

Phase II – Master Document

Please make all revisions to Phase II recommendations in this document.

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Introduction to the Phase II Update

As you proceed through this document, please keep the following in mind:

A Note About Short Term Action Items:

Short Term Action Items marked with an asterisk (*) were included in the Phase I Update adopted by City Council on October 13, 2018, and therefore not open to further edits.

Time Frames:

Action Items are sectioned into short-, mid-, and long-term goals. The following defines the fiscal years (FY) associated with each section:

Short-term: 2019 through 2023

Mid-term: 2024 through 2028

Long-term: 2029 and beyond

DRAFT

1. Energy

Renewable Energy

Goal	Transition Alexandria community to 100 percent clean energy to mitigate Alexandria's contribution to climate change.
Target	Transition all applicable Alexandria government facilities to 100 electricity and offset this electrical energy use by 100 percent renewable energy.

Short Term Actions*

1. By FY2020, increase Renewable Energy Certificate (REC) purchases to offset 100 percent of electrical energy use by City government facilities. This temporary measure is phased down as direct purchasing¹ and onsite generation represent an increasing share of the City's electrical energy supply over time.
Cost Estimate: \$100,000 per year
Cost Breakdown: Approximately \$58,500 has been committed in FY2019 to achieve approximately 60 percent offset of electricity use. Costs will vary slightly year over year to accommodate net changes in electrical energy use from energy efficiency implementation, weather influences, and operational changes.
1. By FY2021, develop a renewable energy supply strategy to evaluate the risks, benefits, feasibility, optimal mix and timing of potential renewable energy supply implementation pathways considering the City's current and future energy use demands. Should beneficial direct purchase or other opportunities become available before the strategy is complete, the City should conduct appropriate due diligence to prudently evaluate and consider implementation.
Cost Estimate: \$100,000
Cost Breakdown: \$50,000 - \$100,000, depending on the quality and rigor of analysis.
2. By FY2023, ensure that direct purchasing of offsite renewable electrical energy accounts for at least 50 percent of electrical energy use at all City-operated facilities.

¹ Direct purchasing includes wholesale transactions such as an offsite purchase power agreement (PPA), voluntary purchases via a utility-run green tariff program, or other methods that can demonstrate regional additionality.

REC purchases and onsite renewable electrical energy generation will make up the remainder, to achieve a 100 percent renewable energy supply.

Cost Estimate: \$3,500,000

Cost Breakdown: Capital cost (consulting, contracting and procurement, acquisition, installation, etc.) is estimated to be approximately \$3,500,000 for implementation of 50 percent electrical energy offset from a direct purchasing opportunity, 5 percent implementation of feasible on-site renewable energy installation opportunities, and the balance through RECs. Both direct purchasing opportunities and feasible on-site renewable energy installations have high potential to result in cost savings to the City, with the highest savings potential resulting from installation of on-site renewable energy followed by direct purchasing opportunities. An estimated 95 percent of the capital cost associated with this action is attributed to the installation of on-site renewable energy opportunities. Optimal mix, savings estimates, and purchasing strategies will be identified from Short Term Action Item 2.

Mid Term Actions

1. By 2024, develop an electrification and renewable energy supply transition plan for City's non-electricity energy use to identify strategies for conversion of natural gas and other fossil fuel use in City facilities and operations supported by renewable energy supply.

Cost Estimate: \$xx/year

Cost Breakdown: xxx

2. By 2028, ensure that renewable electrical energy, accounts for at least 80 percent of electrical energy use at all City-operated facilities and is from a regional source which contributes to the growth of renewable energy available in the region. Onsite renewable electricity generation, and REC purchases, will make up the remainder, to achieve a 100 percent renewable electrical energy supply.

Cost Estimate: \$xx/year

Cost Breakdown: xxx

Long Term Actions

1. Implement electrification of all City **non-electricity energy use** (City facilities, operations, and vehicles).

Cost Estimate: \$xx/year

Cost Breakdown: xxx

2. Ensure that onsite renewable electricity energy generation and direct purchasing of offsite renewable electrical energy, that is both from a regional source and adds to the supply of renewable energy available, accounts for 100 percent of electrical energy use at all City-operated facilities.

Cost Estimate: \$xx/year
Cost Breakdown: xxx

Legislative Priorities

1. Establish aggressive and mandatory requirements for renewables in the state's overall energy mix, including implementation of a mandatory Virginia Renewable Portfolio Standard (RPS) with a focus on in-state solar renewable energy credit (SREC) markets.
2. Encourage expansion of net-metering options for local governments to include aggregate or virtual net metering, allowing local government entities to install solar facilities of up to 5 MW on government-owned property and use the electricity for schools or other government-owned buildings located on nearby property, even if not contiguous.
3. Support development of distributed generation and net-metering rate structures that provide fair retail value of solar and renewable energy electricity generation for all surplus electricity generated and added to the grid, including value of emissions reductions, resiliency, and related benefits.

Justification

4. By FY2020, offsetting 100 percent of electricity use can be accomplished through the purchase of RECs.

Accountable Parties

General Services (primary); Transportation and Environmental Services

Energy Efficiency

Goal Accelerate implementation of all feasible energy efficiency and emission reduction measures for City-owned buildings and infrastructure, and City-affiliated transportation.

Target TBD

5. Major City renovations that are more than 25 percent of the building space or 25 percent of the building value, affect building components and equipment, and impact the energy performance of a building or building system should be replaced with better-than-code options where practicable. Update facility asset condition auditing process and Facility Condition Index (FCI) rating (or similar) methodology and process to reflect facility energy and sustainability performance. In addition, include energy audits, portfolio energy optimization, and similar evaluation processes into the facility asset condition auditing process. Develop and utilize a portfolio-wide energy model to identify and develop a portfolio-wide energy optimization investment plan as part of a broader energy supply transition planning effort, as recommended in the Renewable Energy section.

Cost Estimate: \$200,000 per year

Cost Breakdown: Estimated \$150,000 – \$200,000 per year funding plus staff resources to development a portfolio-wide energy optimization investment plan independent or as part of a broader energy supply transition planning effort as recommended in the Renewable Energy section.

6. By FY2021, initiate electric passenger vehicle pilot programs for DASH, Alexandria City Public Schools, and the City vehicle fleet to evaluate costs, benefits, technical feasibility, and implementation opportunities to transition City fleet vehicles to electric vehicle technology, and install vehicle charging infrastructure at City facilities.²

Cost Estimate: \$150,000 per year

Cost Breakdown: A small-scale pilot of City passenger vehicles may be accomplished with \$100,000 – \$150,000 for vehicle acquisition.

7. By FY2021, complete retrofits of 75 percent of all City facilities' practicable conventional lighting with light-emitting diode (LED) lighting and by FY2023 retrofit 95 percent of practicable streetlights and outdoor lighting to LED technology, subject to the availability of a suitable, safe LED solution and zoning constraints.

² Pilot programs for DASH and ACPS would be subject to approval by the applicable boards.

Cost Estimate: Total estimated cost to retrofit practicable lighting is about \$7,800,000 – \$9,300,000. Retrofit 75 percent of all remaining practicable City facilities’ and operations (i.e. parks, area lighting, parking lots, etc.) conventional lighting roughly estimated to be an additional \$4,000,000 – \$5,500,000 over current funding. Retrofitting 100 percent of practicable streetlights is estimated to be about \$3,800,000 (\$1,800,000 for conventional basic roadway and traditional streetlighting, and about \$2,000,000 for Gadsby streetlighting).

Cost Breakdown: Lighting retrofits for all City facilities will be dependent on future City Capital Improvement Project (CIP) funding and staffing allocated to lighting retrofits. Not all existing lighting is amenable for retrofit, either financially or technically. Funding to retrofit parks and outdoor lighting is limited or not currently specified in the City’s CIP. Retrofitting 75 percent of remaining practicable conventional lighting will result in operating budget savings to the City, as will retrofitting 95 percent of practicable streetlights. Retrofitting practicable conventional lighting at City facilities and operations is estimated to be a simple payback range of approximately 3 – 8 years. The estimated simple payback of retrofitting 100 percent of practicable streetlights is approximately 4 – 7 years. The requested City CIP only specifies funding to support converting 95 percent of streetlights by the end of FY2023. The Gadsbys make up 840 of ~10,000 lights and are custom poles and fixtures are planned to be completed in FY2027. FY2023 recommendation is not coordinated with the practicable considerations of negotiation and funds will come through the normal budget process.

Mid Term Actions

1. Implement energy efficiency strategies in City facilities and operations to reduce energy use by, at minimum, 35% over 2018 use.

Cost Estimate: \$xx/year

Cost Breakdown: xxx

2. Implement electrification of, at minimum, 30% of applicable non-electric passenger City fleet vehicles consistent with Fleet Replacement Plan criteria and scheduled replacement timing.

Cost Estimate: \$xx/year

Cost Breakdown: xxx

Long Term Actions

1. Implement energy efficiency strategies in City facilities and operations to reduce energy use by, at minimum, 50% over 2018 use.

Cost Estimate: \$xx/year

Cost Breakdown: xxx

1. ~~Implement electrification of all non-electric City vehicle fleet. Provide necessary electric vehicle charging infrastructure at City facility locations.~~ Implement electrification of all non-electric City vehicle fleets and include **ACPS, DASH, Rapid Transit Routes, heavy duty equipment and vehicles**. Provide necessary electric vehicle charging infrastructure at City facility locations.

2.

Cost Estimate: \$xx/year

Cost Breakdown: One-time expenditure of \$50,000 for evaluation of solid waste vehicles. (does not include staff time). The funds will be used for consultant studies

Legislative Priorities

8. Provide financial incentives to local governments, state agencies, and private owners of conventional roadway, street, and outdoor lighting to convert to dark-skies compliant LED technologies.
9. Commission a new energy efficiency potential study to assess the scale, availability, and cost of energy efficiency as an economic, resiliency, and generation resource in the Commonwealth of Virginia.
10. Direct the Virginia Department of Mines, Minerals, and Energy (DMME), State Corporation Commission (SCC), Virginia Department of Environmental Quality (DEQ), utility companies, and relevant stakeholders to pursue strategic partnerships with Virginia local governments to identify electric vehicle charging infrastructure needs, coordinate deployment of public electric vehicle charging infrastructure, and incentivize transition of personal-occupancy vehicles to electric vehicle technologies.

Justification

11. Emphasizing energy efficiency as the 'first fuel' to address energy use and greenhouse gas (GHG) reductions to meet our reduction goals.

Accountable Parties

General Services (primary); Code Administration; Transportation and Environmental Services

Community Energy Use

Goal	Reduce greenhouse gas (GHG) emissions associated with community energy consumption in support of the City's global GHG emissions reduction goals.
Target	Reduce greenhouse gas (GHG) emissions by 80 percent below 2005 levels by 2050.

Short Term Actions

12. By FY2019, expand participation in state-level policy and regulatory activities relevant to identifying and creating opportunities to reduce GHG emissions associated with community energy use. This should include lobbying for bills that would expand renewable energy purchasing by the community or utility, advocating for the state of Virginia to join the Regional Greenhouse Gas Initiative (RGGI), setting a Renewable Portfolio Standard for electricity generation, and granting Alexandria authority to undertake energy and transportation initiatives to reduce GHG emissions that are currently prohibited by state law. This should also include intervening in regulatory dockets related to the composition of the utility generation supply mix, utility energy efficiency programs, or utility rates.

Cost Estimate: One full-time employee (FTE) at \$200,000 per year

Cost Breakdown: Depending on the necessary expertise and level of involvement, efforts may require external support including specialized legal counsel or technical experts. Based on past intervention efforts, these costs may range from an estimated \$50,000 - \$500,000 per year.

13. By FY2020, adopt an ordinance implementing a Commercial Property Assessed Clean Energy (C-PACE) program to support sustainable economic development opportunities.

Cost Estimate: \$450,000

Cost Breakdown: Assumes operation by external administrator. Estimate 75 percent for program implementation and 25 percent ongoing program operation. One full-time equivalent (FTE) at \$200,000 per year. The one FTE net time could be allocated accordingly to other programs. Additional one-time start-up costs estimated to be about \$100,000 - 200,000 for legal counsel, engagement, systems implementation, etc. Recurring operation costs would largely be borne by the administrator and fees charged to participants but estimate contingency of \$25,000 - \$50,000 for any necessary legal counsel or administrative consulting expenditures, etc., which could be included in remittances by external administrator. Do not

include costs of recordation or similar costs as the lending volume would not require significant impacts to existing recordation staffing.

14. By FY2020, develop a community electric vehicle charging infrastructure strategy.

Cost Estimate: \$100,000

Cost Breakdown: Consultant engagement and strategy development are estimated to be about \$75,000 - \$100,000.

Mid Term Actions

Develop a Community energy model to track energy use and greenhouse gas reductions by various energy efficiency and renewable energy programs offered by the City and other partner organizations to evaluate cost effectiveness and provide supporting information to optimize community energy use. The community energy model should reflect electrification transition from fossil fuels to electricity of private buildings and developments, changes and electrification in community vehicle use and mobility alternatives, and renewable energy supply implementation

Cost Estimate: \$xx/year

Cost Breakdown: xxx

Long Term Actions

1. Implement policies and programs to support a full suite of community energy efficiency programs, building electrification, transition from fossil fuels, and community renewable energy supply.

Cost Estimate: \$xx/year

Cost Breakdown: xxx

2. Implement actions outlined in Electric Vehicle Charging Infrastructure strategy and support the implementation of a publicly-accessible electric vehicle charging infrastructure supported by renewable energy supply.

Cost Estimate: \$xx/year

Cost Breakdown: xxx

Legislative Priorities

15. Offer state-wide rebates for energy efficient building systems equipment, including lighting, HVAC, hot water, and related systems for all customer classes with primary support for residential customers.

16. Direct the Virginia Department of Mines, Minerals, and Energy (DMME), State Corporation Commission (SCC), Virginia Department of Environmental Quality

(DEQ), utility companies, and relevant stakeholders to pursue strategic partnerships with Virginia local governments to identify electric vehicle charging infrastructure needs, coordinate deployment of public electric vehicle charging infrastructure, and incentivize transition of personal-occupancy vehicles to electric vehicle technologies.

17. Provide increased outreach, implementation assistance, start-up financial resources to local governments to implement Commercial Property Assessed Clean Energy (C-PACE) programs.
18. Prioritize and support legislation to authorize localities to establish mandatory benchmarking and disclosure programs.
19. Increase stringency of energy efficiency building codes; including adoption of most recent International Energy Conservation Code (IECC) and International Green Construction Code (IGCC).

Justification

20. The results of additional community energy policies and programs continue to reduce GHG emissions by 3 percent beyond current efforts to reduce per capita GHG emissions in Alexandria to 10 metric tons per capita per year by FY2022.

Accountable Parties

General Services (primary); Transportation and Environmental Services

2. Climate Change

Goal

Goal Increase the City's preparedness to respond to the effects of climate change and environmental emergencies.

Target

Short-Term Actions

21. By FY2021, establish a multidisciplinary task force to guide an update of the Energy and Climate Change Action Plan. The Plan will include recommendations for specific policies and programs, each with funding strategies, to achieve emissions reductions targets through: improvements in energy efficiency for both new and existing buildings; increasing of renewable energy production and availability for city residents; working to curtail consumption of fossil fuels; engaging Alexandria residents and businesses emissions reducing actions; and, identifying opportunities for climate adaptation policies and practices.

Cost Estimate: \$305,000

Cost Breakdown: \$150,000 is for consultant services to propose recommendations for policies and programs and \$155,000 is for staff (1 FTE) to support a new task force.

22. By FY2020, engage the community through a robust education and outreach campaign to inform Alexandria residents and businesses how to adopt emission reducing strategies and practices, solicit community recommendations, and provide opportunities to participate in the City's commitment to reduce GHG emissions and address climate change.

Cost Estimate: \$20,000 per year

Cost Breakdown: This includes outreach events and a sustained marketing push.

23. By FY2022, determine appropriate policies and guidelines for estimating projected GHG impacts, this includes identifying the types of projects and programs likely to have a significant impact on community-wide GHG emissions and resolving how to consider GHG emissions impacts alongside other city priorities when evaluating options, then calculate costs of programs and projects marked for GHG emissions assessments.

Cost Estimate: N/A

Cost Breakdown: Total annual costs are dependent on the number of projects per year that meet the guidelines (to be developed), but process

will require one to three percent of project costs to estimate the GHG emissions.

Mid Term Actions

1. By FY2024, complete climate vulnerability assessment. Include discussion about:
 - a. Infrastructure
 - b. Community (community resiliency, heat island effect, etc.)
 - c. Systems (food system resiliency/vulnerability)
2. By FY2026, update Energy and Climate Action Plan to evaluate the benefits, feasibility, optimal mix and timing of implementation of policies and programs to support community energy efficiency programs, electrification transition from fossil fuels to electricity of private buildings and developments, and potential renewable energy supply implementation pathways.
Cost Estimate: \$xx/year
Cost Breakdown: xxx
3. Update the City's Emergency Management Plan (CEMP) and COOP plans to include infrastructure resiliency. Provide and/or identify infrastructure in the city for emergency response to environmental emergencies such as shelter planning, potable water, and local emergency power planning.
4. By FY????, divest City pension funds from fossil fuel companies
5. Participate in state-level policy and regulatory activities relevant to identifying and creating opportunities to reduce GHG emissions associated with community energy use, and climate adaptation and resiliency.

Long-term Action

1. Dedicate funding for energy and climate change action plan actions, and include climate action measures in City financial and service decision making

Cost Estimate: \$xx/year
Cost Breakdown: xxx

Legislative Priorities

1. By 2024, annually include and prioritize items in the city's legislative agenda for the state legislature to enable the city to carry out programs and policies for meeting its greenhouse gas emissions reduction targets and climate preparation goals.

Justification

24. The goal, target and short-term actions are consistent with the Metropolitan Washington Council of Governments (MWCOG) Regional Climate and Energy Action Plan³, align with the Paris Agreement⁴, and reinforce our identity as an environmental policy leader by progressing towards our commitment of achieving an 80 percent reduction GHG emissions by 2050.
25. Engagement of the community is essential to reducing the 96 percent emissions generated by the community and the four percent by city operations.
26. Climate adaptation is covered in sections of small area plans for waterfront and other water resource efforts.

Accountable Parties

General Services (primary); Transportation and Environmental Services (secondary); City Manager; Management and Budget; Planning and Zoning

³ MWCOG, Regional Climate and Energy Action Plan, p.24. goo.gl/GmDkzh

⁴ 382 US Climate Mayors commit to adopt, honor and uphold Paris Climate Agreement goals. <http://climatemayors.org/actions/paris-climate-agreement/>

3. Green Building

Goal Optimize the economic, environmental, and social performance of new and existing buildings in the City of Alexandria.

Target By FY2019, the Green Building Policy will set expectations for how both new and existing buildings should contribute toward achieving the goals for GHG emissions, water use, and stormwater runoff reduction established in the EAP, and by FY2020 will set forth a path for new city-owned buildings to meet a net zero energy standard.

Short Term Actions

1. Review the effectiveness of the current Green Building Policy and update the Policy in FY2019 with a focus on sustainable strategies that have the greatest impact toward achieving targets across EAP principle areas. The Task Force deliberations will inform the medium and long-term EAP actions for Green Buildings. Through this process, with support of third-party consultant analysis, the update will consider topics such as:
 - a. Increasing LEED or equivalent third-party green building certification standards for private development;
 - b. Establishing a separate green building standard, which includes evaluating the feasibility of a net zero standard where applicable, for new public development, including schools in collaboration with ACPS;
 - c. Establishing incentives for private development participation in green building certifications, to achieve the quantifiable goals for GHG emissions and water use and stormwater runoff reduction established in the EAP;
 - d. Prioritizing specific green building elements;
 - e. Introducing mandatory and/or voluntary green building practices for existing buildings (including historic) and for small buildings not subject to site plan review;
 - f. Instituting a building performance monitoring program;

- g. The City's ability to be more ambitious than the private sector in meeting green building goals to serve as a sustainability leader, and
- h. Establishing a Green Zone in the City.

As part of this process, a Green Building Policy Update Task Force will be established by City Council. The Task Force, with critical input from the EPC and the development community, will determine the actual topics to be analyzed by the consultant.

Cost Estimate: \$75,000

Cost Breakdown: The funds will be used for consultant studies on policy analysis on a cost analysis. Does not include staff time.

- 2. By FY2020, evaluate additional sustainable features to incorporate into the "Building Section" of the standard development conditions for the Development Site Plans (DSP) and Development Special Use Permits (DSUP) that will contribute toward achieving targets across EAP principle areas.

Cost Estimate: N/A

Cost Breakdown: Existing staff resources

Mid Term Actions

The Green Building Policy update launched in July 2018. A Task Force was established by City Council in September 2018 with seats appointed by the City Manager that include representation from technical and environmental experts and industry professionals. The Task Force will prioritize green building strategies to be evaluated for effectiveness toward achieving the City's environmental sustainability goals as set forth in the Environmental Action Plan. This evaluation will be completed by third-party consultants who will analyze the application of these green building methods and the associated costs within the City. The results of these evaluations will be considered by the Task Force for inclusion in the Green Building Policy update that will be considered by the Planning Commission and City Council in June 2019. Mid- and long-term actions for the Phase II Update of the Environmental Action Plan will be developed concurrently with the outcomes of these studies.

Long-term Action

See Mid Term Actions

Legislative Priorities

N/A

Justification

27. Climate change presents an existential threat to the future livability of Alexandria and the rest of the planet. Climate science has confirmed that GHG emissions must be rapidly eliminated to avoid a greater than 2°C increase in global average temperatures. Green building is an important instrument in reducing GHG emissions, potable water consumption, raw materials use, and waste output. Green Building also contributes to increased air quality, reduced storm water pollution, reduced energy demands, and economic sustainability.

Accountable Parties

Planning and Zoning (primary); Code Administration; General Services; Transportation and Environmental Services

4. Land Use and Open Space

Tree Canopy

Goal	Preserve and expand a healthy urban tree canopy.
Target	By FY2023, average overall tree canopy is a minimum of 40 percent. ⁵

Short Term Actions

28. Update and coordinate the Urban Forestry Master Plan, Environmental and Sustainability Management System (ESMS), and Landscape Guidelines in FY2019 to support increased tree preservation, expansion, maintenance, native species, and a revised tree canopy coverage goal.

Cost Estimate: \$40,000 per year

Cost Breakdown: \$30,000 - \$40,000 per year. \$30,000 for the yearly tree inventory study plus \$10,000 for the tree canopy survey scheduled for every three years. Existing staff resources are accounted for in current budget.

29. Enlist City partnerships (community groups) to provide education and outreach that support technical assistance and opportunities to increase native tree canopy coverage on private property.

Cost Estimate: N/A

Cost Breakdown: Existing staff resources are accounted for in current budget.

Mid Term Actions

1. Identify tools and techniques to maintain and enhance the City's waterfront viewsheds and public access points (*Note: waterfront in this sense means all water including streams, not just the Old Town Waterfront*)

Cost Estimate: \$xx/year

Cost Breakdown: xxx

⁵ City of Alexandria Urban Forestry Master Plan, approved 2009 and currently under revision

2. Seek open space opportunities in unconventional spaces:
 - a. Further evaluate the City's network of public alleys and define those most appropriate for use as trail and open space connectors.
 - b. Identify and map opportunities to re-purpose public rights-of-way to more active or protect open space
 - c. Map location and ownership of utility corridors to identify potential locations for a mutually beneficial shared use agreement

Cost Estimate: \$xx/year

Cost Breakdown: xxx

3. Protect and Preserve institutional Open Space by
 - a. pursuing easements for trails and/or ecosystem corridors through institutional space to connect with public open space
 - b. formalize process for public/private partnerships that maintain and enhance natural areas on institutional land

Cost Estimate: \$xx/year

Cost Breakdown: xxx

4. Develop a comprehensive Urban Forest Health Index rating system to determine the current and ongoing health and health needs of the Urban Forest in Alexandria. (To be used for management planning and goal setting)

Cost Estimate: \$xx/year

Cost Breakdown: xxx

5. Develop a Public Tree Planting Program that supports the planting of trees on private property. Commit funding to establish the program and support an ongoing program. (This will help increase the canopy coverage).

Cost Estimate: \$xx/year

Cost Breakdown: xxx

Legislative Priorities

1. Advocate for state legislation that would enable the City to expand tree protection and preservation and to increase tree canopy requirements.

Justification

30. A healthy and diverse urban forest canopy coverage in Alexandria provides a broad range of environmental and social benefits such as reduced GHG emissions, improved air quality, enhanced property values, stormwater and flood mitigation, public health benefits, and vibrant public spaces. The reduction of GHG emissions improves air quality and contributes to health and wellness.

Accountable Parties

Recreation, Parks and Cultural Activities (primary); Planning and Zoning

DRAFT

Open Space

- Goal** Increase open space quantity and improve the environmental quality, management, and social benefits of open space.
- Target** Maintain the ratio of 7.3 acres of publicly accessible open space per 1,000 residents.⁶

Short Term Actions

1. Protect and add open space through acquisition, preservation, and conservation as prescribed in the Open Space Master Plan (updated 2017) and by FY2023, evaluate increasing the target to 7.5 acres per 1,000 residents. This includes, by 2020, City Council will reestablish the open space steering committee to re-assess the methodology, evaluate, and prioritize potential open space sites. Tools to be considered for open space preservation or restoration will include purchase, easements, or repurposing land as funds can be made available, development occurs, or partnerships can facilitate.
Cost Estimate: N/A
Cost Breakdown: Existing staff resources. The action is dependent on the development envisioned in small area plans, including city investments, developer contributions, and private philanthropic contributions.
2. By FY2023, increase the percentage of acres of public natural lands that are actively managed, including restoration and invasive species removal, by 50 percent (450 acres).
Cost Estimate: N/A
Cost Breakdown: Existing staff resources
3. By FY2020, evaluate and update, using a public process, the requirements of open space on residential, commercial and mixed-use private development. Issues to be addressed include how to achieve meaningful and publicly accessible open space, particularly at the ground level, how to value developer contributions to off-site open space, how to minimize impervious surfaces, how to align vegetation requirements with canopy and native species goals described in Chapter 4.A.1. above; and, how to ensure consistency of open space requirements across similar zones.
Cost Estimate: N/A
Cost Breakdown: Existing staff resources

⁶ City of Alexandria Open Space Master Plan, approved 2003 and updated 2017

Short Term Actions (NEW)

1. City Staff is scheduling a series of three public discussions with the Planning Commission to thoroughly examine the issues of open space provided through private development. The first discussion in the series will provide a review of the open space provided in private developments through the DSP or DSUP process over the last ten years; review the zoning ordinance to discuss its terminology, consistency, and implications for development, and; analyze open space in the City across a transect (or spectrum) of development density, time period of development, and other factors. The second discussion in the series will investigate issues such as those identified in the Environmental Action Plan (EAP) Phase I Update, including visibility/accessibility of open space in private development; the provision of rooftop open space, impervious cover, and; discuss differentiators that make a successful open space. The third and final discussion in the series will cover future policies or practices that may be considered for improvement, such as the definitions of open space; categorization or open space typologies; utilization of supplemental review criteria such as addressing the visibility/accessibility of open space, and; the consideration of the use of contributions for projects that fall short of requirements. The final discussion is not intended to finalize policies, but rather establish the next steps required to address such changes. Mid- and long-term EAP Open Space actions that expand upon the EAP Phase I Open Space short-term action #3 will be developed concurrently with this study.

Cost Estimate:

Cost Breakdown:

Mid Term Actions

2. See Short Term Action Item (New)

Cost Estimate: \$xx/year

Cost Breakdown: xxx

Long-term Action

3. See Short Term Action Item (New)

Cost Estimate: \$xx/year

Cost Breakdown: xxx

Legislative Priorities

N/A

Justification

1. Open space, natural spaces and tree canopy provide physical, mental and community benefits, while offering opportunities for social interaction and the

conservation of natural resources and biodiversity. Public open space equitably encourages healthy choices and active lifestyles for the City's diverse population.

2. Reduces GHG emissions and improves air quality by encouraging development density around mass transit centers as mandated in the City Master Plan.

Accountable Parties

Recreation, Parks and Cultural Activities (primary); Planning and Zoning

DRAFT

5. Solid Waste

Recycle

Goal	Recover resources and reduce GHG emissions and other forms of pollution by optimizing and safely handling the collection and processing of solid waste.
Target	Establish a GHG emissions baseline for the collection and processing of solid waste in FY2019, measure emissions at least annually, and reduce the emissions rate by at least 12 percent by FY2023.

Short Term Actions

1. In FY2020, install special containers for only glass at all recycling drop-off centers to improve the recyclability of glass. In FY2021, if no environmentally and economically justifiable alternative has been identified for recycling glass placed in the single stream, begin to phase out glass from single stream recycling and temporarily reset the City's recycling goal accordingly.
Cost Estimate: \$70,000 per year for glass drop-off centers.
Cost Breakdown: Estimate includes containers, plus labor for collection, processing, and administrative fees.
2. In FY2019, launch a "Recycle Right" education campaign to promote and define recycling best practices with a focus on reducing recyclables contamination, discouraging the disposal of recyclables inside plastic bags, and maximizing the reduction in GHG emissions.
Cost Estimate: \$80,000 per year
Cost Breakdown: Will be built on the existing recycling campaign. Annual fee will be for program administration.
3. By FY2020, conduct a Route Optimization Study to perform a review of the current truck routing, mileage, staffing levels, homes served per route and tonnages of trash collected. Ensure that routes are performed in the most efficient, economical manner, and maximize the reduction in GHG emissions.
Cost Estimate: One-time expenditure of \$100,000 (does not include staff time)
Cost Breakdown: Maximum of \$100,000. The funds will be used for consultant studies.
4. By FY2021, review and update the City's recycling ordinance to reflect changes in the global recycling market and to prioritize recycling practices that maximize the reduction in GHG emissions.

Cost Estimate: One-time expenditure of \$14,400

Cost Breakdown: Includes staff time (320 hours over a two-month period)

5. By FY2020, the City's food waste composting program result in a net reduction in GHG emissions.

Cost Estimate: Existing staff resources are accounted for in current budget.

Cost Breakdown:

Mid-Term Actions

3. Implement a How to Sort search tool on the Resource Recovery website as well as a collection notification tool to help reduce missed collections.

Cost Estimate: Annual expenditure of \$10,000 - \$15,000 (does not include staff time. Estimates are from 2018).

Cost Breakdown: Software costs.

4. Evaluate public space trash and recycling bins and make recommendations on optimizing routes and other operational changes.

Cost Estimate: One-time expenditure of \$75,000 (does not include staff time. Estimates are from 2018).

Cost Breakdown: The funds will be used for consultant studies.

Long-Term Actions

1. Evaluate organics processing market readiness and feasibility of curbside organics collection.

Cost Estimate: One-time expenditure of \$75,000 - \$100,000 (does not include staff time. Estimates are from 2018).

Cost Breakdown: The funds will be used for consultant studies.

2. Complete a regional comprehensive alternative disposal study. Evaluate long-term end disposal options, knowing that significant time will be needed for any potential planning and implementation.

Cost Estimate: One-time expenditure of \$75,000 - \$150,000 (does not include staff time. Estimates are from 2018).

Cost Breakdown: The funds will be used for consultant studies.

Legislative Priorities

N/A.

Justification

5. Improve the quality of collected recyclables in response to more restrictive global recycling markets.
6. The Recycle Right campaign will include outreach and education program in ACPS facilities.
7. These recommendations go a long way to meeting GHG emission reductions.

Accountable Parties

Transportation and Environmental Services (primary)

DRAFT

Reduce

Goal Reduce total solid waste collected City-served residential customers.

Target By FY2023, reduce the total solid waste per household collected city-served residential customers by five percent as compared with a baseline of CY2018.

Short Term Actions

8. In FY2019, develop a reuse (consign), donate, repair online directory including the District of Columbia, Maryland, and Virginia to encourage residents and businesses to prevent waste and reuse existing materials.

Cost Estimate: Existing staff resources are accounted for in current budget.

Cost Breakdown: Includes 20 hours staff time in development and 10 hours staff time for integrating the directory online.

31. By FY2021, evaluate and make a recommendation to Council on whether to initiate variable-rate pricing for solid waste collection services to reduce waste and provide greater economic equity for residents.

Cost Estimate: One-time expenditure of \$100,000 (does not include staff time).

Cost Breakdown: The funds will be used for consultant studies.

32. By FY2020, pilot a Share-A-Bag program to encourage residents to use reusable bags over disposable plastic bags.

Cost Estimate: \$3,000 per year

Cost Breakdown: 20 hours in staff time in program development, materials, and community outreach.

Mid Term Actions

1. Support building material reduce, reuse and recovery through working with regional partners to keep the [Builders Recycling Guide](#) up-to-date and share resources to commercial developers.

Cost Estimate:

Cost Breakdown:

Long Term Actions

1. Work with surrounding jurisdictions to develop and implement a regional approach to reducing plastic waste.

Cost Estimate:

Cost Breakdown:

2. Establish sustainable purchasing guidelines to include for recycled content.

Cost Estimate:

Cost Breakdown: Purchasing guidelines would be coordinated with all city departments.

Legislative Priorities

9. In FY2019, support the development of a legislative proposal in consultation with neighboring jurisdictions and include it in the annual budget priority package to Richmond that would authorize the City to enact a deposit program for glass containers (i.e., a “bottle bill”) and to control the sale of disposable plastic bags (i.e., “bag law” or “plastic bag tax”).

Justification

10. Reducing waste and reusing is the most effective way to save natural resources, protect the environment, and reduce costs. Reducing waste also supports the goal of reducing greenhouse gas emissions as it reduces the amount of waste that needs to be sent to disposal facilities as well as preventing the need to harvest new raw resources. These actions provide opportunities for reuse prior to entering the waste stream and leverage regional resources and expand relationships with regional partners, agencies, and improve outreach to residents and local businesses.

Accountable Parties

Transportation and Environmental Services (primary); Parks, Recreation, and Cultural Activities; Purchasing

6. Water Resources

Enhancement and Restoration

Goal Maintain and enhance stormwater and stream systems to minimize environmental degradation in pursuit of achieving the Clean Water Act goal of fishable and swimmable waterbodies.

Target Achieve the 100% pollutant reduction required by the Chesapeake Bay Total Maximum Daily Load by FY2025.

Short Term Actions

33. Exceed the required Chesapeake Bay Total Maximum Daily Load (TMDL) reductions in nitrogen, phosphorus and sediment mandated for each MS4 5-year permit cycle per the strategies in the Chesapeake Bay Action Plan.
- a. Exceed 35% reductions during the 2018 – 2023 MS4 permit to include design and construction of the Ben Brenman / Cameron Station Pond Retrofit and the Lucky Run Stream Restoration.

Cost Estimate: \$6.1M

Cost Breakdown: \$4.2M to fund the design and construction of the Ben Brenman Pond Retrofit. \$1.9M to fund the design and construction of Lucky Run Stream Restoration. Staff time and effort is not included in this cost. Does not include staff time and effort in developing the Phase 2 Bay TMDL Action Plan.

34. Update the Sanitary Sewer Master Plan to provide for future development and redevelopment consistent with Small Area Plans and incorporation of the Combined Sewer Long Term Control Plan.

Cost Estimate: \$100,000

Cost Breakdown:

35. Develop the framework for and implement a formal and enhanced FOG program (Fats Oils and Grease).

Cost Estimate: Initial cost \$100,000 and then \$200,000/year

Cost Breakdown:

Mid Term Actions

11. Achieve at least 100% total of the pollution reduction targets for nitrogen, phosphorous and sediment through the development and implementation of the Chesapeake Bay TMDL Phase 3 Action Plan by FY2028.

Cost Estimate: \$6.1M

Cost Breakdown: Approximately \$1.6M planned for Strawberry Run Stream Restoration design and construction and approximately \$4.5M for Taylor Run Stream Restoration design and construction, which were identified in the Phase III Stream Restoration study. Staff time and effort is not included in this cost. Does not include staff time and effort in developing the Phase 3 Bay TMDL Action Plan.

36. Begin construction of priority outfall rehabilitation for the Dora Kelly Nature Center outfall into Holmes Run identified in the Phase III Stream Assessment and Outfall Rehabilitation Study by FY2024.

Cost Estimate: TBD

Cost Breakdown: Cost will be substantiated following development of the study.

Long Term Actions

12. Perform an analysis of the Stormwater Utility rate structure for adequate funding for program enhancement by FY2028.

Cost Estimate: Staff cost.

Cost Breakdown: Staff cost.

13. Implement projects necessary in the collection system and at wastewater treatment plant to accommodate long-term growth through careful planning.in accordance with Sanitary Sewer Master Plan

Cost Estimate: TBD

Cost Breakdown: TBD

Legislative Priorities

Expand the Virginia BMP Clearinghouse list of accepted stormwater quality Best Management Practices to provide localities greater flexibility for development and redevelopment projects, and overall to meet the Chesapeake Bay Total Maximum Daily Load (TMDL) cleanup mandates.

Justification

Protecting natural systems through investigation, prioritization and enhancement of the built environment protects natural resources, mitigates adverse impacts, and improves quality of life.

Accountable Parties

Transportation and Environmental Services

DRAFT

Water Resources

Stormwater Management

Goal Implement a comprehensive Stormwater Management Program to guide stormwater improvements within the City that enhance the quality of local waterways to include ecological, public health, social, and economic benefits, while mitigating the impacts of flooding. Promote, require, and invest in green infrastructure (stormwater pollution reduction infrastructure).

Target Improve water quality and reduce incidents of flooding.

Short Term Actions

14. Hire an environmental educator to create and implement a 'Stormwater 101' program to educate students about water quality, stormwater management and the environment; as well as other educational water quality programs by FY2021.

Cost Estimate: \$145,000/year

Cost Breakdown: \$120,000/year for FTE initially and increasing annually; \$25,000/initial year startup; with \$10,000/year thereafter for educational supplies.

37. Create a Green Infrastructure Plan that details the citywide approach as policy for implementation of green practices by 2019.

Cost Estimate: \$350,000

Cost Breakdown: Cost includes contractor policy development. Staff time and effort is not included in this cost.

38. Become a StormReady Community to better prepare for severe weather events through advanced planning, education, and awareness by FY2021.

Cost Estimate: TBD

Cost Breakdown: Cost will be substantiated with development of the action.

39. Develop a Drainage and Flooding Projects Prioritization to manage capital construction and repair by FY2020.

Cost Estimate: TBD

Cost Breakdown: TBD

Mid Term Actions

15. Create a Stormwater Master Plan as the citywide, watershed-based comprehensive approach to addressing water quality and quantity issues as part of the City's Master Plan. Strategies will include prioritization of efforts that increase the ecological, public health, social, economic benefits of waterways while mitigating the impacts of flooding and drainage issues.

Cost Estimate: \$700,000

Cost Breakdown: Plan will incorporate work done in other efforts, such as the updates to the Storm Sewer Capacity (\$475,000) and other efforts to create the plan (\$225,000).

40. Increase green infrastructure projects on public and private property by selecting priority projects for design and construction per the Green Infrastructure Plan beginning FY2024.

Cost Estimate: estimated \$750,000

Cost Breakdown: Estimated cost of identifying and prioritizing projects for further design and construction.

41. Construct priority projects based on the Drainage and Flooding Projects Prioritization beginning FY2027.

Cost Estimate: TBD

Cost Breakdown: Cost will be substantiated following development of the plan.

Long Term Actions

16. Increase green infrastructure projects on public and private property, through easements, by selecting new priority projects for design and construction found in the Green Infrastructure Plan, ensuring new projects include a mixture of differing types of practices and are installed in a variety of areas across the City beginning FY2028.

Cost Estimate: TBD

Cost Breakdown: Cost will be substantiated following development of the plan.

42. Identify existing proprietary stormwater management devices on City properties as candidates for green infrastructure retrofit opportunities beginning FY 2028.

Cost Estimate: TBD

Cost Breakdown: Cost will be substantiated following development of the plan.

43. Implement strategies and priority projects identified in the Stormwater Master Plan beginning FY2028.

Cost Estimate: TBD

Cost Breakdown: Cost will be substantiated following development of the plan.

Legislative Priorities

N/A

Justification

Comprehensive stormwater management improves water quality through practices that mimic natural hydrology, reduces incidents of flooding, and provides community co-benefits.

Accountable Parties

Transportation and Environmental Services

Water Resources

Combined Sewer System

Goal Eliminate the harmful impact of the combined sewer system in the long-term and minimize them in the short term by addressing all four outfalls.

Target

Short Term Actions

17. Continue to be proactive to implement the Area Reduction plan where feasible.

Cost Estimate: TBD

Cost Breakdown: TBD

18. Require developers of new buildings to build separate sanitary sewer and stormwater infrastructure as a condition of development approval in areas served by combined sewers.

Cost Estimate: TBD

Cost Breakdown: TBD

44. Focus water conservation outreach and homeowner incentives in areas served by both combined sewer systems and separate sanitary sewer system through incentives, disincentives (i.e., rebates, fees or taxes), and outreach to the general public.

Cost Estimate: \$25,000/year

Cost Breakdown: Annual cost of rebate program

Mid Term Actions

19. Work with Alexandria Renew in implementation of the Long-Term Control Plan that addresses all four combined sewer outfalls and minimizes combined sewer overflows by 2025

Cost Estimate: \$300,000,000

Cost Breakdown: TBD

45. Educate businesses that have intensive water use about retrofit opportunities and require upgrades to water recycling or other conservation technologies.

Cost Estimate: TBD

Cost Breakdown: TBD

46. Explore a reclaimed water reuse partnership between the City and Alexandria Renew in mid-term and further explore in long term, including evaluating the technical, regulatory, and economic feasibility for using reclaimed wastewater. Several City and commercial uses such as irrigation large landscaping sites, water for winter road or sidewalk brine solutions, commercial chemical landscaping applications and toilet flushing in new development.

Cost Estimate: \$100,000

Cost Breakdown: TBD

Long Term Actions

20. Continued monitoring of the performance of the Long-Term control plan.

Cost Estimate: TBD

Cost Breakdown: TBD

Legislative Priorities

N/A

Justification

Accountable Parties

Transportation and Environmental Services

7. Transportation

Prioritizing Low-carbon Mobility Options

Goal Aggressively promote vibrant, human-scale city streets that prioritize people’s access and mobility by incentivizing the use of low carbon-intensive modes of transportation, consistent with the following level of precedence: pedestrians, bicyclists, public transportation, shared motor vehicles, freight vehicles and private motor vehicles.

Target By 2023, reduce vehicle Miles Traveled (VMT) per capita by at least 1% per year.

Short Term Actions

3. By 2023, complete all engineering and education actions outlined in the 2017 Vision Zero Action Plan. These actions contribute to increase in safety and thus have an important potential to increase the number of pedestrian bicyclist and user of public transit using Alexandria’s streets.
 6. *Cost Estimate:* \$tbd
 7. *Cost Breakdown:*
- 8.
4. By 2023, Add 2 miles of bicycle facilities per year
 9. *Cost Estimate:* \$100,000-200,000
 10. *Cost Breakdown:*

Medium Term Actions

5. By 2028 complete the bicycle and pedestrian projects prioritized in the pedestrian & bicycle Chapters of the Urban Mobility Plan (formerly known as Transportation Master Plan)
 11. *Cost Estimate:* \$1-5 million
 12. *Cost Breakdown:*
6. By 2025, implement the 2017 walk audit recommendations for ALL schools
 13. *Cost Estimate:* \$20,000 – \$50,000
 14. *Cost Breakdown:*

Legislative Priorities

7. By 2023, Adopt regulation for shared mobility devices such as dockless bikes & electric scooters and other personal mobility devices.

8. By 2023, evaluate City Policy and administrative guidelines to improve safety outcomes and support and encourage statewide legislative efforts to implement stricter traffic safety laws as mandated by the 2017 Vision Zero Action Plan.

Justification

9. By incentivizing and regulating mobility options, short automobile trips can be replaced with other less carbon-intensive modes of transportation while maintaining safety and providing mobility and access. Furthermore, by increasing safety, on City streets, the share of walking and bicycling trips can increase moderately.

Accountable Parties

Transportation and Environmental Services

DRAFT

Reduce Automobile Dependency

- Goal** Continue to implement transportation strategies to reduce automobile dependency and inform individuals and employers on mobility options other than single-occupancy driving.
- Target** By 2023 increase the share of ALL trips taken by public transit, walking and biking by at least 15% based taking the 2018 Mobility Survey as a baseline.

Short Term Actions

10. By 2023, develop a stand-alone Transportation Demand Management (TDM) Chapter in the Alexandria Urban Mobility Plan (formerly the Transportation Master Plan).
15. *Cost Estimate:* \$50,000-\$80,000
16. *Cost Breakdown:* Currently, the City has received a \$340,000 grant to update several chapters of the 2008 Transportation Master Plan. The update will result in the development of the 2018 Alexandria Urban Mobility plan. The stand-alone TDM chapter will be developed under the Alexandria Mobility Plan.
11. By 2023, develop a TDM checklist to be utilized into the development review process in both commercial and residential developments. The objective of the checklist will be to incentivize the use of less carbon-intensive modes of transportation and present mobility options for residents and businesses.
17. *Cost Estimate:* \$20,000 - \$50,000
18. *Cost Breakdown:*
12. By 2023, increase the availability and dissemination of information about mobility options utilizing social media, real-time information outlets and other written and printed communication.
19. *Cost Estimate:* \$20,000 - \$100,000
20. *Cost Breakdown:*

Medium Term Actions

13. Encourage people who work in Alexandria to use sustainable mobility options by developing incentives and disincentives that discourage employee parking (e.g., eliminating monthly parking subsidies, prohibiting retail employees to park long term at parking meters and provide parking cash-outs).
21. *Cost Estimate:* \$1 – 5 million
22. *Cost Breakdown:*

23.

Legislative Priorities

1. Propose economic incentives and disincentives to nudge drivers to use more efficient modes of transportation including shared vehicles, public transit and walking and bicycling.

Justification

14. At the National level, approximately 25% of combustion-related GHG come from the road transportation sector. In the region such share can reach 40%. It is important to reduce automobile dependency in order to reduce GHGs that contribute to global warming and criteria pollutants that have been linked to negative health outcomes.

Accountable Parties

Transportation and Environmental Services

DRAFT

Improve, Expand and Integrate Public Transit Systems

Goal	Improve and expand Alexandria's public transit system so that integrates passenger rail and bus systems that are safe, equitable, efficient, accessible and reliable for all.
Target	By 2030, double the miles of dedicated bus infrastructure to at least 1.5 miles.

Short Term Actions

15. By 2023, Continue the development and deployment of transit information technologies in coordination with other regional service providers.
Cost Estimate: \$tbd
Cost Breakdown: tbd
- 24.
16. By 2023, finalize construction of the Potomac Yard Metrorail station.
25. *Cost Estimate:* \$320 million (2018)
Cost Breakdown: The current budget (2018) for the construction and operation of the Potomac Yard Metro Station is \$320 million. The City would fund the project through General Obligation bonds, loans and grants.
17. By 2024, develop a plan to acquire zero emissions buses on Rapid Transit Routes and conversion of DASH fleet to zero emissions.
Cost Estimate: \$100,000-\$300,000
Cost Breakdown:

Long Term Actions

18. By 2040, put into operation the three (3) Rapid Transit Routes as expressed by the 2008 Transportation Master Plan. Work with regional providers to ensure these routes are physically and fare integrated with all modes of transportation.
26. *Estimate:* More than \$100 million
27. *Cost Breakdown:*
- 28.

8. Environmental Health

Goal Explore the broad physical and social environments that are impacting Alexandria’s health and safety and to develop an action plan using the Protocol for Assessing Community Excellence in Environmental Health.

Target By FY2023 to create an updated Community Environmental Health Assessment with an accurate and verifiable status of the Community’s Environmental Health.

Accountable Departments All City Departments lead by Environmental Health.

Short-Term Actions

1. By FY2021, to have reviewed the methodology and created a cross-agency implementation team for creating a new Environmental Health Assessment of the City based on principles containing within National Association of County and City Health Officer’s (NACCHO) Protocol for Assessing Community Excellence in Environmental Health methodology.

Cost Estimate: \$100,000/year

Cost Breakdown: Approximately \$100,000 for a consultant to start the planning process and develop a Community Based Assessment team to complete the next stage of the Assessment.

Mid Term Actions

2. By FY2024, to have completed the Environmental Health Assessment including an action plan to address the greatest issues of concerns for the City of Alexandria based on community input.

Cost Estimate: \$100,000/year

Cost Breakdown Approximately \$100,000 for a consultant to start the planning process and develop a Community Based Assessment team to complete the next stage of the Assessment.

3. By FY2025, to have created a list of actionable goals to address the issues of highest concern as identified by the Community of Alexandria.

Cost Estimate: This will depend on the issues identified and potential actions required. Additionally, it will require a consultant to oversee the

implementation of the action plan and to report progress on achieving these goals.

Cost Breakdown: Unknown

4. By FY2030 to have conducted an annual review of progress made towards achieving these goals and be working towards a repeated assessment to determine community benefit and reset goals for the next EAP period.

Justification

1. The last Environmental Health Assessment was started in 2002 and published in 2007. Since then limited work has been conducted to ensure that the issues highlighted are still relevant to the Alexandria Community. This assessment will create a new bench mark that addresses the needs of today's community in light of changing Public Health climate based on new science and technologies.

There is a real lack of data on what Environmental Health issues are really impacting the lives of the Alexandria community. By completing the assessment, we will be able to target limited resources at environmental health issues that are a genuine concern to the community and that are supported by scientific data as having a real health impact.

Goal

To create a City wide team to investigate mold complaints in residential properties and to provide advice and assistance to residents on remediation strategies.

Target

By FY2021 to have created a Task Force dedicated to providing support and assistance to the residents of Alexandria that are experiencing mold within their homes.

Accountable Departments

Department of Housing, Code Administration and Environmental Health (Lead by Code Administration).

Short Term Actions

1. By FY2021, to have created a Task Force to investigate the best way to manage mold complaints by residents of the City.

Cost Estimate: \$XX/year

Cost Breakdown:

Justification

There are a significant number of mold complaints made each year by the residents of Alexandria. Currently the only resource available to assist residents takes the form of directing them to literature available through Department of Housing and Urban Development. The City has no legislative powers to assist in facilitating repairs in rental properties, or any staff training in mold remediation.

9. Air Quality

Goal 1: Reduce Air Pollution from All types of Sources and Take Necessary Actions to assist the Northern Virginia Region in Complying with all NAAQS for Criteria Pollutants.

Target: Achieve compliance with 2015 ozone NAAQS of 70 ppb and maintain compliance for other criteria pollutants for the MWCOG region including Alexandria by 2023.

Short-term Actions:

1. By FY2020, Review and update standard conditions for development targeted at reducing air pollution.
2. By FY2021, develop strategies to reduce air pollution from non-point sources.
3. By FY2022, develop methodology to quantify air pollution impacts and benefits of major transportation projects by 2022.
4. By 2020, enhance/expand the City's Air Quality Action Day and conduct outreach to residents, businesses, and City staff.
5. By FY2022, promote the use of battery-powered leaf blowers and lawn mowers and investigate incentive mechanisms.

Mid-term Actions:

1. By FY2024, prepare a "State of the Air" report to assess air quality in the City and make recommendations on future actions.

DRAFT

10. Implementation, Education, and Outreach

Education and Outreach

Goal Increase public education and active participation of the community to foster daily sustainability practices by residents and businesses.

Target By 2023, establish ongoing educational events in multiple locations and target populations of residents and businesses.

Accountable Departments Transportation and Environmental Services

Short-Term Actions

- 3. Provide outreach events to engage residents and business owners/operators for sustainability efforts in all topic areas of the EAP (including Eco-City Clean Waterways, ...) using outreach events, graphical educational tools, virtual online options, enhanced social media tools, workshops, and hands-on learning experiences.
- 4. Provide handouts to facilitate information sharing at City public facilities to increase engaged community participation to keep the goals and visions of Eco-City Alexandria and EAP moving forward.

Cost Estimate: \$30,000/year

Cost Breakdown: Quality info-graphics, handouts, sustainability giveaways, (e.g. LEDs, outlet seals, water bottle slings, reusable bags) vibrant and current web presence with instructional videos, sustainable signage, and workshops included in the annual cost. Staff time and effort is not included in this cost.

- 5. Initiate a collaborative effort to update environmental education in Alexandria City Public School curriculum to include city specific sustainability issues including a focus on energy, recycling, water resources, air quality, and transportation. or Work collaboratively with school instructors to create resources to facilitate student education, outreach, and implementation on EAP sustainable topics, goals, and actions.

Cost Estimate: \$xxx/year

Cost Breakdown: xxx.

- By FY2023, evaluate the options available to recognize green businesses certifications using third-party rating systems. In collaboration with the business community, select a green business recognition program. Link local recognition opportunities via the city web site to facilitate consumer selection based on sustainability.

Cost Estimate: xxx

Cost Breakdown: xxx.

- Establish a voluntary program for residents, schools, and businesses to report their efforts in reducing their environmental impact and create an awards program to incentivize participation

Justification

Legislative Priorities

- Seek legislative authority to enforce more sustainable measures in the city than required by regulation and/or code.

Implementation

Goal Enhance implementing, monitoring, measuring, and reporting Environmental Action Plan efforts by the city, community and regional partners.

Target Annual updating.

Accountable Departments Transportation and Environmental Services-Office of Environmental Quality, General Services, Transportation, and Resource Recovery

Short-Term Actions

- Update measurement methods, monitored actions, and key indicators to capture and report new, changed, and trending sustainability goals, regional efforts, and accomplishments in online dashboards and with online trending information.
- Collaboratively identify new and revised roles and responsibilities of City boards, City commissions, staff departments, regional partners, and volunteers to implement, monitor, and report sustainability efforts.

Mid-Term Actions

1. Participate in regional and state efforts to increase the sustainability and enforcement of construction practices, regulations, and codes (Energy Conservation Code, recycling, stormwater management)

Cost Estimate: xxx

Cost Breakdown: xxx.

DRAFT