



City of Alexandria

EAP 2040 Update

Environmental Policy Commission Annual Retreat
May 3rd, 2025



Agenda



1. Overview of EAP 2040 Tasks
2. Discussion & Questions
3. Overview of EAP 2040 Goals & Metrics
4. EAP 2040 Refresh with Eco-City Coordinating Group
5. Discussion & Questions



EAP 2040

- Annually, teams update the EAP tracker
- Teams provide an estimate of progress made, on a scale of 1-4 leaves
- Notes provided for additional context



Climate Change

GOALS, TRAGETS, AND ACTIONS	PROGRESS	EAP TARG	LEAD	NOTES
1. CLIMATE CHANGE				
Target - reduce GHG 50% by 2030 and 80-100% by 2050				31% reduction in 2020 GHG inventory
Climate 1.1.1 (Energy & Climate Action task force established)	✓✓✓✓	FY21	GSw/TES	Complete: ECCAP Task Force appointed March 2021
Climate 1.1.2a (Policy for Emissions Calculations for CIP)	✓✓✓	FY22	GS	Eco-City Coordinating Group, Building Performance Policy, Climate Budgeting Cohorts
Climate 1.1.2b (Emissions Calculations for CIP)	✓✓✓	FY24	GS	See above - 1.1.2 treated as one item
Climate 1.1.3 (sustainable investment criteria)	✓✓✓✓	FY21	GS	sustainability in Impact Policy Statement for each plan
Climate 1.1.4 (vulnerability assessment)	✓✓✓	FY24	GS	some work of the stormwater strike team, also completed in partnership with VA Climate Center. Heat Vulnerability Assessment completed as part of the ECCAP update.
Climate 1.1.5 (Emergency Operations)	✓✓✓✓	FY26	GS	
Climate 1.1.6 (update Emergency Operations Plan)	✓✓✓✓	FY28	GS	OCA and DGS coordinating on resilience strategies including solar and battery backup
Climate 1.1.7 (state-level strategy)	✓✓✓✓	FY24	GS	OCA Coordinates directly with City Legislative Liaison regularly using the city's environmental justice lens as a guide



Energy

2. ENERGY

Goal - 100% renewable for applicable City facilities							By 2030 all electric government facilities offset 100%	
Renewable 2.1.1 (Offset Electrical Use w RECs)						FY20	OCA/GS	100% offset FY24
Renewable 2.1.2 (Energy Supply Strategy)						FY21	OCA/GS	Actively engaged in PPA / Solar Franchise development
Renewable 2.1.3 (Direct Power Purchase)						FY23	OCA/GS	All RECs are green-e certified, but no direct purchases at this time or planned. Focus and funding is on direct solar installation.
Renewable 2.1.4 (electrification plan)						FY24	OCA/GS	City's Building Performance Program instituted to meet EE targets and drive electrification
Renewable 2.1.5 (80% direct offsite)						FY28	OCA/GS	
Target - improve City facility efficiency by 25%								Action 2.2.4 by 2027
Efficiency 2.2.1 (Facility Index)						FY23	GS/OCA	To be coordinated with 2.1.2 and City Building Performance model program
Efficiency 2.2.2 (Electric Vehicle Program)						FY21	DASH,ACPS,TES	All agencies—DASH, ACPS, and the City—have successfully launched electric passenger vehicle pilot programs.
Efficiency 2.2.3a (Building lighting Upgrades)						FY21	GS	
Efficiency 2.2.3b (Streetlighting Upgrades,10.2)						FY23	TES	95% ~ 10,100 out of 10,650 lights have been retrofitted; only 450 Gadsby light fixtures remain to be retrofitted but this may take a few more years to complete.
Efficiency 2.2.4 (reduce energy 25%)						FY27	OCA/GS	16% reduction in 2024 from a 2018 baseline
Efficiency 2.2.5 (25% fleet electrification)						FY24	TES	Currently, we have a total fleet of 87 alternative electric vehicles, comprising 45 hybrids, 6 plug-in hybrids, and 36 all-electric vehicles. This equates to approximately 13.3% of our fleet being electrified.
Efficiency 2.2.6 (10% transit fleet electrification)						FY28	DASH	Our current DASH fleet is already at 14% electric, which is promising. However, it's important to note that this target encompasses 10% of DASH, rapid transit, and King Street Trolley buses collectively. Currently, only the fixed-route, non-trolley buses are electric. To achieve the electrification of future BRT (Bus Rapid Transit) and trolley routes, additional electric buses, will be considered as part of our electrification strategy.
Target - GHG/person to 6:2030, 4:2040, 1-3:2050								7.7 per capita w 2020 GHG inventory
Community 2.3.1 (Regulatory Activities)						FY19	GS	continuing to improve efficiency of energy code
Community 2.3.2 (CPACE)						FY20	GS	CPACE adopted - program plan launched
Community 2.3.3 (Electric Vehicle Charging)						FY20	OCA/GS	report accepted by Council FY 2021
Community 2.3.4(GHG tracking model)						FY24	GS	







































Green Buildings

3. GREEN BUILDING					
Target - Net Zero for Public Buildings					no target update - every 5-7 years per action 3.1.15
Building 3.1.1 (update green building policy)	✓	✓	✓	✓	FY19 OCA/PZ Completed and future updates to occur.
Building 3.1.2 (Sustainability in DSP/DSUP)	✓	✓	✓	✓	FY20 OCA/PZ Updated for 2020 and most years annually
Building 3.1.3 (Development checklist)	✓	✓	✓	✓	FY23 OCA/PZ Upcoming with the Standard Condition update process.
Building 3.1.4 (track compliance)	✓	✓	✓	✓	FY20 OCA/PZ Complete - compliance regularly evaluated by OCA and P&Z
Building 3.1.5 (update development conditions)	✓	✓	✓	✓	FY23 OCA/PZ Much of these items are/will be considered in the Green Bldg Policy
Building 3.1.6 (net zero process)	✓	✓	✓	✓	FY23 OCA/PZ OCA & PZ reviewing ACPS and City facilities
Building 3.1.7 (new staff position, GBP)	✓	✓	✓	✓	FY21 OCA/PZ Completed
Building 3.1.8 (incentive programs)	✓	✓	✓	✓	FY23 OCA/PZ OCA included renovations and EUI as part of the Green Bus. Recognition Program, and is planning
Building 3.1.9 (Regulatory incentives)	✓	✓	✓	✓	FY23 OCA/PZ Considering incentives as part of '24 Green Bldg Policy update
Building 3.1.10 (net zero in existing bldgs)	✓	✓	✓	✓	FY24 OCA
Building 3.1.11 (performance monitoring)	✓	✓	✓	✓	FY28 OCA/PZ Considering performance monitoring broadly in Green Bldg Policy Update
Building 3.1.12 (fee in lieu program)	✓	✓	✓	✓	FY28 PZ
Building 3.1.13 (net zero standardized process)	✓	✓	✓	✓	FY28 OCA/PZ
Building 3.1.14 (performance based procurement)	✓	✓	✓	✓	FY28 PZ



Land Use & Open Space

4. LAND USE & OPEN SPACE

Target - 40% Tree Canopy by 2035							
Trees 4.1.1 (Update Plans/Systems)	   	FY23	RPCA	Updating the City's critical forest data (tree inventory & tree canopy) to assist with daily operations and to inform recommendations for updating the Urban Forest Management Plan (UFMP). The Tree Canopy Assessment will be completed in FY26. ESMS annually reports four significant aspects to the DEQ as a component of VEEP E3 initiatives. In 2019, the City of Alexandria Landscape Guidelines revised the City's approved landscape standards to include current industry standards, best practices, and terminology. Review of guidelines planned for CY 2025.			
Trees 4.1.2 (Outreach/Partnerships)	   	FY23	RPCA	We have built a good partnership with the State and they are getting on more private properties through word-of-mouth. In addition, the Beautification Commission is also being utilized to promote inspections, on private properties, from State Foresters.			
Trees 4.1.3 (forest health index)	   	FY28	RPCA				
Trees 4.1.4 (plant a tree program)	   	FY28	RPCA				
Goal - Increase Open Space Quantity and Quality							
Land 4.2.1 (Open Space steering com)	   	FY23	RPCA	The Open Space Steering Committee(see 4.2.3) evaluated and recommended new metrics and methods for open space to measure the quality of publicly accessible open space and considered a recommendation of increasing the current Open Space Master Plan target of 7.3 acres acreage of per 1,000 residents to 7.5 acres. Continued discussion through community engagement for recommended Open Space Master Plan revisions.			
Land 4.2.2 (increase manage public land)	   	FY23	RPCA	Open Space Steering Committee's recommendations included public natural lands in its Open Space Master Plan recommendations. 2019 Natural Resource Management Plan (NRMP) identifies a course of action for preserving, protecting, and sustainability in managing Alexandria's natural resources and native biodiversity.			
Land 4.2.3 (Open Space Requirements)	   	FY20	RPCA	The Open Space Steering Committee was reconvened in 2020 to review the Open Space Policy Plan and provide recommendations on tools and methods to increase and sustain the City's open space acreage. The Committee completed its work in fall 2023 with draft recommendations to update the Open Space Master Plan			
Land 4.2.4 (maintain stream valleys)	   	FY28	RPCA				
Land 4.2.5 (unconventional open space)	   	FY28	RPCA				



Solid Waste

5. SOLID WASTE					
Target - reduce emissions 12% by 2023					
Recycle 5.1.1a (Glass Recycling)	✓	✓	✓	✓	FY20 TES Complete- 5 glass bins installed and partnered with region
Recycle 5.1.1b (phase Glass out of single stream)	✓	✓	✓	✓	FY21 TES Complete - phased out glass from single stream, annual MRF audits conducted to track progres
Recycle 5.1.2 (Recycle Right)	✓	✓	✓	✓	FY19 TES Complete and ongoing -What goes where tool, new oops tags, recycling sorting game, where does it g
Recycle 5.1.3 (Route Optimization Study)	✓	✓	✓	✓	FY20 TES Complete - optimization study implemented.
Recycle 5.1.4 (Recycling Ordinance)	✓	✓	✓	✓	FY21 TES No revisions made at this time, review of ordinance is ongoing
Recycle 5.1.5 (Composting)	✓	✓	✓	✓	FY20 TES Complete - WARM model to be used to calculate for new curbside composting pilot to evaluate GHG net reductions
Recycle 5.1.6 (public bin evaluation)	✓	✓	✓	✓	FY28 TES Ongoing - implemented No poo in the blue campaign for pet waste contamination reduction
Recycle 5.1.7 (commercial requirements)	✓	✓	✓	✓	FY28 TES No revisions made at this time, review of ordinance is ongoing
Recycle 5.1.8 (organics collection)	✓	✓	✓	✓	FY28 TES Ongoing - the Curbside Composting initiative is in the process of transitioning from pilot to full program, beginning July 1. The program has been receiving excellent feedback from Alexandria
Target - reduce/household waste by 5% by 2023					
Reduce 5.2.1 (Reuse Directory)	✓	✓	✓	✓	FY19 TES Complete - reuse directory implemented
Reduce 5.2.2 (Collection Pricing)	✓	✓	✓	✓	FY21 TES The Pay As You Throw (PAYT) study to determine the feasibility of collection pricing for recycling as an incentive for waste reduction has been approved and will be conducted in FY25-FY26.
Reduce 5.2.3 (Share a Bag)	✓	✓	✓	✓	FY20 TES Considering reimplementing the initiative with surplus bags from the initial program launch.
Reduce 5.2.4 (Builders Recycling Guide)	✓	✓	✓	✓	FY28 TES Complete and ongoing



Water Resources

6. WATER RESOURCES					
Target - meet 70% of phosphorus requirement by 2023					
Enhancement 6.1.1 (exceed mandates)	✓	✓	✓	✓	FY23 TES Complete - 98% complete through FY24
Enhancement 6.1.2 (environmental educator)	✓	✓	✓	✓	FY21 TES Complete - Communication Officer position created in IEQ
Enhancement 6.1.3 (implementation policy)	✓	✓	✓	✓	FY20 TES Complete - GI Study Phase I completed March 2021 which expands the CSO GI focus to the entire City.
Enhancement 6.1.4 (100% pollution reduction)	✓	✓	✓	✓	FY25 TES Almost Complete - 98% complete through FY24
Enhancement 6.1.5 (prioritize projects)	✓	✓	✓	✓	FY24 TES Initiated but stalled due to staff resources focused on pausing stream restoration efforts; staff readjusted to focus on 'targets of opportunity' where additional GI may be installed beyond requirements for already occurring city projects so that disruptions occur once. Bradlee Shopping Center / King Street proposed project upcoming.
Target - reduce flooding risk and improve water quality					
Infrastructure 6.2.1 (flood insurance rating)	✓	✓	✓	✓	FY22 TES Developing plan to increase CRS rating from 6 to 5 for the next cycle (current cycle is 2021 - 2026; 5-years)
Infrastructure 6.2.2a (prioritize nuisance drainage)	✓	✓	✓	✓	FY22 TES Complete and ongoing - Spot Improvement projects are identified and prioritized through Neighborhood Investigations under the Flood Action Alexandria initiative, with new ones added as they are identified
Infrastructure 6.2.2b (Drainage Projects Prioritization Plan)	✓	✓	✓	✓	FY23 TES Complete - Projects are prioritized according to timing of identification and number of properties that are protected.
Infrastructure 6.2.3 (education effort)	✓	✓	✓	✓	FY23 TES Complete and ongoing - Property owners are incentivized to conserve water through the SWU credit program that provides fee reductions for rain barrels, conservation landscaping, etc.
Infrastructure 6.2.4 (minimize sewer overflows-CSO)	✓	✓	✓	✓	FY25 TES RiverRenew Project under construction
Infrastructure 6.2.5 (water reuse)	✓	✓	✓	✓	FY28 TES
Infrastructure 6.2.6 (safe water supply)	✓	✓	✓	✓	FY28 TES



Transportation

7. TRANSPORTATION

Target - reduce VMT by 1%/year by 2023							
Low-carbon 7.1.1 (implement Vision Zero)	✓	✓	✓	✓		FY23	TES Finished 3 yr action plan, safety improvements implemented. See five year plan https://www.alexandriava.gov/sites/default/files/2024-06/Complete%20Streets%20Five-Year%20Plan%20FY25-29_For%20Web.pdf
Low-carbon 7.1.2 (add bike infrastructure)	✓	✓	✓	✓		FY23	TES Added bicycle lanes with many more coming for 2025
Low-carbon 7.1.3 (development checklist)	✓	✓	✓	✓	✓	FY23	TES Completed 2022 updated checklist 2022
Low-carbon 7.1.4 (mobility device regulations)	✓	✓	✓	✓	✓	FY 23	TES Completed 2022 Permanent program adopted
Low-carbon 7.1.5 (plan for zero emission buses)	✓	✓	✓	✓	✓	FY21	TES Complete - Plan has been completed and will be implemented as funding allows
Low-carbon 7.1.6 (low stress multi-modal)	✓	✓	✓	✓	✓	FY23	TES Complete - Network has been assessed and will be implemented as resources allow
Low-carbon 7.1.7 (bike and pedestrian projects)	✓	✓	✓	✓		FY28	TES More than a dozen complete streets and SRTS projects in planning, design, and or construction on-
Low-carbon 7.1.8 (school walk projects)	✓	✓	✓	✓		FY25	TES More than a dozen complete streets and SRTS projects in planning, design, and or construction on-
Target - increase low-carbon mobility by 15% by 2023							
Reduce cars 7.2.1(mobility plan)	✓	✓	✓	✓	✓	FY23	TES Completed - Alexandria Mobility Plan ("AMP") adopted in October 2021
Reduce 7.2.2 (Potomac Yard metrorail)	✓	✓	✓	✓	✓	FY23	TES Completed - Station officially opened in spring of 2023
Reduce 7.2.3 (incentive for options)	✓	✓	✓	✓	✓	FY28	TES addressed in Alexandria Mobility Plan, some parking cashout programs established including for City staff
Target - increase dedicated bus lanes -1.5 miles by 2030							
Transit 7.3.1 (mobile-friendly technologies)	✓	✓	✓	✓	✓	FY23	TES coming year
Transit 7.3.2 (West End and Route 1 Transitways)	✓	✓	✓	✓	✓	FY28	TES Design completed for West End Transitway Phase #1 (Design of West End Transitway underway, advancing next phase of Route 1)



























Environmental Health

8. ENVIRONMENTAL HEALTH

Target - update Assessment by 2023							COVID 19 a priority and no action updates
Community 8.1.1 (assessment)	✓	✓	✓	✓	FY21	HEALTH	Complete: Gap and Asset assessment and development of a healthy homes action plan.
Community 8.1.2 (action plan)	✓	✓	✓	✓	FY24	HEALTH	Complete: Gap and Asset assessment and development of a healthy homes action plan.
Community 8.1.3 (actionable goals)	✓	✓	✓	✓	FY25	HEALTH	Complete: After successfully completing all goals in the 2022 Healthy Homes Action Plan, the Healthy Homes Network has launched a new Action Plan with specific strategies on mold, pests, smoke, hoarding, and reporting home condition issues.
Target - create a task force by 2021							
Indoor Air 8.2.1 (mold management)	✓	✓	✓	✓	FY21	HEALTH	Complete: A workgroup within the Healthy Homes Network has been created to address the mold strategy in the Healthy Homes Action Plan.
Indoor Air 8.2.2 (other air pollutants)	✓	✓	✓	✗	FY25	HEALTH	Healthy Homes Network addresses multiple indoor air pollutants within residential spaces.



































Air Quality

9. AIR QUALITY					
Target - achieve new Federal target 70 ppb by 2023					
Air Quality 9.1.1 (development conditions)	   	FY20	TES/OCA	Complete: 2023 Standard DSUP Conditions have been approved. Examples related to air quality: Increased % required EV charging & EV ready (to 5% or install publicly accessible charger), Reduced wood burning and natural gas fireplaces, with allowance in limited situations requiring buildings go electric, electric plug at loading docks to minimize idling, and further limit idling at construction sites; standard requirement for Erosion & Sediment control plans with new development/construction sites.	
Air Quality 9.1.2 (Air Action Day)	   	FY20	TES	Complete and ongoing. Increased notifications to residents related to Air Quality Action Day via social posts, updates to City webpages, and school engagement. Internal and external notifications through City's Emergency Management communications and webpage notifications.	
Air Quality 9.3.3 (reduce non-point sources)	   	FY21	TES	Complete and ongoing. Require BMPs for demolition, E&S controls, limiting idling on construction sites, limiting idling in loading/unloading zones. City is working toward ban of gas-powered leaf blowers with City transition expected in FY26. Ongoing outreach and education planned for ban, if adopted.	
Air Quality 9.1.4 (promote electric lawn equipment)	   	FY21	TES	Website updates, outreach via email, calls and public meetings to community members, including landscape companies. City started using electric lawn equipment for T&ES operations. RPCA, DGS, OCA, & T&ES are exploring electric lawn equipment in contracts and expanding city use of electric lawn equipment. Conducted demonstration events for commercial landscapers and City Staff. Ongoing outreach and education planned.	
Air Quality 9.1.5 (transportation projects impacts)	   	FY22	TES	Discussions initiated on methodology and performance indicators.	
Air Quality 9.1.6 (State of the Air report)	   	FY24	TES	2023 Addendum for the 2009 State of the Air Report is drafted and in internal review.	



Implementation, Education & Outreach

10. IMPLEMENTATION, EDUCATION & OUTREACH							
Target - establish educational opportunities by 2023							affected by COVID staff limitations
Education 10.1.1 (robust campaign)					FY20	OCA	Eco-City Academy relaunched FY 2025, will focus on creation of new Ambassadors from the Community. Multiple departments are coordinating on Eco-City Popups throughout ALX. OCA launched EcoCityALX social media campaigns
Education 10.1.2 (update resources)					FY20	TES/OCA	Adding new activities in coordination with Eco-City teams across the City.
Education 10.1.3 (collaborate with schools)					FY20	TES/OCA	Art Contest with Students for Earth Day; continued discussions with ACPS to increase collaboration for school programs/activities. Executed engagement activities, such as pilot MWEE and Spring Break programs, in FY 2025 w/ T&ES, OCA, RPCA. Increased ACPS engagement during Eco-City Festival.
Education 10.4.4 (green business program)					FY21	OCA	OCA Launched Green Business Recognition Program for retail and restaurants. Continuing to expand engagement with businesses
Education 10.1.5 (awards and incentives)					FY21	TES/OCA	Collecting information on other locales; Expanded Stormwater Credit Policy; Flood Grant program implemented. OCA launced Eco-city Homes program
Target - annual updating of progress and metrics							
Monitoring 10.2.1 (metrics & key indicators)					FY20	OCA	Eco-City Coordinating Group developing ongoing tracking and accountability
Monitoring 10.2.2 (regional coordination)					FY20	TES/OCA	
Monitoring 10.2.3 (annual report)					FY24	TES/OCA	



EAP Refresh w/ Eco-City Coordinating Group

- Eco-City Coordinating Group expanded
- Reviewing high-level metrics included in EAP & ECCAP (more to come in later retreat session)
- Current EAP approach assumes individual tasks will lead to major outcomes



Focusing on the High-Level Metrics

Climate Change	Reduce GHG Emissions 50% by 2030, 80% by 2050	30% overall Reduction @ 2020
Energy	By FY2030, electrify city facilities, 100% RE	100% RECs
	BY FY2035, improve EE by 50% (25% by FY27)	16% Reduction in top bldgs
	Reduce per capita GHG emissions to <3 MTCO2e by 2050	7.7 MT reduction in 2020
Land Use	40% Tree Canopy by 2035	32.5% in 2025
	7.3 acres of open space per 1,000 residents	7.3 acres in 2025
Solid Waste	Reduce GHG emissions 12% over FY2019 baseline by FY23	
	By FY23 reduce solid waste per household by 5% over FY18	
Water Resources	Achieve reductions in phosphorous pollutions, 70% FY23, 100% FY25	Met FY23 goal, tracking FY25
Transportation	Reduce VMT per capita 1%/year by FY23	
	Increase by 15% share of trips taken by public transit, walking, biking	36% increase in DASH, 53% increase in CaBI
	Double dedicated bus lanes to 1.5 miles by FY2030	~.8 miles
Air Quality	Reduce ozone to 70ppb or lower by FY23	Days over 70ppb: 2022 (2), 2023 (15), 2024 (7)

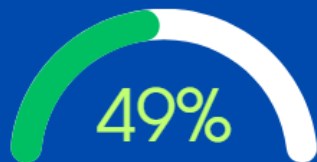


ECCAP Scale to Action

SCALE OF ACTION TO REDUCE GHG EMISSIONS IN ALEXANDRIA

53,000

HOMES RETROFIT TO BE ENERGY EFFICIENT



HOMES USING ELECTRIC HEAT

Electric heating is considerably more efficient than natural gas heating. Heat pumps operate at XXX% higher efficiency. Removing natural gas from your home also increases safety and indoor air quality.



NEW HOMES BUILT TO
BE HIGH PERFORMANCE

Prioritizing energy performance when you're building a new home is crucial. Find a builder that will design to passive house standards and use the most efficient HVAC systems possible.

13 Million

SQUARE FEET OF COMMERCIAL
OFFICE SPACE RETROFIT TO BE
ENERGY EFFICIENT



PERSONAL CAR SALES ELECTRIC

EVs are great - so we'll tell you about them here



ELECTRIC DASH BUSES

DASH has the largest electric bus fleet in the Commonwealth of Virginia, and it's growing! Plus, with fare-free rides, getting around Alexandria in a climate-friendly way is even easier!



MEDIUM- & HEAVY-DUTY
ELECTRIC VEHICLES

Prioritizing energy performance when you're building a new home is crucial. Find a builder that will design to passive house standards and use the most efficient HVAC systems possible.



Process

- Establish tracking mechanism for each metric
(*e.g. electric heat via permit data & real estate assessment*)
- Identify city programs and operations that impact metrics
(*e.g. road design impacts VMT, GHG, bus lanes, etc*)
- Establish procedure for reporting at various project stages
(*e.g. initial CIP submission, various % design stages*)
- Policy requiring inclusion at Council presentations, reviewed as part of Docket Approval, OCA/RASE Work Plan Review
- Regular reporting of progress to City Council, Community



Questions?

