



City of Alexandria, Virginia

MEMORANDUM

DATE: APRIL 27, 2017

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

THROUGH: MARK B. JINKS, CITY MANAGER 

FROM: YON LAMBERT, DIRECTOR, T&ES 

SUBJECT: 2016 PROGRESS REPORT ON ECO-CITY AND THE ENVIRONMENTAL ACTION PLAN 2030

The purpose of this memo is to provide City Council with an annual progress report on Eco-City goals and the Environmental Action Plan (EAP) in conjunction with the City's Annual Earth Day celebration from 10 AM to 2 PM on Saturday, April 29, 2017.

Alexandria continued to make significant progress on several environmental initiatives such as the completion of the Four Mile Run wetlands restoration project, construction of the regional stormwater management pond at the Parc Meridian building, addition of 15 new bikeshare stations, introduction of the new Metrobus route NH2, expansion of the ecological restoration planting program and conducting the second campaign of the SolarizeAlexandria program. Alexandria City Public Schools (ACPS) also initiated multiple environmentally educational projects aimed at teaching the students the value of good environmental stewardship.

Current environmental challenges include mega projects to mitigate the Combined Sewer Overflow (CSO) issues, the establishment of the stormwater utility, and enhancing Alexandria's environmental leadership through the updating of the City's Environmental Action Plan (EAP) and the Green Building Policy.

Background

The comprehensive Environmental Action Plan 2030 (EAP 2030) was adopted by City Council in June 2009. It consists of 48 goals, 50 preliminary targets and 353 actions that span the course of 21 years and beyond. One of the short-term actions in the EAP 2030 calls for the development of key environmental indicators to measure the progress of the Eco-City initiative. In 2010, the EPC spearheaded the development of key environmental indicators that can be measured on an annual basis, in consultation with the City's Environmental Coordination Group members representing City departments involved. These environmental indicators were first reported to the City Council in the 2012 progress report on the EAP 2030. The Attachment is this year's report entitled "2016 Eco-City Progress Report and Key Environmental Indicators." It gives an overview of the Eco-City program, provides the latest indicators and the top ten environmental achievements for 2016.

This is the sixth year this report will be released to the public as part of the 2017 Alexandria Earth Day.

The newly-created position of Sustainability Coordinator approved by City Council for January 2017 is being recruited. Initial assignment for this position will include leading the update of the Environmental Action Plan and participating in the update of the Green Building policy.

Key Environmental Indicators

The 20 key environmental indicators are reported in Table I of the Attachment. Of the 20 indicators, 18 are reported this year as two indicators are no longer being tracked. The Alexandria Health Department no longer tracks respiratory complaints and ACPS no longer composts food waste. Working with City staff, the EPC is currently reviewing these indicators and may propose some new indicators to reflect City's current and future environmental priorities.

Of the 18 reported indicators, two indicators show improvements over last year or the last year for which data is available, six held steady with no change and 10 indicators showed a decline. When compared to the indicators' base years, 12 of the 18 current indicators improved, five declined, and one showed no change.

While the City government has made great strides in reducing Green House Gas (GHG) emissions by 28.5% over the period from 2006 to 2015, there was a 5.9% increase in emissions over the last reporting year, from 2014 to 2015, due to increased park operations, the opening of a new fire station, and increased numbers of street lighting fixtures. For Alexandria as a whole, the per capita GHG emissions is not yet calculated due to an anomalous 52% decrease of natural gas usage reported by Washington Gas over the last reporting year which will require further verification. This situation also impacts the reporting of the following indicators:

- #2 Per capita energy use
- #5 Total greenhouse gas emissions by residents and business
- #6 Per capita greenhouse gas emissions.

Staff is currently awaiting the resolution of this data review by the gas company and will update the findings accordingly.

The City's per capita water use decreased by 0.6% in 2016, but the per capita wastewater treated increased by 2% over 2015.

The number of stormwater Best Management Practices installed in the City increased by 2.6% over last year but increased by 87% over the last two years.

Air quality in the Washington Metropolitan Area has significantly improved since the 2003 base year. However, more stringent ozone regulatory limits enacted in 2015 impact the calculation of the Air Quality Index (AQI) - the indicator used to report local air quality via the number of code orange days. Due to the change, code orange days increased to nine in 2016. Under the previous AQI scale, some of the days that were coded orange in 2016 would have been previously coded yellow for moderate air quality. In 2016, no days in northern Virginia were measured at code red or unhealthy levels.

DASH public transit ridership held steady at 2.25 total passengers per mile, while passengers per hours of service decreased by 6% over 2015.

Highlights of Environmental Progress in 2016

The City continues to increase its stormwater management efforts in response to regulatory requirements by Virginia and the USEPA's Chesapeake Bay program.

The City's stormwater permit requires implementation of stormwater management practices sufficient to achieve a minimum of 5% of the nutrient and sediment reduction of Total Maximum Daily Load (TMDL) targets as prescribed in the permit by 2018. The City strategy to meet this initial target is by implementation of combination of several projects that include:

- Installation of a stormwater pond designed to treat 50+ previously untreated acres in Eisenhower East (Pond 19) completely designed and constructed at the developer's cost as part of a redevelopment project.
- Retrofit of Lake Cook for which the City applied for and received a grant of \$1.2M from Commonwealth of Virginia.
- Retrofit project to enhance the treatment efficiency of stormwater and improve aquatic habitat of the Ben Brenman Pond.

These overarching regulations require the remaining 40% of the reduction targets to be met by 2023 with the last 60% of the required reductions to be achieved by 2028. Total fiscal impact of these requirements may range up to \$100 million, and will depend on the type and mix of technologies implemented. The City has begun, and will expand it further, a broader public education and outreach with the goal of soliciting input as it moves to develop plans to implement 40% and 60% reductions in future permits.

On April 21, 2017 Governor Terence R. McAuliffe signed into law legislation that requires the City of Alexandria to remediate its four combined sewer outfalls by July 1, 2025. In short, the legislation will require the City to plan, design, and construct massive underground storage tanks and tunnels in less than half the time other affected communities have been given. The City's four combined sewer outfalls already operate under state permits and comply with all federal and state laws, regulations, and permit requirements, including the federal Clean Water Act. Since this mandate supersedes the Long Term Control Plan Update (LTCPU) submitted by the City to VDEQ in December 2016, the City will be revising this document to develop a plan that will likely propose large-scale infrastructure projects, and a schedule for meeting the 2025 deadline. The City Manager, in his proposed budget for Fiscal Year 2018 has included \$390 million in funding to address all four outfalls in the City's Combined Sewer System and sewer system wet weather issues.

Climate change and preparing the City and community for potential impacts remain a serious challenge. As part of the adaptation strategy for climate change, the City is moving forward with the waterfront flood mitigation project.

Fifteen new Capital Bikeshare stations were added to the Alexandria system in the Rosemont, North and South Old Town, Potomac Yard and Fairlington neighborhoods. There are now 31

Bikeshare stations throughout the City.

The City's solid waste recycling rate for 2015 held steady at just over 48% for the past 3 years. A pilot food waste program was implemented. While the service was received favorably by the 400 pilot households that participated, a post program economic evaluation determined that there is not a sufficient local infrastructure to justify continuing or expanding the program citywide.

Finally, in 2016, 94% of new commercial development's square footage committed to meeting green building standards as defined by the City's Green Building Policy.

Overall, the City continues to make progress towards meeting the goals and targets set within the Environmental Action Plan 2030. This continues despite challenging economic conditions and budget constraints. The City was recognized for the ninth consecutive year by the Virginia Municipal League (VML) as a platinum-level "Green Government." The Eisenhower West Small Area Plan was awarded the *2016 Excellence in Sustainability Award* by the American Planning Association. AlexRenew's nutrient management facility (NMF), received the Institute for Sustainable Infrastructure's (ISI) Envision Platinum Award for sustainability. This is the first award of its type in the state of Virginia, the DC metro area, and the first for a wastewater recovery facility in the United States. Energy Masters was selected to receive the Governor's Best Affordable Housing Energy Conservation Effort award at the 2016 Governor's Housing Conference and was also recognized by the Virginia Energy Efficiency Council with a 2016 leadership award.

ATTACHMENT: 2016 Eco-City Progress Report and Key Environmental Indicators

cc: Emily A. Baker, Deputy City Manager
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