES: I would also -- Now that we have  
5 the Planning and Zoning Department in our presence,  
6 could we also bring up the question of having  
7 conversations about Miami 21 and modifications to  
8 Miami 21?

9 CHAIR PATHMAN: Well, can you stay Ryan, for a  
10 few minutes; --

11 MR. SHEDD: Uh-huh. Yeah.

12 CHAIR PATHMAN: -- because, we're going to go  
13 through our committee and when we get to your  
14 committee --

15 MR. SHEDD: Okay.

16 CHAIR PATHMAN: -- I'm going to give you all  
17 the time you need, Reinaldo.

18 MR. BORGES: Okay.

19 MR. SHEDD: Cool.

20 CHAIR PATHMAN: Give us a few minutes. Thank  
21 you.

22 MR. SHEDD: Okay.

23 CHAIR PATHMAN: All right. The next item on  
24 the agenda is our committee mission statement that  
25 we discussed in the workshop.

1 Has everybody had a chance to review?

2 If I could have an open discussion about  
3 exactly what we want to say.

4 Reinaldo took the initiative to draft  
5 something for all of us to review so I'd like to go  
6 over that if everybody has their copy.

7 And this is to those of you that are here in  
8 the audience.

9 We've decided that we have, you know, a  
10 directive, a mission statement, based upon the  
11 resolution that the city passed so that people,  
12 when they come into these chambers, they understand  
13 exactly what it is that, you know, this committee  
14 is going to be doing.

15 We are not here to study all climate related  
16 issues.

17 We are tasked only to deal with sea level  
18 rise.

19 So, we are going to have some short  
20 discussion, right now, as to what the committee  
21 members think that mission should be so that we  
22 will announce that in the future when we begin our  
23 meetings.

24 You know, we're, sort of, a new committee.  
25 This is our fourth meeting, Ajani?

1 MR. STEWART: Yes.

2 CHAIR PATHMAN: Fourth meeting. So these are  
3 some of the baby steps that we have to walk through  
4 -- you know, get through first.

5 We won't be taking any public comment on this.  
6 But, you're, obviously, welcome to listen to our  
7 discussion.

8 So Reinaldo, do you want to take the -- take  
9 the lead on this?

10 (Thereupon, a discussion was held off the record.)

11 CHAIR PATHMAN: Matt, we're supposed to keep  
12 all conversation on the record. Okay?

13 Jim, was just asking about public comment. Do  
14 we have to take public comment on our discussions,  
15 on our mission statement.

16 MR. HABER: Right. So, the public is entitled  
17 to comment on anything that comes before the  
18 committee.

19 So, if you have, for instance, just a general  
20 public comment period they can come up and comment  
21 on it at that point.

22 It doesn't have to be, you know, point by  
23 point. But, as long as you provide the opportunity  
24 for comment then you're okay and that's -- I think  
25 that's, kind of, --



1 CHAIR PATHMAN: Which is what we have on the  
2 end of the agenda. There is -- Let me clarify.  
3 There is public comment at the end of our agenda  
4 tonight at which you can feel free to bring up  
5 anything that was discussed or any new matters that  
6 you wish to discuss at the end of the evening.

7 But, at this time, we can go forward and  
8 discuss, internally, what we discussed at the  
9 workshop.

10 MR. HABER: Sure. Before -- On the record.  
11 Absolutely.

12 CHAIR PATHMAN: Okay.

13 MR. BORGES: Yes. So, just to kind of frame  
14 why we're having this conversation. When we looked  
15 at the resolution to create this sea level rise  
16 focus committee it comes to mind that, as  
17 practicing architect, my perspective is that we're  
18 doing pretty well with regards to designing  
19 buildings that meet sustainability standards now  
20 with Miami 21, the new zoning code.

21 We're now -- We no longer have to really  
22 convince our clients that they have to do  
23 sustainability design for certain sizes of  
24 buildings.

25 So, in my world, this committee was more

1 focused towards issues of sea level rise, permanent  
2 flooding in the future of our community; the  
3 impacts of increased damage, perhaps, from storm  
4 surge and so on.

5 So, I feel we're not having enough  
6 conversation about resiliency in the community and  
7 how we modify codes that we have to use to design  
8 our buildings, our streets, our cities, our  
9 infrastructure.

10 So, I developed a list to, sort of, try to  
11 focus the efforts and the conversation of this  
12 committee towards resiliency and less and less  
13 about sustainability. And that was, sort of, the  
14 initiative here. It was, sort of, to say look  
15 we're not -- in this committee we're not here to  
16 talk about reducing energy consumption; reducing  
17 water usage, necessarily, in our community. Those  
18 are all issues about sustainability and  
19 sustainability design.

20 They're all very important issues; because, I  
21 do think that with Miami and South Florida, in  
22 general, we should be a model for sustainable  
23 living and sustainable urbanism and sustainable  
24 architecture.

25 But, I just wanted to crystallize what the

1 mission of this committee was and I thought as a  
2 designer, as an architect and planner, that we're  
3 here to talk more about, okay, how do we adapt to  
4 something that we all, at least, in this committee,  
5 agree is happening to our coastal cities, which is  
6 sea level is rising. We have a challenge through  
7 time that we need to start to make plans for.

8 My personal experience is that I have to  
9 design buildings to current standards. So  
10 every time that we permit and we design -- we  
11 permit, we building a new building right now, at  
12 this moment in time, we are erecting structures  
13 that are not, you know, really, effectively dealing  
14 with a future that is coming to our community.

15 So, I have great anxiety about modifying the  
16 codes and the standards that we have to use to  
17 design our projects.

18 So with that idea or philosophy is where I  
19 was, sort of, saying we need to crystallize that  
20 our conversation in this committee is about  
21 adaptation. It's about, you know, mitigation  
22 towards the impact of sea level rise and planet  
23 change events that affect our coastal communities.

24 And, you know, it really has to do with how we  
25 design buildings differently, how we design the

1 streets differently, the way that we collect our  
2 storm water, how the sewer system gets adapted; all  
3 of the critical functioning aspects of the city and  
4 the complexity of that. That's where we should be  
5 focusing our conversation; because, I find that  
6 there is great deficiency in that conversation  
7 right now in this community in terms of an action  
8 plan.

9 I mean, I think that when we saw the efforts  
10 of the county -- And it's fantastic that Jim is  
11 sitting with us here as the Chief Resiliency  
12 Officer of the county. I don't know if that's your  
13 official title, Jim.

14 But, the county now has a focus on, okay, how  
15 we do as a county, as Dade County, look into this  
16 issue and how does it affect individual  
17 municipalities? And then, now, we have here Miami  
18 having it's own conversation about how do we design  
19 -- how do we adapt more intelligently to these  
20 challenges.

21 So, my point was, let's me clear, if we all  
22 agree, that the conversation here is about  
23 mitigation adaptation. How does the physical  
24 environment get adapted? How do we do that? How  
25 does the natural environment also affect the

1 physical urban environment? How the urban  
2 environment depends on the natural environment for  
3 its existence and, perhaps, to be more resilient.  
4 And, those are conversations that are all valid.

5 But, at times, because I'm also chairing a Sea  
6 Level Rise Task Force at the American Institute of  
7 Architects, we have folks that want to have  
8 conversations about solar panels and about, you  
9 know, increasing tree canopies in our communities  
10 and things like that.

11 These are all great ideas; but, they're not, I  
12 think, ideas or discussions that we should spend  
13 time, in this committee, having conversations about  
14 because there are other forums.

15 In fact, Ajani, heads the sustainability  
16 efforts for the City of Miami and the City of Miami  
17 along with the county have had extensive  
18 conversations about how do we become a more  
19 sustainable community as a whole.

20 I mean, South Florida, as we know has been  
21 very slow in thinking about sustainability and  
22 thinking about living in a way that we're not  
23 continuing to abuse our environment.

24 So, those are all valid conversations.

25 But, Mr. Chair, I was just putting out there a

1 list from this initiative that the conversations  
2 should stay more about, sort of, in a way, where  
3 the rubber meets the road. You know, how do we  
4 design a community that is more resilient, that  
5 will suffer less damages, you know, from storms;  
6 that will, just, you know, be more adaptive and  
7 have more built in flexibility for adapting through  
8 time.

9 And that was, sort of what I wanted to share  
10 with you.

11 CHAIR PATHMAN: Does anybody else on the  
12 committee have any comments with regards to the  
13 mission statement?

14 Jim, any words of wisdom?

15 MR. MURLEY: No. You know, Reinaldo has given  
16 this a lot of thought.

17 I think, like you said, we're at the very  
18 beginning and I think as we go along there's a lot  
19 of latitude here to add things, as the majority, we  
20 think there's something we just missed.

21 And, I do like the differentiation, Mr. Chair,  
22 that these very worthwhile issues that we're not  
23 going to address -- They're still important.  
24 People are going to be -- I mean, if we don't deal  
25 with reducing CO2 (carbon dioxide) none of the

1 other things below make any difference.

2 So, I think it's important that we recognize  
3 that.

4 It's just in the time and the volunteer time  
5 that we have here that's being proposed we look at  
6 the ones below. I'm fine with that.

7 MR. BORGES: This, sort of, comes from the  
8 idea that, you know, we are starting a bit late to  
9 talk about resiliency in this community; because,  
10 this is an issue that's been affecting this  
11 community, as you know, for years. And, you know,  
12 reducing carbon emissions and things like that,  
13 right now, in my school of thought, are not -- is  
14 not going to affect thermal expansion of the ocean.  
15 It's not going to affect the rate of sea level rise  
16 that much, at this point.

17 I've talked to scientists that tell me that  
18 the amount of heat in the ocean and the amount of  
19 thermal expansion is such that, you know, what is  
20 of greater concern is how do we adapt to what is  
21 going to be happening and, not necessarily, in a  
22 committee like this spend a lot of time about  
23 reducing carbon emissions and becoming greener and  
24 more sustainable even though that, inherently, has  
25 to be something that we do; because, we are

1 suffering from, you know, the way that we have  
2 neglected to do that. Right?

3 So, we should be a model city in terms of  
4 sustainability.

5 But, I don't think that this committee,  
6 especially by the resolution that the city  
7 commission put out, is supposed to be having a lot  
8 of conversation about carbon emission and living  
9 more sustainably within -- within the parameters of  
10 sustainability.

11 So, that was, sort of, --

12 MR. MURLEY: And, I'm fine. You know, I'm in  
13 agreement. You know, I like to be focused. It's  
14 just -- I mean, I would not ascribe to an opinion  
15 about the fact that we're beyond the point where we  
16 can affect the causes of what we're dealing with.

17 That's just my personal aside. But, I'm okay  
18 with the group making this prioritization and  
19 recognition that many of us work in other areas on  
20 those issues.

21 So, I don't want us to leave the impression  
22 that we're not (indiscernible) by making this  
23 differentiation that there's no reason to be  
24 worried about CO2 emissions. The world signed an  
25 agreement. Our country signed an agreement. Many



1 of the Mayors -- Maybe even the Mayor of Miami has  
2 -- have adopted CO2 -- significant CO2 resolution  
3 goals. And, I certainly those should be supported.

4 We just don't have to do the (indiscernible).

5 MR. BORGES: I mean, for example,  
6 sustainability objectives are already part of Miami  
7 21. There is nothing in Miami 21 that deals with  
8 the issue of building more resilient buildings and  
9 buildings that are more adaptive to permanent  
10 flooding.

11 So that's why I'm saying that there is a lot  
12 of catching up, you know, to really bring  
13 resiliency thinking and design standards up to the  
14 level that we're at right now; because, even at the  
15 county level, there is a lot of work going on in  
16 the county that is mandated already that needs to  
17 be certified, you know, to at least silver or other  
18 certification levels for sustainability.

19 So, indeed; you know, I think that the  
20 conversation about being a sustainable community is  
21 a conversation that needs to be had and needs to be  
22 expanded.

23 I'm just saying that the task of this  
24 committee is -- should be as focused as possible  
25 towards this idea of design standards for

1 adaptation.

2           You know, I'm looking here at a document that  
3 was producing, during Sandy, about urban  
4 waterfronts and adapted strategies in New York and  
5 they looked at, for example, how they elevate all  
6 of the different components of their city and how  
7 they protect the shore lines and reinforce and  
8 future proof their cities towards danger of  
9 flooding, permanent flooding and storm surge  
10 damage.

11           So there is a lot of conversation to be had  
12 about that and there's nothing right now -- as  
13 we've had conversations with the building  
14 officials. There's nothing in the Florida Building  
15 Code that helps me on that.

16           We know that modifying the Florida Building  
17 Code is very slow process. So, Miami Beach, for  
18 example, is taking initiatives where they modify  
19 their codes at a local level so that they could  
20 build, you know, more resilient architecture  
21 buildings and infrastructure in their costal  
22 community.

23           So, I'm just suggesting that should be our  
24 focus.

25           CHAIR PATHMAN: I think that, you know, Jim

1 brings up a good point and your points are well  
2 taken. But, maybe, our statement should be just  
3 what we are and not what we're not and we'll see  
4 how things roll out, you know, over the course of  
5 the year.

6 I think you've identified what -- where you  
7 say here what the committee is to deal with. I  
8 think those are well identified.

9 I don't think we need to say what the  
10 committee is not.

11 But, I also think we should have some type of,  
12 you know, statement that goes with what our mandate  
13 is. So, maybe, something along the lines -- And  
14 please feel free to comment. -- to study sea level  
15 rise and make recommendations and advise the Miami  
16 City Commission based upon information reviewed by  
17 experts, the public and other municipal and federal  
18 government agencies.

19 Something along those lines could be our  
20 mission mandate. We could tweak it a little bit.  
21 And then, under that we have what the committee is  
22 to deal with.

23 Does anybody have any comment or agree?

24 MR. GOMEZ: I agree with the caveat that,  
25 maybe, you could add, you know, a quick sentence in

1           there that understanding that the city does take  
2           the sustainability issue as important; because, we  
3           do -- The city does take that very important  
4           speaking for the Fire Department. The last fire  
5           station we built was a lead certified fire station  
6           and moving forward they're all going to be the same  
7           way.

8           So, I just want to make the point that the  
9           city does take the sustainability part of it very  
10          seriously; but, it's not this committee's task to  
11          do that.

12          This committee's task is strictly for the  
13          adaptation or ideas of how to --

14          CHAIR PATHMAN: Mitigation as well.

15          MR. GOMEZ: -- adapt or mitigate --

16          CHAIR PATHMAN: Tabitha?

17          VICE CHAIR CALE: I would also like to add --  
18          I think -- I know we're in the process of  
19          developing a web site that folks will be able to  
20          access with more information about the work of this  
21          committee.

22          I think it would also be worthwhile to provide  
23          information and links to, like, the sustainability  
24          work the committee is doing and other relevant  
25          departments and information for things that will be

1 outside of what we'll cover on this committee.  
2 Just to, you know, have those resources available  
3 to the public for things that we won't cover under  
4 this committee.

5 CHAIR PATHMAN: Yeah. I think that's  
6 something we could add, you know, again to the web  
7 site.

8 But, for tonight's purposes I'd like to read  
9 -- have Reinaldo read into the record your --  
10 Because, I don't -- Everybody agrees with the  
11 committee report -- with the committee's  
12 suggestions, on the bottom of his suggestions and  
13 he can read that into the record.

14 And, if you agree with the statement I just  
15 said that would be our header and we can get that  
16 into the record.

17 Again, we can tweak it at a further meeting.  
18 But, at least, it gets us where we want to be as  
19 far as a goal and the mission statement of our  
20 committee.

21 MR. GOMEZ: Should we get any public input at  
22 this point?

23 CHAIR PATHMAN: Yeah. I was going to say --  
24 I'm going to amend what I said earlier.

25 If there's anybody in the public that would

1 like to comment on what we just discussed, you  
2 know, I'll give you two minutes each to comment on  
3 it if you have any comments about what we are  
4 hoping to accomplish through our committee and the  
5 mission statement of our committee.

6 Anybody from the public? Come on up, sir.

7 Please state your name and your address.

8 MR. VAN LEER: My name is Sam Van Leer. I'm  
9 the President and Founder of Urban Paradise Guild.  
10 Our mailing address is 13400 North Miami Avenue.

11 I would say with regard to the mission I  
12 appreciate the fact that you all are discussing  
13 sustainability.

14 Frankly, any adaptation and mitigation that is  
15 done is just a band-aid. Okay?

16 If you don't deal with carbon, if you don't  
17 deal with the causes, the city is doomed.

18 And so, in my opinion, you all need to have a  
19 very strong statement in your overarching mission  
20 objectives that the city and the county and the  
21 state must have all due pressure applied to them to  
22 make sure that they are addressing sustainability.

23 Frankly, the City of Miami and Miami-Dade  
24 County when it comes to sustainability -- it's  
25 being treated as a buzz word. It's not being taken

1 seriously and it must be.

2 Ajani, here, is working alone in the City of  
3 Miami. That's how seriously this city takes  
4 sustainability; one employee. Seriously? Okay.

5 I've been trying to deal with the City of  
6 Miami on various levels with regard to  
7 sustainability and have gotten nowhere. I am  
8 hoping that with recent political changes things  
9 may shift. But, I've seen no leadership. I see a  
10 lot of talk. But, there's no leadership.

11 I would also say that you all should be aware  
12 that your green infrastructure is going away.

13 I have witnessed, recently -- I have been  
14 forecasting that the rate of Mangrove recruitment  
15 was going to be outpaced by sea level rise. I  
16 didn't think it was going to be happening so soon;  
17 but, King Tides are already causing this.

18 I'm seeing Mangroves being scoured away way  
19 ahead of their time.

20 So, of course, there's natural recruitment  
21 happening up slope as well; but, this is not a good  
22 situation.

23 And, currently, as things stand there is no  
24 room when it comes to adaptation and mitigation for  
25 infrastructure retreat. Instead, what's happening

1 is we're building right up to the sea walls.

2 As Mr. Borges was putting it, there is no  
3 guidance there.

4 I don't see any coastal construction standards  
5 being enforced.

6 So, as long as that is happening I see your  
7 hands as being tied. I see this committee as being  
8 irrelevant unless you can get the city leadership  
9 to change their role and to become serious about  
10 enabling your mission and enabling sustainability  
11 and building standards elsewhere.

12 Thank you.

13 CHAIR PATHMAN: Thank you. Thank you for your  
14 comments.

15 Let me just add that, you know, we are under a  
16 resolution passed by the commission, mandated only  
17 to deal with sea level rise.

18 I think as our role grows, as attendance  
19 increases from the community, other things will  
20 happen. Ajani won't be the only person in the city  
21 dealing with sustainability. But, we should be  
22 thankful that we have such a committee now;  
23 because, there wasn't one in existence just a few  
24 months ago and, you know, we -- all of us up here  
25 and there a couple who are absent today, take it



1 very seriously about what the issues are.

2 And, I think, what Reinaldo was expressing  
3 earlier is that, you know, we can't solve all the  
4 problems. We'd love to. We'd love to be able to  
5 bring everything to the attention of the city.  
6 But, we also know that's probably the wrong way to  
7 start.

8 So, our mandate is going to be as the  
9 commission has asked us, to focus on sea level  
10 rise. But, there will be offshoots from that and  
11 there will be things that I think that we will do  
12 that will be brought to the city's attention in  
13 other areas like you just mentioned. And,  
14 eventually, this city, like county has done and  
15 other cities, we'll probably have a much larger  
16 resiliency department in dealing with resiliency  
17 and sustainability.

18 So, this is the place where, again, we're  
19 going to deal with sea level rise and, hopefully,  
20 it's going to grow from here.

21 Any other members of the public that wish to  
22 speak at this time?

23 MR. GOMEZ: Mr. Chair, can I make a comment?

24 CHAIR PATHMAN: Pete, go right -- Go ahead.

25 MR. GOMEZ: First of all, I want to thank you

1 for that direction and your comments.

2 We take it -- I know I do. We take it very  
3 seriously, everything you have said, as a matter of  
4 fact.

5 In our very early meetings one of the things,  
6 too, that we recognized was the fact that we only  
7 have that one person, Ajani, with Dr. Tashiro every  
8 now and then, assisting in the resiliency and  
9 mitigation projects.

10 So, we've addressed it. We are going to make  
11 those recommendations to the commission so that we  
12 do get moving.

13 Our only purpose of trying to focus on sea  
14 level rise -- We understand that adaptation is not  
15 the answers. But, we also have to understand our  
16 limitations and get done as much as we can with  
17 what we're given.

18 So, I appreciate your comments. You're dead  
19 on. And, I think we all here -- Everybody here has  
20 recognized that already in our meetings that we've  
21 had.

22 Thank you, Mr. Chair.

23 CHAIR PATHMAN: I'm just going to give you two  
24 minutes. If you'd state your name and address for  
25 the record, please.

1 MR. GOMEZ: Albert Gomez, South Florida  
2 Resilient Systems, 33133.

3 I would make a point that when committees are  
4 made or put together they're usually focused on  
5 departments and different areas of that nature.

6 Sea level rise is an existential threat. It's  
7 dealing with complex issues. And, in dealing with  
8 complex issues you need to come forward with a  
9 complex adaptive system that supports an agile  
10 change, agile solution -- It's not a one size fits  
11 all proclamation that we can bring forward.

12 You could try to bring microscopic or very  
13 specific suggestions or proclamations to the  
14 commission; but, realistically, if you disconnect  
15 the causes you, basically, dilute it, in  
16 retrospect.

17 So, I would like to say that howerve our  
18 bandwidth -- how grand the problem is and how our  
19 limitations might subject us to try to maybe focus  
20 on a component of it, the fact that if we address  
21 it just with our coding concept we're going to miss  
22 the boat a little there and we might lose more  
23 taxable land and more opportunities for bringing  
24 more money into the system if we don't take a more  
25 holistic approach.

1           And, I just -- I want see if that's, maybe,  
2           addressed in the process. Okay?

3           Thank you very much.

4           CHAIR PATHMAN: Is there anybody else from the  
5           public that wishes to speak?

6           Yes, sir? Please come forward and state your  
7           name and your address.

8           MR. SESSIONS: My name is Patrick Sessions,  
9           1754 South Bayshore Lane, Miami.

10          Just quickly. I understand what the other two  
11          speakers are saying with all due respect to their  
12          comments.

13          I've served on a number of committees. I was  
14          the Chairman of the Coconut Grove Village Council.  
15          We wrestled with the same issues; what's important,  
16          what isn't, what should we do.

17          I think your mandate is pretty clear. I don't  
18          think anybody was looking for you guys to figure  
19          out how to stop global warming.

20          And, I'm a perfect example of -- And the  
21          reason I'm here tonight is I live on South Bayshore  
22          Lane which is the street right before you go over  
23          the bridge to Grove Isle and I've there for thirty  
24          years and I know exactly how far the water has come  
25          up; because, I've measured it for years and years.

1 And, I will tell you right now that in the King  
2 Tides our street is flooded.

3 So, the issues are here. And, I don't think  
4 that the city council or the city commission, I  
5 apologize, wanted to have a global response from  
6 you. I think what they were looking for, and I  
7 know what I'm looking for as a citizen is, what are  
8 you going to do to stop my street from flooding and  
9 what's going to be a practical solution to a lot of  
10 problems?

11 And that -- And we all agree we need to help  
12 out with CO2 and all of the rest of that stuff.  
13 That's not your job. You already spent forty-five  
14 minutes talking about what isn't your job. I  
15 suggest that forty-five minutes would have been  
16 better spent on the first steps you're going to  
17 take to try and solve the fact that our streets are  
18 flooded.

19 I'm not worried about my house flooding. My  
20 house is up three feet above the street. What I'm  
21 worried about is I'm not going to be able to get  
22 there anymore.

23 You know, the canal that runs around behind my  
24 house has one foot left. That's it. When it's a  
25 foot deeper there's not going to be a road to my

1 house anymore. You'll have to take a boat. And  
2 that's also at the same level that South Bayshore  
3 Drive is right there.

4 So, there are real issues and I don't want to  
5 personalize this; but, I would just tell you that I  
6 think that the citizens of Miami are looking for  
7 practical solutions the same way that the City of  
8 Miami Beach has really taken a great step forward  
9 by stepping up front and saying let's do something  
10 about this in a practical manner; pumps, roads,  
11 raising facilities, those types of things. And,  
12 I'd encourage you guys and ladies to focus on that.

13 Thank you.

14 CHAIR PATHMAN: Thank you. Is there anybody  
15 else? We have time for one more speaker.

16 Okay. Seeing none I'm going to close the  
17 public portion of this.

18 I think, you know, we have the obligation, per  
19 our resolution, to focus on sea level rise. And, I  
20 think Reinaldo has set that out well in his -- what  
21 the committee is proposing and I think we can  
22 identify that with the statement made earlier.

23 Obviously, we're going to hear comments, you  
24 know, from the public and from others, experts and  
25 so on, about causes, about the globalness of the

1 problem and climate change.

2 But, again, we have to stick with what we're  
3 tasked to do per the legislation that was passed by  
4 the city commission.

5 That's not to say that any of us lose sight  
6 of, you know, the other issues. We all are very  
7 well aware of those issues and many of us serve in  
8 other capacities dealing with these issues  
9 throughout the county or the state.

10 But again, our forum -- what we're tasked to  
11 do, our committee, is to focus on sea level rise  
12 and, hopefully, be able to recommend solutions.

13 Mr. Sessions just said about, you know,  
14 wasting time.

15 I can assure you nothing we're doing up here  
16 is wasting time. But, since we're all obligated to  
17 act under the Sunshine Laws everything we do, as  
18 far as a committee, we have to discuss openly like  
19 this. And, being a committee that's only had its  
20 fourth meeting now, these are the types of things  
21 that we have to do discuss; what is our mission  
22 statement?

23 The next topic we're going to take up are the  
24 sub-committees that we identified in our most  
25 recent workshop.

1           So bear with us. But, I think overall you're  
2 going to find that this committee hopes to have  
3 some teeth and hopes to be able to create some  
4 change and advise the commission as to the issues  
5 -- the most important issues of sea level rise.

6           Matt, should we go ahead and just read into  
7 the record the things that Reinaldo has identified  
8 and then my short statement that -- and then take a  
9 vote?

10          MR. HABER: In terms of mission statement?

11          CHAIR PATHMAN: Yes.

12          MR. HABER: Yes.

13          CHAIR PATHMAN: Okay. So if there is no  
14 objection from the committee, again, I'd like to  
15 see the top -- our mission statement -- we're  
16 beginning to say something to study sea level rise  
17 and make recommendations and advise the Miami City  
18 Commission based upon information and -- based upon  
19 information received from experts, the public and  
20 other municipal and federal government agencies.

21          Does anybody -- Does everybody agree with  
22 that?

23          Okay. And then, Reinaldo, if you want to read  
24 into the record the second portion.

25          MR. BORGES: (Indiscernible).



1 CHAIR PATHMAN: Well, I just it's good if we  
2 have it on the record as opposed to saying we have  
3 a sheet here with it.

4 MR. BORGES: (Indiscernible).

5 CHAIR PATHMAN: Well, because, the  
6 (indiscernible) part we're not addressing.

7 MR. BORGES: (Indiscernible).

8 CHAIR PATHMAN: Well, Matt, how would you  
9 advise that we do it?

10 MR. HABER: Generally, we should read it into  
11 the record.

12 CHAIR PATHMAN: Okay. I like Jim's way. But,  
13 okay.

14 So go ahead, Reinaldo.

15 MR. BORGES: Then I'll read it into the record  
16 with the understanding that I do believe that this  
17 is a complex issue that requires a lot of  
18 integrated thinking. So, this is not just about  
19 focusing on --

20 CHAIR PATHMAN: Make it part of the motion.  
21 Just read -- And then -- Because, we have to make  
22 it one concise thing.

23 MR. BORGES: So, what I said here was --

24 VICE CHAIR CALE: Wait. I don't know if it  
25 might be easiest since this isn't necessarily --

1 This is a great summary of what I think our mission  
2 should be. But, I don't know if the way it's  
3 currently written does that.

4 (Indiscernible) I have is, especially, with  
5 (indiscernible). I don't know if it makes sense to  
6 write it out with your header. Maybe, kind of,  
7 summarize it a little more and then have that  
8 circulated to approve at the next meeting, with a  
9 little more time to see final -- more final  
10 language.

11 Or, do you feel comfortable summarizing it and  
12 reading it into record?

13 MR. BORGES: I'll synthesize this.

14 VICE CHAIR CALE: Okay.

15 MR. BORGES: I mean, I'm going to synthesize  
16 it. I was just, sort of, -- Because, you know we  
17 have a lot of critics in the audience and we are  
18 being taped. So, I was just, you know, sort of,  
19 saying I took the initiative of putting this thing  
20 to writing and I take responsibility for it and I'm  
21 serious about the care that we bring to this issue.

22 So, what the committee is not, I think,  
23 formulated to do is to discuss issues of  
24 sustainability such as energy consumption, clean  
25 energy issues, water usage in our community,

1 reductions of such.

2 I don't think that's really the task dealing  
3 with the process of climate change, dealing with  
4 recycled materials and the use of recycled  
5 materials, the essence of dealing with all of the  
6 issues associated with the sustainability, design  
7 and living as we know it in this modern world. Not  
8 meaning, at all, that sustainability should not be  
9 at the core of how we change the way that we live  
10 in this community.

11 The committee is supposed to be talking about  
12 sea level rise, the impact of thermal expansion of  
13 the oceans and how we deal with that. How do we  
14 adapt? How do we live differently with an  
15 increased amount of water that comes to us, not  
16 just from the rising seas; but from, you know, more  
17 saturation from the heavens and also from the  
18 grounds because we do have a very porous, you know,  
19 substrate here in the geology.

20 So, we are to focus on adaptation and  
21 mitigating the risk of how water will change the  
22 way that we live in our coastal community.

23 Adaptation means -- And, again, adaptation  
24 means different things to different people. So  
25 this is my interpretation.

1 CHAIR PATHMAN: We have to make a concise  
2 statement that is fluid on the issues that you have  
3 identified.

4 So, one of two things. Either we -- As  
5 Tabitha has suggested, maybe -- I mean we're going  
6 to have to -- The forum to do it is here. That's  
7 what we voted on in the workshop. So, we either  
8 have to do it here or it's going to roll over to  
9 the next meeting; because, we're not going to have  
10 another workshop on this.

11 We need you to read a fluid statement into the  
12 record.

13 VICE CHAIR CALE: Maybe we can just have  
14 Reinaldo read, you know, what the committee is to  
15 deal with, into the record. But then, just provide  
16 the summarized version with your header that we can  
17 formally approve at the next meeting.

18 That way we can have, you know, an  
19 understanding for the public of what that says.

20 Do you have any recommendations, Matt?

21 MR. HABER: If we're struggling with the  
22 particular wording what you can do is -- just the  
23 same way that we're dealing with the annual report,  
24 we can try and come up with language here or we can  
25 send out what this is. You can make your notes on

1 it, individually, without talking to each other,  
2 prior to the next meeting.

3 When you get to the next you'll have something  
4 concrete in front of you that you've been able to  
5 draft and then we can just deal with it right there  
6 just like we're going to handle to the annual  
7 report.

8 VICE CHAIR CALE: Because, I think the content  
9 is there. It's just a matter of, like, if we can  
10 read it off succinctly and as perfectly as we would  
11 like to have in the final mission statement.

12 I think it may be easier just to read into the  
13 record the content of what we want it to have and  
14 then, perhaps, can use that -- or what you said --  
15 suggested to come up with the final wording.

16 CHAIR PATHMAN: Reinaldo, do you feel  
17 comfortable reading just what you wrote there the  
18 committee is to deal with. Let's read that into  
19 the record. It'll be --

20 MR. BORGES: I've been doing my best. But,  
21 I'm not an attorney. I'm an architect. So, I  
22 can't put --

23 CHAIR PATHMAN: You're building a whole  
24 building there.

25 MR. BORGES: I'm not an attorney. So, my

1 language is a bit more --

2 CHAIR PATHMAN: No. But, you did a great job  
3 in drafting this. Thank you. Read it into the  
4 record.

5 MR. BORGES: Yes. But, I'm --

6 CHAIR PATHMAN: I don't think we're going to  
7 get consensus tonight and --

8 MR. BORGES: But, that's what I was attempting  
9 to do, Mr. Chair, in all due respect. You know, we  
10 just have a different way of putting it into the  
11 record. You know, this is a complicated issue and  
12 I was just trying to put some context into these  
13 words that I'm reading into the record.

14 But, I was going into the very basic one which  
15 is adaptation and what it means, I think. So, I  
16 was about to do that when you noted that I need to  
17 synthesize it.

18 I think that this next items is pretty  
19 synthesized.

20 Could I just read that --

21 CHAIR PATHMAN: Sure. Go ahead.

22 MR. BORGES: So, what adaptation means in the  
23 context of this conversation is how we design  
24 cities in a different way, how we regulate this by  
25 changing the codes and standards from which we

1 design the following: Buildings. The main focus on  
2 how buildings meet the street and how we design  
3 flexibility into that so that they are more  
4 adaptive through time.

5 You know we need to look at streets,  
6 streetscapes, the infrastructure of our cities,  
7 water, water and sewer systems, critical  
8 functioning components of our communities such as  
9 airports, hospitals, sea ports and fire stations.

10 How do we make sure that these facilities are  
11 designed with resiliency at their core so that we  
12 do not lose them in the future.

13 How do we do better emergency management so  
14 it's a more holistic approach; but, it's also  
15 associated with planning standards.

16 Learning more about South Florida elevation  
17 maps.

18 I mean we talked about the maps here today. I  
19 think that understanding the map is vital to our  
20 concern and our initiatives; because, it's not the  
21 entire community that gets affected by this.

22 How do we advocate, at the Florida state  
23 level, with the Department of Transportation, to  
24 make sure that as the Florida State DOT (Department  
25 of Transportation) designs our roads and bridges in

1 our communities that they take sea level rise into  
2 account?

3 How does Everglades restoration play into our  
4 -- you know, protecting our urban core and  
5 expanding the life of our urban core?

6 And then, in terms of mitigation, what it  
7 means to me is, really, how we reduce the threat of  
8 sea level rise and so on through adaptation and  
9 reducing the potential damage that this will bring  
10 to our building, to the physical city that we have  
11 in South Florida.

12 So that's what I would say. Thank you.

13 CHAIR PATHMAN: Okay. Thank you, Reinaldo.

14 Ajani, if you can, you know, try to create  
15 from what we just read into the record a statement.  
16 Send it out and we'll go by Matt's recommendation.  
17 People can make comments. Submit it back to you to  
18 bring up at the next meeting and take a final vote.

19 Will that work, Matt?

20 MR. HABER: Sure. As long as the comments are  
21 not distributed across --

22 CHAIR PATHMAN: Correct. Just back to you and  
23 Ajani.

24 MR. HABER: Okay. Sure.

25 CHAIR PATHMAN: Perfect. All right. Thank



1 you very much, Reinaldo and everybody else.

2 And now, the next item on our agenda is the  
3 formation of the committees that we spoke about at  
4 the workshop.

5 So Pete, I'm going to start with you and give  
6 you two minutes to talk about, quickly, what you  
7 see the goals of the Emergency Management Committee  
8 and how you'll be reporting back to this committee  
9 at our regularly scheduled public meetings.

10 MR. GOMEZ: Okay. Well, as I mentioned at one  
11 of the very first meetings, from our perspective, I  
12 look at it as holistic in the sense of public  
13 safety. It's not just emergency management. But,  
14 I want to include police, fire, public works into  
15 anything that we might be looking at. Throughout  
16 --

17 You know, our perspective is we're going to be  
18 looking at it strictly as an adaptive measure;  
19 because, we -- And, as I mentioned before, my  
20 concern is when we do have Mr. Sessions' streets  
21 that are flooded or, you know, Brickell or the  
22 downtown area -- when we've got other skyscrapers  
23 going up, how do I get my fire trucks, how do I get  
24 my police officers in there to help those people?

25 If we have to evacuate, how are we going to

1 evacuate them?

2 So, those are our concerns and we'll be taking  
3 a look at that with Dr. Tashiro so that we can try  
4 to come up to, you know, better ways and let the  
5 commission know that we have to try to fund and we  
6 need to support these types of efforts; whether  
7 it's building fire stations closer to where they're  
8 at or higher elevations or getting more police  
9 officers.

10 But, those are going to be the challenges if  
11 this keeps coming to fruition the way we anticipate  
12 it will.

13 CHAIR PATHMAN: Okay. Thank you, Pete.

14 And for the public, what we're planning on  
15 doing is we've created -- and you'll hear from each  
16 of the people that will be heading these  
17 sub-committees that are members of this committee  
18 -- to try to create an outreach from our committee  
19 to all of the different agencies within the city  
20 where they report back on a regular basis to our  
21 monthly meetings and get input from the public in  
22 the future and also interact with the management --  
23 you know, with the city, with the manager's office  
24 on various issues that are dealing with the five  
25 areas that we've identified.

1           With that, Reinaldo; Building, Planning and  
2           Zoning is your baby.

3           MR. BORGES: Yes. So, I'm trying to combine  
4           my efforts as an architect and leading the American  
5           Institute of Architects Sea Level Rise Task Force  
6           with pro-actively reaching out to all of my  
7           friends, planning directors, from all our  
8           communities and understanding what their game plan  
9           is, what is on their agenda to modify zoning. And  
10          then, also talking to the building officials about  
11          how we start to modify our building codes.

12          So, I would be reporting on the progress of  
13          that and I would stimulate inviting all of these  
14          voices to come and share with us, in the committee,  
15          what they're looking at, how they're formulating  
16          new polices and new ordinances to change the way  
17          that we're designing our cities; because, right  
18          now, you know, we're designing our cities as you  
19          know the same old way.

20          I mean we're in a status quo mode right now.  
21          And, specifically, in this building cycle, you  
22          know, I'm concerned that we're not really being  
23          good futurists.

24          So, I would bring that conversation to the  
25          committee and, hopefully, we could learn through

1 that process and it could inform the policy-makers.

2 CHAIR PATHMAN: And, Mr. Sessions, when you  
3 mentioned about, you know, the life span of your  
4 street or your neighborhood, this is the  
5 sub-committee of our committee that could take up  
6 those issues with the Building and Zoning  
7 Department and issues that would, hopefully, get to  
8 the commission to start looking at or addressing  
9 concerns that you may have in a particular  
10 neighborhood, especially yours. So, --

11 MR. SESSIONS: (Indiscernible).

12 CHAIR PATHMAN: Come to the podium, please.

13 MR. SESSIONS: I'm just curious on who is on  
14 --

15 CHAIR PATHMAN: State your name, again;  
16 please.

17 MR. SESSIONS: Patrick Sessions, 1754 South  
18 Bayshore Lane.

19 CHAIR PATHMAN: Thank you.

20 MR. SESSIONS: I'm sorry; but, I'm a little  
21 confused. It says here formation of  
22 sub-committees. As an example who is on the  
23 sub-committees? Or, how do people get on them or  
24 how -- I'm a little confused as to --

25 CHAIR PATHMAN: The sub-committees are a

1 committee of one, right now, of each member of this  
2 committee itself, to try to explore these issues  
3 and as we get more information or as we grow we may  
4 have an outreach to the public where we would have  
5 those sub-committees and have additional meetings.

6 But, right now, what we're trying to do is  
7 divide our efforts, our resources, which are  
8 limited -- and we're all volunteers -- to try to  
9 address the administration issues for the public  
10 and to try come up with, you know, a game plan,  
11 ultimately, that we hope the commission will adopt  
12 or listen to as it relates to various issues; some  
13 of the ones that you brought up.

14 So, right now, there is no filling the  
15 committee with people from the public. But, we  
16 hope that what will happen is that someone like  
17 Ryan, who is from the Planning Department, will be  
18 on the committee with Mr. Borges and be able to  
19 work together internally with the staff of the  
20 Planning Department, as well as our committee.

21 MR. SESSIONS: Thank you. Sorry I interrupted  
22 you.

23 CHAIR PATHMAN: No. No problem. Thank you  
24 for your help and your discussion.

25 MR. GOMEZ: Mr. Chair, can I make some --

1 CHAIR PATHMAN: Yes, Pete?

2 MR. GOMEZ: Maybe a sub-committee was a  
3 misnomer. Maybe it should have disciplines instead  
4 of sub-committees. But, --

5 CHAIR PATHMAN: No. I think sub -- We are a  
6 committee and these are the subs of our area.

7 MR. GOMEZ: Okay.

8 CHAIR PATHMAN: -- of our -- And most boards  
9 where you have a sub-committee it doesn't mean that  
10 the public serves on those committees.

11 MR. GOMEZ: Okay.

12 CHAIR PATHMAN: We need to go with what, I  
13 think, our goal was and what we discussed in our  
14 workshop is the relationship with our  
15 administration.

16 MR. GOMEZ: Right.

17 CHAIR PATHMAN: You know, you already had that  
18 being, you know, a city official. But, you know,  
19 being in the administration we need to, kind of,  
20 like --

21 MR. GOMEZ: Right.

22 CHAIR PATHMAN: -- expand our wings and see  
23 how we can go. And, it's nice that we have people  
24 from various departments like Stephanie and Ryan  
25 here tonight to address us.

1           So, that's where I hope we go it.

2           MR. GOMEZ: Yeah.

3           CHAIR PATHMAN: But, again, we're going to  
4 continue to evolve over time and see how far  
5 outreach will go.

6           But, this is the forum for the public, you  
7 know.

8           Jim -- Excuse me. Tabitha, natural resources?

9           VICE CHAIR CALE: Sure. So, under the natural  
10 resources sub-committee, I think some of the things  
11 that we would focus on would be identifying efforts  
12 that are being undertaken by other bodies like  
13 Everglades Restoration and finding ways to make  
14 recommendations to the cities to support some of  
15 those efforts more formally; particularly, since  
16 this city relies on the Everglades for its drinking  
17 water, since the water that comes through that area  
18 recharges our aquifer.

19           But then, also identifying other projects --  
20 other restoration efforts or measures that could be  
21 taken by the city to either, maybe, do things that  
22 might overlap with some of Mr. Leer's comments,  
23 like improving and enhancing natural shore line  
24 protection like Mangroves provide.

25           So, really identifying the way in which

1 natural areas help make the City of Miami more  
2 resilient.

3 Looking at restoration projects that may be  
4 providing some of that resiliency that are already  
5 being planned or put in place like the Biscayne Bay  
6 Crystal Wetlands, for example. Or, just ways we  
7 need to better support, as a city, protecting the  
8 resources of, you know, the Mangroves and coral  
9 reefs that can reduce the impact of storm surge and  
10 slow it down before it gets to our coast or making  
11 sure that we have, you know, enough Mangroves that  
12 are keeping up the sea level rise in areas where we  
13 still have them.

14 So, really, kind of, identifying those  
15 natural resources we have that help provide value  
16 and resilience to protecting the city.

17 CHAIR PATHMAN: Thank you, Tabitha. Jim?

18 MR. MURLEY: Thank you, Mr. Chair. I think  
19 any governmental -- really has a little advantage  
20 because we are able to operate in a forthcoming  
21 region with the Southeast Florida Climate Change  
22 Compact has laid a good groundwork, framework, for  
23 us to be able to know what's going on. And, I'll  
24 take full advantage of that.

25 The county has a resilience initiative going



1 on so I can talk to myself about that.

2 CHAIR PATHMAN: Jim, speaking of yourself. I  
3 think we're really, in a sense, blessed to have Jim  
4 on this committee.

5 If could just give a thirty second -- your  
6 background and what your current position is. I  
7 think that for those that don't know how helpful it  
8 would be.

9 MR. MURLEY: You know, I will do that --

10 CHAIR PATHMAN: I know you (indiscernible).

11 MR. MURLEY: Yeah. I will do that. Yeah.

12 But, I do want to caveat that I sought this  
13 appointment because I wanted to be here as a  
14 resident of --

15 CHAIR PATHMAN: Right.

16 MR. MURLEY: -- the City Commission, District  
17 5. So, not with that parochial point of view  
18 cleared. I have the honor of serving in the  
19 position -- a new position in county government  
20 called the Chief Resilience Officer and it picks up  
21 on the sustainability -- those issues that we  
22 talked about earlier dealing with reduction in CO2.

23 But, we also have a series of sea level rise  
24 initiatives that are on-going and we'll be  
25 reporting those to the county commission this year

1 and we will provide all of that information to the  
2 city.

3 And today, this morning, we had an excellent  
4 meeting with the insurance investor, Mr. Chair, and  
5 we missed you.

6 But, that's the kind of information I'll be  
7 sure is reported to the staff so they can share it  
8 with the committee.

9 CHAIR PATHMAN: Very good. Thank you, Jim.

10 Again, I just want to say, having Jim up here,  
11 even though he's here as a citizen, he has vast  
12 knowledge of many things dealing with planning and  
13 zoning and resiliency. So, it's always a pleasure  
14 to be with you, Jim, and have you up here guiding  
15 us and helping us.

16 The last area is economic. This is an area  
17 that I'll be working on and reporting on as well as  
18 working, on occasion, with Reinaldo on the planning  
19 and zoning since it's close to my heart as a zoning  
20 lawyer.

21 But, you know, one of the first things that I  
22 see affecting our community, long before the water  
23 gets here, is the economic impact of things that  
24 will happen related to insurance, banking and  
25 taxation.

1           So, I'll be reporting on those things as they  
2 relate to sea level rise and how those things may  
3 be changing in our community.

4           For instance, the insurance will probably  
5 change in our community over the next ten to  
6 fifteen years.

7           The federal flood insurance program may be  
8 dissolved. It may be changed.

9           And then, the banking community certainly will  
10 be requiring most homeowners to carry excess flood  
11 insurance as more information comes out about areas  
12 that are special flood hazardous areas or flood  
13 frequently and eventually, that effects taxation.

14           We're also talking about potential P-3  
15 projects that the city should undertake which is a  
16 public/private partnership.

17           I don't think that the city government is  
18 going to be able to finance -- or the county  
19 government, for that matter -- is going to be able  
20 to finance the type of capital projects that are  
21 needed in our community and if the public sector  
22 doesn't take a role it's going to be very, very  
23 difficult.

24           There are things that, you know, this  
25 community -- the city and, ultimately, the county

1 are tied to very much, like the septic tank issue.  
2 Septic issues are going to be right at the  
3 forefront of when things start to change because  
4 they're going to be, probably, the first impacted.

5 So that will be something else that I will be  
6 reporting on about the economic impact of what it  
7 will cost the city, the county, to deal with those  
8 kinds of issues.

9 So, what we're trying to do with our  
10 committees is, you know, reach out, again, like I  
11 said, to the internal staff here at the city,  
12 report back to this forum on what's going on, what  
13 changes can be made and what impact can we have as  
14 a committee and also the input from the public.

15 That being said, let's move on to our next  
16 item which is -- I want to do it really quickly, in  
17 the next couple of minutes is -- I see Professor  
18 Hal Wanless is here to speak to us from the  
19 University of Miami. -- potential speakers for  
20 future meetings.

21 I just would like to start from my left.

22 Reinaldo are there one or two people you'd  
23 like to see that Ajani can jot down or reach out to  
24 for the future on potential speakers?

25 MR. BORGES: I think in the spirit of learning

1 from others in the community that are already  
2 advanced in resiliency thinking, perhaps, we invite  
3 someone like Bruce Morè (phonetic) from City  
4 Engineering in Miami Beach to come and share with  
5 us some of their challenges; some of the things  
6 that they've been learning through the process of  
7 modifying and adapting the infrastructure of Miami  
8 Beach.

9 We could also invite, perhaps, -- I guess Susy  
10 was already here? Right?

11 CHAIR PATHMAN: Yeah.

12 MR. BORGES: So, Susy was here.

13 CHAIR PATHMAN: She was here last week.

14 MR. BORGES: And Susy is, basically, doing the  
15 same thing that Jim is trying to do; but, in Miami  
16 Beach, with resiliency and at some point we should  
17 invite them to also come and share. And so, we  
18 could sort of cross-fertilize each other from  
19 what's happening across the bay in the barrier  
20 island to, potentially, how that may inform some of  
21 the things that we may be looking at here in the  
22 City of Miami.

23 CHAIR PATHMAN: Okay. Jim, any suggestions on  
24 potential speakers for the future?

25 MR. MURLEY: The Compact, Mr. Chair, benefits

1 from the support work of the Institute for  
2 Sustainable Communities and Steven Adams and Nancy  
3 Schneider (phonetic) are staff. And, Steve is out  
4 of state. Nancy is local. But, I think, at a  
5 future meeting, maybe, we can -- If we're lucky  
6 Steve might be in town. But, Nancy can do a good  
7 job giving us a good update.

8 CHAIR PATHMAN: Okay. Very good. I've  
9 already spoken to Jimmy Morales, the Manager of the  
10 City of Miami Beach and he's agreed to come and  
11 address us.

12 And, I'm reaching out to someone from the  
13 re-insurance industry to come out and speak to us  
14 about the insurance issues and what the  
15 re-insurance industry is doing as it relates to  
16 insurance.

17 I also think that, you know, we should reach  
18 out to the development community. One of our  
19 former members of the board -- but, unfortunately,  
20 has a conflict -- David Martin, I think, would be a  
21 good person to come and address us from the  
22 development side and since he's passionate about  
23 the issue, I think it would be something we could  
24 hear when he's no longer sitting on the committee;  
25 but, talking to us about what the development

1 community sees.

2 Tabitha?

3 VICE CHAIR CALE: Sure. So, the folks that I  
4 would like to recommend are Tiffany Troxler  
5 (phonetic), who heads up the Sea Level Rise  
6 Solution Center at FIU. And then, from the South  
7 Florida Water Management District, I think it would  
8 be really useful to have Jicentha Obscura  
9 (phonetic), also known to some of you in the  
10 audience as Obi. And, Jeff Kivitt (phonetic).

11 So, Obi is a climate change and sea level rise  
12 expert at the district and have given multiple  
13 presentations on that topic. And then, Jeff Kivitt  
14 is in charge of Operations and Maintenance who  
15 could speak to, for example, some of the coastal  
16 structures that will need to be updated where we're  
17 already having salt water inundation into some of  
18 the canals used for flooding reduction and  
19 everything.

20 So, those two staff members from the Water  
21 Management District.

22 And, I would also strongly second Jim's  
23 suggestion to have some representative from the  
24 Institute for Sustainable Communities.

25 I think that was a great suggestion.

1 CHAIR PATHMAN: Pete, before you speak, I  
2 would just like to add that, both, Ajani and I have  
3 been speaking to city officials from various  
4 departments; Directors from Planning and Zoning,  
5 Public Works, the Manager's Office, also, to come  
6 and address us at a future date.

7 Pete?

8 MR. GOMEZ: Well, I was going to recommend  
9 that we invite the county's Emergency Manager, Kirk  
10 Sommerhoff (phonetic) and we might even reach out  
11 to the Broward County Emergency Manager, Miguel  
12 Escerones (phonetic, who we -- You know, we can get  
13 a hold of both of them and have them present their  
14 perspective from the county's side; because, the  
15 county is responsible for emergency management  
16 functions per state law.

17 CHAIR PATHMAN: Obviously, we didn't cover the  
18 spectrum of all of the types of speakers we'd like  
19 to have.

20 There are others that I will recommend from  
21 time to time.

22 I'm also trying to work with Climate  
23 Resiliency -- with former Vice-President Gore and  
24 see if someone high up in that agency or that group  
25 will come and speak to us at some time in the



1 future. I've been trading phone calls with them.

2 But, we hope to have a good public forum and  
3 input from people that are already associated with  
4 the problem, dealing with the problem at an  
5 administrative or government level and also those  
6 that are out there and knowledgeable and maybe have  
7 written books or articles.

8 A good friend of Reinaldo's and I is -- What's  
9 Jeff's last name, Reinaldo, who wrote the article  
10 for Rolling Stone?

11 MR. BORGES: Godell (phonetic).

12 CHAIR PATHMAN: Jeff Godell is also a friend  
13 of ours who we're going to reach out to and have  
14 him come address us one day. And, if you haven't  
15 read his Rolling Stone article, that was one of the  
16 few articles that was written a few years ago that  
17 got this whole thing started of the doom and gloom  
18 of sea level rise in South Florida.

19 So, Ajani, if we could get together and go  
20 over that list and try to plan accordingly as to  
21 availability, I'd like to do that with you over the  
22 next week or so. Okay?

23 MR. STEWART: Sure.

24 CHAIR PATHMAN: Okay. And now, I would like  
25 to introduce our speaker this evening which is

1 Professor Harold Wanless.

2 For those of you who don't know he's the head  
3 of the Geological Department at the University of  
4 Miami, an expert on sea level rise and glacial melt  
5 and one of the first people that I met when I first  
6 got involved in sea level rise issue four years ago  
7 and has a vast knowledge; very likeable and taught  
8 me a lot of things and, you know, I learned a lot  
9 of things about things I didn't know not being a  
10 scientist or a professor or an engineer and found  
11 much of what he told me to read or do to be very  
12 helpful and, ultimately, something that I took very  
13 seriously and got very involved in the community to  
14 start addressing sea level rise issues here in  
15 South Florida.

16 So, Harold -- Professor Wanless, if you could  
17 come forward I'd appreciate it.

18 DR. WANLESS: Where do you want me to stand?  
19 Here or --

20 CHAIR PATHMAN: Right there. Wherever you'd  
21 like. Wherever you feel comfortable.

22 DR. WANLESS: Can I go there --

23 CHAIR PATHMAN: Sure.

24 DR. WANLESS: -- so I won't be blocking --

25 CHAIR PATHMAN: They both work.

1 DR. WANLESS: Good. Is this on? Good.

2 Thank you very much for having me.

3 I'm Hal Wanless. I'm at the University of  
4 Miami. I've been there for many years. And my  
5 students and I have been studying the past sea  
6 level rise sequence over the past seven -- ten  
7 thousand years and the evolution of our coastal  
8 environments.

9 And, I'm not sure what you want me to cover;  
10 because, I'm not sure what everybody already knows  
11 here.

12 But, I will start and you can divert me when  
13 it gets on the wrong track. Is that okay?

14 CHAIR PATHMAN: That's fine.

15 DR. WANLESS: I just gave a talk out on Miami  
16 Beach and we just got here and this has the  
17 potential to be an hour talk or a twenty minutes  
18 talk or whatever you want.

19 CHAIR PATHMAN: Please include your time with  
20 the Governor. I'd like to hear about that; your  
21 meetings.

22 DR. WANLESS: All twenty -- all thirty minutes  
23 of it?

24 CHAIR PATHMAN: Yes.

25 DR. WANLESS: Yes. Yes. I'd be glad to.

1           The most important thing when you're trying to  
2 help people understand the seriousness of climate  
3 change, human induced global warming, whatever you  
4 want to call it, is how global warming works. And,  
5 what it is, is the sun's radiation coming in to the  
6 earth's surface as a short wave length and then  
7 bouncing off as a longer wave length.

8           And that longer wave length gets caught by the  
9 greenhouse -- some of the greenhouse gases; carbon  
10 dioxide, methane, nitrous oxide, water and so on  
11 and that heats up the atmosphere. And most people  
12 think that's global warming.

13           But, when you look at this diagram which is  
14 the -- The red is the heat that's built up since  
15 about 1960, on the left side, from the earth  
16 surface -- the terrestrial surface, from the ice  
17 and so on. And, the blue is the water that is  
18 heating, that's occurred in the oceans.

19           93.4 percent of the heat from human induced  
20 global warming has been transferred to the oceans.

21           If you remember, from high school, water has a  
22 huge ability to take in and hold heat. And, this  
23 is what's so frightening about the global warming  
24 we have created and that is that it is now less and  
25 less reversible because we've transferred the heat

1 to the ocean.

2 Just look at that diagram and you realize if  
3 we have got -- started to do something about this  
4 -- alternative energy and so on to stop the burning  
5 of fossil fuels in 1960, '70 or even '80, we'd have  
6 a less big problem to tackle.

7 And this is why we're in for this for  
8 centuries now. And, you know, it's just like if  
9 you have a hot bathtub you can't suddenly cool down  
10 the room -- the bathroom and have the whole room --  
11 because the heat is going to keep coming out of the  
12 bathtub for days. Okay?

13 That's really fundamental. And, I hope that  
14 helps you understand the seriousness.

15 Since the beginning of the Industrial  
16 Revolution we have documented an acceleration of  
17 sea level rise.

18 This diagram goes from about 1870 up to after  
19 2000. And, this was an attempt by the Inner-  
20 Governmental Panel on Climate Change in their  
21 fourth report, in 2007, of showing the rate of sea  
22 level rise globally.

23 And, it starts on the left side of my diagram.  
24 My pointer doesn't work here on the screen. So, --

25 And you can see, sea level is increasing and

1 it picks up about 1930. And then, it picks up a  
2 lot more after 1990. After --

3 You know, the warming from 1930 and before was  
4 primarily due to warming of the ocean and it's  
5 expanding.

6 But then, after 1990 we started to have  
7 significant ice melt, accelerating ice melt on  
8 Greenland and Antarctica and that is what we see as  
9 an acceleration now.

10 We're -- The world sea level is rising at  
11 about 33/34 centimeters were per century right now;  
12 3 or 4 millimeters per year.

13 South Florida runs somewhere near that rate in  
14 the longer term average. We're not subsiding.  
15 We're not elevating. Okay?

16 Now, this diagram shows -- These are one of --  
17 some of the numbers we used in the new Compact sea  
18 level Rise projections that just came out.

19 In 2012, the government came out with sea  
20 level rise scenarios for part of their national  
21 climate assessment and they put our four curves.

22 The bottom one is just the historical curve  
23 from way back projected. That's -- We're already  
24 beyond that.

25 The next curve that says little ice melt is a

1 curve they called the intermediate low that does  
2 not include acceleration of ice melt through this  
3 century. And, that is not what's happening and not  
4 what is expected to happen.

5 So, the two meaningful curves are the  
6 intermediate high and the high, which I've gotten  
7 rid of the others here; and, you can see we're  
8 going to be at 4.1 to 6.6 feet by the end of the  
9 century.

10 This is not negotiable because we have warmed  
11 the ocean and this may well be low; because, many  
12 of the accelerating feedback we are seeing with ice  
13 melt -- And, a whole bunch came out over these  
14 holidays. Several new articles came out that are  
15 very disturbing that are suggesting that we should  
16 take our projections and add, at least, four feet  
17 to them by the end of the century.

18 But, my suggestion to all communities is that  
19 by -- because these projections do not include the  
20 accelerating feedback we are seeing in ice melt --  
21 and I'll talk about a few those -- we should be  
22 using the 6.6 feet in our planning.

23 If it comes out slower --

24 UNKNOWN SPEAKER: (Indiscernible).

25 DR. WANLESS: Just a second.

1           If it comes out slower that's fine. We get a  
2 little more times. It is not going to stop because  
3 of the warmed ocean. The warmed ocean is now  
4 melting ice.

5           And, if it's faster, at least, we have a plan  
6 in place that we can then speed up the reaction to.

7           Yes, sir?

8           MR. BORGES: Yes, Doctor. So we were having a  
9 conversation here earlier about the conversation  
10 between sustainability and about resiliency and  
11 adapting to this event through time.

12           In your opinion, is there anything we could do  
13 right now in South Florida to reduce the rate of  
14 this that you're projecting here? Anything in  
15 terms of living more sustainably, all --

16           DR. WANLESS: We should be -- And when I --  
17 Wayne, you asked me to talk about the  
18 Governor's meeting.

19           We, through several efforts, finally got a  
20 meeting of scientist with the Governor back a  
21 couple of years ago, in August. And, we tried to  
22 impress on the fact that this is irreversible now  
23 because it's -- we've warmed the ocean and we  
24 should be seriously planning for it.

25           But, Florida and Miami, specifically -- we



1 should be the global leaders in sponsoring and  
2 developing things like all of the energy sources  
3 except for fossil fuels.

4 We should be the leader. We should be  
5 sponsoring and encouraging all of the industries of  
6 the world that will be helping us pull carbon  
7 dioxide out of the atmosphere.

8 You know, Exxon got called on the carpet late  
9 this year by exposing the fact that beginning about  
10 1983 they started a quiet campaign to deny climate  
11 change even though they had been the leaders in  
12 the years before. They were international leaders  
13 in climate and CO2 science. They understood it  
14 completely. They just decided to put out a carbon  
15 -- off of carbon (indiscernible) for a few years  
16 and it turned into the whole mess that we've  
17 created and people bought into and certain, you  
18 know, political groups have bought into. And,  
19 that's, sort of, been brought out for the reality  
20 of it.

21 And, you'll notice that the Exxon ads now are  
22 talking about sequestering. They not talking about  
23 solar and wind. But, they're talking about  
24 sequestering.

25 I think one of the most important things we

1 have to do -- We can't even think about cooling  
2 down the ocean until we start pulling greenhouse  
3 gases out of the atmosphere.

4 The Crop 21 in Paris is talking about two  
5 degrees now. And then, they're talking about  
6 hoping to get the one and a half degrees. No.  
7 We're at .85 degrees right now and with the sea  
8 above the pre-industrial levels. And, there's  
9 enough CO2 in the atmosphere now -- a number of top  
10 scientists say, for a good reason -- to cause 70  
11 feet of sea level rise.

12 And, we're -- You know, the longer we let the  
13 warm -- ocean warm, the more certain that's going  
14 to be that it happens. But, if we can aggressively  
15 be pulling out -- CO2 out of the atmosphere -- not  
16 just a few little gadgets in Miami; but, globally,  
17 to get it down so that we're managing climate at a  
18 reasonable level, we can start -- we can stop  
19 warming the ocean and start cooling it down.

20 And, one of our hopes is that the Governor  
21 would say, my God, we can make a lot of money. We  
22 could become a world center.

23 He seems to have forgotten that the southern  
24 -- everywhere south of Orlando is susceptible to  
25 inundation by sea level rise.

1           You know, as far as I can see, these numbers  
2           are low and it may happen faster and it will happen  
3           more. And -- And -- You know, these are not  
4           numbers we're going to be living at 6.6 feet at the  
5           end of the century.

6           If it's at 5 feet at the end of the century,  
7           sea level will be rising at a foot per decade. I  
8           mean -- And, as you know, we live on very porous  
9           limestone. The barrier islands are on porous sand.  
10          It's all nice to talk about ways to seal that.  
11          But, with sea level rising at a foot per decade,  
12          you know --

13          I'll show you pictures in a second.

14          And, there is Miami-Dade County and above  
15          Broward. It's also in the back of your handout  
16          which might be clearer.

17          But, you can see that, again -- And, this is  
18          just high tide. Okay? And you can see where we're  
19          headed. And, people tend to look at these maps and  
20          say oh, my house is still there. Yeah. But, your  
21          infrastructure is gone. It would be uneconomic to  
22          try to maintain the infrastructure; all of the  
23          aspects of the infrastructure.

24          So, at some point we have to recognize this  
25          and realize where we're headed. I mean, first of

1 all, this is an amazingly beautiful place to live  
2 and Lynn and I and my kids are going to be living  
3 here as long as we can; because, I love it here,  
4 just like you do and people are going to be  
5 flocking here. But, we haven't this through.

6 We have 230 new condominium high rises going  
7 up right now in Miami-Dade County. My God! No  
8 thought for structurally being resistant to sea  
9 water or sites resistant to storm surges.

10 Now, those maps I just showed you -- and I'll  
11 show you closer up in a minute -- do not include  
12 the twice monthly flooding we were seeing this year  
13 and for the last fifteen years getting worse almost  
14 every year in September, October, November,  
15 December and we'll see how January pans out when we  
16 get to the full moons.

17 And, here I was with Elizabeth Colbert  
18 (phonetic) a New Yorker writer.

19 In September -- And these are -- This is on  
20 Miami Beach. But, this -- These are \$10 million  
21 homes; many of them just being built and you had to  
22 go through knee deep water to get to the property  
23 and if you didn't keep track of your SUV -- your  
24 kid was out driving around through what he thought  
25 was fun fresh water -- No. He's ruining the bottom

1 of your machine.

2 This shows how vulnerable we are. This is up  
3 in Broward. But, it gets the idea across. It --  
4 This is ridiculous that we aren't aggressively  
5 planning. What you're doing is so, so important.

6 And, along the way, we have to include the  
7 role, not just of these higher than normal tides  
8 that are beyond what the maps shows; but, also, the  
9 storm surges. And, as sea level rises, sea level  
10 storm surges are going to become exponentially more  
11 damaging, penetrate farther in.

12 Bryan Sloden (phonetic) at Rosenstiel School  
13 at the University of Miami has wonderful maps  
14 showing what the Andrews type storm would do with  
15 three feet of sea level rise and it just wipes  
16 through Miami, you know, from the front.

17 Our highest areas are on the coast and here  
18 are just some nice maps at zero plus two feet. I  
19 have Miami International Airport which is situated  
20 -- MIA -- which is situated in what we can call the  
21 Miami River Valley; because, in the 20's there was  
22 a waterfall pouring out of the Everglades into the  
23 Miami River and then we blasted that. We cut  
24 canals. We lowered the water levels in the  
25 Everglades 7 feet and that gave us all of that room

1 to develop including where Miami International  
2 Airport is.

3 Also notice that the site of the two new  
4 nuclear plants -- power units, going with the two  
5 that are in existence will be isolated out in the  
6 combined Biscayne Florida Bay with only two feet of  
7 sea level rise which could happen by 2048 according  
8 to the 6.6 foot scenario.

9 Why are we doing that? They say we're doing  
10 it to meet the growing population later in the  
11 century.

12 Here's 4 and 6 feet, just looking at Miami-  
13 Dade County. You can see it's very hard to see  
14 much of Miami Beach at the 4 foot rise which will  
15 be sometime this century.

16 And, we are an interesting topography. Our  
17 high part is right at the mainland coast and then  
18 we slope off into the area out to the west where  
19 Sweetwater and Hialeah and much of our industrial  
20 foundation to maintain our wonderful city is  
21 located. Frightfully low.

22 I gave a talk out at the Miami-Dade County  
23 Emergency Management Center a few years ago with  
24 the Society of Environmental Journalists were here  
25 and it's out west of the Palmetto on 25th Street

1 and I asked the lady aren't you concerned about  
2 flooding. Oh no; we're far inland.

3 Well, most places that works. You go in and  
4 up. Here we go over and down into the Everglades  
5 and you can just see the challenge of the  
6 infrastructure.

7 And, if you couldn't in that one, you  
8 certainly can in this one.

9 Nine percent of Miami-Dade County is greater  
10 than ten feet above sea level.

11 My house in Coral Gables is at 10.75 feet.

12 That doesn't give me a lot of comfort;  
13 because, long before the house is threatened we  
14 will be having our infrastructure collapse and I  
15 don't know -- You know, you can look at this; but,  
16 you have to look at this honestly.

17 The word resilient is a nice idea. We can  
18 have people and businesses be resilient. But, I'm  
19 not sure -- I think I outlined Coral Gables.

20 This was for a talk which, by the way, is on  
21 the community of Coral Gables T.V. channel if you  
22 want to see an extensive view of this.

23 I outlined Coral Gables there and you can see  
24 some part are pretty high; but, to have an  
25 integrated infrastructure is going to be

1 challenging.

2 Here is a piece of our limestone that water  
3 just pours through. If you live on high ground you  
4 know how easily water drains away and, similarly,  
5 it will not keep out rising water and people -- I  
6 hear people talking about well, we'll seal it or  
7 we'll seal the barrier island sand. Well, if you  
8 do that then the rain water can't go down and so  
9 on. It gets quite challenging. All of these  
10 engineering solutions are nice.

11 The problem is that the models I've shown you  
12 are probably low.

13 Michael Mann, our top -- one of our two top  
14 climatologists in the nation, gave an interview for  
15 the Guardian in 2012 and he made the point that the  
16 models get the trend; but, they don't get the  
17 rates.

18 The sea ice which keeps the arctic cold is  
19 decades ahead of it and it's melt of when the  
20 models predicted. The polar ice in Greenland and  
21 Antarctica is showing signs that it's occurring  
22 more rapidly than the models predicted and so on.

23 So, this is important.

24 If you think sea level is, sort of, a  
25 God-given thing where it is, it's not.



1           The diagram on the left is our last inter-  
2           glacial, about 120,000 years ago and sea level was  
3           20 feet higher.

4           South Florida -- There's a beach -- If you go  
5           to Coral Way down to where the Metro Rail goes over  
6           it, down by that Publix, and right across the  
7           street from the Publix is a fossil beach at about  
8           18 feet above sea level. It's beautiful.

9           But, there wasn't much else in the way of  
10          land. The Keys were an active living reef.

11          And then, we went into an ice age with Chicago  
12          under a mile of ice in the middle diagram here.  
13          And, so much ice was in land that sea level was  
14          about 420 feet lower, 120 meters.

15          And the important thing for looking at the  
16          future -- and this is not in any of the models --  
17          is how we got from the middle diagram to the right  
18          diagram.

19          Sea level rose in a series of rapid pulses. I  
20          don't know if you can see them. And then, there  
21          still stands the little horizontal blue areas.

22          All across the continental shelf are barrier  
23          islands just like Miami Beach and Key Biscayne that  
24          were suddenly abandoned and inundated, not washed  
25          to smithereens by storm waves and a slowly rising

1 sea level; but, just left there. And, they're old  
2 reefs, flat top reefs, that are just abandoned  
3 because we had pulses of sea level rise and some of  
4 the ice sheet sector in the north or the south  
5 rapidly disintegrated.

6 And, we end up with the -- All the way up from  
7 the fast part to the slower part, we ended up with,  
8 you know, this resultant sea level curve. But,  
9 it's always as a series of pulses and pauses and  
10 pulses and pauses.

11 Now, -- And that's not in any of the models.  
12 That's all that slide says. So, --

13 This diagram is one of the other very  
14 important diagrams for you to understand.

15 The horizontal axis goes from about 400,000  
16 years to today and the upper red thing is a graph  
17 of the amount of carbon dioxide in the atmosphere.  
18 And, because of natural ways that we presented  
19 ourself to the sun we have gone in and out of ice  
20 ages. We had high CO2 levels in the high red part  
21 of the curve in the inter-glacial. And then, --  
22 And that was at about 280 parts per million.

23 And then, in the cold part of the ice age it  
24 was driven by the lower CO2 levels in the low part  
25 of those curves.

1           And that was how we presented ourself to the  
2 sun and how circular our orbit was. It had about a  
3 100,000 year cycle.

4           Sea level follows that.

5           So, just by having carbon dioxide going up and  
6 down, 100 parts per million, we could change sea  
7 level by 420 feet.

8           Well, we can't go up another 420 feet. We  
9 only have about enough ice to make another 220 feet  
10 of sea level rise.

11          But, look at where we are now. We were at 280  
12 parts per million at the beginning of the  
13 Industrial Revolution and since then, thanks to our  
14 efforts of burning fossil fuels, we are at over  
15 400.

16          We didn't go up another 100. We went up,  
17 almost, another 125 parts per million. And, what  
18 would expect sea level to do? Nothing? It's very  
19 important.

20          So, what I see is that we are beginning -- we  
21 have started in the 90's to see a rapidly settling  
22 ice melt on Greenland and in Antarctica.

23          And, I don't know how much time you want to  
24 give me. But, I can show you how serious that is.

25          The -- We're also seeing rapid melting of

1 Greenland -- of the glaciers elsewhere and just  
2 comparing through time -- But, the big thing is  
3 Greenland and Antarctica.

4 Well, I'm seventy-three. My fiancée, Lynn, is  
5 not quite that. But, I don't think we're going to  
6 make it to Antarctica. But, we can get to  
7 Greenland and spend time there to understand what's  
8 going on. And, the literature is full of things.

9 Where she's standing, a year ago, was the edge  
10 of the ice sheet. It had moved several hundred  
11 meters landward.

12 The melt from the warming atmosphere is moving  
13 up higher and higher on Greenland each year. The  
14 top, in the salmon, is 1992. The top, in the red,  
15 is 2005. There is a little white line there. I  
16 don't know if you can see it; but, that's the 2,000  
17 meter elevation. Greenland is over 3,000 meters in  
18 total elevation, over 10,000 feet.

19 In 2012, right before we flew from Iceland, on  
20 the right of that picture, over to Aluisat  
21 (phonetic), which is halfway up the west side of  
22 Greenland -- for two weeks 98 percent of Greenland  
23 was melting on the surface from a warmed  
24 atmosphere. Not predicted to have happened  
25 anywhere near that soon.

1           And, we got there -- We've been there twice,  
2           in 2012 and '13.

3           One of the things we did was to come study how  
4           the dirt in the ice is concentrating on the surface  
5           making it dark.

6           Unfortunately, in this picture, it snowed the  
7           night before.

8           But, I'll show you several other things about  
9           it and the dirt in a minute.

10          But, this is -- For a hundred miles onto the  
11          ice sheet from all sides and more, in some areas,  
12          you're seeing rivers and lakes and these aren't  
13          trivial little rivers melted into the ice.

14          You can see the people standing in the inset  
15          picture.

16          And, that water is flowing around and melting  
17          from the surface, flowing down skin holes called  
18          mulans (phonetic) that are melted through the ice,  
19          taking the water to the bottom and lubricating the  
20          bottom so the ice is starting to move faster and  
21          it's fracturing. And, that fracturing is speeding  
22          up the melting and letting the warm melt water  
23          percolate all down through the ice, softening it,  
24          and letting it move faster.

25          You can see the dirt on the surface of the ice

1 in this picture and in this picture and you can see  
2 the severe fracturing that is so common for over a  
3 hundred miles onto the ice sheet in Greenland.

4 And this just shows, the picture on the right,  
5 the decreased reflectivity of the ice because of  
6 the dirt accumulating on the surface, in 2012,  
7 compared to the decade before.

8 And that is why -- Because of the warming  
9 atmosphere we are -- That's a feedback that's  
10 rapidly accelerating ice melt on the surface and  
11 that ice is percolating down into the ice weakening  
12 it. These are the things that are speeding it up.

13 But, on both Greenland and Antarctica it is  
14 the warmed ocean water that is coming up along the  
15 coast, on both Greenland and Antarctica, that is  
16 accelerating the ice melt. It is getting in this  
17 warmed water, only 2 to 4 Degrees Celsius, but it's  
18 getting in the outlet fjords that we now know  
19 penetrate deeply in.

20 This is Aluisat on the west coast which was  
21 located where the arrow on the right picture there.

22 And, this is where the ice is caving off,  
23 breaking off the edge of the ice, back on the ice  
24 sheet and coming out. It piles up there because  
25 there is an old glacial terrain of gravel that's

1           only about 200 meters deep at the left edge of the  
2           ice. So, it piles up there. It's a spectacular  
3           place to visit.

4                     But, this -- In 2014, we got our first real  
5           images. They were able to strip off the ice  
6           through all kinds of geophysical techniques and we  
7           could see that these deep fjords penetrate deeply  
8           in -- under the ice sheet.

9                     Where the color begins, of the blue, is where  
10          the ice sheet begins. That arrow is pointing  
11          toward the fjord there.

12                    This is just showing you near the beginning of  
13          the ice sheet at the head of that fjord. You can  
14          see the ice sheet beginning to rise up. Only about  
15          15 years ago the ice was there, that trim line.  
16          So, this is rapidly, rapidly retreating.

17                    And, in 2012, we were out at the National  
18          Science Foundation Center, the research center on a  
19          camp site out there, and you can see the caving,  
20          the collapsing face at the front of the ice, at the  
21          end of the ice sheet in the distance. And, they  
22          had all kinds of gadgets measuring things. And  
23          this is --

24                    One of the things we did was fly up one of  
25          these channels. You can see the red dot on the

1 right picture.

2 And, we flew up there to see how this warm  
3 water coming in underneath is affecting the ice  
4 sheet.

5 We flew 50 to 60 miles in, up this channel.  
6 And, we could see it as this valley.

7 You can see the valley in this picture. It's  
8 about 500 feet below the overall level of the ice,  
9 of the ice sheet; and, it was like going up a dry  
10 meandering valley.

11 Of course, it was the warm water coming in  
12 deep below melting it and collapsing it.

13 This is what's speeding things up.

14 And, I'm going to skip over these pictures;  
15 because, I don't want to take too long.

16 But, what we see, in Greenland, is happening  
17 -- in Antarctica, too -- both to the west Antarctic  
18 ice sheet where the Pine Island glacier thing is on  
19 the lower left -- And, this last year, we learned  
20 that this melt water had penetrated in over 100  
21 miles, in the outlying glacier of the east  
22 Antarctic ice sheet.

23 If we melt all of Greenland we could pull  
24 about 23 feet of sea level rise.

25 The IPCC (phonetic) says we're within a degree



1 of causing the total melt of Greenland.

2 It's not about the rate; but, that we are.

3 The Pine Island, the west Antarctic ice sheet,  
4 which is the lower left part there, that's worth  
5 about 25 feet and the east Antarctic ice sheet is  
6 much, much more.

7 As I think I said, the total ice that we could  
8 raise sea level if we melted it all would be to ab  
9 out 220 feet more.

10 And, this is just happening -- As warm water  
11 gets in -- This is just a schematic I drew. And,  
12 the warm water gets in and it causes melting. And,  
13 the problem is, the weight of the ice back on the  
14 ice sheet, to the right, has pushed the land  
15 surface down. And so, several of the articles that  
16 have come out recently have pointed out that this  
17 can become a run-a-way process; because, as the  
18 melting occurs it's not that the land is level.  
19 It's that it deepens.

20 And this is -- I'm sorry -- Antarctica with  
21 the ice stripped off. And, you can see,  
22 especially, the west Antarctic ice sheet, how that  
23 deep blue inside the arrow there on the left --  
24 That's over 3,000 meters deep, the land surface.

25 So, we could easily get into a run-a-way melt

1 going on with this warmed ocean water that's coming  
2 in around Greenland and Antarctica.

3 There are higher rates of sea level rise.

4 Unless you want me to go over them I'm not  
5 going to do it.

6 CHAIR PATHMAN: Actually, Hal; what I'd like  
7 you to do is talk a little bit -- because we need  
8 to wrap up a little bit.

9 DR. WANLESS: Yeah, I know.

10 CHAIR PATHMAN: How do you see all of this  
11 playing out here in South Florida? You know, what  
12 is your vision with all of the knowledge that you  
13 have of what you've seen, what you've actually --  
14 you know, witnessed? How do you see that playing  
15 out here in South Florida and what -- Give us like  
16 a time frame of what you see the --

17 DR. WANLESS: First of all, I think -- And, you  
18 know, -- I know you're representing the City of  
19 Miami and this is wonderful. But, everything we  
20 say here about barrier islands and low coastal  
21 areas applies to everywhere in the world. Okay?

22 I've given talks up in New Jersey where Sandy  
23 hit this year and so on. And, what's interesting  
24 is they both -- New York and New Jersey -- are  
25 talking about buy-outs.

1           They're talking about the reality -- They're  
2 starting to see the reality because of Sandy and  
3 sea level rise that it may be cheaper to take some  
4 areas that are most vulnerable and help people move  
5 on rather than rebuilding the infrastructure as you  
6 get more and more vulnerable.

7           That's what is going to happen this century.

8           I know Pinecrest and others have started to  
9 look at the cost of not preventing flooding; but,  
10 getting rapid water withdrawal from areas after a  
11 flooding, whether it's rain or a high tide and  
12 they've been shocked at the amount of money.

13           Miami Beach -- As far as I know, I thought  
14 they were using a bed tax to put -- all of this  
15 money. But, I guess it's all bonds. Isn't it?  
16 And, if it's all bonds you're passing that on to  
17 somebody else to pay it back.

18           CHAIR PATHMAN: It's bonds and raising the  
19 water and sewer fees that are passed along to the  
20 --

21           DR. WANLESS: Well, okay. If it's fees and  
22 taxes that's one thing. But, my God, this is going  
23 to accelerate. There is no way around it. It's  
24 going to get worse. We're going to live here as  
25 long as we can.

1           What bothers me if that we put in big money  
2           into defenses they're not going to work; because,  
3           we are going to have an accelerating ice melt.

4           And, the Jim Hanson one I just skipped by --  
5           he's suggesting it will be at 5 meters. So, we're  
6           at 17 feet by the end of this century.

7           He's probably right, unfortunately.

8           But, -- And if it's not, if it's only 5 feet,  
9           well, it's still rising at a foot per decade by the  
10          end of this century and 5 feet didn't look very  
11          pretty in those pictures.

12          So, you know -- So, --

13          CHAIR PATHMAN: So what would your advice be  
14          to a committee like ours that -- You know, if we  
15          walked into a meeting tomorrow with the commission,  
16          with the Mayor, and we said 17 feet by the end of  
17          the century, they'd probably close down our  
18          committee.

19          How do we --

20          DR. WANLESS: Well, that's why I don't talk  
21          about that. I pick the U.S. Government projections  
22          which are 4.1 to 6.6 feet.

23          The problem is that developers and anybody  
24          that's trying to make themselves look good is  
25          always going to take the low graph. That's what

1 they're going to do.

2 Don't do that. Don't do that.

3 It was actually a fight because we have some  
4 scientists that I don't respect a lot that are  
5 always pushing for the low thing and --

6 But, the 6.6 feet is a good one to plan for.

7 And, once you do that -- Once you start  
8 looking -- And this is what Jim Cason (phonetic),  
9 the Mayor of Coral Gables is doing right now. Is  
10 they're looking at every six inches of sea level  
11 rise with high resolution maps. These LIDAR maps  
12 are unbelievable high resolution both with --  
13 vertically and spatially. You can get two or three  
14 pixels across the street. That's pretty good.

15 And, he's looking at the infrastructure that's  
16 going to need to be upgraded for every six inches  
17 of sea level rise and what is costs. And boy, does  
18 it become clear, all of a sudden, at what point it  
19 will not be economically viable to maintain  
20 infrastructure in certain sectors of the community.

21 The other thing that bothers me is that you  
22 look at this map, which is the present topography,  
23 and you know where the dumps are -- you know where  
24 the sewage treatment plants are -- you know where  
25 the industrial sites that would need severe

1 cleaning are, and as -- I'm just going to rise sea  
2 level while I'm talking. There is two feet and so  
3 on. But, -- And you start saying, wait a minute,  
4 what are we leaving our children if we don't clean  
5 the land before inundation?

6 This will happen and just look at it, you  
7 know. I mean, it's unbelievable.

8 But, I geologic time, I've spent my lifetime,  
9 all for the last 600 million years, of studying sea  
10 level change and it goes up and down like crazy.

11 When you backpacking in the Grand Canyon  
12 you'll be looking at sea level changes; do, do, do,  
13 do. Everyone of those is a 100,000 or 40,000 year  
14 cycle, natural. I don't think the Troglobites had  
15 the ability to do what we're doing.

16 MR. BORGES: So Chair, may I raise a question?

17 CHAIR PATHMAN: Sure.

18 MR. BORGES: So, Doctor; thank you so much for  
19 waking us up from this conversation that we started  
20 here today and, perhaps, we should have started  
21 with this presentation. It may have affected the  
22 way we're thinking about what we're doing here.

23 I often say, as an architect, that we're  
24 really bad futurists, you know; because, we really  
25 fail to look into the future that is coming at us

1 slowly and then try to, sort of, imagine how we  
2 adapt to that future.

3 DR. WANLESS: (Indiscernible).

4 MR. BORGES: But then, when you talk to the  
5 historians, historians also say that what we learn  
6 from history is that we fail to learn from history  
7 constantly.

8 DR. WANLESS: Yeah.

9 MR. BORGES: And then, you know, it appears to  
10 me that, you know, no matter what planning we do,  
11 no matter how we adapt, no matter how we modify our  
12 infrastructure, our buildings, our zoning codes,  
13 our building codes, eventually, given the fact that  
14 communities replace our infrastructure every sixty  
15 to eight years, more or less -- and we know we have  
16 a lot of bridges and we have, really, an  
17 infrastructure that is in decay that we're not  
18 really paying attention to --

19 Understanding the kind of priorities that we  
20 have in this society that we live in do you think,  
21 as a scientist and someone that really looks at the  
22 data and the pragmatics of how this is affecting  
23 us, that there is anything that we can really do  
24 through any kind of effective planning method in  
25 the short and long-term that will expand the life

1 of South Florida more than 100 years or so?

2 DR. WANLESS: No.

3 MR. BORGES: I mean, I see --

4 DR. WANLESS: No. But, -- And what bothers me  
5 is that we're building all of these new condos -- I  
6 mean, you can build fortresses in the sea. Right?  
7 I understand that. But, I don't think people live  
8 in South Florida to be surrounded by a giant  
9 concrete, you know, bunker.

10 MR. BORGES: Well, you could imagine a water  
11 world and a world where we navigate --

12 DR. WANLESS: Yeah. But, I've heard about the  
13 floating cities. I want to see one of those after  
14 a Category 5 hurricane. They probably won't be  
15 very pretty.

16 UNKNOWN SPEAKER: But, they'll be floating.

17 DR. WANLESS: Well, -- But, you know, there  
18 are things that you can do to make it livable.

19 I just worry -- And, the other thing that  
20 bothers me is that we're building all of these  
21 condos and there is no -- People are buying into 30  
22 year mortgages when they buy them with no warning  
23 that it may not be sellable; that the insurance may  
24 not be there.

25 The best thing you all can do, and it should



1 be done at a state or national level, is to work  
2 out something with the insurance companies so they  
3 will guarantee -- insurance companies of homes up  
4 to certain sections of the community at -- you  
5 know, at a foot and a half where we're not going to  
6 be able to handle that.

7 Why can't we plan that? Why do we have to  
8 blind-side all us so that we're a bunch of Okies on  
9 the road hoping somebody will take us in because we  
10 can't sell our house?

11 MR. BORGES: Well, --

12 DR. WANLESS: That bothers me.

13 MR. BORGES: And, --

14 DR. WANLESS: Those are the things that bother  
15 me. We are -- We are going to be moving on and,  
16 hopefully, we'll make it through the century for a  
17 lot of it. I hope so.

18 But, it's not going to turn around. We've  
19 warmed the ocean.

20 MR. BORGES: We have a statement here from  
21 you. Is this available to the public?

22 CHAIR PATHMAN: We handed it our earlier. I  
23 think everybody got a copy.

24 DR. WANLESS: I give it at every talk that I  
25 have.

1 MR. BORGES: Yeah. I find your final  
2 statement where you say without planning there will  
3 come a point where society and civilization as we  
4 know it will collapse into chaos.

5 DR. WANLESS: Yes. Look at the Middle East.

6 MR. BORGES: We can only prevent this scenario  
7 with serious planning efforts. Our children and  
8 future civilization deserve much better than that  
9 -- that what we're presently doing now.

10 You know, when you analyze the investment --  
11 for example, the investment Miami Beach is making  
12 in trying to --

13 DR. WANLESS: Uh-huh.

14 MR. BORGES: -- pump the water back into --

15 DR. WANLESS: Uh-huh.

16 MR. BORGES: -- the bay and elevate streets  
17 and adapt -- when you look at a return on  
18 investment type of analysis -- you know, when you  
19 see the catastrophic event that happens, you know,  
20 100 years into the future, is there any return on  
21 this investment? I mean, what are we expanding? I  
22 --

23 DR. WANLESS: I think they made a mistake;  
24 that they decided they were flooding, which they  
25 were and they decided to start doing something and

1 they didn't sit down and do the analysis.

2 You don't need a 10 year analysis to do this.

3 You can figure out what is going to be cost  
4 effective, what is going to be meaningful and with  
5 a meaningful sea level rise projection --

6 Unfortunately, -- Was it the Mayor of Miami  
7 Beach that said we're going to fix this so my  
8 grandchildren are going to be living here.

9 MR. BORGES: Technology; 500 years. Yes.

10 DR. WANLESS: Yeah.

11 MR. BORGES: It was Mayor Levine.

12 DR. WANLESS: I mean that's -- That is  
13 ridiculous with what we know -- with what  
14 scientists in all aspects of science. That's just  
15 ridiculous.

16 There are many projections of sea level rise  
17 that are trying to put it off until the next  
18 century and then it shoots up.

19 MR. BORGES: Right.

20 DR. WANLESS: I don't think that's what is  
21 going to happen. But, it's going to happen one way  
22 or the other. And, we should be very cautious.  
23 And, people, the hair goes up on the back of their  
24 neck or somewhere when I start saying about, maybe,  
25 we should include buy-outs to help people move on;

1 because, otherwise, you're blind-siding all of us.

2 And, you know, one of things -- I went to a  
3 meeting of the Miami Beach Chamber of Commerce.  
4 Wayne invited me. Mr. Pathman invited me. And, I,  
5 sort of, heard their conversation after the talk  
6 and what they said was, you know -- They said two  
7 things that really struck me.

8 How can we make a Miami Beach that is  
9 unbelievable cool, that is going to be a global  
10 destination? Can we do something in the terms of  
11 this reality? And -- Or, are we throwing our money  
12 into the ocean? And, we have to make sure to  
13 include the lower wage earners in it; because,  
14 that's how a community functions. You just can't  
15 have ten rich people living here.

16 And, that was the most satisfying discussion  
17 I've heard about climate change.

18 It was real and it was addressing how do we  
19 take advantage of this.

20 This is going to be a lovely place to live.

21 There are a number of places in the county  
22 that are looking at how to make it as wonderful as  
23 possible, as long as possible.

24 But, don't blind-side us and all of the people  
25 in the -- That's a toughie.

1 MR. BORGES: Yes.

2 DR. WANLESS: And, part of the story is making  
3 sure we elect leaders that are going to be  
4 responsible.

5 And Scott -- Rick Scott is -- He got cornered  
6 in the meeting with us. He used ten minutes of our  
7 half hour with him to force introductions that were  
8 meaningless, long introductions. And then, he  
9 asked no questions. And then, he went and said I'm  
10 not a cause man. I'm a solution man. And, he went  
11 and funded cave researchers -- something -- I don't  
12 know what -- that had nothing to do with anything.

13 And you know the other part of the story.

14 It was weird.

15 CHAIR PATHMAN: Dr. Wanless, I want to thank  
16 you for your time and I want to open it up to the  
17 public for some questions that they may have for  
18 you or the committee.

19 But, before we do that, I just want to take up  
20 one housekeeping thing concerning our annual  
21 report.

22 For the committee members, I assume you've  
23 read the good work that Tabitha did.

24 Thank you Tabitha and Ajani and Matt --

25 VICE CHAIR CALE: And Marge, actually.

1 CHAIR PATHMAN: -- in putting it together.

2 I do have some comments. Just, you know, some  
3 stuff that I think we need to change. Mostly  
4 grammatical. And, also, I think we can adopt a  
5 resolution and I can talk to you guys -- Is that  
6 okay? -- tomorrow about my minor changes. They are  
7 nothing significant.

8 MR. HABER: The committee can adopt it in  
9 substantial form and any tweaks that need to happen  
10 between the Chairman and the staff we can do.

11 CHAIR PATHMAN: I'd also like the -- Just  
12 while everybody is here -- where you have my name  
13 and Chairperson -- I'd like it to say this is from  
14 the committee as a whole. I'll sign it. But, I'd  
15 like to say this is the annual report as filed by  
16 the committee as a whole, if we're allowed to do  
17 that.

18 Yes, Jim?

19 MR. HABER: Absolutely.

20 MR. MURLEY: So, I would move that we authorize  
21 the Chair to work with staff to modify -- to  
22 finalize the report.

23 I have a typo that I'll give to the staff so  
24 that they'll have it. If that's okay?

25 MR. HABER: Right.

1 MR. MURLEY: Or, should I give it to you?

2 CHAIR PATHMAN: Jim, are you making a motion?

3 MR. MURLEY: I'm making a motion.

4 CHAIR PATHMAN: Okay.

5 UNKNOWN SPEAKER: Second it.

6 CHAIR PATHMAN: Okay. All of those in favor  
7 say aye.

8 (Thereupon, responses were heard in the  
9 affirmative.)

10 CHAIR PATHMAN: All of those opposed?

11 (Thereupon, no responses were heard.)

12 CHAIR PATHMAN: No abstentions?

13 (Thereupon, no responses were heard.)

14 CHAIR PATHMAN: Seeing none, the motion passes  
15 to adopt our resolution for the annual report.

16 Right? Okay. Now, would anybody from the  
17 public like to speak or ask Professor Wanless any  
18 questions?

19 I've got to believe that all of the facts I'm  
20 staring at somebody has a question.

21 Let's just start out of here. Please state  
22 your name and your address for the record, please.

23 Hal, you can stay at the podium there.

24 MR. BRICEÑO: I'm Henry Briceño from Florida  
25 International University; zip code is 33199.

1 I agree totally with Dr. Wanless. I'm a  
2 geologist, too. And, I've been also in this  
3 procedure of trying to convince people that things  
4 are not like they are being pictured.

5 Nature is working with these processes. We  
6 are going to have this flooding. There is no way  
7 to stop it. We have even been accelerating this  
8 with our way of living. But, we have to face the  
9 fact -- And not until we recognize that we have a  
10 problem will we begin to try to solve the problem,  
11 try to tackle it.

12 So, the only thing I can do -- or we can do  
13 here, in this community, in South Florida and most,  
14 communities around the world and on the shore line,  
15 is that we have to see how we adapt. But, we have  
16 to be moving. I don't have to -- We'll have to  
17 move away. I mean, there is no way around it.

18 So, the best we can do it try to make things  
19 the best we can while we stay here.

20 But, we should begin to think how, where,  
21 when, we'll have to go. There is no way around it.

22 I know it's difficult. It's very sad. It's  
23 very hard to tell people and show them that all of  
24 these buildings, all of this infrastructure, their  
25 houses, their yachts, everything is going to be



1 gone. But we need to face this. It's hard.

2 But, there's a point where we have to do this  
3 cost benefit analysis. That's the point.

4 Right now we should be doing it. Right now.  
5 We should be spending the money on how we're going  
6 to move. There is a very important opportunity;  
7 because, we have to build new cities, new  
8 infrastructures, new houses, new roads, new  
9 industries. And, that's a lot of investment.  
10 That's a lot of economic movement.

11 There are a lot of opportunities for new  
12 materials, new architecture, new engineering, new  
13 ways of living in and designing our cities.

14 So, it's not just a tragedy. There is an  
15 opportunity right there and I think that's the only  
16 way we can sell this tragedy to people, that there  
17 is an opportunity behind it.

18 Thank you.

19 CHAIR PATHMAN: Thank you very much, Henry. I  
20 appreciate your comments.

21 Yes? Please state your name and your address  
22 for the record.

23 MR. MYER: Walter Myer. In Miami. My address  
24 is 240 Galen Drive in Key Biscayne.

25 CHAIR PATHMAN: Welcome.

1           MR. MYER: I'm a Miami native. I currently  
2           reside in Brooklyn, New York. I'm a Professor at  
3           New School in Parson. I'm an Adjunct Professor  
4           there. I used to be a Professor at Columbia  
5           University. And, I worked with a colleague there,  
6           Claus Jacobs, another climate scientist in the  
7           region. And, it's really important to have science  
8           based decision-making for policy. And, in every  
9           region there are climate scientists and they all  
10          speak the same language.

11                 Whether you believe in science or not it's a  
12          fact. You don't have to believe in it. And, the  
13          numbers are in line with Dr. Wanless.

14                 So, I'm a big fan of your work, Harold. So,  
15          --

16                 I just -- Less of a question and more just to  
17          share my experience in New York.

18                 I was just passing through Miami tonight from  
19          Puerto Rico back to New York and I wanted to share  
20          some time with you in a presentation and I think we  
21          can do that in another month.

22                 CHAIR PATHMAN: We won't have time for that  
23          tonight. I'm going to try to limit everybody to a  
24          couple of minutes.

25                 But, I'm aware that you were in the audience

1 --

2 MR. MYER: Yeah.

3 CHAIR PATHMAN: -- and I would like to invite  
4 you back at a future date.

5 MR. MYER: Okay.

6 CHAIR PATHMAN: Maybe within the next month or  
7 so depending on your schedule.

8 MR. MYER: And, I was aware. This is very  
9 important information. You have to start with his  
10 work to set the long-term view.

11 But, I can share with you some comments  
12 tonight based on your interests and what you can do  
13 in the short-term.

14 It's important to set the long-term frame and  
15 the cause. But, in the short-term there are  
16 opportunities and they have to base on economics  
17 and urban design. Architecture, unfortunately, is  
18 subservient to the urbanism and to economics. And,  
19 therefore, it's first based on mortgage cycles.  
20 Right?

21 What can you do in the first mortgage cycle  
22 and what can you do in the second thirty year  
23 cycle?

24 That fits cleanly with the elevation changes  
25 that we're talking about. So, one foot of sea

1 level change is a set of decisions. Two feet.  
2 Four feet. Et cetera.

3 My firm has a local office, landscape  
4 architecture. It's LOLA in New York. We're also  
5 working in the Caribbean. We just finished  
6 redesigning the Miracle Mile in Coral Gables.

7 They're not dealing with sea level rise there.

8 We -- In that contract, we're dealing with  
9 accelerated -- increasing rain storm events.

10 But, it really comes down to treating these  
11 systems at the surface level and becoming less  
12 dependent on in ground infrastructure.

13 So, two recommendations for the committee is  
14 to consider -- We also have political friction  
15 between New York State and New York City.

16 On the contracts that I work with, I've been  
17 working on federal and state contracts for  
18 re-shaping the New York City shore line.

19 You can see my academic presentations with AIA  
20 (American Institute of Architects) of New York.  
21 It's on-line. And, if you guys have time, it's a  
22 primer to see that. I've presented it with the  
23 Army Corps of Engineers, with climate scientists,  
24 architects and landscape architects.

25 What I will do in the next presentation, in

1 the next month or two, is shape it for Miami, which  
2 I have a place for it in my heart because it's  
3 where I grew up. So, I'm willing to volunteer time  
4 for that. But, I want to share that because of the  
5 political frictions that we also have between  
6 state, city government and the White House, we have  
7 found that the non-profit route, the philanthropic  
8 route, is a way to accelerate ideas. And so,  
9 bringing to the table Trust for Public Land, nature  
10 conservancy; folks like that, in the committee some  
11 things can happen quickly.

12 Next, is to make sure that you have  
13 infrastructure and engineering categories.

14 I know that Pete Gomez is covering that more  
15 from an emergency management perspective.

16 But, really, what we're learning in New York  
17 ever since Sandy -- And Sandy wasn't a hurricane.  
18 It was --

19 You just can't ignore climate change at the  
20 mainstream policy level. So, that's really what  
21 happened.

22 It comes down to infrastructure, topography,  
23 landscape systems before you can talk about  
24 architecture. Mostly because if you build a  
25 resilient building you can't get to it when it

1 floods or any other type of disturbance.

2 The other thing is that resiliency is not a  
3 decision of solar panels or flooding. Resiliency  
4 is a lexicon that's changing policy from the White  
5 House down.

6 I've advised the White House --

7 You can read my resumè on those sessions with  
8 HHS (Health and Human Services), FEMA (Federal  
9 Emergency Management Agency) and the inter-  
10 relationship between community on the ground and  
11 policy level and the mediators, which is the city  
12 and state government.

13 So, I'll close with this. Just -- In New  
14 York, what people are talking about, from Miami, is  
15 -- We're literally the canary in the coal mine.

16 New Orleans doesn't have the soil conditions  
17 that Miami does. So, New Orleans has the luxury of  
18 building a coastal infrastructure to hold out the  
19 water for a short period of time.

20 Miami doesn't have that solution. So, the  
21 solution will ecosystemic. And so, everyone is  
22 looking to Miami; because, we are now at the point  
23 of the arrowhead from Miami and New York has a lot  
24 of ideas that have historically originated from New  
25 York but have perfected in Miami.

1           For example, art deco. Invented in New York,  
2           perfected in South Beach. Right? Disco; invented  
3           in New York, perfected in Miami.

4           So, I leave it to the imagination. Right?  
5           The human mind can sometimes invent our ways out of  
6           problems in the short-term.

7           Unfortunately, in the long-term there is  
8           enough baked into the system that manageable  
9           retreat will be the next generations major issue.  
10          But, there are some things that we can do in the  
11          first thirty years.

12          Thank you.

13          CHAIR PATHMAN: Thank you. We look forward to  
14          speaking to you, hopefully, in the next month or  
15          so.

16          I'm going to have to pass the gavel, Tabitha.  
17          I have another meeting. So, you'll be chairing the  
18          meeting that I have to attend.

19          But, I do want to say to the members of the  
20          public that are here, you know, we really  
21          appreciate you showing up. And, especially, as a  
22          new committee, the more you come, the more people  
23          you bring, the more people you tell about our  
24          committee, the more we're going to have the ability  
25          to do and help the commission try to steer this

1 boat in the right direction.

2 But, if you don't involve yourself and you're  
3 not here to help us, then, you know, we're going to  
4 end up exactly where a lot of committees before  
5 ours came about; and, that is, that we won't be  
6 heard.

7 So, you're important -- very important, you  
8 know, to the mission and the goals that we have as  
9 a committee to be here and express yourselves and  
10 let us know what you're thinking.

11 And Harold, I want to thank you. I really  
12 appreciate your coming out tonight --

13 DR. WANLESS: Thank you.

14 CHAIR PATHMAN: -- and everything and I look  
15 forward to keep working with you on things. And, I  
16 know you wanted to make a comment and then this  
17 gentleman over here.

18 DR. WANLESS: I just have two comments. One  
19 is there's is 5 feet of sea level rise with Miami-  
20 Dade and Broward. Don't move to Broward. The have  
21 no ridge over most of the places.

22 The second one is if you and the audience or  
23 anyone on the committee or others want -- On  
24 February 20th, Saturday and February 27th,  
25 Saturday, we are doing for a six year thing called



1 Empowering Capable Climate Communicators. It's a  
2 two Saturday thing talking --

3 It's a whole series of experts from the  
4 universities in South Florida talking about what we  
5 know, what we don't know, about climate change so  
6 that you can go to others and communicate  
7 accurately what we know and what we're confident  
8 about and not say things that will create the bee's  
9 nest of things.

10 CHAIR PATHMAN: Ajani, if you could note those  
11 dates and --

12 DR. WANLESS: You can register through CLEO,  
13 the educational group Karen Lewis (phonetic),  
14 C-L-E-O. It will be up shortly.

15 CHAIR PATHMAN: Okay. Does anybody have any  
16 direct questions for Professor Wanless here in the  
17 audience?

18 Yes?

19 Okay. Well, the gentleman behind you want to  
20 say -- You had your hand up. If you could -- You  
21 have to come to the podium, please. And, please  
22 state your name and your address?

23 MR. ROSE: Simon Rose, 1654 Tigertail Avenue,  
24 33133.

25 And, I take your comment about getting public

1 involvement -- we, the public, involved in this  
2 process as being very genuine.

3 However, we didn't find out about this meeting  
4 until sometime yesterday by, pretty much, an errant  
5 e-mail.

6 So, I'd highly recommend that there is more of  
7 a process to reach out to the public.

8 CHAIR PATHMAN: We --

9 MR. ROSE: When we checked the city -- for  
10 instance, the city agenda, we went to various web  
11 sites and found nothing.

12 CHAIR PATHMAN: Where are we posting it,  
13 Ajani? Where are the notices being sent?

14 I would also tell you that we have no budget.  
15 We have zero.

16 MR. ROSE: All right.

17 CHAIR PATHMAN: And we're doing -- We're  
18 growing. We're learning. And we're going to,  
19 hopefully, you know, make sure that the community  
20 knows that this committee is going to meet once a  
21 month.

22 MR. ROSE: All right. Thank you.

23 CHAIR PATHMAN: Ajani, where are our notices  
24 posted?

25 MR. STEWART: Mr. Chair, typically, we're

1 posted on the City Clerk's web site. There was  
2 some issue in getting that this time around. But,  
3 that's where you usually can check. And, we'll  
4 also in the process of developing a Sea Level Rise  
5 Committee web site, which I have met with our IT  
6 (Information Technology) Department today and it's  
7 almost ready for production. So, I will share that  
8 with everyone here and beyond as soon as we get  
9 that up and running.

10 And actually, that reminds me. One other bit  
11 of housekeeping information. This goes back to the  
12 point of staying in touch.

13 Everyone who hasn't had a chance to sign in  
14 and give your information please do so, so we can  
15 follow up with you also.

16 I'm leaving; but, the public is still invited  
17 to come and address the committee or raise any  
18 issues and Tabitha you'll be running the meeting.  
19 Sit over here, though.

20 VICE CHAIR CALE: Sure. Okay. Go ahead. You  
21 had a public comment?

22 MR. LIDNER: Steve Lidner, 555 Northeast 34th  
23 Street.

24 Dr. Wanless, can you commit to a range of --  
25 or not even a range. You mentioned that by the end

1 of this century that we should plan for 6.6 feet of  
2 sea level rise.

3 But, what I'm hearing from is that's not  
4 realistic.

5 And that -- But, we should plan for it because  
6 that's all that the --

7 DR. WANLESS: Well, my logic -- My logic is as  
8 follows: If you plan for 2 feet you're going to  
9 get all of the engineering solutions in the world  
10 and you're going to spend all of this money. But,  
11 when you start looking at 5 and 6 feet, by the end  
12 of this century, you're looking at such real change  
13 that the real planning and the economics of we  
14 can't do that is -- starts to become apparent.

15 If it's faster, well, that's the way it is.

16 But, 6.6 feet is the top present U.S.  
17 Government projection.

18 And, if you were going to plan for your family  
19 health or safety, you know, you don't plan for the  
20 low risk thing. You look at the high risk things.  
21 And that's what we -- I just think that's the best  
22 one; because, I'm working with the framework of  
23 what a real government projection is and we know  
24 that there are many elements missing in the  
25 proposal.

1           But, that's so big that in a place like Miami  
2           or any barrier island in the world, you're starting  
3           to say, oh my God, what are we going to do? Are we  
4           going to turn ourself into a giant concrete bunker  
5           and live inside it and building it higher and  
6           higher or are we going to say, wow, this was fun  
7           here and move on and make sure people have a little  
8           bit of resources to move on and make sure we clean  
9           the land before inundation so that it's not  
10          polluted.

11           MR. LIDNER: But, at 6 -- But, you're an  
12          expert and you don't believe that 6.6 feet is  
13          realistic.

14           DR. WANLESS: But, I believe -- Like, I think,  
15          Mr. Pathman said, if you say it's 15 feet people  
16          are going to blow you off and go home. Maybe in  
17          four or five years it will become apparent that is  
18          what it's going to be.

19           VICE CHAIR CALE: Okay. And, actually, I'd  
20          just like to make sure that we can limit the time  
21          on comments. I want to make sure there are  
22          opportunities for other folks in the public to  
23          comment or ask questions for Dr. Wanless.

24           All right. Is there anyone else who  
25          interested in making a public comment or has a

1 question for Dr. Wanless?

2 Any closing comments or thoughts that you  
3 would like to add, for the audience?

4 DR. WANLESS: No. But, what you're doing is  
5 so important and Mr. Murley and I and others have  
6 been in this for a long time trying to get  
7 traction.

8 This -- 2015 was the year traction appeared in  
9 spite of a denying Governor, in spite of a denying  
10 Senator. You know, traction is under way now  
11 because it's too real. The flooding is too real in  
12 parts of Miami and Miami Beach and the Keys and all  
13 the way up the coast.

14 This is now real and it's -- What you're going  
15 to do, probably, is going to have traction. And,  
16 thank you. And, do it right and don't be afraid to  
17 -- Don't low ball it. Look at the reality and try  
18 to deal with it.

19 Thank you.

20 VICE CHAIR CALE: Great. Thank you. And  
21 thank you, again, to the members of the public who  
22 have attended.

23 I am looking forward to working with Ajani and  
24 making sure we can do a better job of advertising  
25 this to the general public.

1           And, I see we have one more person interested  
2           in commenting.

3           MR. GOMEZ: Other than bring -- Albert Gomez,  
4           33133.

5           I wanted to make one comment before the close  
6           of today. I think it's really important to bring  
7           it up; especially, because it's timely right now.

8           I know it's pending litigation against the  
9           city. But, if it's not brought up in a sea level  
10          rise committee, I think it's the wrong message.

11          You don't want to condemn anyone for one act  
12          or one scenario or one oversight issue. But, I  
13          think it's a lesson to be learned and maybe for  
14          this committee to advise future governing city  
15          managers.

16          I think we have a city manager that's about to  
17          leave and I'd love for him to hear this, which is  
18          we can't blame contractors for cutting up Mangroves  
19          -- Mangroves which are a natural system that helps  
20          against storm surge mitigation and sea level rise,  
21          really.

22          So when the Mangroves were cut in Key Biscayne  
23          because of a project and an Assistant City Manager  
24          blames a contractor and doesn't take responsibility  
25          for oversight especially with federal law taken

1 into account and then not taking the responsibility  
2 of their own oversight as a City Manager, I think  
3 that's wrong message; especially, when we have an  
4 on-going sea level rise committee.

5 So, I think we have to address the on-going  
6 litigation and situations are occurring in real  
7 time and bring those forward in the committees so  
8 that we don't have these on-going issues.

9 And, these are things can happen and be  
10 brought to the commission tomorrow.

11 So, I think that it sends a really, really bad  
12 message that here we at, meeting on a sea level  
13 rise committee and talking about these issues, and  
14 we're not addressing, you know, the raping of our  
15 natural environment, on our one natural defense,  
16 which is our coastal Mangroves and not taking an  
17 approach of --

18 And, I don't want to sound alarmist; but,  
19 mitigating and planting Mangroves elsewhere and  
20 continuing a master plan on the new boat show  
21 program without --

22 VICE CHAIR CALE: I can only give a few  
23 minutes.

24 MR. GOMEZ: Yeah. All right. -- without a  
25 set of -- maybe mitigating at sight and bringing



1 back those Mangroves right on site to give claim to  
2 the value of what those Mangroves had when they  
3 were there.

4 And, I think that it's critical that we take a  
5 pro-active approach to what is going on now.

6 So, I just -- I wanted to bring that up  
7 because it's an on-going issue right now and the  
8 city could show face to the public by putting a  
9 step forward in the right direction.

10 VICE CHAIR CALE: Thank you. Any further  
11 public comment?

12 Okay. Do, I have a motion to adjourn?

13 UNKNOWN SPEAKER: Yes.

14 VICE CHAIR CALE: Second.

15 MR. BORGES: I second.

16 VICE CHAIR CALE: Great. Thank you.

17 (Thereupon, the meeting was concluded.)  
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CERTIFICATE OF COURT REPORTER

THE STATE OF FLORIDA:

:ss.

COUNTY OF BROWARD :

I, NICK BRUENS, certify that I was authorized to and did transcribe the foregoing recorded events.

I do further certify that the foregoing is a true and accurate transcript of the events as provided to me on the CD taken at the time, place and the date hereinabove set forth.

I do further certify that I am not an attorney or counsel for any of the parties, nor related to any of the parties, nor financially interested in the action.

Dated this 23rd day of February, 2016

\_\_\_\_\_

Nick Bruens

Typist

NBR/IMG

A				
<b>ab</b> (1) 105:8	<b>additional</b> (1) 69:5	100:9 103:15	56:21 108:23	<b>assessment</b> (1) 86:21
<b>abandoned</b> (2) 97:24 98:2	<b>address</b> (22) 21:9 22:4,7,10 38:23 46:7,10 50:24 51:20 52:7 69:9 70:25 78:11,21 80:6 81:14 119:22 121:21,23 129:22 131:17 136:5	<b>agree</b> (8) 35:5 36:22 43:23,24 45:14 53:11 56:21 120:1	119:16 129:15 <b>anymore</b> (3) 7:8 53:22 54:1	<b>Assistant</b> (2) 2:16 135:23
<b>abide</b> (1) 26:12	<b>addressed</b> (2) 50:10 52:2	<b>agreeably</b> (1) 24:5	<b>apologize</b> (1) 53:5	<b>assisting</b> (1) 50:8
<b>ability</b> (3) 84:22 110:15 127:24	<b>addressing</b> (7) 21:15 46:22 57:6 68:8 82:14 116:18 136:14	<b>agreed</b> (1) 78:10	<b>apparent</b> (2) 132:14 133:17	<b>Associate</b> (1) 5:20
<b>able</b> (15) 11:13 20:11 44:19 49:4 53:21 55:12 56:3 61:4 69:18 72:20,23 75:18,19 103:5 113:6	<b>ad</b> (1) 137:12	<b>agreement</b> (4) 22:23 40:13,25,25	<b>Appeals</b> (2) 23:6,11	<b>associated</b> (3) 59:6 63:15 81:3
<b>absent</b> (2) 2:10 48:25	<b>Adjunct</b> (1) 122:3	<b>agrees</b> (1) 45:10	<b>APPEARANCES</b> (1) 2:1	<b>assume</b> (2) 27:13 117:22
<b>absolutely</b> (3) 28:22 33:11 118:19	<b>adjusting</b> (1) 22:14	<b>ahead</b> (8) 19:9 47:19 49:24 56:6 57:14 62:21 96:19 131:20	<b>appeared</b> (1) 134:8	<b>assure</b> (1) 55:15
<b>abstentions</b> (2) 29:24 119:12	<b>administration</b> (5) 5:7 7:17 69:9 70:15 70:19	<b>AIA</b> (1) 124:19	<b>appears</b> (1) 111:9	<b>atmosphere</b> (9) 84:11 89:7 90:3,9,15 98:17 100:12,24 102:9
<b>abuse</b> (1) 37:23	<b>administrative</b> (1) 81:5	<b>aim</b> (1) 28:11	<b>applied</b> (1) 46:21	<b>attached</b> (1) 19:25
<b>academic</b> (1) 124:19	<b>adopt</b> (6) 4:24 5:1 69:11 118:4,8 119:15	<b>aiming</b> (1) 23:10	<b>applies</b> (1) 106:21	<b>attack</b> (1) 29:11
<b>accelerate</b> (2) 107:23 125:8	<b>advised</b> (2) 4:15 126:6	<b>Airport</b> (2) 93:19 94:2	<b>apply</b> (1) 9:9	<b>attempt</b> (1) 85:19
<b>accelerated</b> (1) 124:9	<b>advocate</b> (1) 63:22	<b>airports</b> (1) 63:9	<b>applying</b> (1) 9:17	<b>attempting</b> (1) 62:8
<b>accelerating</b> (7) 86:7 87:12,20 102:10,16 108:3 120:7	<b>advice</b> (1) 108:13	<b>Ajani</b> (21) 2:15 4:13 5:7 12:9 20:5 22:16 31:25 37:15 47:2 48:20 50:7 64:14 64:23 76:23 80:2 81:19 117:24 129:10 130:13,23 134:23	<b>appointment</b> (1) 73:13	<b>attend</b> (1) 127:18
<b>acceleration</b> (3) 85:16 86:9 87:2	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14	<b>alarmist</b> (1) 136:18	<b>appraisal</b> (3) 18:7 25:9,10	<b>attendance</b> (1) 48:18
<b>access</b> (1) 44:20	<b>advised</b> (2) 4:15 126:6	<b>Albert</b> (3) 3:9 51:1 135:3	<b>appreciate</b> (6) 46:12 50:18 82:17 121:20 127:21 128:12	<b>attended</b> (1) 134:22
<b>accommodates</b> (1) 26:5	<b>advocate</b> (1) 63:22	<b>ALEJANDRO</b> (1) 2:23	<b>approach</b> (6) 15:6,10 51:25 63:14 136:17 137:5	<b>attention</b> (3) 49:5,12 111:18
<b>accomplish</b> (1) 46:4	<b>advertising</b> (1) 134:24	<b>allowed</b> (1) 118:16	<b>approve</b> (2) 58:8 60:17	<b>attorney</b> (4) 2:16 61:21,25 138:13
<b>account</b> (2) 64:2 136:1	<b>advice</b> (1) 108:13	<b>alternative</b> (1) 85:4	<b>approximate</b> (1) 11:5	<b>audience</b> (7) 31:8 58:17 79:10 122:25 128:22 129:17 134:3
<b>accumulating</b> (1) 102:6	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14	<b>Aluisat</b> (2) 100:20 102:20	<b>aquifer</b> (1) 71:18	<b>audio</b> (1) 4:4
<b>accurate</b> (1) 138:10	<b>advised</b> (2) 4:15 126:6	<b>amazingly</b> (1) 92:1	<b>architect</b> (6) 5:17 33:17 35:2 61:21 67:4 110:23	<b>Audubon</b> (1) 5:20
<b>accurately</b> (1) 129:7	<b>advocate</b> (1) 63:22	<b>amend</b> (2) 21:12 45:24	<b>architects</b> (5) 37:7 67:5 124:20,24,24	<b>August</b> (2) 23:8 88:21
<b>act</b> (2) 55:17 135:11	<b>advice</b> (1) 108:13	<b>American</b> (4) 1:14 37:6 67:4 124:20	<b>architecture</b> (6) 34:24 42:20 121:12 123:17 124:4 125:24	<b>authorize</b> (1) 118:20
<b>action</b> (2) 36:7 138:15	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14	<b>amount</b> (7) 9:10 10:20 39:18,18 59:15 98:17 107:12	<b>arctic</b> (1) 96:18	<b>authorized</b> (1) 138:7
<b>active</b> (1) 97:10	<b>advocate</b> (1) 63:22	<b>amend</b> (2) 21:12 45:24	<b>area</b> (8) 12:3 20:1 65:22 70:6 71:17 74:16,16 94:18	<b>availability</b> (1) 81:21
<b>actual</b> (1) 11:17	<b>advertising</b> (1) 134:24	<b>amend</b> (2) 21:12 45:24	<b>areas</b> (14) 40:19 49:13 51:5 66:25 72:1,12 75:11,12 93:17 97:21 101:11 106:21 107:4,10	<b>available</b> (2) 45:2 113:21
<b>Adams</b> (1) 78:2	<b>advice</b> (1) 108:13	<b>amount</b> (7) 9:10 10:20 39:18,18 59:15 98:17 107:12	<b>architecture</b> (6) 34:24 42:20 121:12 123:17 124:4 125:24	<b>Avenue</b> (2) 46:10 129:23
<b>adapt</b> (10) 6:14 35:3 36:19 39:20 44:15 59:14 111:2,11 114:17 120:15	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14	<b>analysis</b> (4) 114:18 115:1,2 121:3	<b>architect</b> (6) 5:17 33:17 35:2 61:21 67:4 110:23	<b>average</b> (1) 86:14
<b>adaptation</b> (13) 35:21 36:23 42:1 44:13 46:14 47:24 50:14 59:20,23,23 62:15 62:22 64:8	<b>advocate</b> (1) 63:22	<b>analyze</b> (1) 114:10	<b>architects</b> (5) 37:7 67:5 124:20,24,24	<b>aware</b> (5) 10:15 47:11 55:7 122:25 123:8
<b>adapted</b> (3) 36:2,24 42:4	<b>advertising</b> (1) 134:24	<b>Andrews</b> (1) 93:14	<b>architecture</b> (6) 34:24 42:20 121:12 123:17 124:4 125:24	<b>axis</b> (1) 98:15
<b>adapting</b> (3) 38:7 77:7 88:11	<b>advice</b> (1) 108:13	<b>announce</b> (1) 31:22	<b>arctic</b> (1) 96:18	<b>aye</b> (2) 29:20 119:7
<b>adaptive</b> (5) 38:6 41:9 51:9 63:4 65:18	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14	<b>annual</b> (5) 60:23 61:6 117:20 118:15 119:15	<b>area</b> (8) 12:3 20:1 65:22 70:6 71:17 74:16,16 94:18	
<b>add</b> (10) 24:9 26:3 38:19 43:25 44:17 45:6 48:15 80:2 87:16 134:3	<b>advocate</b> (1) 63:22	<b>answers</b> (1) 50:15	<b>areas</b> (14) 40:19 49:13 51:5 66:25 72:1,12 75:11,12 93:17 97:21 101:11 106:21 107:4,10	B
	<b>advertising</b> (1) 134:24	<b>Antarctic</b> (5) 104:17 104:22 105:3,5,22	<b>Army</b> (1) 124:23	<b>baby</b> (2) 32:3 67:2
	<b>advice</b> (1) 108:13	<b>Antarctica</b> (10) 86:8 96:21 99:22 100:3 100:6 102:13,15 104:17 105:20 106:2	<b>arrow</b> (3) 102:21 103:10 105:23	<b>back</b> (21) 13:9 17:6 24:16 25:12 64:17 64:22 65:8 66:20 76:12 86:23 88:20 91:15 102:23 105:13 107:17 114:14 115:23 122:19 123:4 131:11 137:1
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14	<b>anticipate</b> (1) 66:11	<b>arrowhead</b> (1) 126:23	<b>background</b> (1) 73:6
	<b>advocate</b> (1) 63:22	<b>anxiety</b> (1) 35:15	<b>art</b> (1) 127:1	<b>backpacking</b> (1) 110:11
	<b>advertising</b> (1) 134:24	<b>anybody</b> (12) 10:24 38:11 43:23 45:25 46:6 52:4,18 54:14	<b>article</b> (2) 81:9,15	<b>bad</b> (2) 110:24 136:11
	<b>advice</b> (1) 108:13		<b>articles</b> (4) 81:7,16 87:14 105:15	<b>baked</b> (1) 127:8
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14		<b>ascribe</b> (1) 40:14	<b>balance</b> (1) 19:17
	<b>advocate</b> (1) 63:22		<b>aside</b> (2) 7:5 40:17	
	<b>advertising</b> (1) 134:24		<b>asked</b> (4) 49:9 88:17 95:1 117:9	
	<b>advice</b> (1) 108:13		<b>asking</b> (1) 32:13	
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14		<b>aspects</b> (3) 36:3 91:23 115:14	
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			
	<b>advertising</b> (1) 134:24			
	<b>advice</b> (1) 108:13			
	<b>advise</b> (5) 43:15 56:4 56:17 57:9 135:14			
	<b>advocate</b> (1) 63:22			

<b>ball (1)</b> 134:17	<b>bit (11)</b> 4:17 13:12 14:16 23:9 39:8 43:20 62:1 106:7,8 131:10 133:8	<b>bridge (1)</b> 52:23	<b>Cale (20)</b> 2:5 5:19,19 12:25 29:15 44:17 57:24 58:14 60:13 61:8 71:9 79:3 117:25 131:20 133:19 134:20 136:22 137:10,14 137:16	94:11,15 107:7 108:6,10,17 113:16 115:18 132:1,12
<b>band-aid (1)</b> 46:15	<b>black (1)</b> 23:23	<b>bridges (2)</b> 63:25 111:16	<b>call (4)</b> 14:9 29:17 84:4 93:20	<b>certain (6)</b> 10:20 33:23 89:17 90:13 109:20 113:4
<b>bandwidth (1)</b> 51:18	<b>blame (1)</b> 135:18	<b>brief (1)</b> 20:22	<b>called (6)</b> 8:15 73:20 87:1 89:8 101:17 128:25	<b>certainly (3)</b> 41:3 75:9 95:8
<b>banking (2)</b> 74:24 75:9	<b>blames (1)</b> 135:24	<b>bring (20)</b> 16:1,15 17:6 24:16 27:12 30:6 33:4 41:12 49:5 51:11,12 58:21 64:9,18 67:24 127:23 135:3 135:6 136:7 137:6	<b>calls (1)</b> 81:1	<b>CERTIFICATE (1)</b> 138:1
<b>barrier (6)</b> 77:19 91:9 96:7 97:22 106:20 133:2	<b>blasted (1)</b> 93:23	<b>bringing (4)</b> 25:6 51:23 125:9 136:25	<b>camp (1)</b> 103:19	<b>certification (1)</b> 41:18
<b>base (1)</b> 123:16	<b>blessed (1)</b> 73:3	<b>brings (1)</b> 43:1	<b>campaign (1)</b> 89:10	<b>certified (2)</b> 41:17 44:5
<b>based (9)</b> 18:16 28:2 31:10 43:16 56:18 56:18 122:8 123:12 123:19	<b>blind-side (2)</b> 113:8 116:24	<b>broader (2)</b> 10:14 16:2	<b>canal (1)</b> 53:23	<b>certify (3)</b> 138:7,9,13
<b>basic (1)</b> 62:14	<b>blind-siding (1)</b> 116:1	<b>Brooklyn (1)</b> 122:2	<b>canals (2)</b> 79:18 93:24	<b>cetera (1)</b> 124:2
<b>basically (2)</b> 51:15 77:14	<b>block (2)</b> 8:23 9:2	<b>brought (5)</b> 49:12 69:13 89:19 135:9 136:10	<b>canary (1)</b> 126:15	<b>chair (171)</b> 2:4,5 4:5 4:6,16,22 5:3,10,19 5:23 6:6 9:14,22 10:1,12,24 11:19 12:7,12,19,25 13:19 15:15 16:18,25 17:8,11,12,16 19:9 19:22 20:8 22:16 23:22 24:9,13 27:7 27:10 28:22 29:1 29:14,15,16,19,22 29:24 30:1,9,12,16 30:20,23 32:2,11 33:1,12 37:25 38:11,21 42:25 44:14,16,17 45:5,23 48:13 49:23,24 50:22,23 52:4 54:14 56:11,13 57:1,5,8,12,20,24 58:14 60:1,13 61:8 61:16,23 62:2,6,9 62:21 64:13,22,25 66:13 68:2,12,15,19 68:25 69:23,25 70:1,5,8,12,17,22 71:3,9 72:17,18 73:2,10,15 74:4,9 77:11,13,23,25 78:8 79:3 80:1,17 81:12 81:24 82:20,23,25 83:14,19,24 106:6 106:10 107:18 108:13 110:16,17 113:22 117:15,25 118:1,11,21 119:2,4 119:6,10,12,14 121:19,25 122:22 123:3,6 127:13 128:14 129:10,15 130:8,12,17,23,25 131:20 133:19 134:20 136:22 137:10,14,16
<b>basis (1)</b> 66:20	<b>blocking (1)</b> 82:24	<b>Broward (2)</b> 10:14 16:2	<b>canon (1)</b> 38:25 39:12,23 40:8 46:16 84:9 89:6,14 89:15 98:17 99:5	<b>chairing (2)</b> 37:5 127:17
<b>bathroom (1)</b> 85:10	<b>blow (1)</b> 133:16	<b>Brooklyn (1)</b> 122:2	<b>care (3)</b> 9:5 24:13 58:21	<b>Chairman (3)</b> 13:18 52:14 118:10
<b>bathroom (2)</b> 85:9,12	<b>blue (4)</b> 84:17 97:21 103:9 105:23	<b>brought (5)</b> 49:12 69:13 89:19 135:9 136:10	<b>Caribbean (1)</b> 124:5	
<b>bay (4)</b> 72:5 77:19 94:6 114:16	<b>board (8)</b> 5:12 11:2 17:6 21:16 23:7,11 23:11 78:19	<b>Broward (6)</b> 80:11 91:15 93:3 128:20 128:20 138:5	<b>carpet (1)</b> 89:8	
<b>Bayshore (4)</b> 52:9,21 54:2 68:18	<b>boards (2)</b> 18:22 70:8	<b>Bruce (1)</b> 77:3	<b>carry (1)</b> 75:10	
<b>beach (21)</b> 13:8 14:21 42:17 54:8 77:4,8 77:16 78:10 83:16 92:20 94:14 97:4,7 97:23 107:13 114:11 115:7 116:3 116:8 127:2 134:12	<b>boat (4)</b> 51:22 54:1 128:1 136:20	<b>Bruens (2)</b> 138:7,20	<b>case (1)</b> 9:11	
<b>bear (1)</b> 56:1	<b>bodies (1)</b> 71:12	<b>Bryan (1)</b> 93:12	<b>Cason (1)</b> 109:8	
<b>BEATRIZ (1)</b> 3:6	<b>body (2)</b> 26:10 28:17	<b>budget (5)</b> 7:18 9:15 9:16,18 130:14	<b>catastrophic (1)</b> 114:19	
<b>beautiful (2)</b> 92:1 97:8	<b>bonds (3)</b> 107:15,16 107:18	<b>build (5)</b> 15:13 42:20 112:6 121:7 125:24	<b>catching (1)</b> 41:12	
<b>becoming (2)</b> 39:23 124:11	<b>books (1)</b> 81:7	<b>building (27)</b> 8:6 16:16 21:25 22:4 35:11,11 41:8 42:13,14,16 48:1,11 61:23,24 64:10 66:7 67:1,10,11,21 68:6 111:13 112:5 112:20 125:25 126:18 133:5	<b>categories (1)</b> 125:13	
<b>bed (1)</b> 107:14	<b>Borges (62)</b> 2:7 5:17 5:17 13:18,20 15:21 20:21 21:14 21:17 22:12 24:15 25:23 28:2,12,15,17 28:20,23 29:8 30:4 30:18 33:13 39:7 41:5 48:2 56:25 57:4,7,15,23 58:13 58:15 61:20,25 62:5,8,22 67:3 69:18 76:25 77:12 77:14 81:11 88:8 110:16,18 111:4,9 112:3,10 113:11,13 113:20 114:1,6,14 114:16 115:9,11,19 117:1 137:15	<b>bulldozing (14)</b> 20:25 22:2 33:19,24 34:8 35:9,25 41:8,9 42:21 63:1,2 111:12 120:24	<b>Category (1)</b> 112:14	
<b>bee's (1)</b> 129:8	<b>both (1)</b> 113:14	<b>bulk (1)</b> 28:6	<b>caught (1)</b> 84:8	
<b>beginning (8)</b> 38:18 56:16 85:15 89:9 99:12,20 103:12,14	<b>bothers (5)</b> 108:1 109:21 112:4,20 113:12	<b>bunch (2)</b> 87:13 113:8	<b>cause (3)</b> 90:10 117:10 123:15	
<b>begins (2)</b> 103:9,10	<b>bottom (6)</b> 21:1 45:12 86:22 92:25 101:19 101:20	<b>bunker (2)</b> 112:9 133:4	<b>causes (5)</b> 40:16 46:17 51:15 54:25 105:12	
<b>believe (6)</b> 57:16 119:19 122:11,12 133:12,14	<b>bought (2)</b> 89:17,18	<b>BURGANA (1)</b> 2:23	<b>causing (2)</b> 47:17 105:1	
<b>benefit (1)</b> 121:3	<b>bouncing (1)</b> 84:7	<b>burning (2)</b> 85:4 99:14	<b>cautious (1)</b> 115:22	
<b>benefits (1)</b> 77:25	<b>bounds (1)</b> 11:17	<b>businesses (1)</b> 95:18	<b>cave (1)</b> 117:11	
<b>best (6)</b> 22:22 61:20 112:25 120:18,19 132:21	<b>boy (1)</b> 109:17	<b>button (2)</b> 5:15,15	<b>caveat (2)</b> 43:24 73:12	
<b>better (9)</b> 11:25 17:1 23:21 53:16 63:13 66:4 72:7 114:8 134:24	<b>BRAD (1)</b> 2:19	<b>buy (1)</b> 112:22	<b>caving (2)</b> 102:22 103:19	
<b>beyond (4)</b> 40:15 86:24 93:8 131:8	<b>Break (1)</b> 4:4	<b>buy-outs (2)</b> 106:25 115:25	<b>CD (1)</b> 138:11	
<b>big (7)</b> 13:7 18:17 85:6 100:2 108:1 122:14 133:1	<b>breaking (1)</b> 102:23	<b>buying (1)</b> 112:21	<b>Celsius (1)</b> 102:17	
<b>bill (1)</b> 19:23	<b>breathing (1)</b> 20:3	<b>buzz (1)</b> 46:25	<b>center (5)</b> 79:6 90:22 94:23 103:18,18	
<b>bills (1)</b> 19:20	<b>BRICENO (1)</b> 2:22		<b>centimeters (1)</b> 86:11	
<b>Biscayne (5)</b> 72:5 94:6 97:23 121:24 135:22	<b>Briceño (2)</b> 119:24,24	<b>C</b>	<b>centuries (1)</b> 85:8	
	<b>Brickell (1)</b> 65:21	<b>C-L-E-O (1)</b> 129:14	<b>century (16)</b> 86:11 87:3,9,17 91:5,6	

<b>Chairperson (1)</b> 118:13	31:11 36:3 37:16 37:16 40:3,6 42:6 43:16 44:1,3,9 46:17,20,23 47:2,3 47:5 48:8,20 49:5 49:14 53:4,4 54:7 55:4 56:17 64:10 66:19,23 70:18 71:16,21 72:1,7,16 73:16 74:2 75:15 75:17,25 76:7,11 77:3,22 78:10 80:3 94:20 106:18 124:15,18 125:6 126:11 130:9,10 131:1 135:9,14,16 135:23 136:2 137:8	126:18 136:16 <b>Coconut (1)</b> 52:14 <b>code (10)</b> 22:4,5,7,11 24:22 27:1 33:20 42:15,17 119:25 <b>codes (7)</b> 34:7 35:16 42:19 62:25 67:11 111:12,13 <b>coding (1)</b> 51:21 <b>Colbert (1)</b> 92:17 <b>cold (2)</b> 96:18 98:23 <b>collapse (2)</b> 95:14 114:4 <b>collapsing (2)</b> 103:20 104:12 <b>colleague (1)</b> 122:5 <b>collect (1)</b> 36:1 <b>college (1)</b> 4:6 <b>color (1)</b> 103:9 <b>Columbia (1)</b> 122:4 <b>combine (1)</b> 67:3 <b>combined (1)</b> 94:6 <b>combining (1)</b> 8:25 <b>come (27)</b> 31:12 32:20 46:6 51:8 52:6,24 60:24 61:15 66:4 67:14 68:12 69:10 77:4 77:17 78:10,13,21 80:5,25 81:14 82:17 101:3 105:16 114:3 127:22 129:21 131:17 <b>comes (13)</b> 14:17 32:17 33:16 39:7 46:24 47:24 59:15 71:17 75:11 87:23 88:1 124:10 125:22 <b>comfort (1)</b> 95:12 <b>comfortable (3)</b> 58:11 61:17 82:21 <b>coming (11)</b> 35:14 66:11 84:5 85:11 102:14,24 104:3,11 106:1 110:25 128:12 <b>Commences (1)</b> 4:3 <b>comment (20)</b> 32:5 32:13,14,17,20,20 32:24 33:3 43:14 43:23 46:1,2 49:23 128:16 129:25 131:21 133:23,25 135:5 137:11 <b>commenting (1)</b> 135:2 <b>comments (16)</b> 38:12 46:3 48:14 50:1,18 52:12 54:23 64:17 64:20 71:22 118:2 121:20 123:11 128:18 133:21 134:2 <b>Commerce (1)</b> 116:3	<b>commission (23)</b> 1:13 7:17 10:15 23:5 28:8 40:7 43:16 48:16 49:9 50:11 51:14 53:4 55:4 56:4,18 66:5 68:8 69:11 73:16,25 108:15 127:25 136:10 <b>commit (1)</b> 131:24 <b>committee (97)</b> 1:5 2:3,10 4:20 5:23 8:1,3 10:25 11:21 12:19 13:12 17:3 19:12 20:2,19 23:22 24:16 27:17 30:13,14,24 31:13 31:20,24 32:18 33:16,25 34:12,15 35:1,4,20 37:13 38:12 39:22 40:5 41:24 43:7,10,21 44:21,24 45:1,4,11 45:20 46:4,5 48:7 48:22 54:21 55:11 55:18,19 56:2,14 58:22 59:11 60:14 61:18 65:7,8 66:17 66:18 67:14,25 68:5 69:1,2,15,18 69:20 70:6 73:4 74:8 76:14 78:24 108:14,18 117:18 117:22 118:8,14,16 124:13 125:10 127:22,24 128:9,23 130:20 131:5,17 135:10,14 136:4,13 <b>committee's (3)</b> 44:10 44:12 45:11 <b>committees (8)</b> 16:20 51:3 52:13 65:3 70:10 76:10 128:4 136:7 <b>common (1)</b> 102:2 <b>communicate (1)</b> 129:6 <b>Communicators (1)</b> 129:1 <b>communities (11)</b> 14:24 35:23 37:9 63:8 64:1 67:8 78:2 79:24 87:18 111:14 120:14 <b>community (44)</b> 6:24 8:21,22 9:2 14:12 15:11,14 16:17 17:13 21:8 27:1 34:2,6,17 35:14 36:7 37:19 38:4 39:9,11 41:20 42:22 48:19 58:25 59:10,22 63:21 74:22 75:3,5,9,21	75:25 77:1 78:18 79:1 82:13 95:21 109:20 113:4 116:14 120:13 126:10 130:19 <b>comp (13)</b> 20:9,14,17 21:2,7 22:3,20 24:1 26:7,10,15,24 27:15 <b>Compact (3)</b> 72:22 77:25 86:17 <b>companies (2)</b> 113:2 113:3 <b>compared (1)</b> 102:7 <b>comparing (1)</b> 100:2 <b>competitive (1)</b> 7:12 <b>complete (1)</b> 23:13 <b>completely (1)</b> 89:14 <b>complex (4)</b> 51:7,8,9 57:17 <b>complexity (1)</b> 36:4 <b>complicated (1)</b> 62:11 <b>component (3)</b> 15:22 18:18 51:20 <b>components (3)</b> 21:24 42:6 63:8 <b>comprehensive (15)</b> 14:24 15:7 17:21 18:8,9,10,16,24 20:9,23 21:21 22:14 25:25 27:17 27:23 <b>concentrating (1)</b> 101:4 <b>concept (1)</b> 51:21 <b>concern (3)</b> 39:20 63:20 65:20 <b>concerned (3)</b> 25:15 67:22 95:1 <b>concerning (2)</b> 18:1 117:20 <b>concerns (2)</b> 66:2 68:9 <b>concise (2)</b> 57:22 60:1 <b>concluded (1)</b> 137:17 <b>concrete (3)</b> 61:4 112:9 133:4 <b>condemn (1)</b> 135:11 <b>condition (1)</b> 23:16 <b>conditions (3)</b> 18:18 19:6 126:16 <b>condominium (1)</b> 92:6 <b>condos (2)</b> 112:5,21 <b>confident (1)</b> 129:7 <b>conflict (2)</b> 26:16 78:20 <b>confused (2)</b> 68:21,24 <b>connection (1)</b> 20:22 <b>consensus (1)</b> 62:7 <b>conservancy (1)</b> 125:10 <b>consider (2)</b> 28:12 124:14
----------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<b>consists (1)</b> 8:3	73:19,25 75:18,25	<b>David (2)</b> 2:11 78:20	80:4	<b>Disco (1)</b> 127:2
<b>constantly (1)</b> 111:7	76:7 80:11,15	<b>day (3)</b> 23:7 81:14	<b>dependent (1)</b> 124:12	<b>disconnect (1)</b> 51:14
<b>construction (2)</b> 8:16	91:14 92:7 94:13	138:17	<b>depending (2)</b> 8:12	<b>discretion (2)</b> 19:16
48:4	94:22 95:9 116:21	<b>days (2)</b> 15:25 85:12	123:7	21:11
<b>Constructions (1)</b> 9:1	138:5	<b>dead (1)</b> 50:18	<b>depends (1)</b> 37:2	<b>discuss (6)</b> 6:21 33:6
<b>consultant (2)</b> 25:10	<b>county's (4)</b> 6:17 18:3	<b>deadline (2)</b> 20:17	<b>described (1)</b> 19:11	33:8 55:18,21
25:20	80:9,14	23:4	<b>deserve (1)</b> 114:8	58:23
<b>consultants (2)</b> 25:1,6	<b>couple (6)</b> 19:14	<b>deal (17)</b> 16:8 22:19	<b>design (19)</b> 22:1 25:3	<b>discussed (6)</b> 23:2
<b>consumption (2)</b>	28:24 48:25 76:17	31:17 38:24 43:7	33:23 34:7,19 35:9	30:25 33:5,8 46:1
34:16 58:24	88:21 122:24	43:22 46:16,17	35:10,17,25,25	70:13
<b>content (2)</b> 61:8,13	<b>course (3)</b> 43:4 47:20	47:5 48:17 49:19	36:18 38:4 41:13	<b>discussing (1)</b> 46:12
<b>context (2)</b> 62:12,23	104:11	59:13 60:15 61:5	41:25 59:6 62:23	<b>discussion (8)</b> 17:7
<b>continental (1)</b> 97:22	<b>COURT (1)</b> 138:1	61:18 76:7 134:18	63:1,2 123:17	27:13 31:2,20 32:7
<b>continue (4)</b> 8:13 9:9	<b>cover (5)</b> 6:13 45:1,3	<b>dealing (19)</b> 18:4	<b>designed (1)</b> 63:11	32:10 69:24 116:16
15:13 71:4	80:17 83:9	27:22 35:13 40:16	<b>designer (1)</b> 35:2	<b>discussions (3)</b> 25:19
<b>Continued (1)</b> 3:1	<b>covering (1)</b> 125:14	48:21 49:16 51:7,7	<b>designing (5)</b> 20:25	32:14 37:12
<b>continuing (2)</b> 37:23	<b>crazy (1)</b> 110:10	55:8 59:2,3,5 60:23	33:18 67:17,18	<b>disintegrated (1)</b> 98:5
136:20	<b>create (6)</b> 26:16	66:24 73:22 74:12	121:13	<b>dissolved (1)</b> 75:8
<b>contract (1)</b> 124:8	33:15 56:3 64:14	81:4 124:7,8	<b>designs (1)</b> 63:25	<b>distance (1)</b> 103:21
<b>contractor (1)</b> 135:24	66:18 129:8	<b>deals (2)</b> 20:18 41:7	<b>destination (1)</b>	<b>distributed (1)</b> 64:21
<b>contractors (1)</b>	<b>created (3)</b> 66:15	<b>decade (4)</b> 91:7,11	116:10	<b>district (4)</b> 73:16 79:7
135:18	84:24 89:17	102:7 108:9	<b>detailed (1)</b> 13:13	79:12,21
<b>contracts (2)</b> 124:16	<b>criteria (1)</b> 20:24	<b>decades (1)</b> 96:19	<b>develop (1)</b> 94:1	<b>districts (1)</b> 28:9
124:17	<b>critical (3)</b> 36:3 63:7	<b>decay (1)</b> 111:17	<b>developed (2)</b> 10:2	<b>disturbance (1)</b> 126:1
<b>convened (1)</b> 8:1	137:4	<b>December (1)</b> 92:15	34:10	<b>disturbing (1)</b> 87:15
<b>conversation (21)</b>	<b>critics (1)</b> 58:17	<b>decide (2)</b> 8:1 12:12	<b>developers (1)</b> 108:23	<b>divert (1)</b> 83:12
16:2,16 32:12	<b>critique (2)</b> 15:8,10	<b>decided (4)</b> 31:9	<b>developing (3)</b> 44:19	<b>divide (1)</b> 69:7
33:14 34:6,11	<b>Crop (1)</b> 90:4	89:14 114:24,25	89:2 131:4	<b>Division (2)</b> 6:12
35:20 36:5,6,18,22	<b>cross-fertilize (1)</b>	<b>decides (1)</b> 26:10	<b>development (6)</b> 8:21	17:14
40:8 41:20,21	77:18	<b>decision (1)</b> 126:3	8:23 9:2 78:18,22	<b>Doctor (2)</b> 88:8
42:11 62:23 67:24	<b>Crystal (1)</b> 72:6	<b>decision-making (1)</b>	78:25	110:18
88:9,9 110:19	<b>crystallize (2)</b> 34:25	122:8	<b>diagram (10)</b> 84:13	<b>document (4)</b> 26:8,14
116:5	35:19	<b>decisions (1)</b> 124:1	85:2,18,23 86:16	26:25 42:2
<b>conversations (8)</b>	<b>curious (1)</b> 68:13	<b>declares (1)</b> 7:4	97:1,12,17,18 98:13	<b>documented (1)</b>
30:7 37:4,8,13,18	<b>current (2)</b> 35:9 73:6	<b>deco (1)</b> 127:1	<b>diagrams (1)</b> 98:14	85:16
37:24 38:1 42:13	<b>currently (4)</b> 29:3	<b>decreased (1)</b> 102:5	<b>dialogue (1)</b> 16:22	<b>doing (25)</b> 9:7 15:9
<b>convince (2)</b> 33:22	47:23 58:3 122:1	<b>dedicated (1)</b> 7:22	<b>difference (1)</b> 39:1	16:14 26:18 28:6
120:3	<b>curve (5)</b> 86:22,25	<b>deep (6)</b> 92:22 103:1	<b>different (11)</b> 16:1	31:14 33:18 44:24
<b>cool (3)</b> 30:19 85:9	87:1 98:8,21	103:7 104:12	24:21 25:13 26:1	55:15 61:20 66:15
116:9	<b>curves (3)</b> 86:21 87:5	105:23,24	42:6 51:5 59:24,24	77:14 78:15 93:5
<b>cooling (2)</b> 90:1,19	98:25	<b>deepens (1)</b> 105:19	62:10,24 66:19	94:9,9 109:9
<b>copy (3)</b> 17:24 31:6	<b>customer (1)</b> 18:3	<b>deeper (1)</b> 53:25	<b>differentiation (2)</b>	110:15,22 114:9,25
113:23	<b>cut (2)</b> 93:23 135:22	<b>deeply (2)</b> 102:19	38:21 40:23	121:4 128:25
<b>coral (8)</b> 72:8 95:11	<b>cutting (1)</b> 135:18	103:7	<b>differently (4)</b> 26:6	130:17 134:4
95:19,21,23 97:5	<b>cycle (6)</b> 28:18 67:21	<b>defense (1)</b> 136:15	35:25 36:1 59:14	<b>dollar (1)</b> 9:10
109:9 124:6	99:3 110:14 123:21	<b>defenses (1)</b> 108:2	<b>difficult (2)</b> 75:23	<b>dollars (2)</b> 8:20 9:20
<b>core (4)</b> 59:9 63:11	123:23	<b>deficiency (1)</b> 36:6	120:22	<b>doom (1)</b> 81:17
64:4,5	<b>cycles (1)</b> 123:19	<b>degree (1)</b> 104:25	<b>dilute (1)</b> 51:15	<b>doomed (1)</b> 46:17
<b>cornered (1)</b> 117:5		<b>degrees (4)</b> 90:5,6,7	<b>dioxide (5)</b> 38:25	<b>dot (2)</b> 63:24 103:25
<b>Corps (1)</b> 124:23	<b>D</b>	102:17	84:10 89:7 98:17	<b>downtown (1)</b> 65:22
<b>Correct (1)</b> 64:22	<b>Dade (3)</b> 36:15 94:13	<b>delay (1)</b> 4:17	99:5	<b>Dr (48)</b> 3:12 5:9 6:2,8
<b>cost (5)</b> 11:5 76:7	128:20	<b>DENKA (1)</b> 3:4	<b>direct (1)</b> 129:16	50:7 66:3 82:18,22
107:9 115:3 121:3	<b>damage (4)</b> 16:8 34:3	<b>deny (1)</b> 89:10	<b>direction (4)</b> 27:24	82:24 83:1,15,22,25
<b>costal (1)</b> 42:21	42:10 64:9	<b>denying (2)</b> 134:9,9	50:1 128:1 137:9	87:25 88:16 106:9
<b>costs (1)</b> 109:17	<b>damages (1)</b> 38:5	<b>department (18)</b> 6:11	<b>directive (1)</b> 31:10	106:17 107:21
<b>council (2)</b> 52:14 53:4	<b>damaging (1)</b> 93:11	8:7,22 13:23 16:14	<b>directly (1)</b> 28:8	108:20 111:3,8
<b>counsel (1)</b> 138:14	<b>danger (1)</b> 42:8	20:12 25:5 29:10	<b>directors (2)</b> 67:7	112:2,4,12,17
<b>counties (1)</b> 26:16	<b>dangers (1)</b> 14:11	30:5 44:4 49:16	80:4	113:12,14,24 114:5
<b>country (1)</b> 40:25	<b>dark (1)</b> 101:5	63:23,24 68:7	<b>dirt (4)</b> 101:4,9,25	114:13,15,23
<b>county (31)</b> 6:19 14:3	<b>data (1)</b> 111:22	69:17,20 82:3	102:6	115:10,12,20 117:2
18:2 26:5 36:10,12	<b>date (5)</b> 12:8 24:5	131:6	<b>disaster (8)</b> 6:3,10 7:3	117:15 120:1
36:14,15,15 37:17	80:6 123:4 138:11	<b>departments (8)</b> 6:13	7:4,7 9:12 14:18,20	122:13 128:13,18
41:15,16 46:20,24	<b>Dated (1)</b> 138:17	14:4 16:1 20:13	<b>disasters (1)</b> 6:14	129:12 131:24
49:14 55:9 72:25	<b>dates (1)</b> 129:11	44:25 51:5 70:24	<b>disciplines (1)</b> 70:3	132:7 133:14,23

134:1,4 <b>draft (2)</b> 31:4 61:5 <b>drafting (1)</b> 62:3 <b>drainage (1)</b> 9:24 <b>drains (1)</b> 96:4 <b>drastically (1)</b> 7:10 <b>drew (1)</b> 105:11 <b>drinking (1)</b> 71:16 <b>Drive (3)</b> 1:14 54:3 121:24 <b>driven (1)</b> 98:24 <b>driving (1)</b> 92:24 <b>dry (1)</b> 104:9 <b>due (5)</b> 19:1 46:21 52:11 62:9 86:4 <b>.dumps (1)</b> 109:23	<b>elevate (2)</b> 42:5 114:16 <b>elevating (1)</b> 86:15 <b>elevation (4)</b> 63:16 100:17,18 123:24 <b>elevations (1)</b> 66:8 <b>Elizabeth (1)</b> 92:17 <b>emergency (17)</b> 5:22 6:12 7:4 8:4 11:12 13:23 15:9 16:21 63:13 65:7,13 80:9 80:11,15 94:23 125:15 126:9 <b>emission (1)</b> 40:8 <b>emissions (3)</b> 39:12 39:23 40:24 <b>employee (1)</b> 47:4 <b>Empowering (1)</b> 129:1 <b>enabling (2)</b> 48:10,10 <b>encourage (1)</b> 54:12 <b>encouraging (1)</b> 89:5 <b>ended (1)</b> 98:7 <b>energy (5)</b> 34:16 58:24,25 85:4 89:2 <b>enforced (1)</b> 48:5 <b>engineer (1)</b> 82:10 <b>engineering (5)</b> 77:4 96:10 121:12 125:13 132:9 <b>Engineers (1)</b> 124:23 <b>enhancing (1)</b> 71:23 <b>entire (1)</b> 63:21 <b>entirely (1)</b> 25:13 <b>entitled (1)</b> 32:16 <b>environment (7)</b> 36:24,25 37:1,2,2 37:23 136:15 <b>Environmental (1)</b> 94:24 <b>environments (1)</b> 83:8 <b>erecting (1)</b> 35:12 <b>errant (1)</b> 130:4 <b>escape (1)</b> 11:17 <b>Escerones (1)</b> 80:12 <b>especially (9)</b> 13:7 40:6 58:4 68:10 105:22 127:21 135:7,25 136:3 <b>essence (1)</b> 59:5 <b>essentially (1)</b> 18:4 <b>Et (1)</b> 124:2 <b>evacuate (2)</b> 65:25 66:1 <b>evaluation (2)</b> 18:7 25:9 <b>evening (2)</b> 33:6 81:25 <b>event (2)</b> 88:11 114:19 <b>events (4)</b> 35:23 124:9 138:8,10 <b>eventually (3)</b> 49:14	75:13 111:13 <b>Everglades (7)</b> 5:20 64:3 71:13,16 93:22,25 95:4 <b>everybody (12)</b> 4:24 22:22 31:1,6 45:10 50:19 56:21 65:1 83:10 113:23 118:12 122:23 <b>evolution (1)</b> 83:7 <b>evolve (1)</b> 71:4 <b>exactly (4)</b> 31:3,13 52:24 128:4 <b>example (10)</b> 16:6 41:5 42:5,18 52:20 68:22 72:6 79:15 114:11 127:1 <b>excellent (1)</b> 74:3 <b>excess (1)</b> 75:10 <b>Excuse (1)</b> 71:8 <b>existence (3)</b> 37:3 48:23 94:5 <b>existential (1)</b> 51:6 <b>expand (2)</b> 70:22 111:25 <b>expanded (1)</b> 41:22 <b>expanding (3)</b> 64:5 86:5 114:21 <b>expansion (3)</b> 39:14 39:19 59:12 <b>expect (1)</b> 99:18 <b>expected (1)</b> 87:4 <b>expeditiously (1)</b> 23:24 <b>experience (2)</b> 35:8 122:17 <b>expert (5)</b> 14:17 27:4 79:12 82:4 133:12 <b>experts (4)</b> 43:17 54:24 56:19 129:3 <b>expires (1)</b> 22:20 <b>explore (1)</b> 69:2 <b>exponentially (1)</b> 93:10 <b>exposing (1)</b> 89:9 <b>exposure (1)</b> 16:8 <b>express (1)</b> 128:9 <b>expressing (1)</b> 49:2 <b>extensive (2)</b> 37:17 95:22 <b>Exxon (2)</b> 89:8,21	<b>fall (1)</b> 10:6 <b>family (2)</b> 16:9 132:18 <b>fan (1)</b> 122:14 <b>fantastic (1)</b> 36:10 <b>far (9)</b> 25:15,17 45:19 52:24 55:18 71:4 91:1 95:2 107:13 <b>farther (1)</b> 93:11 <b>fast (1)</b> 98:7 <b>faster (5)</b> 88:5 91:2 101:20,24 132:15 <b>favor (2)</b> 29:20 119:6 <b>February (4)</b> 5:2 128:24,24 138:17 <b>February's (1)</b> 5:5 <b>federal (7)</b> 7:3 43:17 56:20 75:7 124:17 126:8 135:25 <b>feedback (3)</b> 87:12,20 102:9 <b>feel (6)</b> 33:4 34:5 43:14 58:11 61:16 82:21 <b>fees (2)</b> 107:19,21 <b>feet (41)</b> 53:20 87:8 87:16,22 90:11 91:4,6 93:15,18,25 94:6,12 95:10,11 97:3,8,14 99:7,8,9 100:18 104:8,24 105:5,9 108:6,8,10 108:16,22 109:6 110:2 124:1,2 128:19 132:1,8,11 132:16 133:12,15 <b>FEMA (2)</b> 7:3 126:8 <b>fiancee (1)</b> 100:4 <b>fifteen (3)</b> 7:5 75:6 92:13 <b>fight (1)</b> 109:3 <b>figure (3)</b> 11:24 52:18 115:3 <b>filed (1)</b> 118:15 <b>filling (1)</b> 69:14 <b>final (6)</b> 58:9,9 61:11 61:15 64:18 114:1 <b>finalize (1)</b> 118:22 <b>finally (1)</b> 88:19 <b>finance (2)</b> 75:18,20 <b>financially (1)</b> 138:15 <b>find (5)</b> 24:5 36:5 56:2 114:1 130:3 <b>finding (1)</b> 71:13 <b>fine (5)</b> 21:17 39:6 40:12 83:14 88:1 <b>finished (1)</b> 124:5 <b>fire (10)</b> 6:11 8:3 10:8 44:4,4,5 63:9 65:14 65:23 66:7 <b>firm (1)</b> 124:3 <b>first (18)</b> 5:11 19:1 23:4,9 32:4 49:25 53:16 65:11 74:21	76:4 82:5,5 91:25 103:4 106:17 123:19,21 127:11 <b>fit (1)</b> 21:13 <b>fits (3)</b> 21:8 51:10 123:24 <b>FIU (1)</b> 79:6 <b>five (2)</b> 66:24 133:17 <b>fix (1)</b> 115:7 <b>fjord (2)</b> 103:11,13 <b>fjords (2)</b> 102:18 103:7 <b>flat (1)</b> 98:2 <b>flew (3)</b> 100:19 104:2 104:5 <b>flexibility (4)</b> 21:6 22:1 38:7 63:3 <b>flexible (1)</b> 23:16 <b>floating (2)</b> 112:13,16 <b>flocking (1)</b> 92:5 <b>flood (4)</b> 75:7,10,12 75:12 <b>flooded (3)</b> 53:2,18 65:21 <b>flooding (18)</b> 19:15 19:24 27:20 34:2 41:10 42:9,9 53:8 53:19 79:18 92:12 95:2 107:9,11 114:24 120:6 126:3 134:11 <b>floods (1)</b> 126:1 <b>Florida (29)</b> 1:15 5:20 21:19 34:21 37:20 42:14,16 51:1 63:16,22,24 64:11 72:21 79:7 81:18 82:15 86:13 88:13,25 94:6 97:4 106:11,15 112:1,8 119:24 120:13 129:4 138:3 <b>flowing (2)</b> 101:16,17 <b>fluid (2)</b> 60:2,11 <b>fly (1)</b> 103:24 <b>focus (17)</b> 12:1,5 15:1 20:13 33:16 34:11 36:14 42:24 49:9 50:13 51:19 54:12 54:19 55:11 59:20 63:1 71:11 <b>focused (4)</b> 34:1 40:13 41:24 51:4 <b>focusing (2)</b> 36:5 57:19 <b>folks (5)</b> 37:7 44:19 79:3 125:10 133:22 <b>follow (4)</b> 5:4 9:13 12:25 131:15 <b>following (1)</b> 63:1 <b>follows (3)</b> 19:23 99:4 132:8 <b>foot (9)</b> 53:24,25 91:7 91:11 94:8,14	
<hr/> <b>E</b> <hr/>					
<b>e-mail (2)</b> 4:23 130:5 <b>earlier (6)</b> 45:24 49:3 54:22 73:22 88:9 113:22 <b>early (2)</b> 20:6 50:5 <b>earners (1)</b> 116:13 <b>earth (1)</b> 84:15 <b>earth's (1)</b> 84:6 <b>easier (1)</b> 61:12 <b>easiest (1)</b> 57:25 <b>easily (2)</b> 96:4 105:25 <b>east (3)</b> 104:21 105:5 114:5 <b>economic (4)</b> 74:16 74:23 76:6 121:10 <b>economically (1)</b> 109:19 <b>economics (3)</b> 123:16 123:18 132:13 <b>ecosystemic (1)</b> 126:21 <b>edge (3)</b> 100:9 102:23 103:1 <b>education (2)</b> 18:19 20:22 <b>educational (1)</b> 129:13 <b>effecting (1)</b> 15:12 <b>effective (4)</b> 15:2 17:23 111:24 115:4 <b>effectively (1)</b> 35:13 <b>effects (2)</b> 6:14 75:13 <b>effort (1)</b> 13:24 <b>efforts (12)</b> 34:11 36:9 37:16 66:6 67:4 69:7 71:11,15 71:20 88:19 99:14 114:7 <b>eight (1)</b> 111:15 <b>either (6)</b> 15:17 19:6 26:18 60:4,7 71:21 <b>elect (1)</b> 117:3 <b>elected (1)</b> 18:22 <b>elements (6)</b> 18:10 21:22,23 29:11,12 132:24					
		<hr/> <b>F</b> <hr/>			
		<b>face (5)</b> 14:11 103:20 120:8 121:1 137:8 <b>facilities (2)</b> 54:11 63:10 <b>fact (15)</b> 14:4,14 15:4 37:15 40:15 46:12 50:4,6 51:20 53:17 88:22 89:9 111:13 120:9 122:12 <b>facts (2)</b> 4:11 119:19 <b>fail (2)</b> 110:25 111:6			

108:9 113:5 123:25 <b>force (3)</b> 37:6 67:5 117:7 <b>forecasting (1)</b> 47:14 <b>forefront (1)</b> 76:3 <b>foregoing (2)</b> 138:8,9 <b>forgotten (1)</b> 90:23 <b>form (1)</b> 118:9 <b>formally (2)</b> 60:17 71:15 <b>format (2)</b> 14:25 15:7 <b>formation (2)</b> 65:3 68:21 <b>former (2)</b> 78:19 80:23 <b>formulated (1)</b> 58:23 <b>formulating (1)</b> 67:15 <b>forth (1)</b> 138:12 <b>forthcoming (1)</b> 72:20 <b>fortresses (1)</b> 112:6 <b>forty-five (2)</b> 53:13 53:15 <b>forum (6)</b> 15:18 55:10 60:6 71:6 76:12 81:2 <b>forums (1)</b> 37:14 <b>forward (16)</b> 16:4 23:24 27:3,5 33:7 44:6 51:8,11 52:6 54:8 82:17 127:13 128:15 134:23 136:7 137:9 <b>fossil (4)</b> 85:5 89:3 97:7 99:14 <b>found (3)</b> 82:10 125:7 130:11 <b>foundation (2)</b> 94:20 103:18 <b>Founder (1)</b> 46:9 <b>four (5)</b> 82:6 86:21 87:16 124:2 133:17 <b>fourth (4)</b> 31:25 32:2 55:20 85:21 <b>fracturing (3)</b> 101:21 101:21 102:2 <b>frame (3)</b> 33:13 106:16 123:14 <b>framework (2)</b> 72:22 132:22 <b>Frankly (2)</b> 46:14,23 <b>free (2)</b> 33:4 43:14 <b>frequently (1)</b> 75:13 <b>fresh (1)</b> 92:25 <b>friction (1)</b> 124:14 <b>frictions (1)</b> 125:5 <b>friend (2)</b> 81:8,12 <b>friends (1)</b> 67:7 <b>frightening (1)</b> 84:23 <b>Frightfully (1)</b> 94:21 <b>front (5)</b> 5:15 54:9 61:4 93:16 103:20 <b>fruition (1)</b> 66:11 <b>fuels (3)</b> 85:5 89:3	99:14 <b>full (3)</b> 72:24 92:16 100:8 <b>fun (2)</b> 92:25 133:6 <b>functioning (2)</b> 36:3 63:8 <b>functions (2)</b> 80:16 116:14 <b>fund (4)</b> 7:19 8:10 9:20 66:5 <b>fundamental (1)</b> 85:13 <b>fundamentals (1)</b> 21:2 <b>funded (7)</b> 7:1 8:9 10:19,20 11:13,15 117:11 <b>funding (13)</b> 7:16,20 9:1,2,4 10:21 11:7 14:5,7,15,16 15:3,5 <b>funds (10)</b> 7:1,5,8,9 8:2,12,13,23 9:13 10:23 <b>further (5)</b> 16:19 45:17 137:10 138:9 138:13 <b>future (27)</b> 4:12 8:12 12:8 15:14,16 17:1 20:10 21:18 31:22 34:2 35:14 42:8 63:12 66:22 76:20 76:24 77:24 78:5 80:6 81:1 97:16 110:25 111:2 114:8 114:20 123:4 135:14 <b>futurists (2)</b> 67:23 110:24	<b>geophysical (1)</b> 103:6 <b>getting (12)</b> 4:17 13:25 19:17 20:6 28:15 66:8 92:13 102:16,18 107:10 129:25 131:2 <b>giant (2)</b> 112:8 133:4 <b>give (19)</b> 11:1 20:21 26:21 29:4 30:16 30:20 46:2 50:23 65:5 73:5 95:12 99:24 106:15 113:24 118:23 119:1 131:14 136:22 137:1 <b>given (5)</b> 38:15 50:17 79:12 106:22 111:13 <b>gives (1)</b> 20:3 <b>giving (2)</b> 20:7 78:7 <b>glacial (4)</b> 4:7 82:4 97:2 102:25 <b>glacier (2)</b> 104:18,21 <b>glaciers (1)</b> 100:1 <b>glad (1)</b> 83:25 <b>GLENN (1)</b> 2:25 <b>global (9)</b> 52:19 53:5 84:3,4,12,20,23 89:1 116:9 <b>globally (2)</b> 85:22 90:16 <b>globalness (1)</b> 54:25 <b>gloom (1)</b> 81:17 <b>go (34)</b> 9:12,19 16:8 19:9 23:6 30:12 31:5 33:7 38:18 49:24,24 52:22 56:6 57:14 62:21 64:16 70:12,23 71:1,5 81:19 82:22 92:22 95:3,4 96:8 97:4 99:8,16 106:4 120:21 129:6 131:20 133:16 <b>goal (2)</b> 45:19 70:13 <b>goals (7)</b> 19:5 22:6,8 23:14 41:3 65:7 128:8 <b>God (4)</b> 90:21 92:7 107:22 133:3 <b>God-given (1)</b> 96:25 <b>Godell (2)</b> 81:11,12 <b>goes (7)</b> 43:12 85:18 97:5 98:15 110:10 115:23 131:11 <b>going (129)</b> 4:25 16:7 16:19 18:13,21 19:4,4 20:16 21:3 24:1 27:11,13,24 28:6 29:2 30:12,16 31:14,19 38:23,24 39:14,15,21 41:15 44:6 45:23,24 47:12,15,16 49:8,19	49:20 50:10,23 51:21 53:8,9,16,21 53:25 54:16,23 55:23 56:2 58:15 60:5,8,9 61:6 62:6 62:14 65:5,17,23,25 66:10 71:3 72:23 72:25 75:18,19,22 76:2,4,12 80:8 81:13 85:11 87:8 88:2 90:13 91:4 92:2,4,6 93:10 94:4 95:25 99:5 100:5,8 104:9,14 106:1,5 107:7,22,24,24 108:2,3,25 109:1,16 110:1 113:5,15,18 115:3,4,7,8,21,21 116:9,20 117:3 120:6,25 121:5 122:23 127:16,24 128:3 130:18,20 132:8,10,18 133:3,4 133:6,16,18 134:14 134:15 137:5 <b>Gomez (30)</b> 2:6 3:9 5:21,21 11:1,5,8,11 16:24 17:4 43:24 44:15 45:21 49:23 49:25 51:1,1 65:10 69:25 70:2,7,11,16 70:21 71:2 80:8 125:14 135:3,3 136:24 <b>good (22)</b> 12:20,21 21:10 43:1 47:21 57:1 67:23 72:22 74:9 78:6,7,8,21 81:2,8 83:1,1 90:10 108:24 109:6,14 117:23 <b>Gore (1)</b> 80:23 <b>gotten (2)</b> 47:7 87:6 <b>governing (1)</b> 135:14 <b>government (12)</b> 43:18 56:20 73:19 75:17,19 81:5 86:19 108:21 125:6 126:12 132:17,23 <b>governmental (2)</b> 72:19 85:20 <b>Governor (4)</b> 83:20 88:20 90:20 134:9 <b>Governor's (1)</b> 88:18 <b>grammatical (1)</b> 118:4 <b>grand (2)</b> 51:18 110:11 <b>grandchildren (1)</b> 115:8 <b>grant (7)</b> 7:1,15 8:15 8:23 9:2 11:13 12:15 <b>granted (1)</b> 7:18	<b>grants (1)</b> 9:9 <b>graph (2)</b> 98:16 108:25 <b>gravel (1)</b> 102:25 <b>great (16)</b> 7:1 9:21 13:16,16 16:11 17:8 19:11 35:15 36:6 37:11 54:8 58:1 62:2 79:25 134:20 137:16 <b>greater (4)</b> 16:12,17 39:20 95:9 <b>green (1)</b> 47:12 <b>greener (1)</b> 39:23 <b>greenhouse (3)</b> 84:9,9 90:2 <b>Greenland (17)</b> 86:8 96:20 99:22 100:1 100:3,7,13,17,22,22 102:3,13,15 104:16 104:23 105:1 106:2 <b>grew (1)</b> 125:3 <b>grey (1)</b> 20:1 <b>ground (3)</b> 96:3 124:12 126:10 <b>grounds (1)</b> 59:18 <b>groundwork (1)</b> 72:22 <b>group (4)</b> 6:22 40:18 80:24 129:13 <b>groups (1)</b> 89:18 <b>Grove (2)</b> 52:14,23 <b>grow (3)</b> 8:13 49:20 69:3 <b>growing (2)</b> 94:10 130:18 <b>grows (1)</b> 48:18 <b>guarantee (2)</b> 7:13 113:3 <b>guaranteed (1)</b> 7:11 <b>Guardian (1)</b> 96:15 <b>guess (3)</b> 4:11 77:9 107:15 <b>guidance (1)</b> 48:3 <b>guiding (1)</b> 74:14 <b>Guild (1)</b> 46:9 <b>guys (6)</b> 17:17 19:18 52:18 54:12 118:5 124:21
<b>G</b>				
<b>Gables (6)</b> 95:11,19 95:21,23 109:9 124:6 <b>gadgets (2)</b> 90:16 103:22 <b>Galen (1)</b> 121:24 <b>game (2)</b> 67:8 69:10 <b>Gardens (1)</b> 11:16 <b>GARY (1)</b> 3:2 <b>gases (2)</b> 84:9 90:3 <b>gavel (1)</b> 127:16 <b>general (3)</b> 32:19 34:22 134:25 <b>Generally (1)</b> 57:10 <b>generations (1)</b> 127:9 <b>generators (1)</b> 10:8 <b>gentleman (2)</b> 128:17 129:19 <b>genuine (1)</b> 130:2 <b>geologic (1)</b> 110:8 <b>geological (2)</b> 4:6 82:3 <b>geologist (1)</b> 120:2 <b>geology (1)</b> 59:19				
<b>H</b>				
<b>HABER (15)</b> 2:16 5:1 24:12 29:18 32:16 33:10 56:10,12 57:10 60:21 64:20 64:24 118:8,19,25 <b>hair (1)</b> 115:23 <b>Hal (4)</b> 76:18 83:3 106:6 119:23 <b>half (4)</b> 28:5 90:6 113:5 117:7 <b>halfway (1)</b> 100:21 <b>Hall (1)</b> 1:12 <b>hand (1)</b> 129:20				



<b>handed (1)</b> 113:22	<b>helps (3)</b> 42:15 85:14 135:19	<b>howerve (1)</b> 51:17	<b>impressed (1)</b> 13:22	<b>initiatives (4)</b> 8:6 42:18 63:20 73:24
<b>handle (3)</b> 4:25 61:6 113:6	<b>Henry (3)</b> 2:22 119:24 121:19	<b>huge (1)</b> 84:22	<b>impression (1)</b> 40:21	<b>inland (1)</b> 95:2
<b>handout (1)</b> 91:15	<b>hereinabove (1)</b> 138:12	<b>human (4)</b> 84:3,19 126:8 127:5	<b>improvement (3)</b> 7:19 10:17 11:10	<b>Inner- (1)</b> 85:19
<b>hands (1)</b> 48:7	<b>HHS (1)</b> 126:8	<b>hundred (3)</b> 100:10 101:10 102:3	<b>Improvements (2)</b> 8:5 10:3	<b>input (12)</b> 18:23 19:12 20:6,15
<b>Hanson (1)</b> 108:4	<b>Hi (1)</b> 6:8	<b>hurricane (2)</b> 112:14 125:17	<b>improving (5)</b> 9:6 10:8,10 21:19 71:23	27:18 28:15 29:10 29:12 45:21 66:21 76:14 81:3
<b>happen (14)</b> 48:20 69:16 74:24 87:4 91:2,2 94:7 107:7 110:6 115:21,21 118:9 125:11 136:9	<b>Hialeah (1)</b> 94:19	<b>hypothetically (1)</b> 26:11	<b>in-house (1)</b> 25:14	<b>inset (1)</b> 101:14
<b>happened (2)</b> 100:24 125:21	<b>high (15)</b> 80:24 84:21 87:6,6 91:18 92:6 94:17 95:24 96:3 98:20,20 107:11	<b>I</b>	<b>inadequate (1)</b> 14:5	<b>inside (3)</b> 9:4 105:23 133:5
<b>happening (11)</b> 10:22 35:5 39:21 47:16 47:21,25 48:6 77:19 87:3 104:16 105:10	109:11,12 132:20	<b>ice (57)</b> 84:16 86:7,7 86:25 87:2,12,20 88:4 96:18,20 97:11,12,13 98:4,19 98:23 99:9,22 100:10 101:4,11,13 101:18,20,23,25 102:3,5,10,11,11,16 102:22,23,23 103:2 103:5,8,10,13,14,15 103:20,21 104:3,8,9 104:18,22 105:3,5,7 105:13,14,21,22 108:3	<b>include (8)</b> 65:14 83:19 87:2,19 92:11 93:6 115:25 116:13	<b>instance (3)</b> 32:19 75:4 130:10
<b>happens (3)</b> 24:19 90:14 114:19	<b>higher (8)</b> 66:8 93:7 97:3 100:13,13 106:3 133:5,6	<b>Iceland (1)</b> 100:19	<b>including (1)</b> 94:1	<b>Institute (5)</b> 37:6 67:5 78:1 79:24 124:20
<b>hard (3)</b> 94:13 120:23 121:1	<b>highest (1)</b> 93:17	<b>idea (8)</b> 12:20,22 15:25 35:18 39:8 41:25 93:3 95:17	<b>income (1)</b> 8:24	<b>insurance (10)</b> 74:4 74:24 75:4,7,11 78:14,16 112:23 113:2,3
<b>Harold (5)</b> 3:12 82:1 82:16 122:14 128:11	<b>highly (1)</b> 130:6	<b>ideas (6)</b> 24:1 37:11 37:12 44:13 125:8 126:24	<b>inconsistent (1)</b> 26:11	<b>integrated (3)</b> 16:3 57:18 95:25
<b>hazard (2)</b> 6:3,10	<b>hiring (1)</b> 25:1	<b>identify (3)</b> 12:8 17:5 54:22	<b>incorporated (1)</b> 24:3	<b>intelligently (1)</b> 36:19
<b>hazardous (1)</b> 75:12	<b>historians (2)</b> 111:5,5	<b>ignoring (1)</b> 125:19	<b>increased (2)</b> 34:3 59:15	<b>inter- (2)</b> 97:1 126:9
<b>hazards (1)</b> 12:2	<b>historical (1)</b> 86:22	<b>images (1)</b> 103:5	<b>increases (1)</b> 48:19	<b>inter-glacial (1)</b> 98:21
<b>head (2)</b> 82:2 103:13	<b>historically (1)</b> 126:24	<b>imagination (1)</b> 127:4	<b>increasing (3)</b> 37:9 85:25 124:9	<b>interact (1)</b> 66:22
<b>headed (2)</b> 91:19,25	<b>history (2)</b> 111:6,6	<b>imagine (2)</b> 111:1 112:10	<b>incrementally (1)</b> 25:22	<b>interested (3)</b> 133:25 135:1 138:15
<b>header (3)</b> 45:15 58:6 60:16	<b>hit (1)</b> 106:23	<b>identified (11)</b> 10:15 10:16 14:7 15:19 20:18 43:6,8 55:24 56:7 60:3 66:25	<b>independently (1)</b> 14:5	<b>interesting (4)</b> 4:10 4:11 94:16 106:23
<b>heading (2)</b> 16:20 66:16	<b>hold (4)</b> 20:10 80:13 84:22 126:18	<b>ideas (6)</b> 24:1 37:11 37:12 44:13 125:8 126:24	<b>indiscernible (14)</b> 18:12 40:22 41:4 56:25 57:4,6,7 58:4 58:5 68:11 73:10 87:24 89:15 111:3	<b>interests (1)</b> 123:12
<b>heads (2)</b> 37:15 79:5	<b>holes (1)</b> 101:17	<b>identify (3)</b> 12:8 17:5 54:22	<b>individual (1)</b> 36:16	<b>interfaces (1)</b> 22:14
<b>health (2)</b> 126:8 132:19	<b>holidays (1)</b> 87:14	<b>ignoring (1)</b> 125:19	<b>individually (2)</b> 4:23 61:1	<b>intermediate (2)</b> 87:1 87:6
<b>hear (8)</b> 23:25 24:11 54:23 66:15 78:24 83:20 96:6 135:17	<b>holistic (5)</b> 14:1 16:3 51:25 63:14 65:12	<b>ignore (1)</b> 125:19	<b>induced (2)</b> 84:3,19	<b>internal (3)</b> 7:16 25:7 76:11
<b>heard (10)</b> 4:9 29:23 29:25 112:12 116:5 116:17 119:8,11,13 128:6	<b>home (3)</b> 9:3,6 133:16	<b>ignoring (1)</b> 125:19	<b>industrial (4)</b> 85:15 94:19 99:13 109:25	<b>internally (4)</b> 9:20 25:7 33:8 69:19
<b>hearing (2)</b> 27:5 132:3	<b>homeowners (1)</b> 75:10	<b>images (1)</b> 103:5	<b>industries (2)</b> 89:5 121:9	<b>interfaces (1)</b> 22:14
<b>heart (3)</b> 27:12 74:19 125:2	<b>homes (5)</b> 8:18,24 16:9 92:21 113:3	<b>imagination (1)</b> 127:4	<b>industry (2)</b> 78:13,15	<b>intermediate (2)</b> 87:1 87:6
<b>heat (6)</b> 39:18 84:14 84:19,22,25 85:11	<b>honestly (1)</b> 95:16	<b>imagine (2)</b> 111:1 112:10	<b>inform (2)</b> 68:1 77:20	<b>internal (3)</b> 7:16 25:7 76:11
<b>heating (1)</b> 84:18	<b>honor (1)</b> 73:18	<b>identified (11)</b> 10:15 10:16 14:7 15:19 20:18 43:6,8 55:24 56:7 60:3 66:25	<b>information (15)</b> 13:5 43:16 44:20,23,25 56:18,19 69:3 74:1 74:6 75:11 123:9 131:6,11,14	<b>interruption (1)</b> 69:21
<b>heats (1)</b> 84:11	<b>hope (6)</b> 69:11,16 71:1 81:2 85:13 113:17	<b>identify (3)</b> 12:8 17:5 54:22	<b>information (15)</b> 13:5 43:16 44:20,23,25 56:18,19 69:3 74:1 74:6 75:11 123:9 131:6,11,14	<b>interrupted (1)</b> 69:21
<b>heavens (1)</b> 59:17	<b>hopefully (7)</b> 49:19 55:12 67:25 68:7 113:16 127:14 130:19	<b>ignoring (1)</b> 125:19	<b>individually (2)</b> 4:23 61:1	<b>interview (1)</b> 96:14
<b>heed (1)</b> 4:11	<b>hopes (3)</b> 56:2,3 90:20	<b>ignore (1)</b> 125:19	<b>induced (2)</b> 84:3,19	<b>introduce (1)</b> 81:25
<b>held (2)</b> 3:2 32:10	<b>hoping (4)</b> 46:4 47:8 90:6 113:9	<b>images (1)</b> 103:5	<b>industrial (4)</b> 85:15 94:19 99:13 109:25	<b>introduced (1)</b> 5:13
<b>help (16)</b> 6:13 12:13 12:22 19:19 25:2 27:6 53:11 65:24 69:24 72:1,15 84:2 107:4 115:25 127:25 128:3	<b>horizontal (2)</b> 97:21 98:15	<b>imagination (1)</b> 127:4	<b>industries (2)</b> 89:5 121:9	<b>introductions (2)</b> 117:7,8
<b>helpful (2)</b> 73:7 82:12	<b>hospitals (1)</b> 63:9	<b>imagine (2)</b> 111:1 112:10	<b>industry (2)</b> 78:13,15	<b>inundated (1)</b> 97:24
<b>helping (3)</b> 11:21 74:15 89:6	<b>hot (1)</b> 85:9	<b>immensely (1)</b> 25:12	<b>inform (2)</b> 68:1 77:20	<b>inundation (4)</b> 79:17 90:25 110:5 133:9
	<b>hour (2)</b> 83:17 117:7	<b>impact (6)</b> 35:22 59:12 72:9 74:23 76:6,13	<b>information (15)</b> 13:5 43:16 44:20,23,25 56:18,19 69:3 74:1 74:6 75:11 123:9 131:6,11,14	<b>invent (1)</b> 127:5
	<b>house (11)</b> 53:19,20 53:24 54:1 91:20 95:11,13 113:10 125:6 126:5,6	<b>impacted (1)</b> 76:4	<b>information (15)</b> 13:5 43:16 44:20,23,25 56:18,19 69:3 74:1 74:6 75:11 123:9 131:6,11,14	<b>invented (2)</b> 127:1,2
	<b>housekeeping (2)</b> 117:20 131:11	<b>impacts (2)</b> 16:5 34:3	<b>information (15)</b> 13:5 43:16 44:20,23,25 56:18,19 69:3 74:1 74:6 75:11 123:9 131:6,11,14	<b>investment (5)</b> 114:10,11,18,21 121:9
	<b>houses (2)</b> 120:25 121:8	<b>implementation (1)</b> 27:2	<b>information (15)</b> 13:5 43:16 44:20,23,25 56:18,19 69:3 74:1 74:6 75:11 123:9 131:6,11,14	<b>investor (1)</b> 74:4
	<b>housing (1)</b> 18:20	<b>implemented (1)</b> 19:6	<b>information (15)</b> 13:5 43:16 44:20,23,25 56:18,19 69:3 74:1 74:6 75:11 123:9 131:6,11,14	<b>invite (7)</b> 5:9 6:2 77:2 77:9,17 80:9 123:3
		<b>important (23)</b> 22:24 34:20 38:23 39:2 44:2,3 52:15 56:5 84:1 89:25 93:5 96:23 97:15 98:14 99:19 121:6 122:7 123:9,14 128:7,7 134:5 135:6	<b>informed (2)</b> 68:1 77:20	<b>invited (3)</b> 116:4,4 131:16
		<b>impress (1)</b> 88:22	<b>information (15)</b> 13:5 43:16 44:20,23,25 56:18,19 69:3 74:1 74:6 75:11 123:9 131:6,11,14	



36:15 39:5 63:5 65:12 66:3 84:13 85:2 91:19 95:15 95:16 99:11 107:9 108:10,24 109:22 110:6,25 114:5,17 127:13 128:14 132:20 134:17 <b>looked (3)</b> 16:25 33:14 42:5 <b>looking (26)</b> 7:14,15 25:5 26:7 42:2 52:18 53:6,7 54:6 65:15,18 67:15 68:8 72:3 77:21 94:12 97:15 109:8 109:10,15 110:12 116:22 126:22 132:11,12 134:23 <b>looks (2)</b> 19:24 111:21 <b>lose (3)</b> 51:22 55:5 63:12 <b>lot (31)</b> 4:10 9:24 12:6 19:16 21:6 26:23 29:2 38:16 38:18 39:22 40:7 41:11,15 42:11 47:10 53:9 57:17 58:17 82:8,8 86:2 90:21 95:12 109:4 111:16 113:17 121:9,10,11 126:23 128:4 <b>love (4)</b> 49:4,4 92:3 135:17 <b>lovely (1)</b> 116:20 <b>low (12)</b> 8:24 87:1,11 91:2 94:21 96:12 98:24 106:20 108:25 109:5 132:20 134:17 <b>lower (5)</b> 97:14 98:24 104:19 105:4 116:13 <b>lowered (1)</b> 93:24 <b>lubricating (1)</b> 101:19 <b>lucky (1)</b> 78:5 <b>LUNDY (1)</b> 3:5 <b>luxury (1)</b> 126:17 <b>Lynn (2)</b> 92:2 100:4	79:14 <b>major (1)</b> 127:9 <b>majority (1)</b> 38:19 <b>making (12)</b> 25:20 26:20 40:18,22 72:10 101:5 114:11 117:2 119:2,3 133:25 134:24 <b>man (2)</b> 117:10,10 <b>manage (1)</b> 14:20 <b>manageable (1)</b> 127:8 <b>management (18)</b> 6:12 7:4 8:4 11:12 13:23 14:18 15:9 16:21 63:13 65:7 65:13 66:22 79:7 79:21 80:15 94:23 125:15 126:9 <b>manager (7)</b> 5:22 78:9 80:9,11 135:16,23 136:2 <b>manager's (2)</b> 66:23 80:5 <b>managers (1)</b> 135:15 <b>managing (1)</b> 90:17 <b>mandate (4)</b> 43:12,20 49:8 52:17 <b>mandated (3)</b> 21:4 41:16 48:16 <b>mandatory (1)</b> 19:16 <b>Mangrove (1)</b> 47:14 <b>Mangroves (11)</b> 47:18 71:24 72:8 72:11 135:18,19,22 136:16,19 137:1,2 <b>Mann (1)</b> 96:13 <b>manner (1)</b> 54:10 <b>map (2)</b> 63:19 109:22 <b>maps (9)</b> 63:17,18 91:19 92:10 93:8 93:13,18 109:11,11 <b>March (4)</b> 28:25 29:1 29:13 30:3 <b>Marco (1)</b> 11:14 <b>Marge (1)</b> 117:25 <b>Martin (2)</b> 2:11 78:20 <b>master (4)</b> 10:3,18 13:5 136:20 <b>materials (3)</b> 59:4,5 121:12 <b>Matt (10)</b> 4:25 12:9 24:9 29:17 32:11 56:6 57:8 60:20 64:19 117:24 <b>Matt's (1)</b> 64:16 <b>matter (6)</b> 50:3 61:9 75:19 111:10,11,11 <b>matters (1)</b> 33:5 <b>MATTHEW (1)</b> 2:16 <b>maximize (1)</b> 8:20 <b>Mayor (5)</b> 41:1 108:16 109:9 115:6 115:11 <b>Mayors (1)</b> 41:1	<b>mean (30)</b> 9:18 16:6 20:24 21:1 23:14 24:22 26:4,17 27:3 28:10,14,15 36:9 37:20 38:24 40:14 41:5 58:15 60:5 63:18 67:20 70:9 91:8,25 110:7 112:3,6 114:21 115:12 120:17 <b>meandering (1)</b> 104:10 <b>meaning (1)</b> 59:8 <b>meaningful (3)</b> 87:5 115:4,5 <b>meaningless (1)</b> 117:8 <b>means (5)</b> 59:23,24 62:15,22 64:7 <b>measure (1)</b> 65:18 <b>measured (1)</b> 52:25 <b>measures (2)</b> 8:17 71:20 <b>measuring (1)</b> 103:22 <b>mechanism (1)</b> 27:2 <b>mediators (1)</b> 126:11 <b>meet (9)</b> 6:21 15:16 17:16,17 22:18 33:19 63:2 94:10 130:20 <b>meeting (33)</b> 4:3,18 5:2,5 12:18 13:21 17:22 22:23 28:10 28:11 29:5 31:25 32:2 45:17 55:20 58:8 60:9,17 61:2 64:18 74:4 78:5 88:18,20 108:15 116:3 117:6 127:17 127:18 130:3 131:18 136:12 137:17 <b>meetings (10)</b> 28:19 31:23 50:5,20 65:9 65:11 66:21 69:5 76:20 83:21 <b>meets (2)</b> 21:25 38:3 <b>melt (19)</b> 4:7 82:4 86:7,7,25 87:2,13 87:20 96:19 99:22 100:12 101:22 102:10,16 104:20 104:23 105:1,25 108:3 <b>melted (3)</b> 101:13,18 105:8 <b>melting (8)</b> 88:4 99:25 100:23 101:16,22 104:12 105:12,18 <b>member (1)</b> 69:1 <b>members (12)</b> 2:3,10 5:12,24 31:21 49:21 66:17 78:19	79:20 117:22 127:19 134:21 <b>mention (1)</b> 4:13 <b>mentioned (6)</b> 17:19 49:13 65:10,19 68:3 131:25 <b>merit (1)</b> 14:8 <b>mess (1)</b> 89:16 <b>message (3)</b> 135:10 136:3,12 <b>met (3)</b> 82:5 83:12 131:5 <b>meter (1)</b> 100:17 <b>meters (6)</b> 97:14 100:11,17 103:1 105:24 108:5 <b>methane (1)</b> 84:10 <b>method (1)</b> 111:24 <b>methods (1)</b> 26:1 <b>Metro (1)</b> 97:5 <b>MIA (1)</b> 93:20 <b>Miami (87)</b> 1:1,12,15 4:6 6:4 8:18 13:8 14:3,21,24 15:9 20:24 21:10,17,19 21:24 22:15 24:18 24:22 25:5,15,21,25 26:12,12 27:12 30:7,8 33:20 34:21 36:17 37:16,16 41:1,6,7 42:17 43:15 46:10,23 47:3,6 52:9 54:6,8 56:17 72:1 76:19 77:4,7,15,22 78:10 82:4 83:4,15 88:25 90:16 92:20 93:13 93:16,19,21,23 94:1 94:14 97:23 106:19 107:13 114:11 115:6 116:3,8 121:23 122:1,18 125:1 126:14,17,20 126:22,23,25 127:3 133:1 134:12,12 <b>Miami- (2)</b> 94:12 128:19 <b>Miami-Dade (6)</b> 6:19 46:23 91:14 92:7 94:22 95:9 <b>Michael (1)</b> 96:13 <b>micro- (2)</b> 14:9 15:2 <b>micro-level (1)</b> 16:11 <b>microscopic (1)</b> 51:12 <b>middle (3)</b> 97:12,17 114:5 <b>Miguel (1)</b> 80:11 <b>mile (2)</b> 97:12 124:6 <b>miles (4)</b> 101:10 102:3 104:5,21 <b>millimeters (1)</b> 86:12 <b>million (7)</b> 9:19 92:20 98:22 99:6,12,17 110:9	<b>mind (2)</b> 33:16 127:5 <b>mine (1)</b> 126:15 <b>minor (1)</b> 118:6 <b>minute (3)</b> 92:11 101:9 110:3 <b>minutes (17)</b> 4:14,18 4:24 5:2 30:10,20 46:2 50:24 53:14 53:15 65:6 76:17 83:17,22 117:6 122:24 136:23 <b>Miracle (1)</b> 124:6 <b>misnomer (1)</b> 70:3 <b>missed (2)</b> 38:20 74:5 <b>missing (2)</b> 20:14 132:24 <b>mission (18)</b> 30:24 31:10,21 32:15 35:1 38:13 43:20 45:19 46:5,11,19 48:10 55:21 56:10 56:15 58:1 61:11 128:8 <b>mistake (1)</b> 114:23 <b>MITCHELL (1)</b> 3:7 <b>mitigate (2)</b> 6:14 44:15 <b>mitigating (3)</b> 59:21 136:19,25 <b>mitigation (25)</b> 6:3,5 6:10,18,19,21 7:6,9 7:18,21,23 8:16,17 9:1,5,13 11:7 35:21 36:23 44:14 46:14 47:24 50:9 64:6 135:20 <b>mode (1)</b> 67:20 <b>model (2)</b> 34:22 40:3 <b>models (6)</b> 96:11,16 96:20,22 97:16 98:11 <b>modern (1)</b> 59:7 <b>modif (1)</b> 118:21 <b>modifications (1)</b> 30:7 <b>modified (1)</b> 24:23 <b>modify (6)</b> 25:2 34:7 42:18 67:9,11 111:11 <b>modifying (6)</b> 20:23 25:24,25 35:15 42:16 77:7 <b>moment (1)</b> 35:12 <b>money (10)</b> 16:7 19:25 51:24 90:21 107:12,15 108:1 116:11 121:5 132:10 <b>month (8)</b> 18:9 28:5 29:3 122:21 123:6 125:1 127:14 130:21 <b>monthly (2)</b> 66:21 92:12
<b>M</b>				
<b>machine (1)</b> 93:1 <b>mailing (1)</b> 46:10 <b>main (2)</b> 22:13 63:1 <b>mainland (2)</b> 11:18 94:17 <b>mainstream (1)</b> 125:20 <b>maintain (3)</b> 91:22 94:20 109:19 <b>Maintenance (1)</b>				

<p><b>months (5)</b> 22:9 26:19 28:6,24 48:24</p> <p><b>moons (1)</b> 92:16</p> <p><b>Morales (1)</b> 78:9</p> <p><b>Morè (1)</b> 77:3</p> <p><b>morning (2)</b> 13:22 74:3</p> <p><b>mortgage (2)</b> 123:19 123:21</p> <p><b>mortgages (1)</b> 112:22</p> <p><b>motion (14)</b> 24:11,14 24:15 27:8,21,25 29:6,8 30:1 57:20 119:2,3,14 137:12</p> <p><b>move (14)</b> 16:4 17:12 23:24 76:15 101:20 101:24 107:4 115:25 118:20 120:17 121:6 128:20 133:7,8</p> <p><b>moved (1)</b> 100:10</p> <p><b>movement (1)</b> 121:10</p> <p><b>moving (6)</b> 5:6 44:6 50:12 100:12 113:15 120:16</p> <p><b>mulans (1)</b> 101:18</p> <p><b>multiple (1)</b> 79:12</p> <p><b>municipal (2)</b> 43:17 56:20</p> <p><b>municipalities (4)</b> 6:20 14:20 25:1 36:17</p> <p><b>Murley (17)</b> 2:8 5:18 5:18 19:10 26:4 28:25 38:15 40:12 72:18 73:9,11,16 77:25 118:20 119:1 119:3 134:5</p> <p><b>mutual (1)</b> 24:5</p> <p><b>Myer (7)</b> 3:10 121:23 121:23 122:1 123:2 123:5,8</p> <hr/> <p style="text-align: center;"><b>N</b></p> <hr/> <p><b>name (11)</b> 46:7,8 50:24 52:7,8 68:15 81:9 118:12 119:22 121:21 129:22</p> <p><b>Nancy (3)</b> 78:2,4,6</p> <p><b>nation (1)</b> 96:14</p> <p><b>national (3)</b> 86:20 103:17 113:1</p> <p><b>native (1)</b> 122:1</p> <p><b>natural (13)</b> 10:7 36:25 37:2 47:20 71:8,9,23 72:1 98:18 110:14 135:19 136:15,15</p> <p><b>naturals (1)</b> 72:15</p> <p><b>nature (3)</b> 51:5 120:5 125:9</p> <p><b>navigate (1)</b> 112:11</p> <p><b>NBR/IMG (1)</b> 138:25</p>	<p><b>near (3)</b> 86:13 100:25 103:12</p> <p><b>necessarily (3)</b> 34:17 39:21 57:25</p> <p><b>necessary (1)</b> 24:24</p> <p><b>neck (1)</b> 115:24</p> <p><b>need (28)</b> 12:20 14:22 15:25 16:12 23:7 27:7 30:17 35:7,19 43:9 46:18 51:8 53:11 60:11 62:16 63:5 66:6 70:12,19 72:7 79:16 106:7 109:16,25 115:2 118:3,9 121:1</p> <p><b>needed (1)</b> 75:21</p> <p><b>needs (4)</b> 9:5 41:16 41:21,21</p> <p><b>neglected (1)</b> 40:2</p> <p><b>negotiable (1)</b> 87:10</p> <p><b>neighborhood (3)</b> 17:21 68:4,10</p> <p><b>neighborhoods (2)</b> 16:10 28:8</p> <p><b>nest (1)</b> 129:9</p> <p><b>new (46)</b> 23:22 31:24 33:5,20 35:11 42:4 67:16,16 73:19 86:17 87:14 92:6 92:18 94:3 106:22 106:24,24 112:5 121:7,7,8,8,8,11,12 121:12,12 122:2,3 122:17,19 124:4,15 124:15,18,20 125:16 126:13,16 126:17,23,24 127:1 127:3,22 136:20</p> <p><b>nice (7)</b> 17:16,17 70:23 91:10 93:18 95:17 96:10</p> <p><b>Nick (2)</b> 138:7,20</p> <p><b>night (1)</b> 101:7</p> <p><b>Nine (1)</b> 95:9</p> <p><b>nitrous (1)</b> 84:10</p> <p><b>non-profit (1)</b> 125:7</p> <p><b>non-traditional (1)</b> 7:15</p> <p><b>normal (1)</b> 93:7</p> <p><b>north (2)</b> 46:10 98:4</p> <p><b>Northeast (1)</b> 131:22</p> <p><b>note (2)</b> 18:6 129:10</p> <p><b>noted (1)</b> 62:16</p> <p><b>notes (1)</b> 60:25</p> <p><b>notice (2)</b> 89:21 94:3</p> <p><b>notices (2)</b> 130:13,23</p> <p><b>November (7)</b> 17:18 19:2,7 20:3 23:4,17 92:14</p> <p><b>nuclear (1)</b> 94:4</p> <p><b>number (3)</b> 52:13 90:9 116:21</p> <p><b>numbers (4)</b> 86:17 91:1,4 122:13</p>	<p style="text-align: center;"><b>O</b></p> <hr/> <p><b>Obi (2)</b> 79:10,11</p> <p><b>objection (1)</b> 56:14</p> <p><b>objectives (2)</b> 41:6 46:20</p> <p><b>obligated (1)</b> 55:16</p> <p><b>obligation (1)</b> 54:18</p> <p><b>Obscura (1)</b> 79:8</p> <p><b>obviously (6)</b> 14:6 22:21,24 32:6 54:23 80:17</p> <p><b>occasion (1)</b> 74:18</p> <p><b>occurred (2)</b> 19:14 84:18</p> <p><b>occurrence (1)</b> 9:11</p> <p><b>occurring (2)</b> 96:21 136:6</p> <p><b>occurs (1)</b> 105:18</p> <p><b>ocean (15)</b> 39:14,18 85:1 86:4 87:11 88:3,3,23 90:2,13 90:19 102:14 106:1 113:19 116:12</p> <p><b>oceans (3)</b> 59:13 84:18,20</p> <p><b>October (1)</b> 92:14</p> <p><b>office (4)</b> 4:16 66:23 80:5 124:3</p> <p><b>Officer (2)</b> 36:12 73:20</p> <p><b>officers (2)</b> 65:24 66:9</p> <p><b>official (2)</b> 36:13 70:18</p> <p><b>officials (4)</b> 18:22 42:14 67:10 80:3</p> <p><b>offshoots (1)</b> 49:10</p> <p><b>oh (4)</b> 18:13 91:20 95:2 133:3</p> <p><b>okay (56)</b> 5:3,23 10:1 10:24 12:24 16:18 16:24 17:8,16 22:12 29:14,19 30:15,18,22 32:12 32:24 33:12 35:3 36:14 40:17 46:15 47:4 52:2 54:16 56:13,23 57:12,13 58:14 64:13,24 65:10 66:13 70:7 70:11 77:23 78:8 81:22,24 83:13 85:12 86:15 91:18 106:21 107:21 118:6,24 119:4,6 123:5 129:15,19 131:20 133:19 137:12</p> <p><b>Okay.Now (1)</b> 119:16</p> <p><b>Okies (1)</b> 113:8</p> <p><b>old (3)</b> 67:19 98:1 102:25</p> <p><b>on-going (5)</b> 73:24 136:4,5,8 137:7</p>	<p><b>on-line (1)</b> 124:21</p> <p><b>once (4)</b> 4:20 109:7,7 130:20</p> <p><b>ones (5)</b> 10:13 11:11 12:9 39:6 69:13</p> <p><b>open (2)</b> 31:2 117:16</p> <p><b>openly (1)</b> 55:18</p> <p><b>operate (1)</b> 72:20</p> <p><b>Operations (1)</b> 79:14</p> <p><b>opinion (3)</b> 40:14 46:18 88:12</p> <p><b>opportunities (4)</b> 51:23 121:11 123:16 133:22</p> <p><b>opportunity (5)</b> 19:11 32:23 121:6,15,17</p> <p><b>opposed (3)</b> 29:22 57:2 119:10</p> <p><b>orbit (1)</b> 99:2</p> <p><b>ordinances (1)</b> 67:16</p> <p><b>originated (1)</b> 126:24</p> <p><b>Orlando (1)</b> 90:24</p> <p><b>Orleans (2)</b> 126:16 126:17</p> <p><b>ourself (3)</b> 98:19 99:1 133:4</p> <p><b>outlet (1)</b> 102:18</p> <p><b>outlined (2)</b> 95:19,23</p> <p><b>outlying (1)</b> 104:21</p> <p><b>outpaced (1)</b> 47:15</p> <p><b>outreach (6)</b> 18:8 28:7,13 66:18 69:4 71:5</p> <p><b>outside (4)</b> 9:5 25:1,6 45:1</p> <p><b>overall (4)</b> 13:23 15:10 56:1 104:8</p> <p><b>overarching (1)</b> 46:19</p> <p><b>overlap (1)</b> 71:22</p> <p><b>overlapping (1)</b> 13:2</p> <p><b>oversight (3)</b> 135:12 135:25 136:2</p> <p><b>overviews (1)</b> 13:4</p> <p><b>oxide (1)</b> 84:10</p> <hr/> <p style="text-align: center;"><b>P</b></p> <hr/> <p><b>P-3 (1)</b> 75:14</p> <p><b>p.m (2)</b> 1:20,20</p> <p><b>painful (1)</b> 15:4</p> <p><b>Palmetto (1)</b> 94:25</p> <p><b>Pan (1)</b> 1:14</p> <p><b>Panel (1)</b> 85:20</p> <p><b>panels (2)</b> 37:8 126:3</p> <p><b>pans (1)</b> 92:15</p> <p><b>Paradise (1)</b> 46:9</p> <p><b>parallel (1)</b> 26:18</p> <p><b>parameters (1)</b> 40:9</p> <p><b>paramount (1)</b> 26:14</p> <p><b>Paris (1)</b> 90:4</p> <p><b>parochial (1)</b> 73:17</p> <p><b>Parson (1)</b> 122:3</p> <p><b>part (20)</b> 6:20 18:25 21:20 28:13,18</p>	<p>41:6 44:9 57:6,20 86:20 94:17 95:24 98:7,7,20,23,24 105:4 117:2,13</p> <p><b>partially (1)</b> 9:6</p> <p><b>particular (2)</b> 60:22 68:9</p> <p><b>particularly (2)</b> 21:16 71:15</p> <p><b>parties (2)</b> 138:14,15</p> <p><b>partnering (1)</b> 8:21</p> <p><b>partnership (1)</b> 75:16</p> <p><b>parts (5)</b> 98:22 99:6 99:12,17 134:12</p> <p><b>pass (2)</b> 12:21 127:16</p> <p><b>passed (6)</b> 19:23 24:3 31:11 48:16 55:3 107:19</p> <p><b>passes (2)</b> 30:2 119:14</p> <p><b>passing (2)</b> 107:16 122:18</p> <p><b>passionate (1)</b> 78:22</p> <p><b>Pathman (137)</b> 2:4 4:5,22 5:3,10,23 6:6 9:14,22 10:1,12 10:24 11:19 12:7 12:12,19 13:19 15:15 16:18,25 17:8,11,16 19:9 20:8 22:16 23:22 24:9,13 27:7 28:22 29:1,14,16,19,22,24 30:1,9,12,16,20,23 32:2,11 33:1,12 38:11 42:25 44:14 44:16 45:5,23 48:13 49:24 50:23 52:4 54:14 56:11 56:13 57:1,5,8,12 57:20 60:1 61:16 61:23 62:2,6,21 64:13,22,25 66:13 68:2,12,15,19,25 69:23 70:1,5,8,12 70:17,22 71:3 72:17 73:2,10,15 74:9 77:11,13,23 78:8 80:1,17 81:12 81:24 82:20,23,25 83:14,19,24 106:6 106:10 107:18 108:13 110:17 113:22 116:4 117:15 118:1,11 119:2,4,6,10,12,14 121:19,25 122:22 123:3,6 127:13 128:14 129:10,15 130:8,12,17,23 133:15</p> <p><b>Patrick (3)</b> 2:20 52:8 68:17</p> <p><b>pauses (2)</b> 98:9,10</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------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<b>pay (1)</b> 107:17	101:15 102:1,1,4,21	44:8 45:22 51:3	<b>presented (3)</b> 98:18	132:17,23
<b>paying (1)</b> 111:18	104:1,7	73:17 77:16 91:24	99:1 124:22	<b>projections (5)</b> 86:18
<b>pending (3)</b> 19:20,22 135:8	<b>pictured (1)</b> 120:4	96:15 109:18 114:3	<b>presently (1)</b> 114:9	87:16,19 108:21
<b>penetrate (3)</b> 93:11 102:19 103:7	<b>pictures (3)</b> 91:13 104:14 108:11	121:2,3 126:22	<b>President (1)</b> 46:9	115:16
<b>penetrated (1)</b> 104:20	<b>piece (1)</b> 96:2	<b>pointed (1)</b> 105:16	<b>Press (1)</b> 5:15	<b>projects (39)</b> 6:13,17
<b>people (36)</b> 31:11	<b>piles (2)</b> 102:24 103:2	<b>pointer (1)</b> 85:24	<b>pressure (1)</b> 46:21	6:22,23,25 7:12,19
38:24 59:24 64:17	<b>Pine (2)</b> 104:18 105:3	<b>pointing (1)</b> 103:10	<b>pretty (8)</b> 33:18	7:21,24 8:9,10 9:10
65:24 66:16 68:23	<b>Pinecrest (1)</b> 107:8	<b>points (1)</b> 43:1	52:17 62:18 95:24	9:10,12,17,19,22,25
69:15 70:23 76:22	<b>pixels (1)</b> 109:14	<b>polar (1)</b> 96:20	108:11 109:14	10:5,5,9,11,12,19
81:3 82:5 84:2,11	<b>place (12)</b> 19:7,19	<b>police (4)</b> 8:3 65:14	112:15 130:4	10:23 11:2,24 12:6
89:17 91:19 92:4	23:15 49:18 72:5	65:24 66:8	<b>prevent (1)</b> 114:6	12:16 13:6 14:8,8
95:18 96:5,6	88:6 92:1 103:3	<b>polices (1)</b> 67:16	<b>preventing (1)</b> 107:9	17:5 35:17 50:9
101:14 107:4 112:7	116:20 125:2 133:1	<b>policies (1)</b> 19:5	<b>primarily (1)</b> 86:4	71:19 72:3 75:15
112:21 115:23,25	138:11	<b>policy (5)</b> 5:20 122:8	<b>prime (1)</b> 28:9	75:20
116:15,24 120:3,23	<b>places (3)</b> 95:3	125:20 126:4,11	<b>primer (1)</b> 124:22	<b>promising (1)</b> 19:24
121:16 126:14	116:21 128:21	<b>policy-makers (1)</b>	<b>prior (1)</b> 61:2	<b>proof (1)</b> 42:8
127:22,23 133:7,15	<b>plan (44)</b> 10:3,18	68:1	<b>priorities (2)</b> 13:6	<b>property (1)</b> 92:22
<b>percent (4)</b> 7:5 84:19	13:5 17:2,20,21	<b>political (4)</b> 47:8	111:19	<b>proposal (1)</b> 132:25
95:9 100:22	18:8,10,16,24 20:9	89:18 124:14 125:5	<b>prioritization (1)</b>	<b>proposed (2)</b> 20:17
<b>percolate (1)</b> 101:23	20:14,17,23 21:2,7	<b>politics (1)</b> 14:18	40:18	39:5
<b>percolating (1)</b>	21:21 22:3,14,20	<b>polluted (1)</b> 133:10	<b>prioritize (1)</b> 11:25	<b>proposing (1)</b> 54:21
102:11	24:1 25:25 26:7,10	<b>poor (1)</b> 16:9	<b>prioritizing (1)</b> 8:8	<b>protect (1)</b> 42:7
<b>perfect (2)</b> 52:20	26:15,21,24 27:4,15	<b>population (1)</b> 94:10	<b>pro-active (1)</b> 137:5	<b>protecting (3)</b> 64:4
64:25	27:23 29:11 36:8	<b>porous (3)</b> 59:18 91:8	<b>pro-actively (1)</b> 67:6	72:7,16
<b>perfected (3)</b> 126:25	67:8 69:10 81:20	91:9	<b>probably (12)</b> 20:14	<b>protection (1)</b> 71:24
127:2,3	88:5 109:6 113:7	<b>portion (2)</b> 54:17	22:22 26:5 49:6,15	<b>provide (11)</b> 8:17
<b>perfectly (1)</b> 61:10	132:1,5,8,18,19	56:24	75:4 76:4 96:12	15:13 19:12 29:10
<b>period (5)</b> 18:6 22:20	136:20	<b>ports (1)</b> 63:9	108:7,17 112:14	29:12 32:23 44:22
23:7 32:20 126:19	<b>planet (1)</b> 35:22	<b>position (3)</b> 73:6,19	134:15	60:15 71:24 72:15
<b>permanent (3)</b> 34:1	<b>planned (1)</b> 72:5	73:19	<b>problem (11)</b> 51:18	74:1
41:9 42:9	<b>planner (2)</b> 17:13	<b>possible (4)</b> 12:7	55:1 69:23 81:4,4	<b>provided (1)</b> 138:10
<b>permit (2)</b> 35:10,11	35:2	41:24 116:23,23	85:6 96:11 105:13	<b>providing (1)</b> 72:4
<b>person (5)</b> 13:15	<b>planning (30)</b> 6:23	<b>posted (2)</b> 130:24	108:23 120:10,10	<b>public (52)</b> 8:4 16:15
48:20 50:7 78:21	16:4,15 17:14,14	131:1	<b>problems (3)</b> 49:4	18:22 28:7,13 32:5
135:1	20:11 23:6,10,11	<b>posting (1)</b> 130:12	53:10 127:6	32:13,14,16,20 33:3
<b>personal (2)</b> 35:8	25:4 27:10 29:9	<b>potential (6)</b> 64:9	<b>procedure (2)</b> 5:4	43:17 45:3,21,25
40:17	30:5 63:15 66:14	75:14 76:19,24	120:3	46:6 49:21 52:5
<b>personalize (1)</b> 54:5	67:1,7 69:17,20	77:24 83:17	<b>process (19)</b> 8:11	54:17,24 56:19
<b>perspective (5)</b> 33:17	74:12,18 80:4	<b>potentially (2)</b> 23:1	11:13 21:4,20	60:19 65:9,12,14
65:11,17 80:14	87:22 88:24 93:5	77:20	24:20 25:11,13	66:14,21 69:4,9,15
125:15	111:10,24 114:2,7	<b>pouring (1)</b> 93:22	26:15 28:3 42:17	70:10 71:6 75:21
<b>pertinent (1)</b> 18:22	132:13	<b>pours (1)</b> 96:3	44:18 52:2 59:3	76:14 80:5 81:2
<b>Pete (9)</b> 2:6 16:18	<b>plans (1)</b> 35:7	<b>power (1)</b> 94:4	68:1 77:6 105:17	113:21 117:17
49:24 65:5 66:13	<b>planting (1)</b> 136:19	<b>practical (3)</b> 53:9	130:2,7 131:4	119:17 125:9
70:1 80:1,7 125:14	<b>plants (2)</b> 94:4	54:7,10	<b>processes (2)</b> 26:2	127:20 129:25
<b>Peter (1)</b> 5:21	109:24	<b>practicing (1)</b> 33:17	120:5	130:1,7 131:16,21
<b>philanthropic (1)</b>	<b>play (2)</b> 17:3 64:3	<b>pragmatics (1)</b>	<b>proclamation (1)</b>	133:22,25 134:21
125:7	<b>playing (2)</b> 106:11,14	111:22	51:11	134:25 137:8,11
<b>philosophy (1)</b> 35:18	<b>plays (1)</b> 12:6	<b>pre-disaster (1)</b> 7:9	<b>proclamations (1)</b>	<b>public/private (1)</b>
<b>phone (1)</b> 81:1	<b>please (14)</b> 5:25	<b>pre-industrial (1)</b>	51:13	75:16
<b>phonetic (15)</b> 77:3	43:14 46:7 50:25	90:8	<b>producing (1)</b> 42:3	<b>Publix (2)</b> 97:6,7
78:3 79:5,9,10	52:6 68:12,16	<b>predicted (3)</b> 96:20	<b>production (1)</b> 131:7	<b>Puerto (1)</b> 122:19
80:10,12 81:11	83:19 119:21,22	96:22 100:24	<b>professor (9)</b> 76:17	<b>pull (2)</b> 89:6 104:23
92:18 93:12 100:21	121:21 129:21,21	<b>predominant (1)</b> 26:8	82:1,10,16 119:17	<b>pulling (2)</b> 90:2,15
101:18 104:25	131:14	<b>presence (1)</b> 30:5	122:2,3,4 129:16	<b>pulses (4)</b> 97:19 98:3
109:8 129:13	<b>pleasure (3)</b> 6:6	<b>present (6)</b> 2:3,18 3:1	<b>program (6)</b> 8:16 9:1	98:9,10
<b>physical (3)</b> 36:23	13:21 74:13	80:13 109:22	11:10 14:20 75:7	<b>pump (1)</b> 114:14
37:1 64:10	<b>plus (1)</b> 93:18	132:16	136:21	<b>pumps (1)</b> 54:10
<b>pick (1)</b> 108:21	<b>podium (3)</b> 68:12	<b>presentation (6)</b> 13:4	<b>progress (1)</b> 67:12	<b>purpose (1)</b> 50:13
<b>picks (3)</b> 73:20 86:1,1	119:23 129:21	13:13,16 110:21	<b>project (5)</b> 7:11 11:15	<b>purposes (1)</b> 45:8
<b>picture (12)</b> 14:11,25	<b>point (21)</b> 20:10	122:20 124:25	11:17 14:10 135:23	<b>pushed (1)</b> 105:14
16:12 100:20 101:6	32:21,22,23 36:21	<b>presentations (2)</b>	<b>projected (1)</b> 86:23	<b>pushing (2)</b> 13:9
	39:16 40:15 43:1	79:13 124:19	<b>projecting (1)</b> 88:14	109:5
			<b>projection (3)</b> 115:5	<b>put (12)</b> 26:10,20

40:7 51:4 61:22 62:12 72:5 86:21 89:14 107:14 108:1 115:17 <b>putting (6)</b> 37:25 48:2 58:19 62:10 118:1 137:8 <b>PZAB (1)</b> 23:10	60:11,14 61:10,12 61:18 62:3,20 64:15 81:15 82:11 117:23 126:7 <b>reading (5)</b> 23:4,9 58:12 61:17 62:13 <b>ready (6)</b> 4:19,21,22 9:11,12 131:7 <b>reaffirmed (1)</b> 14:1 <b>real (10)</b> 54:4 103:4 116:18 132:12,13 132:23 134:11,11 134:14 136:6 <b>realistic (2)</b> 132:4 133:13 <b>realistically (1)</b> 51:14 <b>reality (5)</b> 89:19 107:1,2 116:11 134:17 <b>realize (2)</b> 85:2 91:25 <b>really (37)</b> 17:17 19:11 22:13 27:1 28:6 33:21 35:13 35:24 41:12 54:8 59:2 64:7 67:22 71:25 72:14,19 73:3 76:16 79:8 85:13 110:24,24 111:16,18,21,23 116:7 122:7 124:10 125:16,20 127:20 128:11 135:6,21 136:11,11 <b>reason (3)</b> 40:23 52:21 90:10 <b>reasonable (1)</b> 90:18 <b>rebuilding (1)</b> 107:5 <b>received (1)</b> 56:19 <b>recess (1)</b> 23:8 <b>recharges (1)</b> 71:18 <b>recognition (1)</b> 40:19 <b>recognize (3)</b> 39:2 91:24 120:9 <b>recognized (2)</b> 50:6 50:20 <b>recommend (7)</b> 5:1 23:3 55:12 79:4 80:8,20 130:6 <b>recommendation (1)</b> 64:16 <b>recommendations (7)</b> 21:16 43:15 50:11 56:17 60:20 71:14 124:13 <b>record (23)</b> 32:10,12 33:10 45:9,13,16 50:25 56:7,24 57:2 57:11,15 58:12 60:12,15 61:13,19 62:4,11,13 64:15 119:22 121:22 <b>recorded (1)</b> 138:8 <b>records (1)</b> 10:10 <b>recovery (2)</b> 6:3,10	<b>recruitment (2)</b> 47:14 47:20 <b>recycled (2)</b> 59:4,4 <b>red (5)</b> 84:14 98:16 98:20 100:14 103:25 <b>redesigning (1)</b> 124:6 <b>reduce (3)</b> 64:7 72:9 88:13 <b>reduced (1)</b> 7:10 <b>reducing (6)</b> 34:16,16 38:25 39:12,23 64:9 <b>reduction (2)</b> 73:22 79:18 <b>reductions (1)</b> 59:1 <b>reef (1)</b> 97:10 <b>reefs (3)</b> 72:9 98:2,2 <b>refined (1)</b> 24:23 <b>reflectivity (1)</b> 102:5 <b>REGALADO (1)</b> 2:12 <b>regard (2)</b> 46:11 47:6 <b>regards (3)</b> 27:8 33:18 38:12 <b>region (3)</b> 72:21 122:7,9 <b>register (1)</b> 129:12 <b>regular (1)</b> 66:20 <b>regularly (1)</b> 65:9 <b>regulate (1)</b> 62:24 <b>rehab (1)</b> 8:24 <b>rehabbed (2)</b> 9:3,3 <b>Reinaldo (29)</b> 2:7 5:14,17 13:19 15:15 20:20 23:1 24:13 27:9 28:1 29:6 30:17 31:4 32:8 38:15 45:9 49:2 54:20 56:7,23 57:14 60:14 61:16 64:13 65:1 67:1 74:18 76:22 81:9 <b>Reinaldo's (1)</b> 81:8 <b>reinforce (2)</b> 16:14 42:7 <b>relate (2)</b> 17:5 75:2 <b>related (10)</b> 12:10,15 13:6 14:2 16:23 19:5 22:19 31:15 74:24 138:14 <b>relates (4)</b> 15:19 20:15 69:12 78:15 <b>relating (1)</b> 25:16 <b>relationship (4)</b> 25:24 26:6 70:14 126:10 <b>relevant (1)</b> 44:24 <b>relies (1)</b> 71:16 <b>remember (1)</b> 84:21 <b>reminds (1)</b> 131:10 <b>repeat (1)</b> 8:11 <b>replace (1)</b> 111:14 <b>report (15)</b> 5:6,25 6:1 12:22 17:11 45:11	60:23 61:7 66:20 76:12 85:21 117:21 118:15,22 119:15 <b>reported (2)</b> 15:2 74:7 <b>REPORTER (1)</b> 138:1 <b>reporting (6)</b> 65:8 67:12 73:25 74:17 75:1 76:6 <b>representative (1)</b> 79:23 <b>representing (1)</b> 106:18 <b>requires (1)</b> 57:17 <b>requiring (1)</b> 75:10 <b>Rescue (1)</b> 6:11 <b>research (1)</b> 103:18 <b>researchers (1)</b> 117:11 <b>reside (1)</b> 122:2 <b>resident (2)</b> 5:18 73:14 <b>Residential (2)</b> 8:16 8:25 <b>residents (1)</b> 8:25 <b>residents' (1)</b> 8:18 <b>resilience (3)</b> 72:16 72:25 73:20 <b>resiliency (22)</b> 8:19 11:23 14:2 16:4,17 34:6,12 36:11 39:9 41:13 49:16,16 50:8 63:11 72:4 74:13 77:2,16 80:23 88:10 126:2 126:3 <b>resilient (11)</b> 15:14 21:18 37:3 38:4 41:8 42:20 51:2 72:2 95:17,18 125:25 <b>resistant (2)</b> 92:8,9 <b>resolution (11)</b> 12:21 31:11 33:15 40:6 41:2 48:16 54:19 109:11,12 118:5 119:15 <b>resolutions (1)</b> 24:2 <b>resources (7)</b> 45:2 69:7 71:8,10 72:8 72:15 133:8 <b>respect (3)</b> 52:11 62:9 109:4 <b>responding (2)</b> 21:4 23:19 <b>response (1)</b> 53:5 <b>responses (6)</b> 29:21 29:23,25 119:8,11 119:13 <b>responsibility (3)</b> 58:20 135:24 136:1 <b>responsible (2)</b> 80:15 117:4	<b>rest (2)</b> 12:19 53:12 <b>restoration (5)</b> 10:7 64:3 71:13,20 72:3 <b>resultant (1)</b> 98:8 <b>resumè (1)</b> 126:7 <b>retreat (2)</b> 47:25 127:9 <b>retreating (1)</b> 103:16 <b>retrospect (1)</b> 51:16 <b>return (2)</b> 114:17,20 <b>reversible (1)</b> 84:25 <b>review (7)</b> 18:7,10 19:1,1 25:10 31:1,5 <b>reviewed (1)</b> 43:16 <b>Revolution (2)</b> 85:16 99:13 <b>rich (1)</b> 116:15 <b>Rick (1)</b> 117:5 <b>Rico (1)</b> 122:19 <b>rid (1)</b> 87:7 <b>ridge (1)</b> 128:21 <b>ridiculous (3)</b> 93:4 115:13,15 <b>right (76)</b> 5:3 9:8 11:8 13:14,15 15:5 15:5,6,11 21:3,14 21:20 28:13,16 30:23 31:20 32:16 35:11 36:7 39:13 40:2 41:14 42:12 48:1 49:24 52:22 53:1 54:3 61:5 64:25 67:17,20 69:1,6,14 70:16,21 73:15 76:2 77:10 82:20 86:11 88:13 90:7 92:7 94:17 97:6,17 100:19,20 102:4,21 104:1 105:14 108:7 109:9 112:6 115:19 118:25 119:16 121:4,4,15 123:20 127:2,4 128:1 130:16,22 133:24 134:16 135:7 136:24 137:1,7,9 <b>rise (76)</b> 1:5 12:1,3,6 12:10 13:7 14:2,10 14:23 15:20 16:5 16:23 18:1,19 20:15 25:16 27:20 31:18 33:15 34:1 35:22 37:6 39:15 43:15 47:15 48:17 49:10,19 50:14 51:6 54:19 55:11 56:5,16 59:12 64:1 64:8 67:5 72:12 73:23 75:2 79:5,11 81:18 82:4,6,14 83:6 85:17,22 86:18,20 90:11,25 93:15 94:7,14 98:3
-------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------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99:10 103:14 104:24 106:3 107:3 109:11,17 110:1 115:5,16 124:7 128:19 131:4 132:2 135:10,20 136:4,13	58:19 110:3 115:24 <b>says (6)</b> 22:8 60:19 68:21 86:25 98:12 104:25 <b>scale (2)</b> 15:6 16:17 <b>scaled (1)</b> 25:12 <b>scenario (3)</b> 94:8 114:6 135:12 <b>scenarios (1)</b> 86:20 <b>schedule (5)</b> 22:17 27:22 29:5,9 123:7 <b>scheduled (1)</b> 65:9 <b>schematic (1)</b> 105:11 <b>Schneider (1)</b> 78:3 <b>SCHONHOFF (1)</b> 2:19 <b>school (4)</b> 39:13 84:21 93:12 122:3 <b>science (5)</b> 89:13 103:18 115:14 122:7,11 <b>scientist (4)</b> 82:10 88:20 111:21 122:6 <b>scientists (6)</b> 39:17 90:10 109:4 115:14 122:9 124:23 <b>Scott (2)</b> 117:5,5 <b>scoured (1)</b> 47:18 <b>screen (1)</b> 85:24 <b>sea (104)</b> 1:5 10:8 12:1,3,5,10 13:6,9 14:2,10,23 15:19 16:5,23 18:1,19 20:15 25:16 27:20 31:17 33:15 34:1 35:6,22 37:5 39:15 43:14 47:15 48:1 48:17 49:9,19 50:13 51:6 54:19 55:11 56:5,16 59:12 63:9 64:1,8 67:5 72:12 73:23 75:2 79:5,11 81:18 82:4,6,14 83:5 85:17,21,25 86:10 86:17,19 90:7,11,25 91:7,11 92:8 93:9,9 93:15 94:7 95:10 96:18,24 97:2,8,13 97:19 98:1,3,8 99:4 99:6,10,18 104:24 105:8 106:3 107:3 109:10,17 110:1,9 110:12 112:6 115:5 115:16 123:25 124:7 128:19 131:4 132:2 135:9,20 136:4,12 <b>seal (3)</b> 91:10 96:6,7 <b>seas (1)</b> 59:16 <b>second (13)</b> 29:14,15 29:16 56:24 73:5 79:22 87:25 91:13 119:5 123:22	128:22 137:14,15 <b>sections (1)</b> 113:4 <b>sector (2)</b> 75:21 98:4 <b>sectors (1)</b> 109:20 <b>see (69)</b> 6:6 9:16 11:20 12:22 13:6 15:4 17:5 20:16 21:12 24:5,23,25 27:17,21 30:3 43:3 47:9 48:4,6,7 52:1 56:15 58:9 65:7 70:22 71:4 74:22 76:17,23 80:24 85:25 86:8 87:7 91:1,17,18 92:15 94:13,13 95:5,22,23 97:20 99:20,21 100:16 101:14,25 102:1 103:7,14,19 103:25 104:2,6,7,16 105:21 106:10,14 106:16 107:2 112:3 112:13 114:19 120:15 124:19,22 135:1 <b>seeing (10)</b> 27:5 30:1 47:18 54:16 87:12 87:20 92:12 99:25 101:12 119:14 <b>seek (1)</b> 10:23 <b>seeking (1)</b> 19:18 <b>seen (2)</b> 47:9 106:13 <b>sees (2)</b> 21:8 79:1 <b>sell (2)</b> 113:10 121:16 <b>sellable (1)</b> 112:23 <b>Senator (1)</b> 134:10 <b>send (3)</b> 4:23 60:25 64:16 <b>sends (1)</b> 136:11 <b>sense (4)</b> 26:23 58:5 65:12 73:3 <b>sent (2)</b> 17:22 130:13 <b>sentence (1)</b> 43:25 <b>September (2)</b> 92:14 92:19 <b>septic (2)</b> 76:1,2 <b>sequence (1)</b> 83:6 <b>sequestering (2)</b> 89:22,24 <b>series (4)</b> 73:23 97:19 98:9 129:3 <b>serious (4)</b> 48:9 58:21 99:24 114:7 <b>seriously (8)</b> 44:10 47:1,3,4 49:1 50:3 82:13 88:24 <b>seriousness (2)</b> 84:2 85:14 <b>serve (1)</b> 55:7 <b>served (1)</b> 52:13 <b>serves (1)</b> 70:10 <b>Services (1)</b> 126:8 <b>serving (1)</b> 73:18 <b>session (1)</b> 19:24	<b>sessions (12)</b> 2:20 52:8,8 55:13 68:2 68:11,13,17,17,20 69:21 126:7 <b>Sessions' (1)</b> 65:20 <b>set (8)</b> 7:5 22:6 54:20 123:10,14 124:1 136:25 138:12 <b>settling (1)</b> 99:21 <b>seven (1)</b> 83:6 <b>seventy-three (1)</b> 100:4 <b>seventy-two (1)</b> 6:16 <b>severe (2)</b> 102:2 109:25 <b>sewage (1)</b> 109:24 <b>sewer (5)</b> 11:2,17 36:2 63:7 107:19 <b>shape (1)</b> 125:1 <b>share (12)</b> 4:20 12:8 38:9 67:14 74:7 77:4,17 122:17,19 123:11 125:4 131:7 <b>SHED (1)</b> 30:15 <b>Shedd (17)</b> 3:8 17:13 17:17 18:13 21:1 21:15 22:3,13 23:3 25:8 28:5,14,16,18 30:11,19,22 <b>sheep (1)</b> 23:23 <b>sheet (19)</b> 57:3 98:4 100:10 101:11 102:3,24 103:8,10 103:13,14,21 104:4 104:9,18,22 105:3,5 105:14,22 <b>shelf (1)</b> 97:22 <b>shift (1)</b> 47:9 <b>shocked (1)</b> 107:12 <b>shoot (2)</b> 28:25 29:1 <b>shoots (1)</b> 115:18 <b>shore (5)</b> 10:7 42:7 71:23 120:14 124:18 <b>short (5)</b> 31:19 56:8 84:6 111:25 126:19 <b>short-term (3)</b> 123:13 123:15 127:6 <b>shortly (1)</b> 129:14 <b>show (7)</b> 91:13 92:11 99:24 101:8 120:23 136:20 137:8 <b>showed (1)</b> 92:10 <b>showing (5)</b> 85:21 93:14 96:21 103:12 127:21 <b>shown (1)</b> 96:11 <b>shows (4)</b> 86:16 93:2 93:8 102:4 <b>side (6)</b> 12:15 78:22 80:14 84:15 85:23 100:21 <b>sides (1)</b> 101:11 <b>sight (2)</b> 55:5 136:25	<b>sign (2)</b> 118:14 131:13 <b>signed (2)</b> 40:24,25 <b>significant (4)</b> 15:12 41:2 86:7 118:7 <b>signs (1)</b> 96:21 <b>silver (1)</b> 41:17 <b>similarly (1)</b> 96:4 <b>Simon (2)</b> 3:3 129:23 <b>single (1)</b> 16:9 <b>sir (4)</b> 29:18 46:6 52:6 88:7 <b>sit (2)</b> 115:1 131:19 <b>site (7)</b> 44:19 45:7 94:3 103:19 131:1 131:5 137:1 <b>sites (3)</b> 92:9 109:25 130:11 <b>sitting (2)</b> 36:11 78:24 <b>situated (2)</b> 93:19,20 <b>situation (1)</b> 47:22 <b>situations (1)</b> 136:6 <b>six (6)</b> 22:9 25:11 26:19 109:10,16 128:25 <b>sixty (1)</b> 111:14 <b>size (1)</b> 51:10 <b>sizes (1)</b> 33:23 <b>skin (1)</b> 101:17 <b>skip (1)</b> 104:14 <b>skipped (1)</b> 108:4 <b>skyscrapers (1)</b> 65:22 <b>slide (1)</b> 98:12 <b>Sloden (1)</b> 93:12 <b>slope (2)</b> 47:21 94:18 <b>slow (3)</b> 37:21 42:17 72:10 <b>slower (3)</b> 87:23 88:1 98:7 <b>slowly (2)</b> 97:25 111:1 <b>small (1)</b> 10:9 <b>smithereens (1)</b> 97:25 <b>snowed (1)</b> 101:6 <b>society (3)</b> 94:24 111:20 114:3 <b>softening (1)</b> 101:23 <b>soil (1)</b> 126:16 <b>solar (3)</b> 37:8 89:23 126:3 <b>Solid (1)</b> 8:4 <b>solution (6)</b> 51:10 53:9 79:6 117:10 126:20,21 <b>solutions (4)</b> 54:7 55:12 96:10 132:9 <b>solve (3)</b> 49:3 53:17 120:10 <b>somebody (3)</b> 107:17 113:9 119:20 <b>Sommerhoff (1)</b> 80:10 <b>soon (4)</b> 28:3 47:16
<b>S</b>				
<b>S (1)</b> 2:16 <b>sad (1)</b> 120:22 <b>safety (2)</b> 65:13 132:19 <b>salmon (1)</b> 100:14 <b>salt (1)</b> 79:17 <b>Sam (2)</b> 2:21 46:8 <b>San (1)</b> 11:14 <b>sand (2)</b> 91:9 96:7 <b>Sandy (5)</b> 42:3 106:22 107:2 125:17,17 <b>SARA (1)</b> 3:4 <b>satisfying (1)</b> 116:16 <b>saturation (1)</b> 59:17 <b>Saturday (3)</b> 128:24 128:25 129:2 <b>saw (1)</b> 36:9 <b>saying (11)</b> 27:8,16 35:19 41:11,23 52:11 54:9 57:2				

100:25 131:8 <b>sooner (1)</b> 23:20 <b>sorry (3)</b> 68:20 69:21 105:20 <b>sort (25)</b> 14:13 15:22 15:25 20:22 23:14 24:8 25:5,23 29:11 31:24 34:10,13,14 35:19 38:2,9 39:7 40:11 58:16,18 77:18 89:19 96:24 111:1 116:5 <b>sought (1)</b> 73:12 <b>sound (1)</b> 136:18 <b>source (1)</b> 7:20 <b>sources (3)</b> 7:15 10:21 89:2 <b>south (25)</b> 21:19 34:21 37:20 51:1 52:9,21 54:2 63:16 64:11 68:17 79:6 81:18 82:15 86:13 88:13 90:24 97:4 98:4 106:11,15 112:1,8 120:13 127:2 129:4 <b>Southeast (1)</b> 72:21 <b>southern (1)</b> 90:23 <b>span (1)</b> 68:3 <b>spatially (1)</b> 109:13 <b>speak (11)</b> 4:9 22:5 49:22 52:5 76:18 78:13 79:15 80:1 80:25 119:17 122:10 <b>speaker (7)</b> 18:12 54:15 81:25 87:24 112:16 119:5 137:13 <b>speakers (5)</b> 52:11 76:19,24 77:24 80:18 <b>speaking (4)</b> 44:4 73:2 80:3 127:14 <b>spec (1)</b> 10:12 <b>special (1)</b> 75:12 <b>Specialist (1)</b> 6:4 <b>species (1)</b> 10:7 <b>specific (2)</b> 22:10 51:13 <b>specifically (10)</b> 11:20 12:9 14:22 15:19 16:22 21:19 21:25 25:16 67:21 88:25 <b>specifics (1)</b> 22:4 <b>spectacular (1)</b> 103:2 <b>spectrum (1)</b> 80:18 <b>speed (1)</b> 88:6 <b>speeding (3)</b> 101:21 102:12 104:13 <b>spend (4)</b> 37:12 39:22 100:7 132:10 <b>spending (1)</b> 121:5	<b>spent (4)</b> 8:2 53:13,16 110:8 <b>spirit (1)</b> 76:25 <b>spite (2)</b> 134:9,9 <b>spoke (1)</b> 65:3 <b>spoken (1)</b> 78:9 <b>sponsoring (2)</b> 89:1,5 <b>ss (1)</b> 138:4 <b>staff (17)</b> 2:14 5:6,25 6:1 20:5 23:2 25:7 27:5,23 69:19 74:7 76:11 78:3 79:20 118:10,21,23 <b>stand (2)</b> 47:23 82:18 <b>standards (10)</b> 25:3 33:19 35:9,16 41:13,25 48:4,11 62:25 63:15 <b>standing (2)</b> 100:9 101:14 <b>standpoint (2)</b> 8:19 11:23 <b>stands (1)</b> 97:21 <b>staring (1)</b> 119:20 <b>start (19)</b> 35:7 49:7 65:5 67:11 68:8 76:3,21 82:14 83:12 90:2,18,19 109:7 110:3 114:25 115:24 119:21 123:9 132:11 <b>started (9)</b> 5:11 81:17 85:3 86:6 89:10 99:21 107:8 110:19 110:20 <b>starting (6)</b> 5:13 18:8 39:8 101:20 107:2 133:2 <b>starts (2)</b> 85:23 132:14 <b>state (23)</b> 8:15 18:17 19:4 21:4 46:7,21 50:24 52:6 55:9 63:22,24 68:15 78:4 80:16 113:1 119:21 121:21 124:15,17 125:6 126:12 129:22 138:3 <b>statement (21)</b> 30:24 31:10 32:15 38:13 43:2,12 45:14,19 46:5,19 54:22 55:22 56:8,10,15 60:2,11 61:11 64:15 113:20 114:2 <b>states (1)</b> 7:11 <b>station (2)</b> 44:5,5 <b>stations (3)</b> 10:9 63:9 66:7 <b>status (1)</b> 67:20 <b>statutory (3)</b> 18:16 19:3,13 <b>stay (4)</b> 30:9 38:2	119:23 120:19 <b>staying (1)</b> 131:12 <b>steer (1)</b> 127:25 <b>step (2)</b> 54:8 137:9 <b>Stephanie (13)</b> 2:24 5:9 6:2,6 9:14 11:1 13:21 14:17 15:1 15:17 16:22 17:9 70:24 <b>stepping (1)</b> 54:9 <b>steps (2)</b> 32:3 53:16 <b>Steve (4)</b> 3:11 78:3,6 131:22 <b>Steven (1)</b> 78:2 <b>STEWART (9)</b> 2:15 4:15 5:8 6:1 17:12 24:7 32:1 81:23 130:25 <b>stick (1)</b> 55:2 <b>stimulate (1)</b> 67:13 <b>Stone (2)</b> 81:10,15 <b>stop (6)</b> 52:19 53:8 85:4 88:2 90:18 120:7 <b>storm (17)</b> 10:2,17 11:2,16 13:5,10 34:3 36:2 42:9 72:9 92:9 93:9,10,14 97:25 124:9 135:20 <b>storms (1)</b> 38:5 <b>story (2)</b> 117:2,13 <b>strategies (1)</b> 42:4 <b>strategy (6)</b> 6:5,18,20 7:2 8:14 13:24 <b>street (11)</b> 22:1 52:22 53:2,8,20 63:2 68:4 94:25 97:7 109:14 131:23 <b>streets (6)</b> 34:8 36:1 53:17 63:5 65:20 114:16 <b>streetscapes (1)</b> 63:6 <b>strictly (2)</b> 44:12 65:18 <b>strip (1)</b> 103:5 <b>stripped (1)</b> 105:21 <b>strong (1)</b> 46:19 <b>strongly (1)</b> 79:22 <b>struck (1)</b> 116:7 <b>structurally (1)</b> 92:8 <b>structures (2)</b> 35:12 79:16 <b>struggling (2)</b> 25:23 60:21 <b>students (1)</b> 83:5 <b>study (4)</b> 31:15 43:14 56:16 101:3 <b>studying (3)</b> 4:7 83:5 110:9 <b>stuff (2)</b> 53:12 118:3 <b>sub (1)</b> 70:5 <b>sub-committee (5)</b> 27:9 68:5 70:2,9 71:10	<b>sub-committees (7)</b> 55:24 66:17 68:22 68:23,25 69:5 70:4 <b>sub-elements (1)</b> 17:20 <b>subject (1)</b> 51:19 <b>Submit (1)</b> 64:17 <b>subs (1)</b> 70:6 <b>subservient (1)</b> 123:18 <b>subsiding (1)</b> 86:14 <b>substantial (2)</b> 17:25 118:9 <b>substrate (1)</b> 59:19 <b>succinctly (1)</b> 61:10 <b>sudden (1)</b> 109:18 <b>suddenly (2)</b> 85:9 97:24 <b>suffer (1)</b> 38:5 <b>suffering (1)</b> 40:1 <b>sufficient (1)</b> 29:17 <b>suggest (2)</b> 28:20 53:15 <b>suggested (3)</b> 26:19 60:5 61:15 <b>suggesting (4)</b> 15:15 42:23 87:15 108:5 <b>suggestion (3)</b> 79:23 79:25 87:18 <b>suggestions (4)</b> 45:12 45:12 51:13 77:23 <b>summarize (1)</b> 58:7 <b>summarized (1)</b> 60:16 <b>summarizing (1)</b> 58:11 <b>summary (1)</b> 58:1 <b>summer (3)</b> 22:18,21 28:21 <b>sun (2)</b> 98:19 99:2 <b>sun's (1)</b> 84:5 <b>Sunshine (2)</b> 5:2 55:17 <b>supply (3)</b> 17:20 18:4 18:5 <b>support (4)</b> 66:6 71:14 72:7 78:1 <b>supported (1)</b> 41:3 <b>supports (1)</b> 51:9 <b>supposed (4)</b> 26:25 32:11 40:7 59:11 <b>sure (38)</b> 4:15 6:22 12:11 15:23 19:9 19:18 20:6 21:1 24:7,15 25:19 33:10 46:22 62:21 63:10,24 64:20,24 71:9 72:11 74:7 79:3 81:23 82:23 83:9,10 95:19 110:17 116:12 117:3 125:12 130:19 131:20 133:7,8,20,21	134:24 <b>surface (12)</b> 84:6,16 84:16 100:23 101:4 101:17,25 102:6,10 105:15,24 124:11 <b>surge (4)</b> 34:4 42:9 72:9 135:20 <b>surges (3)</b> 92:9 93:9 93:10 <b>surrounded (1)</b> 112:8 <b>susceptible (1)</b> 90:24 <b>sustainability (27)</b> 33:19,23 34:13,18 34:19 37:15,21 40:4,10 41:6,18 44:2,9,23 46:13,22 46:24 47:4,7 48:10 48:21 49:17 58:24 59:6,8 73:21 88:10 <b>sustainable (9)</b> 8:6 34:22,23,23 37:19 39:24 41:20 78:2 79:24 <b>sustainably (2)</b> 40:9 88:15 <b>Susy (3)</b> 77:9,12,14 <b>SUV (1)</b> 92:23 <b>Sweetwater (1)</b> 94:19 <b>synopsis (1)</b> 11:2 <b>synthesize (3)</b> 58:13 58:15 62:17 <b>synthesized (1)</b> 62:19 <b>system (6)</b> 13:10 36:2 51:9,24 127:8 135:19 <b>systems (4)</b> 51:2 63:7 124:11 125:23
<b>T</b>				
<b>T.V (1)</b> 95:21				
<b>Tabitha (12)</b> 2:5 5:19 29:16 44:16 60:5 71:8 72:17 79:2 117:23,24 127:16 131:18				
<b>table (1)</b> 125:9				
<b>tackle (3)</b> 19:7 85:6 120:11				
<b>take (34)</b> 9:4 11:23 12:20 32:8,8,14 44:1,3,9 48:25 50:2 50:2 51:24 53:17 54:1 55:23 56:8 58:20 64:1,18 68:5 72:24 75:22 84:22 87:16 104:15 107:3 108:25 113:9 116:19 117:19 129:25 135:24 137:4				
<b>taken (6)</b> 43:2 46:25 54:8 71:21 135:25 138:11				
<b>takes (1)</b> 47:3				



<b>talk (25)</b> 15:24 16:20 18:14 21:21 34:16 35:3 39:9 47:10 65:6 73:1 83:15,17 83:18 87:21 88:17 91:10 94:22 95:20 106:7 108:20 111:4 113:24 116:5 118:5 125:23	64:13,25 66:13 68:19 69:21,23 72:17,18 74:9 83:2 110:18 117:15,24 121:18,19 127:12 127:13 128:11,13 130:22 134:16,19 134:20,21 137:10 137:16	71:10 72:18 73:3,7 75:17 76:25 78:4 78:17,20,23 79:7,25 84:12 89:25 90:1 95:19 96:24 100:5 105:7 106:17 110:14 111:20 112:7 113:23 114:23 115:20 118:3,4 120:20 121:15 122:20 132:21 133:14 135:6,10,13,16 136:2,5,11 137:4	98:16 110:20 131:6 135:6 <b>today's (1)</b> 17:22 <b>told (1)</b> 82:11 <b>tomorrow (5)</b> 4:19,23 108:15 118:6 136:10 <b>tonight (8)</b> 33:4 52:21 62:7 70:25 122:18 122:23 123:12 128:12 <b>tonight's (1)</b> 45:8 <b>top (9)</b> 21:8 56:15 90:9 96:13,13 98:2 100:14,14 132:16 <b>topic (2)</b> 55:23 79:13 <b>topography (3)</b> 94:16 109:22 125:22 <b>total (3)</b> 100:18 105:1 105:7 <b>totally (2)</b> 21:11 120:1 <b>touch (1)</b> 131:12 <b>toughie (1)</b> 116:25 <b>town (1)</b> 78:6 <b>track (2)</b> 83:13 92:23 <b>traction (4)</b> 134:7,8 134:10,15 <b>trading (1)</b> 81:1 <b>tragedy (2)</b> 121:14,16 <b>transcribe (1)</b> 138:8 <b>transcribed (1)</b> 4:18 <b>transcript (1)</b> 138:10 <b>transferred (2)</b> 84:20 84:25 <b>Transportation (5)</b> 8:5 10:4 11:10 63:23,25 <b>Transportation's (1)</b> 10:17 <b>treated (1)</b> 46:25 <b>treating (1)</b> 124:10 <b>treatment (1)</b> 109:24 <b>tree (1)</b> 37:9 <b>trend (1)</b> 96:16 <b>tried (1)</b> 88:21 <b>trim (1)</b> 103:15 <b>trivial (1)</b> 101:13 <b>Troglolites (1)</b> 110:14 <b>Troxler (1)</b> 79:4 <b>trucks (1)</b> 65:23 <b>true (1)</b> 138:10 <b>Trust (1)</b> 125:9 <b>try (28)</b> 10:22 11:24 16:13,15 23:25 26:16 28:21 34:10 51:12,19 53:17 60:24 64:14 66:3,5 66:18 69:2,8,10 81:20 91:22 111:1 120:10,11,18 122:23 127:25 134:17	<b>trying (17)</b> 8:19 25:7 29:4 47:5 50:13 62:12 67:3 69:6 76:9 77:15 80:22 84:1 108:24 114:12 115:17 120:3 134:6 <b>tuning (1)</b> 21:17 <b>turn (2)</b> 113:18 133:4 <b>turned (1)</b> 89:16 <b>tweak (3)</b> 21:12 43:20 45:17 <b>tweaks (1)</b> 118:9 <b>twelve (2)</b> 7:24 10:5 <b>twenty (2)</b> 83:17,22 <b>twice (2)</b> 92:12 101:1 <b>two (30)</b> 11:4,6 22:9 23:8 24:4 26:1 28:5 46:2 50:23 52:10 60:4 65:6 76:22 79:20 87:5 90:4 93:18 94:3,4,6 96:13 100:22 109:13 110:2 116:6 124:1,13 125:1 128:18 129:2 <b>type (7)</b> 7:21 14:25 43:11 75:20 93:14 114:18 126:1 <b>types (6)</b> 9:16,22 54:11 55:20 66:6 80:18 <b>typically (3)</b> 22:3 26:15 130:25 <b>Typist (1)</b> 138:21 <b>typo (1)</b> 118:23	
<b>talked (6)</b> 14:16 16:7 19:21 39:17 63:18 73:22	<b>thankful (1)</b> 48:22 <b>thanks (1)</b> 99:13 <b>that.But (1)</b> 125:4 <b>thermal (3)</b> 39:14,19 59:12 <b>they'd (1)</b> 108:17 <b>thing (24)</b> 5:10 21:10 23:15 57:22 58:19 77:15 81:17 84:1 96:25 97:15 98:16 100:2 104:18 107:22 109:5,21 112:19,25 117:20 120:12 126:2 128:25 129:2 132:20	<b>thinking (13)</b> 14:1 15:6 16:3,3 19:13 27:19 37:21,22 41:13 57:18 77:2 110:22 128:10 <b>thirty (7)</b> 4:8 23:7 52:23 73:5 83:22 123:22 127:11 <b>thought (10)</b> 18:13 24:2 35:1 38:16 39:13,24 89:11 92:8,24 107:13 <b>thoughts (2)</b> 13:20 134:2 <b>thousand (1)</b> 83:7 <b>threat (2)</b> 51:6 64:7 <b>threatened (1)</b> 95:13 <b>three (3)</b> 53:20 93:15 109:13 <b>throwing (1)</b> 116:11 <b>tide (2)</b> 91:18 107:11 <b>tides (3)</b> 47:17 53:2 93:7 <b>tied (2)</b> 48:7 76:1 <b>Tiffany (1)</b> 79:4 <b>Tigertail (1)</b> 129:23 <b>time (52)</b> 6:17 7:24 17:18 18:25 19:7 20:11 22:18,22 23:13,14 26:22 28:10 29:4 30:17 33:7 35:7,10,12 37:13 38:8 39:4,4 39:22 47:19 49:22 54:15 55:14,16 58:9 63:4 71:4 80:21,21,25 83:19 88:11 99:23 100:2 100:7 106:16 110:8 117:16 122:20,22 124:21 125:3 126:19 131:2 133:20 134:6 136:7 138:11	<b>total (3)</b> 100:18 105:1 105:7 <b>totally (2)</b> 21:11 120:1 <b>touch (1)</b> 131:12 <b>toughie (1)</b> 116:25 <b>town (1)</b> 78:6 <b>track (2)</b> 83:13 92:23 <b>traction (4)</b> 134:7,8 134:10,15 <b>trading (1)</b> 81:1 <b>tragedy (2)</b> 121:14,16 <b>transcribe (1)</b> 138:8 <b>transcribed (1)</b> 4:18 <b>transcript (1)</b> 138:10 <b>transferred (2)</b> 84:20 84:25 <b>Transportation (5)</b> 8:5 10:4 11:10 63:23,25 <b>Transportation's (1)</b> 10:17 <b>treated (1)</b> 46:25 <b>treating (1)</b> 124:10 <b>treatment (1)</b> 109:24 <b>tree (1)</b> 37:9 <b>trend (1)</b> 96:16 <b>tried (1)</b> 88:21 <b>trim (1)</b> 103:15 <b>trivial (1)</b> 101:13 <b>Troglolites (1)</b> 110:14 <b>Troxler (1)</b> 79:4 <b>trucks (1)</b> 65:23 <b>true (1)</b> 138:10 <b>Trust (1)</b> 125:9 <b>try (28)</b> 10:22 11:24 16:13,15 23:25 26:16 28:21 34:10 51:12,19 53:17 60:24 64:14 66:3,5 66:18 69:2,8,10 81:20 91:22 111:1 120:10,11,18 122:23 127:25 134:17	<b>things (58)</b> 7:20 13:25 14:19 16:11 26:17 37:10 38:19 39:1,12 43:4 44:25 45:3 47:8,23 48:19 49:11 50:5 54:11 55:20 56:7 59:24 60:4 71:10,21 74:12,21,23 75:1,2 75:24 76:3 77:5,21 82:8,9,9 89:2,25 100:8 101:3,8 102:12 103:22,24 104:13 112:18 113:14 116:2,7 120:3,18 125:11 127:10 128:15 129:8,9 132:20 136:9 <b>think (110)</b> 11:22 12:4,5,20,21 13:1 13:14,15 15:21 16:6 17:4,18 19:10 19:17,20 20:1 22:17,24 23:23 26:4 27:3,15 28:4 28:11 29:2 31:21 32:24 34:21 36:9 37:12 38:17,18,20 39:2 40:5 41:19 42:25 43:6,8,9,11 44:18,22 45:5 47:16 48:18 49:2 49:11 50:19 52:17 52:18 53:3,6 54:6 54:18,20,21 56:1 58:1,22 59:2 61:8 61:12 62:6,15,18 63:19 70:5,13	<b>types (6)</b> 9:16,22 54:11 55:20 66:6 80:18 <b>typically (3)</b> 22:3 26:15 130:25 <b>Typist (1)</b> 138:21 <b>typo (1)</b> 118:23
<b>talks (1)</b> 106:22 <b>tank (1)</b> 76:1 <b>taped (1)</b> 58:18 <b>targets (1)</b> 9:15 <b>Tashiro (19)</b> 2:24 5:9 6:3,8 9:18,24 10:2 10:16 11:4,6,9,14 11:22 12:11,17 13:14 17:10 50:7 66:3 <b>task (6)</b> 37:6 41:23 44:10,12 59:2 67:5 <b>tasked (3)</b> 31:17 55:3 55:10 <b>taught (1)</b> 82:7 <b>tax (1)</b> 107:14 <b>taxable (1)</b> 51:23 <b>taxation (2)</b> 74:25 75:13 <b>taxes (1)</b> 107:22 <b>techniques (1)</b> 103:6 <b>Technology (2)</b> 115:9 131:6 <b>teeth (1)</b> 56:3 <b>tell (6)</b> 39:17 53:1 54:5 120:23 127:23 130:14 <b>ten (5)</b> 75:5 83:6 95:10 116:15 117:6 <b>tend (1)</b> 91:19 <b>term (1)</b> 86:14 <b>terms (11)</b> 4:12 9:15 14:1 25:18 28:7 36:7 40:3 56:10 64:6 88:15 116:10 <b>terrain (1)</b> 102:25 <b>terrestrial (1)</b> 84:16 <b>terrorism (1)</b> 12:4 <b>TERRY (1)</b> 2:25 <b>thank (43)</b> 5:23 6:7,8 17:9,9,10 30:20 48:12,13,13 49:25 50:22 52:3 54:13 54:14 62:3 64:12	<b>think (110)</b> 11:22 12:4,5,20,21 13:1 13:14,15 15:21 16:6 17:4,18 19:10 19:17,20 20:1 22:17,24 23:23 26:4 27:3,15 28:4 28:11 29:2 31:21 32:24 34:21 36:9 37:12 38:17,18,20 39:2 40:5 41:19 42:25 43:6,8,9,11 44:18,22 45:5 47:16 48:18 49:2 49:11 50:19 52:17 52:18 53:3,6 54:6 54:18,20,21 56:1 58:1,22 59:2 61:8 61:12 62:6,15,18 63:19 70:5,13	<b>timely (1)</b> 135:7 <b>times (3)</b> 14:5 37:5 88:2 <b>title (1)</b> 36:13 <b>today (9)</b> 14:13 17:1 48:25 63:18 74:3	<b>try (28)</b> 10:22 11:24 16:13,15 23:25 26:16 28:21 34:10 51:12,19 53:17 60:24 64:14 66:3,5 66:18 69:2,8,10 81:20 91:22 111:1 120:10,11,18 122:23 127:25 134:17	<b>U</b> <b>U.S (2)</b> 108:21 132:16 <b>Uh-huh (3)</b> 30:11 114:13,15 <b>ultimately (4)</b> 26:10 69:11 75:25 82:12 <b>unbelievable (3)</b> 109:12 110:7 116:9 <b>underneath (1)</b> 104:3 <b>understand (11)</b> 24:20 29:10 31:12 50:14,15 52:10 84:2 85:14 98:14 100:7 112:7 <b>understanding (7)</b> 14:14 44:1 57:16 60:19 63:19 67:8 111:19 <b>understood (1)</b> 89:13 <b>undertake (1)</b> 75:15 <b>undertaken (1)</b> 71:12 <b>uneconomic (1)</b> 91:21 <b>unfortunate (1)</b> 9:11 <b>unfortunately (6)</b> 78:19 101:6 108:7 115:6 123:17 127:7 <b>units (1)</b> 94:4 <b>universities (1)</b> 129:4	

<b>University (7)</b> 4:5 76:19 82:3 83:3 93:13 119:25 122:5	<b>vulnerable (3)</b> 93:2 107:4,6	<b>water (48)</b> 10:3,18 13:5,10 17:20 18:3 18:5 34:17 36:2 52:24 58:25 59:15 59:21 63:7,7 71:17 71:17 74:22 79:7 79:17,20 84:10,17 84:21 92:9,22,25 93:24 96:2,4,5,8 101:16,19,22 102:14,17 104:3,11 104:20 105:10,12 106:1 107:10,19 112:10 114:14 126:19	76:9 78:5 79:16 81:13 85:7 86:10 86:14,15,23 87:7 90:7,12,17 91:4,18 91:25 94:9 95:2 99:25 100:5 104:25 107:24 108:5 110:15,22,22,23 111:17 112:5,20 113:5,8 114:9 115:7 118:16 121:5 123:25 124:4,8 125:16 126:15 127:24 128:3 129:7 130:17,17,18,18,25 136:14	<b>work (26)</b> 6:12,24 11:20 15:18 20:5,7 21:7 24:4,7 40:19 41:15 44:20,24 64:19 69:19 78:1 80:22 82:25 85:24 108:2 113:1 117:23 118:21 122:14 123:10 124:16 <b>worked (1)</b> 122:5 <b>working (11)</b> 14:4 26:17 47:2 74:17 74:18 120:5 124:5 124:17 128:15 132:22 134:23 <b>works (6)</b> 8:4 16:15 65:14 80:5 84:4 95:3 <b>workshop (19)</b> 15:17 15:23,24 19:21 20:10 22:19 24:6 24:16,18 27:22 28:4 29:9 30:25 33:9 55:25 60:7,10 65:4 70:14 <b>world (13)</b> 6:15 33:25 40:24 59:7 86:10 89:6 90:22 106:21 112:11,11 120:14 132:9 133:2 <b>worried (3)</b> 40:24 53:19,21 <b>worry (1)</b> 112:19 <b>worse (2)</b> 92:13 107:24 <b>worth (1)</b> 105:4 <b>worthwhile (2)</b> 38:22 44:22 <b>worthy (1)</b> 12:16 <b>wow (1)</b> 133:6 <b>wrap (1)</b> 106:8 <b>wrapped (1)</b> 23:17 <b>wrestled (1)</b> 52:15 <b>write (1)</b> 58:6 <b>writer (1)</b> 92:18 <b>writing (1)</b> 58:20 <b>written (3)</b> 58:3 81:7 81:16 <b>wrong (4)</b> 49:6 83:13 135:10 136:3 <b>wrote (2)</b> 61:17 81:9		
<b>UNKNOWN (5)</b> 18:12 87:24 112:16 119:5 137:13	<hr/> <b>W</b> <hr/>	<b>waterfall (1)</b> 93:22 <b>waterfronts (1)</b> 42:4 <b>wave (3)</b> 84:6,7,8 <b>waves (1)</b> 97:25 <b>way (44)</b> 11:25 14:19 15:12 16:13 21:25 22:13 36:1 37:22 38:2 40:1 44:7 47:18 49:6 54:7 57:12 58:2 59:9,22 60:18,23 62:10,24 66:11 67:16,19 71:25 86:23 93:6 95:20 97:5,9 98:6 107:23 110:22 115:21 120:6,8,17 120:21 121:16 125:8 132:15 134:10,13	<b>we've (20)</b> 7:14 11:6 20:18 22:8 24:2 25:9,20,21 31:9 42:13 50:10,20 65:22 66:15,25 84:25 88:23 89:16 101:1 113:18 <b>weakening (1)</b> 102:11 <b>web (5)</b> 44:19 45:6 130:10 131:1,5 <b>week (3)</b> 6:2 77:13 81:22 <b>weeks (1)</b> 100:22 <b>weight (1)</b> 105:13 <b>weird (1)</b> 117:14 <b>welcome (2)</b> 32:6 121:25 <b>went (6)</b> 97:11 99:16 116:2 117:9,10 130:10 <b>west (7)</b> 94:18,25 100:21 102:20 104:17 105:3,22 <b>Wetlands (1)</b> 72:6 <b>white (4)</b> 100:15 125:6 126:4,6 <b>wiggle (1)</b> 23:9 <b>willing (1)</b> 125:3 <b>wind (4)</b> 8:17 9:5 16:8 89:23 <b>wings (1)</b> 70:22 <b>wipes (1)</b> 93:15 <b>wisdom (1)</b> 38:14 <b>wish (3)</b> 12:13 33:6 49:21 <b>wishes (1)</b> 52:5 <b>withdrawal (1)</b> 107:10 <b>witnessed (2)</b> 47:13 106:14 <b>wonderful (4)</b> 93:13 94:20 106:19 116:22 <b>word (2)</b> 46:25 95:17 <b>wording (2)</b> 60:22 61:15 <b>words (2)</b> 38:14 62:13	<b>work (26)</b> 6:12,24 11:20 15:18 20:5,7 21:7 24:4,7 40:19 41:15 44:20,24 64:19 69:19 78:1 80:22 82:25 85:24 108:2 113:1 117:23 118:21 122:14 123:10 124:16 <b>worked (1)</b> 122:5 <b>working (11)</b> 14:4 26:17 47:2 74:17 74:18 120:5 124:5 124:17 128:15 132:22 134:23 <b>works (6)</b> 8:4 16:15 65:14 80:5 84:4 95:3 <b>workshop (19)</b> 15:17 15:23,24 19:21 20:10 22:19 24:6 24:16,18 27:22 28:4 29:9 30:25 33:9 55:25 60:7,10 65:4 70:14 <b>world (13)</b> 6:15 33:25 40:24 59:7 86:10 89:6 90:22 106:21 112:11,11 120:14 132:9 133:2 <b>worried (3)</b> 40:24 53:19,21 <b>worry (1)</b> 112:19 <b>worse (2)</b> 92:13 107:24 <b>worth (1)</b> 105:4 <b>worthwhile (2)</b> 38:22 44:22 <b>worthy (1)</b> 12:16 <b>wow (1)</b> 133:6 <b>wrap (1)</b> 106:8 <b>wrapped (1)</b> 23:17 <b>wrestled (1)</b> 52:15 <b>write (1)</b> 58:6 <b>writer (1)</b> 92:18 <b>writing (1)</b> 58:20 <b>written (3)</b> 58:3 81:7 81:16 <b>wrong (4)</b> 49:6 83:13 135:10 136:3 <b>wrote (2)</b> 61:17 81:9		
<b>updated (1)</b> 79:16 <b>upgraded (1)</b> 109:16 <b>upper (1)</b> 98:16 <b>urban (7)</b> 37:1,1 42:3 46:9 64:4,5 123:17 <b>urbanism (2)</b> 34:23 123:18 <b>usage (2)</b> 34:17 58:25 <b>use (5)</b> 8:24 34:7 35:16 59:4 61:14 <b>useful (3)</b> 13:3,11 79:8 <b>uses (1)</b> 18:3 <b>usually (3)</b> 12:6 51:4 131:3	<hr/> <b>V</b> <hr/>	<b>Wayne (3)</b> 2:4 88:17 116:4 <b>ways (7)</b> 66:4 71:13 72:6 91:10 98:18 121:13 127:5 <b>we'll (20)</b> 5:3 9:12 15:24 17:6 26:19 28:19 30:3 43:3 45:1 49:15 64:16 66:2 73:24 92:15 96:6,7 113:16 120:16,21 131:3 <b>we're (115)</b> 6:23 8:8 8:25 16:19 18:4,6 18:21 20:6 21:3,4 23:10,19 25:8 27:22 28:6 29:2,3 30:12 31:24 32:11 33:14,17,21 34:5,15 34:15 35:2 37:22 38:17,22 40:15,16 40:22 41:14 43:3 44:18 48:1 49:18 50:17 51:21 54:23 55:2,10,15,16,23 56:15 57:6 60:5,9 60:21,23 61:6 62:6 65:17 66:14 67:17 67:18,20,22 69:6,8 71:3 73:3 75:14	<b>we've (20)</b> 7:14 11:6 20:18 22:8 24:2 25:9,20,21 31:9 42:13 50:10,20 65:22 66:15,25 84:25 88:23 89:16 101:1 113:18 <b>weakening (1)</b> 102:11 <b>web (5)</b> 44:19 45:6 130:10 131:1,5 <b>week (3)</b> 6:2 77:13 81:22 <b>weeks (1)</b> 100:22 <b>weight (1)</b> 105:13 <b>weird (1)</b> 117:14 <b>welcome (2)</b> 32:6 121:25 <b>went (6)</b> 97:11 99:16 116:2 117:9,10 130:10 <b>west (7)</b> 94:18,25 100:21 102:20 104:17 105:3,22 <b>Wetlands (1)</b> 72:6 <b>white (4)</b> 100:15 125:6 126:4,6 <b>wiggle (1)</b> 23:9 <b>willing (1)</b> 125:3 <b>wind (4)</b> 8:17 9:5 16:8 89:23 <b>wings (1)</b> 70:22 <b>wipes (1)</b> 93:15 <b>wisdom (1)</b> 38:14 <b>wish (3)</b> 12:13 33:6 49:21 <b>wishes (1)</b> 52:5 <b>withdrawal (1)</b> 107:10 <b>witnessed (2)</b> 47:13 106:14 <b>wonderful (4)</b> 93:13 94:20 106:19 116:22 <b>word (2)</b> 46:25 95:17 <b>wording (2)</b> 60:22 61:15 <b>words (2)</b> 38:14 62:13	<b>valid (2)</b> 37:4,24 <b>valley (4)</b> 93:21 104:6 104:7,10 <b>value (2)</b> 72:15 137:2 <b>Van (3)</b> 2:21 46:8,8 <b>various (7)</b> 10:21 47:6 66:24 69:12 70:24 80:3 130:10 <b>vast (2)</b> 74:11 82:7 <b>Venetian (1)</b> 11:15 <b>version (1)</b> 60:16 <b>vertically (1)</b> 109:13 <b>viable (1)</b> 109:19 <b>VICE (19)</b> 2:5 5:19 12:25 29:15 44:17 57:24 58:14 60:13 61:8 71:9 79:3 117:25 131:20 133:19 134:20 136:22 137:10,14 137:16 <b>Vice-President (1)</b> 80:23 <b>view (3)</b> 73:17 95:22 123:10 <b>Village (1)</b> 52:14 <b>vision (1)</b> 106:12 <b>visit (1)</b> 103:3 <b>vital (2)</b> 10:10 63:19 <b>voices (1)</b> 67:14 <b>volunteer (2)</b> 39:4 125:3 <b>volunteers (1)</b> 69:8 <b>vote (3)</b> 4:24 56:9 64:18 <b>voted (1)</b> 60:7 <b>voting (1)</b> 8:9	<b>valid (2)</b> 37:4,24 <b>valley (4)</b> 93:21 104:6 104:7,10 <b>value (2)</b> 72:15 137:2 <b>Van (3)</b> 2:21 46:8,8 <b>various (7)</b> 10:21 47:6 66:24 69:12 70:24 80:3 130:10 <b>vast (2)</b> 74:11 82:7 <b>Venetian (1)</b> 11:15 <b>version (1)</b> 60:16 <b>vertically (1)</b> 109:13 <b>viable (1)</b> 109:19 <b>VICE (19)</b> 2:5 5:19 12:25 29:15 44:17 57:24 58:14 60:13 61:8 71:9 79:3 117:25 131:20 133:19 134:20 136:22 137:10,14 137:16 <b>Vice-President (1)</b> 80:23 <b>view (3)</b> 73:17 95:22 123:10 <b>Village (1)</b> 52:14 <b>vision (1)</b> 106:12 <b>visit (1)</b> 103:3 <b>vital (2)</b> 10:10 63:19 <b>voices (1)</b> 67:14 <b>volunteer (2)</b> 39:4 125:3 <b>volunteers (1)</b> 69:8 <b>vote (3)</b> 4:24 56:9 64:18 <b>voted (1)</b> 60:7 <b>voting (1)</b> 8:9	<b>valid (2)</b> 37:4,24 <b>valley (4)</b> 93:21 104:6 104:7,10 <b>value (2)</b> 72:15 137:2 <b>Van (3)</b> 2:21 46:8,8 <b>various (7)</b> 10:21 47:6 66:24 69:12 70:24 80:3 130:10 <b>vast (2)</b> 74:11 82:7 <b>Venetian (1)</b> 11:15 <b>version (1)</b> 60:16 <b>vertically (1)</b> 109:13 <b>viable (1)</b> 109:19 <b>VICE (19)</b> 2:5 5:19 12:25 29:15 44:17 57:24 58:14 60:13 61:8 71:9 79:3 117:25 131:20 133:19 134:20 136:22 137:10,14 137:16 <b>Vice-President (1)</b> 80:23 <b>view (3)</b> 73:17 95:22 123:10 <b>Village (1)</b> 52:14 <b>vision (1)</b> 106:12 <b>visit (1)</b> 103:3 <b>vital (2)</b> 10:10 63:19 <b>voices (1)</b> 67:14 <b>volunteer (2)</b> 39:4 125:3 <b>volunteers (1)</b> 69:8 <b>vote (3)</b> 4:24 56:9 64:18 <b>voted (1)</b> 60:7 <b>voting (1)</b> 8:9
				<hr/> <b>X</b> <hr/>		
				<hr/> <b>Y</b> <hr/>		
				<b>yachts (1)</b> 120:25 <b>Yeah (22)</b> 5:8 12:17 19:10 28:14,16,19 28:22 30:11 45:5 45:23 71:2 73:11 73:11 77:11 91:20 106:9 111:8 112:12 114:1 115:10 123:2 136:24		

<b>year (21)</b> 8:11 10:20 19:23 22:9 43:5 73:25 86:12 89:9 92:12,14 99:3 100:9,13 104:19 106:23 110:13 112:22 115:2 123:22 128:25 134:8	<b>1983 (1)</b> 89:10 <b>1990 (2)</b> 86:2,6 <b>1992 (1)</b> 100:14 <b>1st (4)</b> 19:2,7 23:4,17	108:8,10 112:14 128:19 132:11 <b>50 (1)</b> 104:5 <b>500 (2)</b> 104:8 115:9 <b>555 (1)</b> 131:22		
<b>years (30)</b> 4:8 8:12 11:3 19:14 22:9 25:11 39:11 52:24 52:25,25 75:6 81:16 82:6 83:4,7 88:21 89:12,15 92:13 94:23 97:2 98:16 103:15 110:9 111:15 112:1 114:20 115:9 127:11 133:17	<b>2 (2)</b> 102:17 132:8 <b>2,000 (1)</b> 100:16 <b>20 (1)</b> 97:3 <b>20's (1)</b> 93:21 <b>200 (1)</b> 103:1 <b>2000 (1)</b> 85:19 <b>2005 (2)</b> 7:8 100:15 <b>2007 (1)</b> 85:21 <b>2012 (6)</b> 86:19 96:15 100:19 101:2 102:6 103:17 <b>2014 (1)</b> 103:4 <b>2015 (1)</b> 134:8 <b>2016 (2)</b> 1:19 138:17 <b>2048 (1)</b> 94:7 <b>20th (1)</b> 128:24 <b>21 (19)</b> 20:24 21:10 21:17,24 22:15 24:18,22 25:15,21 25:25 26:12,12 27:12 30:7,8 33:20 41:7,7 90:4 <b>220 (2)</b> 99:9 105:9 <b>23 (1)</b> 104:24 <b>230 (1)</b> 92:6 <b>23rd (1)</b> 138:17 <b>240 (1)</b> 121:24 <b>25 (1)</b> 105:5 <b>250,000 (2)</b> 7:11,13 <b>25th (1)</b> 94:25 <b>27th (1)</b> 128:24 <b>280 (2)</b> 98:22 99:11	<b>6 (3)</b> 94:12 132:11 133:11 <b>6.6 (9)</b> 87:8,22 91:4 94:8 108:22 109:6 132:1,16 133:12 <b>6:08 (1)</b> 1:20 <b>60 (1)</b> 104:5 <b>600 (1)</b> 110:9		
<b>yesterday (1)</b> 130:4 <b>York (16)</b> 42:4 106:24 122:2,17,19 124:4,15,15,18,20 125:16 126:14,23 126:25 127:1,3 <b>Yorker (1)</b> 92:18	<b>2012 (6)</b> 86:19 96:15 100:19 101:2 102:6 103:17 <b>2014 (1)</b> 103:4 <b>2015 (1)</b> 134:8 <b>2016 (2)</b> 1:19 138:17 <b>2048 (1)</b> 94:7 <b>20th (1)</b> 128:24 <b>21 (19)</b> 20:24 21:10 21:17,24 22:15 24:18,22 25:15,21 25:25 26:12,12 27:12 30:7,8 33:20 41:7,7 90:4 <b>220 (2)</b> 99:9 105:9 <b>23 (1)</b> 104:24 <b>230 (1)</b> 92:6 <b>23rd (1)</b> 138:17 <b>240 (1)</b> 121:24 <b>25 (1)</b> 105:5 <b>250,000 (2)</b> 7:11,13 <b>25th (1)</b> 94:25 <b>27th (1)</b> 128:24 <b>280 (2)</b> 98:22 99:11	<b>7 (1)</b> 93:25 <b>70 (2)</b> 85:5 90:10		
<b>Z</b>	<b>3 (1)</b> 86:12 <b>3,000 (2)</b> 100:17 105:24 <b>30 (1)</b> 112:21 <b>33/34 (1)</b> 86:11 <b>33133 (4)</b> 1:15 51:2 129:24 135:4 <b>33199 (1)</b> 119:25 <b>34th (1)</b> 131:22 <b>350,000 (4)</b> 7:18,25 8:11 10:6 <b>3500 (1)</b> 1:14	<b>7</b>		
<b>zero (2)</b> 93:18 130:15 <b>zip (1)</b> 119:25 <b>zoning (22)</b> 16:15 17:14 22:5,7,10 23:6,11 25:3,4 27:1 27:10 29:9 30:5 33:20 67:2,9 68:6 74:13,19,19 80:4 111:12	<b>3</b>	<b>8</b>		
<b>0</b>	<b>4 (4)</b> 86:12 94:12,14 102:17 <b>4.1 (2)</b> 87:8 108:22 <b>40,000 (1)</b> 110:13 <b>400 (1)</b> 99:15 <b>400,000 (1)</b> 98:15 <b>420 (3)</b> 97:14 99:7,8	<b>8:37 (1)</b> 1:20 <b>80 (1)</b> 85:5 <b>85 (1)</b> 90:7		
<b>1</b>	<b>5</b>	<b>9</b>		
<b>10 (2)</b> 92:20 115:2 <b>10,000 (1)</b> 100:18 <b>10.75 (1)</b> 95:11 <b>100 (5)</b> 99:6,16 104:20 112:1 114:20 <b>100,000 (2)</b> 99:3 110:13 <b>11th (1)</b> 1:19 <b>120 (1)</b> 97:14 <b>120,000 (1)</b> 97:2 <b>125 (1)</b> 99:17 <b>13 (1)</b> 101:2 <b>13400 (1)</b> 46:10 <b>15 (2)</b> 103:15 133:15 <b>1654 (1)</b> 129:23 <b>17 (2)</b> 108:6,16 <b>1754 (2)</b> 52:9 68:17 <b>18 (1)</b> 97:8 <b>1870 (1)</b> 85:18 <b>1930 (2)</b> 86:1,3 <b>1960 (2)</b> 84:15 85:5	<b>5 (8)</b> 73:17 91:6 108:5	<b>90's (1)</b> 99:21 <b>93.4 (1)</b> 84:19 <b>98 (1)</b> 100:22		