

Board of Supervisors Environmental Committee

February 7, 2017

Conference Rooms 9&10

Board of Supervisors Members Present:

Board Chair Sharon Bulova
Committee Chair Penelope A. Gross, Mason District
Supervisor John Cook, Braddock District
Supervisor John Foust, Dranesville District
Supervisor Cathy Hudgins, Hunter Mill District
Supervisor Jeff McKay, Lee District
Supervisor Dan Storck, Mount Vernon District
Supervisor Linda Smyth, Providence District
Supervisor Pat Herrity, Springfield District
Supervisor Cathy Smith, Sully District

Summary Minutes of Previous Environmental Committee Meeting (October 11, 2016):

<http://www.fairfaxcounty.gov/bosclerk/board-committees/meetings/2016/oct11-environmental-summary.pdf>

February 7, 2017 Meeting Agenda:

<http://www.fairfaxcounty.gov/bosclerk/board-committees/meetings/2017/feb7-environmental-agenda.pdf>

February 7, 2017 Meeting Materials:

<http://www.fairfaxcounty.gov/bosclerk/board-committees/meetings/2017/feb7-environmental-presentations.pdf>

The following is a summary of the highlights of the discussion from the **February 7, 2017** meeting.

Today's meeting was called to order at 10:05 A.M.

After a brief introduction from Supervisor Gross, Committee Chair, the minutes from the **October 11, 2016** meeting were approved.

The first topic on the agenda was a briefing on the status of the fire that broke out at the Covanta Waste-to-Energy facility. James Patteson, Director of the Department of Public Works and Environmental Services (DPWES), indicated that the fire started on the tipping floor and mentioned that tipping floor fires are not uncommon. He explained the operating process from beginning to end. Areas of concern expressed by Supervisor Gross were cost of damage and electrical costs, and responsibility for damage to building? James indicated that more information will be provided to the Board at a later date.

Board Discussion:

- Committee Chair Supervisor Gross asked how long the plant will be out of service and James replied that it was hard to say at this time.
- James shared the names of other energy plants that could help us out while Covanta is shut down.
- Chairman Bulova asked if a flyer could go out addressing air quality.
- James mentioned that the county was working with the Office of Public Affairs (OPA) and looking at what other counties have experienced with air quality following a similar event.
- Supervisor Storck expressed his gratitude and respect for the work of the firefighters, but was disappointed to find out that there aren't air quality monitoring stations in the area.
- Supervisor Gross indicated that the county's four monitoring stations were removed from service due to budget cuts. However, the state continues to operate and maintain a single monitoring station located in the Lee District.
- Supervisor Storck indicated that the Covanta plant needs to be brought back on-line as soon as possible and he was planning to meet with DPWES at a later date to discuss further.

The second topic on the agenda was a briefing by Kate Bennett, who coordinates the county's Municipal Separate Storm Sewer System (MS4) Program, on the status of the county's Total Maximum Daily Load (TMDL) requirements as it relates to the overall MS4 permit requirements. A detailed presentation is provided in the meeting materials link shown above.

Board Discussion:

- Supervisor McKay asked about comments received and if they would be responded to.

- Kate indicated that staff intends to submit the action plans, which include the response to comments, to DEQ for their review and approval and once approved will post the plans on the public website and notify the Board.
- Chairman Bulova expressed concerns about development in areas without sewer service that were using alternative septic systems.
- James Patteson explained these are regulated by the Health Department – and require individual engineering reports.
- Supervisor Gross noted that the committee needs more details and Randy Bartlett offered to contact the Health Department and request they provide more information regarding the alternative septic systems.
- Supervisor Storck asked about sanitary sewer systems and if they were required to comply?
- Randy indicated that the system in Mason Neck is the only one in the county and it is not impacted by any local TMDLs. They are permitted and regulated by the State DEQ.
- Supervisor Cook noted that on Page 14 of the presentation under “Chesapeake Bay”, the county should celebrate hitting our targets. Do we have other charts like these for the local TMDLs?
- Kate mentioned that the local TMDLs are harder to quantify because the State does not make individual allocations to each MS4, so we do not have the same specific targets.
- Supervisor Gross agreed this is something to celebrate. It took a lot of effort.
- Supervisor Gross concluded by letting staff know that they did not need direction from the Board and to carry on.

The third topic on the agenda was a briefing by Randy Bartlett, Deputy Director, DPWES, on the county’s Storm water Program Business Plan. A detailed presentation is provided in the meeting materials link shown above.

Board Discussion:

- Supervisor Gross commented on the Steady progress of the program and the need for the Board to continue its support.

The fourth topic on the agenda was a briefing by James Patteson, Director, DPWES, on the need for a Storm water Utility. A detailed presentation is provided in the meeting materials link shown above.

Board Discussion:

- Supervisor Gross indicated that this is a discussion and not a proposal and although there are members of the Board who do not think we need to discuss this topic at this time, there are other members who wish to have the discussion.
- Supervisor Foust mentioned that the presentation seemed to portray a success with the existing funding structure and questioned whether a discussion was needed at this time.

- County Executive Ed Long mentioned that the program got started without using a Utility and staff just wanted the Board to be aware of some of the other options for funding the program and what other communities are doing.
- James Patteson mentioned that the current system is working. This is an equity question – who pays?
- The consensus of the committee was to not pursue a utility at this time.

The fifth topic on the agenda was a briefing by Randy Bartlett, Deputy Director, DPWES, on public maintenance of private storm water management facilities. A detailed presentation is provided in the meeting materials link shown above.

Board Discussion:

- Randy briefed the Board’s committee on how a program would potentially work, including the costs and benefits of the program and showed where staff had attempted to incorporate the Board’s comments from previous meetings.
- Supervisor Smyth suggested that the Board first consider a pilot.
- The decision of the committee was to try a couple of pilot projects and ask staff to report back to the committee.

The sixth topic on the agenda was a briefing by Troy Shaw, Chief, Forest Pest Management, Urban Forest Management Division, DPWES, on a Forest Health Approach, which would expand our monitoring of the forest lands in Fairfax County. The new approach would allow for a better understanding of how our forest are changing over time and allows us to accomplish our mission. Other agencies such as the Park Authority and Storm Water Planning will benefit from this project. Planning meetings between the three agencies show promise for this to be a valuable project. The one time cost of this project is \$78,000. A detailed presentation is provided in the meeting materials link shown above.

Board Discussion:

- Troy Shaw had indicated in the presentation that the Forest Pest Program is required to obtain Board of Supervisors approval each year for its work plan, which included an Urban Forest Health and Value Assessment.
- Chairman Bulova asked if the Forest Pest program could use its funds for such a program.
- Troy indicated that staff had consulted with the Office of the County Attorney prior to presenting to the Board’s committee.
- Supervisor Herrity asked if the staff was paid out of the Pest Management fund.
- Troy answered yes – 5 full time and 2 part time. Just the Pest Group – not all of Urban Forestry.
- Chairman Bulova suggested that monitoring the health of our forest and neighborhood is very good.

- Supervisor Storck also mentioned that from what was presented, the program appeared to be the right way to go. Education pieces are powerful.
- Supervisor McKay also supported the new approach and mentioned that the Board received a petition that was on fall cankerworm spraying and asked if the county was planning to respond to the petition?
- Troy indicated that staff would be responding to the petition.

The seventh and final topic on the agenda was a briefing by Michael McGrath, Director, Wastewater Treatment Division, DPWES on the status of the county's Biosolids program. A detailed presentation is provided in the meeting materials link shown above.

Board Discussion:

- Supervisor Gross mentioned that based on the presentation and discussions staff should move forward as proposed with two options pending DEQ determination.
- Supervisor Storck asked if the emissions cap would limit the future plant to the current volume and Mike responded "no".
- Supervisor Gross said that it's possible that staff will have an opportunity to move forward on some things and not on others.

Meeting adjourned at 12:00 p.m.

Next Meeting is Tuesday, May 23, 2017, at 10:00 a.m.



Environmental Excellence: A 20-Year Vision

Recommendation

Kambiz Agazi, Environmental Coordinator

May 23, 2017

Today's Presentation

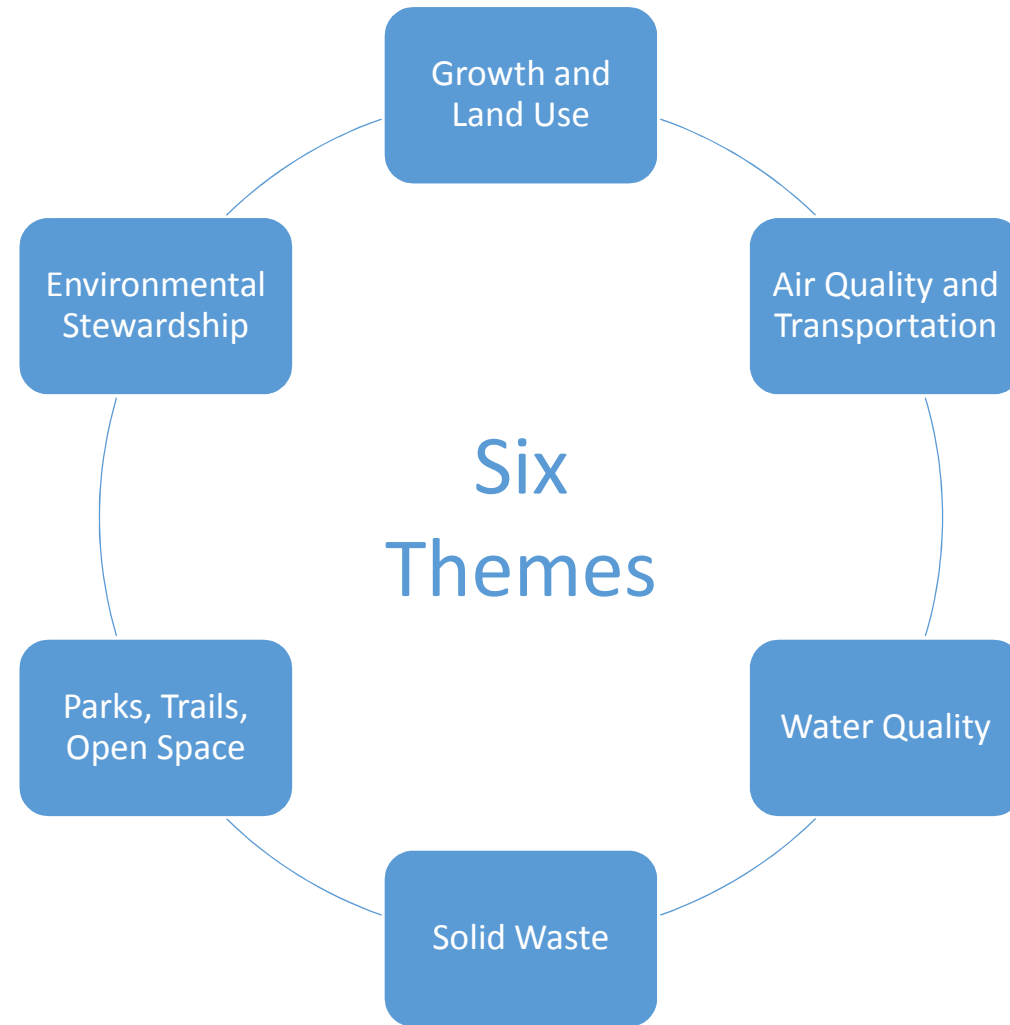
1. Recap of Environmental Vision – 2004 (revised 2007)
2. Board Directive to Review and Update Environmental Vision
3. Approved Process, Schedule and **Community Outreach**
4. Community Outreach Highlights
5. Draft Vision Highlights
6. Next Steps
7. Staff Acknowledgments
8. Discussion/Questions

Environmental Vision – 2004

- ▶ Adopted by the Board on June 21, 2004; revised March 26, 2007
- ▶ Broad vision—not a plan
- ▶ The Board shaped its Vision to protect and enhance the environment around two principles:
 - 1) Conservation of our limited natural resources must be interwoven into all government decisions.
 - 2) The Board must be committed to provide the necessary resources to protect our environment.

Please see

http://www.fairfaxcounty.gov/living/environment/eip/bos_environmental_agenda.pdf



Approved Process, Schedule and Community Outreach

Approved Update Process

- ▶ October 6, 2015 Board Matter
 - ▶ Review the existing vision and report back to the Board of Supervisors (Board) with suggestions and a timeline for community and Board involvement.
- ▶ May 24, 2016: BOS Environmental Committee Review and Endorsement
- ▶ June 7, 2016 : Kick-off w/Extensive Outreach
- ▶ **June 2016: Online Public Survey - 285 responses**
- ▶ **July 2016: Three Public Meetings - 66 participants**
- ▶ November 2016: Initial Draft Vision
- ▶ December 2016 - January 2017: EQAC/Board Member Office Review
- ▶ **February - March 2017: Public Comment on Draft Vision - 620 individual comments**
- ▶ March-April 2017: Revise Draft Vision
- ▶ April 2017: Present Vision Update Process and February Draft to the Planning Commission's Environment Committee
- ▶ May 2017: Present Revised Draft Vision to the Board of Supervisors Environmental Committee

Approved Update Schedule

	2016												2017					
	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J
Approval of Process & Organization																		
Public Survey & Facilitated Meetings																		
Review of Core Vision Services																		
Review of Findings & Text Recommendations																		
Online Review of Draft Report, by Public																		
Refinement of Draft Report																		
Preparation of Final Report																		
Adoption by BOS																		

Community Outreach Highlights

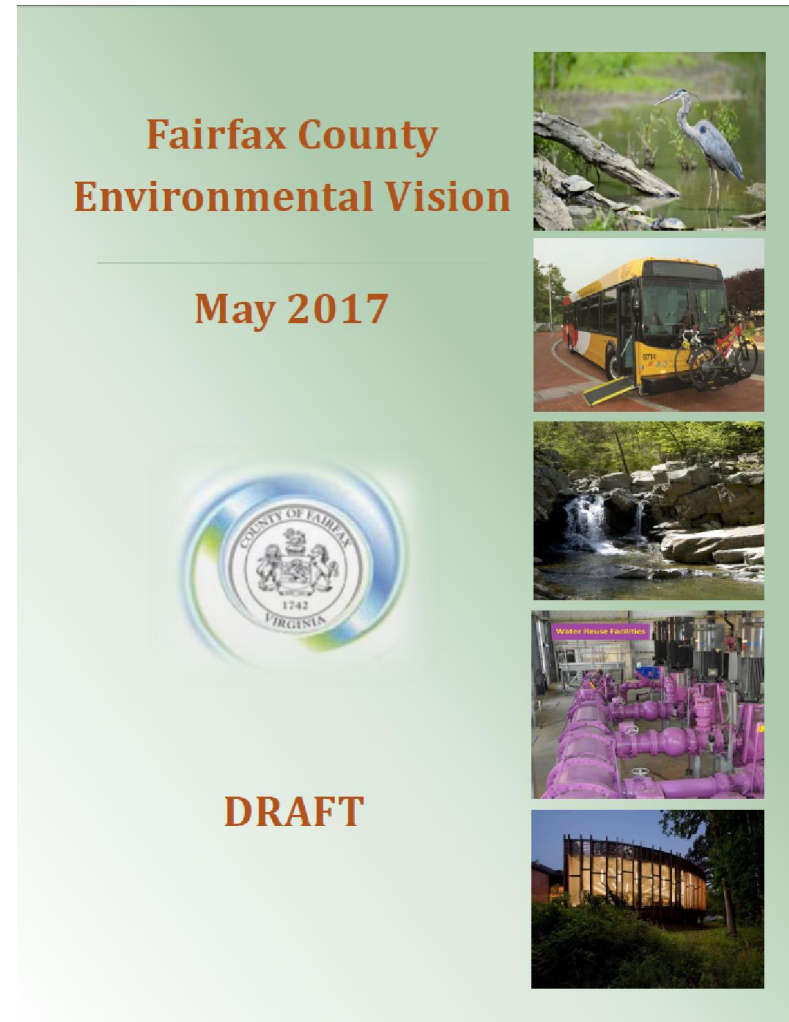
1. June 2016: Kick-Off
2. Dedicated web page – <http://www.fairfaxcounty.gov/living/environment/environmentalvision.htm>
3. News Release/Media Outreach
4. Use of Social Media
5. June 2016: Public Survey
6. Outreach to dozens of organizations/groups
7. Available online for everyone to access
8. July 2016: Facilitated Public Meetings
9. February 2017: Posting of draft report*
10. February/March 2017: Public Comment opportunity

*Draft report was reviewed with Board Member offices and EQAC prior to February 2017 posting

Draft Vision Highlights

Overview

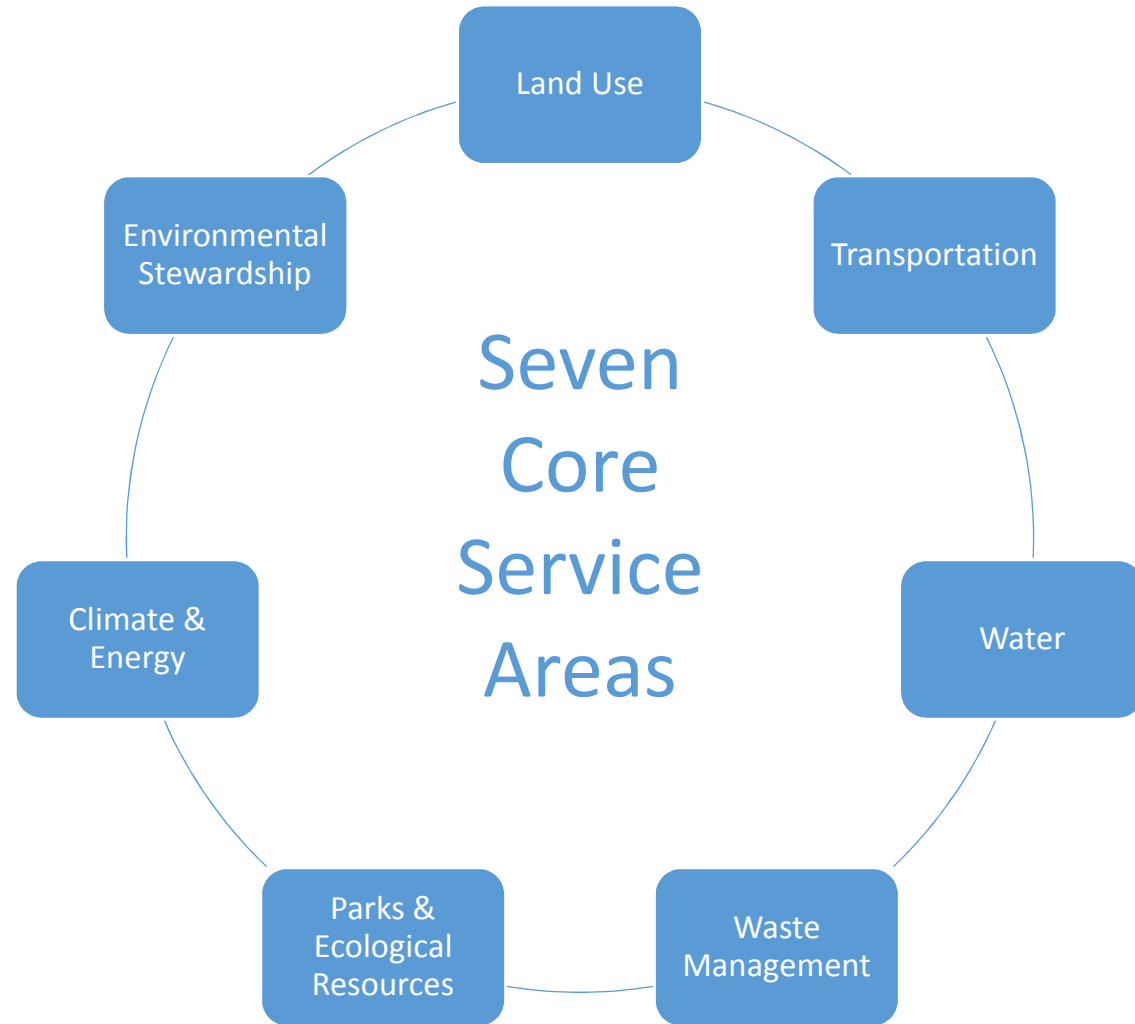
- ▶ Preface
- ▶ Vision Summary
- ▶ A Record of Commitment
- ▶ Protecting and Enhancing Our Environment
 - ▶ Land Use
 - ▶ Transportation
 - ▶ Water
 - ▶ Waste Management
 - ▶ Parks & Ecological Resources
 - ▶ Climate & Energy
 - ▶ Environmental Stewardship
- ▶ Conclusions



Draft Vision Highlights

What's New?

- ▶ Themes vs. Core Service Areas
- ▶ Climate and Energy Core Service Area
- ▶ Board Vision for each core service area
- ▶ Focused objective statements to support the Vision
- ▶ Objective statements reinforce and support existing Board Policy.



Land Use

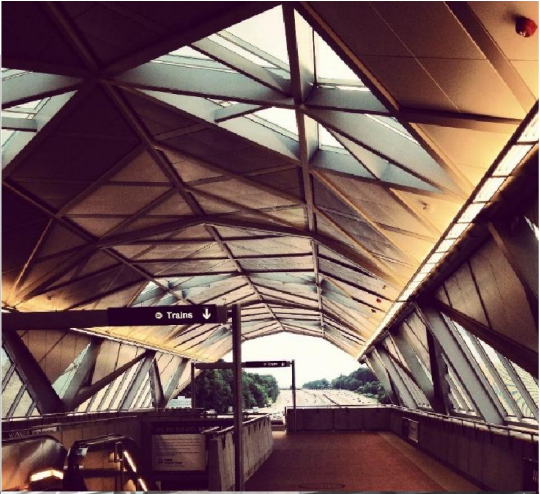


Mosaic District —Merrifield



Georgelas graphic—Tysons West/Spring Hill

Transportation



Water



Waste Management



Parks & Ecological Resources



Climate & Energy



Thermal Camera Loan Program



www.solarizefairfaxcounty.org

An renewable energy initiative of the nonprofit Local Energy Alliance Program (LEAP), the Northern Va. Regional Commission, and local partners



Energy Action
Fairfax
Step Up to Savings

A green graphic consisting of a vertical line that steps up three times to the right, ending in a two-prong electrical plug.

COOL
COUNTIES
TOGETHER WE KEEP THE NATION COOL!

A graphic of three blue curved arrows forming a clockwise circle around the word "COOL".

Environmental Stewardship



Draft Vision Next Step

1. Board Environmental Committee endorsement of Draft Vision
2. Staff to bring forward an Action Item in June for Formal Board Adoption

Staff Acknowledgments

Coordinating Team

Kambiz Agazi
Noel Kaplan
Leonard Wolfenstein
Shannon Curtis
Erica Carter
John Stokely
Susan Hafeli
Laura Grape
Brian Worthy
Keith Cline
Marguerite Guarino

Steering Committee

Dave Molchany
John Kellas
Randy Bartlett
Mark Moffatt
Cindy Walsh
Marianne Gardner
Denise James
Coordinating Team



Questions?



Planning Commission Review and Recommendation: MITRE Building Energy Technology Report

Recommendation

Noel Kaplan, Senior Environmental Planner
Department of Planning and Zoning

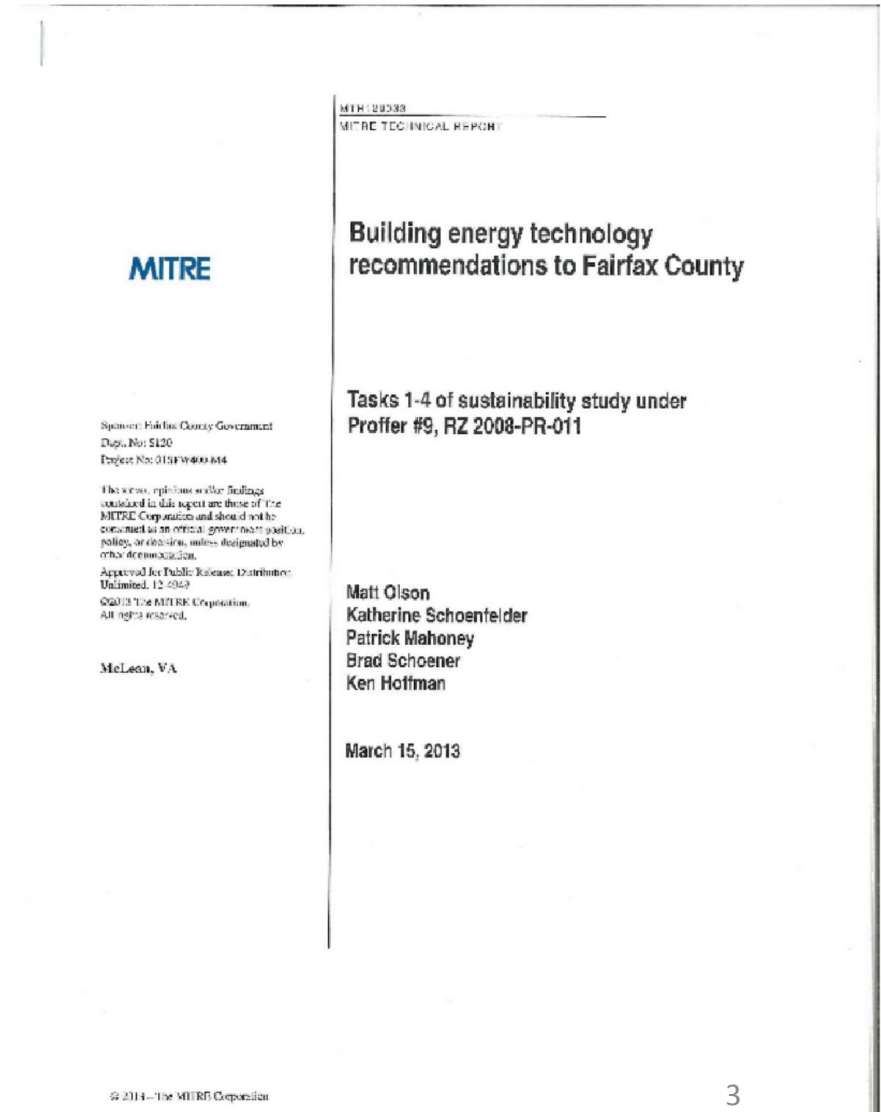
May 23, 2017

Today's Presentation

1. MITRE's Building Energy Technology Report
2. Planning Commission Review Process
3. Planning Commission Recommendations
4. Next Step

MITRE's Building Energy Technology Report

- Prepared per proffer commitment
- Report's focus
- MITRE recommendations
 - Performance over prescription
 - Designed to Earn the ENERGY STAR®
 - Benchmarking and reporting



Planning Commission Review Process

- Planning Commission Environment Committee
 - 16 meetings over three years
 - Staff perspectives on MITRE's recommendations
 - Stakeholder comments
 - Committee views and recommendations

Planning Commission Recommendations

Prescription vs. Performance

- Agree with MITRE that technological prescriptions should not be established.
- Support for engagement of applicants should they express interest in specific technologies.
- Possible future reconsideration of solar and significantly more energy-efficient approaches.

Planning Commission Recommendations

Designed to Earn the ENERGY STAR®

- Agree for a need for a stronger energy emphasis in the green building policy.
- Disagree that a specific implementation approach should be endorsed.
- Support for a Plan amendment to better highlight energy in the green building policy.

Planning Commission Recommendations

Benchmarking and Reporting

- Broad support for energy tracking and evaluation for all buildings.
- Concern about numerous challenges and limitations associated with seeking related commitments during the zoning process.
- Opposition to public disclosure of energy tracking data.
- Possible reconsideration in the future.

Next Step

- BOS authorization of a Policy Plan amendment consistent with the Planning Commission recommendation.



Cost Share Agreement for Wet Weather Flow Mitigation in Alexandria Renew Wastewater System

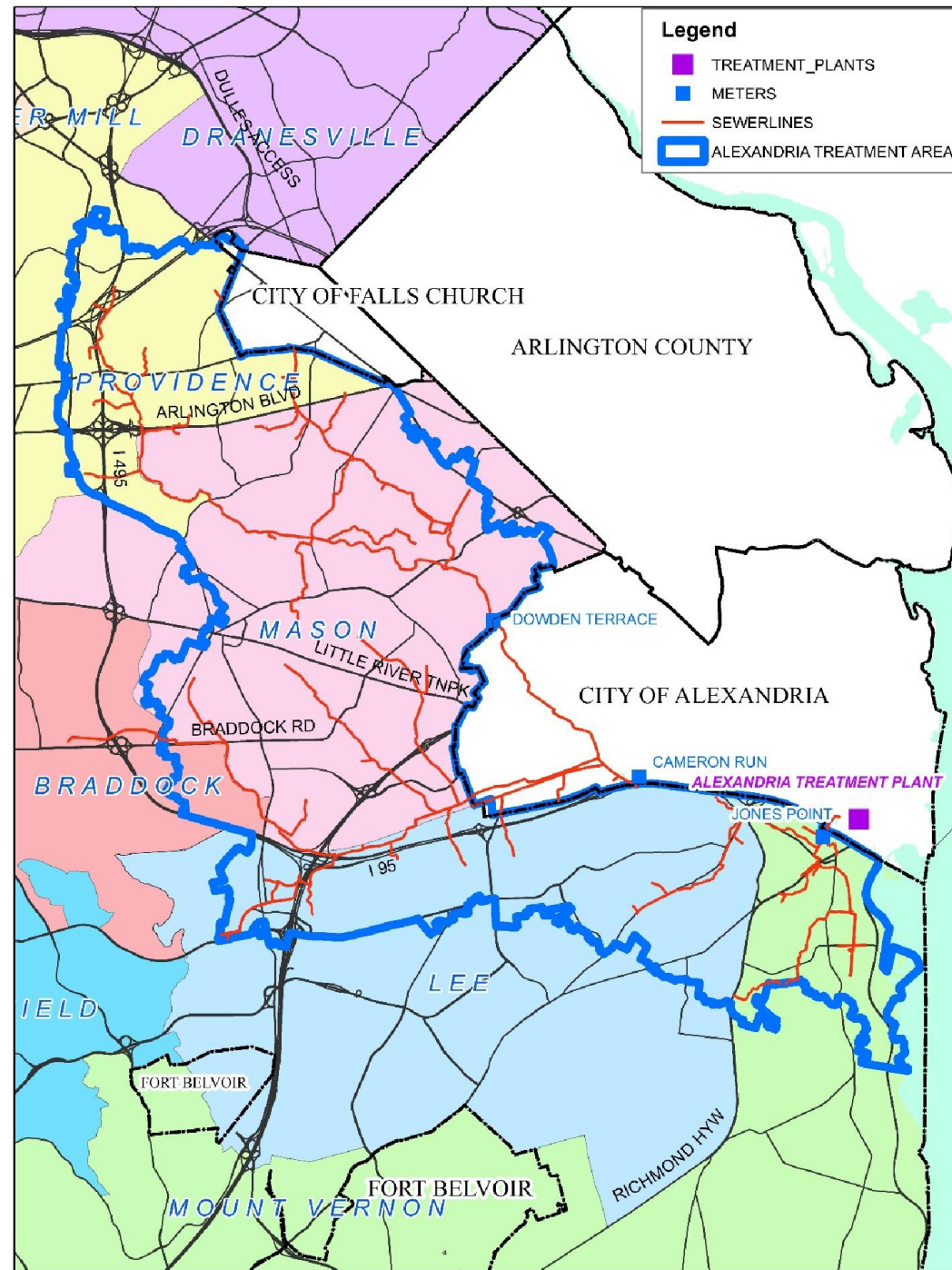
Recommendation

Shahram Mohsenin, Director
Wastewater Planning & Monitoring Division
Department of Public Works & Environmental Services
May 23, 2017

Background:

- Alexandria Sanitation Authority (dba Alexandria Renew Enterprises or AlexRenew) serves Alexandria & FFX County
- County's capacity - 32.4 MGD (60% of 54 MGD plant)
- County has separate sewer system
- City has combined & separate sewer system
- City is required to reduce combined sewer overflows (CSO)
- AlexRenew is required to minimize wet weather sanitary sewer overflows (SSO) from City & County

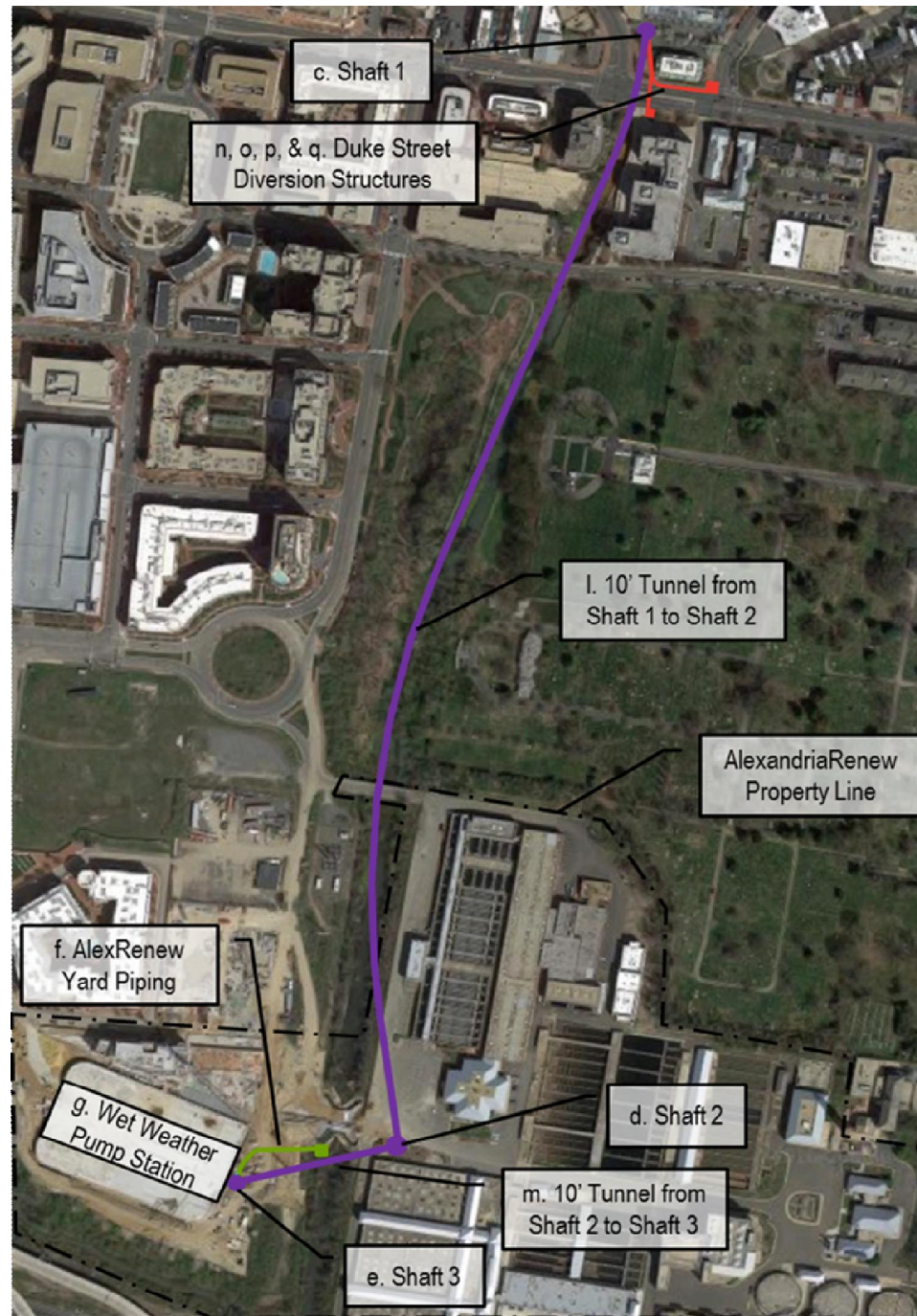
AlexRenew Service Area:



Collaboration:

- County, City & AlexRenew have been working several years on wet weather flow issues
- Initially SSO & CSO were to be addressed separately
- Studies confirmed efficiencies in addressing them together
- Joint project includes:
 - A tunnel, pumping station, expansion of preliminary treatment, CSO 003 and 004 diversion structures, & associated facilities

Schematic of Joint Project:



Project Cost:

- Estimated capital cost \$85.2M
 - County \$29.4M (35%)
 - City \$55.8M (65%)
 - Division of capital cost
 1. CSO related 100% City
 2. Joint use 60% County & 40% City
 3. Tunnel volume 19% County & 81% City
 - Division of O&M Cost
 - CSO related 100% City
 - Joint use based on metered flow

What if County were to mitigate its flows separately?

- Scenario 1 – Control 5-yr. storm wet weather
 - 7.31 MG storage \$25.6M & challenges of locating a raw sewage tank near Alexandria
 - Pump station \$5.5M
 - Subtotal \$31.1M
 - 3-ac land /easement near Alexandria
 - O&M & odor issues
 - Minimize SSOs not eliminate

What if County were to mitigate its flows separately?

- Scenario 2 – Control 25-yr. storm wet weather
 - 21.06 MG storage \$73.3M & challenges of locating a raw sewage tank near Alexandria
 - Pump station \$10.5M
 - Subtotal \$84.2M
 - 7-ac land /easement near Alexandria
 - O&M and odor issues
 - Eliminate SSOs

Summary:

- Joint project** \$29.4M & lower \$O&M
- Scenario 1: 5-yr. storm \$31.1M + 3-ac land /easement
- Scenario 2: 25-yr. storm \$84.2M + 7-ac land /easement
 - ** Joint project is equivalent to Scenario 2
- 20% cost increase cap in agreement

Staff Recommendation:

- Bring cost share agreement to Board meeting for authorization to execute as soon as possible



Community Energy Initiatives

Update

Jessica Lavender, Utilities Analyst

May 23, 2017

Agenda for Today



- Energy Homepage
- Energy Action Fairfax
- Green Business Partners Program
- Energy Data Webpages



Efficient energy use is beneficial to both the environment and your wallet. The websites below illustrate a variety of Fairfax County energy efficiency initiatives as well as energy saving tips for home, work, or on the road. For the latest information, visit our [Fairfax County Energy News](#) page.

Fairfax County Initiatives

- [Energy Data Webpages](#)
- [Energy Policy](#)
- [Green Building](#)
- [Cool Counties](#)
- [Sustainability Initiatives Report](#)
- [Building a Sustainable Future - Energy Efficient Fairfax County](#) 



Resources for Home or Work

- [Green Business Partners Program](#)
- [Energy Action Fairfax](#)
- [Virginia Energy Sense](#)
- [ENERGY STAR](#)
- [Department of Energy's EnergySaver Program](#)
- [US Energy Information Administration Guide to Understanding Energy](#)
- [Fairfax Water Conservation](#)



Resources for on the Road

- [Commuting in Fairfax County](#)
- [RideSources Program: Car/Van Pools](#)
- [Employer Services Program](#)
- [SmartBenefits](#)
- [TeleworkVA](#)
- [Fuel Economy](#)



Herndon-Monroe Park & Ride Saves 75% on Electricity

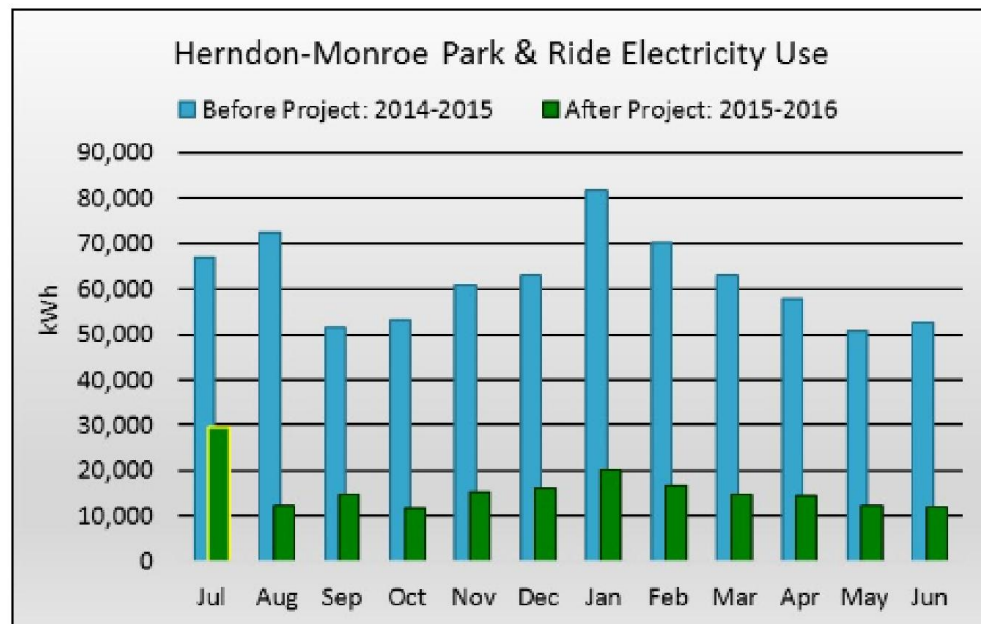
May 1, 2017

The [Herndon-Monroe Park & Ride](#) is located between the Dulles Toll Road and Sunrise Valley Drive in Herndon. It features 1,745 free parking spaces, a covered parking garage, a kiss & ride/slug line lot, access to various [Fairfax Connector](#) routes, and a Connector Store.

In 2015, Fairfax County completed a lighting retrofit at the Herndon-Monroe Park & Ride garage. Instead of just replacing the fixtures one-for-one, the entire system was redesigned to maximize energy savings and improve light distribution. Over 600 metal halide lights were removed and replaced with less than 500 LEDs.

LEDs, or light emitting diodes, use about one third the energy of metal halides. The Herndon-Monroe Park & Ride project achieved additional savings with daylighting, occupancy, and bi-level controls that were integrated into most of the fixtures. Daylighting controls turn lights off when outdoor light levels are adequate, and occupancy sensors turn lights off when no one is present. The bi-level feature enables lights to be dimmed to 50% rather than completely turned off in areas where safety is a concern.

The graph below shows monthly electricity use for one year before and after the project. July of 2015 is highlighted in yellow to identify when the retrofit was performed. As the graph shows, the Herndon-Monroe Park & Ride uses about 75% less electricity than it did before the retrofit. LEDs achieve additional savings from maintenance costs, since LEDs are typically rated to last 100,000 hours (about 7 times longer than metal halides).



www.fairfaxcounty.gov/energy/energyactionfairfax

Energy Action Fairfax

Bringing Neighbors Together to Save Energy and Money

Many county residents spend over \$200 dollars each month in home energy costs. Each step you take to become more energy efficient will reduce your energy use . . . and your costs.

FOR A LIMITED TIME: Solarize Fairfax County is underway April 18 through June 30. Visit www.solarizefairfaxcounty.org to learn more about this community campaign to reduce the cost and complexity of investing in solar energy.



**Thermal Camera
Loan Program**



Informational Videos



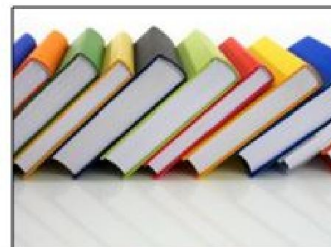
Energy Saving Tips



**Home Energy
Assessment Information**



**Events & Success Stories
in Your Community**



Other Resources

Energy Action Fairfax brings neighbors together to save energy.

Each step you take will help you reduce your energy use...and your costs.

For more information, email energyactionfairfax@fairfaxcounty.gov.

Solarize Fairfax County



- Solar panel discount & assistance
- Partners: NVRC & LEAP
- April 18 – June 30
- 2 county info sessions
- Almost 800 sign-ups
- 5 contracts signed to date
- www.solarizefairfaxcounty.org

Thermal Camera Loan Program

- Borrow a thermal camera from any county library branch
- Launched Earth Day, April 22
- > 550 people on waiting list
- Helps residents spot hot and cold areas in their homes
- www.fairfaxcounty.gov/energy/energyactionfairfax/cameras.htm



ART Conference Green Lounge



- April 29 conference for the Administrative Resource Team
- FEEE Green Lounge and presentation
- <http://fairfaxnet.fairfaxcounty.gov/Dept/County/FEEE>

Home Performance Get Together

- February home energy assessment and community gathering

“Since many of my neighbors have similar units of the same age and construction quality, they were able to use some of the findings and incorporate them into making their home more energy efficient. It gave us an opportunity to discuss our observations as home owners and share in the solutions that were provided by the auditor. It was time well spent!”

www.fairfaxcounty.gov/energy/greenbusiness

Green Business Partners Program

FOR A LIMITED TIME: Solarize Fairfax County is underway April 18 through June 30. Visit www.solarizefairfaxcounty.org to learn more about this community campaign to reduce the cost and complexity of investing in solar energy. Residents and businesses are eligible.

The Fairfax County Green Business Partners Program recognizes local businesses that are leaders in environmental stewardship. These businesses are integrating sustainability principles like energy conservation, waste reduction, and smart water use into their day-to-day operations. Visit the [Green Business Directory](#) to find a Partner in your area and learn about ways to save resources and money.

Membership is free and open to any business in Fairfax County. Refer to the [Membership Benefits](#) and [Become a Green Business Partner](#) pages for more information. Helpful links to get you started on operating a green business, including available incentives, are provided on the [Green Business Resources](#) page.



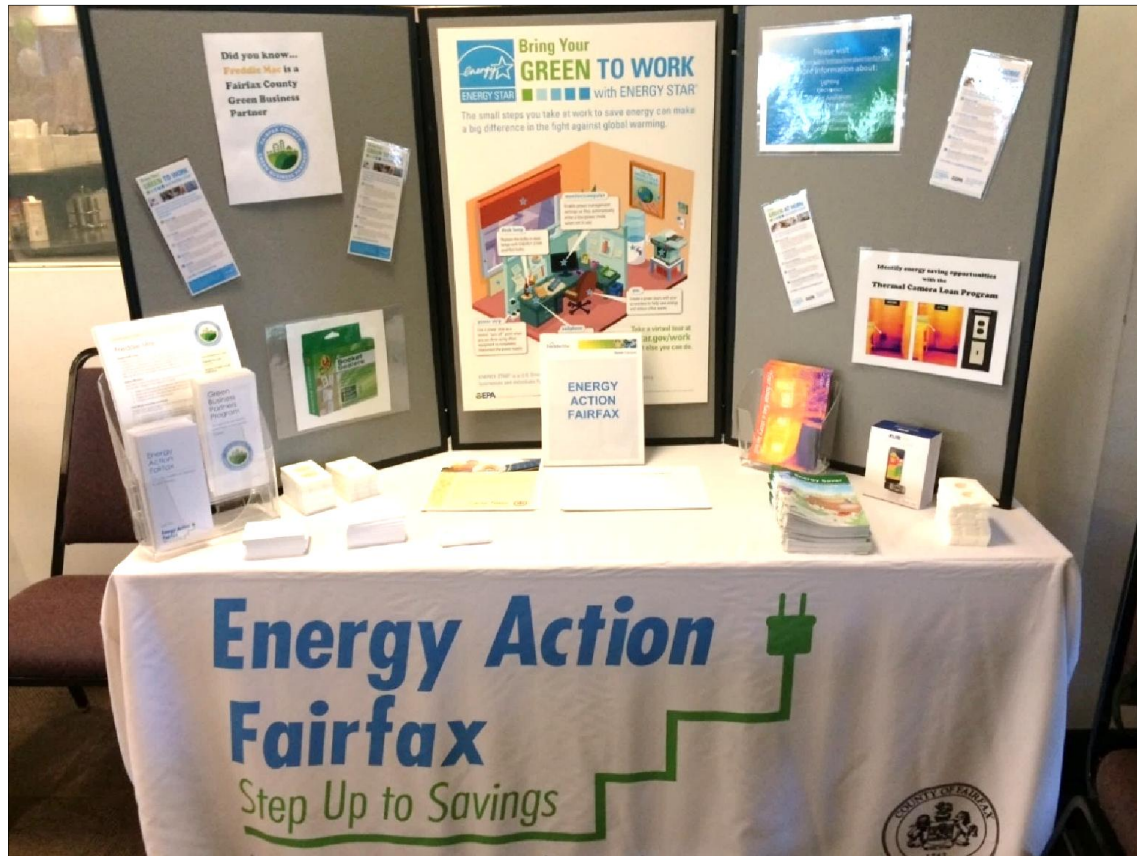
Questions? Ideas? We want to hear from you. Contact Susan Hafeli at 703-324-5903, TTY 711, or send an email to greenbusiness@fairfaxcounty.gov.



Current Partners

- AvalonBay Communities, Inc.
- Boston Properties
- Brookfield Office Properties
- Carr Properties
- Compass Group
- COPT
- Deltek
- ENERActive Solutions
- Founding Farmers
- Freddie Mac
- Healthy Buildings
- Hilton Worldwide
- Inova
- JBG
- KPMG
- KTA
- MOM's Organic Market
- Northern Virginia Association of Realtors (NVAR)
- PNC Financial Services Group
- Regency Centers
- Reston Association
- RTEC Treecare
- Sears
- Target

Freddie Mac Earth Day Fair



- April 18 booth at Freddie Mac headquarters in Tysons

www.fairfaxcounty.gov/energy/energydata

Energy Data Home

Fairfax County's commitment to environmental and corporate stewardship is demonstrated by policies, programs, and projects that reduce the electricity and natural gas used in county buildings and operations. Reducing the amount of energy used saves on the county's utility bills while also avoiding the emission of greenhouse gases.

Fairfax County has been tracking its electricity and natural gas consumption since 2006. Select the buttons below to learn more about the county's overall energy use, service area energy use, and the energy use of featured building categories.

County Overall



Service Areas

Government Buildings



Public Works



Parks



Housing & Human Services



Featured Building Categories

Offices



Libraries



Public Safety Facilities



Correctional Facilities

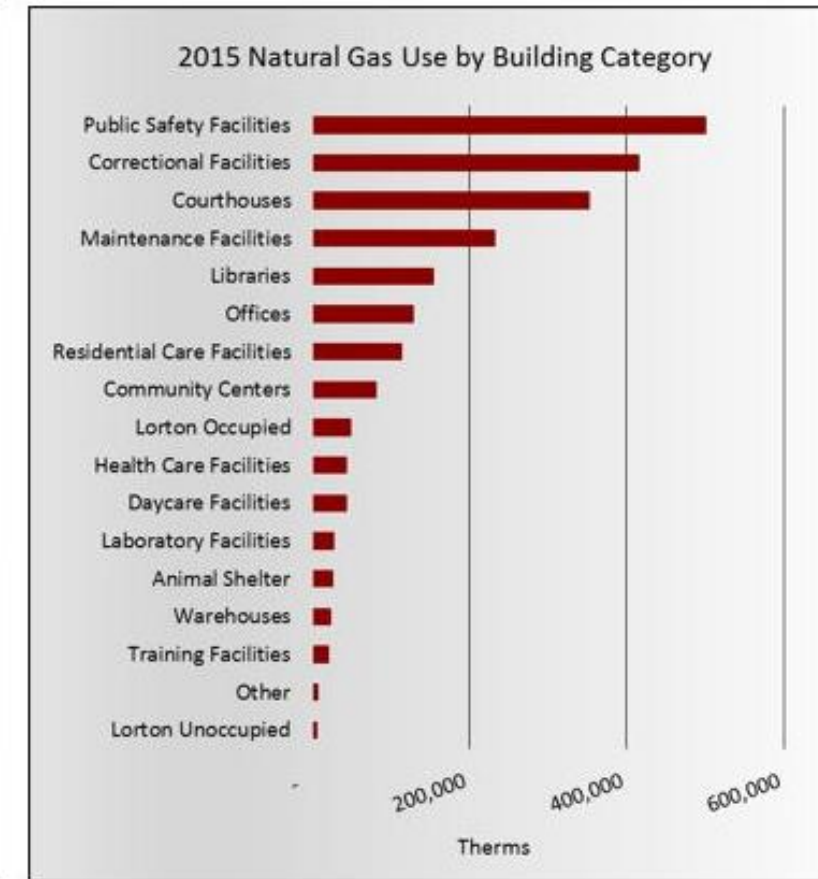
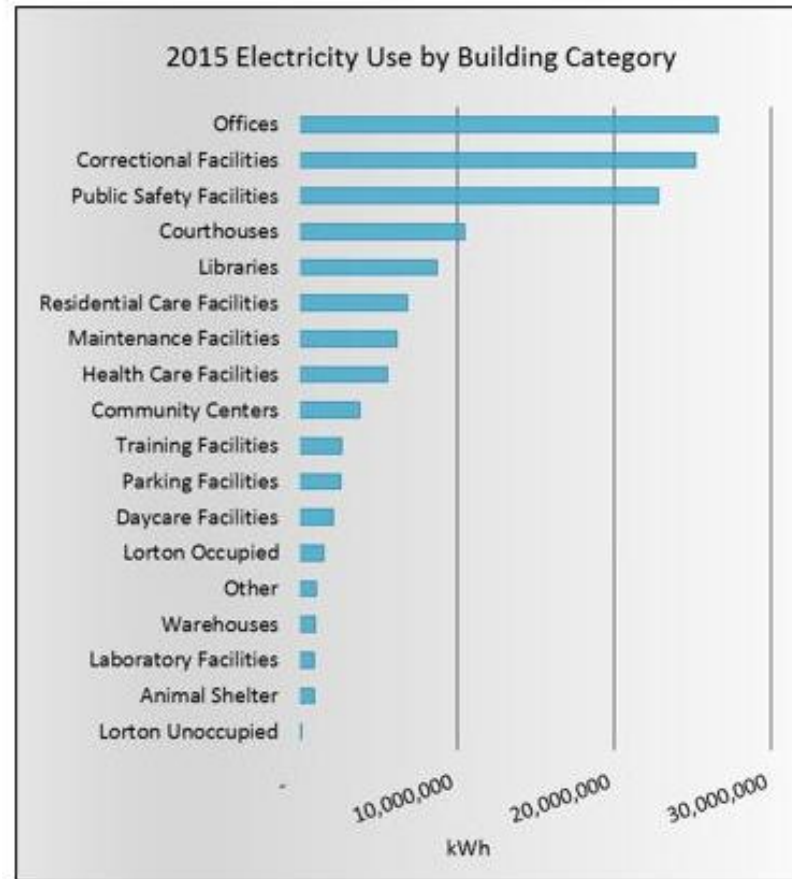


RECenters



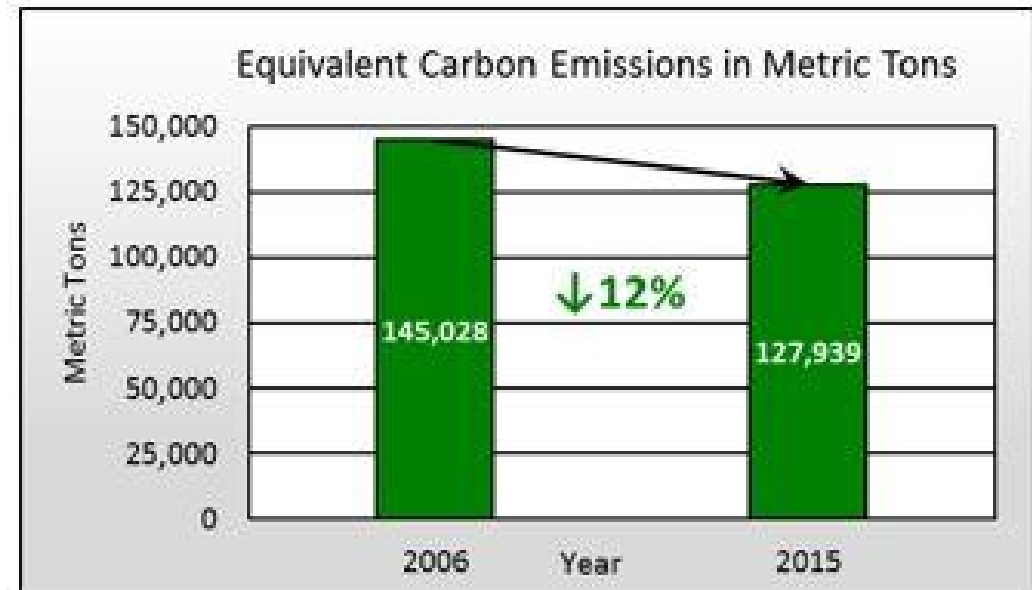
Energy Data Webpages Phase 2

- November 2016 FMD Building categories added
- 5 categories featured



Energy Data Webpages Phase “2.5”

- February – added equivalent CO₂ graphs and downloadable data tables



[Download Data Table](#)

Coming Soon...

- Green Business Partners Program
 - Opportunities for small businesses
- Energy Data Webpages
 - Phase 3



THANK YOU

Jessica.Lavender@fairfaxcounty.gov

703-324-5955



Energy Management of Fairfax County Government Buildings

Update

José A. Comayagua Jr, Facilities Management Department, Director
Peter Shogren, Facilities Management Department, Assistant Director

May 23, 2017

Glossary of Terms

- **BEMS:** Building Energy Management System
- **BAS:** Building Automation System
- **Building Commissioning:** Process of verifying, in new construction, all (or some, depending on scope) of the building subsystems - mechanical (HVAC), plumbing, electrical, fire/life safety, building envelopes, lighting, etc.
- **Building Re-commissioning:** Process to improve the efficiency of an existing building's equipment and systems. It can often resolve problems that occurred during design or construction, or address problems that have developed throughout the building's life as equipment has aged, or as building usage has changed
- **Kbtu:** Kilo British Thermal Unit. Unit of measurement for energy use
- **Kwh:** Kilo Watt-hour. Unit of measurement for electricity use
- **kdTH:** Kilo Dekatherm. Unit of measurement for natural gas use
- **KGal:** kilo Gallons: Unit of measurement for water use

New Energy Management Division

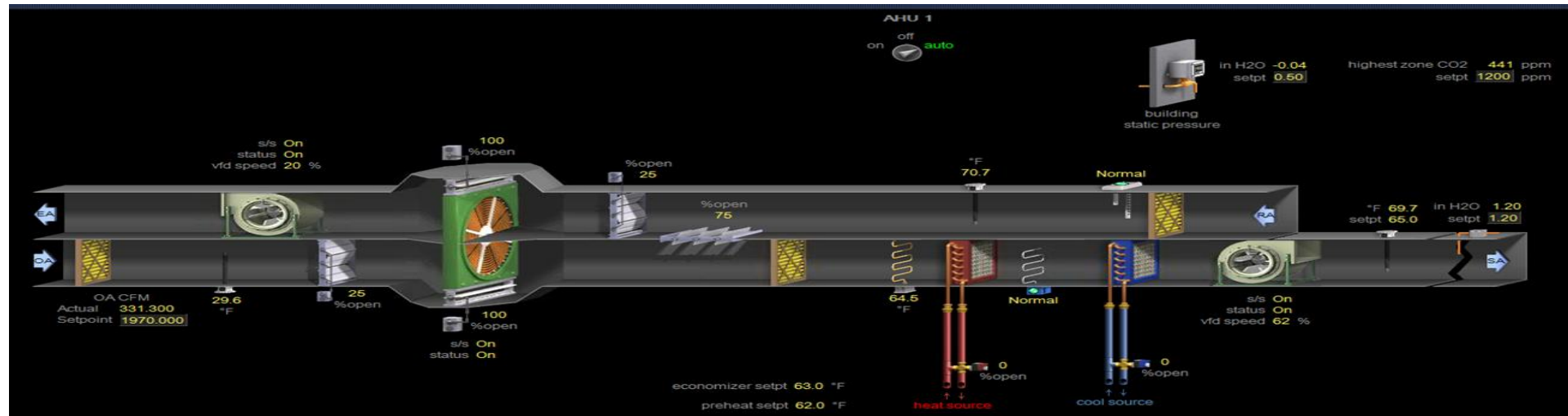
Strategic comprehensive energy management plan includes:

1. Set targets/goals
2. Energy use profile
3. Measure/benchmark current energy consumption
4. Develop public access format for utilities
5. Develop strategic action plans for improvement
6. Implement projects
7. Track, measure, and report
8. Train, educate, and celebrate

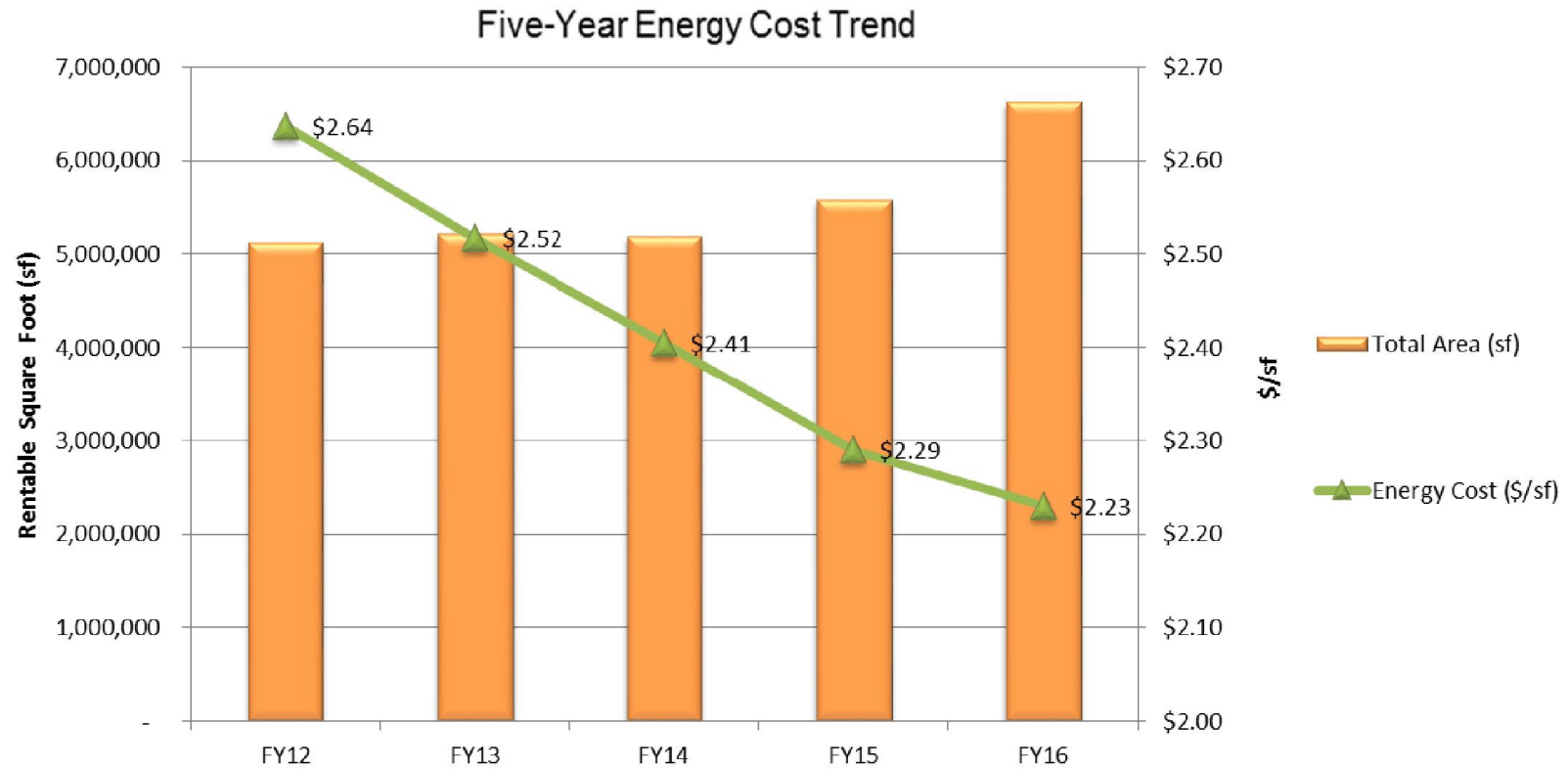
What We Do: Energy Management Division

Energy Conservation Strategies Currently Include:

- Building Energy Management Systems (BEMS) maintenance and retro commissioning
- Utility contracts and systematic utility bill review
- “Energy Cap” energy tracking software - data analysis
- Temperature/humidity and scheduling/demand management in County buildings
- Review new building designs
- Building systems replacement, specify and manage energy projects

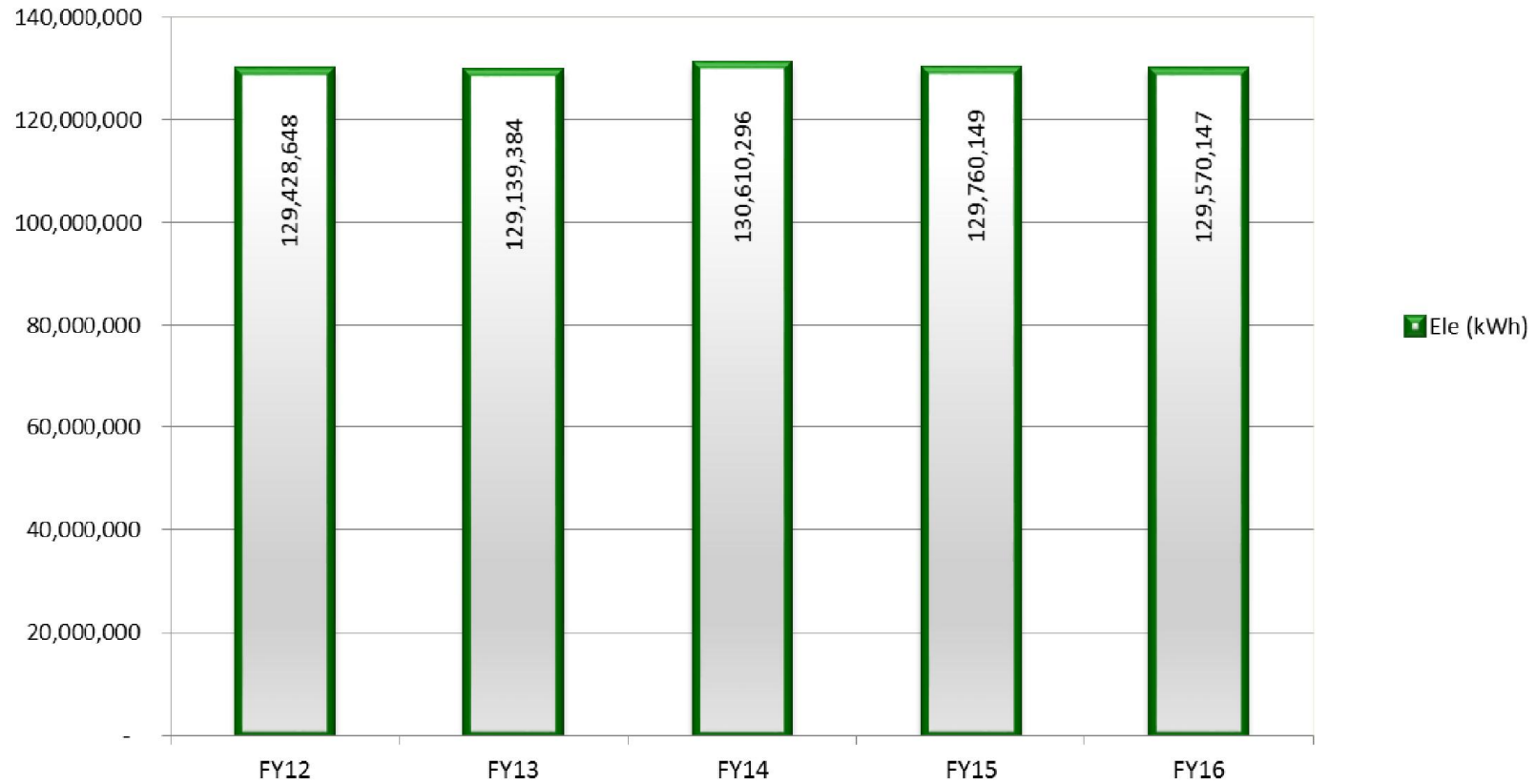


Energy Management



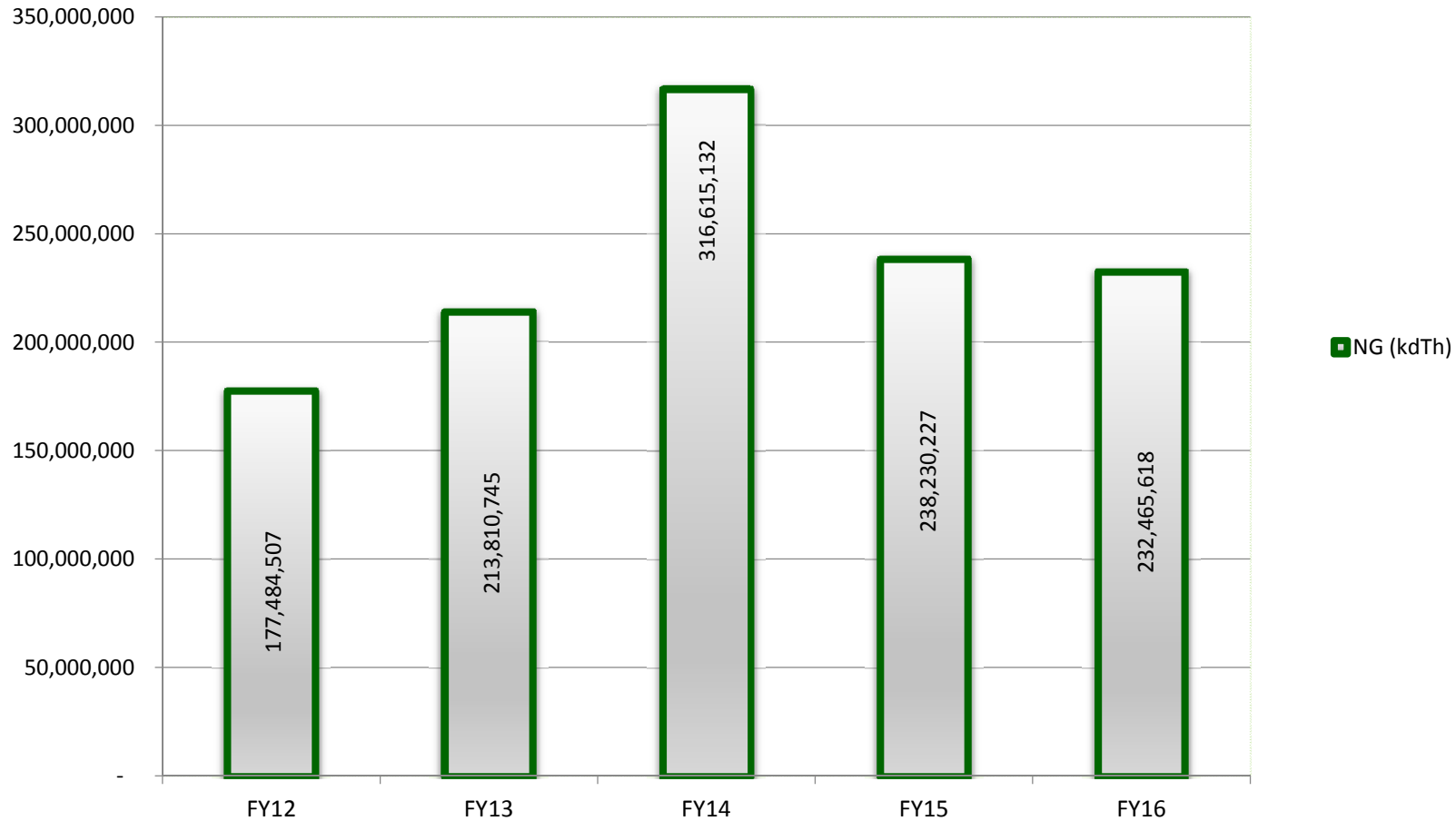
Energy Management

Five-Year Electricity Consumption Trend



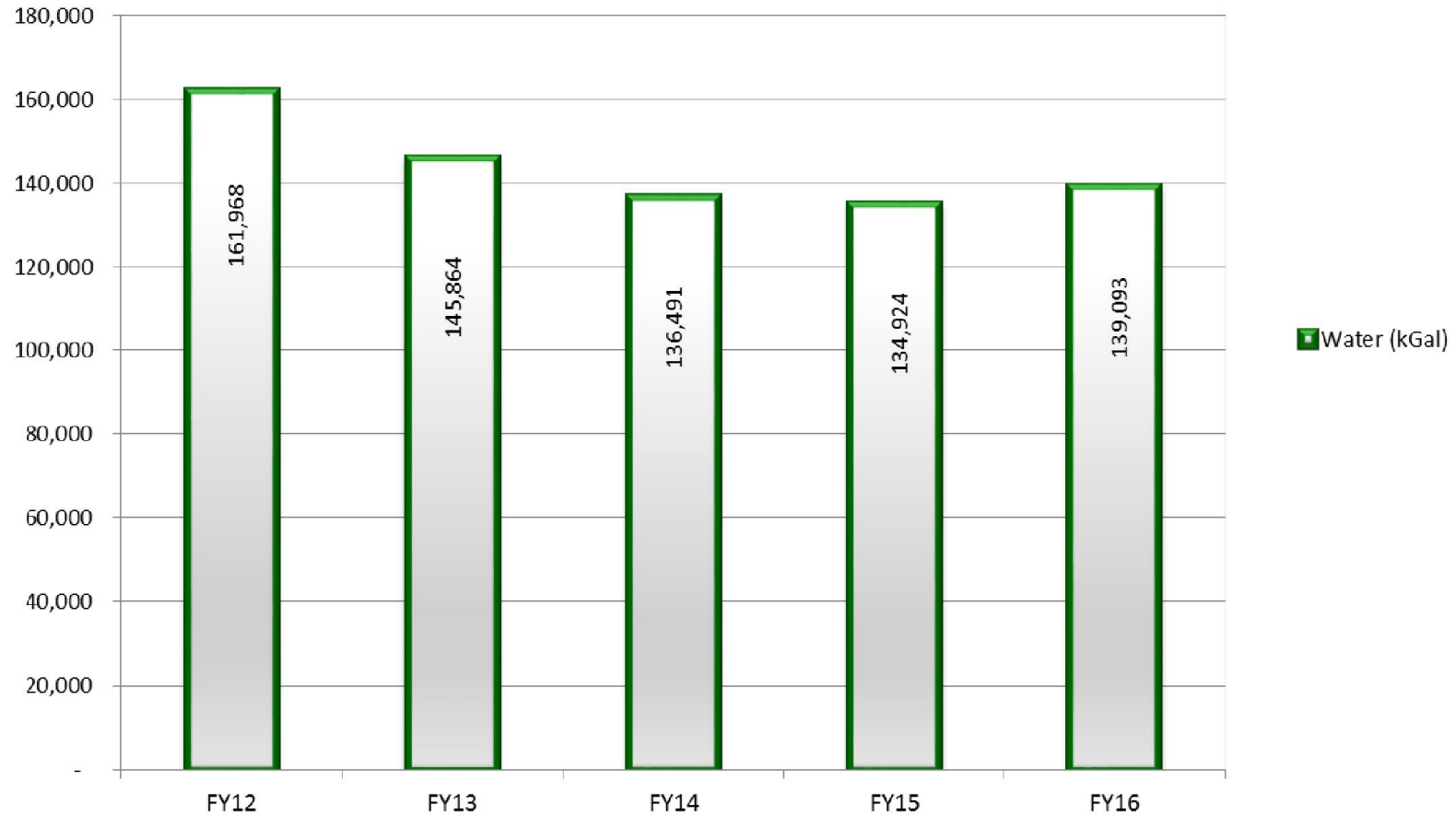
Energy Management

Five-Year Natural Gas Consumption Trend



Energy Management

Five-Year Water Consumption Trend





Questions?



DEQ Inspection of the County's MS4 Program

Update

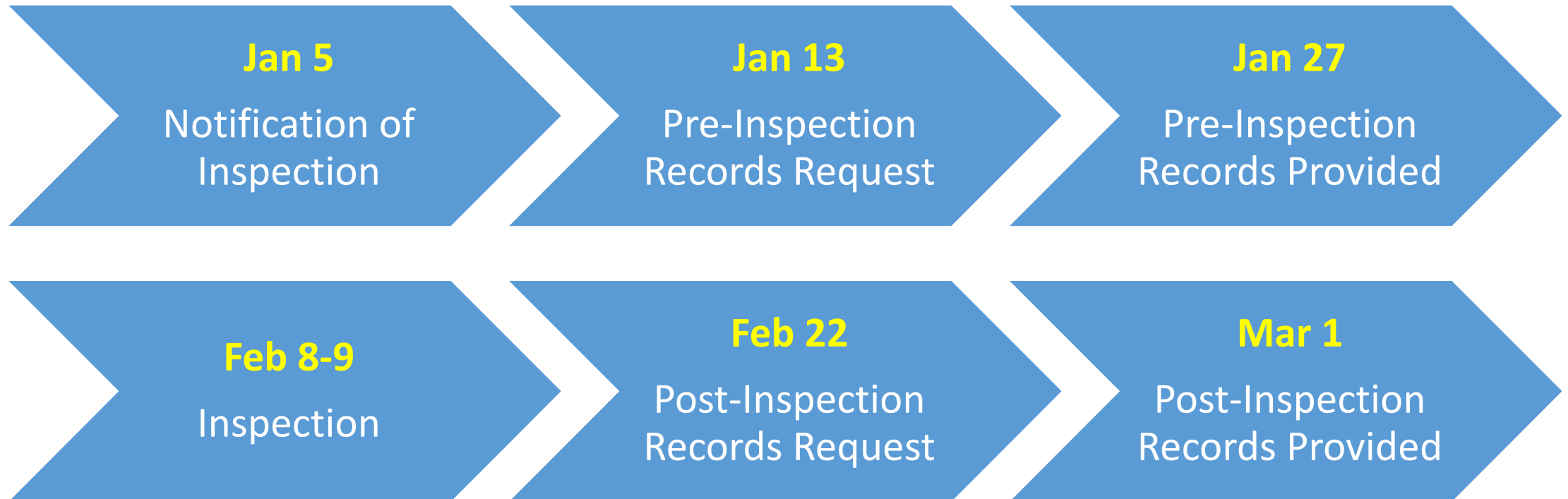
Kate Bennett, MS4 Program Coordinator
Stormwater Planning Division, DPWES

May 23, 2017

Glossary of Acronyms

- DEQ – Department of Environmental Quality
- IDID – Illicit Discharges and Improper Disposal
- IHRR – Industrial & High Risk Runoff
- MS4 – Municipal Separate Storm Sewer System
- SWPPP – Stormwater Pollution Prevention Plan

Inspection Timeline



Inspection Process

- Prepared staff from multiple agencies and partners
- Attorneys present for every step
- Department of Environmental Quality (DEQ) and consultant on-site for two days
 - Two inspection teams
 - Reviewed all program elements
- Outstanding County team effort

Inspection Agenda – February 8, 2017

Time	Team 1	Team 2
8:00 – 9:00 am	<u>Office Discussions</u> <ul style="list-style-type: none"> • Opening Discussions and General Program Management • Stormwater Infrastructure Management (infrastructure and mapping only) • Public Education/Participation 	
9:00 – 10:30 am	<u>Office Discussions</u> <ul style="list-style-type: none"> • Training • Construction Site Runoff and Post Construction Runoff from Areas of New Development and Development on Prior Developed Lands 	<u>Office Discussions</u> <ul style="list-style-type: none"> • Illicit Discharges and Improper Disposal • Spill Prevention and Response • Industrial & High Risk Runoff • Water Quality Screening Programs
10:30 am – 12:30 pm	Construction Sites (Field)	Illicit Discharges and Improper Disposal: Water Quality Screening (Field)
12:30 – 1:30 pm	Lunch Break	
1:30 – 4:00 pm	Construction Sites (Field)	Industrial & High Risk Runoff (Field)
4:00 – 4:30 pm	Recap and Logistics Planning for Thursday	

Inspection Agenda – February 9, 2017

Time	Team 1	Team 2
8:00 – 10:00 am	<u>Office Discussions</u> <ul style="list-style-type: none"> • Infrastructure Coordination • Stormwater Infrastructure Management (stormwater management facilities only) • Structural and Source Controls Compliance Monitoring and Tracking • Watershed Management Plans • Retrofitting on Prior Developed Lands 	<u>Office Discussions</u> <ul style="list-style-type: none"> • Biological Stream Monitoring • In-stream Monitoring • Floatables Monitoring • Roadways • Pesticides, Herbicides, and Fertilizer Application • County Facilities
10:00 am – 12:00 pm	Post-Construction Sites (Field)	County Facilities (Field)
12:00 – 1:00 pm	Lunch Break	
1:00 – 3:00 pm	Post-Construction Sites (Field)	County Facilities (Field)
3:00 – 3:30 pm	DEQ Internal Discussion	
3:30 – 4:00 pm	Closing Discussions	

Inspection Report

- Received April 28, thirty days to respond
- Describes existing Municipal Separate Storm Sewer System (MS4) program and implementation
- Identifies observed compliance issues
- Two categories of findings:
 - Recommendations
 - Corrective Actions

Recommendations

- Industrial and High Risk Runoff (IHRR)
 - Ensure control measures are implemented to prevent pollution from:
 - Oil staining on the ground
 - Overflowing dumpsters
 - Sand piles and debris storage
 - External car washing
 - Periodically evaluate IHRR list
- Stormwater Infrastructure Management
 - Ensure stormwater management facility inspections refer to most up-to-date as-built drawings

Recommendations (Continued)

- Public Education/Outreach
 - Develop additional public outreach materials/activities that address both private and public swimming pool discharges
- Illicit Discharge and Improper Disposal (IDID)
 - Develop inventory of county-owned swimming pools that contains:
 - Facility name and address
 - Discharge to MS4
 - Indoor and/or outdoor pool (including water parks)
 - If filtration system, location of discharge
 - If discharge to MS4 or surface waters, is discharge dechlorinated?
 - Any non-filtration discharge to MS4 or surface waters that are not dechlorinated?

Corrective Actions

- Industrial and High Risk Runoff (IHRR)
 - Update IHRR list to include facility ID VPD11320041
 - Rainwater Landfill (VAR051081), 9917 Richmond Hwy, Lorton
- Stormwater Infrastructure Management
 - Add latitude and longitude in decimal degrees for each MS4 outfall
 - Conduct maintenance for deficiencies observed during inspection
 - One privately-maintained, two county-maintained dry ponds
- Construction Sites
 - Ensure that deficiencies observed during inspection are corrected
 - One county site, three private sites

Corrective Actions (Continued)

- County Facilities

- Revise list of high priority facilities to include any county facility that meets definition in Part I.F.5:

- “High Priority Municipal Facility” means any facility owned and operated by the permittee or regulated under this state permit that includes:

- composting facilities
- equipment storage and maintenance facilities
- materials storage yards
- pesticide storage facilities
- public works yards
- recycling facilities
- salt storage facilities
- solid waste handling and transfer facilities
- vehicle storage and maintenance yards

- Revise list of high priority facilities that have a high potential for discharging pollutants

Corrective Actions (Continued)

- County Facilities (Continued)
 - Include the following facilities on the list of high priority facilities requiring a Stormwater Pollution Prevention Plan (SWPPP):
 - Central Maintenance Facility
 - Maintenance and Stormwater Management Division
 - “Administrative or engineering measures may be used to manage the risk of exposure but do not preclude a site from being included on the list of facilities requiring a SWPPP”

Corrective Actions (Continued)

- County Facilities (Continued)
 - Ensure that county-owned facilities practice good housekeeping
 - Ensure that control measures are implemented to prevent pollution at the four sites visited during the inspection:
 - Maintenance and Stormwater Management Division (10635 West Drive, Fairfax)
 - Central Maintenance Facility (5414 Ladue Lane, Fairfax)
 - Flat Lick Maintenance Facility (4501 Brookfield Corporate Drive, Chantilly)
 - Oak Marr RECenter (3200 Jermantown Road, Oakton)

Next Steps

- Develop response to inspection report
 - Describe how Corrective Actions will be addressed
 - Correct any inaccuracies
- Following County response, DEQ will determine whether formal enforcement is warranted
- Significant effort required to:
 - Revise list of high priority County facilities with high potential for discharging pollutants
 - Develop and implement any additional SWPPPs



Questions?