



Resilient Fairfax: Climate Adaptation and Resilience Plan
Public Meeting #2
October 14, 2021 | 6:30 P.M. | Via Zoom
Meeting Minutes

The Community Meeting was hosted by Fairfax County and it took place on October 14, 2021 at 6:30 p.m. via Zoom. It was open to all members of the Fairfax community. The following meeting minutes summarize the presentation and discussion. In addition to the meeting minutes, this document also contains the original Zoom Chat transcript which can be found in the Appendix below.

Attendees: 185 people registered for the public meeting and approximately 105 participated, including members of the Project Team, as listed below.

Project Team

- Office of Environmental and Energy Coordination (OEEC)
 - Matthew Meyers
 - Allison Homer
 - Stephanie Cornejo
 - Aline Althen
- Consultants (the “Cadmus team”)
 - Cadmus: Deb Perry, Julia Nassar, Julia Chase
 - WSP: Dr. Rawlings Miller
- Infrastructure Advisory Group
 - Northern Virginia Regional Commission: Nora Jackson
- Community Advisory Group
 - Dranesville District Representative: Barbara Ryan
 - Environmental Quality Advisory Council: Larry Zaragoza
 - Federation of Citizens Associations: C. Flint Webb
 - Mount Vernon District Representatives: Barbara Bacon and Glenda Booth
 - Springfield District Representative: Cindy Speas
- Resilient Fairfax Planning Team
 - Fairfax County Department of Planning and Zoning: Katherine Hermann
 - Fairfax County Health Department: Samuel Gaber
 - Fairfax County Health and Human Services: Samantha Hudson

Meeting Start: 6:30 p.m.

- I. **Intro to Resilient Fairfax | 6:30 p.m. – 6:40 p.m.**
 - a. Welcome
 - i. Matt Meyers from the Office of Environmental and Energy Coordination provided opening remarks to welcome participants, introduced the project team, and outlined the agenda topics.
 - b. Meeting Logistics
 - i. Allison Homer reviewed the meeting goals, summarized the ground rules for the meeting and described how to use the Zoom platform.
 - c. What is resilience?
 - i. Ms. Homer presented how the county defines climate resilience (i.e., the ability of communities to prepare for, respond to, and recover from climate hazards). She clarified the difference between Resilient Fairfax, which is government led given much of the infrastructure that will be impacted is the responsibility of the County, and the [Community Wide Climate and Energy Action Plan \(CECAP\)](#), which was a community led process since 95% of greenhouse gas emissions come from the community.
 - ii. Ms. Homer reviewed the purpose of Resilient Fairfax, which is to determine:
 - a. What climate conditions and hazard will our county face?
 - b. Where are we vulnerable?
 - c. How are we currently doing in terms of resilience?
 - d. Which strategies will strengthen our resilience?
 - e. What is the path to implementation?
 - iii. Ms. Homer reviewed the overarching project timeline and identified that the project is transitioning from assessing vulnerabilities and the audit of existing policies, plans, and programs to strategy development. She explained that each phase of the project includes engagement with the Resilient Fairfax Infrastructure Advisory Group (IAG), Community Advisory Group (CAG), and public.
 - d. Poll Results
 - i. Allison Homer launched the introduction polls to learn more about the participants. Three questions were asked of the participants and the results are summarized below.
 - a. How did you hear about this meeting?

Most participants (41%) learned about the meeting through a Fairfax County email or e-newsletter, followed by social media (25%). *Figure 1* depicts the poll results.

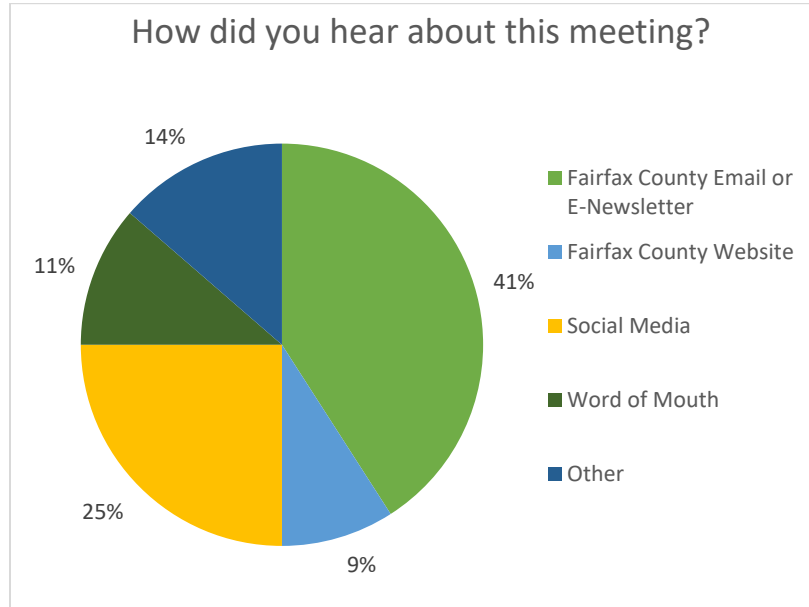


Figure 1. The pie chart shows the participant responses to “How did you hear about this meeting?”

b. How familiar are you with Resilient Fairfax?

Nearly 40% of attendees were not familiar with Resilient Fairfax, while only 30% were “Somewhat familiar”, 18% “Moderately familiar”, and 14% “Very familiar”. *Figure 2* shows the poll results.

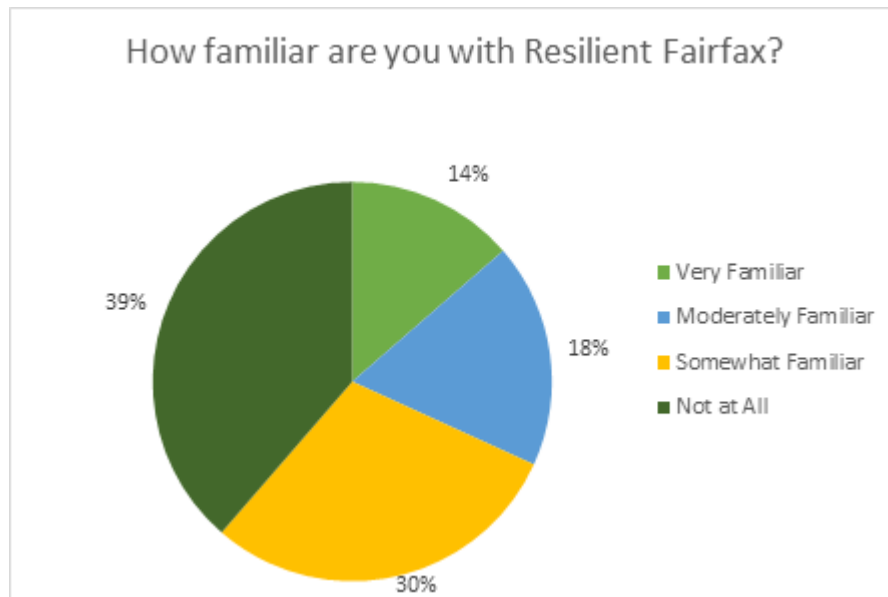


Figure 2. The pie chart displays the participant responses to “How familiar are you with Resilient Fairfax?”

c. What district of Fairfax County do you reside in?

There was representation from every Fairfax County Supervisor District, with a majority from Dranesville (25%). Approximately 2% of the meeting participants did not live in Fairfax County. *Figure 3* depicts the poll results.

II. **Warmer, Wetter, Weirder: What can we expect?** | 6:40 p.m. – 6:50 p.m.

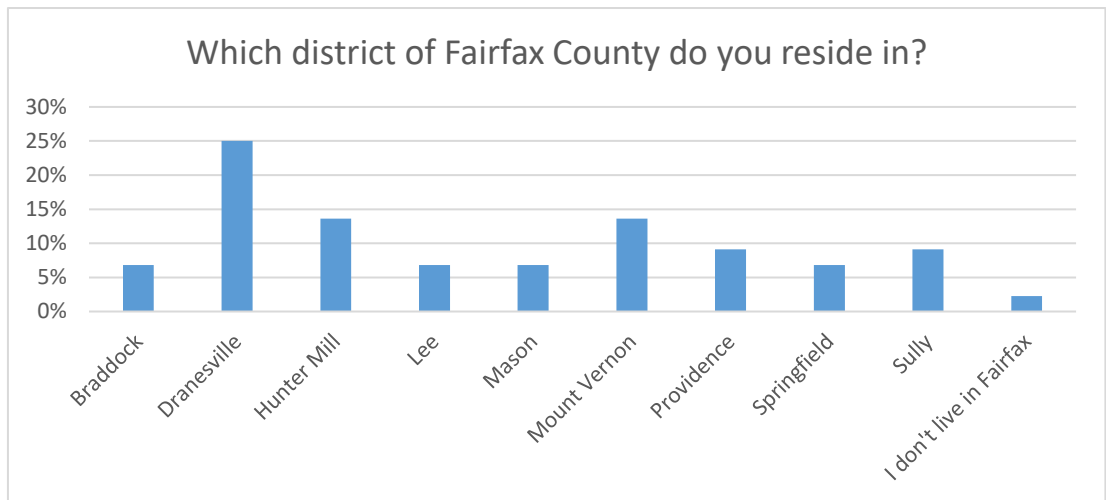


Figure 3. The bar graph shows the participant responses to “Which district of Fairfax County do you reside in?”

- a. Julia Nassar introduced the “Warmer, Wetter, Weirder” section, describing how the average weather conditions in Fairfax County are expected to change in the coming decades.
 - i. *Warmer:* Ms. Nassar explained the projections for heat compared to historic trends. For Fairfax County, the average annual temperature is expected to rise by 4 to 8 degrees Fahrenheit (F) by 2085. Fairfax is also expected to experience four times as many hot days (i.e., days above 95 degrees F) from seven to 28 to 36 days by 2050. She highlighted that the number of days below freezing are projected to decrease from 86 days to 62 to 67 days by 2050. Ms. Nassar explained that Urban Heat Islands are areas that are more dense and/or urbanized that have more impervious services and less green spaces, which tend to retain heat than other areas. She reviewed the Urban Heat Island Assessment completed by NASA Develop for Fairfax County which identifies heat exposure, heat sensitivity, and heat vulnerability indexes. She noted that this assessment can help the county target their efforts to reduce the effects of heat. Ms. Nassar reviewed some of the potential impacts of warmer conditions which can include health impacts such as

heat stroke/exhaustion, softening of asphalt, higher energy use and blackouts, worsening air quality, and increased rates of crime and homicides.

- ii. *Wetter*: Ms. Nassar reviewed the difference between inland flooding, typically from heavy precipitation, and coastal flooding, due to sea level rise and storm surge. In the past 60 years, heavy precipitation events have increased 27% in the region. These trends are expected to continue and accelerate. In terms of sea level rise, the Fairfax County area is expected to see a rise of up to 3 feet by 2050. Ms. Nassar reviewed some of the potential impacts of wetter conditions which can include disruption to vital services, streambank erosion, fallen trees causing power outages, road closures, and health-related impacts.
- iii. *Weirder*: Ms. Nassar discussed that future conditions will include more unseasonably warm or cool temperatures, more frequent and severe storms (e.g., hurricanes, nor'easters) are more likely, and swings between drought and deluges.

III. **Buildings** | 6:50 p.m. – 7:10 p.m.

- a. Deb Perry shared that the presentation tonight will highlight some of the findings of both the Risk Assessment and the Audit, examples of strategies being implemented in other locations, and then provide time for open discussion.
- b. Vulnerabilities
 - i. Dr. Rawlings Miller reviewed the Warmer, Wetter, Weirder conditions for buildings. In a warmer climate, she noted that most buildings will be impacted, especially those located in Urban Heat Islands. For wetter climate conditions, homes, facilities, and businesses can be impacted. With weirder climate conditions, all buildings can be impacted. Dr. Miller identified potential impacts from these, from human health impacts to damage to buildings.
- c. Existing Strategies
 - i. Ms. Perry discussed potential policies and programs already in place in Fairfax County, including participation in the National Flood Insurance Program's Community Rating System, regulation of development in the floodplain, and the Commercial Property Assessed Clean Energy (C-PACE) program. Ms. Perry noted that, through C-PACE, Fairfax County is the first in the state to include resiliency improvements for buildings.
- d. Sample Strategies from Elsewhere
 - i. Ms. Perry provided examples of additional strategies that could be considered in Fairfax County, including providing voluntary resilient design guidelines, a program to support homeowners with flood retrofits, and guidance documents for homeowners.

e. Poll

The project team launched a poll to learn more about the participants interest in various strategies related to making buildings more resilient. The participants were able to select one option. Participants were most interested in guidance for residence on home retrofits for energy efficiency, flood preparedness, etc. (42%).

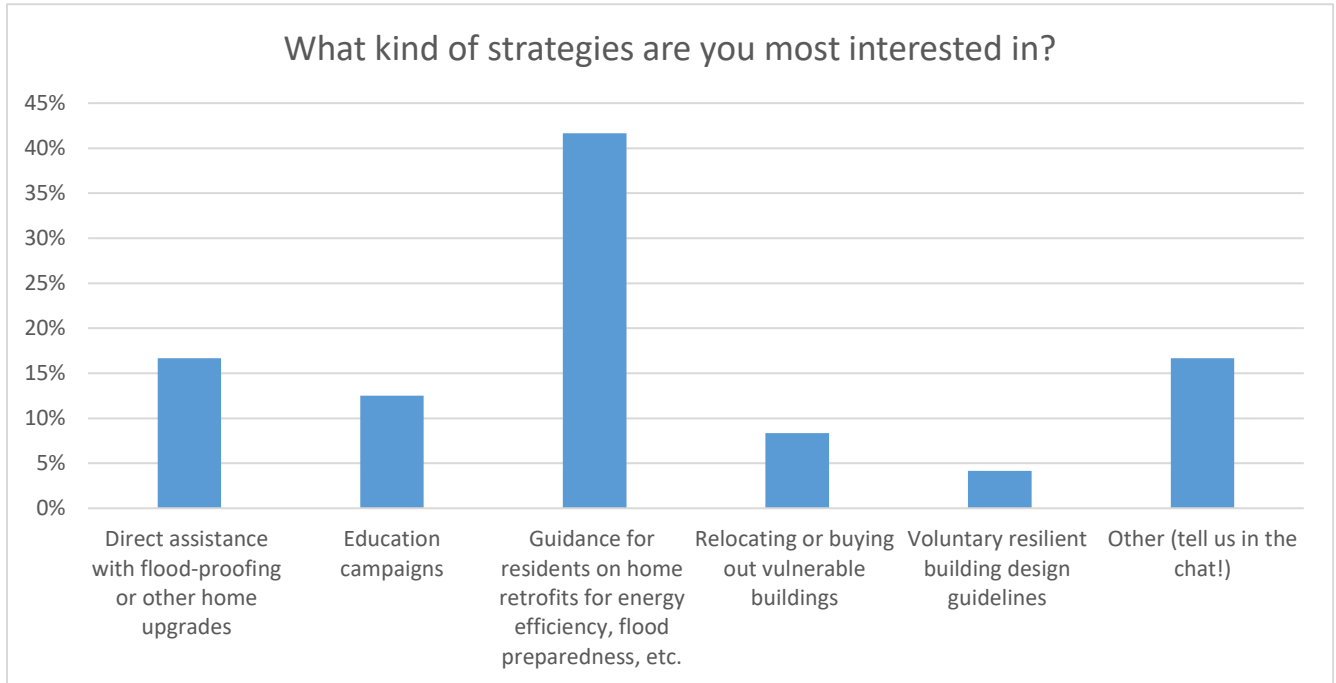


Figure 4. The bar graph shows the participant responses to “What kind of strategies are you most interested in?” to make buildings more resilient.

f. Discussion

- i. A participant asked whether the Urban Heat Island (UHI) effect can be reduced by planting deciduous trees? Ms. Perry noted that yes, that is an effective strategy to reduce UHI.
- ii. There was interest on the role and/or barrier that homeowners’ associations (HOAs) may play in resilience actions taken by homeowners. One participant commented that some HOA requirements can be hinderance to implementation of solar. However, the HOAs are separate governing structures that residents may need to work directly with. One participant called for the County to take action by advocating for legal changes at the state level.
- iii. Participants were also interested in floodproofing homes, white roofs, mitigating the detrimental effects of infill development on stormwater runoff, ending parking minimums to reduce the amount of asphalt surface.

IV. Infrastructure | 7:10 p.m. – 7:30 p.m.

a. Vulnerabilities

- i. Dr. Miller noted that infrastructure is a broad category that includes many types of facilities, structures, and assets, such as water, wastewater, and transportation. She provided a brief overview of what is vulnerable, exposed and some potential effects. In a warmer climate, heat particularly impacts above-ground infrastructure, primarily in Urban Heat Islands where there tends to be more infrastructure. Hot temperatures can potentially damage the electric grid, transportation network, and roadway pavements. For wetter climate conditions, flooding can damage both above and below-ground infrastructure, such as culverts and roads. Floodwater can also carry debris with it and overflow sanitary sewer systems. With weirder climate conditions, all above ground infrastructure can be exposed to extreme storms, causing disruption to essential services.

b. Existing Strategies

- i. Ms. Perry reviewed some of the policies and programs already in place in Fairfax County including creating redundancy in drinking water infrastructure, back-up power for energy system components (e.g., wastewater pump stations are equipped with a back-up generator to avoid failure), and stormwater management including the Huntington Levee.

c. Sample Strategies from Elsewhere

- i. Ms. Perry provided an overview of additional strategies that could be considered in Fairfax County, including integration of climate projections into infrastructure planning, design and standards, infrastructure upgrades such as shade structures and energy storage, and the creation of additional redundancy in operations to further support infrastructure needs.

d. Poll

- i. The project team launched a poll to learn more about the participants interest in various strategies related to making infrastructure more resilient. The participants were able to select one option. About 35% of participants were most interested in upgrading infrastructure design to enhance resiliency, followed by including climate change projections in infrastructure planning (25%), and creating more redundancy in operations and systems (23%).

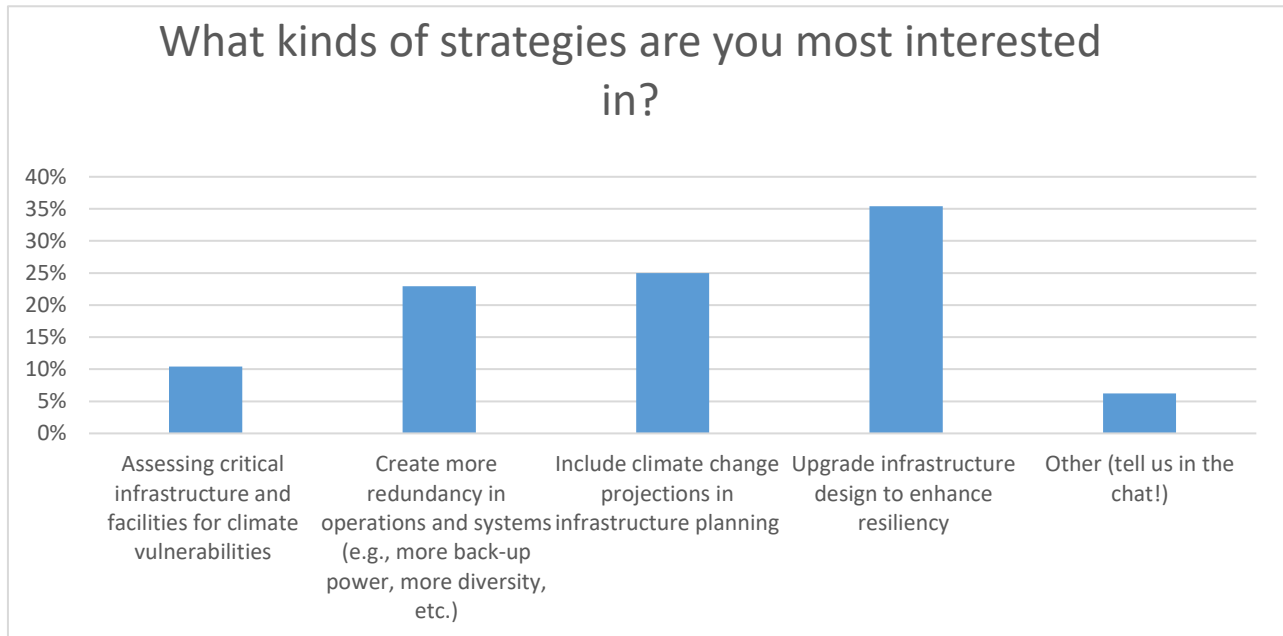


Figure 5. The bar graph shows the participant responses to “What kind of strategies are you most interested in?” to make infrastructure more resilient.

e. Discussion

- i. A resident (phone) called in with concerns regarding the 495 project and its subsequent tree removal, mitigation efforts, environmental and stormwater impacts.
- ii. Another resident agreed with the 495 project concern and added that other color roofs may be more effective than white roofs, such as light grey or tan roofs and the concept of purple roofs. Mr. Meyers responded that lighter color roofs as well as vegetated (green) roofs are being used on county projects and private site developments including those in Tysons. The participant asked if there were plans to increase sanitary sewer waste capacity in tandem with development. Mr. Meyers explained that DPWES Wastewater manages the sanitary sewer conveyance system, operates one wastewater treatment facility and coordinate with other entities to treatment wastewater at five other regional facilities. He elaborated that the county has some ability to divert waste from one wastewater treatment plant to another, and that Resilient Fairfax will continue to examine opportunities to manage the system related to climate impacts.
- iii. Another participant noted that an environmental lens is needed for current and future development projects to include climate projections. Dr. Miller highlighted that this approach is new, emerging, and slowly getting traction in communities. She explained that climate projections can help inform design. Mr.

Meyers shared that Fairfax County is actively looking at the climate projections data as part of this project and examining the need to adjust the county's design requirements. He expounded that the county has also changed stormwater management requirements over time to keep pace with stormwater needs in the site development process.

- iv. There was interest in moving power transmission infrastructure underground, beginning in lower income, oldest neighborhoods, shading structures at bus stops, and reducing road capacity by increasing public transportation/biking options.

V. Natural Areas | 7:30 p.m. – 7:50 p.m.

a. Vulnerabilities

- i. Dr. Miller explained, with a warmer climate, that almost all environmentally sensitive areas are exposed to the Urban Heat Island effect, causing a decrease in water quality, crop viability, and an increase in stress to trees and viability of pests. Moreover, most of the county's parks are located in floodplains. Flooding can cause increased risk of streambank erosion and habitat disruption. Sea level rise can also affect coastal habitats. These effects will likely increase with a wetter climate. With respect to weirder climate conditions, severe storms can impact crops, uproot trees, and increase sediment deposition.

b. Existing Strategies

- i. Ms. Nassar reviewed some of the policies and programs already in place in Fairfax County including regulations to protect water bodies, the Tree Conservation Ordinance, and outreach efforts such as Plant Northern Virginia Natives and Watch the Green Grow.

c. Sample Strategies from Elsewhere

- i. Ms. Nasser provided an overview of example policies that Fairfax County could consider, including restoration and education efforts related to natural resources, zoning regulations for landscape standards, and stormwater credits.

d. Poll

- i. The project team launched a poll to learn more about the participants interest in various strategies related to making natural areas more resilient. The participants were able to select one option. Responses were roughly equal across the strategy choices. Participants were most interested in incentives to reduce impervious surfaces (26%), followed by increase urban tree canopy (24%), and a tie for nature-based infrastructure solutions (23%) and protection, conservation, and restoration of important natural areas (23%).

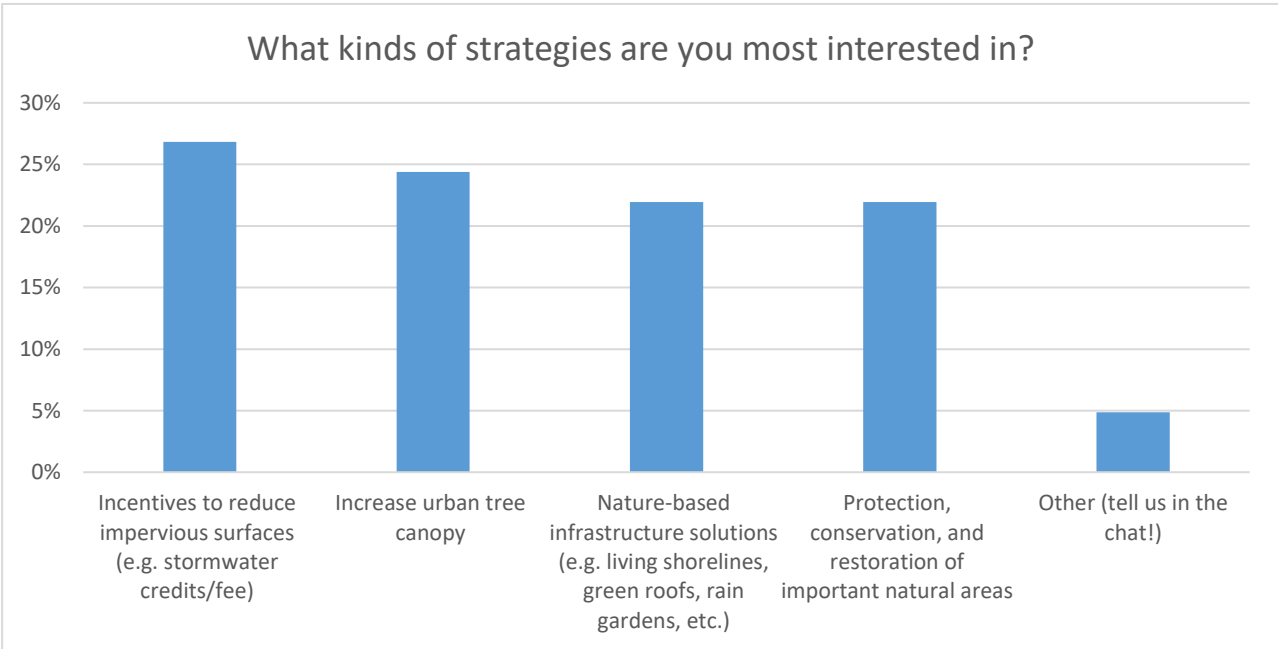


Figure 6. The bar graph shows the participant responses to “What kind of strategies are you most interested in?” to make natural areas more resilient.

e. Discussion

- i. One participant posed a question regarding communal challenges between Washington, D.C., Maryland, and Virginia. Ms. Homer responded that the county coordinates regularly with their regional partners to ensure that actions are aligned.
- ii. A participant commented that the scope of the goal of this plan is grand, noted that there needs to be grassroots efforts, and asked how could those as the grassroots-level best get involved. Ms. Homer noted the Northern Virginia Soil and Water Conservation District (NVSWCD) was a very active group and provided many options and ways for residents to get involved in terms of stormwater resilience and nature-based solutions.
- iii. There was interest for expanding the Chesapeake Bay protection act to ensure riparian areas are capable of absorbing excess flooding, tax incentives on impervious surfaces, green/purple roofs, enhancing biodiversity/removing monoculture turf lawns, and nature-based solution as it relates to food insecurity (e.g., urban gardens).
- iv. One participant also requested educational guidelines on what greening strategies homeowners and HOAs can take, and which strategies are most effective.

VI. Residents | 7:50 p.m. – 8:15 p.m.

a. Vulnerabilities

i. Dr. Miller noted that all residents are vulnerable, however some residents will be more impacted, such as those with chronic illnesses, those who work outdoors, and older adults. A Vulnerability Index was completed that identifies factors that can make some residents more vulnerable. Dr. Miller noted that all residents will experience increased heat, which can in turn increase heat related illness, pollution, and respiratory illness. All residents can be exposed to wetter climate conditions, which can pose human health and safety risks, property damage, and financial impacts. With weirder climate conditions, all residents may be exposed, and can cause property damage, power outages, mental health impacts, and financial impacts.

b. Existing Strategies

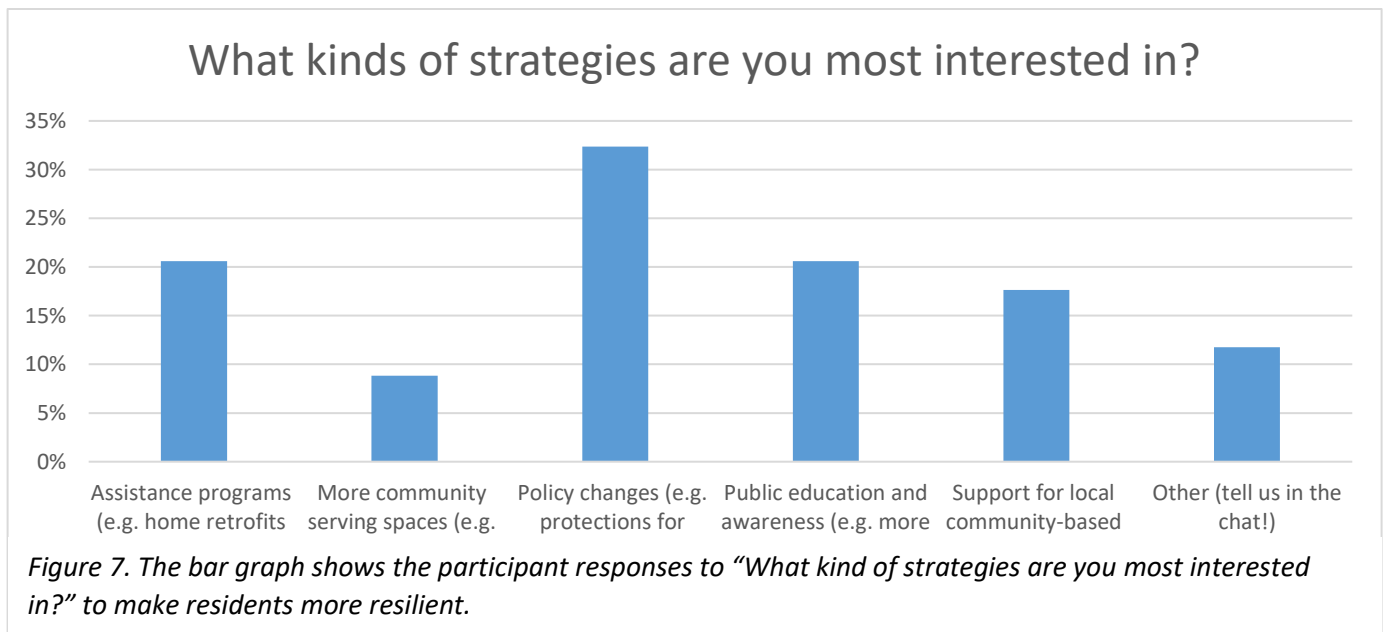
i. Ms. Nassar reviewed some of the policies and programs already in place in Fairfax County including heating and cooling assistance, stormwater management grant funding and assistance through NVSWCD's Conservation Assistance Program, and the Office of Emergency Management's Community Emergency Response Guide and Fairfax Alerts.

c. Sample Strategies from Elsewhere

i. Ms. Nassar provided an overview of additional strategies that Fairfax County could take into consideration, including Indoor Air Temperature Regulation, enhancing social resiliency through "Be a Buddy" program, and greater education and awareness.

d. Poll

The project team launched a poll to learn more about the participants interest in various strategies related to making residents more resilient. The participants were able to select one option. About 32% of participants supported policy



changes, such as protection for outdoor workers. Additionally, 21% of participants supported assistance programs and 21% were most interested in public education and awareness programs.

e. Discussion

- i. One participant commented that the strategies presented and discussed are mostly reactive and not proactive. The participant expounded that there are opportunities to identify where known problems are and prepare for disasters in advance. Ms. Homer noted that the OEEC is coordinating with a variety of agencies to improve opportunities to be proactive and this is a component of the project.
- ii. Another participant commented on the need for building regulations to include insulation for extreme climate and wind resistance during extreme storms, and asked if there is something Fairfax County can do? Ms. Homer noted that the County is restricted in what they can do regarding building codes, but they do work with low-income residents on water and energy efficiency upgrades for their homes.
- iii. One participant shared that they are happy to see that the county is working on resiliency and wondered about the political will to see these efforts through with auto-centric planning and car dependent lifestyle. Mr. Meyers recognized that these are real challenges and that this project, among other environmental initiatives, is based on the Fairfax County Board of Supervisors' direction and leadership.
- iv. Generally, participants requested more information both on strategies and to understand the County's vulnerabilities. Participants also called for financial encouragement through taxes and incentives for more resilient communities, households, and businesses.
- v. One participant commented that the construction of the Huntington Levee is not the best approach to address Potomac River flooding since it "pushes" flood waters elsewhere, and suggested a better approach would be to expand home buyouts in areas of recurring flooding.

VII. **Intro to the Viewer | 8:15 p.m. – 8:25 p.m.**

- a. Ms. Homer introduced the Climate Viewer. She noted that the viewer will help to inform residents and provide them with the information they need to be ambassadors for climate action. Ms. Homer demonstrated some of the functions of the viewer, such as the ability to represent multiple heat factors (e.g., daily average summer temperature, heat exposure, and heat vulnerability).
- b. Ms. Homer noted that the Climate Viewer is not available yet as it is currently under development. She added that an announcement will follow once the Climate Viewer completed and available. Mr. Meyers added there are other resources that publish similar information such as U.S. Climate Resilience Toolkit as well as real estate applications that include flood risk and solar potential.

- c. A participant asked if socio-economic data for populations will be included in the Climate Viewer. Ms. Homer affirmed that One Fairfax population vulnerability data will be included in the viewer.

VIII. **Next Steps** | 8:25 p.m. – 8:35 p.m.

- a. Allison Homer concluded the meeting by outlining the project team’s next steps, opportunities to remain engaged throughout the process, and additional OEEC events.

Meeting Adjourned: 8:35 p.m.

Appendix: Chat Transcript

The following transcript contains the public meeting chat. The names of the public participants have been replaced with a pseudonym.

18:36:59 From Participant 1 : There was a Fairfax Resilient Communities project a few years ago. Is this part of that project? Or just a new effort?

18:42:14 From Matt Meyers : This is the first Resilient Fairfax plan that started this year.

18:50:36 From Participant 1 : From your answer, should I infer you have not looked at the previous resilience project?

18:54:42 From Allison Homer : Hi Participant 1 - are you referring to the Northern Virginia Resiliency Planning Work Group?

18:55:09 From Participant 2 : Thanks for all the data and charts

18:55:33 From Participant 3 : Thank you for that sobering presentation, Julia\

18:59:58 From Participant 4 : Thanks for great framing: "Warmer, Wetter, Weirder" . Easy to remember and talk about with friends and family.

19:02:59 From Participant 1 : With rising water table, there will be more hillside soil migration (& some landslides), & surface structure migration.

19:05:55 From Participant 5 : when was FEMA's BFE established?

19:06:50 From Participant 4: Are white roofs included in C-PAC?

19:07:35 From Participant 6 to Julia Nassar(Direct Message) : Are slide available on website? Thank you.

19:09:16 From Participant 7to Julia Nassar(Direct Message) : Proofing homes

19:09:22 From Participant 8 : Not voluntary guidelines

19:09:57 From Participant 9 : Introduce an additional property tax based on amount of impervious surface.

19:10:14 From Participant 10 to Julia Nassar(Direct Message) : I chose other because I'm on the CAG and didn't think I should comment.

19:10:21 From Participant 11: Because flood plains are generally flat, a 15 foot setback from a flood plain boundary could be "safe" only for a very small rise in the flood levels. Has the county assessed how resilient the current floodplain map is relative to the expected changes?

- 19:10:48 From Participant 1 : Participant 4, The brightest shingles I've found are not nearly as white as white membrane.
- 19:10:53 From Julia Nassar to Participant 6(Direct Message) : Hi Participant 6 , they will be available in a few weeks on the Resilient Fairfax website.
- 19:10:57 From Participant 12 : am interested in the plans on how we can build on the Chesapeake bay protection act to make sure our riparian areas are capable of absorbing a lot of the flooding
- 19:11:06 From Participant 13: I almost chose guidance but I didn't see a choice having to do with HOA restrictions and I'm interested in limitations that might be placed on those restrictions when it comes to changes that increase resiliency.
- 19:11:12 From Participant 14 - MVCCA Stormwater Cmte : I am interested in how to mitigate the detrimental effects of infill development on stormwater run-off?
- 19:11:19 From Participant 4 : OK
- 19:12:00 From Participant 15 : I would like to see more info on vulnerability of public services -- sewer supply, water supply, hospital access
- 19:12:02 From Participant 10 : There is a return on investment calculation that is part of the PASE program so white roofs could qualify if the benefits can be quantified.
- 19:12:32 From Participant 8 : Can we reduce the urban heat neighborhoods by planting lots of deciduous trees?
- 19:13:02 From Participant 16 : For all buildings, we need to end all parking minimums countywide. There's too much asphalt surface in this county.
- 19:13:17 From Participant 10 : That brings up another point about funding for resiliency projects funding under PACE since it is difficult to quantify the benefits.
- 19:13:17 From Participant 13 : ...such as limitations that already exist in Virginia law when it comes to HOAs prevention the installation of solar panels
- 19:13:20 From Participant 15 : public transportation -- and cost to reduce likely impacts.
- 19:13:33 From Participant 5 : Like the idea of additional tax on more impervious surface installation
- 19:13:40 From Participant 17 : Also interested in food security, with adaptation such as roof and sidewalk gardens, suburban lawns turned to permaculture food sources
- 19:14:10 From Participant 4 : Thank you. Scientists have quantified the benefit of white roofs. White roofs lower the heat 10%, dramatically cut carbon emissions, save money.

- 19:14:13 From Participant 5 : any county support for green roofs?
- 19:14:17 From Participant 14- MVCCA Stormwater Cmte : Increase in strong storms and flooding sounds indicate increases in stormwater run-off. How will infrastructure be fixed/improved/installed to mitigate more stormwater? so stormwater
- 19:14:27 From Participant 4 : HOAs are a big problem.
- 19:15:31 From Participant 4 : We have to pass a state law to prevent HOA objections.
- 19:15:33 From Participant 18 : Great comment Participant 13.
- 19:15:49 From Participant 19 : This may be a question too far in the weeds, but currently I've been seeing a lot of trees being taken out because of pests/disease that have been afflicting them. How can we address these interconnected problems?
- 19:16:23 From Participant 4 : Maryland just passed a state law preventing HOA restrictions.
- 19:17:07 From Participant 20: Re: Buildings, current developers are refusing to include purple or Green roofs. These are able to moderate flooding but cost more to build. Those up-front expenses are recouped FAST but not bucks in developers pockets so doesn't happen. They sell and want max profit. BOO for everyone in the future!
- 19:17:37 From Participant 4 : 4 states have passed state laws to reign in HOA restrictions.
- 19:17:42 From Participant 21 : If you are having problems with HOA's and solar going this google group. va-sun@googlegroups.com
- 19:18:20 From Participant 21 : va-sun@googlegroups.com is a group of folks that have successfully pushed back on HOA's
- 19:18:26 From Participant 22: With regards to solar roofs, the new state laws that took affect on October 1st of this year really do reign in the HOAs.
- 19:18:42 From Participant 13 : The action the county could take would be advocating/coordinating for legal changes at the state level. State law already limits how much an HOA can prevent a homeowner from installing solar panels, whatever the HOA rules may be
- 19:19:09 From Participant 14 - MVCCA Stormwater Cmte : What is the source of your definitions for 2/10/100 year rain events?
- 19:20:24 From Participant 4 : I called the county earlier in the week to ask about HOAs and they told me I had to call the state. Only the state can sway HOA bylaws.
- 19:20:33 From Participant 1 : Some of this issue of HOA strictures, have been addressed by the emergency communications community (Amateur Radio, etc) and has long experience & approaches to those problems.

- 19:21:24 From Participant 4 : There are multiple issues that relate to HOAs: solar panels, white roofs, pollinator gardens, no mow yards.
- 19:22:21 From Participant 4 : Ok, thank you, Participant 1.
- 19:23:20 From Allison Homer : Thank you all for these comments! Please be assured that we are capturing these comments and will certainly be considering them, especially in the strategy development phase
- 19:23:41 From Participant 5 : any possibility of looking at moving to underground power transmission, beginning in the lower income, oldest neighborhoods and communities? The rich have their generators, so don't need it.
- 19:24:02 From Participant 18 : Our county has abundance of parking and removing parking often seems to be untouchable to the general public. However, these asphalt surfaces increase the storm water runoff, urban heat effect, cost \$\$ to maintain, etc. Wouldn't this land be better used for green space (trees) or other uses (such as denser housing)?
- 19:24:50 From Participant 20 : Where is Vulcan quarry?
- 19:25:46 From Participant 10 : My understanding is that the quarry is very close to the water treatment plant.
- 19:26:15 From Participant 10 : There are similar projects in other Potomac River communities on both sides of the river.
- 19:26:30 From Matt Meyers : Fairfax County floodplain information
<https://www.fairfaxcounty.gov/publicworks/stormwater/flood-information>
- 19:26:38 From Participant 23 : Will you provide access to the recording so we can share it? And the presentation slides?
- 19:27:09 From Julia Nassar : Participant 23, yes, the recording and slides will be made available on the Resilient Fairfax website in a few weeks.
- 19:27:28 From Participant 16 : The shading structures at bus stops is a GREAT idea.
- 19:27:56 From Participant 5 : will all chat comments be reviewed by the team whether they are discussed during meeting or not?
- 19:28:04 From Participant 16 : We should also be pushing VDOT to allow more trees along roadways
- 19:28:46 From Participant 23 : Thanks Julia. And thanks for the plug for NASA DEVELOP (I manage the program at NASA HQ).
- 19:28:53 From Participant 4 : Participant 18, great point. At the very least, the black asphalt parking lots in the county should be painted white. Black asphalt is 40-60° hotter than

the air. Los Angeles began painting their roads white to cool them down. The asphalt can melt and get on the tires of the cars parked in the lot.

19:28:55 From Participant 23 : I am most interested in vulnerability.

19:29:04 From Julia Nassar : Participant 6, yes, there are too many great comments to respond to live, but the project team will indeed review the full chat transcript.

19:29:08 From Participant 23 : Oops - meant vulnerability of people.

19:29:32 From Participant 24 : Interested in reduced road capacity and increased public transportation/biking options, such as more and safer bike lanes and more bus/metro routes.

19:29:52 From Participant 1 : Greater emphasis on residential tools already available: insulation, shading, home agriculture, ...

19:29:56 From Participant 18: Wrt the poll, they are all great options; it's difficult to choose one.

19:30:16 From Participant 25 : Totally agree with Participant 24's comment

19:30:35 From Participant 5: each one of the infrastructure issues is vitally important

19:30:39 From Participant 18: I agree with Participant 24's comment too!

19:30:43 From Participant 26 : What can I do as an individual homeowner to work in partnership with Fairfax County. For example, I may start to look at solar cells on my house to be integrated into the electric grid.

19:30:53 From Participant 9 : I do not believe that the Huntington Levee is an appropriate approach to address Potomac river flooding. It merely "pushes" flood waters elsewhere. A better approach would have been to buy out homeowners have had recurring flooding.

19:31:08 From Participant 23: Thanks and need to go.

19:31:13 From Participant 13 : I chose other because all of the options seemed important

19:31:41 From Participant 1 : political, legislative, & financial encouragement for resilient community/household planning & resources.

19:31:50 From Participant 27: How is Resilient Fairfax working with VDOT to minimize the asphalt that is planning to be put into the Richmond Hwy upgrades. I sat in a recent meeting & we need multi-level roads with walking & biking space & public transport not more lanes for cars

19:32:25 From Participant 21 : Lot coverage should be reduced to increase permeable land, give more space for trees and reduce the amount of energy needed to condition buildings.

19:32:27 From Participant 4 : Trees are awesome, but it's more than just trees, we need biodiversity. IE, we need to plant 2 shrubs under every tree, and perennials under shrubs to improve soil health which increases carbon drawdown.

19:32:44 From Participant 18 : I agree with the person leaving the audio comment now about 495 NEXT. This project is the opposite of resiliency.

19:32:55 From Participant 3 : Nice that you're reading your statement about 495, but what's your question?

19:33:05 From Participant 8: Does Fairfax County have the power to levy taxes and create incentives to have all of residents and businesses upgrade their facilities?

19:33:06 From Participant 4: Composting is very important too. Composting should be mandatory.

19:33:10 From Participant 14 - MVCCA Stormwater Cmte : Every vulnerability listed must be addressed; it's hard to pick one.

19:33:21 From Participant 1 : VDOT's blatant dismissal as "NO IMPACTS" is very disappointing.

19:33:42 From Participant 3 : Thank you Matt

19:33:55 From Participant 28: I'm concerned about 495 NEXT as well

19:33:55 From Participant 29 : Great information about the larger infrastructure issues regarding resiliency. I am also interested in what we can do at the HOA and homeowner level; plantings, replacing impervious surfaces, maintenance of trees and natural areas, erosion & drainage projects, rain barrels - which of these would help/make a difference? Which are not as helpful? I'm not sure if these are in the goals of this project. If they are, having guidelines for individuals and HOAs would be extremely helpful.

19:34:26 From Participant 12 : let's not read prepared statements. they can be dealt with in other good ways.

19:34:34 From Participant 8: Thank you for redirecting the conversation.

19:34:42 From Participant 4 : Agree, every vulnerability is important and needs to be addressed.

19:34:45 From Participant 13: Switching devices, hoping to return

19:34:46 From Participant 30: Please let the meeting continue

19:35:35 From Matt Meyers : <https://www.p3virginia.org/projects/495-next/>

- 19:36:22 From Participant 25 : How is climate change factored in to big projects like 495 Next?
- 19:37:29 From Participant 10 : Green roofs are even better than white roofs because they also absorb storm water.
- 19:37:35 From Participant 21 : What is a purple roof?
- 19:37:46 From Participant 22: I put in a new roof with light colored energy saver shingles. It made a huge difference in how much AC cooling my house needs.
- 19:37:47 From Participant 4: White roofs on flat corporate building. The icecaps are going to be gone in 5 years, so we have to make up for the loss of white by painting flat roofs white.
- 19:38:03 From Participant 10 : PACE should be a tool to encourage the use of white or green roofs.
- 19:38:28 From Participant 4: Green roofs don't reflect the sun though. It's all about albedo.
- 19:39:06 From Participant 4: If our icecaps are gone in 5 years, global warming will accelerate exponentially.
- 19:40:20 From Participant 4: We're currently at 1.2°C. The goal is to stay below 1.5°. We're currently tracking at 4.4°C which is unsurvivable.
- 19:41:49 From Participant 13: Are the projections for climate change that the county is using already factoring in the likelihood of the polar icecaps disappearing?
- 19:42:19 From Participant 24: Thanks for a great presentation and open discussion, all! Have to head off but will check out the rest of the recording later.
- 19:42:23 From Participant 4: Participant 13, no it doesn't seem like it.
- 19:43:06 From Participant 4: Biden and Scientists are all saying we only have 10 years. 2030.
- 19:44:07 From Participant 10: The county has no leverage over State-run projects. There are some proposals for giving local communities more tools for directing these projects but it will take action in Richmond
- 19:45:05 From Participant 4: Richmond won't act fast enough. We have have international laws that hold US states accountable if we deny act fast enough.
- 19:46:13 From Participant 10 : True, but Richmond has started moving in the right direction after decades of going the wrong direction.

19:46:19 From Participant 4: Toxic algal blooms become airborne in the heat and can kill us.

19:47:11 From Participant 30: While only a small percentage of homeowners may experience devastating total flooding, it is very important for Fairfax County to have property acquisition for floodprone properties as a tool in our toolbox, especially to have an established program that can act quickly after a flood, before folks invest a lot of money in remediation and rebuilding.

19:47:28 From Participant 8: What trees should we plant that wouldn't become fragile and become vulnerable to pests?

19:47:28 From Participant 4: OK, I just know I tried to get tree protection legislation passed through the state last January, and they're going to think about it.

19:48:38 From Debra perry : Part of the Resilient Fairfax Plan will address the areas where the County needs to advocate for change. The audit describes how Fairfax County is limited in its ability to influence transportation and energy infrastructure. We are identifying different ways for the County to work through regional collaboration and partnership and also strategies for amplifying the County's influence on those other aspects of infrastructure planning.

19:48:40 From Participant 8 : Educating the landscape companies to leave trees and not pull out saplings and mow less (so that saplings can grown and not be killed) would be helpful.

19:48:56 From Participant 4: Trees are no longer a big deal since we only have 10 years. The "new way" is biodiversity. Native shrubs, perennials, ground cover.

19:49:22 From Debra perry : Thanks Participant 8- we are always looking for ideas for specific audiences we need to engage!

19:49:25 From Participant 5: Education continues to be vital, so important for citizens to be educated and understand the issues and also critically important for Supervisors and their staffs to have the knowledge as they interact with constituents.

19:49:30 From Participant 21: We need to get rid of the Dillon rule in Virginia. Localities should be able to do what they need to do. Building codes are a good example. VA is way behind. Tree canopy is another area. Vienna has tried for years to get stronger tree canopy regs but the builders push back the the legislature caves.

19:50:31 From Debra perry : Thanks Participant 21- building codes are another area that we've identified as challenging because of the limitations on the County.

19:50:33 From Participant 4: "Pocket forests"... a few trees, diverse shrubs, perennials, groundcover. NO MONOCULTURE. Current movement to remove all monoculture turf lawns.

- 19:51:39 From Participant 31: Can you talk about overlap between DC, MD, VA, where communal challenges spill over into Fairfax County?
- 19:51:44 From Participant 5: Again, all of these Natural area strategies are important and needed, and we need everyone to understand the importance
- 19:52:04 From Participant 8: Truly difficult for me to answer these polls since I'm not an expert. Really want to choose what is the most effective.
- 19:52:49 From Participant 13: I made a choice on this one but they all seem pretty good, glad to know the county is considering all of them.
- 19:52:51 From Participant 4: There are several key people in Fairfax County that are anti nature based solutions because they don't want deer to come into the area. They say "only trees." But trees can't grow fast enough.
- 19:53:18 From Participant 32: Which give the most results for the cost?
- 19:53:31 From Participant 6 : Matt, when you say you are working with Planning and Zoning, does this mean your office is actively involved in a staffing process, that is, do you sign off on changes in technical bulletins, operating procedures, etc, or do you simply attempt to stay aware? Is it a structured coordination process, and what if you disagree with a policy can you stop it, change it...or are you simply a coordinator?
- 19:53:39 From Participant 12: incentives for residents to plant trees or increase permeability?
- 19:54:09 From Participant 31: Great, Allison, thank you!
- 19:55:51 From Participant 4: Plant Nova Natives is a great grass roots organization
- 19:56:38 From Participant 30: Also, it is absolutely essential to consider how the effects of climate change will affect people who are not "in the room" this evening.

A small step - please consider ensuring that all flood education materials are provided in English and Spanish with additional information available in other languages.

This year I noticed that less print information was provided in the floodplain mailing but a link was provided via QR code to the main content. In my outreach experience, QR codes are great for some people but a barrier for others. They are harder for folks who are less technologically inclined.

- 19:56:46 From Participant 5: There was a comment about NOT endorsing monoculture.....so true. All landscapers who work in the county should be educated concerning

the impact of their work, such as monoculture and the benefits of native plantings, pollinator plants, etc.

19:57:48 From Participant 13: On tree canopy and tree plantings, a fuller tree canopy benefits the community as a whole but an individual tree that's a part of that canopy could be a risk to the home it's next to...so, maybe a program to incentivize keeping trees or planting them to offset the potential loss and risk of a tree falling down on a house in a big storm.

20:00:11 From Participant 29: On our HOA's common property, we had invasive species (English Ivy) killing mature trees. So we have started an invasive species removal project. We also have issues with trees near homes, so we have an arborist walk our property annually to check on tree health. The arborist has also been able to treat trees that have initial signs of infestation but could still be saved. This is good bang for the buck

20:00:22 From Participant 13: Is the increase in crime associated with warmer temperatures seen more in the winter or the summer?

20:00:48 From Participant 33: Is it my understanding that there is going to be a map that will show areas more prone to flooding?

20:01:03 From Participant 8: Can we put a tax on sales of invasive? Like English ivy..

20:01:06 From Julia Nassar : Participant 13, studies have shown an increase in rate of crime in the summer

20:01:17 From Participant 13: Thanks Julia

20:01:22 From Julia Nassar : Participant 33, Allison will preview the climate viewer shortly

20:01:29 From Allison Homer : Hi Participant 33- yes, I'll be showing the map after the discussion. (It's a work in progress, but we'll provide a preview)!

20:02:16 From Participant 33: follow-up - any thoughts to the negative impact on home values by posting such a map?

20:02:35 From Allison Homer : Great question! Yes, for that reason, we've blurred out specific properties

20:05:50 From Participant 5: For the Residents poll, again! a balance of all of these excellent and needed strategies!!!

20:06:38 From Participant 13: Policy changes to me could include changes to land use policy, zoning, percentage of land covered by parking lot

20:06:45 From Participant 4: I didn't see anything about lightning. With each 1°C increase, there will be 20% more lightning strikes. Lightning strikes are how most forest fires

start. There are 100 lightning strikes around globe every second, 1 million strikes per day. That was before we went above 1°C. So now there are 120 lightning strikes per second. Most people who die from a lightning strike, die in a park. Our Fairfax County Parks should all have grounded buildings where people in a park can run to, if a storm rolls in.

20:06:48 From Participant 15: The lack of economic information limits the ability to make choices.

20:07:41 From Participant 13: good point, Participant 11

20:09:29 From Participant 18: Is the FC Department of Transportation (FCDOT) a part of your planning team? Or even VDOT?

20:09:52 From Participant 16 : The sprawling nature of Fairfax County makes services more expensive and vulnerable, so we should be supporting policy efforts to redevelop our core business areas with denser housing options (instead of being expanses of parking and wide six-lane roads) along with less car-dependent mobility choices. It would bring more tax dollars into our coffers to afford the expensive measures going forward.

20:10:10 From Allison Homer : Hi Participant 18- yes! FCDOT is one of the 20 members of our Planning Team. VDOT is on our Infrastructure Advisory Group

20:10:17 From Participant 4: Has everyone watched Kiss the Ground? It's on Netflix. Once everyone in the county watches this documentary, we'll all know what to do on the Nature Based side of things.

20:10:26 From Participant 29: Great point about cost effectiveness. I'm hoping that one of the results of this project will be materials that can help us make decisions about what projects can be the most cost-effective as homeowners

20:11:59 From Participant 30: Resident (and worker) vulnerability is so important to prioritize. Thank you for your work on the full suite of climate effects. Your work is very much appreciated.

20:15:25 From Participant 13: Thanks Matt

20:15:32 From Participant 5: thank you, Matt, really good to know your work is at the direction of the BOS

20:16:03 From Participant 13: I'm still skeptical, thinking it will turn out to be happy talk that lacks follow through, but I hope I'm wrong

20:17:55 From Participant 1 : The political will of our officials has always been for commercial development, so it will almost certainly devolve to local communities to do what they can as far as community disaster plans & specific mitigations of the mostly predictable problems of climate change.

- 20:18:56 From Participant 1 : Are these maps available to the public via the chat?
- 20:20:35 From Julia Nassar : Participant 1, the tool is currently still under development. Once complete, it will be publicly available.
- 20:21:11 From Debra perry : Participant 13, here is the good news... I'm hearing this conversation in communities around the country. You aren't alone and momentum is building. And the way that federal dollars are being directed is starting to really move the needle. There is reason for optimism.
- 20:21:25 From Participant 4: Participant 13, you're actually right. I've been super proactive, trying to get climate solutions implemented for nearly 3 years. My Supervisor is amazing, but there is always someone in the mix who blocks. Large corporations are their main priority.
- 20:22:36 From Participant 10 : This is awesome!
- 20:22:56 From Participant 34 : Hi, Participant 34, Williamsburg here
- 20:23:02 From Participant 4 : By "climate solutions" I mean nature based climate solutions.
- 20:23:46 From Participant 11 : Road closures to flooding could be added to the map
- 20:24:24 From Participant 4: Amazing maps. Super helpful.
- 20:24:30 From Participant 18 : The map is very informative. I can't wait for it to be released.
- 20:24:45 From Participant 13: I love the mapping project too, and providing the information to the public
- 20:25:07 From Participant 1 : FloodFactor.com
- 20:25:11 From Participant 18 : Did you have a map for "tree/shade coverage"?
- 20:25:17 From Participant 35 : I think tree canopy or land use layer would be a useful layer to compare your heat and flooding layer.
- 20:25:40 From Participant 4 : Agree, tree canopy is vital.
- 20:29:13 From Participant 11 : Fairfax County Tree Canopy and Impervious Surface Estimator is at
<https://fairfaxcountygis.maps.arcgis.com/apps/webappviewer/index.html?id=bd774594fdd5497a8098bc1613f56421>
- 20:31:06 From Participant 5: Staff and Constultants,

20:31:37 From Participant 31: Is Virginia or any governmental bodies in Virginia developing a statistic for economic vulnerability to climate change? For instance, Hampton Roads and Norfolk are extremely vulnerable to sea-level rise, and the number of jobs and Federal funding and military bases is well known, and can be quantified. Would Fairfax County ever want to look, say, at Old Town Alexandria, Springfield, Tysons Corner (McLean), Reston, through such a lense? This could help concentrate thinking. For instance, if Chambers of Commerce were invited to contribute the formulation of economic vulnerability indices, or commercial or residential real estate experts could quantify and estimate economic vulnerability to climate change, a useful tool could be developed. I recently learned by listening to Jeff McKay, Chairman of the Fairfax County Board of Supervisors, that 40% of Fairfax County's government revenues derives from real estate taxes.

20:31:44 From Participant 5 : Thank you for a great evening and lots of great information. Can't wait to hear more as things move along.

20:31:48 From Participant 5: Good night

20:32:40 From Participant 31: Great map, everyone! And terrific work you have done! Thank you for a great evening!

20:33:32 From Participant 36 : Often times when measures such as suggested, add costs to the development of new housing. Currently, affordable housing is very difficult to build in the county because of land and development costs. Since there is such a great need for affordable housing, will there be additional funds available to affordable housing development to offset the impact of these resiliency policies? Please encourage this.

20:34:19 From Julia Nassar : Thanks again, all, for such thoughtful feedback! Again, we have captured all questions and comments from the chat and our team will review carefully.

20:34:24 From Participant 4 : Thanks so much. Wonderful presentation.

20:34:28 From Participant 29 : Great meeting. Thank you all!

20:34:37 From Participant 13 : Thanks, good night

20:34:38 From Participant 32 : Thanks sounds like you're on the right track. This was interesting

20:34:42 From Participant 37 to Julia Nassar(Direct Message) : Wonderful presentation. Thank you.

20:34:43 From Participant 18: Thank you!

20:35:12 From Participant 38 : Great job Team Resilient Fairfax!