ALEXANDRIA
Environmental Policy Commission

AGENDA

EPC REGULAR MEETING

Monday, February 8, 2016
7:30 - 9:30 PM
City Hall, Room 2000 (Second Floor)

7:30 – 7:35	Welcome and Public Comments
7:35 – 7:50	Staff Consent items and EPC updates
7:50 – 8:35	Recycling Update (Michael Clem, Recycling Specialist, TES)
8:35 – 8:55	Discuss Sustainability Coordinator Workshop Concept Note (Jim Kapsis)
8:55 – 9:10	Indicators Discussion (Geoff Goode)
9:10 – 9:30	Agenda for next Work Session and full meeting
9:30	Adjourn

City Staff Update: 1/25/16

Prepared by Lisa Goldberg

1. The Alexandria Earth Day 2016 Committee met on January 6 and 20. Natasha Andersen chairs the committee. The event is scheduled for April 30 at George Washington Middle School. City Staff and Alex Renew will release the call for nominees for the Ellen Pickering Award. The logo design art contest supporting the theme "Choose to Reuse-The Choice is Yours," is underway.
2. The City's Department of Recreation, Parks and Cultural Activities (RPCA) was awarded the Exemplary Environmental Enterprise (E-3) certification by the Virginia Dept. of Environmental Quality. The award was based upon the Department's development and implementation of its Environmental Sustainability Management System (ESMS) and the associated Environmental Policy. An environmental management system is a set of management processes and practices that allows an organization to analyze, control, and reduce the environmental impact of its activities and services, and to increase its operating efficiency. Benefits include improved environmental performance, enhanced compliance, pollution prevention, resource conservation, increased efficiency, improved employee awareness, and enhanced public image. The ESMS that was developed by RPCA is centered around four Significant Aspects: 1) Hazardous Waste; 2) Agro-chemicals; 3) Water Usage; and 4) Water Quality. Having received the E-3 Certification from Virginia DEQ, the Department is now pursing ISO 14001 Certification for Environmental Management Systems
3. City staff is finalizing the top 10 Environmental Achievements Report of 2015. Highlights include recognition of the Municipal Storm Sewer System (MS4) Program by the Water Environment Federation's (WEF) National Municipal Stormwater and Green Infrastructure Awards Program, maintaining a 48% solid waste recycling rate, increased tree plantings, maintenance and invasive plant management milestones within the Urban Forestry Master Plan (UFMP) and signed contracts for residential solar energy installations through the "Solarize Alexandria" program.
4. City Staff is collecting data for the 20 Environmental Indicators for 2015 report. The update will be announced at Earth Day.
5. City Staff is preparing for an EAP Steering Committee tentatively scheduled for the first quarter of 2016. The Committee consists of City Councilmembers Del Pepper and John Taylor Chapman, EPC Chair and/or Vice-chair, and other senior level staff whose responsibilitiesinclude EAP goal implementation.
6. City staff and its remediation contractor are reviewing the upland soil gas and groundwater monitoring and community relations plans for the Oronoco Bay outfall remediation program. An RFP for professional services to review the existing dredging and capping remedial design was released January 13; bids are due by February 8.
7. The Ad-hoc Waterfront Construction Group met on January 11. City staff prepared a presentation on past contamination and remediation plans for the Robinson Terminal North redevelopment project.

21st Century Waste Management

Michael Clem
Resource Recovery Division
City of Alexandria

A New Perspective:
3 reasons why environmentalists focus on waste disposal

1. Trash may contain harmful chemicals that are transferred to the environment during disposal.
2. Extraction and processing of raw materials damages the environment. Reprocessing spent material reduces demand for raw materials ; thus reducing ecological damage.
3. Trash, even if benign, takes up space in the natural landscape and decreases the 'naturalness' of that space.

How is waste regulated in Alexandria?

- Commonwealth of Virginia delegates limited authority to local governments
  - Dillon-Rule State
  - Example: no local authority to restrict the use of plastic bags or Styrofoam containers
  - Waste-handling facilities are permitted by VA Department of Environmental Quality

- Alexandria, VA, Code of Ordinances, Title 5, Chapter 1 – Solid Waste Control
  - On-site storage requirements
    - Preparation requirements
    - Submission of plans
  - Trash hauler requirements
    - Vehicle requirements
    - Record keeping
    - Disposal requirements

4 Types of Municipal Waste

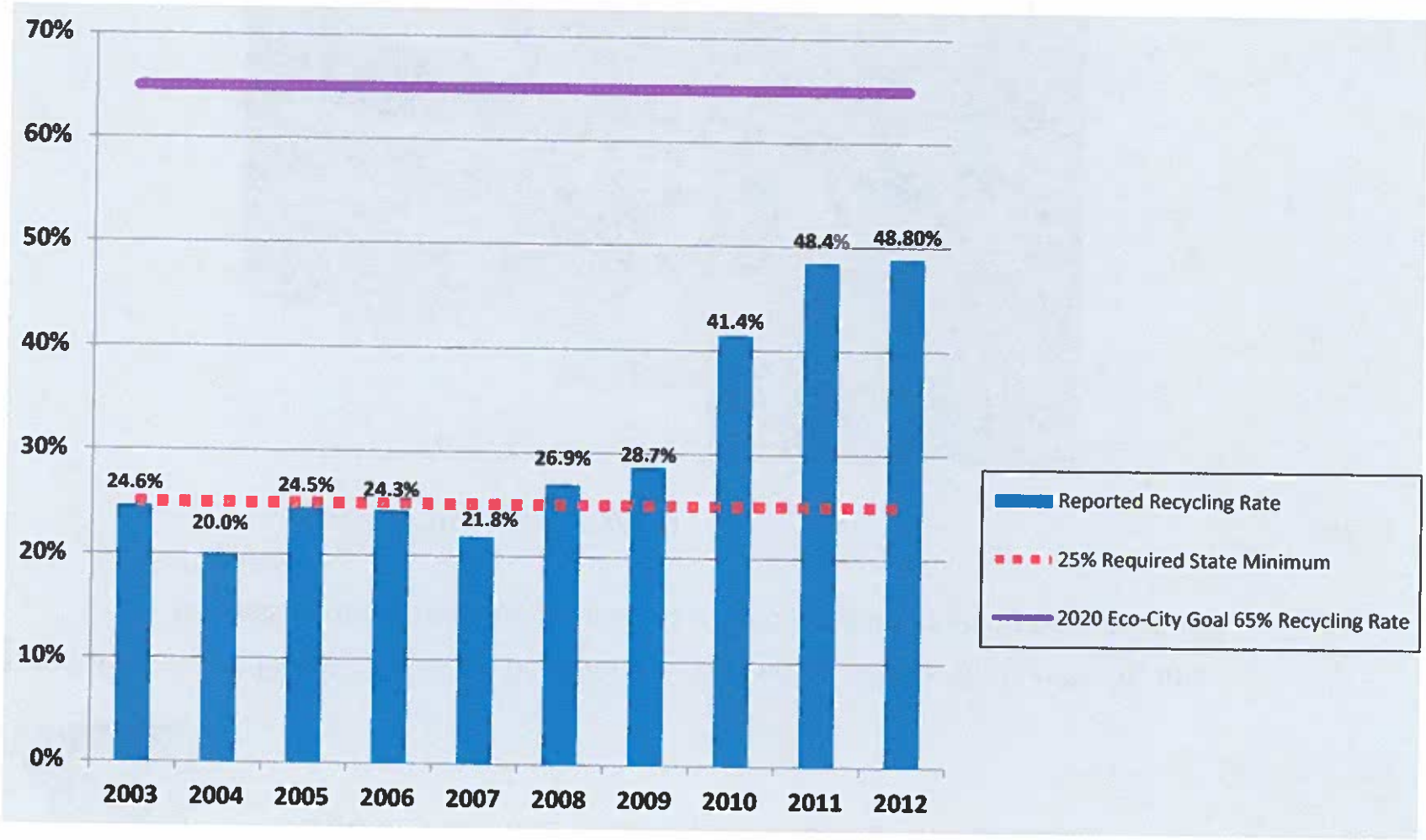
- Recyclables (material reprocessed into feedstock for new products)
  - Wood pulp fiber (office paper, newspapers, cardboard, junk mail, cereal boxes)
  - Metals (steel, tin, aluminum)
  - Plastics (food and beverage containers, buckets, toys, play sets)
  - Glass (bottles and jars)

- Organics (material processed into soil amendments or fuel)
  - Yard waste (leaves, grass, branches, brush, logs)
  - Food waste

- Trash (non-toxic and cost-prohibitive to recycle)
  - non-recyclable packaging,
  - broken and worn out products

- Household Hazardous Waste (toxics)
  - Vehicle chemicals (motor oil, gasoline, solvents)
  - Nature control (insecticides, pesticides, herbicides, fertilizer)
  - Household maintenance (paints, fluorescent bulbs, batteries, cleaning chemicals)

Recycling Rate Over a Ten Year Period



Disposal Facilities Used By Alexandria - Organics

Organics Processing

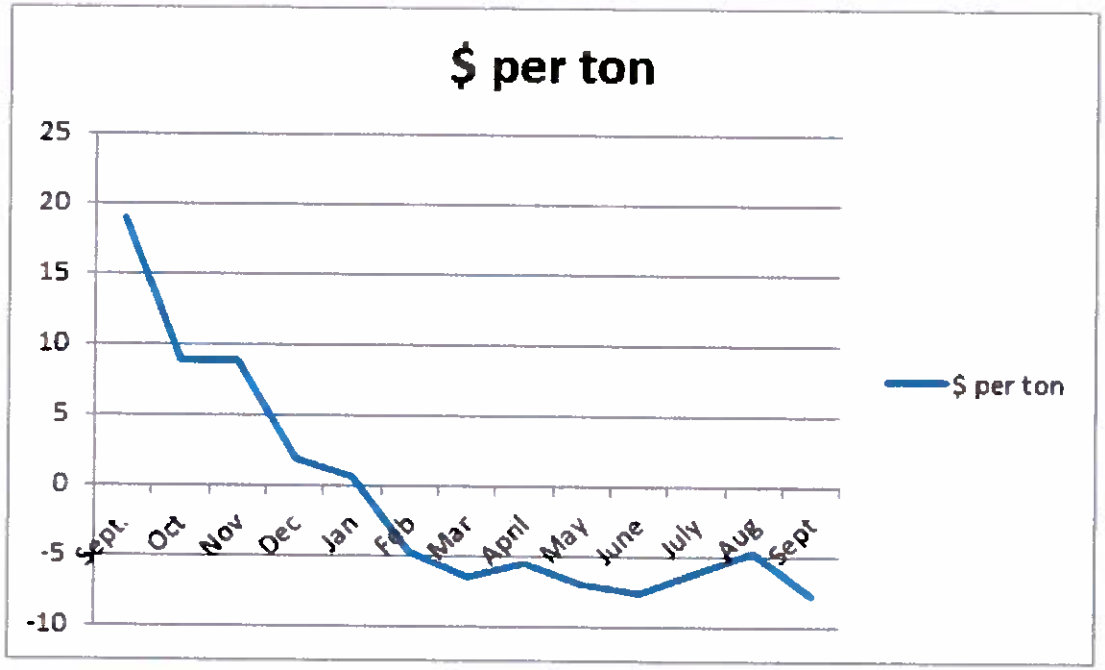
- Eisenhower Leaf Storage Facility
  - leaves and woody waste only
  - City owned and operated
  - temporary storage (grind, reduce, then haul)
- Western Branch Composting Facility
  - green waste (grass) and food waste
  - owned by Prince Georges County, MD – 24 miles
  - cost per ton $45

Disposal Facilities Used By Alexandria – Household Hazardous Waste

Household Hazardous Waste and Electronics Drop-Off Center

- Drop-off Center located on City owned property at 3224 Colvin Street
- Managed under contract by Clean Venture, Inc.
- Hazardous material is shipped to a special incinerator
- Electronics is shipped to: Service Source located in Alexandria (50 tons)
- Cost per ton (average) to process household hazardous waste = $1,500

The Crash of the Market for Recyclables



Month	Sept.	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept
$ per ton	$18.94	$8.89	$8.89	$1.93	$0.54	-$4.72	-$6.52	-$5.47	-$7.05	-$7.66	-$6.22	-$4.79	-$7.72
Total Rebate	11,364	5,334	5,334	1,158	324	-2,832	-3,912	-3,282	-4,230	-4,596	-3,732	-2,874	-4,632

What to do next….
Don’t Bite the Apple!

Smart Waste Management

- Only recycle/compost when it makes <u>economic</u> sense
- New Message = 'Recycle Right' (discontinue 'Recycle More Now')
- Understand that 'hard-to-recycle' waste is not bad and can be safely and economically managed as trash for decades.
- Consider landfills as large storage facilities for future material recovery when economical. Or the WTE as an 'alternative energy' generating plant.
- Use 'price signals'. Push the price of disposal up by including hard to quantify costs ('upstream' environmental damages and climate change emissions)
- Beware of large capital investments for waste recovery since the waste environment is changing quickly. 'Enlightened' product designers are 'redesigning' their products and packaging to reflect 'eco-values'.

February 2016

TO: Yon Lambert, Karl Moritz, and Emily Baker
CC: Members of City Council
RE: Sustainability Coordinator Workshop Concept Note

In November of 2015, the Environmental Policy Commission (EPC) sent a memo to City Council urging the creation of a sustainability coordinator position. Pursuant to this request, the EPC would like to organize a one-day workshop this spring for City staff, City Council and Members of the general public at which sustainability practitioners from other jurisdictions as well as from Alexandria could share best practices around urban sustainability planning and implementation.

We would propose that the day be divided into two parts:

In Part 1, we would have outside practitioners available for small group meetings with City Staff and/or Members of Council for private, off-the-record discussions. These discussions would allow candid discussion and an exchange of best practices and lessons learned from different jurisdictions.

In Part 2, EPC would host potentially jointly with Council and/or the Transportation Commission an evening community discussion on sustainability practices in Alexandria and elsewhere in the U.S. and globally. Part 2 would provide a forum with City staff to tout Alexandria's many sustainability achievements and for the public to learn from practitioners in other jurisdictions about trends in urban sustainability.

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In both cases, the EPC would like to collaborate with staff and Council to develop the specific agenda and content of the workshop. Potential topics for discussion could include:

- The Creation, Role and Function of Urban Sustainability Coordinators and Planners: Lessons from Other Jurisdictions

- How Cities Leverage Sustainability Principles to Promote Economic Development

I have been in contact with four potential panelists who have each expressed an interest and willingness to attend such a workshop.

These include:

- **Adam Freed, Principal, Sustainability Practice, Bloomberg Associates.** Prior to joining Bloomberg Associates, Adam was the Deputy Managing Director of The Nature Conservancy's Global Water Program, where he

Category	Indicator 1	Indicator 2	Indicator 3	Indicator 4
Energy (Scott, Geoff)	**Title: Gross Electricity and Natural Gas Use by sector (kWh/BTU)** **Possible source of data:** Dominion and Washington Gas **Frequency of data production:** Quarterly **Time periods available:** Back 4-5 years **Target:**	**Title: Gross Electricity and Natural Gas Use by sector, per capita (kWh/BTU)** **Possible source of data:** Dominion and Washington Gas **Frequency of data production:** Quarterly **Time periods available:** Back 4-5 years **Target:**	**Title: Gross renewable energy produced or installed** **Possible source of data:** Dominion (likely use solar as a proxy for this) **Frequency of data production:** Annual **Time periods available:** Each year, if possible. **Target:**	
Water (Jessica)	**Title: Per capita water use by sector (gallons per person per year)**	**Title: Gross water use by sector (gallons per year)**	**KEEP: Per capita wastewater treated, gallons per person per year**	**Title: Acres Treated (or # of projects) Using Green Infrastrucure Practices (bioswales, green roofs, pavers, etc.)** (replacing Number of stormwater best management practices (BMPs) in the City). This indicator would be a subset of the overall number of BMPs in the City with the hope that it would provide non-stormwater people with an understanding of the non-grey infrastrucure in the city. Currently, EPC does not know this number yet there are many GI practices that exsist within city limits. I'd like to see GI encouraged within the City and with the SW utility, I think people will be drawn to these types of practices and "City as Leader" will help property owners realize potential on their lands.
Climate (Scott, Tyler)	**NAME: Energy use GHG pollution** **Possible source of data:** Dominion and Washington Gas data on electricity and natural gas consumption, combined with EIA/SERC data on greenhouse gas emissions factors associated with electricity use in our area. These numbers would then be compared with the year's reduction target, as specified in the city's Energy and Climate Action Plan. This action plan called for reducing GHG emissions by 80% from 2005 levels by 2050. This would require a roughly 3.5% reduction in emissions each year. So, for example, community energy use-related emissions for 2015 should be just under a million tons (CO_2e), based on the community energy use-related emissions inventory reported for 2005 of 1.4 million tons CO_2e. The difference between the 0.986 million tons CO_2e target for 2015 and the actual energy-related emissions number for the year would constitute the indicator, telling us exactly how far away we are from being on trajectory to meet our GHG emissions goals. **Frequency of data production:** Annual **Time periods available:** Should be annual **Target:** Specified in the Energy and Climate Action Plan adopted in 2011	**NAME: Vehicle-related GHG emissions** **Possible source of data:** The transportation fuel use-related emissions will be harder to estimate on an annual basis. Ideally, we'd have an annual figure for estimated transportation GHG emissions, but this might depend on MWCOG or NoVA TPB sources or plans for estimating this consistently. We could have T&ES or a new sustainability coordinator--or Virginia Tech--conduct an annual survey to estimate this, or collaborate with Arlington to do this for both jurisdictions at the same time. As with the first indicator, the target can be pulled directly from the 2011 Energy and Climate Action Plan. According to the GHG inventory for 2005, our community generated 0.66 million tons of CO_2e due to on-road transportation. The same annual 3.5% reductions are needed from this starting point to achieve an 80% cut in emissions. **Frequency of data production:** Annually, I hope. **Time periods available:** Each year, if possible. **Target:** As specified in the Energy and Climate Action Plan adopted in 2011		
Transportation (Tyler, Scott)	**Title: Vehicular Miles Traveled**	**Title: Mode Split**		
Land Use (Natasha, Susan)	**Title: Overarching indicator: % canopy – calculated every three years**	**Title: City contributions to canopy coverage** (This would be calculated based on CCA measures in Landscape Guidelines and would include any plantings that the City directly or indirectly supports, from street tree plantings, to restoration plantings, having a hand in a tree sale with external partners, etc.)	**Title: Square footage of invasive plants removed**	**Title: Area of open space** (through development redevelopment, or reclamation on city held lands) dedicated to food production or habitat for wildlife. (This may include plantings in plazas, parks, community gardens, and rooftops.) – measured and
Solid Waste (Tyler)	**Title: Waste Diversion Rate (with and without "green waste")**	**Title: Contamination Rate**		