



Resilient Fairfax: Climate Adaptation and Resilience Plan
Infrastructure Advisory Group – Kickoff Meeting
April 30, 2021 | 1:00 PM | Via Microsoft Teams
Meeting Minutes

Attendees:

- Fairfax County Office of Environmental and Energy Coordination (OEEC) (Chair)
- American Society of Highway Engineers (ASHE)
- Columbia Gas
- Cox of Northern Virginia
- Dominion Energy
- Engineers & Surveyors Institute (ESI)
- Fairfax County Department of Public Works & Environmental Services (DPWES)
- Fairfax County Department of Transportation (FCDOT)
- Fairfax County Public Schools (FCPS)
- Fairfax Water
- Federal Emergency Management Agency (FEMA)
- Metropolitan Washington Council of Governments (MWCOG)
- National Association of Industrial & Office Properties (NAIOP)
- Northern Virginia Building Industry Association (NVBIA)
- Northern Virginia Regional Commission (NVRC)
- Northern Virginia Transit Authority (NVTA)
- United States Department of Defense (DOD) – US Army – Fort Belvoir
- Northern Virginia Electric Cooperative (NOVEC)
- Verizon
- Virginia Department of Conservation & Recreation (DCR)
- Virginia Department of Emergency Management (VDEM)
- Virginia Department of Environmental Quality (DEQ)
- Virginia Department of Transportation (VDOT)
- Washington Gas
- Washington Metropolitan Area Transit Authority (WMATA)
- WTS International

Unable to Attend:

- Comcast
- Transportation Advisory Commission

Meeting Start: 1:00 p.m.

I. Overview and Introductions (OEEC)

- a. OEEC provided opening comments on the purpose of the Resilient Fairfax initiative and why it is important for the county. Fairfax County has already seen climate effects such as increased storm severity, flooding, extreme heat. Some recent storms have cost millions of dollars each for rehabilitation of infrastructure.
- b. OEEC explained the purpose and background of Resilient Fairfax, which is to: study the projected climate effects in the County, identify where our vulnerabilities are given those projections, strategize to address those vulnerabilities together, and come up with an implementation plan. Collaboration between the county and utility managers is key to success.
- c. OEEC detailed key differences between CECAP and Resilient Fairfax. CECAP focuses on reducing the County's emissions that contribute to climate change. Resilient Fairfax focuses on enhancing the County's adaptation and resilience to the impacts of climate change. Resilient Fairfax was previously known as "Climate Adaptation and Resilience Plan" (or CARP). "Climate Adaptation and Resilience Plan" will remain the subtitle of the plan with "Resilient Fairfax" as the primary name.
- d. OEEC provided an overview of key players assisting with Resilient Fairfax.
 1. Project Management team: OEEC Staff
 2. Consultant Team: Cadmus, WSP, and NSpireGreen
 3. Planning Team: County Departments
 4. Infrastructure Advisory Group: Utilities, authorities, transportation commissions, building groups, and local, regional, state, and federal infrastructure partners
 5. Community Advisory Group: Residents of each Supervisor District, advocacy organizations, non-profit groups, and entities representing populations most exposed or vulnerable to climate effects.
- e. A round of introductions was conducted, including OEEC Project Management staff members, Consultant team members, and Infrastructure Advisory Group (IAG) members.

II. IAG Charter Overview (OEEC)

OEEC provided an overview of the Infrastructure Advisory Group (IAG) Charter, including the following points:

- a. The purpose of the IAG is to ensure that the strategies developed through the Resilient Fairfax process are aligned with the data, experiences, and needs of those who manage infrastructure in the county.
- b. Primary responsibilities include: review and technical feedback of major deliverables, coordination among partners, and sharing of best practices.
- c. There will be a total of 4 IAG meetings over the Resilient Fairfax planning period. Meetings may be divided into smaller breakout sessions as needed to discuss specific types of infrastructure.
- d. Between meetings, IAG members will provide reviews of deliverables and responses to PM Team questions to ensure accuracy in both technical details and process between meetings

- e. IAG advises OEEC, not the Board of Supervisors. The IAG is not an official board, authority, or commission, and there is no formal voting. Statements made during IAG meetings are not binding, with a goal of facilitating productive discussion so that the County can have a complete understanding of needs and how best to help enhance the resilience of our infrastructure.
- f. IAG meetings are not open to the public due to the potentially sensitive and security-oriented nature of information (vulnerable infrastructure). However, meeting summaries will be posted to OEEC's website to maintain process transparency.

III. Walkthrough of Scope of Work (Cadmus)

OEEC's primary consultant, Cadmus, provided an overview of Resilient Fairfax's scope of work.

- a. There are 4 main tasks between now and June 2022:
 - i. Task 1: Project initiation, establishing advisory groups and developing charter documents
 - ii. Task 2: Climate projections, climate risk and vulnerability assessment, audit of County's programs/plans/policies
 - iii. Task 3: Developing adaptation and resiliency strategies and an implementation roadmap based on task 2 findings
 - iv. Task 4: Developing the final plan and outreach materials
- b. Task 1 and Task 2 activities are currently ongoing.
- c. The IAG's role includes partner coordination, providing information and data, and review of deliverables based on technical expertise.

IV. Example of Ongoing Resilience Activities #1 (WMATA)

IAG member WMATA served as a "guest speaker" to provide an example of ongoing resiliency planning activities being done by IAG members. WMATA has already seen climate hazard issues, such as flooding of the underground metro stations. WMATA is conducting a resiliency plan that runs concurrently with Resilient Fairfax. WMATA's goal is to support the region with future transit resiliency moving forward. WMATA's resiliency planning effort will review industry best practices, opportunities and gaps in the region, and models commonly used and best data available.

V. Example of Ongoing Resilience Activities #2: (NVRC)

IAG member NVRC served as a second "guest speaker" to provide an example of ongoing resiliency planning activities being done by IAG members. NVRC provided an overview of their current and relevant activities to enhance resiliency in the region, including a list of reports, education/outreach programs, and technical assistance provided, among others. NVRC also discussed other related policies and initiatives: HB 981 (RGGI), HB 504 (Chesapeake Bay Preservation Act), EO-24 (Resilience Master Plan), SB 776 (shoreline erosion control), HB 1164 (add climate change to DEQ), HB 1313 (created "Chief Resilience Officer" position). NVRC wished to share the link to the NVRC climate and resiliency dashboard:

https://experience.arcgis.com/experience/d8319e3a2b5c42efa9dd241ddc0a0932/page/page_1/

VI. Infrastructure Advisory Group Input Requests: Ongoing Resilience Activities (Cadmus)

Following the example presentations, Cadmus led a discussion on whether other IAG members are conducting resiliency studies, programs, or other activities. The following topics were discussed:

- a. There is an inter-state commission on the Potomac River basin examining resiliency and interconnections between regional water systems.
- b. The Virginia Community Flood Preparedness Fund (CFPF) was established to provide support for regions and localities across Virginia to reduce the impacts of flooding.
- c. There is a Community Flood Preparedness Fund Grant/Loans program being developed at the state level. The manual is currently out for public comment.
- d. The Resilience Master Plan should be reviewed.
- e. The Metropolitan Washington Council of Governments (MWCOC) developed a Metropolitan Washington 2030 Climate and Energy Action Plan for the Metro-Washington region as a whole to prioritize resilience actions. The link was shared through the chat: <https://www.mwcog.org/documents/2020/11/18/metropolitan-washington-2030-climate-and-energy-action-plan/>
- f. The state's Virginia Environmental Excellence Program, Wastewater Management Program has an Environmental Management System (a voluntary program for facilities and organizations/agencies to calculate their carbon footprint and implement many sustainable energy and water related initiatives.
- g. Flood map updates are occurring. Preliminary flood map information as well as preliminary changes from the current flood map will be available early next week on FEMA Region III Mitigation Mapping and Data: <https://fema.maps.arcgis.com/apps/MapSeries/index.html?appid=f3bb86e451d74093a0bd46e4501aa9f1>

VII. Feedback on Methodology (Cadmus)

Cadmus asked for feedback or questions on the proposed Resilient Fairfax methodology. No verbal comments were received. In the chat box, there was mention of adopting the Envision certification as part of resiliency code.

VIII. Vulnerability & Risk Assessment Overview (WSP)

Subconsultant WSP led a discussion on the vulnerability and risk assessment methodology, including infrastructure sectors and subsectors being considered. The following items were discussed:

- i. High traffic roads and bridges are defined using ADT metrics.
- ii. For major communication lines, the types of lines considered depends on the data available. It would be good to include information pertinent to all lines (above and below ground) if possible. Even if we don't know the exact locations, we can generally discuss strategies to enhance resilience.
- iii. Transit and bus line data is reliant on GIS data, so we are anticipating some gaps. The assessment will consider vulnerable populations and the transportation lines that service them in particular and the infrastructure that would best help them.
- iv. It would be valuable to include priority telecommunications sites. If that data is available as a GIS layer, that would be helpful.
- v. For the energy sector, there was a recommendation to include CHP, large scale solar installations, back up energy systems at CI, battery storage, microgrids/district energy, and cooling centers.

- vi. For the water sector, there was a recommendation to include policies around perviousness, soil upgrades with disturbances, compaction, etc. to facilitate natural resolution of flooding issues.
- vii. There was a recommendation to include water reuse structures.
- viii. Waste to energy plants in the area should also be considered.
- ix. There was a recommendation to include data centers and IT infrastructure.
- x. Parks and open space will be incorporated through “natural infrastructure” sector.
- xi. There was a recommendation to add older housing specifically.
- xii. There was a recommendation to include bike & pedestrian infrastructure.

IX. Adaptation and Resilience Concerns for Infrastructure - Particular Events (WSP)

WSP led a discussion on specific infrastructure concerns. The following topics were discussed:

- a. Older communities in Fairfax County are more susceptible to flooding because they were developed before updated infrastructure policies were enacted. The older infrastructure does not meet today’s standards. The community often observes flooding in older neighborhoods and expresses the view that updated standards are needed, when in fact there *are* updated standards, but those updates do not retroactively ameliorate flooding in developments that are already completed. It would be valuable to assess how newer developments are faring in comparison, considering code and zoning ordinance revisions and how developments under our latest standards are projected to withstand future projections.
- b. There was a recommendation to add “ice” into list of problematic climate hazards, especially considering 2011 ice storms and wind impact on utilities.
- c. The power grid already practices drills in case of extreme temperatures stress grid load, to mitigate increasing risk of rolling blackouts. Electric companies are considering revising temperature threshold and incorporating impacts from long-term heat and cold conditions.
- d. There was a recommendation to add “Fires/Wildfires.” Wildfires have risen in the area.
- e. We need to consider the risks of staff working in dangerous conditions and what it takes to keep systems running to mitigate damages.
- f. Regarding consumer demand, the regional ICPRB study uses regression and multi parameter equations to predict water demand based on temperature and precipitation.
- g. For precipitation, the duration of conditions and other thresholds should also be considered. Severe storms with multiple inches in a very short time frame (less than 1 hour) are more damaging than storms that slowly drop higher amounts.
- h. DPWES and MWCOG can provide more information from past energy emergency exercises.

Meeting Adjourned: 3:00 p.m.