

# ENVIRONMENT FOR EVERYONE

*Environmental Sustainability  
and Resilience: the Natural  
Resources Chapter of the City's  
Comprehensive Plan*

*Adopted  
Month xx, 2019*

## **Introduction: Context and Vision**

### **Environmental Leadership**

The City of Falls Church considers environmental sustainability a community priority, and the 2040 Vision affirms that the City will strive to be a leader in sustainability. In many ways the City has matched or exceeded the accomplishments of jurisdictions many times its size, including: named first Tree City USA in Virginia and first Green Power Community in Virginia, recognized as a Community Wildlife Habitat, recognized as a SolSmart community, and achieved Platinum certification in the Virginia Municipal League Green Community Challenge. The City also often leads the state in recycling rates. These accomplishments are supported by hundreds of volunteers who contribute their time and energy to making the City a better place to live. They illustrate the community's longstanding commitment to environmental protection and improvement.

As the City continues to develop and adapt to change, its environmental goals must go beyond protecting and improving its natural resources. The City must also integrate green infrastructure into development to create a vibrant and healthy urban ecosystem which will enhance resilience and community quality of life.



**Figure 1: Tree canopy cover on commercial streets increases consumer traffic, commercial profitability and property values. It also provides shade, cooling, air pollution control, stormwater management and a host of other environmental benefits.**



Figure 2: Community involvement and education are essential to the City's environmental protection and enhancement.

## Environment is Everywhere – Scope of the Chapter

This chapter of the comprehensive plan addresses:

- Climate change mitigation and adaptation: air quality, greenhouse gas emissions, energy, green buildings, sustainability and resilience
- Water: water resources, watersheds, floodplains and stormwater management
- Green infrastructure: the built environment and urban forest, including open space, streamside plantings and rain gardens, green roofs, and habitat
- Waste management: industrial, construction, commercial and residential solid waste

It also incorporates goals related to other chapters of the Comprehensive Plan such as transportation (Mobility for all Modes)

and parks and open spaces (Parks for the People). Although it does not explicitly address economic and social sustainability and resilience, environmental goals and initiatives strengthen and reinforce both concepts.

## Adapting to Change – Population Growth

Falls Church is a small community in which increasing population and significant land redevelopment drive vibrant growth. Between now and 2040, the City's population is expected to increase by 44 percent (Weldon Cooper Center for Public Service). Increased population can mean increased transportation needs and associated increases in noise, air, and water pollution. Managing waste generation is also a significant challenge. Solid waste (trash) management brings heavy truck traffic into the City.

## Adapting to Change - Redevelopment

Between 2000 and 2015, commercial area redevelopment and retrofits affected a total of 34 acres, about 2.3 acres per year<sup>1</sup>. In addition, more than 187.2 acres of commercial land have been identified as possible redevelopment sites.

Redevelopment within the City also impacts residential areas. For the five-year period of 2013 to 2017, 129 single-family homes were

---

<sup>1</sup> Memo "Pace of redevelopment" January 17, 2017 from Paul Stoddard and Shelley Mastran to Chair Wodiska and Members of the Planning Commission.

constructed, affecting an estimated 5.5 acres of land per year<sup>2</sup>. An estimated 2,000 homes in the City are worth less than the land on which they are located, a situation that provides an incentive for redevelopment.

Redevelopment is a welcome process economically, but land disturbance affects soils, vegetation, and water management. Failure to plan for the preservation and integration of green space in redeveloped areas can result in the loss of tree canopy and its many environmental benefits; increased stormwater runoff and associated water pollution; and loss of wildlife habitat and native plants.

### Adapting to Change - Climate

In addition to the changes within the City, there are ongoing changes outside its boundary. It is important to plan for and protect against the negative impacts of these changes, especially climate change. Gradually increasing average temperatures, higher temperature extremes, increased precipitation, and more frequent and severe storm events are anticipated. The City must do what it can to mitigate its impacts on climate through reduced greenhouse gas emissions. The City must also consider strategies to enhance its adaptability and resiliency through the construction of more energy efficient, environmentally integrated, and sustainable buildings.

---

<sup>2</sup> Assuming a conforming lot size larger than R-1B (7,500 sq ft) and smaller R-1A (11,250 sq ft).



Figure 3: Planning for climate change means doing our best to prepare for the worst.



Figure 4: The use of green infrastructure for stormwater management in development can make the area more attractive and commercially valuable.



Figure 5: Farmers Market pop-up.



Figure 6: Community Meeting.

## Community Engagement

The actions of City government and community members have a great influence upon the quality of the environment in Falls Church. The City should provide opportunities for its citizens to be active and involved in environmental stewardship. There are numerous ways for people to become engaged in environmental issues. These include serving on the Environmental Sustainability Council (ESC) or Village Preservation and Improvement Society (VPIS), helping with neighborhood tree planting, volunteering in the battery recycling program, participating in community clean-up events or neighborhood tree mulching, removing invasive weeds and restoring habitat, or assisting with recycling and hazardous waste collection.

The City can provide environmental forums to enhance citizens' knowledge about the local environment as well as information on how to access data, technical assistance, and other resources. The City can also encourage and support environmental education programs in City schools, such as Operation Earth Watch.



Figure 7: We all share responsibility for our future.

## Vision Statement – Environmental Leadership

*Increase the resiliency and environmental sustainability of the City by protecting, restoring, and enhancing the City’s natural resources; increasing the use of green infrastructure; reducing resource consumption and waste; and using the latest building techniques to minimize environmental impacts and enhance community quality of life.*

The following goals are based on the vision statement above:

- **Climate and Air:** Reduce emissions of greenhouse gases and other air pollutants by 20 percent by 2020 and 50 percent by 2050 to mitigate the City’s impact on climate change, reduce community exposure to harmful air pollution, and enhance livability.
- **Stormwater, Streams, and Natural Springs:** Protect the water resources of the City and the Chesapeake Bay from the adverse effects of pollution and climate change, reduce flooding, and improve water quality.
- **Urban Forest and Biodiversity:** Protect and enhance the network of trees, green spaces, and naturalized land on public and private property throughout the City, and the native plants and wildlife it supports. Integrate urban forestry goals across all City programs, projects, and efforts concerned with environmental sustainability and resilience issues.
- **Solid Waste:** Reduce solid waste to zero to eliminate the harmful pollution associated with waste disposal; and



Figure 8: Cherry Hill Park Volunteer Event



Figure 9: Cavalier Trail Planting Event

expand the City’s composting program to include 75

## Chapter Organization

The remainder of this chapter describes the existing conditions, needs, and planned changes to protect the City’s natural resources, while supporting environmental sustainability and resilience. Each of the goals is addressed in turn, although due to the overlap of environmental issues the chapter sections are interlinked.

## How to Use This Plan

The Comprehensive Plan serves as the City’s official policy guide for shaping the future of the City. It establishes priorities for environmental sustainability and resilience and its natural resources in planning efforts and projects. This chapter also recognizes that implementation must remain flexible to changing conditions and priorities. Therefore, this chapter should be used as a “living document.”

This chapter should be used as a framework for scheduling projects and documenting completed projects. The project locations and elements described in this chapter are conceptual. Specific location and design decisions are intended to be worked out on a project-by-project basis during implementation.

percent of residential properties.

Specific tasks in the Plan are scheduled in one of three time frames: short-term, medium term, and long term. Those terms refer to the following ranges:

Timeframe	Expected Completion
Short Term	2019 to 2021
Medium Term	2022 to 2024
Long Term	2025 or later

In addition to implementation timeframes, specific tasks also include cost estimates in both staff and dollar costs.

## Development Review

During development review, developers, staff, and boards and commissions should refer to the vision, goals, and strategies enumerated in this chapter as well as specific policies and projects. Additionally, implementation plans that are adopted pursuant to this chapter as well as any implementation plans that are included in the chapter by reference should also be considered. All of these referenced plans are part of the City’s Comprehensive Plan and should be used to guide development of the City. A list of these plans is included in Appendix A.

## Climate and Air

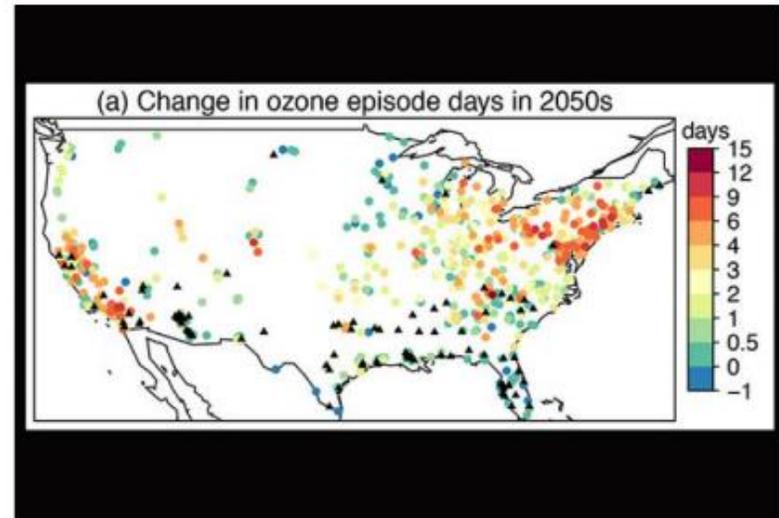
*Goal: Reduce emissions of greenhouse gases and other air pollutants by 20 percent by 2020 and 50 percent by 2050 to mitigate the City's impact on climate change, reduce community exposure to harmful air pollution, and enhance livability.*

Global climate change largely due to greenhouse gases (GHG) produced by human activities is causing extremes in weather. Increasing average temperatures, higher temperature extremes, increased precipitation, and more frequent and severe storm events are occurring and are predicted for the future in the D.C. metro region.

Air quality in the area has improved significantly in the past 30 years. All six pollutants regulated by the Clean Air Act (particulate matter, ground-level ozone, carbon monoxide, sulfur dioxide, nitrogen oxides, and lead) have shown a downward trend, and all but one pollutant, ground-level ozone, are below the federal health-based air quality standards. However, in July 2018 ground-level ozone pollution once again reached unhealthy air quality levels in metropolitan Washington, marking the first "Code Red" air day for the region since 2012.<sup>3</sup>

---

<sup>3</sup> Metropolitan Washington Council of Government, Gold Book and Air Quality Trends.



California, the Southwest, and the Northeast would be the most affected, each possibly experiencing up to nine additional days of dangerous ozone levels, with much of the rest of the country experiencing an average increase of 2.3 days.

Figure 10: The complex relationship between heat and ozone. Source: [News.Harvard.edu/gazette/story/2016.](https://news.harvard.edu/gazette/story/2016/)

## Existing Policies, Programs, and Projects

The City of Falls Church has an air pollution ordinance to preserve, protect, and improve its air resources.<sup>4</sup> The City has also adopted by resolution the regional greenhouse gas reduction goals established by the Metropolitan Washington Council of Governments (MWCOG).

## Intergovernmental Cooperation

The City is a member and active participant in collaborative intergovernmental networks internationally (Urban Sustainability

---

<sup>4</sup> City Code, Chapter 14.

Director's Network), nationally (Climate Mayors), regionally (MWCOG, Virginia Municipal League, Virginia Energy Purchasing Governmental Association) and locally (Northern Virginia Regional Commission). City Council members, Board and Commission members, and City staff participate in clean air and energy-related groups within these organizations.

## City Policies and Programs

**Energy Transition Subcommittee:** The Environmental Sustainability Council (ESC) has established an Energy Transition Subcommittee to guide energy policy and action programs. The subcommittee also addresses such issues as transportation and waste management as they relate to energy use and greenhouse gas emissions.

**EPA Green Power:** The City of Falls Church is an EPA Green Power Community and the City government itself is an EPA Green Power Partner. This program offsets two to three percent of the City's grid electricity through the purchase of renewable energy certificates.

**Green Building Policy:** The City has a green building policy for publicly owned non-school facilities, which aims for LEED Silver standards.

**Green Home Program:** This encourages single-family homeowners to build to certified sustainability standards. Falls Church has at least 36 certified green homes.

**Solarize Nova:** Since 2014, the City has participated in Solarize NOVA, a community outreach and purchase program which makes

solar photovoltaic (PV) panels easier and more affordable for homeowners and businesses to install. At least 25 homes and businesses in the City have solar installations, with a power generation capacity of more than 150kW. City permit procedures for solar installation have also been simplified.

**Low-Energy Lighting:** The City has replaced all its traffic signals and many of its streetlights with lower energy use light-emitting diode (LED) lighting. Light bulbs in City facilities are being replaced with LEDs.

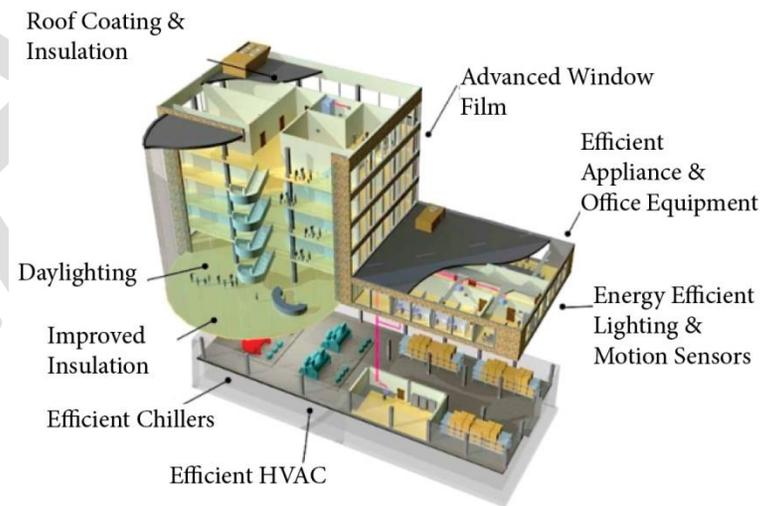


Figure 11. Energy efficiency measures in commercial and residential building construction and renovation reduce energy consumption and the need for energy generation.

## Evaluation of Needs

According to the latest City inventory, greenhouse gas emissions are primarily from two sectors: buildings (52 percent) and transportation (42 percent). These emissions pollute the air and contribute to the unhealthy urban heat island effect, which are marked by Code Red and Code Orange days.

Solid waste management and air conditioner refrigerant gas management may provide additional opportunities for reducing GHG emissions. Trees and plants can reduce pollution by lowering air and ground temperatures and absorbing some emissions.

The GHG emissions reduction goals established by MWCOG and adopted by the City are ambitious and cannot be achieved by any single action. However, the City can implement policies, programs, and projects that will contribute to their achievement.

City residents can decrease pollution generation and minimize the impact of daily activities on local air quality. Trees are an effective means to capture airborne pollutants, thus actions taken to preserve the City's urban forest will also help reduce local air pollution.

**Table 1. Summary of City of Falls Church GHG Emissions**

Year	Residential Buildings	Commercial Buildings	Transportation	All Other	Total	Emissions Per Capita	Total Percent Reduction from 2005 baseline	Per Capita Percent Reduction from 2005 baseline
2005	40,410	53,529	56,158	5,587	155,684	14.2	-	-
2012	34,224	42,456	65,088	8,353	150,121	12.2	3.6%	14.1%
2015	37,027	42,943	63,410	9,638	153,018	11.5	2%	19%

## Strategies

The following strategies shall guide the City's efforts to reduce emissions of greenhouse gases and other air pollutants:

1. Reduce energy consumption and increase energy efficiency.
2. Reduce the use of fossil fuels and encourage the production and use of renewable energy sources.
3. Maintain and protect mature tree canopy coverage (see Urban Forest and Biodiversity section of this chapter).
4. Actively promote use of, create incentives for, and provide infrastructure for electric vehicles.
5. Educate and engage the community on renewable technologies such as Solarize.

## Stormwater, Streams, and Natural Springs

Goal: *Protect the water resources of the City and the Chesapeake Bay from the adverse effects of pollution and climate change, reduce flooding, and improve water quality.*

Impervious surfaces such as buildings, roads, parking lots, and driveways cover an estimated 45 percent of City land. In contrast to trees and green spaces, impervious surfaces contribute to fast, high water flows that carry sediment and other pollutants into the storm drain system. From there the contaminated water flows directly to City streams and ultimately into the Potomac River and the Chesapeake Bay without treatment or filtration.

Stormwater volume must be managed, not only to prevent flooding within the City, but also to protect streams from erosion, which adds to the sediment pollutant loads of downstream waters. In compliance with Virginia's Watershed Implementation Plan for the Chesapeake Bay Total Maximum Daily Load, the City is required to reduce pollutant loads to its streams.

The City has plentiful springs. They're also vulnerable to pollution, e.g. from fertilizers, weed/pest control chemicals, and lawn and garden equipment, which contributes to degraded water quality.

### **Existing Policies, Programs and Projects**

**Stormwater Enterprise Fund:** In 2014, the City created a fund for stormwater management. Its revenues, generated by a fee based

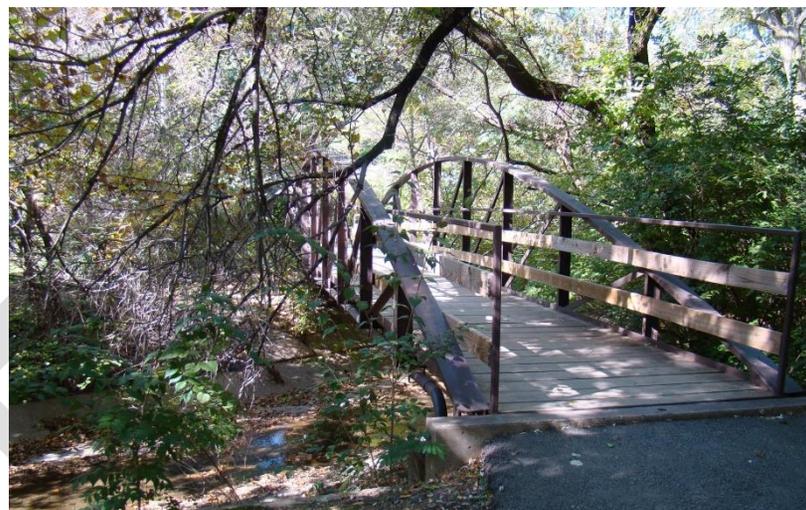


Figure 13: Tripps Run.

on impervious coverage, fund the stormwater program. Voluntary concessions have provided payments to the stormwater fund to plant vegetation within the Four Mile Run and Tripp's Run watersheds.

**Stormwater Ordinance:** The City has a stormwater ordinance (Chapter 35 of the municipal code) that ensures land is used, developed, and redeveloped in a manner that protects water quality. It prohibits illicit discharges and provides that adequate stormwater management and erosion and sediment control measures are taken before, during, and after land disturbance, development, and construction. The ordinance also limits the area of land disturbance to protect existing vegetation, which helps to prevent erosion. Through the redevelopment process, the City must meet the requirements of the latest Virginia Stormwater Act, which actually improves the City's stormwater management overall.

**Municipal Separate Storm Sewer System (MS4):** The Virginia Department of Environmental Quality requires the City to operate under a MS4 permit, which is used to minimize pollution discharged through the City’s stormwater system and ensure compliance with pollution reduction targets, specifically for nitrogen, phosphorus, and sediment pollution.

**Stormwater Detention and Filtration:** The City has installed and maintains stormwater detention and filtration systems as well as several raingardens in parks and on the streets.

**Operations:** The Operations Department has a four-person crew that inspects and maintains Stormwater Conveyance Infrastructure. Street sweeping conducted in five cycles per year collects between 200 and 250 tons of debris. Fall leaf collection also helps to keep excessive amounts of organic matter out of the drain system.

**Capital Improvement Program (CIP):** A program within the CIP has been established with local debt funding to allow rehabilitation and replacement of stormwater infrastructure. Seven million dollars are available from the year 2020 to 2024.

**RainSmart:** The City has contracted with the Village Preservation and Improvement Society to run RainSmart, an education, outreach and grant-funding program to support stormwater management on residential properties.

**Floodplain Districts:** These are defined and protected by the provisions of the Municipal Code (Chapter 48, Article IV, Division



Figure 14: TJ Elementary School Parking Lot Rain Garden.

14). The City participates in the National Flood Insurance Program and the associated Community Rating System Program.

**Chesapeake Bay Program:** The City participates in the Chesapeake Bay Program, which directs the restoration of the Chesapeake Bay. The City has identified and monitors development proposals in the Resource Protection Areas, which include 100-foot buffers on both sides of City streams and non-tidal wetlands. The City has also designated the rest of the City as Resource Management Areas, which are intended to manage development to protect water quality.

**Stream Restoration:** The City has restored several streams, including Coe Branch and Pearson Branch, and has identified others for future restoration and potential daylighting.

The City’s two main streams, Four Mile Run and Tripp’s Run, are partially channelized, eroded, polluted, and overgrown with invasive

species. Both streams need restoration. Large portions of Tripp's Run are underground and could be daylighted to provide environmental and community benefits.

## Evaluation of Needs

Capital maintenance is the greatest need of the City's existing stormwater conveyance system. Approximately 28 percent of the system is composed of corrugated metal piping, most of which has exceeded its service life. In many parts of the City, the system fails to adequately carry a two-year storm event (i.e., a storm with a 50 percent chance of occurring during any given year).

Additional CIP funding will be needed to meet the mandated Chesapeake Bay pollutant reduction targets. Compliance with state and federal mandates to reduce sediment, nitrogen, and phosphorus from stormwater runoff will be a challenge. Even if funding were available, there is insufficient public land available to construct the facilities needed to adequately manage the City's stormwater.

## Strategies

The following strategies shall guide the City's efforts to provide adequate flood control and the safe management of water runoff for the City's residents, and protect the water resources of the City and the Chesapeake Bay from the adverse effects of pollution and climate change.

1. Reduce stormwater flow.

2. Reduce pollution entering the stormwater system.
3. Protect the City's two main streams and other water resources.
4. Convert floodplain properties to protected areas and buffers.
5. Expand green spaces and develop greenways to connect them.
6. Monitor the Stormwater Utility Fee to support the Capital Improvement Program requests.
7. Convert floodplain properties to parks and buffer zones.
8. Educate and engage the community in water pollution reduction and the benefits of stormwater management; encourage participation in the RainSmart program and water monitoring opportunities.
9. Increase water-efficient landscaping on residential, commercial, and public properties.
10. Build infiltration and retention systems for flow control and pollution reduction where space is available.
11. Repair and rehabilitate stormwater conveyance infrastructure.

## Urban Forest and Biodiversity

*Goal: Protect and enhance the network of trees, green spaces and naturalized land on public and private property throughout the City, and the native plants and wildlife it supports. Integrate urban forestry goals across all City programs, projects, and efforts concerned with environmental sustainability and resilience issues.*

The urban forest—the network of trees and green spaces on public and private property throughout the City—is a critical part of the City’s economic and civic well-being. It provides many environmental benefits, including carbon capture, oxygen emission, filtration and capture of air pollution, reduced energy use through shading and shelter, stormwater flow management and filtration, improved soil condition, diverse wildlife habitat, beauty, and increased human health. The urban forest also contributes to real estate values and to the appeal and walkability of City business districts.



Figure 15: Crossman Park Habitat Restoration.

Falls Church has a 46 percent tree canopy cover based on 2013 data.<sup>5</sup> Native trees are still prevalent on public and private property throughout the City, providing a forest habitat for native wildlife. City-owned natural areas comprise about 20 acres, primarily in Crossman, Howard E. Herman, Cavalier Trail, and Cherry Hill Parks. Much of this land has been cleared of invasive species and replanted with native species.

### Existing Policies, Programs and Projects

**Tree City USA:** Falls Church was the first community in Virginia to celebrate Arbor Day and the first Tree City USA in the Commonwealth.

**Specimen Trees Program:** The City has about 50 Specimen Trees, which have special protection against damage or removal.

**Urban Forestry Staff:** The City has an Arborist and an Urban Forester, responsible for managing all City-owned trees and overseeing urban forest-related permits and enforcement.

**Urban Forestry Commission:** The City's five-member Urban Forestry Commission makes recommendations on relevant legislation, plans, policies, and programs. It also advises the City Arborist, City Council, and City Manager on tree-related matters.

**Tree Inventory:** The City has a complete inventory of City-owned or –regulated trees. The original dataset was generated in 2004, and

<sup>5</sup> “A Report on Greater Fairfax County’s Existing and Possible Tree Canopy,” Draft Report, University of Vermont Spatial Analysis Laboratory, 2013.

the tree inventory has been updated on a continual basis since 2015.

**Tree Ordinance:** The City's tree ordinance regulates tree removal and tree contractors. Single-family residential development requires preservation/replanting to achieve 20 percent canopy coverage within 10 years.

**Neighborhood Tree Program:** The City partners with the Village Preservation and Improvement Society on the Neighborhood Tree Program, to plant shade trees on private property within 15 feet public streets.

## Evaluation of Needs

The City needs to protect and expand its tree canopy coverage to ensure environmental sustainability and resiliency, City character, and adequate wildlife habitat. Although current coverage is relatively good, the pace of residential redevelopment is resulting in a loss of mature trees. Commercial and mixed-use development projects are not replacing all lost trees resulting in growing concerns for stormwater management and heat island effect as well as missed opportunities to create a unique sense of place in the City of Falls Church.

To improve its data collection and public-tree inventory, Falls Church needs to develop an Urban Forest Management Plan. The Plan is also necessary for the City to define and enforce standards of care for the urban forest and prioritize urban forestry staff resources and goals.

## Strategies

The following strategies shall guide the City's efforts to protect and enhance the network of trees, green spaces, and naturalized land on public and private property and the native plants and wildlife they support.

1. Protect the City's tree canopy cover and increase overall tree coverage to 50 percent.
2. Restore and protect the natural vegetation in stream corridors and other natural areas.
3. Preserve mature trees during residential redevelopment.
4. Implement green space requirements on all mixed use special exception projects.
5. Create attractively landscaped City entrances on streets and W&OD crossings.
6. Continue to expand space for tree plantings and stormwater control in public areas, through increased street trees, greenways, park space, or other green infrastructure.
7. Update and streamline City Code to address tree preservation requirements and processes.
8. Educate and engage the community in urban forestry and habitat protection.
9. Engage the community in tree planting, tree mulching, and removal of invasive species projects.
10. Increase street tree plantings.
11. Identify existing and potential community garden sites on public property and provide education on and incentives for urban agriculture.

## Solid Waste

*Goal: Reduce solid waste to zero to eliminate the harmful pollution associated with waste disposal; and expand the City's composting program to include 75 percent of residential properties.*

One of the key tenets of sustainability is the reduction of solid waste. The call to “reduce, reuse, and recycle” is a motto for the City to live by. Achieving zero waste will contribute to a reduction of materials that might be stored or dumped on land and in streams, or incinerated, all of which is harmful to the environment.

### Existing Policies, Programs and Projects

**Commercial Waste Removal:** The City has a contract with a commercial waste hauling company to pick up trash and recycling and deliver them to the appropriate destinations. Approximately 3,027 homes are serviced, removing 38 tons of trash and 27 tons of recycling each week. City year-round yard waste collection picks up about 450 tons per year.

**High Recycling Rate:** City homeowners often achieve the highest recycling rates in Virginia. Municipal solid waste quantities have been stable since 2010, when the City implemented a multi-tiered pricing system for household solid waste and yard waste.

**Mixed-Use Recycling:** Recyclable materials from the City are delivered to a mixed-use recycling facility for sorting and resale. A recycling app, RecycleCoach, provides waste disposal information customized for City residents.



Figure 16: Recycling Center.

**Composting Program:** City comprehensive composting program, which includes City-subsidized curbside compost pick-up, a drop-off facility and classes in backyard composting, is the first of its kind in Virginia.

**Recycling Center:** The City has a recycling center to drop off metal, glass, plastics, mixed cardboard and paper and used textile goods.

**Community Clean-Up Days:** The City conducts two annual Community Clean-up Days and one household Hazardous Waste and Recycling Extravaganza.

**Equipment and Supply Purchase:** The City participates with other governments in the auction of unwanted equipment and supplies.

## Evaluation of Needs

The City's current leaf-storage site will be lost with redevelopment of the schools property, and new mechanisms for dealing with collected leaves and wood waste will need to be explored.

## Strategies

The following strategies shall guide the City's efforts to reduce solid waste to zero:

1. Create a community environmental network and provide more public education about the importance of "Reduce-Reuse-Recycle."
2. Provide solid waste management to businesses and multi-family dwellings, and educate business or building owners about the importance of solid waste management.
3. Educate and engage the community in the benefits of recycling and solid waste reduction with the goal of zero waste.
4. Encourage the community to participate in the battery recycling program and the recycling of hazardous wastes.

## Planned Policy Actions

Proposed Action	Staffing and Funding Needs
<p><b>Establish a Green Building Policy for private development and redevelopment in the City</b>            To the extent permitted by Virginia law, establish a clear policy and incentive program for commercial and residential development and redevelopment in the City such that developers, builders and property owners meet sustainability standards for energy use reduction and energy efficiency. The policy should include incentives for stormwater runoff reduction practices, provisions for contributions to the Stormwater Fund when tree or planting requirements cannot be met; and requirements for waste management during construction and operation.</p>	
<p><b>Strengthen the City's Green Building Policy for publicly owned facilities</b> to achieve higher required standards for sustainability in construction and renovation.</p>	
<p><b>Establish a green purchasing policy</b> that includes replacement of the existing fleet with electric vehicles, use of electric powered maintenance equipment, and recyclable products of all kinds; and prioritizes energy efficiency and low emissions in HVAC systems, lighting, and emergency generators.</p>	
<p><b>Develop a climate risk assessment and a climate resilience plan for the City</b>, building on the</p>	

Climate Risk Assessment of the Northern Virginia Regional Commission, <sup>6</sup> to better understand the risks to the City from climate change.	
<b>Implement a Commercial Property Assessed Clean Energy (CPACE) program</b> to lower the cost of financing energy improvements for private building owners.	
<b>Update the Stormwater Management Plan</b> to reflect changing requirements and the possible effects of climate change.	
<b>Update the Chesapeake Bay Preservation Ordinance</b> to meet state requirements.	
<b>Develop a green infrastructure plan</b> that identifies opportunities to install trees and low-impact design features across the City.	
<b>Provide incentives for increasing green space in business districts</b> as redevelopment occurs.	
<b>Develop a standard tree maintenance agreement</b> for non-residential properties.	
<b>Incorporate stronger stormwater goals into the City's development regulations</b> , including special exceptions, site plans, subdivision plans and grading plans.	
<b>Conduct a cost/benefit analysis on installing CCTV</b> for the entire stormwater system.	
<b>Establish a program to acquire floodplain property or easements</b> , whether through a fund or transfer of development rights, so that such properties could be converted to wetlands.	
<b>Develop an Urban Forest and Biodiversity Management Plan</b> to include short-term and long-term tree-canopy goals and a native plant	

<sup>6</sup>Northern Virginia Regional Commission, *Climate Resiliency in the Metropolitan Washington Region*, November 2016.

and sustainable landscaping policy for public lands.	
<b>Expand the tree canopy fund</b> of payments in lieu of plantings to include commercial properties.	
<b>Create a standard street tree maintenance agreement</b> with non-residential property owners.	
<b>Develop a zero-waste plan</b> , which may include zero-waste goals in the special exception process.	
<b>Develop new mechanisms to deal with collected leaves and wood waste.</b>	

DRAFT

## Planned Programs and Projects

Proposed Action	Staffing and Funding Needs
<b>Install solar energy facilities</b> on City buildings and schools, perhaps by using Power Purchase Agreements.	
<b>Expand the number of charging stations</b> in the City to encourage the use of electric vehicles.	
<b>Purchase renewable energy</b> to offset local emissions, including the possibility of investing with other jurisdictions in solar farms (Large Off-site Renewable Energy).	
<b>Implement incentives and education programs for public facility employees</b> on energy conservation and sustainability practices.	
<b>Provide energy-efficiency incentives</b> to residents and businesses, e.g., through Energy Performance Contracting.	
<b>Conduct a series of workshops</b> that promote renewable technologies.	
<b>Educate and engage the community about urban forestry</b> using social media, local newspaper, the City's website, and brochures.	
<b>Restore Four Mile Run and Tripp's Run.</b>	
<b>Create a right-of-way and easement ownership data set</b> to support maintenance and planting decisions.	
<b>Initiate an urban agriculture program.</b>	

### **Policy Action and Project Priorities**

This Plan sets out a long-term vision for the City’s environmental resources and resiliency. Some of the policy actions and projects will be decades in the making. The section details the priorities of different projects to ensure the City addresses the highest priority needs first. The priorities are split into three levels – short term, medium term, and long term. Policy and project priorities were determined through the public engagement process and by estimating staffing and funding availability.

### **Developing Priorities**

These priorities reflect the interests expressed during the planning process. Many channels of input were utilized, including community meetings, a web survey, work sessions with City Boards and Commissions, and new releases in the Falls Church News Press.

### **Flexibility and Opportunities**

This timeframe serves as a guide for implementation, but is also flexible and responsive to opportunities. For example, private development projects, new grant programs, and new partnerships

all provide opportunities to advance projects. The City should pursue these opportunities even if it means advancing something outside the schedule shown here.

### **Funding Limitations**

The total project costs required to implement this plan are significant. Many of these projects will not be feasible without cost sharing, such as joint ventures between jurisdictions, public/private partnerships, and grant funding. This priority schedule assumes that cost sharing for capital projects is required.

### **Plan is a Guide, Not a Budget**

As noted in the previous paragraphs, the City needs to remain flexible and respond to opportunities. Also, current funding levels are insufficient to accomplish all of the projects identified in this plan. Therefore, this plan provides guidance on which policies and projects to pursue. It is not a budget document that commits the City to funding these efforts.

### **Short-Term Policies and Projects (2019-2021)**

Action	Policy	Project	Estimated Costs	Completion Date


**Mid-Term Policies and Projects (2022-2024)**

Action	Policy	Project	Estimated Costs	Completion Date

DRAFT

**Long-Term Policies and Projects (2025 or Later)**

Action	Policy	Project	Estimated Costs	Completion Date

DRAFT

## **Appendix A: Related Plans**

The City's Comprehensive Plan is a family of documents. The Comprehensive Plan includes specific elements, like this chapter on parks, recreation and open space. It also includes specific functional plans. The table below is a list of the plans that inform this chapter of the Comprehensive Plan.

<b>Planning Document</b>	<b>Adoption Year</b>
North Washington Street Small Area Plan	2012
South Washington Street Small Area Plan	2013
Mobility for All Modes, Transportation Chapter of Comprehensive Plan	2014
Downtown Small Area Plan	2014
Parks for People, Parks and Recreation Chapter of Comprehensive Plan	2015
Watershed Management Plan	2015
Bicycle Master Plan	2015
West Broad Street Small Area Plan	2016

**Appendix B: Natural Resource Base**

DRAFT

## Appendix C: Planning Process and Public Engagement

This chapter was developed with significant public input and collaboration. Regular announcements regarding the planning effort were posted to the City’s eFocus tool, on the City’s website, and in *The Falls Church News-Press*. The plan was developed and refined with community input during the public meetings listed in table to the right.

Information outreach was conducted using the following tools:

- Announcements about community meetings using
  - eFocus , the City’s electronic newsletter
  - City website homepage
  - City’s Facebook account
  - City’s Twitter account
  - *Falls Church News-Press*
- Regular updates of project status and materials on the project webpage

<b>Date</b>	<b>Groups</b>	<b>Event</b>
May 7, 2018	Planning Commission (PC)	Project Launch
May 16, 2108	Tree Commission (TC)	Regular meeting
May 17, 2018	Environmental Sustainability Council (ESC)	Regular meeting
June 18, 2018	City Council (CC)	Work session
June/July 2018	CC, PC, TC, ESC	Draft distribution
August 2018	General Public	Community Meeting
August/September 2018	Other events	Farmers Market
May 2019	Boards and Commissions	
June 2019	General Public	Community Meeting; Public

		Survey
July 2019	Final review with PC, ESC & TC	
July2019	PC action; CC action	

DRAFT

**Bibliography**

DRAFT