

Captioning Transcript of Community Affairs, Housing,
Health and Education Committee Meeting - September 14,
2022

"Shanklin, Barbara"

This is the community affairs, Housing, Health and Education Committee. I am the chair councilwoman Barbara Shanklin, Vice Chair is Cassie Chambers Armstrong, Angela Bowens, Committee member Kevin Triplett, Committee member Marilyn Parker, Committee Member Stuart Benson I'm glad to see you back. Today before we start, we need to talk, read the rules didn't you get it this time of Olivia?

"Harward, Sonya"

It's Sonya today, this meeting is being held pursuant to KRS 61.806, with rule 5A read in full.

"Shanklin, Barbara"

Thank you okay we will be bringing it out of order today. So, the 1st, 1 is going to be number 5, Sonya, you can, you.

"Harward, Sonya"

It fair for us a resolution relating to the conveyance of property owned by local Jefferson County Board of health.

"Shanklin, Barbara"

Do we have a motion?

"Chambers Armstrong, Cassie"

Motion Armstrong.

"Triplett, Kevin"

2nd triplet.

"Shanklin, Barbara"

Okay, we have some. I know we have someone to speak on. In councilman, David, James, he's also there, so, do we have someone speak on it David?

"James, David"

Yes, we do. Okay. I would ask the guests, yes, please identify yourself for the record and tell us why we're here.

"Johnson, Natalie"

This is Natalie Johnson with a Jefferson County Attorney's Office and we're here today, because the board of health is wanting to convey 3 properties that they own 1 property to the

family health centers inc and 2 properties to Metro government. The board of health was conveyed these properties decades ago. Some of them maybe even 100 years ago and I do, have the statute, if the board of health wants to convey property under Kentucky statute, they are required to have a resolution of approval from Metro Council and with me, today, I do have Bill Wagner, who is the retired CEO of the Family Health Centers Inc. to speak about the convenience of some of those properties.

"Wagner, Bill"

Thank you, it's good to be back. It's good to see everyone. I am also a member of the U. S marine hospital foundation board, it's one of the reasons that I'm here. Yeah, it's Bill Wagner.

36 "Brown, Marissa" Thank you the property at 2015 Portland Avenue is about 8 acres of property with 4 buildings, including the historic U. S marine hospital building the main building, which is the headquarters for the family health center nonprofit corporation. The family health centers is a 501 C3 not for profit that was established by the board of health to act on its behalf and so we are quasi governmental behalf and so we are quasi governmental nonprofit organization we have been responsible for the property there at Portland avenue for the entire life of the organization since 1976 we've had a lease with the board of health and nominal lease where we've paid a dollar per year. a dollar per yea for the properties, but the family health center CEO, current CEO doctor Barter, who is sitting here beside me, we have been responsible for the maintenance and upkeep and all the improvements on the property literally, millions of dollars improvements over all the years and under that lease arrangement, we are fully in support of the proposal to transfer this title to the family health centers inc. it will help us to streamline and simplify process obtaining historic tax credits in long standing effort to rehabilitate and bring back into community, use the historic marine hospital building that sits up against I-64 there and so I'm just here to express our full support for this I just wanted to remind you that since we are a, not for profit established by the board of health that if, for any reason, the corporation is dissolved all the assets return to the board of health so, we are really just a vehicle by which the board of health can do things that they can't do on their own as a governmental entity so, and I'm happy to answer any questions that, that you might

"Shanklin, Barbara"

Does anyone have does anyone have any questions? There's no questions we ready to go. All in favor. I guess I heard

everybody, so we will be sending this to the consent calendar unless council president, James, wanting to go on old business.

"James, David"

No ma'am. Consent Calendar is fine.

"Shanklin, Barbara"

Okay. Thank you. Next item of business we have a special discussion and councilwoman Cassie Armstrong, you want to introduce your guests? I know you have yes, already there, right?

"Chambers Armstrong, Cassie"

Yeah, we have a couple of speakers in chambers, I will let them introduce themselves, but I will kick it off by saying that I am very grateful to them for being here. We have Dr. Ted Smith, and we have Ms. Laney Taylor who are going to talk to us about the work of the environments the Council might remember that we appropriated some ARP dollars to be involved in sort of the exterior and public activation of this project and so I am very excited to hear about the work going on in the environment Institute and sort of the next phases, and all of the things they have planned, so I'll let themselves introduce themselves further, but very grateful to have Dr Smith and miss Taylor with us today, thank you, the floor is yours?

"Taylor, Laney"

Hi, thank you so much for that warm introduction. I'm Laney

"Smith, Ted"

And I'm Ted Smith. Well, I really do appreciate the opportunity to come in without any sort of pressing ask on the legislative or financial front and with a tremendous amount of gratitude for your prior support of the many different things, our research institute is done, so, in some ways, this is just overdue Introduction or re, introduction to sort of our group, because this committee is charged with so many important things about the health and welfare of our community really wanted to prioritize addressing you directly in answering any questions you have so I'm going to try to keep the commercial portion of this advertising as little as possible, but it's a difficult thing for me to suppress. So, Christina Lee brown and Enivorme Institute at the university level is about 5 years old. It is the largest independent research institute at the University of Louisville. What about? We'll get into some details about 110 people. I'd like to tell people it's the largest research institute in our city you've never heard of. We're really

working hard to. working hard to for that problem, but given our, uh, our size and our presence you know, we really do feel a responsibility to be a very helpful member of the community. So we do have a phrase that we like to think we're pursuing a new vision of health you all probably know that a lot of the healthcare system is very focused on disease and identifying a treating disease and while that's not unimportant, it does leave a gap for where this disease comes from and so there's 3 broad areas we'll talk about here landscape of Louisville, you know what our realities are I know you all know this, but we'll do a quick refresher. You know, some of the fundamentals and what place based research and insight and interventions looks like. So you all are very familiar with the disparities and equities across our community. I'm not covering any new ground here, although we do continue to gather additional insights into these disparities and Ms. Taylor will share some of that with you in a few minutes, but for us, this is a really important focus, not only for Louisville, if we go to any major city in the United States, we're going to look at a map that has characteristics like this. If there, if there are racial boundaries, if there are socio economic boundaries, I promise you, you will find health boundaries in those cities and, you know, in some areas it's only a few miles and the difference could be as much as 30 years of life expectancy. So, we have to really take a look at places when we think about health and so if we offer up here, a couple of guiding questions, you know, the history of medicine is really has been focused on looking at individuals they come and they present their circumstances they worked up and, you know, somebody tries to figure out what's going on with that person, I think our approach is a little more like treating places and diagnosing places, and I don't need to tell anybody who's committed some of their lives to public service you know, one of the reasons that we choose to treat drinking water or wastewater pickup, solid waste so this is because we know that individual solutions in those areas are just infeasible and so ask us to keep thinking with that had on, as we look at these questions about disparities in health and health burden is it really about the person? Or is it about the place and if it is about the place, I'd like you to know that you have a strong partner here at the environment students in thinking about that, and thinking about what can be done about that just for those that are looking for dinner party, trivia conversation we came up with a name and Envirome as kind of a cheeky plug in the genome people, so, genetics and genomics has been such a strong field in life sciences for such a long time we've sort of come to believe that the genes are the important thing or whatever, and certainly through the pandemic, we've all

gotten lots of extra genetic lessons not to say that genes aren't important, but we really have under thought the environment and we all understand that our health and wellbeing emerges from this intersection of our genes and environment it's just that we've really under explored and so, you know, we break that whole anything outside of your skin is the way I think about it, where your skin ends and the rest of the world begins is the Envirome, you know, we see that in several dimensions we see the natural environment which many of you might be familiar with some of our other projects that look like, we do environmental health research and we do environmental health research, we care about the natural environment, but we also care about the social environment, which is critically important so, that's all the relations we have with each other things we've done to the natural environment to create the built environment and then our own individual personal environments, which vary with each of us, like our own individual fingerprints and so we try to keep track of all those levels of when we say environment we say Envirome we mean, all those things. As I was saying in the opener, you know, we're a large organization. This isn't all of us, but this is all of us we showed up on picture day we are currently 6 centers. We will probably be 8 centers next year we, we sort of emerged from these core centers that I'm sharing with you here. Really? I just want you to understand that all these people are busy pursuing some usually, federally funded initiative, whether it's about looking at Super fund exposures so, for example, Lee's lane here in Louisville or farm, just south of Justin memorial forest, you know, that's a body of work that's done both locally and nationally. We have a diabetes and obesity center that's a little bit of a misnomer. We're looking at the role of diabetes and obesity. The role of the vasculature the cardiovascular system in those diseases, tobacco regulation and addiction center that's a giant center funded by the food and Drug Administration through the American Heart Association, which we are a part of to do that work the center that I direct the center of healthy AirWatch soil, which is self explanatory the vast majority of our funding is from the federal government, we, we've got a pretty good track record over the last 10 years in these individual centers pursuing funds and we fully anticipate a bright future in this current administration. We have record funding to the National Institutes of health, the National Science Foundation, and several other research supporting agencies, so we're optimistic that the future is bright. We are always busy publishing as you might imagine, because we're academics, but it's really to make sure that we're the work that we're doing gets shared across, across the world. So, you'll probably never see this slide again

or never want to see it again, but often, because you may interact with us and it looks like we're doing public health work and I'm not saying that we're not, we are often doing things that look a lot like public health work. Our approach is deeply rooted in basic science, especially molecular biology and so all of our centers at their core can be traced back to somebody in a laboratory on the health sciences campus who is usually trying to understand how a pathway and your physiology is being disrupted, how a repair mechanism works, because at the end of the day, a lot of these environmental factors, we can see them. 1st, as they cause distress in our vasculature. It's the, in some ways the Achilles heel of the human body so, it's the single, biggest limiter of human lifespan so anything, if we can understand how to keep the cardiovascular system functioning, we can live longer and healthier lives and so anytime anything's going wrong, whether it's nutrition, whether it's stress, whether it's air pollution, I promise you we can see early signs of it in the molecules inside your blood vessels, so again, don't expect you to carry that information around, but just to know if you called over there, we're not really public health researchers we're really experts in mechanisms of human physiology and how physiology works. So just quickly areas that we, all may intersect over time pollution, you know, when we corrupt the environment, nobody's surprised that we have health problems and I know the vice chair here has interest strong interest in getting lead out of our community it is a really important goal there are dozens of other toxins that are present in all Metro environments that have industry, and I think, you know, this is going to be a continuous journey for us all to identify those pollutants and get rid of those pollutants and, you know, that the negative effects they have on human health so, you know, for us, largely the Super fun center and the center for Integrative environmental health sciences are 2 of our centers that typically get involved, so, if anybody from the community calls, for example, we had a rail car a few years ago spill with a lot of beauty dying in it, we got a call to try to figure out what the perimeter of risk is right? So so, you know Emergency Management services, disaster management. They don't have science backgrounds, right? They're working on the logistical situation and so we are happy to be called. We've had explosions in industry in this city we've had natural disasters that could also include toxins and toxic spills so this is a place that we are always available and always interested in being a partner to the city. Tobacco, you know, this, this body has been incredibly important over the years in tobacco regulation at a local level we have made tremendous progress in human health by reducing dependency addiction to tobacco

products and we are at some level, we are the science body that advises the FDA on things like constituents added to vaping products and E-cigarettes so when, when there's a discussion about whether these products are dangerous, that 9 times out of 10 is research coming out of our lab right on Mohammed Ali Boulevard so, we are very interested, invested in understanding the safety profile of these products and responsible marketing and access to those products. And then I mentioned earlier, diabetes and obesity center, you know, this is a long standing center for us funded by the National Institute for health we do look at diabetes and obesity as really, as a disruption of vascular repair and glucose management and the vasculature we don't really other than type 1, diabetes type 2, diabetes the most prevalent in the country really does seem to be a disruption of metabolism and so, as we think about diets as we think about food access you know, we're thinking about those factors as it relates to really having a healthy cardiovascular system, and then enjoying the benefits of not having the disruptions that these 1st, obesity, and then type 2 diabetes will bring. And just quickly, I know the councilman Triplett knows this project, well, we have a project in South Louisville called the green heart project it is a great example of what the National Institutes of health call, implementation science. Many of you probably are frustrated with academics who just continue to study things and publish reports that doesn't feel like we're working on the challenges to everybody all the time and so this project is a really great example it's 1, the National Institutes called out as a model project in United States, and it is essentially to take a whole bunch of epidemiological data correlational data that says people who live in greener places, have better health outcomes and instead of just getting stuck in these correlations it is the 1st project of its kind that has an intervention where we say we're going to take an environment where there's less greenery and we're going to add greenery, we're going to have a matched control area that doesn't get added greenery and we're going to look at a group of people over a period of time to see if the greenery was the causal factor in the improvement in their health. It's a remarkable project. I believe it will make Louisville famous for decades once we get the sort of science coming in. So we just we've done the baseline work, both Pre and post covered, and then planted 8,000 trees and bushes in 4 neighborhoods in South doable. And now we've started post testing of the group of people, we're monitoring air pollution the whole time, the primary hypothesis is that in urban environments, 1, valuable component nature brings is filtering air the National Institutes of health agreed that that was a

reasonable hypothesis, we do expect there are many other benefits protecting those neighborhoods from ambient air pollution, especially the air pollution that rolls off the Watterson expressway and a little bit from the airport adjoining. So we expect fingers crossed that a project like this could go on for decades and could be expanded if you know, the framing him hard study, it's a very famous study out of Massachusetts that really taught us almost all that we know about heart attack risk. This has the same kind of promise for how we think about how we build our cities. So, we're really looking forward to expanding that work over time with the communities that we're in. The community project, just as a refresher at the beginning of the pandemic we helped the health department with testing so we converted all of our molecular biology labs to do testing for Covid, I think we were, I hope helpful by testing all the health care workers, and all of the hospitals in all of our market. We did that for several months and, you know, we're happy to do it and it was important to work we expanded that to augment metros, broader community testing and, you know, the thing I'm now unfortunately famous for is we also added wastewater testing to that project, I'm very glad that we did that Louisville is 1 of 5 cities in United States that's doing probably the most, I think, groundbreaking work in wastewater monitoring, I'm looking forward to the dividends that that could pay a well outside of covid you've heard about obviously monkey pox and polio. There's dozens of other infectious diseases and dozens of toxins that I think we would all be comforted to know that we were on the watch for and so thank you for your support as body for this work. And then I'll turn it over to Laney to walk you through some of the some of the sort of the where the rubber hits the road on the place to work.

"Taylor, Laney"

Sure, thanks for that. I'm really excited to talk more about the environmental vulnerability index work. So, how it started, and I think is really exciting for our Institute, a community request, which generated for the asked to create knowledge, applicable tool that could be helpful and more proactively planning for natural disasters or more equitably allocating resources during that time. When trying to figure out, how do we create that knowledge for our city and we turn to other research across the country, really pinpointed a wonderful model in the Houston, Galveston area that constructed a city wide vulnerability index that combined social vulnerability factors and environmental vulnerability factors really into a visualization, so you could see at a micro level Edison by

census tract by census tract, what vulnerability looks like for the people of Houston so we took that we took those methods, we adapted it to the needs of Louisville, Louisville and Houston are not the same place and really generated 6 distinct rounds of vulnerability that we could think about when it comes to mobile things like social factors, baseline health measures, environmental factors and other specific conditions like housing and flooding are ones that we added and with that, it's just with the recognition that vulnerabilities can't be viewed in silos in our city and, and a better acknowledgment and a better understanding of vulnerability can really improve emergency and management planning. So, over the course of the summer, a group with 3 of us supported by faculty at the University of Louisville work to create the maps that you see in front of you though, is also on a previous slide, to really tell a preliminary story of vulnerability across Louisville, and what that means for our city, and we're now in an inflection point of that work, finishing up the data analysis, finishing up, kind of the internal work, and then sharing it with people like you all so, we can come together equipped with this knowledge to better to create better solutions for our city I think we've talked a lot about where we've been kind of where the origins of the environment are where we are right now in our place space research and it's also pretty important to talk about where we're going. You could also call this title of the slide where we're growing, because I would say that the next steps for the environment are characterized by expansion, rather than a reorientation. So, in terms of how we think about health, I know for me before I started the Envirome, I typically thought about it in terms of what hurts me a bee sting, a diagnosis of an illness I wasn't expecting, an inability to access needed resources and that's definitely 1 way to think about health but when it comes from a research perspective, thinking about health and those silos in terms of those factors is really time and resource consuming, and when thinking about the new vision of health campus, I located in the heart of downtown, it's really reoriented and centered on a basic profound question, and that is what builds health? and in terms what we believe those pillars are right now, and you can see these 3, these 3 pillars on the screen nutrition sleep and exercise by no means exhaustive, but it really is a new orientation of understanding health and recognizing that these pillars are central to a strong foundation for how we live here in Louisville. And kind of thinking about foundations I hope it's become clear throughout this presentation I thought the work of the environment is built on a strong foundation of wanting to reduce disease and improve health outcomes for the city we all know and

love and although we differ tactically and how we answer those questions, I think the work of the subcommittee is really rooted in that same foundation to improve the health of our city as we've walked through mobile has profound health inequities that are really collaboration is required to make to make sense to them and to make progress on them from research institutes, like ourselves, policymakers like you and others, civic group's other members of the community that can take steps together in stride over time as we really build to see what Louisville can, and should it be rather than what it is and so I really hope that you can consider us 1 of your many partners in this work, particularly when it comes to environmental health with the acknowledgement that our research really lends itself to collaboration and we really value the voices of the community in the work that we do here for our city. In terms of how that can manifest that is exactly why I'm here at the Envirome, I was brought on in April, with the explicit purpose to connect to the community to really make sure that our research and our work and our values are responsive to the needs of the community at any given time, and that we are aware of the diversity and the complexity of the problems that are in solutions within Louisville. So, as you can hear, I have helped with the environmental vulnerability index, some of our police basic research, and really have been super excited to receive community request with your ideas with your observations about what environmental health looks like to you all to your constituents And really more of those conversations are so welcome from individuals on the subcommittee metro council as a whole, and anyone who's interested in making progress on this with Louisville, use your observations, and I think most importantly the element that makes this work, so well is your aspiration because it's those threads of imagination and curiosity that just make me really excited to do this work and I think that help us make the most progress when we are able to take a step back and think about what we can become over time in terms of how that can manifest lots of different ways you see some examples here on the screen I'll kind of walk through the different rooms that we've identified so far again, by no means 1 is conducting research on environmental health topics, think a great example of this is last summer councilman dominant purpose came to us with a simple question: What is the connection between PTSD and noise pollution thinking about some of the lived experiences of her constituents? And really catalyzed by a letter to the editor, we found about someone living near the Watterson expressway very confused and wanting to know why there wasn't noisy mitigation, right where he lived, and when he can look down the way on the same expressway and see that

other neighborhoods. So, 1 example of the research that we were happy to help with and really, I'm inspired to learn more about the needs of our city.

2nd community engagement work attending speaking out events, like these are aligned community events that you host for your constituents. This Sunday at the Speed we are hosting a screening of dark waters, it's about the danger forever, chemicals and our water in our blood streams and really it's very ubiquitous in terms of the impact it has on our lives. We are coordinating this with representative, a state representative and that collaboration for the community has been really fulfilling A great example of how we can collaborate to make progress on awareness of issues like these, and lastly, collaborating with local stakeholders on solution. Ted referenced this earlier in the presentation, I know this council on a subcommittee in particular is thinking about lead abatement and what that can look like from a policy perspective and being able to look at pure city models or being able to think about the science of lead is definitely a way that we could lend expertise as 1 example for thinking about solutions that can really improve the health of our neighbors. My email, my phone number are here for a reason. Please directly reach out to me and I would be more than happy to help think through ideas to brainstorm and to really again think about what the city can be over time. And with that, a big thank you all for your attention for listening and we're happy to answer any questions that you may have.

"Shanklin, Barbara"
Councilwoman Cassie Armstrong.

"Chambers Armstrong, Cassie"
Thank you Madam chair and thank you both for being here today. You started to talk a little bit about my question at the end and so I want to say, I love the idea of having you are all sort of physically centered downtown, putting health at the very center of our community and I love, I think so often when we think about health, we think of it as this very institutionalized, very medical occurs at a hospital with rubber gloves, sterile sort of thing and I love the idea that health is something that exists around us and sort of at its core that it's this idea that we should all be entitled to be well in the world and understanding the way that the world contributes to that. So, I think it's just great to have you all be a part of the fabric of downtown and in the actual core of our city. My question is, and I'm hoping you all can talk a little bit more about just sort of what having this research going on means for

the community at large and also for us as policymakers? And so what does the community benefit from this can the community engage with your all's work? How do you foresee bringing the communities that are impacted by disease and health challenges into the work that you're doing? And also, you know, I love the idea of, like, evidence-based policy and that, as we identify challenges and we have all of this data about health vulnerabilities and indexes and sort of what the challenges are in each of our unique districts. How what does it look like for us to take that information and use it to create policy solutions? So, how do you sort of how has that, what does that relationship look like in other places? What could it look like here? And just sort of how does how do we, as policymakers learn from the work that you're doing, thanks.

"Smith, Ted"

We have a take a shot of that, so maybe just borrow a little bit from the work that we do with the federal government so when the food and Drug Administration wants to know whether something is dangerous they need somebody that can answer the question right so it's interactions like that where, I mean, referenced earlier 1 of your colleagues concerned about noise, what do we know about noise? And so I'm old enough to remember that there used to be referenced desk at libraries before there was Google and so you would go and you would ask the reference library and for help when you need to do what you had a question about and I feel like this is part of our responsibility as a research university we have lots of people that have lots of different expertise across many disciplines beyond environment, right and so I think it starts there. So, what do we know, and we live in a world where there's sort of a lot of half truths, and a lot of sort of made up opinion and it's difficult to figure out what the ground truth is, right? So, I think, and so many things can be done quickly in that fashion and so that's offer 1 and I think many cities are used to being spoiled by that, and a lot of colleagues in California are always talking about how they just call Stanford whenever they have a problem. I grew up in Pittsburgh, everybody just called Carnegie Mellon whenever they had a problem, so, I hope you all just get used to calling the university when you have a problem and happy if it's related to something about the health in your district happy to have that call come to us and Laney specifically, not me and see what we can do, right just straightforward, it could be a very quick, quick matter and we get smarter for it too and we live here too right? So we're all sort of vested together. I think when you get to sort of policy I think it's. I think it's a little less clear and perhaps very situational so really relying on you all

with your expertise to figure out when you feel like it's more than just looking something up and when we might want to go out and test so I won't get into a project that we've started where we're just curious it's a development project in community where we're curious about the air pollution being generated by the project, so we will go out we will spend our resources to figure out what the local air pollution is that that project is creating. So that's more than a look it up thing, that's a specific kind of thing and the lead project has elements of that, right? So we already know that is bad. We know it's really bad for developing brains so, you know, it's not a look it up it's go find it project the same thing is true for forever chemicals. So, sooner or later in this community, we will be hunting for these chemicals as a regular matter of course, between the water company, and that's ground 0 for that work but we're going to have to find where these chemicals are largely coming from and if there are defined point sources, we're going to want to get rid of them. And so, you know, we, you know, we would hope and expect to be part of that work just like we hunted for sears and the sewers happy to go hunt for fast, you know, if it means keeping our kids safe and their kids safe in the future. So again, situational and not only any of you would have anything to that.

"Taylor, Laney"

Yeah, I really appreciate the 1st, part of your question about how do we bring the community alongside this work? How does that happen? How's that manifest? And that's a tough question and I think it starts by being present and I think something that's been wonderful for me through some of my relationships with Metro Council thus far has been invited to events Council woman Nicole George my 3rd day on the job, invited us to a community forum about aspiring spell that happened some of her constituents, we were able to use the expertise of the environment to prepare a handout, bring it to the community forum and say this is the science behind some of the symptoms you may have experienced this is the risk that you may have underwent during that time period and here is a groundswell for conversation and I think this job at its best is when we have those forms to have those conversations about what people are noticing their lived experiences, their observations and being to work alongside experts at the Enirome, it's really ground those observations into a path forward so, that's 1 example where I've seen it being really successful, but in terms of how we can better engage the community, I think that presence is something I'm really looking forward to in this role, I'm

attending more community forms events and would welcome any invitations that you all may have unrelated events.

"Chambers Armstrong, Cassie"

Well, thank you to both. And thank you Madam chair.

"Shanklin, Barbara"

Kevin Triplett.

"Triplett, Kevin"

Yeah, thank you. Dr Shanklin, Dr. and Laney, thank you both for being here, actually you've spent the last several minutes covering my, my questions with councilwoman Armstrong had suggested is how do we get there? What can we do and get it's more of a, just a public education and public information. I mean come on knowing what we know about, the dangers of smoking and tobacco use and things like that, but also just the environment and clean air and the benefits of healthy living and healthy lifestyles we've been, we've heard this over and over and over, but yet for the life of me, some people just need to be reminded and so I appreciate the work, you guys are involved in such, such in depth work Dr. thank you for bringing up the, the Green Heart and the tree planting, you know, talking about the environment, and the Clean Air, and the whole genesis behind that, the program did take a little bit of a PR, over the summer, we've had a lot of the trees that didn't make it and now on top of being health experts, you have to be an arborist now and to be a tree planting engineer but the trees are being replaced, the program is wildly successful and so we want to thank everyone involved with that, and I just want to think you both for being here today to share this wealth of knowledge and please know, that we can help in any way in a public information way getting the word out with what you guys do and living healthy and living better. Thank you so much.

"Shanklin, Barbara"

Thank you Councilman. President James.

"James, David"

Thank you, Madam chair. Thank you all for being here and thanks for all the work you're doing and go cards. I do have a question about the dark waters film and fast and all that and have you all had any or do you plan on having any conversations with the little water company or MSD? And, or and if so, what have those conversations been?

"Smith, Ted"

So, yes on MSD and no on the water company. So is an active daily partner of ours on the pandemic. Monitoring work, so David Tally has become a good friend, and colleague over there, and he has operational responsibilities that touch onto these chemicals and getting them out of the water as part of treating them and so they're, I mean, they're in the investigating, the best available technologies right? Now you know, I applaud your interest in this I mean, you know, when the president declared this super fun chemical, and I made it a priority 1 target it surprised the entire industry, so I think we're all going to want to pay very close attention to how fast and cost effectively, we can identify and remove these chemicals. I know that MSD the team is working hard to figure that out. I know nobody wants to hear that it could become more expensive to go hunting for these things, but, I mean, the reality is, it will become more expensive so, you know, it's my hope that we can do that together in the speed school of engineering we've got some people that are really, really interested in scaling up solutions on this front ,you know, because again, most of the suppliers in this business also got caught flat footed, so we're in sort of a national race to clean up the drinking water and clean up the discharges in the wastewater, so early days, I think is where we are.

"James, David"

Ok, thank you so much. Thank you. Madam chair.

"Shanklin, Barbara"

Thank you we have anyone else that. Has any concerns questions or anything? If not I want to thank Doctor Smith and Miss Taylor for being here with us today, we appreciate it and we may call you back before the years done. But next on the agenda, we have, we had 3 things is going to be held, this continue to be held, number 2 with the lead program and 3 which is data purposes, occupational something pertaining to priorities and reduction of fans to elderly people and then we also have to Jecorey Author has a new resolution to support a bit better public housing management and maintenance and he wants it held also. So, with that being said, that's all we have on their agenda today, so we are adjourned. Thank you.