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Prince William Board of County Supervisors Meeting — Work Session, Tuesday, September 15, 2026

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[00:00:07] all right thank you everyone it is two o'clock on tuesday september 15 2026 let us begin with the moment of silence all right thank you all rise if you are able for pledge of allegiance

[00:00:30] all right thank you everyone we do not have any procedural matters so we are going to go on to agenda item number four and that is public comment time i will give instructions while the clerk gets the sheet i will call people up in groups of five please begin by stating your name

[00:01:05] the magisterial district where you reside. Up there on the screen is a timer. You will have three minutes. Everyone will speak at the back, and I ask that you adjust the microphone so that we can hear you. You can have the most brilliant ideas, but if we can't hear you. So first, we have two people. I'd like to call up Sonny Coffey and Dr. Kimberly Melman-Horosko.

[00:01:33] Yes, no problem. Ready to go green. It's not a problem. Let's just go.

[00:02:32] We'll get it shortly. Okay.

[00:03:22] Are you ready?

[00:04:23] Yeah, let's go green. I'm here once again to address law H-256, which was to allow municipalities to enact environmental justice into their comprehensive plan.

[00:04:47] After further review and consulting with a referee, I found that it is entered in Section 15.2 of the Virginia Code, and this falls under towns, cities, and counties.

[00:05:05] And this is, for me, after reading that, I'm asking for, one, advise and consent from the county executive. But when I further read the law, in Part C, it said the environmental justice strategy shall.

[00:05:26] And number one, it said identify each environmental justice community and fence line community within the local planning commission jurisdiction. So when I saw fence line, I was thinking more or less in the more rural as well as more farming area.

[00:05:45] But when, after further review and looking up how it reads in the Virginia law, fence line community means an area that contains all a part of the low-income community or community of color that presents an increased health risk and to its residents due to proximity to the major source of pollution.

[00:06:07] So once again, I'm here to ask the county executive to advise and consent on it and the board to include it in the comprehensive plan review. And as James Bond said, the second time is considerably.

[00:06:26] Thank you for your time. Thank you. Next speaker, please. You ready? My name is Dr. Kimberly Melman-Oroska. I'm a resident of the Gainesville District.

[00:06:45] Last time I was here, and the last few times I was here, I actually spoke to you about the systemic violations to special education issues affecting children with disabilities within Prince William County Public Schools. I also talked to you about the misappropriation, government waste and abuse among the expenditures by the Prince William County School Board.

[00:07:07] Following that talk to you all, I had two interactions worth noting with this board. One was from Mr. Stewart of the Gainesville District. I commend you, sir. I very quickly and hastily left the building.

[00:07:24] You sent one of your staff members out to come and speak to me. She literally ran after me to get information. I challenge every person who is a resident of your district, whether they are a Republican or Democrat, to recognize that.

[00:07:39] Because that takes strong and strength of character to do that. So I commend you, and I do thank you for making that overture, because that really speaks volume to the content of your character, to hear something like that and want to learn more, to see what you can do about it. The other interaction was from Chair Jefferson.

[00:07:56] After my speech, you told me that it is not the role of the Board of County Supervisors to investigate or to look into what I spoke about. I fervently disagree with your position. I think that any person who has a moral and ethical compass, any person of elected authority, should look into allegations of civil rights abuses affecting children with disabilities.

[00:08:22] Any person in your position should absolutely look into allegations of government fraud, waste, and abuse. And to that effect, I did my own digging and research. It is this board who appropriates the \$2.9 billion worth of funding.

[00:08:38] If that funding is going to places where you do not authorize, if it is being misappropriated, it absolutely is not only your role, it is your responsibility to look into it and to correct it because you are the one appropriating those funds.

[00:08:54] And to that effect, as I mentioned last time, I had a pending FOIA request. Another reason why all of you should care is because what's happening to children with disabilities. Although your former superintendent of the school board, Dr. Waltz, did away with the archaic practice of locking children with disabilities in padded rooms with wooden doors, Dr. McDade has brought it back.

[00:09:18] Specifically, if any of these schools are in your jurisdictions, children are being locked in rooms. Signal Hill Elementary School, Woodbridge High School, Henderson Elementary School, Independence, Pace West, Bennett Elementary School, and Kyle Wilson Elementary School, as well as Penn.

[00:09:35] These kids are being locked in rooms. They have spent back this money to put those doors on those rooms, and you should look into it because the U.S. Department of Education has already found this district out of compliance for that. All right. Thank you very much. We are now going to go to Supervisor Victor Angry for remote public comment.

[00:09:56] Thank you, Madam Chair. Chris, I have two on the sheet. Are they still with us? Yes, I believe they are. Our first speaker is Rachel Ellis. Yes. Go ahead, Ms. Ellis. Good afternoon. Rachel Ellis, Gainesville District.

[00:10:14] This board has the power to do more, more when it comes to protecting its residents. and I am encouraging you to use that power. Today you will be discussing the Lima study, and next week is a discussion of the Zoning Text Amendment for the data center overlay. With both of these discussions and what could lead to a vote, I look forward to real action from this board, not just soundbites.

[00:10:39] Next year is an election year, so it is certainly suspect that two things, water and data centers, are at the forefront of this board's current discussions. You cannot say we are one Prince William while you continually vote against protecting communities and other districts. For the past two and a half years, residents have watched four district supervisors pass 13 of 14 data center applications. Not one of these data centers was in their district. And to be clear, the four districts are Potomac, Occoquan, Biasco, and Woodbridge.

[00:11:12] And to be totally clear, Supervisor LaCroix is new, but her predecessor voted yes on every single data center application, which we are now seeing the impacts of. We are not one Prince William, not when the voting record shows otherwise, whether it was voting to disband the resident-led data center ordinance advisory group or allowing more on data center applications.

[00:11:37] Again, which districts are most impacted by these votes, not yours? You have the opportunity to change your voting record. You have the opportunity to protect our watershed. You have the opportunity to put data center restrictions in place to protect all communities.

[00:11:54] Residents are watching. It is time your social media posts about protecting our water and protecting our communities are put into real action. We are one Prince William when you fight for other districts as if they were your own. That is when we will be unified as a county.

[00:12:10] Thank you. Thank you, ma'am. next speaker please next speaker is jessica grove go ahead miss groves hi good afternoon board um i am actually in another i'm in the gainesville district i'm on another work meeting right now but i just wanted to pop in to say um i'm really concerned about the votes that are being taken that a lot of us in the western end feel are really being discriminated against with respect

[00:12:43] to water usage and the power and the sprawl that we've been incurring in our district specifically um you know you're gonna be talking about the watershed today and we have been bringing up for years what the decisions this board and the previous board have been making really affect our water um and you're you're discussing it and you have great ideas and great thoughts and but But you're still making decisions that are going to ruin our quality of life.

[00:13:22] And you guys may not be on the board when it actually comes to affect us. And we're asking you to really take a look at this and stop making decisions that will affect us negatively in the meantime before you're waiting for your study.

[00:13:40] And please listen to us when we're saying that building sprawl in the middle of our county or building data centers in the middle of our county. And you have a planning commission who's letting 180 days go by.

[00:13:58] Please stop by right development. Please stop the sprawl. Listen to us and what we are protecting here in the western end with the Occoquan watershed. It is important to us for our quality of water. It is also important for the rest of the region to protect their water. Please work with us to protect what is so important to this area and this county.

[00:14:20] Thank you, ma'am. Thank you. Chris, is that it? Yes, sir. All right. Thank you, sir. All right. Thank you very much.

[00:14:37] And thank you for everyone who has taken time out of their schedules to be able to comment today. We are going to go on to agenda item number five, and that is county executive time. Mr. Shorter. Thank you very much, Madam Chair, members of the board. There was one directive given at your last meeting, and that was to explore the ability of establishing a local marijuana and cannabis tax in the county.

[00:15:01] That directive was assigned to our finance department, and there were no directives closed. Since your last meeting, there were a few messages sent to the board. One, an update on several key fire and rescue system initiatives, including the community engagement sessions, the fire and rescue system plans to host this week to help shape the department's strategic plan.

[00:15:25] I also sent a message sharing the 2026 real estate assessment annual report, And that has been posted to the county's website. I want to really thank Leslie Weldon and really the entire real estate and assessments team for the great work in producing that annual report.

[00:15:43] I sent a message regarding highlights from the FY 2027 Debt Oversight Committee, which we discussed earlier during the Finance and Budget Committee meeting, and am happy to answer any questions about that report.

[00:15:59] And I sent a message sharing the very good news that Fitch Ratings has reaffirmed the county's credit rating at AAA. I also wanted to just quickly thank board members and really this community for the phenomenal 9-11 ceremony that was held last week.

[00:16:23] really want to especially thank Mrs. Lynch, Vicki Taylor, and the chair for the just phenomenal remarks that were provided during that evening ceremony. And really also want to thank the communications and engagement team for designing just a phenomenal program and for inviting

Osborne Park High School Choir. They were absolutely phenomenal. So thank you. Thank you there. And for me, Madam Chair, that is all, unless there are any questions. All right. Thank

[00:16:57] you very much. I think that everyone wants to highlight what amazing work that our communications department did. It was a touching ceremony, 25 years. I'm sure that everyone here remembers exactly where we were when it happened. But Nick and her team did an amazing job. And Brenda Lynch, I mean, it was hard to look at her sometimes without wanting to tear up myself. So I don't see anyone else in queue so I'll go to um agenda item number six madam county attorney thank you madam chair members of the board this afternoon in closed session there will be consultation with

[00:17:34] legal counsel and briefings by staff members pertaining to discussions concerning an economic development item regarding an expansion of of an existing business or industry where no previous announcement has been made of the business or industry's interest in expanding their facilities in the county along with a related discussion or consideration of the investment of public funds for the economic development matters where competition or bargaining is involved, where if made public initially, the financial interests of the county would be adversely affected, all where discussion in an open meeting would adversely affect the litigating posture, bargaining position, or negotiating strategy of the public body, and consultation with legal counsel and briefings by staff members pertaining to the discussion

[00:18:13] or consideration of the disposition of publicly held real property for public transportation purposes, where discussion in an open meeting would adversely affect the litigating posture, bargaining position or negotiating strategy of the public body. These items are appropriate for closed session pursuant to 2.2-3711A3, 5, and 6 of the Code of Virginia.

[00:18:33] Move for approval. Second. All right, let's go ahead and take our votes. Vote unanimous. All right, thank you very much. Mr. Short, I'm going to return to you to tee up our work session.

[00:18:53] All right, thank you very much, Madam Chair. So with item 7A, we're going to hear an update on the land use impact modeling and assessment study. I want to invite Director Katab Shemute down to introduce the presentation, but before we get started, I did want to just acknowledge Craig Pfeiffer, the Executive Director of the Northern Virginia Regional Commission here with us today, and just want to thank him for his presence and all the great partnership and work that we do together. Director Shemoud, turn it over to you. Thank you very much, Chris. Good

[00:19:26] afternoon, Madam Chair, members of the board. I'm here to present the team that worked on the Lima study, which is, as we call it, Lima study, but it's the Occoquan Land Use Impact Modeling and Assessments. The study was led by NVRC, Northern Virginia Regional Commission, in collaboration or coordination with Virginia Tech Occoquan Lab.

[00:19:52] I'm very excited to say we have representation from both entities are with us today. From NBRC, we have, as Mr. Schwartor mentioned, Craig Pfeiffer, and he is the Executive Director for Northern Virginia Regional Commission.

[00:20:11] And we have Dr. Stanley Grant, the Director of the Occoquan Lab and Professor in the Department of Civil and Environmental Engineering in Virginia Tech. We also have Dr. Siddharth Saxena. He is the Assistant Professor in Civil and Environmental Engineering at Virginia Tech as well.

[00:20:31] The study provides an important regional assessment of how current and projected land use changes within the Occoquan watershed would affect the Occoquan Reservoir. It is particularly relevant to Prince William County as we continue to experience growth and consider future land use and development decisions.

[00:20:50] The study also provides a broader regional perspective by looking at the cumulative impact of land changes across the watershed, rather than just focusing on one jurisdiction. We appreciate our guests for being here today, and they're going to walk us through the study, its methodology, its key findings, and help us better understand what the results may mean for the future of the Occoquan Reservoir.

[00:21:15] So with that, I'm going to turn it over without any further ado to Mr. Craig Pfeiffer to lead us into this presentation. Thank you. Thank you very much, Madam Chair and board members. Thank you for having us here. I am not the water expert here today, so I'm going to turn it over very shortly to my colleagues, but I would be remiss if I didn't take this opportunity as the first time I've been able to visit with you to thank you very much for your participation and support of NVRC.

[00:21:44] we are one of 21 planning district commissions in virginia we represent the 13 cities counties and large towns in northern virginia over 2.6 million people and we help coordinate a lot of different programs that make sense to be coordinated regionally many of those are environmental programs especially related to our support for chesapeake bay water quality and for the management of the Occoquan and the Four Mile Run watersheds.

[00:22:09] So we appreciate your active participation and support of MVRC. Your supervisors, Angry, Bodie, and Bailey are all on our commission. Supervisor Bailey serves as our vice chair. Supervisor Angry serves as a co-chair of our military and community partnership committee.

[00:22:28] And so we just really appreciate how active Prince William County is in regional cooperation and collaboration and coordination. So with that, I'd like to turn it over to my colleagues from Virginia Tech, who will introduce themselves and tell you more about the Occoquan model that MVRC has been privileged to lead for some time with the help of our friends at Virginia Tech.

[00:22:49] Thank you very much. Thank you so much, Craig, for the introductions, and thanks for the board for inviting us over to talk about the study. My name is Siddharth Saxena. I'm a assistant professor in the Department of Civil Environmental Engineering, And I was the PI for the Lima study, as well as the stuff that I'm going to be talking about in addition to the Lima study would be the Occoquan Watershed Modeling Framework, which is the forward-looking work that we've been doing over the past last two years to address some of the concerns.

[00:23:22] So just to thank our team, this is the Lima team, consisted of myself, Dr. Grant, Dr. Rippey, as co-PIs from Virginia Tech, along with Norm Goulet from NVRC who lead the study from the NVRC side and the other staff at Virginia Tech who were really instrumental in doing all of the work, the graduate students as well as our postdocs that were really instrumental in getting us through the line.

[00:23:50] So before I talk about this study, I just wanted to talk briefly about the Occoquan model. And I want to preface this by saying it's the Occoquan legacy model now because, as I'll talk about in the future, we have moved on from this model.

[00:24:07] It was the model of choice for the last 30 years or so that NDRC Invergenetic had been working on and developing. It was primarily based on these two models that are called HSPF and CEQAL. And the

idea of this model was to provide data on flow estimates, nutrient loads, sediment loads into the reservoir.

[00:24:28] and it did provide valuable data to support BMP design as well as manage the discharge operations into the reservoir. But newer and more challenging questions and recent technological advances that we've seen have reduced its usability.

[00:24:44] So the LEMA study is really the last study that we did through using this model, and that is why I will also talk about the Occoquan framework, which kind of goes into what new are we doing to help some of the issues that were previously in the model and how we are advancing the technology as well.

[00:25:02] So the key question that we were trying to answer through the study was how does increasing imperviousness due to land-use land cover change and climate variability impact the watershed in the future? So we were looking at a watershed scale picture of what would happen in the year 2040, assuming we had projections for land use and land cover change as well as projections for climate variability.

[00:25:27] We incorporated both of that and tried to see how we would see changes in, say, the flow, as well as the nutrient concentrations that were coming out at the reservoir. So just going briefly into how did we design this study. So the research workflow essentially considered of us trying to first get a good idea of the present as well as forecast into the future.

[00:25:52] So when looking into future projections, we had to project both imperviousness as well as the climate projections going out into the future. So we used two tools, the TERSET, which is the standardized tool for land use change analysis. It's a proprietary software that we incorporated for getting these imperviousness projections.

[00:26:11] And then an in-house tool that we developed at Virginia Tech that's a very rigorous tool to come up with future climate projections. So once we had these projections, we used the Occoquan legacy model where we first calibrated it to the present so that we knew that the model was doing a decent job at predicting the present scenario, or the last three or four years of flows that we were seeing were accurately captured or not by the model.

[00:26:35] And then using that calibrated model, we put in these new scenarios of future projections of 2040, including both land use and climate, and then tried to predict what the change in the water levels might be or change in the pollution levels might be. Just to give you a brief overview of, first, we had to look into whether the model was doing a good job or not.

[00:26:56] And these are some basic statistics that we used to identify how good a job the model was doing. In terms of, like, trend tracking, like if the river goes up, does the model also show the river going up, how reliable it was, what was the margin of error, and was there a bias in the predictions of the model where it was constantly either over-predicting or under-predicting?

[00:27:17] We looked at all of those statistics before we went ahead and looked at the present and future analysis comparisons. And so overall, based on standardized references and previously established criteria, the model calibration was satisfactory, which had also shown to the Occoquan TAC and got their approval before we went ahead and went into the analysis for the future.

[00:27:43] So in trying to understand how would these scenarios work in the future, we set up four basic scenarios. The first was today's snapshot where it represented the baseline scenario, which for the modeling purposes, we use the years 2013 to 15 and the land use for 2016 as the baseline.

[00:28:03] And then we use three different scenarios, one that just considered growth or just land use change where we did not change anything into the future in terms of the climate. So exactly the same rainfall or precipitation that would have occurred in those years, we assumed that the same one would occur.

[00:28:21] And then we came up with two more scenarios through our climate model that one looked at median change in terms of the climate adaptability and incorporated what would be the changes in rainfall as well as temperature in the model. And then we also looked at sort of a growth with the worst case scenario on top of it with respect to climate, which we called as the extreme scenario.

[00:28:43] And both these scenarios were out for 2039 to 2041. That sort of averaged out representing the 2040 projections that we were looking into. So we went ahead for our land use projections. We went ahead with the model that we built, and then we sent that model over to all the jurisdictions to look into how our projections were, and where not they were matching what their comprehensive master plans were.

[00:29:08] And we worked with them, worked with all the jurisdictions, gave them a certain amount of time once they came back with their estimates of where we were going wrong or where there were developments that we needed to adjust for. We incorporated both our machine learning framework as well as the jurisdiction's input to come up with these projections for imperviousness.

[00:29:28] And what you see on this slide here is the 2040 projections of imperviousness as percent change across the Occoquan watershed. And as you can see, some of the smaller sub-basins that are part of watershed that drain into the reservoir had about five more than five percent change but some of them had less change although this was aggregated across these individual areas so certain locations might have seen more change but they were aggregated because they were looking at this from the watershed scale so we said okay we have good projections for land use then we went about our

[00:30:05] climate model and came up with these projections for precipitation and the climate model I just wanted to let you know that we ran thousands and thousands of simulations so it's a very stochastic process where we look at different models we don't trust one specific future outlook model we looked at more than five models came up with an approach where we ran thousands of simulations and then came up with these projections out into the future and what you see here are just all of the gauges that are part of the Occoquan watershed and how the precipitation would look like in the year 2040 projected by the climate model that we developed. And this represents both the median

[00:30:44] scenario as well as the extreme future scenario. Okay, so now that we have the land use as well as climate, we just ran our Occoquan legacy model that we already had that we had built and worked well for the current scenario. And what you see in the blue here is that prediction from that model. And the results that you see here are the example of the lower Bullrun watershed, which saw about 4.45 percent impervious change as we were predicting. And then what you see here are just changes in the mean daily stream flow. So on average over the year, what would be the change

[00:31:20] in the mean daily stream flow? And what we did find was that when you looked into the land use impacts, the green is what shows just the growth scenario. For about a 5 percent impervious change, we were seeing a similar difference in the change in the mean stream flow.

[00:31:37] But with the climate scenarios, when we moved into looking at the impact of median scenarios as well as extreme scenarios, which are in orange and red, we did see a much more significant change

with respect to the mean daily stream flow, going up about 20% in the extreme scenario.

[00:31:55] Same thing we did for the analysis of the load. So once we know the flow is changing, We also predicted concentrations for what would be total nitrogen, ammonia, and TSS, suspended solids. And we tried to look at how the loads going into the reservoir would change if land use were to change.

[00:32:13] And this is an example of the lower broad run, where we had about 5.67% change in the imperviousness. And we did see some change in the loads coming out into the reservoir from the watershed in terms of total phosphorus as well as TSS.

[00:32:30] However, again, the impact combined of both the growth scenario and the climate scenarios were more significant than compared to just the growth scenario from our observations. So in the report, we have these results for each of the watersheds as well as very detailed tables that talk about all of these numbers here that you see.

[00:32:52] One last thing that we did on this work was also assumed future development scenarios just to understand the sensitivity. if the randomly increased imperviousness what would happen to the things that we were seeing and what you see here are just results from the lower broad run watershed and we did see that increasing daily flow as well as total increasing imperviousness did translate into increasing the daily flows as well as the other constituents that we were measuring in the watershed however the impact of each of the constituents was different so total phosphorus and nitrogen

[00:33:29] they were relating much more linearly. The total suspended solids were not increasing as much as you would expect. One caveat though is that the projected development that we had predicted in the model as well as the accuracy of the legacy model was about 70 percent. So we were very accurate at predicting overall area of what the development would be in terms of when we calibrated but where the development would occur was not as accurate in the model so I didn't want to mention that, as well as the model itself was about 70% accurate. So that is why we have uncertainty

[00:34:07] bands around these predictions here, just to make sure that we account for that. Just something to note there. Okay, finally, coming to the conclusions of this work, when we projected out into 2040, we realized that the urban land cover, that that doesn't necessarily translate to imperviousness, goes from about 29% for the entire watershed to 39% by 2040.

[00:34:32] And we did see that more development did result in higher flows, more nutrients and more sediments going into the stream. One important thing that we also noticed that streams had more sensitivity during the summer season. So when the flows were lower, the impacts were more significant to the changes that we were observing.

[00:34:53] The other thing, in terms of sustained development under climate variability, where we are assuming the same growth to happen that we are projecting out, but also include climate variability into the system, we did expect that there would be higher rainfall and flashier storms.

[00:35:10] By 2040, there would be enhanced periods of no rainfall, but the overall averages of rainfall we did see that were increasing. And coupled with the growth, the climate variability had a much larger impact on the total flows in the watershed health in terms of nutrients and sediments.

[00:35:27] So in terms of our understanding, one thing that we recommended was continuous and improved monitoring of the watershed because monitoring data has been and will continue to be very

valuable for analysis. We also recommended being ready for the worst case scenarios, so developing scenarios like these and understanding their impacts was critical to being prepared for that.

[00:35:50] And then one last thing that we recommended was that the legacy model, with all of its inaccuracies in terms of what it could do, as well as the 70% accuracy I talked about, we needed to modernize the modeling process itself moving forward. Some of the things that, you know, talking about why we needed the upgrade, sort of why we moved away from the legacy Occoquan model, was one thing that I mentioned that we could not see the neighborhood level change or could not assign that to a hydrologic model like that that well.

[00:36:24] It was well aggregated to the watershed scale, so we were not able to see finer details. And it was slow and difficult to update, so it took us a year to run all of these simulations and come up with these changes every time we tried to solve it. And so our forecasts, because we could not account for a lot of scenarios, were also not as certain.

[00:36:43] So because of that, you know, we ended and published the Lima report at the end that talked about all of these recommendations. And then we moved forward into the new study that we worked with the Occoquan TAC to establish, which was called the Occoquan Watershed Modeling Framework.

[00:37:01] So the Occoquan Watershed Modeling Framework, or UMTH, is transforming a watershed management through intelligence. That's sort of the objective and goal. So this is more future-looking, forward-looking, trying to do better at the things that we weren't able to do in the past.

[00:37:18] And as part of this framework, we suggested that we should not stick to one model because it's hard to trust the results for one specific model. Rather, we should look at the advantages that different models provide and come up with a suite of models that can help us answer more nuanced questions. So some model would be good at answering neighborhood-level questions.

[00:37:37] Some model would be good at answering the overall watershed picture. So based on this framework, we went ahead and developed or are in the process of developing four applications of products. The first one's called OccoCast, which is the real-time flow forecasting app.

[00:37:55] The other one's called Lucy, which is the land use and climate impact intelligence tool. The third one's OccoScene, which is not yet under development, but this would be the scenario explorer where people could go in and actually work through the dashboard, so people working at the Prince William County office or our stakeholders that we continually work with at the Occo Contact could actually look at the data, download it themselves, and work through that.

[00:38:19] And then ORDER, which is the transit time environmental response model as well. So I'll briefly give you an overview of what we're trying to accomplish through each of these things. And again, with this work, we, of course, have a new team, Some team members moved on to different positions, and we had new students join in as well.

[00:38:43] We also hired an AI engineer to help us with some of the tasks that were related to machine learning, and as well as Dr. Day, who has joined our team as a research scientist recently. So one of the things that we were finding a problem with was the reliability.

[00:38:59] We wanted to run a lot of simulations, and we wanted to run them quickly. So what we have done is we have expanded our automation process. So now, instead of taking us a year to run a simulation,

we can do that much faster. So if we come up with different scenarios, we can get answers to those scenarios faster.

[00:39:17] We are also going into uncertainty estimation, because each of these processes has their inherent uncertainty. So we're trying to estimate that and put that in the models. And then we are stress testing the new models for reliability and risk forecasting as well. Just as an example of that, this is the new model report card.

[00:39:38] at least one of the models that we have in the framework. And now you see that from good to satisfactory, we've now moved on to very good and excellent in terms of our predictions. This gives us confidence that now we can at least predict better, so we'll be able to predict the future better also using these models.

[00:39:57] The other app that I talked about was the OccoCast. This application that we're developing right now is already operational, actually. The link is in the slides if you want to click on and go into the dashboard there. but this is designed to see watershed conditions before they happen so with this we can actually look into how much flow there is going to be in the watershed at all of the monitoring gauges 16 hours out at the hourly scale as well as 10 days out at the daily scale so we'll be able to better know what is going to happen in the watershed looking at forecasts and we also are embedding into it an adaptive AI correction where it looks into what

[00:40:37] error has been and self-corrects itself. So that is one of the applications that is already operational as part of the framework that we are developing. The other application that we've developed so far is LUCI, which is the land use and climate impact intelligence. So this application would allow us to generate better scenarios, be more accurate at knowing where land use change would occur or what would be the impact of future climate variability into a watershed.

[00:41:06] As an example of that application, we know that the previous model was great at predicting the overall, how much land would be developed. So we were doing well at the areas, the total acreages of land use, but we were not very good at predicting where the development would occur.

[00:41:22] So now we are using advanced deep learning to pinpoint exactly how future growth would occur, which with much higher accuracy in terms of the exact cell-by-cell prediction out into the future. So this just gives you a good example of the improvement in the accuracy that we have seen.

[00:41:44] Going from the previous model that was incorporated in the Lima study, the Turset, to our deep learning model. In terms of like locational accuracies, we're not doing well with that proprietary software. That's why we went ahead and built our own.

[00:42:00] And this one is definitely much higher in terms of accuracy of prediction. And what we can do with this now is we can actually forecast imperviousness going out into the future at a cell-by-cell level. So this is already something that we have produced.

[00:42:17] Now what we're doing is we're working with individual jurisdictions to try to incorporate the comprehensive master plans and some development locations into the machine learning framework so that it can even do a much better job at predicting imperviousness. The last thing that I would talk about is one of the things that we did not do in our previous analysis in the Lima study was we only focused on traditional watershed health markers like sediment and nutrients.

[00:42:45] We do know that the community is concerned about forever chemicals like PFAS and salt. So we are moving with a more diverse area of scientific approaches to include those in the future. And as part of that is the tool that we've developed that is called ORDER. and to talk about order and these new forever chemicals in salt, the work that we are doing as part of this grant.

[00:43:07] I'd like to invite Dr. Grant to continue. Thank you for having us again and for all of the support of the Occoquan Lab over time. And thank you, Siddharth, for a really great job in not only organizing and implementing this project that he just described to you in the Lima report, but also in reporting out a very coherent summary of a very long document.

[00:43:33] So thank you. My name is Stanley Grant. I'm a professor of civil and environmental engineering at Virginia Tech and director of the Occoquan Watershed Monitoring Lab. I've met many of you before. The lab has been around for about 40 years.

[00:43:50] It's a lab in the Department of Civil and Environmental Engineering at Virginia Tech, although we're obviously displaced up here in diaspora in northern Virginia. And our sole mission is really to help the community think about the sustainability of the Occoquan Reservoir as a critical drinking water resource for up to 1 million people in northern Virginia, including this community.

[00:44:18] And so anyway, it's been a wonderful partnership with Prince William County and the Public Works Group and I really appreciate all of the support over time. One of the things we've been able to do, because I think the Occoquan is such an interesting case study, is we've been able to leverage the funds that we receive from the local community into research grants from the National Science Foundation, from the Water Research Foundation, and so on.

[00:44:49] And that's really allowed us to develop some of these additional tools that I'll be talking about, including Otter, which we're kind of moving forward and marrying with some of the tools upstream with support from the MVRC. So let me just kind of give you my view of the Occoquan watershed.

[00:45:08] And again, what you're looking at here is a kind of hydrologic perspective. So the boundary there is the watershed itself, which just means that if rain falls within this area, it eventually either ends up in the groundwater, it either evaporates or transpires through forests, or it flows into the Occoquan Reservoir, where we have the Griffith Drinking Water treatment plant run by Fairfax Water, and that supplies drinking water for up to 1 million people. Some statistics there about the watershed and the reservoir itself. One of the

[00:45:45] really key aspects of the system that our forefathers, I guess not forefathers but founders of the Occoquan lab certainly were involved with was the idea of treating domestic sewage and industrial effluent to a very high degree and then discharging it to bull run there, one of the streams that flows into the Occoquan reservoir.

[00:46:14] And as it's discharged, it mixes with stream flow, dilutes, and then goes into the reservoir. And you might ask why you would do that. And the answer is quite simple. It kind of provides a drought-proof source of water for the community. And so during dry weather periods or droughts, we can see inflows from the watershed drop significantly.

[00:46:36] And this basically, because we all flush our toilets day in, day out, this is a very reliable source of water. Sorry to put that in your head, but there it is. And it presents certain water quality challenges, too. But really, it's a number of factors that are going on, as I'll explain.

[00:46:58] So, Siddharth already mentioned that we've had a lot of growth and imperviousness, and he talked about some of the modeling tools that they're developing to look forward in time. But we can look backwards in time, as well, with observations, not models. So this is one of the products from the USGS that looks at impervious surfaces.

[00:47:18] So this isn't urban developments, it's a fraction of that, just the impervious surfaces in the watershed. And this is where it was at in 1985, the red there. And then, you know, moving forward to 2012, this is what it looks like. And then again to 2023. And I've said this a number of times, if any of you have had any microbiology experience and you see growth of bacteria colonies on a Petri dish, it looks a little bit like that, right?

[00:47:42] And it's probably not hard to see where this is going. This presents a really interesting conundrum in a way, right? Because I spent some time in Melbourne, Australia, and they protect, they have a protected watershed for their reservoirs, right? And so what that means is they've been running those reservoirs for almost 100 years of very, very minimal treatment at all.

[00:48:06] And, you know, that probably lasts another 100 years or more. We're not running that experiment. We're running a very different experiment, which is that we are developing the watershed. There's a lot of good reasons to do that. I live nearby. I benefit from that as well.

[00:48:24] But we've got a drinking water resource downstream, a really critical one. And so the fundamental question is, how do you balance that growth over time in urban cover and imperviousness and what that means for both flow and water quality against the need to protect that water resource downstream.

[00:48:45] And so that kind of fundamental challenge is not just a local challenge. This is happening all over the country and all over the world. And so my pitch here is that if we can figure it out and do it right here, you know, we're going to be a model for the rest of the world.

[00:49:01] And that, I think, actually does fly. That's a very, you know, it's a realistic, it's a real way of casting the challenge that we face. But it is important to realize that it is a challenge. And so one of the consequences of that challenge is that we have what I would call cascading water quality issues occurring at the reservoir and in the drinking water coming out of Griffith.

[00:49:30] So this is sodium concentrations in the finished drinking water at Griffith over time from 1980 to present. And you can see those sodium concentrations rising above the green there. The green is the EPA health recommendation for individuals on an extreme low-sodium diet.

[00:49:47] So it wouldn't apply to most of us. We don't normally get most of our sodium from drinking water. You wouldn't think of that, right? You think about eating potato chips. You wouldn't think about your tap waters being a source of sodium. but if you're on an extreme low sodium diet then this can be an issue and you know it's really not the levels per se it's the trend that maybe worries a lot of us and so there's the trend and there's also then the cost if you were to actually try at Griffith to remove the salt you would be looking at something like membrane filtration which could cost up to a billion

[00:50:24] dollars plus generating, losing some of the water that you were pulling out of the reservoir because there's going to be a reject water from that membrane process. But then you have to put that reject water somewhere. So it creates a disposal issue as well. So anyway, it's definitely a growing concern.

Ideally, rather than treat it at the end of the pipe, what we would be doing is fighting the sources of the sodium and trying to tackle those, right? That would be the goal there.

[00:50:55] But it's not just sodium. As you probably know, EPA has issued some maximum contaminant levels for forever chemicals or PFAS in drinking water. And unfortunately, the raw water from the Occoquan periodically exceeds those thresholds, which are quite low. There are four parts per trillion.

[00:51:18] And so it's put Fairfax Water in the position of trying to figure out how to remove, you know, basically comply with those new EPA MCLs. Again, a very costly potential, you know, sort of treatment option. It would be much better to go look upstream, find the sources, and control those as opposed to treating end-of-pipe.

[00:51:40] So what are we learning about, for example, salt in the drinking water that was produced by Griffith? Well, here's kind of a laundry list. Basically, it's not just here, it's really across northern Virginia that we're seeing salt increasing in drinking water as northern Virginia urbanizes.

[00:51:59] And, you know, not surprisingly, the problem has multiple sources, the most obvious being road de-icers on impervious surfaces. So the more impervious surfaces you have, you know, the more de-icing that's required in some cases at the roads, sidewalks, parking lots, and so on.

[00:52:15] And that salt has to go somewhere, and ultimately it goes into streams, groundwaters, and the reservoir, and that's one of the main factors we're seeing driving high sodium concentrations, high chloride concentrations in the winter. But it's not just that.

[00:52:30] We also have salt, sodium in particular in our reclaimed water from that wastewater treatment process I mentioned earlier. And then the question is, where is that coming from? And we've kind of tracked it down. and it's not from the wastewater treatment plant itself.

[00:52:45] They provide or add very little. It all starts kind of at the beginning. A lot of that water comes from the Potomac, which has a little bit of salt in it, and it gets treated to drinking water standards. The salt's added in that process through chemical addition.

[00:53:02] Then it goes through homes and businesses, and a whopping amount of salt is added there. Some of that's diet. Probably 30% of it's diet. But then if you walk down the grocery store and you look at all the products that are on the shelf, just think about the fact that virtually all of those are going to end up down the drain into the sewer system, and they're usually salts of sodium or other ions.

[00:53:24] So a lot of home products are also, you know, part of that story. So we've had tremendous growth both in the population and the imperviousness within the watershed, but also in the water reclamation activity, and so growth matters, I would say.

[00:53:45] You know, it's definitely something that should be on all of our radar screens, and I really want to emphasize there is no technological fix. The worst technological fix is to fix this at Griffith because that costs the maximum amount of money, and it locks us into costs and technologies that we will be dealing with for another 50 years.

[00:54:08] So ideally, we go to the source and we control the source. What have we learned about PFAS and drinking water produced by Griffith? So I am the PI of a Water Research Foundation grant that we've had for about a year, and we've been tracking down sources of PFAS in the Occoquan.

[00:54:27] We have a paper coming out in Nature Water, which basically speaks to that in detail in the next couple of weeks. But probably more important than that, we're working with all of the stakeholders in the region to try to figure out what to do about this problem.

[00:54:47] And it's a tough problem because it's not just a technological problem. It's also a jurisdictional problem. It's a governance problem. You guys are covering, you understand this, right? You have multiple jurisdictions with different boards, you know, different exigencies that they're dealing with, you know, and how do you get everybody to coordinate and be on the same page?

[00:55:14] So it's really quite an interesting process. So in terms of sources, you know, some of the PFAS that we're measuring is coming from watershed runoff, some of it from the wastewater. We have industrial users of the sanitary sewer system, which contributes some of these forever chemicals as well. We can now identify those sources.

[00:55:38] One of the big questions that I had, and I think a lot of people had, is because the concentrations are so low, you know, in the parts per trillion, could you reasonably do kind of a load balance and isolate where they're coming from? And in fact, even despite the fact that we have so much hydrologic variability we can actually do that so and then timing matters Siddharth mentioned this there's a lot of seasonality in our system here so during the summer you know we have all these beautiful trees in the forest and they're pulling water out of the groundwater and sending it into the atmosphere that's water then that lowers the amount of water that's coming from the watershed

[00:56:17] into the reservoir which increases the fraction of that inflow from the reclaimed water process so if you have a certain amount of forever chemicals in that reclaimed water, they're going to have a higher contribution during those summer periods. So seasonality is a really big factor here too.

[00:56:34] And what can we do to manage the problem? Well, basically, again, my pitch is that it requires managing PFAS at the whole system level, and we're living that through the Water Research Foundation project. Again, I think that the biggest challenge really is institutional and governance it's not technological we know how to we know how to get these these chemicals out of the water um but it's a matter of coordinating efforts so that it doesn't cost the community three billion dollars to to do it at the end of pipe um and you know the other thing i want to

[00:57:10] mention is that that through these various efforts we're accumulating information and and um and kind of knowledge and so on and um we're working with the mvrc uh to uh to kind of look forward and have a SAMS, like this is the SALT Management Program Stakeholder Work Group to kind of continue a lot of these kind of education outreach efforts forward.

[00:57:35] So this is definitely not just the Occoquan Lab. This is really a community concern, a community effort, and we're really happy to be part of that. All right, so I wanted to give you kind of a brief lecture, I guess. Sorry, I'm a professor.

[00:57:50] I can't help it. on what we're looking at, and then I'll transition to this modeling tool that Siddharth mentioned, otter. So if you tilted the Occoquan Reservoir on its head, so now north is to the right instead of up, it would look a little bit like that.

[00:58:08] And if you think about what are the key control points in this system where we could make a difference in terms of these water quality challenges. In the watershed, oftentimes it really boils down to looking what's coming off of our urban landscapes during storms and in non-storm periods.

[00:58:28] We also have groundwater discharge that actually supports base flow. It's a really important component of the hydrology of the system. But if we have legacy pollution that's gotten into the groundwater, that can be kind of a long-term source of pollution. We have industrial discharges.

[00:58:44] It's a really growing community. It's exciting to have all these great, high-paying jobs, but they can also result in the discharge of some of these chemicals, for example, into the wastewater, which were then not removed during treatment.

[00:59:01] And then there's possibility of mobilization for contaminated soil, which can actually come from air pollution. So we can have some of the PFAS, for example, being transported, you know, hundreds of miles through the atmosphere and then deposited through no fault of our own onto the sediments.

[00:59:19] And then those erode and become part of that TDS issue that Siddharth mentioned. I also mentioned that we have here in the Occoquan the water reclamation activity. This is, again, a really great thing for our community.

[00:59:34] It's made us more or less drought-proof, but also, you know, all of us are using that system, and so everything we put down the drain ultimately goes, you know, is either removed during treatment, or for a lot of these chemicals, there's no treatment modalities yet, and so they end up in Bull Run and then into the reservoir.

[00:59:55] And so where are they coming from? Again, the imported water, say, from the Potomac through the Corvillis drinking water treatment plant, industrial sources, a lot of domestic sources, and then also there can be actually magnification of some of the forever chemicals at UOSA during treatment, too, and so all of these are being investigated and thinking about ways that we could control them.

[01:00:20] And then finally, the very last line of defense, the very last line of defense is the drinking water treatment plant, and as I said before, you really don't want to try to fix it there because the volumes of water that you're talking about are so enormous that it's extremely costly to do that.

[01:00:40] All right, so that brings me to Otter. And I really want to emphasize the great job that Siddharth is doing with respect to the oomph, thinking about the future of the modeling tools. And by way of giving you some perspective on that, let me explain to you what the typical workflow would have been historically.

[01:01:01] And you've witnessed that, I think, a lot of you yourselves. An issue would come up. There would be a directive to go investigate that issue. A contract would be let with the Occoquan lab, for example. We'd spend \$100,000 or whatever it took.

[01:01:20] A year or two later, we'd generate a report thunk on your desk, and you probably were like, what was the question again? You know, why did I ask this, right? And so that, you know, we really want to move away with the kind of modern tools away from that, you know, very long process from question to answer.

[01:01:43] And really, more to the point, we want to put humans in the middle, right, and actually give you guys the power to explore these problems and take this kind of out of the loop there. And so Otter, the Occoquan Transit Time Environmental Response Model, is an attempt to do that.

[01:02:03] We have a historical or a legacy hydrodynamic model of the reservoir called CEQOLW2. It's an industry standard. That's the one that takes about \$100,000 in a year or two to run and calibrate. We

wanted to see if we could complement that tool with what we call a lumped model.

[01:02:23] So we're not resolving every flow path through the reservoir specifically, but we're tracking the age of water, the age distribution of water in leaving the reservoir and how that changes over time. If you know that, if you know what the ages are of the water leaving the reservoir and you know when the pollutants came in, you can basically connect those two and predict what the water quality is leaving the reservoir.

[01:02:49] And so, yeah, publish or perish, you know, so we've published on this. If you want to know more, you really want to see some math, there you go. But this is the exciting thing. Regardless of the math and the physics that are involved, the really cool aspect of this framework is that it can be done interactively, right?

[01:03:13] And so I actually wanted to share that with you, if I can figure out how to click this guy. And assuming that it works, it works. That's great. Okay. So let's see if we can expand this. Great. So basically what you're looking at, so we're looking at PFAS here, one of the PFAS PFOA, for which the MCL, the EPA MCL, is four parts per trillion.

[01:03:41] So that would be down here around four. So what we're looking at is we have now measurements of PFOA coming into the reservoir from the Occoquan River and Bull Runs, so the two main tributaries of the watershed.

[01:03:58] But then we also have the contributions, estimate the contribution, or measured, and then can estimate the contributions from domestic sewage, you know, as it flows through UOSA and is treated, as well as a significant industrial user of that system.

[01:04:14] And then we've got a number of areas around the reservoir itself, which are what we call engaged. We don't really have much flow monitoring, but we can infer what's going on with those as well. And so what you're looking at here is basically where that PFOA is coming from across these five different sources on a daily basis from 2010 to 2025.

[01:04:35] So we're hindcasting back to 2010 and running it forward on a daily basis through 15 years. And you can see basically this layer cake shows you the contributions of each of those sources to the overall concentration and that cycling of the concentration over time.

[01:04:56] These peaks are actually during the summer when reservoir inflow is low. So it's getting back to what I was saying, you have less dilution from the watershed and you tend to have higher inflow of the forever chemicals, for example, during the summer. The model itself then translates those inflows into a predicted outflow.

[01:05:17] We don't have any data back in 2010, but we do beginning in 2024, and you can see how the model is performing. But here's the really cool thing. That's all passive. But if you wanted to understand, well, what if I invested all my resources and I cut the inflow coming from bull run?

[01:05:34] What would that do for me? Or what if I invested my resources in public education to try to get the PFAS sources in domestic sewage down? And you can see immediately where each of those activities would sort of get you in terms of the intake at Griffith relative to that 4-PPT, which is our MCL target, that red dash line.

[01:06:00] The other thing that we're doing is working with stakeholders to do what are called serious games, right? And so basically this starts to look at the watershed as a whole, right? If you have a budget, right, so you've got a, like in this case, I think the budget is \$1.5 million, \$1,500 million, \$1.5 billion.

[01:06:25] That was the budget that you're given. And you have a certain set of interventions that you can implement in the Occoquan watershed, in the Bull Run watershed, in that engaged region around the watershed, or at UOSA. And each of these has a certain benefit and a certain cost.

[01:06:42] You start clicking these guys, and what happens is you click them, is that the predicted concentrations at the intake, at the Griffith intake, start going down, but the costs start going up, right? And so basically you can sort of see what the reduction is and then what your cost is.

[01:07:00] The three that I clicked here basically brings me up to about a billion dollars. So we are working with stakeholders to basically kind of implement these tools so they can begin to see what the tradeoffs are and where investments in different parts of the watershed could really matter.

[01:07:18] And then the second game that we implemented recently takes it a step further and says, well, you know, the fact is that Fairfax Water isn't going to allow drinking water to go to customers that doesn't meet the MCL.

[01:07:36] They're going to do whatever it takes to do that. And so the reality is that you have to choose probably between two different futures at the drinking water treatment plant. You can choose a future where basically you spend a lot of capital up front, like membrane filtration, but maybe the O&M cost isn't that bad.

[01:07:53] These are all fictional numbers, by the way, more or less. Or you can choose another future where you don't have as much capital cost, but the O&M costs are really, really high. And not surprisingly, depending on which one you choose, well, this one, you're over budget, period, before you do anything else and you have to go home, right?

[01:08:13] But what's really interesting is there's a non-linearity in the system so that if you choose this guy where you've got high O&M costs, basically select interventions in the watershed start dropping the overall costs. So you start out above the budget, but then because you're removing PFAS up in the watershed, you actually start lowering the O&M costs and actually lower the overall costs.

[01:08:40] And so basically, I've seen very dour managers jump up and go whoop when they got the right answer, right? And they realize that that connection between what you do downstream at the drinking water treatment plant completely affects what you can do upstream in the watershed.

[01:09:00] Where we need to go next is really game three. That's the next level, right? Which is the governance piece, right? You can have an optimal solution, but if the various boards disagree or don't invest, then it's not going to happen.

[01:09:16] So kind of bringing in that governance piece. How is this going to work? Is Fairfax Water going to plunk down a certain amount of money or the collection of stakeholders going to plunk down a certain amount of money and that's going to be spent for these activities? Or is it going to be settled through lawyers?

[01:09:33] I don't know. But anyway, that's kind of coming up. And anyway, I just wanted to illustrate kind of where we're going with this, this interactivity, this kind of exploring the non-linearity of the system, and

then also the governance dimensions. And then ultimately, through the MVRC funding, basically connecting the fine work that Siddhartha is doing upstream so you can begin to go, well, what if we had this development, you know, and under climate change?

[01:09:59] What would the impacts be downstream? And see that in real time. Take us out of the loop. So with that, I think I'm certainly done, and I'm happy to take questions, Siddharth and I, as you like. Thank you so very much. I'm waiting.

[01:10:15] I knew you were going to be, oh, I was thinking, looking at you, Bodhi. I thought you were going to be the first in there. Supervisor Bailey. Okay, I'm sorry.

[01:10:31] Thank you so much. This is a very interesting presentation because you're a professor, and you took us through the whole thing. Just don't give us the test, okay? Just don't give us the test. are you ready you ready for the test open book so my my question um we've been talking about pfas for about two years now we had a presentation from our water authority last year and it's becoming beginning to be more and more popular to discuss and um there is absolutely what i see

[01:11:10] as a elected official with the just in tracking the salt levels there is uh an environmental and justice concern with this you know drinking the salt affecting our blood pressure and cholesterol and all that you know so how do we how do we with that information that you're providing or that our water department is providing that our county staff is providing how do how do we protect our constituents county-wide via a little tool called comprehensive plan how do we support you

[01:11:48] know community health in that regard because it's a it's a big issue and people don't look at it that way but how do we go in that direction and protecting our community well that's that's the big yeah you've given me a test right i mean i think uh if i if i had the answer to it then i'd be i don't know wealthy or happy or something i could retire yeah um i think that the answer is basically doing the sort of thing that you're doing today, right?

[01:12:19] You know, you invited a couple of nerds in to talk about a bunch of... I didn't say that. You did. Yeah, except I'm a nerd. He's not a nerd. You know, and you're grappling with some really hard material, trying to understand what's going on.

[01:12:34] So I think that's the start, right? Because the fact is that all of the pressures, water quality pressures that Fairfax Water is experiencing and, you know, ultimately, you know, what goes into our tap, you know, has its origin upstream.

[01:12:50] And that's really reflected in the decisions that we make about, you know, development. It's reflected in the decisions that we make about which products we're going to buy and pour down the drain and so on. So it really comes back to the community.

[01:13:07] And I think that probably the critical piece is just letting the community know this is an issue, right, so that they can be an active part of that solution and not expecting the engineers to completely solve it. Because although the engineering is wonderful, the fact is that's kind of the last resort, especially into pipe.

[01:13:29] So we want that combination of kind of understanding the environmental science, you know, And that's what Siddharth and I are doing, having contingency plans that are engineering-based, but then

also having a community engagement that leads to reduction in the pollutants that are being generated in the first place.

[01:13:50] And we individually can protect our own water supply. I guess that's how I would phrase it. And then, you know, we're very fortunate that we have an organization, Craig Haidt, good to see you, that we do have NVRC as a support arm.

[01:14:06] But what does that look like in the future, you know, in terms of funding? That's very key as well. So any suggestions or any recommendation in terms of that? Yeah. No, I think that, you know, Craig needs more money for sure.

[01:14:22] Is that right? Do you agree with that? Okay, he says yes. I do, you know, I feel like we're developing a knowledge base and we're publishing that, you know. and we publish our papers you know and maybe there's a press release maybe there isn't um but the fact is that translating that knowledge into information that you know um everybody can understand easily and also really actionable things you know things that people can individually do to make a difference that's that you know it's a different challenge and it's one that really

[01:14:59] needs to be done by the experts so i i personally feel like that piece of it is a bit underfunded from my perspective and that we could do a lot more okay thank you madam chair supervisor gordy thank you madam chair thank you for uh for this presentation it's been uh very interesting um i noticed on your simulation uh model um that it looked like when we got into covid and and since COVID, there was a lot more, a lot more of the yellow, a lot more domestic sewage. Yeah. So that

[01:15:38] made me start thinking, you know, there are things that happen within our culture and happen within our economy, product packaging, those types of things that start to have impacts of things that are well beyond our control right um and when you think about the fact that we now have more people instead of going to work and maybe sharing their problems with other watersheds um instead they're now within our watershed that's right uh so um so so we're now concentrating it within our own

[01:16:17] watershed um but but i just found that that that was an interesting dynamic that we've now seen through this modeling uh which is very interesting the other thing is such as uh the the pods for washing machines dishwashers um which understand are made with sodium uh which you know those are you know very popular uh everyone's buying them and they're utilizing them and and yet that is what is also contributing to the salinity within our within our within the domestic sewage but also

[01:16:50] you know within the drinking water so um so as we think about you know as i think about this i recognize first foremost there are a lot of things beyond our control um that sort of go into the the inputs uh to our problem uh that we're trying to address the other piece the i guess it kind of gets more back to the things that we can control aboard and and that gets back to that land use piece and one of the things i noticed it and i don't know if you could get back to it but it was that slide where it showed it was the red, um, showing the impervious surfaces, um, over time,

[01:17:27] um, which I found very interesting, um, in that much of that imperviousness, uh, is within that bull run corridor. I'm sorry, broad run corridor, um, which incidentally is in, uh, my district in the Brentsville district. And so it makes us, it makes me think about also, you know, we have kettle run and cedar run. So we have cedar run, which you, but you, you guys don't necessarily

[01:18:04] show kettle run, but that is now the area that we're development is pushing. So, but if we take a look at the density of of this imperviousness it has happened in um in in an area of of where we've seen most of the growth over the past 40 years the linton hall corridor um and then even up the route 15 corridor in in the gainesville district uh so um in terms of how we in terms of policies or or or concepts from you you asked the question how do you balance growth

[01:18:41] in the need to protect water quality and and so i think that's a question that we have to ask and that we need to come to an answer um and because we can't keep spreading the red because the more we push out into our agricultural area that's where we have the ability to keep our water clean and we're losing the opportunities to do that we have kettle run and cedar run left that's it. And if we don't do better than what we've done in the past, we're going to only grow our problem

[01:19:21] by massive factors. And so we have to come up with a better solution. We have to come up with solutions. And we need to do it quickly and soon because the pressure is continuing to grow on the growth side. But at the same time, I look at this and it's like, we've gotten it wrong. So how do we get it right well you know and and um i don't want to be halcyon about it either or pollyannish i mean you know maybe the growth is going to happen um and if you start with that as a premise then you want to be as smart about it as possible and i think um one of the other we mentioned kind

[01:20:01] of community outreach as being a really important kind of not missing piece but but really could be stronger i think um not saying that you aren't doing a good job but just there isn't much investment there right now um i i think that um that kind of going beyond conventional best management practices for some of the stormwater runoff um really makes sense in this watershed as well so um and you know maybe that comes at the proffer stage i i don't know enough about how

[01:20:31] that works. But really thinking about how this is a very special little watershed. And if you're going to build here, you need to kind of meet the challenge and that we need to lay down that challenge, what that challenge looks like. And I think maybe that piece might be missing. But again, I don't, there's a lot of legal issues surrounding that too, you know, and DQ has a huge role to play, right? So anyway, that was my first comment. And the second thing I wanted to say

[01:21:06] is that, yeah, after 2020, you're right, the yellow contribution gets bigger. Some of that is climate, because it got drier during that period. I know, because I came to this area from Southern California in 2018, and it rained so hard, our roof started leaking. We had rain coming into the... And I was like, oh my God, why did we move here? But it turned out it was beautiful. It was the perfect thing to do. But that, you know, transition from 2018 to 2020 and then beyond, it was much drier. So I think that that explains some of that increase. But I just

[01:21:44] love the fact that you're looking at those graphs and, you know, making them actionable, thinking really about kind of what it means. So that's wonderful. So just with regard to public outreach and funding, I mean, we really only need as much money as you would like us to do programs.

[01:22:03] And we scale our programs to the needs of our member localities and to the available funding. We do a lot of public education outreach right now around only rain down the drain, around winter salt awareness, around hazardous household materials, and increasingly about SALT and now PFAS is in development. So we're certainly happy to work with you to whatever extent you'd like us to expand those public outreach campaigns. Again, this is something that makes sense to do regionally because PFAS is the same in Fairfax County and Prince William

[01:22:39] County and Loudoun County. And so if we talk about it as a region and we amplify that message, we can hopefully break through more of the noise. So happy to work with you to whatever degree you'd like to expand those programs. All right. Thank you so very much. Supervisor Bode.

[01:22:56] Thank you, Madam Chair. In the interest of the fact that both Dr. Grant and I can get very verbose, can I just take my full 10 minutes in one shot at a time? I know that I'll just have to come back later and do a full five minutes, so I just, thank you.

[01:23:17] So, Dr. Grant, good to see you again, Siddharth, good to see you again, appreciate it. I will start from sort of where some of this ended, which is solutions. When you all are modeling out imperviousness, you're not necessarily focusing or able to anticipate the kinds of impervious surface, the times of development that's done.

[01:23:39] So, you know, this sort of assumes just sort of status quo. We're going to use normal impervious surfaces. We're going to pave everything, what have you. How different would things be if we sort of improve our stormwater management best practices? You start requiring things like rain gardens, porous pavement, neighborhood retention ponds, being more proactive around the technologies that we're asking of the development community as they go about building stuff out.

[01:24:05] Yeah, your premise is that by saying that you're absolutely right about the imperviousness first, like the model that we have looks at what has happened in the past, learns from that, and then tries to predict the future based on that. So it does not account for these sort of implementations that we might consider.

[01:24:25] One way to include that in the model is to tag them as such and try to make the model learn that. That's just on the modeling side of things that how we would potentially do that. The other point that you mentioned, I think goes to Stan's point, is the interventions need to be across the watershed. And I believe that what you mentioned, the BMPs, are interventions across the watershed that would certainly have an impact.

[01:24:46] Now, the ability to model those within this work that we're doing currently, we have the capability. It's also a managerial problem to get access to all the data across all the jurisdictions, which I think we are happy to work with and we are see if that is something that needs to be done and also implement stormwater modeling as part of our framework.

[01:25:07] Currently, it is not. So I can't comment on us being able to say whether or not that will cause a change. But we have done that in the past for other areas in other studies where we have looked at stormwater BMPs and their impacts on land use changes, villas climate change, and what they can do in reducing those sort of things.

[01:25:24] So that's certainly in the domain of what we could do. It's just going to be a managerial thing that we need to address first. And I appreciate that. And I guess that then goes to my next question is, Dr. Grant, when you were talking through the paper, you mentioned that sort of you all took a huge menu of different interventions that could be taken.

[01:25:43] You narrowed them down, you narrowed them down further to further study. Can you give us a little bit more color on the types of those interventions that you sort of have looked at for further study? And when will the results of that be available? So that's another nature sustainability paper that I hope to have out soon.

[01:25:59] But yeah, no, absolutely, Supervisor Bodie, I'll try to not be as verbose as I normally would be, but you're right, I am. Guilty as charged. So we, as part of the Water Research Foundation project, we went through a facilitation process where we got everybody together in one workshop and just brainstormed everything that we could think of to address the PFAS problem in the Occoquan watershed.

[01:26:26] And we ended up with something like 57 interventions. And then those went to subcommittees that were basically specialists in each of the different domains, drinking water, wastewater, and then watershed. And some of those interventions were like, oh, this doesn't make any sense at all.

[01:26:42] And so they removed it preemptively. And then the rest of them, they basically ranked according to a whole series of criteria, you know, co-benefits, sustainability, cost, O&M costs.

[01:27:00] you know, so on and so forth. And then that information was then brought back into another workshop, and basically another facilitation resulted in the narrowing of that list down to, I think, about 17 or so interventions.

[01:27:19] And so it's really that 17 that now we've started with, and we're looking at the modeling, and actually we're going to marry those. Currently, the model that I showed you, those interventions are just hypothetical, right? And we really, in this third workshop, we wanted to keep it theoretical because otherwise people start worrying about, well, wait a minute, you know, is that the right amount of, you know, benefit?

[01:27:41] Is that the right cost? And so we wanted to keep it generic to give them a systems level understanding of what was going on. But we're moving into workshop four, which will come up in about six months. We're going to populate the model with actual interventions.

[01:27:57] And to your question, I mean, It's really interesting to see how the different kind of components or domains of the system have such different ways of doing things. You know, water treatment and wastewater treatment, it's a pretty advanced field, right?

[01:28:16] And so the engineers know more or less what it's going to cost and what the benefits are going to be. And so those two, the wastewater treatment and then the drinking water treatment, those two domains, it's pretty straightforward. in terms of the set of interventions that you can look at and cost out.

[01:28:34] When you go into the watershed, it's a completely different story because just as Siddharth mentioned, now you're talking about, you know, you can't just implement something here or there. You really have to go to scale. It has to be kind of part of the fabric of development, right?

[01:28:52] You know, if you're going to do this, then you have to do that. And then, of course, there are some sites, legacy pollution sites, which are contributing PFAS. We know about them. And so a lot of the interventions that we were talking about, the watershed scale, are really focused on those sites.

[01:29:07] But, boy, it's a head-scratcher to figure out exactly, you know, what the intervention is going to look like. What is that thing? Is it either starting with, you know, soil contamination? Is it shallow groundwater contamination? Is it deep groundwater contamination?

[01:29:24] Hugely different approaches and costs, depending uh on the answer to that question and we just don't know enough right so i think what this process has illuminated to me is you know how much we don't know right you know but at least we're starting to ask the right questions and we're starting to narrow in on that so we can begin really thinking about it appreciate that and i i will say and looking at my time

now and this is the reason why i wanted to take my full time because um dr grant is you're going to excuse and appreciate this point at the same time i appreciate the way you're able to make what could be a dry

[01:30:01] topic very engaging i'll just leave the pun there and continue on um so that's important because one of the other things that i've sort of been curious and concerned about it are some of the other things we've been discussing right we talk about urban urbanizing you know the watershed what have you but what's about the other side of the equation some of these legacy areas where there's tons of folks that have well in septic knowing there's aging septic system areas that used to perk that don't anymore, places that they didn't perk to begin with, people didn't check enough, they put septic systems in there. Can you talk about then how much everything you're doing

[01:30:35] looks at that side of the coin as well? Yeah, no, I mean, there's evidence that PFAS in particular could be coming from some septic, especially around the reservoir. I mean, I think that's still a reactive research question. What I can tell you is that our little model, the otter, One of the things it does is it says, well, in order to make everything work, you have to estimate a concentration of, say, PFOA that's coming from that ungauged region around the reservoir.

[01:31:04] We don't have measurements of that, but we can infer those concentrations. And when we do that, we find, and you'll see that if you play with the model, that the ungauged contribution is really large. It's really small for salt, much smaller for salt, but it's much larger for PFAS.

[01:31:25] And one possible explanation is that it really comes to the way that we're handling sewage, you know, around the reservoir. Or it could be legacy sites. In my neighborhood, we have an old, you know, now decommissioned, you know, sort of spray irrigation treatment system that, you know, could be an issue.

[01:31:50] So I think for me, maybe the frustrating thing is that there's so many great questions and, you know, there's not a lot of money to study it, but the cost of dealing with it is so great. So I think that's another kind of cognitive dissonance that would be great to see resolved at some point.

[01:32:11] Appreciate that. And my last one, Madam Chair, because I see how much time I have left is, and I appreciate this, because you've also gotten to the heart of sort of why I asked, and I appreciate the chair and the county exec entertaining this and inviting you all to this, is that we have a lot of constituents who have been asking for a water study.

[01:32:29] Well, one water study doesn't cover everything people care about, right? Like this, the particular land use study that we're talking about now, we asked for back in 2022. And to Siddharth's earlier point, it just takes years to spin up these things and do it. But there's also groundwater study the county is currently doing.

[01:32:44] There's the two PFAS salinity questions that you're answering right now, Dr. Grant. There's also the DEQ groundwater study that's being done in Western Loudoun and Falk here that are answering. There's also the East of 95 water study that was just recently done. So can you just very briefly talk about how those at some point we should start using those in synergy with each other so that these disparate sort of displaced siloed things?

[01:33:10] Yeah, that's great. So I just got off a presentation with the Science and Technology Advisory Council for the Chesapeake Bay Watershed. And so 50 folks from across the watershed, you know, talking about the results of the Occoquan, right?

[01:33:27] and the otter was talked about. And, you know, so I think that's the first step, right, is to basically put us on the map because, frankly, I'm not sure we were there. And so I think those kinds of regional coordination efforts can really, really help.

[01:33:44] We've got tools that can help you think about your problem, maybe help us too, right? What technologies have you found really work well in your region? And maybe we can try to translate those here. So I guess you wanted me to be brief. I think that's it, regional coordination.

[01:34:00] And the MVRC has a really big role to play there, too. Appreciate all the work. Thank you so much. All right. Thank you, Sir Registrarian Stewart. Thank you, Madam Chair. Thank you for being here. Thank you for the presentation. A couple of things. I mean, number one, I really like how a lot of your maps don't show borders of different counties.

[01:34:23] We're all connected in this situation. And, you know, a couple of things that I want to hit on, kind of picking off where Supervisor Bode left off, with the water study. And I know we spoke about this when I came to the lab.

[01:34:41] Prince William County currently has how many wells to monitor water? Well, so there's two USGS wells and probably a couple more that fall within Prince William County jurisdiction.

[01:35:00] and at least two of those have long records of groundwater levels. Other than that, we're working with Prince William Water and trying to see what we can scare up in terms of additional information, including potentially going out and measuring the water, getting instruments on the ground ourselves.

[01:35:21] Right. And so what would be needed really as far as a comprehensive well network for a county the size of Prince William in order to get this data, number one, not only in a timely manner, but in a manner that has us not wait quite as long due to the distance and spacing between each well to find out what's going wrong where and having us have first mover advantage against anything that might threaten our water supply.

[01:35:56] Man, that's a great question. And I'm not going to have an answer for you, just to be honest, but we're trying to get there, right? And so I think that's the right way to put it. Why is the groundwater important? Just to kind of bring that up for a second.

[01:36:13] It's really important in a couple different ways. You know, obviously, if you're on a domestic well and your water supply runs out, that's a problem. And so just the water level itself, the groundwater level, is of, you know, significant interest there.

[01:36:31] But the other piece of it, you know, we talked about how flow into the reservoir by the streams drops in the summer due to the forest, if that were transpiring. And, you know, that flow is supported by groundwater.

[01:36:48] And so if the groundwater drops, then it's logical that the base flow would drop. to and that's something that we need to look at and we have data so one of the things on my board is to to start looking at what are the what are the annual minimum flows and are we seeing any long-term trends that we should be worried about and this really came to my radar thanks to all you guys for bringing this issue up so you know thank you and the other issue is just this concern about for example PFAS contamination in some of the groundwater sites right what's

[01:37:22] happening to that how fast is it moving from you know the groundwater into the streams how big of a source is it and so on so um so there's water quality water supply issues water supply issues not just at the scale of the watershed but also at the scale of individual homes right i which i i get and we'll talk further more about that with with the whole well network but one of the things i wanted to kind of hit on speaking about wells you know we have about uh 16 000 private wells

[01:37:55] in the county serving about 80 000 uh people and some are in good shape some are not right yeah you turn on the sprinkler system you got clear water for for 10 minutes and then you're you're spraying mud um on your property um and so speaking about impervious impervious surfaces um so how important

[01:38:21] And would it be, like, especially in the more rural areas where we have more wells, especially like in my district, the Gainesville district, where we have, like, where would low-density protections, like, come into play to preserve or even maybe, if we can, replenish those wells?

[01:38:45] That's another really great question. I guess I'll answer naively based on my understanding of the current situation. So there's variable infiltration across the watershed, right? Some areas are really great at infiltrating groundwater.

[01:39:03] So when it rains, the water goes to groundwater very quickly. And other areas are not so great. And then if you add imperviousness, at least historically, you know, kind of the mental model is that that rainfall then just gets shunted to the stream through stormwater systems.

[01:39:21] So it increases stream flow massively during storms, which has its own problems, but it also cuts off the groundwater supply. So the traditional model, mental model, is that as you increase imperviousness, you reduce base flow in the stream because you're dropping groundwater, but you increase the flashiness of that flow.

[01:39:41] So you're basically doing more erosion, more water quality problems, and so on. So that's the typical mental model. How that applies to our specific watershed, I think, is basically something we need to look into. And it may be, the answer may be, you know, local, right?

[01:39:56] We know there's a lot of variability in infiltration. We have actually a principal in counties funding a USGS study, a soil water balance study to look into that. And they've got some preliminary results out that I've seen. So there's a lot of variability.

[01:40:12] I think that maps directly to, you know, things that you guys would care about, in particular, you know, where are you most vulnerable to losing that infiltration capacity, you know, and how then do you potentially protect that going forward.

[01:40:30] So I don't think we have the answers yet, but we're on our way, at least we're dipping our toe in the water on that one. Thank you very much. Thank you, Madam Chair. Supervisor LaCroix. Well, first of all, thank you so much.

[01:40:48] This was an incredible presentation. I found it to be very stressful because I realized there's just so much that I don't know. And I was like, oh, my gosh. And then, of course, Gordy tells me I can't use my laundry pods anymore.

[01:41:06] Then I went into a panic. Yeah, it just makes me think, oh, my gosh, we're supervisors. We're not water experts, and there's so much we need to know. And I just thank God for our county because you

are making sure that the developments that we put up, right, Katab?

[01:41:26] You're making sure that if we approve it, it's going to go through the proper channels. And it just reminded me, and I'm sorry I'm not giving you a question, but it reminded me of Drew. I think you're here. And remember, we were picking up trash.

[01:41:43] And as we're picking up trash, we saw one of the car places, and they were washing the cars, and they were going in the wrong place. They needed to be in this drain instead of this water runoff. And he made them move so that they would wash the car.

[01:42:00] And it just brought me back to we're talking about everything we're doing. And so I need to hear more and more from you because when we're making these big decisions, I think that we need to have this kind of knowledge.

[01:42:16] And people are bringing up water all the time to us, and that's a big deal. And now I feel a little bit smarter, not that smart, but not you're smart, but a little smarter. And, of course, we have a team of people behind us that are very smart, and they're going to keep us in line.

[01:42:36] That's all. I have no questions. May I say something in response? I just wanted to compliment your team. I think that they're doing an excellent job, and I've really enjoyed working with them and engaging with them. So you guys are very lucky.

[01:42:55] All right. Thank you, Supervisor. I'm going to go to Vega and Ager because they haven't spoken, and then back to Bailey. So Vega. Thank you, Madam Chair. Dr. Stanley, it's good to see you again. I want to thank you and the team for being a part of the well-monitoring conversations that we've been having with DEQ, Virginia Tech.

[01:43:15] i see you katab and of course i know he's watching at home our beloved martin jeter um with that being said prior to me um serving in this seat i had heard concerns from folks lake jackson obviously is in the coals district um and i had heard about uh silt concerns um it's become an increasing issue not just in lake jackson but throughout the county and um considering you know, the challenges that we're having in regards to our groundwater supply, are

[01:43:49] there, or are you in a position to perhaps give us some recommendations as to how to handle this growing issue? You're talking about siltation of reservoirs in the region. Yeah. Well, I mean, that comes back to some of the modeling that Siddharth mentioned, you know, with the legacy model and looking at suspended solids transport.

[01:44:14] And, you know, again, just really broadly, because I can't speak to Lake Jackson specifically, that requires a study of that. But the mental model that I have in my mind is that as you add that impervious cover, the flow during rain events going into the streams becomes much larger.

[01:44:34] And that puts more force on the stream bed and the banks of the stream, which then causes more erosion. And a lot of that sediment then gets very quickly transported, enters a reservoir or a lake, and then it's quiescent and it settles, right?

[01:44:52] So that, again, may not apply in every single case, but that's kind of the general mental model that we have of what happens. And as I was listening to Siddharth's presentation, you know, and looking at, he's trying to summarize a very complex report, right, and looking at the effect of increasing imperviousness on flow, some of those numbers I'm thinking, you know, it's almost impossible to explain

the hydrologic variability component of that, right, that you almost get one answer on the median or the mean and then a completely different answer when you're looking at extreme flows.

[01:45:30] And a lot of the sediment transport, for example, actually occurs during those extreme flows. And that gets more extreme, you know, if impervious comes down, imperviousness comes up. But the other thing I was going to say is that there are best management practices, right, BMPs in place to try to deal with that.

[01:45:50] And so depending on what the local situation is, those BMPs may be effective or they may not be. So it's hard, again, for me to know without doing a study exactly what's going on. Study, studies. I know that dredging is not always feasible.

[01:46:09] I do know that Montclair community had a huge dredging project. My planning commissioner was dealing with that also, but just trying to see what other alternatives we have. So thank you.

[01:46:25] Yeah, no, I think, again, source control, right? comes back to that in a lot of cases. All right thank you very much. Supervisor Angry. Thank you Madam Chair. Doctors gentlemen first of all and and team Craig thank you all for this in-depth knowledge of this area and thank you for your passion for what you do because what I love about what you did you don't pick a side you simply find the data you tell us the data you educate us on what some of the possible concerns would be and I've heard a lot in what you said that we we should really be digging into some of the recommendations that you presented so i hope that

[01:47:04] in the recording of this or listening to this that there's some some uh outcomes that we learned from what you said that we need to do better now i'm gonna say something so bear with me because i don't want people to uh interrupt this piece so i love this show star trek right and so the enterprise as you know captain kurt puts that ship through a lot and he takes doctors uh mr spock excuse me uh uh scotty scotty and he just tells scotty fix it and scotty has to come up and do

[01:47:38] the most incredible work right to fix this shit because captain kirk trust scotty and scotty will get it done and scotty doesn't ask questions i mean he asked all the right questions but he knows what he's doing and i and in many ways i feel like we're captain kirk prince from county is the enterprise and you are our spot or excuse me our scotty to help us make sure we're doing this thing the right way. And I really just appreciate this. And it's the first time I've seen you for this presentation to be this way, because to Supervisor LaCroix's point, we've gotten so many questions about water. And really, even in what you said, it's so many

[01:48:13] different areas to really find the answer to all of this. I think there's so much partnership in VRC and you all that we can do really good here in Prince William County, because I just really value and appreciate everything that you said and it was really just given to us without it being from either side but it was from every side so thank you really for all of that thank you i love your analogy our warp drive is down i have to be honest i had to google scotty i know be me up

[01:48:47] scotty and all that but i don't i've watched star wars so scotty is the main star what okay star Star Trek. Okay. I didn't watch a lot of TV. I still don't. Anyways, we have a number of things that we have done to try to protect the watershed. We have an ORPA, the Occoquan Resource Protection Area. And I don't know how familiar you are with that, but I just want to get your thoughts. Is that something that's really helpful? Or, you know, as best as you can say it, is that more

[01:49:24] of something that's almost a band-aid? Because it seems like, as you said, you know, source control is so important obviously that helps with it you know having buffers and not getting so close to that watershed so i just want to understand what you said before they'd be me up scotty no and you know what he had a scottish accent didn't he i just was looking on google is that why they call him scotty no one can answer all right go on yeah yeah i i'm stuck in star trek um or maybe it's Star Wars, I don't know. Whatever it is. It's Star Trek. Whatever it is. Kirk. Captain Kirk,

[01:50:00] yep. So I'm sorry, I really did lose the thread. Thank you. Yeah, yeah, yeah. So there's really two issues. You know, one is if growth occurs, right, inevitably, or redevelopment occurs, there's a real opportunity to try to maximize source control, right, in our little enterprise.

[01:50:26] and then so that we all survived the trip. But the other thing to point out is that conservation areas, resource conservation areas or forests in particular, play a special role.

[01:50:45] And so, for example, one of my colleagues, Sujay Koshal at the University of Maryland, has published a number of papers where they look at what happens to salt in streams as it moves through conservation areas, forests. And what they see is that the salt basically gets absorbed by that forest.

[01:51:04] It's not going to go away. It's still there, but it's stored. So they play a complementary role, which I think is really important to clarify, not to mention the fact that they're a habitat for wildlife and there's ecosystem services and values way beyond even drinking water quality.

[01:51:27] So I think that those are complementary approaches. You know, given, you know, maybe the inevitability of development, you guys probably only have limited control over what happens. A lot of this land is privately held. And, you know, and then there's what they do with that land is going to make a big difference.

[01:51:47] So, you know, thinking about trying to implement the best possible BMPs on the land is really appropriate. But then also, to the extent possible, protecting forested areas and conservation areas, it's like a backstop, right?

[01:52:03] It keeps the reservoir from receiving the worst of what makes it through. All right, thank you. Before I go on to Supervisor Bailey for the last comments, I think people need to go outside and play more. All right. There's a lot of TV watching.

[01:52:19] Too much screen time. Supervisor Bailey. Beam me up, Madam Chair. Beam me up. I'm ready. We're going to go out and play. Ready to go out and play. I really, really love, I agree with you, I love my colleague's analogy. It was beautiful because it's just common sense.

[01:52:38] And what I love about this also is we do, as Supervisor LaCroix said, we get a lot of questions about water, and we are not the subject matter experts, but we have you, we have our county staff to help us navigate the waters, no pun intended, for our communities.

[01:52:59] And we need you to help us navigate that to get the answers to them as precise as we possibly can. What I love about this presentation is the fact that it's understandable, but it also is synergistic, if I may say that, with the presentations we've had from COG, Because we sit on these boards at NVRC, and the time is now for us to really focus on climate change

[01:53:36] and the direction that we're taking with everything, noise and water, environment, everything, you know. And so one of the things that I want to bring to, just for clarity's sake, on your slide 34, you had

the terminology urbanizing, urbanizes, am I reading that correctly?

[01:54:03] And just for clarity, that was in reference to, not to population or density or growth. What was, that terminology defines specifically what? Is it? Is it, I've got slide 34, is it not?

[01:54:20] It was in the, but it was the terminology urbanizes. That, I understood, was in reference to. Oh, I see, yeah.

[01:54:35] You see what I'm talking about? What was that in reference to? If you could explain that to us. So these terms have different meaning and different contexts. So there's, like, for example, Siddharth was talking about the distinction between impervious cover and urban cover, land cover.

[01:54:54] Okay. You know, and the watershed is currently at 30-some percent urban cover, but maybe around 10 percent impervious cover. Okay. And then a fraction of that is things like the rooftops and buildings and so on. that wouldn't necessarily, for example, receive de-icers.

[01:55:13] And then there's kind of a smaller percentage, which is roads and parking lots and so on, that do receive de-icers, as an example. Okay. Is that what you were referring to? Yeah, that's what I was referring to, because it may be denoted as something different, you know?

[01:55:31] And not, you know, you're talking about all-encompassing. You're not talking about population levels or density and that kind of thing. They tend to be very correlated, obviously. And I need to hear that. Yeah, they do. And one of the things we looked at in the Occoquan, again, was we have different watersheds, some of which have had very different growth trajectories over time.

[01:55:54] Like Upper Bull Run, very low development, relatively speaking, over the last 20 years. Upper Broad Run, similar upstream of Lake Jackson, similarly. And what we see is that the fraction of that impervious area within a watershed that is roads that would be subject to de-icing is really high initially, and then it drops down to about 40 to 50 percent as that watershed develops.

[01:56:26] And it makes sense because if you start with a forest, you have to cut roads into it, and so most of that impervious area is going to be roads. And then as you start developing it out, you're putting buildings and subdivisions and so on. So I don't know if that helps.

[01:56:42] No, it does. It helps. Yeah. Thank you very much. And just to add to that, in the models that we do run, population is one of the big drivers of predicting how it would change. So we do have predictions of population from all the jurisdictions that we incorporate in all of this.

[01:56:59] So it's definitely a big factor where the growth is, where the density of population is, all of that is already in it. And just to connect one more dot, those numbers come from COG, right, through the transportation area zone planning efforts.

[01:57:20] All right, thank you very much. This was a wonderful presentation. My apologies for all the Star Wars, Star Trek, Star whatever, stargazing. No, don't do stargazing. I start gazing. I'm just making up stuff, all right. So I have Victor over here.

[01:57:38] He's trying to educate me. Thank you guys so very much. We appreciate this. Great job. Mr. Short, if you want to tee up the next presentation. Yes, thank you very much, Madam Chair, and to Public Works, all of our partners, Craig Pfeiffer, thank you so much for being here and for the great work.

[01:57:55] Madam Chair, with Item 7B, I'll invite our Director, Phyllis Jennings-Holt, down to talk really about Medicaid coverage and SNAP work requirements associated with H.R. 1.

[01:58:11] So I wanted to make sure that the board was aware of some of the changes that are occurring because of federal changes, as well as some of the support that now the governor and state has notified us on. So with that, Director Jennings-Holt, I'll turn it to you. Thank you.

[01:58:27] Good afternoon, Chair Jefferson, Vice Chair Angry, members of the board, CXO Mr. Shorter, and County Attorney Michelle Robel, Phyllis Jennings Holt, Director of Social Services. Thank you for the opportunity today to share information with you about the collaboration between VDSS, Prince William County DSS, and community stakeholders to ensure that constituents are informed about the changes pertaining to SNAP and Medicaid programs.

[01:58:58] Governor Spanberger's executive order acknowledges the mandate to comply with the HR1 bill and also directs local Department of Social Services to use every possible tool to help eligible Virginians to retain health care and food assistance.

[01:59:15] We are trying to meet this goal through collaboration and information sharing. The SNAP work requirements became effective October 1, 2025. This means the recipients would need to participate in employment, volunteering, or educational program 20 hours per week, 80 hours a month, to maintain their benefits.

[01:59:39] In 2025, we had over 13,000 constituents that needed to comply with the work requirement, and now we have over 11,000. We have over 2,000 constituents that either are no longer eligible for this benefit or have met an exemption.

[01:59:56] And it's just as a reminder, the exemptions includes anyone younger than 14 or older than 65 years, is medically certified, is physically or mentally unable to work, is pregnant, and is responsible for a dependent child younger than 14.

[02:00:16] This slide here just simply shows a few of the community partners that we are engaged with. We have Virginia Career Works, Northern Virginia, with the ISLA program that supports TANF and SNAP recipients in workforce development skills and employment.

[02:00:34] Then we have Virginia Career Works, Northern Virginia UpGlow, which supports SNAP and Medicaid recipients in workforce development skills and employment. And then the VDSS Office of New Americans Working with Refugee Families in Prince William County to learn new skills and obtain employment that leads to self-sufficiency.

[02:00:57] So on this slide, it talks a little bit about the HR Medicaid changes, which become effective January 1, 2027. Medicaid renewals will occur every six months, and recipients also need to comply with 80 hours of work, volunteer, or educational program.

[02:01:20] This change will affect the individuals in the Medicaid expansion group, and the individuals in the Medicaid expansion group was those that was covered under Affordable Care Act that included adults between the ages of 19 and 64.

[02:01:35] There are a number of exemptions to this new eligibility requirement that you can find on the DMASC Virginia government website. Currently, right now, in Prince William County, we have over 24,000 Medicaid recipients that will be subject to the new H.R. 1 Medicaid work requirements effective January 1.

[02:02:02] DMAS has provided us with toolkits for the members, for federal work requirements, for members, and for those who are advocating for constituents. This information is being shared with providers in the community. This information is being shared in various languages to include English, Spanish, Urdu, Arabic, and Vietnamese.

[02:02:27] So this slide here just shows a few of the community events that are occurring. To ensure that community and providers are receiving information about the upcoming changes in Medicaid, DMAS is holding virtual halls.

[02:02:46] Prince William County DSS is sharing information from the DMAS toolkit with other county agencies and community partners to share with constituents that engage with to make sure that they're getting information regarding the changes. My deputy director, Holly Handy, participated in the two events that were sponsored by Centario on August 31st.

[02:03:09] Tomorrow I will be at Nova Community College with the SNAP Regional Roundtable providing or getting information from VDSS and Cinture so that we can get prepared for sending out this information.

[02:03:27] We are scheduled for various community and county events to provide information about the changes. Currently we are scheduled for 16 events from September the 12th to December the 7th. Also, DSS is uploading the changes on our public-facing page, and we will be providing flyers at our front desk, as well as at our Falazo and Sutley North building, as well as our shelters.

[02:03:55] August the 12th, there was a volunteer summit that was held to encourage organizations that need volunteers, but also creating an opportunity for those who need to volunteer to sign up at the Volunteer Prince William web-based program. They can show available opportunities and they can track their volunteer hours. Paige Thacker with VCE and my Deputy Director Holly Handy is taking the lead on this effort. And we are also collaborating with our quadrant, the health, well-being,

[02:04:31] environmental sustainability, as well as our No Wrong Door initiative. So as I mentioned before, there are a number of county agencies that we are disseminating information to. They are sharing information to their constituents that they are engaging with to make sure that everyone gets that information. And this concludes my presentation. Is there any questions? Thank you. I just have a couple quick questions um on pages slides two and five it talks about you can go to either one

[02:05:07] how many people will you know fall under the new requirements for example do we know how many of those people already work or is that just i just want to understand is that the number of people on that program who will have to work because of the changes or do we know if some of those people already working in some capacity or are students? It could be both. Do I know the number in each category? I do not. I just know the number that will be impacted by this work requirement. I appreciate that. Thank you. And are you hearing anything from the community? Are people feeling

[02:05:44] anxious? Are they concerned? Do they have questions? I'm not hearing anything. I'm quite sure there are questions. I know that we're getting a lot of, I'm getting a lot of emails and questions from community partners, providers, community organizations wanting to partner to get the information out there and also to actually learn about the work requirements.

[02:06:08] Great. And I appreciate you putting up some of the things that you have already done. Are there any more things that you have upcoming or anything that we should be sharing with constituents as

well to help you out in getting the information? Well, I mean, we do have the flyers for the DMAS toolkit we can provide to supervisors to have in your office if that's something that you would like.

[02:06:30] The 16 events is something that's just starting. And so I would imagine January 1, when it actually starts, that there will be more and we will be getting more asks and making sure that we're getting the information out in the community.

[02:06:47] All right, thank you. Okay, I don't see anyone else, so you might want to run, okay? Thank you. Thank you. All right.

[02:07:05] Yeah, we're joking maybe you should have gone first because you got off scot-free. You had to sit for everything, but thank you for your patience. So we are moving on to agenda item number eight. And before we go around the horn, there are a few things to vote on. The first one is A, 8A, and that's a resolution to reaffirm commitment to protect the Occoquan Reservoir and oppose diversions from the Occoquan Watershed for consumptive reuse.

[02:07:31] Supervisor Bode, right on time. Thank you, Madam Chair. Now, I will say I didn't necessarily plan for us to have this resolution taken up literally just a few minutes after we had Dr. Grant and everyone else do it, but it couldn't have been more timely. By now, I would imagine that most of you have been visited by Calvin Farr with Prince William Water.

[02:07:54] Essentially, the long and short of it is there are folks among UOSA and the city of Manassas that would like to explore diverting some of the treated wastewater and using it for consumptive reuse.

[02:08:10] And why I emphasize consumptive reuse is it would be reuse of the water that would go away. We use by a large industrial user in most cases, they would leave the water system. None of it would be put back or a very small amount would be put back, thus diminishing how much is in the water supply.

[02:08:26] I think that Dr. Grant and Siddharth, when they spoke about it earlier, have talked very well and eloquently about how, especially during drought conditions, how, and based on the calculations we got from Prince William Water, upwards of 90% of the water that's in the water supply during drought conditions is the treated, reused water.

[02:08:48] So to me, it would be worrisome if we allowed some of that water to be diverted, consumptively reused out of the system, and none of it would be brought back. Knowing that there are concerns about water quality, water levels, groundwater, all these other one water system concerns over time, I think that it's not a question of yes or no.

[02:09:11] So it's, hey, if you're going to consider doing some kind of reuse of water supply, there needs to be a conversation among stakeholders that are part of this, right? UOSA is in Justice City of Manassas. It includes Prince William County. It includes Fairfax. And so it includes a much larger microcosm of stakeholders.

[02:09:30] And it isn't, hey, you can't reuse any water. It's just don't do consent of reuse. find another way to reuse the water that is put back in the water system at least the same level of quality and close to the same level of quantity as was taken out before it was diverted out of the water system.

[02:09:45] So that's the long and short of it. I won't go too much more into other detail. Like I said, I think that it was eloquently talked about earlier. And I'll just say that Fairfax County has already put out a

resolution that basically affirms this. The Board of Directors for Prince William Water has also put out their own resolution in support of it.

[02:10:05] So my ask is that we just follow along with it, you know, affirm that we believe that if folks are going to be reusing water, they should not be taking it for consumptive reuse. Thank you, Madam Chair. All right. Is there any questions? Move to approve.

[02:10:23] Second. Thanks, Gordy. That is a true boardy collaboration right there. All right. It's been properly moved and seconded any discussion. no kenny you've already talked anyone else anyone else all right let's go ahead and take a vote vote unanimous all right thank you so very much we are going to go on to agenda item 8b supervisor bailey thank you madam chair um during the 20 uh the regular 2026 session the general assembly

[02:11:03] passed the house bill hb 352 which allows the county by ordinance to establish an affordable housing performance grant program for qualifying construction and improvement of real property and to be awarded by the industrial development authority and that's hb 352 amended to section 1.5 1.2 958 4 um colon 1 i without objection i'd like to direct the county uh executive to work with staff the ida and its legal counsel i'm sorry you don't have to read it um because remember

[02:11:40] now that everything is advertised we don't have to read it so i'm going to save you a little bit of time only for you ma'am all right does anyone have any objections madam chair yes thank you i have a few questions again um for the sake of consistency i don't want to get used to doing things just for the sake of doing them and so my question is supervisor bailey is there an intent in trying to solve perhaps a problem or shortcoming that our current newly established housing trust fund doesn't currently meet?

[02:12:18] Yes, the intent is because we're dealing with the IDA to have a legitimate policy in place in dealing with the IDA and establishing a grant program from them for housing. So it's a different program because it's coming from the IDA.

[02:12:36] Well, I guess I'm just trying to understand, because as it stands right now, the IDA, and correct me if I'm wrong, Mr. Shorter, or if you need to ask anybody else from staff, the IDA currently does issue bonds for affordable housing projects.

[02:12:53] They've already done that. And the beauty of the IDA is that it operates as a separate entity from this board. It does not use tax dollars for those incentives. And so I see a lot of red flags in regards to this request because I would hate to have to either tie their hands or add additional red tape that they don't need because currently as it stands right now, they've already done that through other projects.

[02:13:22] And so I'm trying to better understand what the need is, what the purpose is when the IDA already does this without the need of an ordinance. And while I understand, Supervisor Bailey, the bill that you're referencing was passed by the General Assembly, it's not mandatory for localities to implement or to further look into, if I make sense.

[02:13:46] Would you like to comment or you want me? Okay, not mandatory, but my purpose in bringing it to the fore is because it had not been established in the past, and so this gives the leverage to the IDA to go forth when it comes to housing projects because we've had several housing projects in my district specifically in Dumfries where the IDA has been involved and we didn't have the policy in place to move forward with it so I just was I was trying to have make sure that there was an alignment with what the General Assembly like we normally do with what the General Assembly has established legitimately

[02:14:26] and that alignment as we institute the IDA grants, there's no crack mire, no stoppage at all when it comes to housing. And to make sure that since we're focusing on housing, this is separate from the housing trust fund.

[02:14:42] You mentioned that. It has nothing to do with the housing trust fund. It has to do with the IDA and giving them the leverage and making sure that the grants are fluid and there's no stoppage at all when it comes to housing going forward. Again, I'm still struggling to understand.

[02:14:59] I'm not sure if it's just project specific, but that is quite literally one of the core functions of the IDA is to, the primary tool that they use is issuing private activity bonds, industrial revenue bonds, ones that developers heavily rely on to see these projects through.

[02:15:19] And so I'm not sure what the correlation there is. And so I have concerns about it for that reason. I have a very close relationship, not just with my appointee to the IDA, but the IDA in general. And again, I don't see the need for it, nor do I want the IDA to be negatively impacted in the work that they're already doing by bringing something like this.

[02:15:41] I think that it would be perhaps appropriate to have an offline conversation with them to see if this is something that they would want to support. And if they're interested in supporting and backing it, I think I would be more inclined in moving forward with it. But as it stands right now, I do have concerns.

[02:15:59] So understanding your concerns, I understand that. Don't want to tie their hands at all. But this request came from two of the members of the IDA, specifically one of my appointees and another member, to make sure that, as it relates to the General Assembly, they are fluid in how they conduct business.

[02:16:17] And I understand what you're saying about the bonds. This is related to housing, and it would also give them more leverage when they're dealing with developers and builders related to housing. So that's the reason why I brought it forward. Get what you're saying.

[02:16:34] Don't want to tie their hands. I agree with that. But I think that this would help us in terms of the leverage that we would also have as we're going forward with an ordinance and not relying only on our housing trust fund. Madam Chair, I'll just end with saying that, you know, on the record, the IDA's role is to help finance affordable housing projects.

[02:16:57] They're on the record for doing that. I think I've raised my concerns. While I understand and respect that there are two members of the IDA that came to you, I think it would have probably been more prudent to have the conversation as a whole so that the majority could have taken, you know, a position on the issue.

[02:17:14] But I'm not going to drag it out. I have my concerns. I will object, and we can move forward, Madam Chair. I respect that. I just have a question, because you mentioned a couple projects in Dumfries. Would you be willing to share information on that? As soon as I get the project's name, I will. With each one of, especially you, Madam Chair, I will do that.

[02:17:32] It's projects that happened before you were on the board. One was in 2020, and the other is one that is recent that's coming about. So I'll get the specific name shared with my colleagues. Don't have a problem in doing that at all. Okay, thank you. Because I don't have them in my memory, but it's two, one in 2020 and one now in Dumfries, okay?

[02:17:52] All right, does anyone else have any questions, objections? Are you, Gordy? Just a question. Has the IDA put forward a resolution on this issue requesting the board to take this action? I don't think they've put forth a resolution.

[02:18:08] Okay, thank you. This was based on the requirement and then them acknowledging what the governor had signed. All right, since we have an objection, it's going to have to be a motion. I move that we accept the directive that was presented, the IDA Performance Grants for Affordable Housing Projects.

[02:18:26] Second. All right. Supervisor Bode. Thank you, Madam Chair. Sue Reservailey, thank you for putting forward this directive. Sue Reservailey, I completely get what you're saying. For me, this directive, should it pass, will allow staff to work with the IDA to compare what their current policies are around performance grants, other things, vis-a-vis what the law allows.

[02:18:49] and they can they can find uh a way forward there i guess and this might just be a gap in my knowledge most of the idea grants and and things that i've seen so far have been mostly around uh helping do folks do assemblages uh tap fees things like that i haven't seen them do as much around allowing them to do gap financing and other things like that i remember we had one in my district well back in 2021 where they did allow for it was a senior affordable housing but i know that again to the point they probably do have some that they've done over the years like

[02:19:25] you said sures or vega but i'm not sure if they have standardized policies especially knowing that the the state is moving forward with having it be a lot more of a proactive explicit codified way of doing it so you know if it ends up being redundant to your point sures or vega i don't see a reason why we would would move forward but at least let's give staff the opportunity to work with the IDA to see how what was codified into law this past year aligns with what their current policies are at the IDA.

[02:19:51] Thank you, Madam Chair. Madam Chair, if I may just respond to something that he said one of the reasons was the TAP funding, and they wanted the leverage to use the TAP funding and apply for it. So that's part of the reason why I'm bringing it forward. Thank you, Madam Chair.

[02:20:07] And can you give me more information? So I don't have an appointee to the IDA, because you give me more information about what you just mentioned. What do you mean, the TAP funding? Yes. Yeah, I'll make sure that our chiefs of staff get together and they can exchange that. I don't have it memorized, but the TAP funding was something that they requested that they wanted to have leveraged and utilizing these grants.

[02:20:29] So I'll be happy to provide that to your chief of staff, for mine, and to give you a better understanding of it. All right, thank you. Anyone else? Supervisor Vega? Thank you, Madam Chair. Thank you, Supervisor Bodie. It does sound like some of these cases perhaps happened before we established our affordable housing trust fund which serves for gap financing and so i think that allowing that program to mature a little bit more would be more beneficial than giving more work for staff to do um when perhaps we could take another course of action that's my personal opinion so for mine

[02:21:08] um you know i read through this and obviously i support affordable housing i wish we had a discussion beforehand you know no one from the idea i haven't had conversations with anyone because Again, I don't have an appointee, so I am, you know, going to have to abstain for this one because I don't have all the information that I need.

[02:21:28] I'm sure that you would respect that, so I'd like to go ahead and call for the vote. Motion passes 5 to 2.

[02:21:50] Supervisors Gordy and Vega voting nay. Chair Jefferson abstaining from the vote. All right, thank you very much. Madam Chair, if I may. I'm sorry. We have the move. Yes. Just want to thank you for your inquiries, both you and Supervisor Vega.

[02:22:08] and I'll make sure, assure that you have the detailed information that you need. One of the things that I really, I can appreciate, we like to discuss this before it's brought to the board, and that's what I'm usually very good at, so I'll make sure that both of you get that information, and we can talk a little bit further, because I'm very sensitive to what you said, thank you.

[02:22:28] I would appreciate, because my team has reached out, and we hadn't gotten a response, so I'm going to have to go ahead and move this forward. We're going to go to 8C, And that is to amend the Prince William Board of County Supervisors 2026 meeting calendar to remove the 7 p.m. evening session on October 6th.

[02:22:44] This is the change that we discussed at our finance and budget committee meeting earlier. As a reminder, we do not take votes during our committee meetings. So it is coming to us at this point. I'm going to go ahead and ask for a motion and we can contain any discussion inside the motion.

[02:23:03] So moved. Second. It's been properly moved and seconded at any discussion. all right let's supervisor stewart thank you madam chair just a quick question at old hickory will that meeting uh be streamed or tele and or televised will that be transmitted there won't be video but we will audio record in the same way we do with um um the inter-jurisdictional committee meetings but we do not have the ability to video record at old hickory okay would that have normally

[02:23:37] happened at um at the kelly leadership center would video have so when we do extended work sessions uh related to any topic we wouldn't do it uh uh at well i don't know actually if we've done it at kelly before um but generally if we are using kelly we're doing something with the schools uh in terms of the uh the legislative session that we're doing after at 6 p.m um yes, that is something that we would have done in years past at the Kelly Leadership Center,

[02:24:15] considering that we are inviting the delegation. I think we have done that in the past. I will say just by way of context, we do our best to be good partners with the school. So we've had these events at the Kelly Leadership Center a few times now, and we do try to be host as well.

[02:24:38] I don't know, Clerk, if you wanted to add to that. Outside of board chambers, those meetings are recorded audio and posted after the meeting has occurred. We have not done live audio or live streaming off-site when we've been at Kelly Leadership.

[02:24:56] We have also done the audio recording and then posted it after the fact. It has not been streamed live from the location. Okay. Thank you very much. Anyone else? I don't see anyone, so let's vote.

[02:25:14] Vote unanimous. All right. Thank you so very much. Now we are going to go around the dance for everyone's updates. I'm going to look at you, Supervisor Angry. Stop what you're doing. Give me your update. Thank you, Madam Chair.

[02:25:38] Real quick, just a recap of events. I want to thank Americans in Wartime, Dennis Brandt, for allowing us the use of Engine 252 for our September 11th, September 10th ceremony we did, and for

leaving it on display. And I think they're going to be picking it up soon, sometime.

[02:25:56] But just want to thank him for doing that. And, again, very somber ceremony. I absolutely love that format. That format was spot on. So thanks to our comms team, Nikki Brown, and your team for putting that on as well. Let's see.

[02:26:13] Oh, I didn't attend the Woodbridge Elementary School ribbon-cutting, but congratulations on that school ribbon-cutting for being open. My team was there for that. Also, Fort Belvoir had their Patriot Day observance, a new garrison, not a new, but the garrison commander at the post.

[02:26:32] Another solemn ceremony, so happy to be a part of that. Let's see what we got. Oh, so I attended my Region 5 Vaco Region Update. I've got a couple more lined up, so I've been real busy with Vaco. A lot of good stuff going on around the Commonwealth in these regions.

[02:26:49] September 12th, we had the Arts Alive, and I was very happy to read at the Book Nook Reading Circle. That was a great opportunity to sit there and read some books for the kids, so I really enjoyed that.

[02:27:04] Thanks for inviting me to be a part of that. And then also, Prince William County Police Department had their sixth annual community day. I didn't stay super long because I had a full day, but I did get to stop by. I actually heard the Supervisor Stewart jumped in the dunk tank. Well, I'll let you talk about that because I would have loved to be there and help you out on that.

[02:27:24] But, you know. All right. Let's just talk about some upcoming events. So, upcoming events, we have quite a few. And let me just get here. September 17th, we got Jazz on the Green.

[02:27:40] That's Birmingham Green. That's 99 years of service. So, if you got an invite or whatever, hope to see you all there. 19 September Veterans Info Seminar. I believe that's AARP, I forget who's, no, DAV, Disabled American Veterans, are doing a seminar at First Mount Zion Church, and that is 19 September from 10 to 12.

[02:28:05] So if you're a vet and want to go and hear some topics, please stop by there. Also that day, we have our second annual Teens on the Right Step celebration. I guess we say Director Bass, I don't know, is it Director Bass, Levi Bass, yeah, putting that on.

[02:28:23] That's at Cloverdale Park from 12 to 4. Also, OmniRide Bus Rodeo is that same Saturday. That's at the Occoquan Park and Ride commuter lot 95 and Route 123. That's from 12 to 2. If you want to see our operators do some cool stuff with those buses, that is a real fun event.

[02:28:40] I hope you can stop by. I have another region update on Monday the 21st, Region 12 and 13. out there in russell county that's like a six-hour drive okay and then i got this on here it's the rv there yet is that a is that a economic development they'll send out information there we go okay brentsville hall 21 september from 5 to 7 p.m and then again we have our joint school board meeting but also on the 23rd i just want to remind us all of the omni ride 43th anniversary open house eastern facility they're going to do another one on the western facility as a date out

[02:29:17] there this particular one is from 4 to 8 p.m i know we have the joint school board from 6 to 9 p.m at kelly building uh and then uh fort belvoir octoberfest always a good time if you haven't been to one and that's going to be over at pulling field at fort belvoir from 6 to 10 on that friday the 25th of september and then lastly the 26th of september neopsicle district fall dumpster day gemini way commute a lot also

have a shred event with that you definitely want to come by that, and that's from 10 to 2 Gemini Way commuted up, basically the farmer's market.

[02:29:51] All right. Okay. Thank you, Madam Chair. Senior Advisor LaCroix. Thank you. I just wanted to say that I intend to appoint Nicole Canole to the IDA, and I believe that you got her... Yes.

[02:30:09] Okay. Okay. I'd like to have a draft directive language, and Madam Chair, without objection, I'd like to direct the county exempt to work with the staff to review the discretionary authority regarding zoning administrator, administrative modification under Virginia Code 15.2-22.

[02:30:31] So you don't have to read it. Okay. I was wondering who this is from. That's from me. We'll talk about it later. You don't have to read it. Okay. We'll put it on the next agenda, and we'll talk about it then. Perfect. Thank you. What else you got? I would like Directive 1 and 2. I sent you all the other night, and it's expanded senior programming capacity.

[02:30:51] and directive two would be senior transportation assistance we'll put that on the next agenda thank you anything else forgive me i have to leave goodbye we love you bye all right supervisor vega thank you madam chair i just want to highlight um the 9-11 ceremony i know that the county executive uh already spoke about it but i just want to commend the team um executing an event of that magnitude takes a lot of prepping and a lot of paying attention to the details.

[02:31:27] I once read that the grace of a memorial service lies within the details, and I just want to say that I've been serving in this seat for now almost seven years, and I have never experienced a ceremony like the one that we did last week. And so to the team, just want to say thank you for um being mindful no matter how small the detail you all captured everything so beautifully um it is 25 years but I don't think that it gets easier even as the years go by um I in fact I think it gets harder because you um learn more about the lives that were lost and the impact

[02:32:05] that that had on our nation and how we have to um honor those memories for the upcoming generations that were not alive when 9-11 um first took place and so I say all of that to say that I just want to use my entire supervisor's time to thank the team for being so thoughtful and for making Prince William County proud. I've had folks reach out and say that that has been the best 9-11 ceremony that they've attended, not just from Prince William County, but in general. The only little complaint that I got was, why the day before? Because in years prior, we've done it on

[02:32:45] the day of, and it's been in the morning. I'm sure that there's a good explanation. Part of the consideration for us is that we wanted the two speakers, particularly Ms. Lynch, to be present. And she was participating in several other 9-11 ceremonies on the day.

[02:33:07] And so we wanted to be sensitive to that and to a few of the other families who were also present, but participating in events in Arlington on September 11th. But appreciate that you brought it up. Well, for those in chambers and those watching at home now, you all know the reason.

[02:33:22] And I think that we can all be in agreement as to why we had it the day before. But, no, thank you, Mr. Shorter. Thank you, Madam Chair, for both of your remarks. And, again, to the team, absolutely amazing. And another event where we can all just be extremely proud of our county and of the people that work here.

[02:33:39] Thank you. All right. Thank you so much. i'm going to go over to supervisor bode yes thank you madam chair um there's a few things i won't completely retread ground that's already been tread but i'll start where supervisor vega left off you know i couldn't attend my team attended the ceremony i represent the county at nvta but i keep hearing how well it was received um and as was just said the more distance and time we get from september 11th 2001 the more we learn and the more people we know were affected in ways that we

[02:34:16] didn't know the day of um and so that's one of those things where it's had obviously already had ripple effects throughout uh the geopolitical situation in various parts of the world but also in various lives and families that didn't know they were affected until years later leading up to even you know with the past few weeks so i think i just wanted to add weight and reinforce what you just said. Also wanted to reinforce what was said about all the intricate details and all the work that the team must have done behind the scenes to pull something like that off. Like I said, I keep getting a lot of good feedback and my team was there. So I really appreciate that. Also wanted to go back to an earlier event that was mentioned, the ribbon

[02:34:55] cutting at the new Woodbridge Elementary School. I did get a chance to go over there to that. I know that some of our offices also have representation beyond that. But I just want to highlight how important it was to have a state-of-the-art school built in the Woodbridge District in the sort of North Woodbridge area. You know, that's one of the oldest parts of the county, and it has some of the oldest schools, some of the oldest infrastructure. So to see that come up alongside all the other revitalization efforts that this board has worked on over the years was important. But it also, I think, I'll just say it this way, it redefines and reimagines

[02:35:34] how i think some people look at woodbridge you know i'll just say it candidly people say hood bridge all the time because they have this certain stigma about what that area looks like who lives there how they live all these different uh ideas in their head about the folks that live there well you can't look at a school that's as vibrant as full of life and and as promising as that woodbridge elementary school and want to use that term for that area anymore so i just wanted to highlight that and emphasize that um looking ahead you know barktoberfest is coming uh my my team and

[02:36:13] i are going to be partnering with tackett's mill for their fall festival to have barktoberfest looking forward to having all sorts of different uh pet and dog associated uh vendors there as well i'm going to invite omni ride so they can table there and get some good information about our transit system, and really looking forward to getting some more folks to adopt some pets this coming year as well. And the last thing I have, I have another resolution. I sent it all out last week, but it goes along with the same bead on water. It goes back to something that Supervisor Stewart said earlier and that we've been talking about. The long and short of it is that back

[02:36:51] during the General Assembly session, I've talked about this before, there was a bill by Delegate McAuliffe that would have established a groundwater study for Western Loudoun and Fauquier counties. That bill died, but it miraculously resurrected as a budget amendment that was ultimately passed by the General Assembly. Now, to Supervisor Stewart's point, the basin and the watershed that starts in Western Loudoun and Fauquier County doesn't stop at the boundary line and the county line in Prince William County. It flows through and to and through Prince William County to part south. So as we have already invested in our own

[02:37:29] groundwater study, but this DEQ one is apparently on a much accelerated and deeper time frame, I would just, my ask is that we petition the governor and DEQ to be asked to be added to it. This actually comes as a request of the Sustainability Commission. They passed a resolution asking for this about two months ago. We're in August recess. We couldn't act on it during the August recess so my um I'm introducing it this week to then be voted on at our September 22nd meeting thank you all right thank you I'm going to go to Stuart Gordy then Bailey thank you madam

[02:38:05] chair um so I'm going to be issuing um a directive next week uh to establish a small area plan in Gainesville I emailed um all of the uh all of the supervisors and and other parties um and have reached out to pretty much everybody, left voicemails and or text, and have spoken to some of you already, and looking forward to more conversations coming up for our next meeting.

[02:38:39] On the 4th of this month, or actually, no, I'm sorry, the 14th yesterday, the Gainesville District mobile market was active, and we had people come through receiving food items. We're going to be doing this every month going forward into perpetuity. And last Saturday, I did attend the Prince William County Police Department Sixth Annual Community Fair. And yes, there was a rare

[02:39:16] sighting of Supervisor Stewart in a pair of shorts because I was in the dunk tank and talking a lot a smack right and got dunked several times and and it was awesome because it was all kids and and it was it was great um yeah yeah they were laughing at me yeah it was that water was cold too um and so um afterwards i i uh also attended the arts alive uh function at the hilton performing art center they had some amazing art there some of which i purchased and i also got uh some locally

[02:39:53] made um hot sauce which is i'm you know the hotter the better um and yeah so i bought some hot sauce uh that that morning um and i carry it i do carry it in my bag like beyonce yep um so the ninth annual willing warriors bike ride to support the wounded ill ill injured and um disabled vets um that that happened at a brewery um in in haymarket that i attended and um yes also i did also attend the uh the 9-11 memorial here's what i'll say about that that that is true that you know the

[02:40:33] more we learn the more we know um but i think the burdens that those of us who who who picked up that day which just seems like it was a week ago um i think we still carry them i i got very present to that at that function because I'm not even going to lie about it I got emotional it's very emotional um as a lot of you know um you know I'm born and raised in New York and I was living in New York when that happened and um yeah it it it affect I'll just say it affected everybody

[02:41:08] everybody in town um as it did across the nation and the world um on the 10th I attended uh the grand opening of the carbonara restaurant um in gainesville um excellent restaurant um wonderful food they are booked to november but make your reservations now and you won't regret it i had the big uh parmesan cheese reel with the pasta and i mean that was the first time i've ever had that i've heard about it i've seen it on television and but man was that good and you know i'll be

[02:41:41] talking to my tailor about letting these pants out um and so i know that's a lot but but um but i'm going back and uh so with that madam chair thank you very much okay oh oh one i'm sorry one last thing i'm this is so very important since we did bring this up i want to wish a happy 60th birthday to star trek right and so my fellow trekkers not trekkies wrong term my fellow trackers out there you know all right let's make it so all right thank you all right i'm gonna go to bailey because she didn't want to be less so i'm gonna go to you i don't mind please go to time no

[02:42:20] no i'm good your light is on go ladies first oh okay let's go uh i just i want to echo what my colleagues have said about this the ceremony for the 25th anniversary uh remembering ceremony it was impeccable it was impeccable it keeps getting gooder and gooder in a very sad time so just thank you so much for just bringing the community together on the fifth I was invited to participate in the 52nd Virginia Scottish games and thanks to you to Travis Haddock for inviting me it was

[02:42:56] enlightening it was so much fun to see family and friends out there so I'll be going back next year It was a different experience, and I appreciate you, Travis. On the 6th, I was invited to the Nova Labor Annual Picnic for IBEW.

[02:43:11] It was a lot of fun, and we ate too much food, but it was a lot of fun to be with colleagues on Labor Day. Always a lot of fun. And then on the 8th, we celebrated Chief Molsky and said goodbye to him. I gave him a little dessert, and I don't know who gave him permission to do what he did, but he knows we love him, all of us love him.

[02:43:35] And then on the 8th, I want to thank Patrick Jones and Luke Davies for coming to my office and talking about the VHD, VDH opportunities here in the county and how we can serve better and partner with VDH going forward.

[02:43:53] And then on the 10th, again, just really, it was just wonderful. Angelic Voices of Osborne Park, always bringing our kids in the midst of what we do. We honor the children always.

[02:44:09] Then on the 12th, I participated in the Alpha Kappa Alpha, honoring their annual fundraiser, Jazz Fundraiser for Scholarships, and it was a great time. Again, I had a good time later on that day, Potomac Shores Community Fun Day, the first ever.

[02:44:29] We had 300 people to participate, and we had a good time. I participated with my colleague, Jean LaCroix, at the Stonebridge Chili Cook-Off. We were right next door to each other, having a good old time with the bumblebee in that little costume. We danced with the bumblebee.

[02:44:45] And then on the 13th, I participated in the Bethel AME Fun and Family Day with Pastor Melinda Clark. Every year, she brings the community together before school starts or right after school starts to support the students.

[02:45:04] And so I joined Congressman Vindman and Delegate Margaret Franklin, our beloved Delegate Margaret Franklin, in that event. And we just had a good time just dancing and playing with the kids. And then yesterday, I joined Senator McPike and Delegate Franklin to talk about the Dominion Energy Cherry Hill Project and talk to the community to give them an update, and I appreciate their time for coming out and supporting that.

[02:45:32] It's in reference to the waterline project that we're doing there with our water authority, and so thank you to Mr. Calvin Farr. He was here this evening for supporting that event. On the 19th, I will be joining Grace Church for their annual Grace Fest.

[02:45:51] So I'm excited about that as well as they serve the community as it relates to food insecurity and also participating to serve their students. I've also been invited to the Loudoun County. Loudoun County is having a crisis receiving and stabilization center to open.

[02:46:08] And I'm really excited about that because it partners with the regional efforts that we're doing with mental health. So thank you to Chair Randall for your invitation. And that's my story. I am sticking to

it. Thank you so much. All right.

[02:46:23] Supervisor Gordy. Thank you, Madam Chair. On Saturday the 5th, I was pleased to attend the opening ceremonies of the Scottish Games. And I want to thank Travis. It's now the third year that I've been able to go out and participate in having Scottish heritage.

[02:46:43] it certainly um uh is very meaningful to me and uh it was a it was a great event the weather held off even though it was storming all around us uh it stayed dry where we were so thankful for that on last thursday uh kicked off the day with the ribbon cutting of the rocky branch bridge um really appreciate all the work that parks and rec did to get that bridge rebuilt it took a long time it washed out in 2018 but we think we now have a bridge that will last and uh endure um any potential future uh heavy rains and floodings we we heard him talk about tonight or earlier

[02:47:19] about 2018 about him all the water coming through his ceiling and roof well yeah it washed out a bridge too so uh so elijah thank your team for all the hard work on that uh later that day met with the Chapel Springs Church pastors and ministry team looking at opportunities and where they can be more supportive for our community. I really appreciate it. I appreciate the discussion and their desire to get more plugged into our community and appreciate the work that they already do within the Bristow area. Well, I had another commitment, so I missed

[02:47:56] the 9-11 ceremony, but I will tell you that I do appreciate all the work that our staff has done to continue to improve that ceremony, and I'm sorry I was not able to be a part of it, but as someone who was run out of their building, I was working on Capitol Hill. I was on the phone with my wife. Police came in, said, get out now. There's another plane on the way, and then not knowing if that was the last time I was going to talk to my wife or not, and then to spend the and then that was the day I decided to join the Navy, and so here I am with a 23-and-a-half-year

[02:48:34] career based upon, you know, what happened that day, so appreciate everything that has been done to continue to commemorate and to remember that day so that we will never forget, but I did spend that evening with community leaders from the Braemar community discussing all the power line issues affecting their community and appreciate their continued engagement and involvement on those issues. Last night, I was joined by Chair Jefferson at a meeting with the Wentworth Green and Bridalwood neighborhoods to discuss the impact of Byright data centers, as well as

[02:49:12] power lines that are affecting their respective neighborhoods. It was a great discussion. I appreciate the um honest exchange between us and them and it was uh but it was a really good conversation appreciate everyone who came out for that um and to continue that discussion going forward on thursday this week at 7 p.m at the noakesville firehouse um uh chair jefferson and i will be meeting uh as well and i know other board members are planning to attend uh as we continue to discuss the uh the dominion transmission projects uh through the brentsville

[02:49:47] and noakesville communities so um madam chair that's all i have thank you all right and see right there you had a little quick update yes i just quick out about i wanted to apologize uh miss jessica grove and not groves with an s so i said with an s so i just wanted to apologize to her for messing up her name so thank you oh and i want to give mr blakeley here the attention to detail award he noticed that i changed ties between the meetings and he caught that so you get the award i i guess when you're on police work you notice the little things because you're

[02:50:24] trained to so i'm going to be quick i want to appreciate i'll send my appreciation from supervisor kenny bode for filling in for me at mvta you're kind of like my permanent sub or you're not kind of you are my permanent sub whenever i have to miss something and i hated for you to have to miss 9-11. But I really appreciate you going to NBA and making sure that you represent the county well, as you always do. And touching on the town hall that I have on Thursday with Tom, I mean, again, we have the record. I've done more town halls with Tom Gordy than anyone else. I would really like for everyone to be, it has been advertised, I would really like

[02:51:04] for as many people to attend as possible. Because this is such an important, it's such an important topic. It's such a weighty topic. I know it also will impact the Gainesville district as well. But with all the conversation around data center transmission lines, hearing from the people impacted, hearing the frustration, the anger, and their concerns, I think it's vitally important that as many people go. So if you're free on Thursday at seven o'clock, we are the Noakesville Fire Department. I would really love to see as many people from the board there. And as for

[02:51:37] i went there as well i was offered an invitation the food was yummy it's in the brinsville district so tom i'm gonna have to take you there sometime um and i'll even treat you if you're not tired of me if you're not tired of all the time you spend with me okay yes i'll take you forward too well sounds like they're it sounds like they're booked well our town hall last night we got up pretty late we got out like nine o'clock so um we'll have to do lunch or something so anyways

[02:52:09] thank you very much we are going to go into closed session thank you fun we are back from

[02:52:47] closed session if i can get a motion to certify so moved second it's improperly moved and seconded let's go ahead and take our votes does not like your finger vote unanimous supervisor la corey absent from vote all right thank you very much everyone can i get a motion to adjourn so moved second it's improperly moved and seconded let's take a vote and while we wait our next meeting

[02:53:26] will be on tuesday september 22nd okay it's not working i got it so unanimous thank you everyone

[02:53:39] we're adjourned be able to alleviate some of those symptoms and alleviate that pain and suffering

[02:54:28] that people are going through is something that we take pride in this is a 96 000 square foot facility where we grow manufacture and produce finished products for patients we have very stringent seed to sale tracking, not only for understanding where every single plant goes within our facility, but also to be able to ensure product safety for the patient

