

# City of Newport News Roadmap to Sustainability



Resource Conservation

Civic Engagement and Policy

Transportation

Open Space and Smart Development

Sustainable Built Environment

Energy Efficiency and Conservation



**N N G R E E N**

February 2013

[www.nngov.com](http://www.nngov.com)



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Visit the City's NNGreen web site ([www.nngov.com/nngreen](http://www.nngov.com/nngreen)), "like" us on Facebook ([www.facebook.com/NNGreenTeam](http://www.facebook.com/NNGreenTeam)) and follow us on Twitter ([www.twitter.com/NNGreenTeam](http://www.twitter.com/NNGreenTeam))

# Letter from the City Manager

Neil A. Morgan



Sustainability is one of the items on our City Council-approved 2012 strategic “to do list.” In fact, the effort predates our current strategic list.

Sustainability, in Newport News, is an ongoing effort to save energy, prevent pollution, and take the practical actions we can to make our City operations and our community viable for future generations. Remember the bumper sticker “Think Globally, Act Locally”? That is a good way to think about it.

The Sustainability Team has focused on short, medium, and long-term actions to advance the City’s sustainability initiatives. Our award-winning Environmental Management System is a major component of the undertaking as we work to minimize the risk of pollution and environmental damage across our City operations. The Sustainability Team is also taking the lead to ensure our success in state-wide Green Government Challenge sponsored by the Virginia Municipal League (VML). We have been recognized in each of the past five years.

Going forward, a major aspect of the Sustainability Team’s work will be advising the Management Team and my office on the right mix of investments in energy-saving buildings and vehicles, and changes in operations. There are also elements of land use planning changes that will push us in the direction of new urbanistic type of development with reduced dependency on the automobile. This will affect our public buildings and leasing policies most obviously, but also may impact private land use in the future.

These are just a few of the many initiatives that the City is undertaking in order to better serve our citizens and our environment. Stay tuned for more updates on the important work of sustainability. In the meantime, I encourage you to adopt simple green practices at home, work, or play to make Newport News a sustainable community.

A handwritten signature in blue ink, appearing to read "Neil A. Morgan". The signature is fluid and cursive, with a long horizontal stroke at the end.

Neil A. Morgan  
City Manager Newport News, VA

## Foreword

The Department of Public Works was charged with leading the development of a City-wide Sustainability Program. The successes of the City's Sustainability program, *NNGreen*, are directly proportional to the efforts of every member of the Sustainability Team. The Sustainability Team is comprised of subject-matter experts from almost every department in the City. In addition, a fully engaged *NNGreen* Citizen Advisory Team has informed this plan. It is important to recognize these individuals for their collaboration and teamwork. *NNGreen* will keep the community updated on progress toward achieving the goal to "...launch new green initiatives that our City Council, employees, and citizens have come to expect." We hope you will join us on this journey.

### Reed Fowler, Director of Public Works

## Acknowledgements

### Sustainability Team

The Sustainability Team is an interdepartmental team of City employees charged with supporting City Council's strategic goal of being an environmentally sustainable local government. Their leadership was key in developing a comprehensive approach to demonstrate the City's stewardship effort and making recommendations regarding the City's overall approach to sustainability as we look to the future.

**Andy Lunsford**

Parks Operations  
Superintendent

**Jeri Wilson**

Legislative Analyst

**Bob McElheney**

Vehicles Services Director

**Louis Bott**

Environmental Sustainability  
Specialist

**Brian Lewis**

Chief of Environmental  
Engineering

**Michael Nealer**

Parks, Recreation & Tourism  
Asst. Director

**Bryan Witt**

Project Coordinator,  
Development Management

**Natalie Mackie**

Environmental Scientist I

**Chris Morello**

Development Management  
Administrator

**Neil Morgan**

City Manager

**Cindy Rohlf**

Assistant City Manager

**Reed Fowler**

Public Works Director  
*Sustainability Team Co-Facilitator*

**Dan Baxter**

Asst. Recycling Coordinator

**Saul Gleiser**

Senior Planner

**Deborah Everitt**

Asst. Recycling Coordinator

**Sheri Chapman**

Purchasing Director

**Jennifer Privette**

Sustainability Manager  
*Sustainability Team  
Co-Facilitator*

### Sustainability Team Committees

The Sustainability Team is comprised of six committees that are responsible for developing an evaluation system for decision making that will have filters for environmental, economic and social impact. The committees plan and develop steps towards reaching a sustainable city.

**Sustainable Built  
Environment**

Bruce Wobser  
Bryan Witt  
**Chris Morello**  
Lewis Stepp  
Michael Redifer  
Saul Gleiser

**Energy  
Efficiency and  
Conservation**

Bob McElheney  
Lewis Stepp  
Louis Bott  
**Michael Redifer**

**Open Space and  
Smart  
Development**

Andy Lunsford  
Bryan Witt  
Chris Morello  
**Michael Nealer**  
Natalie Mackie  
Saul Gleiser

**Civic Engagement  
and Policy**

Deborah Everitt  
**Jeri Wilson**  
Lee Ann Hartman  
Lewis Stepp  
Matt Johnson

**Resource  
Conservation**

Deborah Everitt  
**Louis Bott**  
Natalie Mackie  
Sheri Chapman

**Transportation**

Bob McElheney  
**Brian Lewis**  
David Wilkinson  
Saul Gleiser

Committee Facilitator is indicated in Bold Italics

## **NNGreen Citizen Advisory Team**

The *NNGreen* Citizen Advisory Team is composed of citizens and staff whose collective expertise provides guidance to the Sustainability Team in the development of the City's Sustainability Plan. The Advisory Team makes recommendations regarding proposed policies and practices in support of the City's vision of a sustainable community and promotes the most efficient and responsible use of City resources that will have a lasting and positive impact on our environment.

### **Bill Bent**

QA Inspector  
Modern Machine & Tool Co. Inc.

### **Michael Nealer**

Parks, Recreation & Tourism  
Asst. Director

### **Dwight Bryant**

Citizen

### **Michael Poplawski**

Parks, Recreation & Tourism  
Director

### **Flave Rogers (Liaison)**

Management Analyst, Office of  
the City Manager

### **Patricia VonOhlen**

Citizen

### **Gina Dixon Roemer**

Environmental Health Physicist  
Jefferson Lab

### **Pixie Killebrew**

Citizen

### **Jennifer Privette**

Sustainability Manager, Co-  
**Facilitator**

### **Reed Fowler**

Public Works Director, Co-  
**Facilitator**

### **Joan Minarik**

Citizen

### **Sheri Chapman**

Purchasing Director

### **Kathy P. Grubbs, CPM, LEED**

Green Associate  
Senior Vice President Harvey  
Lindsay Commercial Real Estate

### **Steve Carpenter (alternate)**

Senior Budget Analyst

### **Linda L. Even**

Citizen

## **Sustainability Speaker Series**

Subject-matter experts from the private and public sector presented sustainability-related topics that had been identified as an opportunity to be an environmentally sustainable local government.

### **MyiOffice Corporation**

A Virtual Workspace Program  
Presented by:

Andy Stein, Information Technology Director  
City of Newport News

### **Marketing of Recyclable Materials**

Presented by:

Dave Smiley, Sustainability Director  
Bay Disposal & Recycling

### **Greenhouse Gas (GHG) Emissions Inventory**

Presented by:

Yolanda F. Pagano, Esq., CPA  
Director, Sustainable Strategies & Solutions  
O'Brien & Gere

### **SCOUT, Buxton's online customer analytics engine**

Presented by:

Meisha Holmes, Economic Analyst  
City of Newport News

### **Anaerobic Digestion Systems**

Presented by:

Quasar Energy Group

### **Tucker's Landing, A new model for sustainable communities**

Presented by:

William A. Tucker  
William A. Tucker Enterprises, LLC

## **Interns**

Internships have played a valuable role in the planning, developing, and implementing of the City's roadmap to sustainability. Through the City's Internship Program, students have been mentored to apply the skills they have learned in the classroom in a real-world setting. The interns gained hands-on work experience in a growing segment of the job market and the City gained the talents of four exceptional young people.

### **Laura Craig**

Sustainability Intern  
Summer 2011 & 2012  
Virginia Polytechnic Institute  
and State University (Virginia  
Tech), Class of 2013

### **Lauren White**

Sustainability Intern  
Summer 2012  
Virginia Tech  
Class of 2013

### **Elsy Henriquez**

Sustainability Intern  
Spring 2012  
George Mason University  
Class of 2012

### **Shawn Mitchell**

Environ. Engineering Intern  
Spring 2013  
Old Dominion University  
Class of 2013  
Virginia Tech  
Class of 2011

## Executive Summary

The City of Newport News encompasses 70 square miles (23 miles long and three miles wide); it is the sixth largest city in Virginia with a 2010 population of 180,719. To ensure that we protect and capitalize on the wealth of resources –historic and current as well as natural and built - that make our city unique, Newport News began exploring sustainability in 2008 through the formation of a sustainability task force.

The task force sought to define sustainability in a way that would balance the three dimensions, known as “the triple bottom line”: environmental stewardship, social responsibility, and economic prosperity, which will enhance the quality of life in our City. By increasing the efficiency and effectiveness of city government operations, pursuing sustainable public facility design and ensuring appropriate private development plan approval incentives, we can position the city for sustainable gains. This roadmap is the result of the task force’s multi-year effort and details a path to sustainable success for Newport News.

Newport News’ great location and rich history, which begins shortly after the founding of Jamestown, has shaped the city into what it is today. Located on the banks of the Hampton Roads harbor in southeastern Virginia, Newport News is minutes from Williamsburg and a short drive to Virginia Beach and the Atlantic Ocean. From this central Coastal Virginia location, one can relive our nation’s past and actively experience the great outdoors.

From the landing at Jamestown in 1607, to the Revolutionary War, the War of 1812, and the 1862 Peninsula Campaign where the famous Battle of the CSS Virginia and the USS Monitor took place, one can step back in time and learn about our nation's beginning while visiting our region. With the USS Monitor Center, historic homes, battle sites, fortifications, monuments and extraordinary collections of artifacts, history is at the top of our cities attractions.

The James River, Hampton Roads and their tributaries provide habitats for a variety of plant and animal species. The shoreline too, is a natural resource because it provides public and private access to the water, habitat for wildlife, and a water quality function. Excluding the Fort Eustis/Mulberry Creek shoreline, the City of Newport News contains over 100 linear miles of shoreline. This shoreline is the collective total of fourteen creeks and rivers located within the City limits. This wealth of natural resources is enjoyed by citizens and visitors alike. The city’s many scenic parks filled with every activity imaginable from hiking, camping, fishing, canoeing, golf and more to fun-filled attractions that let you get up close and personal with nature and Virginia’s wildlife.

While city government must be prepared for many factors that could impact our city, perhaps none is more insidious than the forces of nature. These forces can wreak havoc not just on the natural environment but can also impact the economic vitality and social fabric of our community. The July 2012 report *Climate Change in Hampton Roads* prepared by the Hampton Roads Planning District Commission found that “sea level rise could have significant economic impacts on the Hampton Roads region, potentially forcing businesses and their employees to relocate and investments in property to be lost.” Projected impacts of exposure to a one meter rise in sea level above spring high tide in Newport News include land impacts ranging from nearly 10% to 15% of total land mass, with the values of the affected built environment in the 6-15% range and affected infrastructure in the 5-15% range.

The city must plan for these impacts on the built and natural environment, on our city’s infrastructure and on the city’s population. As the adage says, preparation is half the battle; sustainable planning is critical to that preparation. A sustainable approach means making decisions through the lens of sustainability; ensuring outcomes achieve environmental and social gains in an economically responsible manner both today and in the future.

In September 2010, City Council unanimously endorsed eight strategic initiatives for the City of Newport News. Those were refined in December 2012 into five broad strategic priorities, each with several initiatives that incorporate the original eight initiatives along with additional areas of focus. “Environmentally Sustainable Local Government Policies” remains as one of these strategic priorities. Articulated as areas of focus within this priority are green purchasing and fleet policies, sustainable design building standards, waste to energy programs, Environmental Management System (EMS) and advancement in the VML (Virginia Municipal League) Green Government Challenge. As can be seen from the graphic, the City’s priorities themselves support a sustainable approach seeking to balance the triple bottom line focus areas that are often also referred to as people, planet and prosperity.



To advance this commitment to sustainability, a Sustainability Team, which leads the City’s Sustainability program, *NNGreen*, was established. This Plan is the culmination of the team’s work focused on environmentally sustainable local government practices/policies and reducing the carbon footprint of the City as a whole, The Team is comprised of subject-matter experts from almost every department in the City and a fully engaged *NNGreen* Citizen Advisory Team as well as the following committees:

- Energy Efficiency and Conservation
- Resource Conservation
- Open Space and Smart Development
- Transportation
- Sustainable Built Environment
- Civic Engagement and Policy

*The City’s priorities support a sustainable approach seeking to balance the triple bottom line focus areas referred to as people, planet and prosperity.*

Within this Plan, a Summary Matrix of Initiatives is presented which summarizes the goals and opportunities aligned with each committee. Following the Summary Matrix, individual goals are discussed. The Plan lays out the status of each goal, its path forward towards achievement, and the potential impact that achievement will have. A brief summary of each committee and its mission follow:



## Energy Efficiency and Conservation

Energy Efficiency is the method of updating and retrofitting existing infrastructure to use energy efficiently and responsibly. For example, simply turning off lights or installing light sensors. The Energy Efficiency and Conservation Committee identifies and promotes sustainable energy practices and the use of alternative energy resources.

**MISSION** - *To advance the sustainability of Newport News by identifying and encouraging practices for the efficient use of energy in City buildings and vehicles, support the use of alternative renewable energy sources and promote the reduction of fossil fuel usage*



## Resource Conservation

The City has a commitment to conserve natural resources that enrich our daily lives such as air, water, and open space to foster a healthy and sustainable community. The Resource Conservation Committee aims to form a strategy to develop, enhance, and preserve these resources through education, waste minimization, and pollution prevention.

**MISSION** - *To ensure a healthy and sustainable future for our community through the conservation of natural resources by forming an effective strategy*



## Open Space and Smart Development

Open space and smart development plays an important role in the city's landscape and impacts our community through patterns of development, economy, culture, environment and sense of community. The Open Space and Smart Development Committee aims to strengthen the relationship between buildings and the communities in which they are located.

**MISSION:** *To advance the sustainability of Newport News by promoting land use policies and developmental practices that preserves open space, encourages environmentally efficient development, offers housing and economic opportunities for citizens of all ages and incomes, and supports revitalization throughout the City.*



## Transportation

Transportation in the community has a large impact on the sustainability of the City. Through goals such as promoting mass transit and establishing bike paths, the Transportation Committee intends to maximize safe, efficient, and sustainable movement of pedestrians, cyclists, motorist and commercial vehicles.

**MISSION** - *To advance and maximize the safe, effective and efficient movement of pedestrians, cyclists, motorists and commercial vehicles through sustainable transportation systems while helping to build community and enhancing quality of life*



## Sustainable Built Environment

A sustainable built environment, or "green" building, is an approach to building design, construction, and management that decreases the environmental impact of buildings. As a result, green buildings use less energy, consume less water, generate fewer air pollutants and provide a better indoor environment for human health. The Sustainable Built Environment Committee will focus on pursuing this approach through sustainable design, construction and renovation of the City's buildings.

**MISSION** - *To advance the overall sustainability of the built environment in Newport News – both in the public and private realms -- by determining and enabling the best policies and practices which afford greater environmental protection, greater energy efficiency, and which also produce economic opportunities wherever possible*



## Civic Engagement and Policy

A sustainable community starts with an awareness and understanding that everyday choices make a difference in ensuring a cleaner, greener sustainable environment for current and future generations. They range from the simplest task of turning off the lights, to major home buying decisions. The Civic Engagement and Policy Committee shall engage the community to raise public awareness, engage the community, promote successes, deliver calls for action, and inspire behavioral change.

**MISSION** - *To partner with the community to promote sustainable practices. We will raise awareness and encourage behavior changes that will result in a healthier, cleaner, and more sustainable community. We will advocate for public policies that support this mission.*

We invite you to explore this plan and learn more about the City's plans. In addition, the *NNGreen* public awareness campaign provides the community with a gathering place to learn about everything from energy conservation and recycling and water conservation to events, programs and projects. The *NNGreen* web site ([www.nngov.com/nngreen](http://www.nngov.com/nngreen)) is designed to keep visitors informed on the City's sustainability efforts and to provide information on ways citizens can live a more environmentally-friendly lifestyle. Citizens can also "like" *NNGreen* on Facebook ([www.facebook.com/NNGreenTeam](http://www.facebook.com/NNGreenTeam)) and follow *NNGreen* on Twitter ([www.twitter.com/NNGreenTeam](http://www.twitter.com/NNGreenTeam)).

Since 2008, the City has made great strides towards achieving its goal of launching new green initiatives to make Newport News more sustainable for future generations. The goals and initiatives enclosed in this Plan present the path forward. This Plan is another milestone on the path towards a sustainable City.



# Timeline to a Sustainable Community

Since 2008, the City has made great strides towards achieving its goal of launching new green initiatives to make Newport News more sustainable for future generations. The goals and initiatives enclosed in this Plan present the path forward. This Plan is another milestone on the path towards a sustainable City.

**Feb 2008** Newport News listed as one of America's 50 green cities that are leading the way in successful and rapid environmental action, according to Popular Science Magazine

## 2008

**Dec 2008** City forms interdepartmental task force to fully explore what sustainability means to Newport News

## 2009

**Sept 2009** Newport News awarded an Energy Efficiency & Conservation Block Grant to fund sustainability initiatives

## 2010

**Oct 2010** Newport News selected as a grant recipient for the Southeast Propane Autogas Development Program to convert vehicles to run on propane

**Sept 2010** Newport News hires first Sustainability Coordinator

## 2011

**Apr 2011** City Manager signs City Energy Policy

**Nov 2011** City opens permanent facility for household chemical disposal

**Oct 2011** City awarded silver in the Virginia Municipal League (VML) Green Government Challenge

**Dec 2011** Mayor's Operational Efficiency Task Force recommends sustainable practices to improve City efficiency

## 2012

**Mar 2012** *NNGreen* launches a public awareness campaign. Visit [www.nngov.com/nngreen](http://www.nngov.com/nngreen), Facebook and Twitter

**Aug 2012** City achieves its 13th Environmental Management System (EMS) certified facility as recognized by the Virginia Department of Environmental Quality.



## Introduction

### Prioritizing Sustainability

Ensuring that our City operates in a way that is both economically and environmentally sustainable is of the utmost importance to the future of Newport News. In 2009 as part of a City-wide Strategic Planning process, the City established an ambitious sustainability initiative to include city operations, public facility design and private development plan approval incentives.

An interdepartmental task force was formed and given two charges:

- Identify ways to improve upon the positive steps already taken to enhance our environmental stewardship, and
- Explore and define what sustainability means for Newport News.

Additionally, the task force was asked to conduct an inventory of all existing City environmental efforts, identify other areas of sustainability policy in which we may need to engage, and make recommendations regarding the City's overall approach to sustainability as we look to the future.

In response to management's challenge, the task force now known as the Sustainability Team worked collaboratively to develop and implement actions and activities that fit the team's mission of:

*"Practicing sound environmental stewardship in order to meet the needs of the present generations without compromising the ability of future generations to meet their needs."*

### Planning Commences

The Sustainability Team pursued its mission with a focus on environmentally sustainable local government practices and policies that reduce the carbon footprint of the City as a whole. In response to management's challenge, the Team systematically reviewed and evaluated the City's current sustainability initiatives following The Natural Step Framework (TNS Framework). The Team adopted the TNS Framework because it provides a shared mental model of sustainability. The TNS Framework helps people across organizations, disciplines and cultures to communicate effectively, build consensus, and ultimately move toward their vision. TNS Framework utilizes an upstream approach that anticipates and avoids problems before they occur, rather than reacting to their downstream effects. (Source: <http://www.naturalstep.org/en/faq#natural-step-framework>)

#### Three specific objectives were developed:

1. Identify benchmarking tools for sustainability initiatives
2. Develop a sustainability action plan
3. Determine strategies to gauge performance

### Developing a Plan

The Sustainability Team focused on developing programs which provide economic, social, and environmental benefits such as

- Reducing energy costs,
- Preserving green space,
- Implementing better land use policies,
- Improving air quality,
- Promoting waste-to-energy programs,
- Expanding transportation networks and employment options
- Reducing traffic congestion, and
- Fostering economic development and job creation through energy efficiencies and new technologies.

A broad range of actions, opportunities, and benefits that can substantially improve the quality of the environment were considered. The Sustainability Team focused its attention on programs and plans that will provide the greatest environmental benefit for the dollars spent (pay-back).

The Team identified six focus areas and organized into the following committees:



#### Energy Efficiency and Conservation



#### Resource Conservation



#### Open Space and Smart Development



#### Transportation



#### Sustainable Built Environment



#### Civic Engagement and Policy

## Institutionalizing the Plan

The City established the Sustainability Team to determine its own definition of sustainability and develop a comprehensive, cross-departmental mission and understanding of sustainability for Newport News. The Team adopted two guiding principles for its efforts: Environmental Management System (EMS) and Triple Bottom Line (TBL).

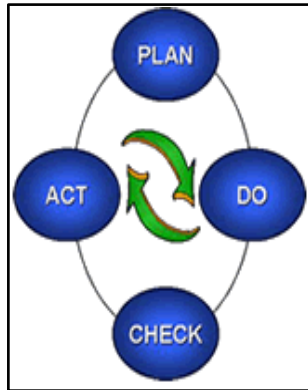
### Environmental Management System

An EMS is a set of management processes and procedures that define a process of analyzing, controlling, and reducing the environmental impact of our activities, products, and services, while also enabling the City to operate with greater efficiency and control.

The benefits to implementing an EMS, according to Virginia Tech's Center for Organizational and Technological Advancement (COTA), include:

- Path to environmental sustainability
- Resource and Cost Savings
- Enhanced Environmental Awareness and Stewardship
- Increased Credibility with External Stakeholders
- Employee Empowerment
- Improved Environmental Performance
- Better Relationships with Regulators
- Increased Operational Efficiency and Consistency
- Labor-Management Improvement
- Improved Bond Rating
- Reduced Insurance Premiums

The City had implemented an EMS in several departments long before terms like sustainability and green government were in fashion. Through its EMS, the City began a systematic approach to proactively reduce environmental risk. The EMS relies on a plan-do-check-act model of continuous improvement. It is naturally designed to prevent stagnation and to ensure that the Plan would be adaptable as the City and circumstances change.



In the EMS evaluation process, environmental aspects were identified and ranked by using a sum-weighted average method. The Sustainability Team selected the five highest scored significant environmental aspects on which to aim their focus. While the five items were the principal significant aspects, all environmental aspects identified were assessed to determine significance in the development and implementation process.

### Triple Bottom Line

The second of the two guiding principles was the concept of TBL. TBL encapsulates a set of values, and criteria for measuring organizational (and societal) success according to social, ecological, and economic standards. These three pillars are also referred to as people, planet, and profit. The phrase was coined by John Elkington in his book "*Cannibals with Forks: the Triple Bottom Line of 21<sup>st</sup> Century Business*" (1997).

Using the TBL concept, the Team prioritized the goals and opportunities using a weighted scoring system. The factors and their respective scores are presented below. The full scoring analysis is provided in the Appendix.

Ranking System with weights assigned to each priority	
Existence of current program or activity	1
Environmental benefit	3
Social benefit	3
Economic benefit	3
Financial incentives	3
Personnel availability and capacity	2
Technical feasibility	1
Stakeholder concerns	2
Regulatory requirement	1
Contribution to established objectives	3
Timeframe to realize benefits	1
Funding	3

The goals and opportunities were summed by the weighted score to determine the order of importance. The results were formatted in matrixes and further evaluated by the NNGreen Citizen Advisory Team.

## Consulting Stakeholders

One important factor in the future success of the City's sustainability efforts is citizen involvement. While staff would lead this effort, citizen engagement was identified as an important component of developing a sustainable community. The *NNGreen* Citizen Advisory Team is comprised of citizens and staff whose collective expertise provided guidance to the Sustainability Team in the development of the City's Roadmap to Sustainability. The *NNGreen* Citizen Advisory Team was established to make recommendations regarding proposed policies and practices in support of the City's vision of a sustainable community and to promote the most efficient and responsible use of City resources that will have a lasting and positive impact on our environment. This Team serves as the voice of the citizens. The role of the Advisory Team is to:

- Lend expertise on plan development including defining performance measurement
- Review and provide recommendations on presentation and communication of sustainability information including the
  - Draft Roadmap to Sustainability, and
  - Annual progress reports.
- Evaluate accomplishments

## Gauging Performance

The Roadmap is designed to be a living document, which will be evaluated on an annual basis allowing for adjustments if the criteria parameters change due to conditional influences. Those parameters may include:

- An EMS implementation strategy of "Plan, Do, Check, Act"
- The TBL score which indicates how well each opportunity balances the environmental, economic, and social benefits.
- The goals and opportunities are grouped by committees or logical implementation categories to ensure results.

## Continuing Progress

The City's progress towards its clearly articulated vision of a community with a great environment was not suspended while this plan was developed. Progress has continued, as the City is also:

- 2013 Sustainability Partner of the Virginia Environmental Excellence Program
- A recipient of the VML Green Virginia Award (Green Government Challenge):
  - 2008, 2009, and 2010 – Green certificate
  - 2011 – Silver certificate
  - 2012 – Gold certificate
- Continuously engaged in efforts to reduce GHG emissions and energy consumption, minimize environmental impacts, and encourage sustainable business and operational practices.

## Moving Forward

Next steps include institutionalizing sustainability organization-wide. The following three key steps are deemed critical to that cultural change:

**1. Implement structural changes to City's budget, procurement, Capital Improvement Plan (CIP) and other operational processes.** This will require support for and knowledge of the Sustainability Team's strategies (Goals and Opportunities) through which the City of Newport News can become more economically, socially and environmentally sustainable.

**2. Appoint Sustainability Plan Steering Committee.** Facilitated by the Sustainability Team Co-Facilitators. The Committee will guide implementation of those components (i.e., Principles of Sustainability, Goals and Actions) of the Sustainability Plan. It will also facilitate ongoing collaboration throughout the City to ensure that the Sustainability Plan is integrated across all City departments.

**3. Align Programs, Policies and Plans.** The Sustainability Plan Steering Committee will ensure that all City policies are consistent with the Sustainability Plan. Efforts will be undertaken to align the policies of City departments with the Sustainability Plan to the greatest extent possible.

While institutionalizing the plan is critical for success, so is periodic review and refinement. As such, the goals and opportunities articulated here will be reviewed at least annually. This will ensure that the identified strategies are implemented. The City will be able to use the performance measures not only to track its own progress but also to benchmark against other cities to check our progress. The City will be accountable to our citizens by releasing reports of our progress on a regular schedule. These reports will provide an opportunity to solicit community feedback to inform the City of the desires of our citizens in charting the future course on our Roadmap to Sustainability.

# SUMMARY MATRIX OF INITIATIVES

The Summary Matrix of Initiatives represents the identified goals and opportunities of each committee. These goals and opportunities may change over time depending on changes in technology, policy initiatives and the goals and vision for Newport News by City Council and the City Manager.



**Energy Efficiency and Conservation**



**Sustainable Built Environment**



**Transportation**



**Open Space and Smart Development**



**Resource Conservation**






**Civic Engagement and Policy**






## Energy Efficiency and Conservation

**MISSION-** To advance the sustainability of Newport News by identifying and encouraging practices for the efficient use of energy in City buildings and vehicles, support the use of alternative renewable energy sources and promote the reduction of fossil fuel usage



Opportunity	Performance Measure	Responsible Dept./Division	Impact
<b>Goal 1: Promote energy efficiency and conservation practices and technologies in City facilities and vehicles</b>			
1.1 Establish an energy usage baseline and reduction goals	Electrical bills for all City facilities input into EnergyCAP base year vs. current year consumption	Public Works	
1.2 Develop a GHG emissions inventory and set a reduction goal	Develop RFP for services	Public Works	
1.3 Develop and implement an energy use policy	Enhance Energy Policy Statement for submittal to City Manager	Engineering	
1.4 Identify processes, practices and routines to minimize energy use in computers and peripherals	Submit schedule to systematically change city facilities with power-off devices/software	Information Technology	
1.5 Install occupancy sensors for lighting in City facilities	Submit schedule to systematically change city facilities with power-off devices/software	Public Works	
1.6 Use EPEAT guide for purchasing energy efficient electronics equipment	Submit list of servers/elect. and replacement schedule	Information Technology	

Opportunity	Performance Measure	Responsible Dept./Division	Impact
1.7 Reduce energy usage for exterior wall mounted lighting to LED and use photo-cell or timer control	Submit schedule to systematically install lighting controls and change to LED	Public Works	
1.8 Install timers on vending machines to turn off at night and require Energy Star machines at contract renewal with vendors	Baseline of retrofitted vending machines in city facilities	Public Works	
1.9 Convert to more efficient building and parking lot lighting	Develop list of existing lighting and ROI for conversion	Public Works	

**Goal 2: Promote energy efficiency and conservation awareness in the community**

2.1 Provide incentives to carpool or take mass transit or bike to work	Conduct a ride sharing survey.	Public Works	
2.2 Provide energy audit information and tax credit information for homeowners and businesses	Post info on web site. Explore "net metering" and credits for excess power to the grid.	Public Works City Manager's Office	 



















**Goal 3: Promote green business and energy independence, and search for renewable energy opportunities**

3.1 Use landfill gas for heating Mary Passage Middle School/Denbigh Recreation Center	Emission reduction, avoidance, and reduce energy costs	Solid Waste	 
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## Resource Conservation

**MISSION** - To ensure a healthy and sustainable future for our community through the conservation of natural resources by forming an effective strategy

Opportunity	Performance Measure	Responsible Dept./Division	Impact
<b>Goal 1: Reduce Waste</b>			
1.1 Identify opportunities for reduced paper usage in the workplace	% reduction from baseline	Public Works	 
1.2 Promote use of reusable water bottles/mugs; discontinue use of Styrofoam cups at city functions	Identify vendors that offer competitive alternatives to Styrofoam cups	Purchasing is the dept	 
1.3 Establish pallet collection program	Identify/quantify pallet sources	Public Works, Fire Department, Purchasing	 
<b>Goal 2: Improve Recycling</b>			
2.1 Recycle broken trash and recycling carts	Track recycled carts by weight	Public Works	
2.2 Motivate citizens to recycle and reinforce recycling behaviors with City employees through awareness training	Generate informational brochure for public distribution on recycling	Public Works	
2.3 Assist local businesses, apartment complexes and condo developments in establishing recycling programs	Implement \$2,000 grant from American Forest & Paper Association partnership with Keep America Beautiful.	Public Works	
<b>Goal 3: Identify Sensitive Environmental Resources</b>			
3.1 Develop a City-wide Integrated Natural Resources Management and Conservation Land Plan	Project Completion	Engineering	 
3.2 Complete an urban/suburban forest inventory	Project Completion	Engineering	 
<b>Goal 4: Conserve Water</b>			
4.1 Retrofit existing vehicle washing facilities to closed-loop systems	Project completion	Engineering, Vehicle and Equipment Services	 
4.2 Retrofit existing toilets in buildings and outfit new buildings with low flow appliances	Number of locations or number of appliances replaced	Building Services	 
4.3 Promote installation of rain barrels and/or cisterns for harvesting rainwater	Identify potential locations	Public Works	



## Open Space and Smart Development

**MISSION:** To advance the sustainability of Newport News by promoting land use policies and developmental practices that preserves open space, encourages environmentally efficient development, offers housing and economic opportunities for citizens of all ages and incomes, and supports revitalization throughout the City.
























Opportunity	Performance Measure	Responsible Dept./Division	Impact
<b>Goal 1: Institute a Smart Growth policy where site plan approval is expedited and fees are reduced for proposed development in strategic growth/transit oriented development districts</b>			
1.1 Update codes and ordinances to enforce sustainable neighborhood design standards	Draft ordinance	Planning	
1.2 Revise current parking requirements to provide for additional green space or greater density	Draft Ordinance	Planning	
<b>Goal 2: Increase, protect, improve and conserve greenways, vistas, recreational trails, parks and open space.</b>			
2.1 Expand and improve our network of constructed open spaces	Number of open spaces	Economic Development, Engineering	
2.2 Expand Adopt-A-Spot	Increase number of adopted spots by 3 per year	Public Works	
2.3 Promote the creation of low or no maintenance vegetation on existing turf areas	Report of annual plantings	Parks and Recreation, Economic Development	
<b>Goal 3: Promote Sustainable Development</b>			
3.1 Prioritize development of underutilized, vacant and brownfield sites while limiting development of greenfield sites	Inventory catalog of developable sites	Economic Development	
3.2 Protect and sustain watershed health by managing 50% of storm water from City facilities using sustainable practices	Compare to baseline data	Engineering	





## Transportation

**MISSION** - To advance and maximize the safe, effective and efficient movement of pedestrians, cyclists, motorists and commercial vehicles through sustainable transportation systems while helping to build community and enhancing quality of life








Opportunity	Performance Measure	Responsible Dept./Division	Impact
<b>Goal 1: Promote the development and use of mass transit</b>			
1.1 Increase use and efficiency of Public Transportation by enhancing service routes and frequencies	Identify potential routes benefitting from increased service frequency	Planning	 
1.2 Support development and implementation of mass transit corridors	Identify funding opportunities including public/private partnerships	Planning	
1.3 Adopt land-use plans that encourage transit-oriented development and encourage mixed-use communities	Number of developments approved within 1.5 miles	Development	 
<b>Goal 2: Promote a bike friendly community</b>			
2.1 Develop a system of bicycle routes that connect the City in an efficient way	Lane miles of bike routes	Planning	  
2.2 Expand and enhance bicycle paths/ways throughout the City	Lane miles of bike routes	Planning	 
2.3 Establish a Safe Routes to School program, which encourages walking and bicycling to neighborhood schools	Number of schools that institute program.	Planning	 
<b>Goal 3: Support sustainable transportation practices within City Government</b>			
3.1 Adopt an anti-idling policy for school/government fleet vehicles	Enhance existing policy and incentivize compliance	Vehicle Services	  
3.2 Adopt a "Green Fleet" policy that incorporates technologies to conserve fuel and reduces emissions.	Pollutant or particulate matter reduction as a percentage over time	Vehicle Services	 
3.3 Establish a practice to reduce vehicle usage by ride sharing between meetings and events and encouraging telecom meetings	Identify ride share occurrences through motor pool office and identify web-based tools to conduct online meetings	Purchasing & Information Technology	  
3.4 Enact policy that a minimum of 20% of eligible workforce participate in alternative work schedules	Identify Departments implementing a 4-day work week and/or telecommuting	Human Resources	 
3.5 Provide employee benefits for ride sharing, walking, biking, or taking transit to work	Number of employees engaged in program	Human Resources	



## Sustainable Built Environment







**MISSION** - To advance the overall sustainability of the built environment in Newport News – both in the public and private realms -- by determining and enabling the best policies and practices which afford greater environmental protection, greater energy efficiency, and which also produce economic opportunities wherever possible

Opportunity	Performance Measure	Responsible Dept./Division	Impact
<b>Goal 1: Enact development and growth policies and implement land use strategies that help advance Newport News as a more sustainable community</b>			
<b>1.1 Adopt an urban/sustainable zoning overlay capability, to encourage increased densities and more mixed-uses, while promoting adequate open space</b>	Preparation of a draft zoning overlay ordinance. Ready for planning commission review and city council approval	Planning, Development, City Attorney	 
<b>1.2 Encourage higher density development by identifying Code/policy that should be reviewed for adjustments</b>	Code sweep and change listing completed, followed by appropriate ordinance amendments.	Planning, Development, Codes, and Engineering, Attorney's Office	
<b>1.3 Identify and stimulate redevelopment of selected areas of the City into desirable mixed-use areas</b>	Identification completed.	Development, Planning	  
<b>1.4 Revise Code (Zoning/Planning) to allow for wind turbines, solar panels, and other alternative energy sources</b>	Preparation of draft ordinance	Codes, Planning	 
<b>1.5 Stimulate maintenance, protection (of character) and revitalization of older residential neighborhoods and encourage adaptive reuse of these structures</b>	Identify structures in collaboration with community maintenance strategic priority.	Development, Planning, Codes	
<b>Goal 2: Promote and encourage buildings and site developments that are designed and constructed with sustainable practices and meet or exceed associated standards and practices</b>			
<b>2.1 Encourage rehabilitation, reuse and preservation of existing buildings</b>	Complete list of steps to achieve.	Development, Codes, Engineering	
<b>2.2 Review site plans to recommend sustainability best practices as first-mover examples</b>	Create Administrative Policy	Planning, Codes, Engineering	 
<b>2.3 Lease space that is Energy Star and LEED certified wherever possible</b>	Preparation of draft ordinance/resolution	City Attorney, City Manager & Development	

Opportunity	Performance Measure	Responsible Dept./Division	Impact
<b>Goal 3: Develop policy-level initiatives that result in meaningful and measurable outcomes both for the City's and for the community's sustainability efforts, as well as overall Smart Growth</b>			
<b>3.1 Apply sustainable design standards to all new and renovated community facilities</b>	Standards developed.	Engineering	
<b>3.2 Support Council adoption of a resolution stating that all new public buildings must meet standards complying with LEED, Energy Star, Green Communities or similar</b>	Preparation of draft resolution	Development	
<b>3.3 Amend subdivision, site plan, and soil &amp; erosion control ordinances to encourage cluster development on sensitive sites</b>	Standards developed.	Engineering	
<b>3.4 Council adoption of an ordinance to create a sustainable building classification of real property and to set a reduced tax rate for this classification</b>	Standards developed.	Engineering	  
<b>3.5 Encourage construction contractors to recycle building materials</b>	Develop recycling vendor list	Public Works	



**MISSION-** To partner with the community to promote sustainable practices. We will raise awareness and encourage behavior changes that will result in a healthier, cleaner, and more sustainable community. We will advocate for public policies that support this mission

Opportunity	Performance Measure	Responsible Dept./Division	Impact
<b>Goal 1: Raise community awareness about NNGreen and sustainability</b>			
1.1 Promote NNGreen via social media such as Facebook and Twitter	Number of posts to sites	Civic Engagement Team	
1.2 Use City and NNGreen websites to provide information to Citizens	Create Google analytics dashboard	Civic Engagement Team / City IT	
1.3 Partner with NNTV to highlight NNGreen	NNTV program air time	Public Works, NNTV	
<b>Goal 2: Gather community input and feedback about sustainability</b>			
2.1 Administer Citizen Survey	Survey data collection	Civic Engagement Team	
<b>Goal 3: Encourage citizen behavior changes that support sustainability</b>			
3.1 Use all available City communication tools to inform Citizens about Green practices	survey feedback	Civic Engagement Team	
3.2 Incentivize recycling	Recycling rate change	City Council	
<b>Goal 4: Advocate on behalf of environmentally sound public policies</b>			
4.1 Support Green legislation at State and Federal levels	Proposal/support of legislation	City Council, City Manager's Office	
4.2 Promote sustainable City policies	Adoption of Green City policies	City Council	
<b>Goal 5: Publicize City Council endorsed Sustainability Plan</b>			
5.1 Issue Press Release upon Council endorsement of plan	Press release issued	Civic Engagement team	



## Energy Efficiency and Conservation

Energy Efficiency is the method of updating and retrofitting existing infrastructure to use energy efficiently and responsibly. Examples of energy conservation measures for existing infrastructure include turning off lights and installing light sensors.

### Goals

Promote energy efficiency and conservation practices and technologies in City facilities and vehicles.

Promote energy efficiency and conservation awareness in the community

Promote green businesses and energy independence, search for renewable energy opportunities.

### Select Accomplishments

**Celebration in Lights LED bulb conversion** resulting in 40% reduction in energy costs

**L.E.D. Traffic Light Conversion Project:** The Newport News Engineering Department began a program to convert the City's incandescent traffic lights to LED lights in 2006. All of the intersections have been converted, saving approximately \$110,000 annually in energy costs (73% reduction).

**Energy Management:** Software program, EnergyCAP, which will measure and verify the energy improvement work that we do. EMCS (Energy Management Control Systems) will control and manage the operations of heating and air conditioning equipment for efficiency. Occupancy Sensors estimated to save about 60% on the lighting energy used in office buildings.

**Newport News is using EECBG** funding to support the City's climate change initiative by upgrading dated incandescent lighting to ultra-efficient LEDs and CFLs at the Justice Center parking garage, Family Courts, Main Street Library and Fire Station #2.

## Goal 1 – Promote energy efficiency and conservation practices and technologies in City facilities and vehicles

### Opportunity 1.1 – Establish an energy usage baseline and reduction goals

**Completed Projects** Purchase of EnergyCAP license

**Looking Forward** Set up EDI bill pay through EnergyCAP to improve efficiency

**In Progress** Research and collaboration with other City governments to determine best practices of utility management.

The City of Newport News identified that energy monitoring, targeting and reporting is critical to its long term energy management. Essential elements of energy management include analyzing the historical energy performance of City facilities, setting energy reduction targets, controlling current energy performance, projecting future energy resource needs and projecting future energy budgets. Through EnergyCAP, an energy management software program, the city will implement a comprehensive utility bill tracking, reporting, analyzing, auditing, and benchmarking. EnergyCAP not only allows for increased utility efficiency but helps eliminate billing errors by analyzing rates and usage to determine if bills are calculated correctly. In cases of error, bills are red flagged and are eligible for refunds or credits. EnergyCAP can also be utilized to monitor for leaks and inefficiencies in buildings.

### Opportunity 1.2 - Develop a GHG emissions inventory and set a reduction goal

**Completed Projects** Completion of a 2009 abbreviated GHG inventory

**Looking Forward** Collaboration with local University to create a GHG inventory.

**In Progress** Request For Proposal in draft format

The City of Newport News understands the importance of a GHG inventory. One of the biggest advantages of a GHG inventory is the ability to create a baseline and use that data for measurable policy initiatives. Currently the GHG inventory is still in the planning stages.

### Opportunity 1.3 – Develop and implement an energy use policy

**Completed Projects** An energy use policy adopted by the City Manager

**Looking Forward** Enhancing the policy and creating utility usage benchmarks

**In Progress** Review of existing policy

The first step in becoming energy efficient is to create smarter policy that helps facilitate the implementation of energy policies within each department of the City of Newport News. The City Manager signed off on the City-wide energy policy on April 28th 2011. This policy focuses on technology, cost saving, and coordination efforts between departments in order to properly implement energy conservation efforts within the City. One of the key factors in the policy is education within the City and its citizens, which will facilitate a smooth transition into more energy efficient policies.

### Opportunity 1.4 – Identify processes, practices and routines to minimize energy use in computers and peripherals

**Completed Projects** Removed desktop printers and switched all employees over to network printers to save energy and resources. Incorporation of SharePoint to increase network computing.

**Looking Forward** Develop and submit schedule to systematically implement changes.

**In Progress** Vehicle services network computing reduces electricity demand.

Switching from desktop printers to network printers may sound like a small change, but it can have dramatic effects on the City's energy consumption and resource conservation efforts. For example, by switching to network printers the Public Works Department reduced costs up to \$9,500 spent on toner for individual desktop printers. Network printers include toner. Additionally, the quality of printing is increased as network printers operate at a higher quality than desktop printers, and are less costly.

**Opportunity 1.5 – Install occupancy sensors for lighting in City facilities**

- Completed Projects** Installation of occupancy sensors

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- Looking Forward** Expansion

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- In Progress** Budget review

Occupancy sensors are one of the easiest ways to reduce energy costs by ensuring that when the room is unused the City is not paying for energy costs to light the room. The City installed wall mounted occupancy sensors which are placed onto the wall where the light switch was previously. This allows for easy installation and removes the light switch from the room to ensure that the occupancy sensors are used.

**Opportunity 1.6 – Use EPEAT guide for purchasing energy efficient electronics equipment**

- Completed Projects** Buy Green Policy within the City Purchasing Department.

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- Looking Forward** Implementing Buy Green Policy into the IT Department

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- In Progress** Update servers

EPEAT registered products are a part of the EPEAT global registry for greener electronics. The mission of the EPEAT Corporation is to create a world where negative environmental and social impacts of electronics are reduced. This policy which focuses on leadership, transparency, and collaboration aligns with the City of Newport News' vision for greener purchasing.

**Opportunity 1.7 – Reduce energy usage for exterior wall mounted lighting to LED and use photo-cell or timer control**

- Completed Projects** Upgraded outdated incandescent lighting to ultra-efficient LEDs and CFLs at the Justice Center parking garage, Family Courts, Main Street Library and Fire Station 2

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- Looking Forward** Expand retrofitting activities into other city buildings

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- In Progress** Lighting inventory

The implementation of the lighting upgrade is estimated to conserve 1,866, 411 kilowatt-hours of energy conserved annually and 1,321 metric tons of CO2 emissions annually. The total improvements were funded by the EECBG grant of \$1.72 million awarded to the City of Newport News. The LED traffic light conversion project reduced energy consumption by 73%.

**Opportunity 1.8 – Install timers on vending machines to turn off at night and require Energy Star machines at contract renewal with vendors**

- Completed Projects** Retrofit Public Works vending machine with sensor device, light bulb removed.

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- Looking Forward** Gauge success of removing lights from vending machines when possible and remove light bulbs from other vending machines. Install timers on drink machines to keep beverages cold while conserving energy.

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- In Progress** Vending machine inventory

Removing light bulbs from vending machines is a simple method to save electricity. This may sound like a small initiative, but when done at a large scale it can be very economical. For example, Wal-Mart removed light bulbs from vending machines within their employee break rooms and saved \$1 million dollars.

**Opportunity 1.9 – Convert to more efficient building and parking lot lighting**

**Completed Projects** America’s Recovery and Reinvestment Act Lighting Retrofit

**Looking Forward** Lighting schedule and ROI conversion

**In Progress** Energy efficient bulb replacement as needed

Government agencies spend more than \$10 billion a year on energy to provide public services and meet constituent needs — while grappling with tightening budgets. Yet nearly one-third of the energy used to run typical government buildings goes to waste, according to the Environmental Protection Agency. Increased energy efficiency in existing buildings represents one of the best opportunities for immediate and cost-effective reductions in energy use and greenhouse gas emissions. Changing incandescent light bulbs to Compact Fluorescent Light bulbs (CFLs), which use up to 75% less energy and last 6-10 times longer than incandescent lights, are relatively easy actions.

**Goal 2 – Promote energy efficiency and conservation awareness in the community**

**Opportunity 2.1– Provide incentives to carpool or take mass transit or bike to work**

**Completed Projects** “Try Transit Week” Proclamation, signed by the Mayor and City Council

**Looking forward** Increase ridership

**In Progress** Employee Survey

Hampton Roads Transit (HRT) is committed to supporting the use of transit options throughout Virginia by providing transit services to the City of Newport News and surrounding communities. The City of Newport News encourages residents and employees to pledge to try some form of transit in Hampton Roads. As such, the city hosted two information sessions by Hampton Roads TRAFFIX for City of Newport News employees regarding the NU-RIDE program and other ridesharing and commuter services offered by Hampton Roads Transit (HRT). During “Try Transit Week”, HRT provided free rides on the MAX express bus service to encourage Virginians to try one of the varieties of transit options available such as bus and rail service, carpools, vanpools or telework.

**Opportunity 2.2 – Provide energy audit information and tax credit information for homeowners and businesses**

**Completed Projects** Commercial Real Estate Tax Abatement.

**Looking forward** Increase participation in the residential and commercial programs

**In Progress** Marketing Plan

The Newport News City Council has enacted an ordinance to encourage commercial rehabilitation in the city by providing a five-year partial abatement of real estate taxes. This ordinance provides for a reduction of the post-rehabilitation assessment of a qualifying property by fifty percent (50%) of the eligible rehabilitation costs. Building new commercial buildings has become increasingly expensive in recent years. Modernizing an older building may provide a lower cost alternative to new construction. Building rehabilitation includes exterior, interior, structural, mechanical or electrical improvements that improve energy efficiency.

**Goal 3 – Promote green business and energy independence, and search for renewable energy opportunities**

**Opportunity 3.1 – Use landfill gas for heating Mary Passage Middle School/Denbigh Recreation Center**

**Completed Projects** Mary Passage Middle School landfill gas to energy project with the inactive Denbigh landfill

**Looking forward** Expansion of landfill gas to energy project to neighboring facilities

**In Progress** Feasibility study for an Anaerobic Digester facility at the Denbigh landfill.

Mary Passage Middle School borders the inactive Denbigh landfill and was chosen for this environmentally friendly initiative due to its close proximity. The methane gas, a product of municipal solid waste decomposition, is being used to fuel one of the School’s boilers. This reduced the amount of non-renewable fuel needed to heat the school.





## Resource Conservation

The resources in Newport News provide us with capital that helps to enrich our daily lives such as air, water, and open space. Newport News has a commitment to conserve the natural resources that will foster a healthy and sustainable community. Newport News aims to form an effective strategy to develop, enhance, and preserve these resources through education, waste minimization, and pollution prevention.

### Goals

- Reduce Waste
- Improve Recycling
- Identify Sensitive Environmental Resources
- Conserve Water

### Select Accomplishments

**Internal recycling program** since 1988. Community wide recycling program since 1989. Plastic bag recycling program at Public Works operations center.

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**City recognized by DEQ** for exceeding the State's mandatory 25% recycling rate for 2010; City recycled 32.4% of the waste stream in 2010

.....  
**Keep America Beautiful Recycling Grant - Award: \$2,000.** City awarded \$1,000 more than the maximum prize due to focus on business recycling

.....  
**Successfully** implemented the Broken Trash Can recycling program which recycled 20,000 pounds of plastic. Total revenue created was \$1,600 and \$400 saved in disposal fees.

.....  
**SharePoint 2010 and Network printing** –Reduction in paper usage and ink costs through use of SharePoint and utilization of network printers.

**Goal 1 – Reduce Waste**

**Opportunity 1.1 – Identify opportunities for reduced paper usage in the workplace**

**Completed Projects** iPads at Council meetings

**Looking forward** Integrate technology to reduce paper consumption

**In Progress** Engineering use of electronic sharing

Reduced paper usage presents many opportunities for resource conservation. The Public Works Department has converted to network printing thereby eliminating the need for personal desktop printers. Staff now prints to the network printers located in the central copy room, which has resulted in savings on ink, repair, and paper costs.

City Council has integrated new technology into the workplace. iPads have replaced the printed packets for regular City Council meetings and work sessions. The members view the agendas on Pads instead of paper copies.



Crittenden Middle School, Newport News’ Science, Technology, Engineering, and Math magnet school, recently instituted “A Day Without Paper.” Teachers eliminated paper use for the day. Instead, students used technology as a substitute. “A Day Without Paper” turned out to be successful on two fronts. It allowed the school to save paper as well as have the students engaged in learning instead of concentrating on the worksheet.

The City’s Engineering Department is practicing resource conservation by utilizing electronic file sharing. In the future, research is needed to evaluate the success rates of going paperless. With an increase in the usage of electronic devices, the City may see an increase in the amount of energy it uses that will impact utility costs.

**Opportunity 1.2 - Promote use of reusable water bottles/mugs; discontinue use of Styrofoam cups at city functions**

**Completed Projects** Research of cost-effective alternatives to Styrofoam

**Looking forward** Purchasing policy for alternatives to Styrofoam

**In Progress** Use of alternatives when it is financially feasible

Styrofoam is a product that cannot be recycled or reused. It is predicted to remain in its original form for thousands of years in a landfill. In August, 2011, The City’s Purchasing Department explored opportunities to discontinue purchasing Styrofoam materials. At the time, it was not financially practical; however staff recognized the importance of using multi-use products and will work to implement this policy in the future. Staff is currently researching cost effective alternatives to single use products.

**Opportunity 1.3 – Establish pallet collection program**

**Completed Projects** Partnership with [www.thatsreusable.com](http://www.thatsreusable.com) to locate pallets

**Looking forward** Pallet reuse program

**In Progress** Departmental collaboration

The City’s Compost Facility currently reuses approximately 10 pallets per month for palletizing electronics for E-waste recycling.

However, the City generates a large number of pallets that exceeds the Compost Facility needs. City departments are working together to efficiently utilize this potential resource. The Fire Department has expressed an interest in obtaining the used pallets for training purposes. The website <http://www.thatsreusable.com/> is providing the City a free subscription to their program, which acts as a supply/demand information sharing and transporting center. Moving forward, the City will explore additional uses of pallets and alternative pallets made from recycled plastic.



The City implemented a scrap metal recycling program to identify and capture recyclables coming from city job sites. To date, 12,000 pounds of metal has been recycled and \$12,000.00 of revenue generated.

**Goal 2 – Improve Recycling**

**Opportunity 2.1 - Recycle broken trash and recycling carts**

**Completed Projects** Recycled 20,000 pounds of broken plastic trash and recycling bins

**Looking forward** Expansion of the program

**In Progress** Awareness of the program to increase public participation

The official City trash carts are made from plastics. According to the EPA, 21 million tons of plastic were generated in 2010 but only 8% of this plastic was recycled. This creates a large market for trash cart recycling. The Public Works Department has instituted a Broken Trash Can Recycling Program. On April 1, 2011, the City contacted Otto Environmental Systems to help dispose of more than 20,000 pounds of broken plastic trash and recycling bins. In addition to recycling the old cans and bins, this program provides the City with a rebate for the recycled plastic. The initial shipment of recycled bins resulted in recycling 20,000 pounds of plastic, receipt of \$1,600.00 in revenue and avoided disposal costs of \$460. The carts are ground, washed and pelletized, and used in the construction of plastic lumber.

**Opportunity 2.2 – Motivate citizens to recycle and reinforce recycling behaviors with City employees through awareness training**

**Completed Projects** Recycling at Belmont Apartments in City Center

**Looking forward** Older apartment complexes to comply

**In Progress** Recycling Awareness Programs

Recycling is one of the established programs to contribute to Newport News’ sustainability efforts. In 2011, the city recycled 32.4% of the total waste stream of 203,591 tons. The city’s recycling rate exceeds the state mandated recycling rate of 25%. The rate has been continually improving since 2008, a direct reflection of the increase in awareness programs conducted by the City’s Solid Waste and Recycling Division. The City will continue to motivate citizens and employees to learn more about recycling. All residents are provided with a recycling bin or easy access to a recycling drop-off site. Many new developments are being built with resource conservation in mind. For example, the new apartments at City Center offer recycling for residents. The City will continue to work with older apartment complexes to educate residents the importance of recycling and opportunities to participate.

**Opportunity 2.3 – Assist businesses, apartment complexes, and condo developments in establishing recycling programs**

**Completed Projects** American Forest and Paper Assoc./Keep America Beautiful Grant

**Looking Forward** Identify grant opportunities

**In Progress** Collaboration with recycling contractor to develop education/outreach for targeted audiences

The City of Newport News received a \$2,000 grant from the American Forest & Paper Association (AF&PA) in partnership with Keep America Beautiful (KAB) in 2011. The grant supported the City’s sustainability initiatives in environmental and energy stewardship to the community by assisting local businesses to enhance paper recycling programs.

One of the city’s successful business recycling awareness programs is the Waste Audits of Residential Recycling event. Through a partnership with the city’s recycling contractor, businesses participate in the semi-annual waste audit conducted at the Material Recovery Facility. There, participants engage in hands-on evaluation of materials that come through the residential single stream recycling program. Participants learn about material contamination, recycling markets and trends for the recyclables.



City employees organize broken trash cans and recycling bins for plastic recycling.

Participants of the residential recycling waste audit sort through materials.



**Goal 3 – Identify sensitive environmental resources**

**Opportunity 3.1 – Develop a City-wide Integrated Natural Resources Management and Conservation Land Plan**

**Completed Projects** Partnership with Newport News Green Foundation

**Looking forward** Identify the natural resources the City has to offer

**In Progress** Working amongst departments to best manage the resources

Newport News contains many ‘one of a kind’ natural resources. This specific opportunity allows for collaboration amongst city departments and citizens. One opportunity is to foster the City’s relationship with the Newport News Green Foundation. The City has a strong partnership with the Green Foundation, whose mission is to promote the preservation of green space throughout Newport News. The Foundation has already preserved 26.5 acres of open space in the city.

Moving forward, the City will work to develop an urban forest inventory to best assess the City’s natural resources. The Integrated Natural Resources Management Plan can be created once the inventory is completed. This plan will help to determine the next step the City should take in the management of its urban forest natural resources.

**Opportunity 3.2 – Complete an urban/suburban forest inventory**

**Completed Projects**

A Tree City USA community

**Looking forward**

Identify urban/suburban forests and how to best manage them

**In Progress**

Departmental collaboration

Newport News understands the importance of best utilizing and protecting its urban forest because of the resources that it provides such as shade and aesthetics. One of the original goals listed for City Council’s Strategic Eight Priorities was to complete an urban forest inventory. An Urban Forest Inventory provides the City with a baseline and how best to manage this valuable resource. The inventory will serve to identify potential economic benefits of the forests located in Newport News.

Environmentally minded business owners opt to have a private company pick up their recycling curbside.



**Goal 4– Conserve Water**

**Opportunity 4.1 – Retrofit existing vehicle washing facilities to a closed loop system**

**Completed Projects** Public Works Wash Rack closed loop system research

**Looking Forward** Project completion

**In Progress** Apply close loop principle to the Vehicle Services wash facility

A closed-loop wash rack wastewater recycling system helps facilities achieve compliance with discharge limits while reducing water and detergent usage. As environmental regulations continue to set more stringent discharge limits for wastewater contaminants, a closed loop system becomes even more justified since regulatory agencies grant permitting exemptions to activities that recycle wastewater onsite.

In general, systems are purported as capable of removing contaminants from the wastewater to the following concentrations: oil to less than 10 ppm, heavy metals to less than 0.1 ppm, and suspended solids to 1 ppm.

During a feasibility study, Hampton Roads Sanitary District (HRSD) has granted the city permission to connect the Public Works wash rack to the HRSD system, requiring a valve installation to divert water to the stormwater system when not in use. The goal is to ensure environmental sustainability with the following benefits:

- Complies with discharge requirements
- Reduces annual quantity of water used to wash vehicles, equipment
- Reduces annual detergent used to wash vehicles, equipment
- Reduces loading on wastewater treatment plants

**Opportunity 4.2 – Retrofit existing toilets in buildings and outfit new buildings with low flow appliances**

**Completed Projects** Low Flow Showerhead replacement Fire Station #5

**Looking Forward** Develop fixture replacement schedule

**In Progress** Low Flow Fixture replacement as needed

Water conservation is very important. Water is a limited natural resource, and drinking water supply is vulnerable to droughts that can rapidly decrease our water supply. One of the easiest

and least-intrusive ways to reduce facilities’ water use is to replace existing fixtures and appliances with those that conserve water. Water-conserving toilets and urinals and low-flow showerheads and faucets can have a significant impact on facility water use. Installing low-flow fixtures and aerators saves not only water but money, too. Aerators for faucets and showers require an initial capital investment, but they often pay back the investment in less than a year, especially when they are used often. Switching to water-efficient appliances and fixtures will also save money on energy costs, as you end up using significantly less hot water and extend the life of your water heater. The EPA estimates that if everyone in the country switched to water-efficient appliances, the country would save **\$8 billion annually**.

**Opportunity 4.3 – Promote installation of rain barrels and /or cisterns for harvesting rainwater**

**Completed Projects** Go Green Expo

**Looking Forward** Commercial application

**In Progress** 2013 schedule for rain barrel workshops

On September 24th 2011, the Newport News Master Gardeners held their annual Go Green Expo at the Brittingham-Midtown Community Center. The event was a collaborative effort sponsored by the Newport News Master Gardeners Association and the Virginia Cooperative extension service. Support was provided by Newport News Public Works Recycling Office, Newport News Waterworks and several local businesses. The event featured displays from businesses, conservation organizations and informational sessions to help local residents to get valuable and practical information concerning maintaining their properties. The focus was on environmentally sustainable methods for yard maintenance and home ownership. Interactive displays covered both the inside and outside pavilion areas of the Midtown Community Center. A garden marketplace featured locally grown native plants and many eco-friendly and practical garden accessories. Practical sessions were conducted on composting and planting methods. This year’s event also hosted two of the very popular “Rain Barrel Workshops”, where over 50 rain barrels were created to help residents capture rain water for lawns and other uses. Each rain barrel collects on average 1,500 gallons of water per barrel, per year saving money and controlling storm water run-off

Rain barrel construction is a family event at the city’s Rain Barrel Workshop, conducted by the Public Works Solid Waste Division, NN Master Gardeners, Waterworks and the Cooperative Extension Service.





## Open Space & Smart Development

Open space and smart development plays an important role in the city's landscape and affects our community through impacts in the patterns of development, economy, culture, environment and sense of community. The Open Space and Smart Development aims to strengthen the relationship between buildings and the communities in which they are located. Newport News endeavors to preserve open space, encourage environmentally efficient development, offer housing and economic opportunities for citizens of all ages and incomes, and support revitalization throughout the City.

### Goals

Institute a Smart Growth policy where site plan approval is expedited and fees are reduced for proposed development in strategic growth/transit oriented development districts

Increase, protect, improve and conserve greenways, vistas, recreational trails, parks and open space.

Promote Sustainable Development

### Select Accomplishments

**NNGreen Foundation Partnership** – To date approximately 26 acres of green space has been preserved

**Tree Preservation and Planting:** The City has been a Tree City USA for the last 25 consecutive years

**Partnerships** with Keep America Beautiful, Tree City USA, and Newport News Master Gardeners in order to protect and maintain the open space in the City

**Installation** of a Cistern & Filterra Bioretention System at Fire Station #3 to improve storm water management practices

**Promoted the development** of mixed use communities such as Port Warwick, City Center, and the Apprentice School Development

**Goal 1 – Institute a Smart Growth Policy where site plan approval is expedited and fees are reduced for proposed development in strategic growth/transit oriented development districts**

**Opportunity 1.1 – Update codes and ordinances to enforce sustainable neighborhood design standards**

**Completed Projects** Increased & promoted mixed use developments – City Center, Port Warwick

**Looking forward** Reuse of older structures

**In Progress** Radius Urban Apartments

The City of Newport News has worked to promote sustainable neighborhood design standards through increased mixed-use developments such as City Center and Port Warwick. There is now a designated zoning code for mixed-use or high density. While mixed-use communities are more sustainable than traditional development, reuse of older structures should be considered in addition to developing new areas. These buildings possess the characteristics of the neighborhood. The surrounding development is considered infill development. The new Radius Urban Apartments, currently available at the Jefferson Marketplace, include many sustainable features. The development is located in an area that has easily accessible retail, entertainment, and job opportunities. The apartments include many environmentally friendly amenities for its residents such as an electric car charging station, Earthcraft Energy Efficient HVAC systems, online service & payment options, recycling on site, and a complimentary interior bike storage area.

**1.2 Revise current parking requirements to provide for additional green space or greater density**

**Completed Projects** City Center Development

**Looking forward** Draft Code

**In Progress** Code Review

Green parking refers to several techniques that applied together reduce the contribution of parking lots to total impervious cover. From a stormwater perspective, green parking techniques applied in the right combination can dramatically reduce impervious cover and, consequently, reduce the amount of stormwater runoff. Green parking lot techniques include: setting maximums for the number of parking lots created; minimizing the dimensions of parking lot spaces; utilizing alternative pavers in overflow parking areas; using bioretention areas to treat stormwater; encouraging shared parking; and providing economic incentives for structured parking.

All of the green parking techniques can be applied in new developments, and some can be applied in redevelopment projects, depending on the extent and parameters of the project. In urban areas, some techniques, like encouraging shared parking and providing economic incentives for structured parking, can be practical and necessary. Commercial areas can have excessively high parking ratios. By applying green parking techniques in various combinations, a site's impervious cover can be dramatically reduced.



A sunflower in full bloom at the Community Garden in the Lee Hall area of the City.

**Goal 2 – Increase, protect, improve, and conserve greenways, vistas, recreational trails, parks and open space**

**Opportunity 2.1 – Expand and improve our network of constructed open spaces**

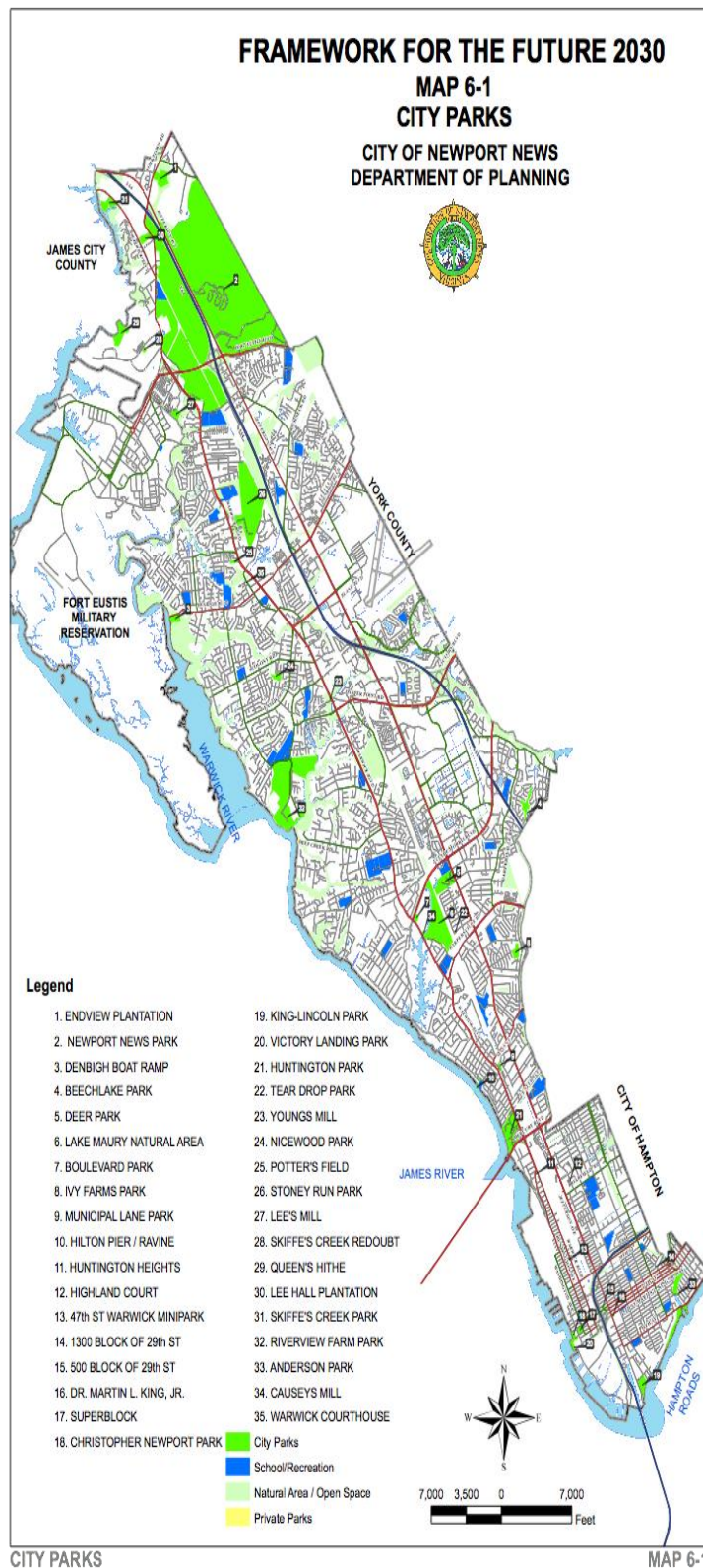
**Completed Projects** Partnerships with Keep America Beautiful, Newport News Green Foundation, Tree City USA

**Looking forward** Future of open space, increasing citizen involvement

**In Progress** Beautification of open spaces, increasing partnership initiatives with Newport News Green Foundation

Keep America Beautiful is a nonprofit organization whose mission is “engaging individuals to take greater responsibility for improving their community environments.” The organization focuses on litter prevention, waste reduction and recycling, and beautification and community greening. Through a partnership with Keep America Beautiful work continues to maintain Newport News’ open space.

The Tree City USA program provides direction, technical assistance, public attention, and national recognition for urban and community forestry programs in thousands of towns and cities. The City has been a member in this program since 1984 ensuring that protecting the urban forest was one of its top sustainability goals. An example of an urban forest is Mariners Museum Park located near Christopher Newport University. This urban forest provides recreation for nearby college students and provides beauty to the city. Urban forests filter air and water in the City in addition to providing habitat for animals and recreational activities for citizens. The urban forest is also useful in controlling the heat island effect. The heat island effect is when cities are hotter than surrounding rural areas because of the darkly colored impervious surfaces covering more surface area in cities and absorbing heat, making the air temperature rise. Newport News is partnering with community and citizen groups such as the NNGreen Foundation to promote the protection of the urban forest. These groups can participate in the maintenance of them while simultaneously learning about the importance of protecting the forest that are available in Newport News.



**While the City of Newport News is highly developed at 95%, there are still a large number of public parks. The City has 31 parks located within its limits. Each park varies in size and Newport News Park is the largest out of the 31 at 8,065 acres. The map above which is taken from the Framework for the Future 2030 shows park land located within the City. To find more information about the Framework for the Future visit [www.nngov.com](http://www.nngov.com).**



**Opportunity 2.2 – Expand Adopt-A-Spot**

**Completed Projects** 72 participating organizations in the program

**Looking forward** Expand participation in the individual category and increase funding

**In Progress** Identifying locations in the City who could benefit most from the program

The Adopt-A-Spot program provides resources to individuals or organizations for cleaning up a street or community. Individuals, businesses, and organizations commit to keep a designated area within the city litter free. As of June 2012, there were seventy-two individuals and organizations involved in Adopt-A-Spot in Newport News. Most of those involved in the program were organizations.

Newport News will continue to promote and expand the program to increase participation throughout the community and target areas that have been identified as community maintenance sites.

**Opportunity 2.3 – Promote the creation of low or no maintenance vegetation on existing turf areas where possible**

**Completed Projects** Community garden

**Looking forward** Incorporation of native vegetation requirements into the building requirements

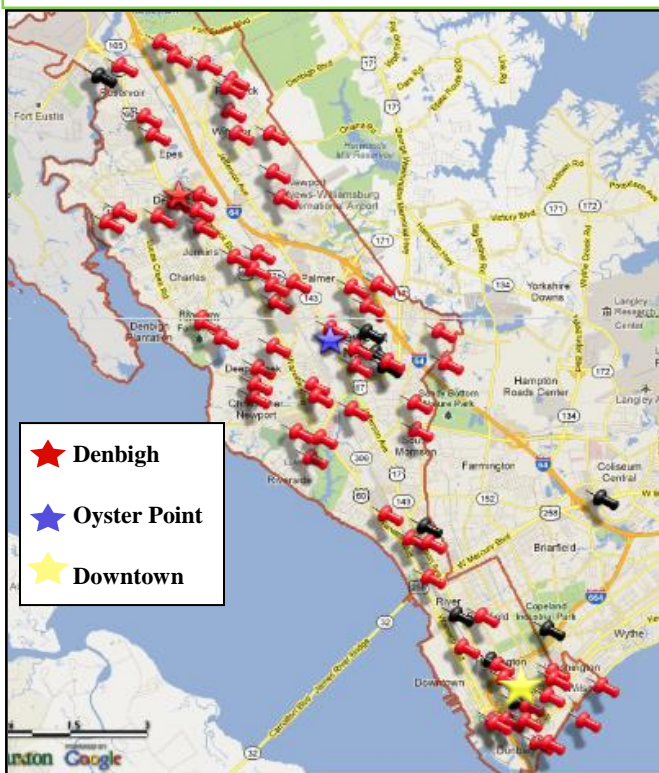
**In Progress** Grissom Library Rain Gardens (Stormwater retrofits with amended soils & native plants)  
Denbigh High School courtyard – Rain garden with native plantings

The type of vegetation planted at a site can impact all uses of that site. The City has partnered with the Newport News Master Gardeners to educate the public about landscape management practices and to promote the conservation of natural resources. The organization uses horticultural research from Virginia Polytechnic Institute and State University and Virginia State University. Newport News plans to partner with other community organizations in order to educate the community about vegetation. The benefits of low or no maintenance vegetation is decreased water and chemical fertilizer needs. This saves time and money for the grower and means fewer chemicals are released into the environment.

There are numerous projects happening in Newport News to manage its soil and vegetation resources. In 2011, the Denbigh High School courtyard was outfitted with a rain garden that contains native plantings. This area will be utilized as an outdoor learning environment. A rain garden has been created at the Grissom Public Library as well as storm water retrofits with amended soils and native plants. This was an educational opportunity for the public and employees of the library.

**Current Adopt-A-Spot Locations in Newport News**

Each push pin represents an Adopt-A-Spot location in Newport News. Locations are usually sections of roads or streets which groups pledge to clean up. These sites are labeled within the City of Newport News with a blue sign. The Adopt-A-Spot program is facilitated through the Department of Public Works. Map Source: Buxton SCOUT 2012



### Goal 3 – Promote Sustainable Development

#### Opportunity 3.1 - Prioritize development of underutilized, vacant, and brownfield sites while limiting development of Greenfield sites

**Completed Projects** Port Warwick infill development. Brownfield Assessment and Demonstration Pilot at Ft. Eustis

**Looking forward** Identify opportunities and challenges of creating/developing green space associated with a city that is 95% developed

**In Progress** Analysis of Brownfield and Greenfield sites to determine best fit for development

According to the US Environmental Protection Agency, “A brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.” Brownfield sites are difficult to develop because of the legal liability. Present owners can be held legally liable for cleaning up brownfields even if they were not the ones who contaminated them. Greenfields are areas of undisturbed land that have no potential hazardous material in their sand. In response to Brownfield’s around the country, the EPA created a program to address these abandoned hazardous waste sites. The program is commonly known as Superfund. The Newport News site is located on the Fort Eustis Army Base in the northern section of the City. The site was identified because of contaminated ground water, soil, sediment, surface water, and fish tissue.

#### Opportunity 3.2 - Protect and sustain watershed health by managing 50% of the storm water from City facilities using sustainable storm water practices

**Completed Projects** Cistern at Fire station #3

**Looking forward** Research storm water best practices for Newport News

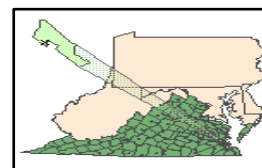
**In Progress** Expansion of infrastructure to other city facilities

Newport News currently has 62 employees in its Stormwater division. These staff members are trained to address the quality of stormwater runoff. Stormwater is the water that flows over land as it rains. In urban areas, the water runs over gardens and streets picking up pollution as they go. The water eventually runs into waterways where it deposits the pollution. This contributes to overall water quality.

The newly constructed Fire Station #3 installed a cistern to collect and store rainwater. The water is used to wash emergency vehicles and maintain landscaping. This reduces the consumption of treated water for these purposes. Additionally, a Filterra Bioretention System was installed to improve stormwater quality by using landscape vegetation and nature based filtration systems to naturally reduce the amount of pollutants and harmful solids entering the stormwater drainage system. Stormwater from Newport News goes directly into the Chesapeake Bay.

The City intends to expand sustainable stormwater practices to all of its facilities.

#### FT. Eustis Superfund Site



Ft. Eustis Army base is Newport News' only site listed on the National Hazard Priority list through the EPA's Superfund Program as of June 2012. Currently early action activities have been completed on the site and the remedy to the environmental hazards has been selected. The EPA's Cleanup Impact Summary states that the EPA is working to determine whether there are human exposures to containments, and states that there is insufficient data to determine mitigation control status.

Source Images: US EPA 2012  
Source: Information: US EPA 2012

**01/18/1994**  
Proposed to the NPL

**12/16/1994**  
Listed as Final on the NPL

**06/30/1997**  
1st Cleanup Action Initiated





Photo Credit: Adrin Snider, Daily Press

## Transportation

To advance and maximize the safe, effective and efficient movement of pedestrians, cyclists, motorist and commercial vehicles through sustainable transportation systems while helping to build community and enhancing quality of life.

### Goals

- Promote the development and use of mass transit
- Develop a bike friendly community
- Support sustainable transportation practices in city government

### Select Accomplishments

**Grant recipient for the Southeast Propane Auto-gas Development Program Grant recipient** - \$159,000.00 to convert 26 city vehicles from gasoline powered to propane powered.

**Partnership** with HRT to increase the use and efficiency of public transportation

**Anti-Idling Policy:** All departments with significant vehicle use have established anti-idling policies for the employees

**Hampton Roads CMAQ/RSTP Transportation grant**—\$20 million project for a multi-modal train station that will provide an alternative to driving from Newport News to Washington D.C.; the state estimates it will result in the removal of over 1.3 million vehicles from I-95 and will eliminate over 62,000 tons of CO2.

**Created** a system of bikeways throughout the City that run along major thoroughfares

**Encourage** ride sharing among city employees

## Goal 1 –Promote the Development and Use of Mass Transit

### Opportunity 1.1 – Increase use and efficiency of Public Transportation by enhancing service routes and frequencies

**Completed Projects** Created a regional transportation plan which will help increase the efficiency of public transportation. New HRT bus stops at Patrick Henry Mall with an aesthetically pleasing design to promote HRT in Newport News

**Looking forward** Identify the needs of the community to better promote public transportation.

**In Progress** Increase ridership to middle income commuters.

According to studies, an efficient public transportation route increases ridership because it takes less time to get from each destination for the rider. Additionally, increasing routes and enhancing services encourages a more diverse population of riders to take part in public transportation. Services utilized by other localities such as phone apps and increased bus monitoring systems alerts the rider when the bus is within close proximity to help make a more efficient and intelligent public transportation system. These are types of tools the City plans to develop to increase ridership for public transportation.



The vision for high speed rail in America as imagined by the US Department of Transportation shows the possible connections for high speed rail throughout the country. Newport News plans to incorporate high speed rail into its future transportation plan. Image Source: US Department of Transportation

### Opportunity 1.2 - Support development and implementation of mass transit corridors

**Completed Projects** Amtrak Relocation Project Funding Application Approval

**Looking forward** Increase ability of current Amtrak stations to accommodate predicted rider forecast of 248,000 passengers per year by 2030.

**In Progress** Plans for a project which will provide an alternative to driving from Newport News to Washington, DC.

Transportation is a partnership between the City and a variety of public and private entities at the local, regional, and state level. Mass transit corridors are areas planned around stations along a mass transit lines which provide walkable connections to the city. Currently this is in the planning stage as new developments and mass transit expansions are being planned. The City is working to incorporate these new ideas within future transportation plans. The City has received \$2,000,000 from the Regional Surface Transportation Program (RSTP) for the study and design of the multimodal transit site. Also, the City received \$18,000,000 from Congestion Mitigation and Air Quality (CMAQ) grant program from the Federal Transit Authority (FTA) for construction of the multimodal transit station. This project is a partnership between the City of Newport News, Amtrak, CSX, Virginia Department of Rail and Public Transportation (DRPT), and the Hampton Roads Transportation Planning Organization (HRTPO).

The current funding allocations on this project are as follows:

FY 2011 = \$1,000,000 RSTP

FY 2012 = \$1,000,000 RSTP

FY 2016 = \$9,000,000 CMAQ

FY 2017 = \$9,000,000 CMAQ

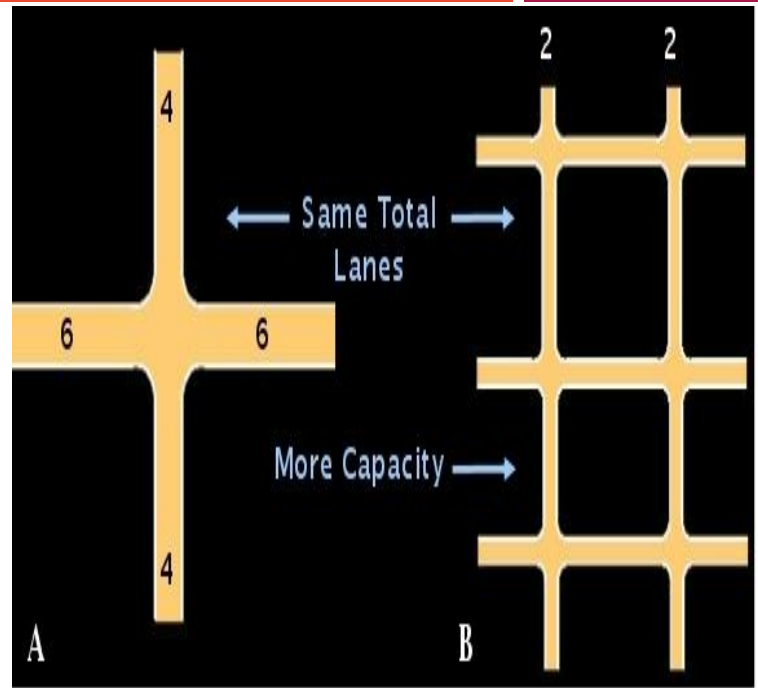
**Total = \$20,000,000**

**Opportunity 1.3 – Adopt land-use plans that encourage transit-oriented development and encourage mixed-use communities**

**Completed Projects** “Rail Enhancement Fund” participation, providing additional funding dedicated for passenger and freight rail improvements in Virginia.

**Looking forward** Integrate Newport News’ transit plans into a regional picture for more efficient transportation throughout the City. Analyze the difficulties of Newport News’ spatial design to better serve the community’s transportation needs.

**In Progress** The Amtrak relocation project which allows for light rail stations, HRT bus stations, airport shuttles, taxi stands, and bike/pedestrian accommodations.



A fine grained road network (B) contains the same lane miles as a sparse hierarchy road system (A); however; the fine grained road network has a greater capacity, gives the driver more options, creates a more pleasant drive, and lays the framework for a pedestrian friendly community.

Image Source: Glatting Jackson, Inc.  
Text Source: Framework for the Future 2030

Port Warwick and City Center are examples of mixed use communities which is suitable for transit oriented development (TOD). Port Warwick’s design is TOD because of circular traffic patterns with looping roads, roundabouts, alleyways, and no cul-de-sacs. Mixed use developments offer efficiencies in transportation because they are connected into the transportation structure of a city and utilize the densely organized structure to reduce congestion. Mixed use developments make it easier to use alternative transportation, which requires density, because there is a large ridership built into the communities. Newport News plans to incorporate transit oriented design elements into future mixed use developments and connect current mixed use developments such as Port Warwick and City Center in order to create a more efficient use of alternative transportation.

## Goal 2 – Promote a Bike Friendly Community

### Opportunity 2.1 – Develop a system of bicycle routes that connect the City in an efficient way

**Completed Projects** Implementation of street design that allows for a fine grained road network. The design contains the same lane miles as a hierarchy road system but allows for greater capacity and driver choice while laying the groundwork for a more pedestrian friendly community.

**Looking forward** Increase citizen usage of bikeways and better publicize location of existing bikeways.

**In Progress** Multi-modal transportation system

The City recognizes the importance of sustainable transportation. There are bicycle paths that run the length of the entire city as well as connect into the neighboring City of Hampton. The paths throughout Newport News run along main thoroughfares such as Jefferson Avenue and Warwick Boulevard as well as smaller, connector roads. Bicycle trails are available in many of the parks, including a 6-mile trail in Newport News Park. These bicycle paths have been used to connect different areas of the city. Bicycle paths and greenways also encourage residents to bike and walk to work. Newport News has worked to enhance the quality of its existing paths and greenways through maintenance work.

According to the Framework for the Future 2030, 83% of citizens drove alone to work. Newport News promotes a ride sharing service for city employees through HRT's programs. In the future, the City plans to construct a multi-modal transportation center that would include facilities for cyclists as well as rail, car, and bus. This will allow users to easily move from one form of transportation to another.

### Opportunity 2.2 Expand and enhance bicycle paths/ways throughout the City

**Completed Projects** Bike Routing Signage

**Looking forward** Expansion of bike paths/ways

**In Progress** Biking information portal

A balanced transportation system is necessary to provide alternative forms of transportation and help reduce congestion. Traffic congestion results in lost time, increased energy consumption and air pollution. Between 1990 and 2000, the mean travel time to work increased from 20 minutes to 23

minutes. Most people drive alone to work, although gas prices are rising. The Census Bureau's 2005 American Community Survey estimates that 83% of workers drove alone. A balanced transportation system provides alternative forms of transportation to help reduce congestion on City streets. Bicycling is a mode of transportation that will help reduce congestion on the City's streets. Bikeways and paths allow people to ride their bicycles to work or for recreation. In the Framework For The Future, the city commits to amend the subdivision and site plan ordinance to require bikeways consistent with the City's plan in new development projects and establish design standards for bikeways.

### Opportunity 2.3 – Establish a Safe Routes to School program, which encourages walking and bicycling to neighborhood schools

**Completed Projects** Encourage the Newport News School Board to implement Safe Routes to School program

**Looking forward** Model program after other localities implementing Safe Routes to School and apply for grant funding to implement the program.

**In Progress** Identify possible routes and schools that could easily implement Safe Routes to School because of their proximity to existing sidewalks.

Safe Routes to School is a federally funded program that helps provide children with sidewalks to and from their residences which allow them to walk instead of riding the bus to school. Usually chaperons are provided for elementary children as they make the trek to school. Safe Routes to School helps lower GHG emissions produced by school busses and increases air quality because it reduces pollution. Additionally, Safe Routes to School can reduce fuel costs as school buses will reduce miles traveled and make fewer stops to pick up children. This can create a more efficient route system.

The Safe Routes to school program helps promote walking to school through the construction of sidewalks and crosswalks from residential neighborhoods to local schools.



### Goal 3 – Support sustainable transportation practices within City Government

#### Opportunity 3.1 – Adopt an anti-idling policy for school/government fleet vehicles

**Completed Projects** An anti-idling policy for all departments with significant vehicle use for employees

**Looking forward** Explore anti-idling technology to equip vehicles.

**In Progress** Enhancing and improving anti-idling policy

Anti-idling policies are beneficial because it results in reducing fuel costs. One minute of idling uses more fuel than it takes to restart the engine and prolonged idling uses fuel at a rate of about ½ gallon per hour. Organizations have reported a decrease in their gasoline usage by 6% in vans and light duty trucks during a 6 month period when this policy has been implemented. Another important reason to implement an anti-idling policy is the effect on air quality. Excessive idling deteriorates the air quality outside the vehicle and penetrates inside the vehicle for the drivers and passengers. Not only is idling not a best practice environmentally, but the long duration idling is costly to the citizens of Newport News through increased cost and air pollution.

#### Opportunity 3.2 – Adopt a "Green Fleet" policy that incorporates technologies to conserve fuel and reduces emissions.



**Fuel is a valuable resource**, and the propane Auto-Gas vehicles conserve it. Currently city vehicles consume 640,000 gallons of gasoline burned annually costing almost \$2 million dollars a year. - NNTV

**Completed Projects** Conversion of gasoline vehicles to propane auto-gas

**Looking forward** Implement the vehicle check list to help ensure that all city vehicles to improve efficiency. Example: Tire pressure checks help improve fuel efficiency

**In Progress** Expansion of the Propane Auto-Gas program

Propane Auto-Gas is propane which has been condensed into a liquid form. One of the benefits of using propane instead of gasoline is that the majority of propane is produced from natural gas deposits inside the United States. Additionally, propane is listed in the 1990 Clean Air Act and National Energy Policy Act (NEPA) of 1992 as an alternative clean fuel. Through a grant from James Madison University and the Southeast Propane Auto-Gas Development Program, the City of Newport News has retrofitted 22 propane auto-gas vehicles as part of a pilot program. Currently the Auto-Gas vehicles operate at \$1.00/gal less per vehicle than gasoline powered vehicles. The City of Newport News plans to expand the "green fleet" within the next coming years as it has proven to be economical. The projected savings from the conversion to propane for 22 vehicles is \$22,000, and extends the engine life 1-2 years. One of the benefits of the propane auto gas system is that the propane system can be removed from the car at the end of its life cycle and installed in a new vehicle.

**Opportunity 3.3 – Establish a practice to reduce vehicle usage by ride sharing between meetings and events and encouraging telecom meetings**

**Completed Projects** Encourage employees to ride share between meetings through coordination by motor pool office.

**Looking forward** Explore opportunities to install webcams within meeting rooms throughout organization to increase use of telecom conferences

**In Progress** Video conference is available within City Hall, Courts, and Sheriff's Office

Ride sharing is one of the easiest ways to save on fuel costs and increase efficiency. City employees attending the same meetings can ride together in order to reduce air pollution and congestion on the roads. Furthermore, ride sharing can reduce vehicle maintenance costs as well as fuel costs. Additionally, ride sharing may shorten commute times for employees through the ability to drive in the High Occupancy Vehicle lanes. Telecom meetings are another way to reduce air pollution due to fewer vehicles on the road. Productivity increases because it reduces travel time for employees to attend meetings. Moreover, telecom meetings reduce the requirement for increased parking at City buildings for city employees, which helps conserve land and reduce impermeable surfaces.



Traffix is an initiative through HRT with the involvement of different regional, national, and local agencies. Traffix is aimed at promoting transportation alternatives with the goal of decreasing traffic congestion in Southeastern Virginia.

**Opportunity 3.4 – Enact a policy that a minimum of 20% of the eligible workforce should participate in alternative work schedules**

**Completed Projects** Draft telework policy under review by city management.

**Looking forward** Identify potential telecommute type jobs and research what technology (if any) is required to implement a policy.

**In Progress** Research existing policy at the local government level

Teleworking has many benefits for the environment but also for the employee. It has been found that employees who work from home are more productive as they can choose to work at hours when they are the most alert and attentive. Another benefit of teleworking is flexibility. The flexibility of the schedule reduces the number of days employees miss work due to unforeseen circumstances.

**Opportunity 3.5 – Provide employee benefits for ride sharing, walking, biking, or taking transit to work**

**Completed Projects** Promoted Traffix as a method to provide employees with incentives for ride sharing, walking, biking, or taking transit to work.

**Looking forward** Employee ride sharing survey

**In Progress** Nu-Ride benefits awareness

The City of Newport News is promoting benefits for ride sharing, walking, and using alternative transportation through a variety of programs which provide incentives. For example, Traffix, an HRT initiative, advertises the variety of options citizens and employees have within the Hampton Roads area for alternative transportation. Additionally, programs like NuRide provide rewards for logging your carpool miles which can be redeemed for goods and services at area businesses.





## Sustainable Built Environment

A sustainable built environment, or “green” building, is an approach to building design, construction, and management that decreases the environmental impact of buildings. As a result, green buildings use less energy, consume less water, generate fewer air pollutants and provide a better indoor environment for human health. The sustainable built environment committee will focus on establishing an overall sustainability of the built environment in Newport News through building incentives, policies, and leading by example with public building sustainable design, construction and renovation.

### Goals

Enact development and growth policies and implement land use strategies that help advance Newport News as a more sustainable community

Promote and encourage buildings and site developments that are designed and constructed with sustainable practices and meet or exceed associated standards and practices

Develop policy-level initiatives that result in meaningful and measurable outcomes both for the City's and for the community's sustainability efforts, as well as overall Smart Growth

### Select Accomplishments

**Denbigh Community Center** – green building components include use of methane gas from the closed land fill for heating of building and water; majority of construction products used consist of at least 50% recycled materials; energy reduction efforts such as low-E glass (better thermal characteristics and allows more day light in), LED lighting, solar reflective roof, and automatic internal lights; and water use reduction features including auto flush toilets/urinals and auto shut-off restroom faucets.

**Landfill Gas to Energy Project:** Landfill Gas to Energy project will be delivered to Mary Passage Middle School for use in firing the boilers. Potential annual utility cost savings is \$47,000

**Dark Sky Compliance:** Where possible, all new and retrofitted exterior light fixtures will be dark sky compliant.

**Land use:** Port Warwick and City Center at Oyster Point are examples of high density, mixed use developments, constructed near major transportation routes.

**EECBG Grant Recipient:** The Justice Center Garage completed lighting project included replacement of inefficient metal halide fixtures with exterior energy efficient LED fixtures. The new fixtures are estimated to reduce annual energy consumption by 43,000 kWh and carbon dioxide emissions by 31 metric tons.

**Goal 1: Enact development and growth policies and implement land use strategies that help advance Newport News as a more sustainable community**

**Opportunity 1.1 – Adopt an urban/sustainable zoning overlay capability, to encourage increased densities and more mixed-uses, while promoting adequate open space**

**Completed Projects** Lee Hall Corridor overlay district

**Looking forward** Limit impervious surfaces, and/or to protect historic sites

**In Progress** Oyster Point Overlay

Overlay zoning is a supplemental zoning requirement that can be used to put special restrictions on an already existing zone.. For example, it can be used to limit impervious surfaces or to protect historic sites.

The City plans to use a zoning overlay in the Oyster Point Central Business District Urban core to increase the number of LEED certified properties. In the future, the overlay will need to be expanded to include all parcels located in the Urban Core. Newport News is continuing to partner with consulting firms to develop a long-range strategic expansion plan for the Oyster Point Central Business District that will look at sustainable building options.



Through ongoing efforts to “go green” the City has installed solar powered street lights to increase energy efficiency.

**Opportunity 1.2 - Encourage higher density development by identifying Code/policy that should be reviewed for adjustments**

**Completed Projects** Definition change of family to allow for higher density development

**Looking forward** Review density of the city which is 4.5 people per developed acre, lower than 1960 standard

**In Progress** Development of high density and mixed use areas

In October 2010, the Newport News Planning Commission voted to make changes to the definition of ‘family’ to allow for higher density development and to address overcrowding issues. Previously, code allowed for no more than three unrelated persons to share a dwelling unit. “Family” now allows up to four unrelated individuals to live in a multi-family building. This encourages higher density development by allowing people to rent apartment units together rather than separately. This is useful in the City where today’s demographics and market changes favor more housing choices and quality dense development.

A language change in code policy that allows for higher density development should be considered for the city because higher density development brings more citizens to the city. In 2008, the density of Newport News was 4.5 people per developed acre. This is a decrease from the 1960 rate of 4.8 people per developed acre.

One of the goals identified in the Framework for the Future 2030 was to develop high-density residential areas. It encourages Newport News to develop high-density areas around transit centers as well as retail, office, and government uses. The success of City Center is an example of the high-density development that is being created in the City.

**OVERLAY ZONING:** regulatory tool that creates a special zoning district placed over an existing base zone which identifies additional provisions on top of the provisions in the underlying base zone. Sometimes used to protect sensitive resources or guide development. (DOA, 2012)

**BROWNFIELDS:** Real property, the expansion, redevelopment, or reuse which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or containment. (EPA, 2012)

**GREENFIELDS:** Undeveloped sites which are often located in less dense and less accessible areas, sometimes farmlands or forested areas are considered greenfields.

**Opportunity 1.3 – Identify and stimulate redevelopment of selected areas of the City into desirable mixed-use areas**

**Completed Projects** Strengthening Greater Oyster Point

**Looking forward** Identify, plan, and enhance mixed use communities

**In Progress** Mixed use communities outside of the center of the city such as the southeast community & Denbigh

City Center has been a staple of the City for over ten years. The goal of City Center was to transform 50 acres of land in the 850 acre Oyster Point Park into a mixed use Central Business District to enhance the City’s competitiveness in attracting and retaining business, to expand the tax base and to improve the overall quality of life for its residents. Ten years later City Center has been a defining success. It is the largest economic engine in the City of Newport News. It had an \$809 million value when assessed in 2009. This was a 260% increase from its assessed value of \$310 million in 1999. It is a thriving mixed-use community that shows how beneficial mixed neighborhoods can be for the triple bottom line.

Areas outside City Center should be considered in the future for mixed-use development. One area that has already been identified is the City’s traditional downtown. Currently, in development is the construction of Newport News Shipbuilding’s new Apprentice School facility. Included in the facility will be academic space, residential, retail, green space, and a parking garage. The facility is scheduled to open in December 2013.

**Opportunity 1.4 – Revise Code (Zoning/Planning) to allow for wind turbines, solar panels, and other alternative energy sources**

**Completed Projects** Façade Improvement Grant

**Looking forward** Alternative energy source inclusion

**In Progress** Code Review

The City’s Department of Development program, Façade Improvement Grant (FIG) objective is to restore, sustain, and improve commercial properties located within the City of Newport News. The FIG program provides matching grant funds, up to a maximum of \$30,000, to assist with eligible façade improvements on properties city-wide that are used for commercial, industrial, office or mixed-use purposes. A FIG may assist in financing the cost of eligible façade improvements such as: awning installation, exterior lighting, hardscape improvements, signage and certified green/sustainable exterior improvements.



An Engineering employee installs LED street lights in Hilton Village of Newport News through one of the City’s first projects implemented under the EECBG grant. The projected savings from this retrofit is a reduction in energy cost by 60%.  
Image Source: Daily Press

**Opportunity 1.5 – Stimulate maintenance, protection (of character) and revitalization of older residential neighborhoods and encourage adaptive reuse of these structures**

**Completed Projects** Hilton Village

**Looking forward** Southeast Community, Brooks Crossing

**In Progress** Causeys Mill

Causey’s Mill is a two-story mill that has stood beside Warwick Boulevard for over 140 years, which dates back to shortly after the Civil War. In recent years, the mill has fallen on hard times. In 2011, the mill received a new foundation, a new coat of paint, and was moved about seventy-five feet back from the water’s edge to prevent future damage. There are plans for restoration in the future.

**Goal 2 –Promote and encourage buildings and site developments that are designed and constructed with sustainable practices and meet or exceed associated standards and practices**

**Opportunity 2.1 - Encourage rehabilitation, reuse and preservation of existing buildings**

<b>Completed Projects</b>	Rehabilitation of Noland Green Apartments in Downtown Newport News
<hr style="border-top: 1px dashed #008000;"/>	
<b>Looking forward</b>	A Southeast Commerce Center in Downtown Newport News
<hr style="border-top: 1px dashed #008000;"/>	
<b>In Progress</b>	The rehabilitation of the Warwick Corridor

The Noland Green Apartments were constructed within the old Noland Company buildings located at Warwick Boulevard & 26th Street. These historic buildings were turned into 60 one, two, and three bedroom apartments. The developers were careful to maintain the historic character of the buildings. Currently, the apartments are 100% leased.

In progress is the redevelopment of the Southeast Community. The first step in the process is to revitalize Jefferson Avenue, as it is the gateway into the community. There are plans to revive the older buildings and put the utility lines underground. The Southeast Community is one of the oldest parts of Newport News, and the revitalization of the Southeast Community is one of the City Council’s Strategic Priorities. In its heyday, it was the most thriving section of the City. The Southeast Commerce City will include redevelopment of a fourteen-acre commercial site on the Southeast Community’s main commercial corridor, Jefferson Avenue. It will include retail, office, and residential spaces. Currently, medical, shipbuilding, credit union, and drugstore occupants are in lease negotiations. In August 2011, the signature public art sculpture was installed at 31st Street and Jefferson Avenue. It was a Richard Hunt sculpture entitled “Build the Dream.”

Along the Warwick Corridor there will be a comprehensive evaluation of existing conditions. The City has received numerous grants that focus on the rehabilitation of the Warwick Boulevard Corridor. These include a \$733,000 Fort Eustis Gateway federal grant for façade improvement grants on a matching basis and landscaping improvements.

The Noland Green Apartments located in Downtown Newport News were constructed within the old Noland Company buildings on Warwick Blvd at 26th Street. Noland Company was a whole sale distributor of mechanical equipment. The almost 100 year old structures were reused and converted to 60 one, two, and three-bedroom apartments using historic tax credits and low-income housing credits. Overall, Noland Green apartments represent infill development in downtown Newport News. For more information on what is planned for the Southeast Community read the Downtown & the Southeast Community Development plan for 2012.

To date, \$366,000 for facade improvements and \$135,000 for landscaping projects has been distributed. The voluntary property acquisition program will help to give Newport News strategic redevelopment options in the long run.

**Opportunity 2.2 – Review site plans to recommend sustainability best practices**

<b>Completed Projects</b>	Standard for interdepartmental collaboration
<hr style="border-top: 1px dashed #008000;"/>	
<b>Looking forward</b>	A set of minimum requirements for every new site
<hr style="border-top: 1px dashed #008000;"/>	
<b>In Progress</b>	City Center LEED designation

The site plan review committee shall develop a standard set of sustainability requirements for each new site or development being planned in Newport News. Each site plan is different but a minimum set of requirements can be established. These regulations could include more tree foliage to lessen the amount of energy needed to heat or cool the building, the type of materials being used to construct the building or how to make the building consume less energy. The site plan review committee should also include a member of the staff who specializes in sustainability or energy management.

**ADAPTIVE RE-USE**  
 The process of converting a building to a use other than that for which it was designed, while retaining its historic qualities



**Opportunity 2.3 – Lease space that is Energy Star and LEED certified wherever possible**

<b>Completed Projects</b>	Virginia Environmental Excellence Program
<b>Looking forward</b>	Energy Star Partnership & LEED Compliance leased space
<b>In Progress</b>	Research requirements to negotiate lease for “green” building space

Virginia Green is a program formed to promote sustainable tourism as well as increase environmental awareness. It was formed by a partnership between the Virginia Tourism Cooperation, the Virginia Department of Environmental Quality, and the Virginia Hospitality and Travel Association. The program focuses on three key issues which are recycling, waste reduction, and energy and water conservation. Virginia Green certification means that a business is practicing the sustainability practices at the core of the program. Virginia Green boasts more than 1,000 participants throughout many industries including hotels, restaurants, conference centers, and parks. Newport News has many locations certified as Virginia Green including Newport News Park, Huntington Park, Hilton Village, The Mariners Museum, James A. Field House, and many more sites. A complete listing of all Virginia Green certified sites in Newport News can be found on the Virginia Green website: [www.virginia.org/green](http://www.virginia.org/green). In particular, the Virginia Living Museum has sponsored many green initiatives. They encourage staff to use the stairs instead of the elevator, encourage staff to carpool to work, and sell items made from recyclable materials in their gift shop.

ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping to save money and protect the environment through energy efficient products and practices. With the help of ENERGY STAR, Americans saved enough energy in 2010 alone to avoid greenhouse gas emissions equivalent to those from 33 million cars — all while saving nearly \$18 billion on their utility bills.

Local and state governments, as well as federal agencies, that partner with EPA and take the ENERGY STAR Challenge demonstrate their commitment to taxpayers as well as the environment. The City of Newport News recognizes the benefits of partnering with Energy Star to assist in achieving our goal to measure, track and benchmark energy performance, develop and implement a plan to improve energy performance, and educate staff and the public about the partnership and achievements with Energy Star.



Built on a reclaimed landfill site, the Stoney Run Athletic Complex contains five field complexes and is an example of brownfield land development within Newport News.

**Goal 3 –Develop policy-level initiatives that result in meaningful and measurable outcomes both for the City's and for the community's sustainability efforts, as well as overall Smart Growth**

**Opportunity 3.1 – Apply sustainable design standards to all new and renovated community facilities**

**Completed Projects** Denbigh Recreation Center, Main Street Library

**Looking forward** Council adoption of a resolution for sustainable building principles to be integrated into the planning of new community facilities

**In Progress** Light sensors in facilities, Justice Building Parking garage retrofitted with LED lights  
Major renovation of pump station

Many of the new buildings and developments in Newport News are already incorporating sustainable design standards into their design and construction. Sustainable design should aim to lessen environmental impacts not just during the construction of the building but throughout its entire life cycle.

Examples areas where sustainable design opportunities exist include using building materials composed of recycled materials and including energy efficient designs during the life of the building, such as:

- Alternative energy sources, like solar hot water
- Rainwater harvesting
- Green roofs

Sustainable design standards serve to educate the public about sustainability. The community can apply this knowledge to practices in their own homes. There are many opportunities for “green” design standards to be implemented in Newport News.

The new Denbigh Community Center, which opened in 2013, features a variety of sustainable building techniques. During the construction phase 50% of the materials were recyclable whenever feasible. Examples of sustainable elements included are LED lighting, installation of a solar reflective roof, and automatic internal lights. Additionally water conservation features were included such as auto shut off facets. These features are many of the building qualifications that are evaluated in the LEED certification process. LEED stands for Leadership in Energy and Environmental Design, and is a part of the U.S. Green Building Council. One of the benefits of LEED certification is that the process takes into consideration the building’s impact on the local community and design quality in addition to environmental features.

Besides being a mixed use development some of the buildings within City Center showcase sustainability in their own right. For example, The Marriott Hotel at City Center is a Virginia Green certified hotel and conference center. Virginia Green is a statewide program that works to reduce the environmental impacts of Virginia’s tourism industry. It is run as a partnership among DEQ, the Virginia Tourism Corporation and the Virginia Hospitality and Tourism Association. Virginia Green participants are “self-certified” and the consumers provide feedback on the how the sustainable initiatives are implemented at each site.



**Opportunity 3.2 –Support Council adoption of a resolution stating that all new public buildings must meet standards complying with LEED, Energy Star, Green Communities or similar**

**Completed Projects** Cistern at Fire Station #3, VA Municipal League Green Government

**Looking forward** Green building policy

**In Progress** Identify stormwater runoff high risk sites.

Storm water management is a process to control the quality of runoff caused by rainfall which is not absorbed into the soil. The pollutants that we use everyday can be carried out to nearby water bodies that are affected by this pollution. Storm water management practices can include limiting the number of impervious surfaces such as parking lots or planting more vegetation that acts as a filter for the storm water before it gets to a body of water. Newport News Engineering staff is dedicated to quality storm water management.

When constructing the City’s newest fire station, staff looked for ways to integrate environmentally friendly aspects into the design. Among the features included in the new station’s construction is the installation of a cistern and inclusion of a Filterra Bioretention system. The newly built cistern collects rainwater that will be used to wash emergency vehicles and maintain landscaping, thereby reducing the consumption of treated water for these purposes. The Filterra Bioretention System will improve storm water quality by using landscape vegetation and nature-based filtration systems to naturally reduce the amount of pollutants and harmful solids entering the storm water drainage system.

**Opportunity 3.3 - Amend subdivision, site plan, and soil & erosion control ordinances to encourage cluster development on sensitive sites**

**Completed Projects** Jefferson & Bland mixed use community

**Looking forward** Implement density bonuses to preserve open space

**In Progress** Ordinance Review

Cluster development is a type of development where all of the buildings allowed on the site are concentrated on a portion of the site and the rest of the site is left undeveloped. Clustering buildings together on a site instead of spreading them out is similar to having a mixed-use community versus urban sprawl. Designing the site so that buildings are close together allows for many environmental benefits. One benefit is that the undeveloped land can act as a buffer for stormwater and other environmental risks as well as provide a habitat for animals. The open space may also be aesthetically appealing to those living, working, and enjoying the development. In addition, cluster development also provides economic incentives. When all of the development is clustered in one area, less money is used to pave roads and deliver services. A method the City has identified to implement this opportunity is through the creation of an inventory of sensitive sites to determine the best use of cluster development.

Shown on the right is the newly constructed Denbigh Community Center. The Center was constructed with many sustainable features.

Photo: James River Architects



**Opportunity 3.4 – Council adoption of an ordinance to create a sustainable building classification of real property and to set a reduced tax rate for this classification**

**Completed Projects** Real Estate Tax Abatement for Rehabilitated Residential Structures Program

**Looking forward** Potential incentive to bring new businesses to the City

**In Progress** Review of existing local government classifications

A reduced tax rate for a sustainable building classification would add economic incentives for energy efficient buildings. In 2010, a third of all new US commercial construction was green, amounting to a \$54 billion market for commercial green buildings. Tenant demand is on the rise for green buildings and are becoming mainstream. This reduced tax rate will serve as an incentive to bring new businesses to Newport News.

**Opportunity 3.5 – Encourage construction contractors to recycle building materials**

**Completed Projects** PW Department design standard that lists construction waste recycling companies

**Looking forward** Incentivize C&D recycling/reuse

**In Progress** Education/Outreach to Industry

Construction & Demolition (C&D) materials are generated during new construction, renovation, and demolition of buildings, roads, and other structures. C&D materials include brick, concrete, masonry, soil, rocks, lumber, paving materials, shingles, glass, plastics, aluminum (including siding), steel, drywall, insulation, asphalt roofing materials, electrical materials, plumbing fixtures, vinyl siding, corrugated cardboard, and tree stumps. If properly planned, a vast majority of C&D materials can be recovered through reuse and recycling, which conserves resources and energy.

According to the Construction Materials Recycling Association, construction and demolition waste are the largest sources of trash in the United States. The association says 325 million tons of recoverable construction debris is generated in the United States each year.



**Christopher Newport University** has made an effort to “go green” in all facets of the university’s operations. Within the Dining Centers the use of a pulper reduces Regatta’s solid waste to 1/10 of usual waste. Additionally there is recycling of cardboard boxes and all cooking oil used in deep fat fryers. The recycling of cooking oil saves around 1,000lbs of oil per week.

Within the housing operations at CNU the use of sustainable resource conserving appliances are implemented such as low flow shower heads in 90% of campus residences. Additionally CNU has the goal of replacing old appliances with EnergyStar certified appliances upon the replacement of older items.

To meet the growing transportation needs of the student body bike parking was also increased.

**Recycling Centers** on campus are a common occurrence with recycling centers in:

- CNU SunTrust Building
- David Student Union
- The Freeman Center
- Gosnold Hall
- James River Hall
- Potomac River Hall North
- Potomac River Hall South
- Santoro Hall
- The Triple Library
- York River Hall West
- York River Hall East





Flowers for sale at Port Warwick's weekly farmers market in Newport News, VA  
Photo via: Port Warwick Farmer's Market

## Civic Engagement & Policy

A sustainable community starts with an awareness and understanding that everyday choices make a difference in insuring a cleaner, greener sustainable environment for current and future generations. They range from the simplest task of turning off the lights to major home buying decisions. The Civic Engagement & Policy committee shall engage the community to raise public awareness, gain support, engage community members, promote successes, deliver calls for action and inspire behavioral change and advocate for public policies that support this mission.

### Goals

- Raise community awareness about *NNGreen* and sustainability.
- Gather community input and feedback about sustainability.
- Encourage citizen behavior changes that support sustainability.
- Advocate on behalf of environmentally sound public policies.
- Publicize City Council endorsed Sustainability Plan.

### Select Accomplishments

*NNGreen* launches public awareness campaign which includes “*NNGreen*” webpages, Facebook, and Twitter

[Askhrgreen.org](http://Askhrgreen.org) – public awareness program from HRPDC

**Facebook *NNGreen* Team** page has increased weekly total reach by 388.9% since its inception and the number of people talking about our page has increased by 75%

**Twitter** influential followers include the Mayor, Congressmen, and the Lt. Governor with retweets by local organizations such as VA Green and CNU.

## Goal 1 – Raise community awareness about NNGreen and sustainability

### Opportunity 1.1 – Promote NNGreen via social media such as Facebook and Twitter

**Completed Projects** Created multiple social media sites (Facebook and Twitter)

**Looking forward** Develop a city-wide policy for social media

**In Progress** Growth of social media sites

Social media sites such as Facebook and Twitter have experienced a boom in recent years, especially among younger generations. The *NNGreen* social media sites were created in February 2012 and have become a useful communication tool to get information about Newport News’ sustainability efforts as well as green facts out to the general public. While Facebook and Twitter have typically been a Gen. Y means of communicating, more and more it is becoming an effective way to reach out to all generations. The *NNGreen* Facebook can be found at [www.facebook.com/NNGreenTeam](http://www.facebook.com/NNGreenTeam) and the Twitter can be found at [www.twitter.com/NNGreenTeam](http://www.twitter.com/NNGreenTeam).

The Sustainability blog is being incorporated to the social media sites. Currently the blog is an internal communication and will be used as an external tool.

Moving forward, citywide policy on the use of social media shall be considered to increase the efficiency of social media sites. Another tactic is collaboration amongst departments to promote departmental social media sites to reach their intended viewers. For example, on Twitter, the City of Newport News can ‘retweet’ the *NNGreen* tweets to reach out to a larger audience.

### Opportunity 1.2 – Use City and NNGreen websites to provide information to citizens

**Completed Projects** Created NNGreen website

**Looking forward** Improve web page for easier search capability by viewers

**In Progress** Citizens guide to services

Websites should be made easily accessible by all citizens. This means that they are easily searchable and findable through major search engines as well as the City’s main website.

The *NNGreen* web pages were created to provide citizens with easy access to sustainability information about the City. In addition to being available on the *NNGreen* web pages, the information can easily be searched and found on the city website. The *NNGreen* web pages can be accessed at [www.nngov.com/nngreen](http://www.nngov.com/nngreen).

Moving forward, the Sustainability Team will identify other avenues to distribute information about its green services to reach citizens that do not have internet access. For example,

NNTV’s “NN in Review” and “Inside Newport News” airs newsworthy programs on local events and happenings, an ideal medium for sharing environmental news. The Citizen’s Guide to Services, distributed by the City, provides another opportunity to work with existing resources to reach citizens. The Guide is a directory that lists City services and contact information. Other ways to reach citizens being considered are community newsletters, and educational exhibits at community events.

### Opportunity 1.3 – Partner with NNTV to highlight NNGreen

**Completed Projects** NNTV featured programs, NNTV NNGreen promotional video

**Looking forward** Expand media partnerships

**In Progress** NNTV promotional spots

Newport News Television (NNTV) has featured several of the City’s sustainability initiatives in multiple segments including the community garden and the anaerobic waste digester demonstration conducted at the Public Works Operations Center.

In progress at NNTV are short, promotional “spots” with a feature on “NEWPORT NEWS...WHERE GREEN THINGS ARE HAPPENING!” The goal is to highlight the positive things the city is doing in a more general way—with the intent to create awareness for City Council’s Strategic Eight Priorities. The “spots” will play within shows or adjacent to programs and on the web site.

Looking forward, consideration will be given for “spots”, segments and feature stories that highlight sustainability initiatives the community has implemented. Outside of NNTV, the Sustainability Team will continue to expand partnerships with outside media outlets to promote the initiatives to their audiences. This will give *NNGreen* the opportunity to be exposed to many difference viewers that it would not normally experience.



Members of the City’s Sustainability and Citizen Green Advisory Teams pose together at their joint meeting.

**Goal 2 – Gather community input and feedback about sustainability**

**Opportunity 2.1 – Administer Citizen Survey**

**Completed Projects** Ranking System, NNGreen advisory team review

**Looking forward** Citizen Survey

**In Progress** Draft survey

Through the use of the TNS Framework and the balanced scorecard, The Sustainability Team established goals and opportunities to be a sustainable community. The Team then engaged the support from citizens to conduct a review of these goals and opportunities. The *NNGreen* Citizen Advisory Team, along with key executive staff worked together over the course of one year to make recommendations on the sustainability initiatives they believed to be the most important to the City. It was this process used to build the “Roadmap to Sustainability”.

Moving forward, citizen surveys will be a useful tool to expand on the initial evaluation of sustainability initiatives. Survey Monkeys have become a popular tool to gauge public input and would include questions such as how interested they are in sustainability and how it can apply to Newport News. The survey will help to administer a baseline for future sustainability efforts.

**Goal 3 – Encourage citizen behavior changes that support sustainability**

**Opportunity 3.1 –Use all available City communication tools to inform Citizens about Green practices**

**Completed Projects** Use of social media sites

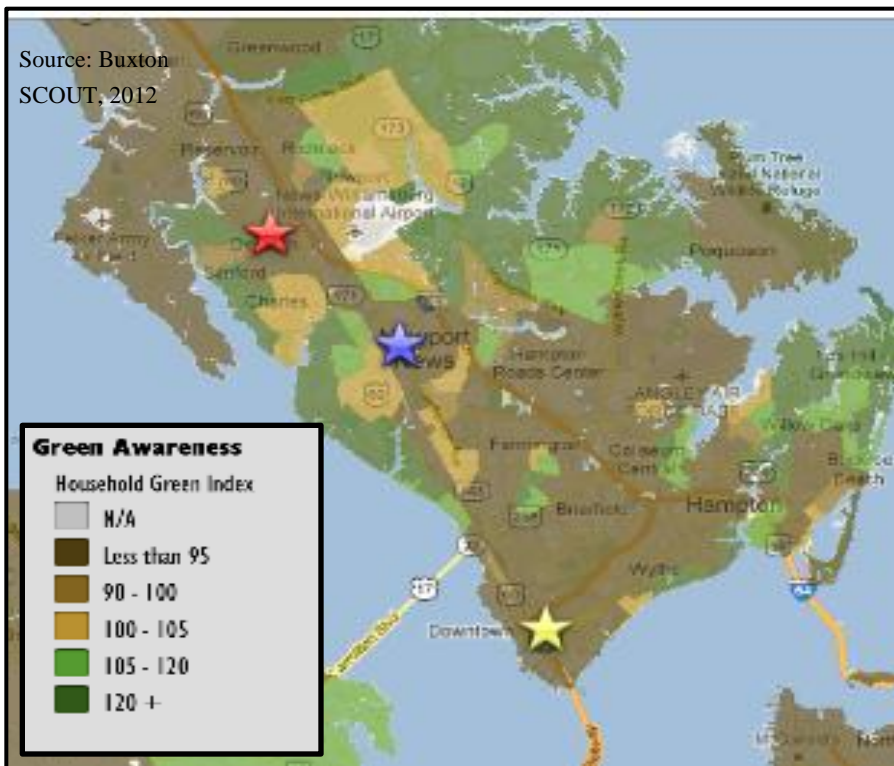
**Looking forward** Print media

**In Progress** Spreading awareness about NNGreen Facebook, Twitter, and webpage by creating a following.

The City has established many means of communication with the community. Even with today’s technology, the Sustainability Team recognizes that one of the most utilized forms of communication is word of mouth. This is a method of communication that should not be overlooked, as it is extremely important, especially in communities that do not have easy access to television or the internet. One way to increase word of mouth communication is through community events. The City’s Purchasing Department hosted a “Buy Green Exposition” at the Newport News Marriott at City Center in March. The expo featured dozens of exhibitors and non-profit organizations and offered demonstrations and classes throughout the day. The expo, which was free and open to the public, showcased local vendors and nonprofit organizations that offer “green” products or services. The event also served to educate citizens on environmentally sustainable practices that can be used in our everyday lives.

**Green Awareness by Households in Newport News 2012**

Source: Buxton SCOUT, 2012



While the Sustainability Team is already making use of most tools of communication such as web pages, Facebook, Twitter, and the blog, moving forward, expansion of these tools will include video blogging and participation in community events based on the sustainability initiatives laid out in the “Roadmap to Sustainability.”

The numbers located in the key to the Green Awareness map are indicators of concentration, not percentages. These numbers are indexes which includes standardized data for items like buying habits. For example, these items are analyzed to see where consumers buy environmentally sustainable household cleaners to measure awareness about the community. The darker the shade of green the more green awareness and the darker the brown the less.

**Opportunity 3.2 –Incentivize Recycling**

**Completed Projects** Incentivized recycling through lowered trash fees for consumers who reduce trash cart size from 90 gallons to 60 gallons

**Looking forward** Incentivize recycling

**In Progress** Keep America Beautiful Grant implementation

In progress is the City’s Business Recycling Outreach program, funded in part through a grant from Keep America Beautiful and the American Forestry and Paper Association. Through research with local recycling vendors, presentation tools have been developed to engage in awareness presentations. Awareness briefings have been conducted at Canon Virginia Environmental Fair (for staff), Virginia Peninsula Chamber of Commerce Professional Connections group, Business Development Group Sustainable Business Seminar series, Huntington Ingalls Earth Day, and NASA Safety Fair. The most successful and eye opening effort to date has been the Waste Audit at Bay Disposal, the City’s recycling contractor. Attendees participated in the semiannual waste audit of residential recycling collected curbside and delivered to the Materials Recovery Facility (MRF). Participants experienced hands-on the evaluation of products that come through the Residential Single Stream recycling program and gained an awareness about the recycling industry and market trends for the products.

Looking forward, an incentivized recycling program will need further research to determine the best way to implement one that is economically and environmentally feasible. The City has implemented a successful broken trash and recycling bin recycling program that has resulted in avoided landfill disposal of 20,000 pounds as well as the avoided disposal cost to landfill the bins. This program can serve as a base program for incentivized recycling for all types of recyclables. The Citizen Survey is a tool to gauge citizens what they would most like out of an incentivized recycling program.

Newport News has a very successful residential recycling program. In 2010, the City recycled 32.4% of materials, exceeding the state mandated rate of 25%. Providing incentives to citizens can encourage more citizens to recycle. Incentives to recycle in other communities have included discounts on restaurants, recognition for participation, and reduced user fees



Volunteers at CSX Beyond the Rails event at Crittenden Middle School pose together before building the vegetable garden, painting brightly colored inspiration murals, and building an outdoor classroom.  
Photo Credit: CSX

**Goal 4 – Advocate on behalf of environmentally sound public policies**

**Opportunity 4.1 –Support Green legislation at State and Federal levels**

**Completed Projects** Exceeding state mandated recycling rate

**Looking forward** Regional Partnerships

**In Progress** Strengthening already developing relationships

The City's recycling rate for 2010 was 32.4% which exceeded the State's mandatory recycling rate of 25%. It was through the hard work and extraordinary effort of the City's Solid Waste Division that this accomplishment was achieved.

Newport News supports state and federal legislation by adhering to the Virginia Environmental Excellence Program and the administration of the Energy Efficiency and Conservation Block Grant program. Newport News also supports regional policies through the Hampton Roads Planning District Committee. These policies are important to the sustainability efforts of Newport News. Significant changes take a joint effort from all different levels of government. The City recognizes the importance of these state and federal level partnerships and has resolved to strengthen the relationships.

**Opportunity 4.2 –Promote sustainable City policies**

**Completed Projects** "Buy Green" policy for the Purchasing Department

**Looking forward** Implementation of the "Roadmap to Sustainability"

**In Progress** Sustainable policies for specific departments

The Purchasing Department of the City of Newport News has implemented a "Buy Green" policy for the City. The policy states that whenever economically feasible, the City will buy products that are sustainable. Purchasing kicked off the first ever "Buy Green Exposition" with a welcome and opening remarks from City Manager Neil Morgan during March 2012. The "Buy Green Exposition" focus was on sustainability. Exhibitors included firms that offer green products and services related to saving energy, providing alternate sources of energy, recycling, repurposing, reusing, protecting or sustaining the environment, and/or otherwise reducing our carbon footprint. The Buy Green Expo included opportunities for different vendors to promote their materials, and approximately 30 different vendors set up booths. Additionally, informational booths and exhibits such as a rain barrel workshop put on through the City of Newport News were included in the Buy Green Expo.



**Goal 5 – Publicize City Council endorsed Sustainability Plan**

**Opportunity 5.1 –Issue Press Release upon Council endorsement of plan**

**Completed Projects** City Council Presentation of Strategic Priorities

**Looking forward** City Council Resolution

**In Progress** Schedule of City Council Work session

In September 2010, City Council unanimously endorsed eight strategic initiatives for the City of Newport News. Those were refined in December 2012 into five broad strategic priorities, each with several initiatives that incorporate the original eight initiatives along with additional areas of focus. "Environmentally Sustainable Local Government Policies" remains as one of these strategic priorities.

In fact, City Council has demonstrated a clearly articulated vision of a community with a great environment. For the fifth year in a row, the City of Newport News was awarded the VA Municipal League's "Go Green VA" award, and the City's first year receiving Gold level certification. The award is in recognition of the City's innovative steps to reduce energy usage and promote sustainability.

Moving forward, once the "Roadmap to Sustainability" has been endorsed by City Council, an annual progress report will be prepared to provide performance data and describe innovative projects and initiatives undertaken by staff. The report will serve to keep the community informed on the City's commitment to a sustainable community.

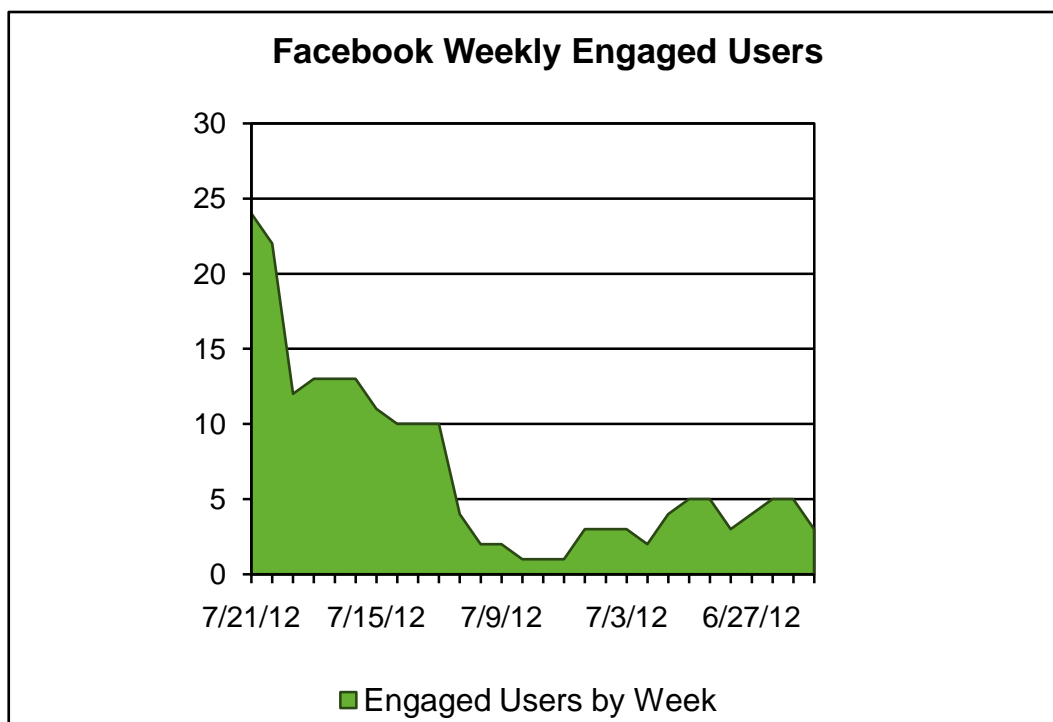
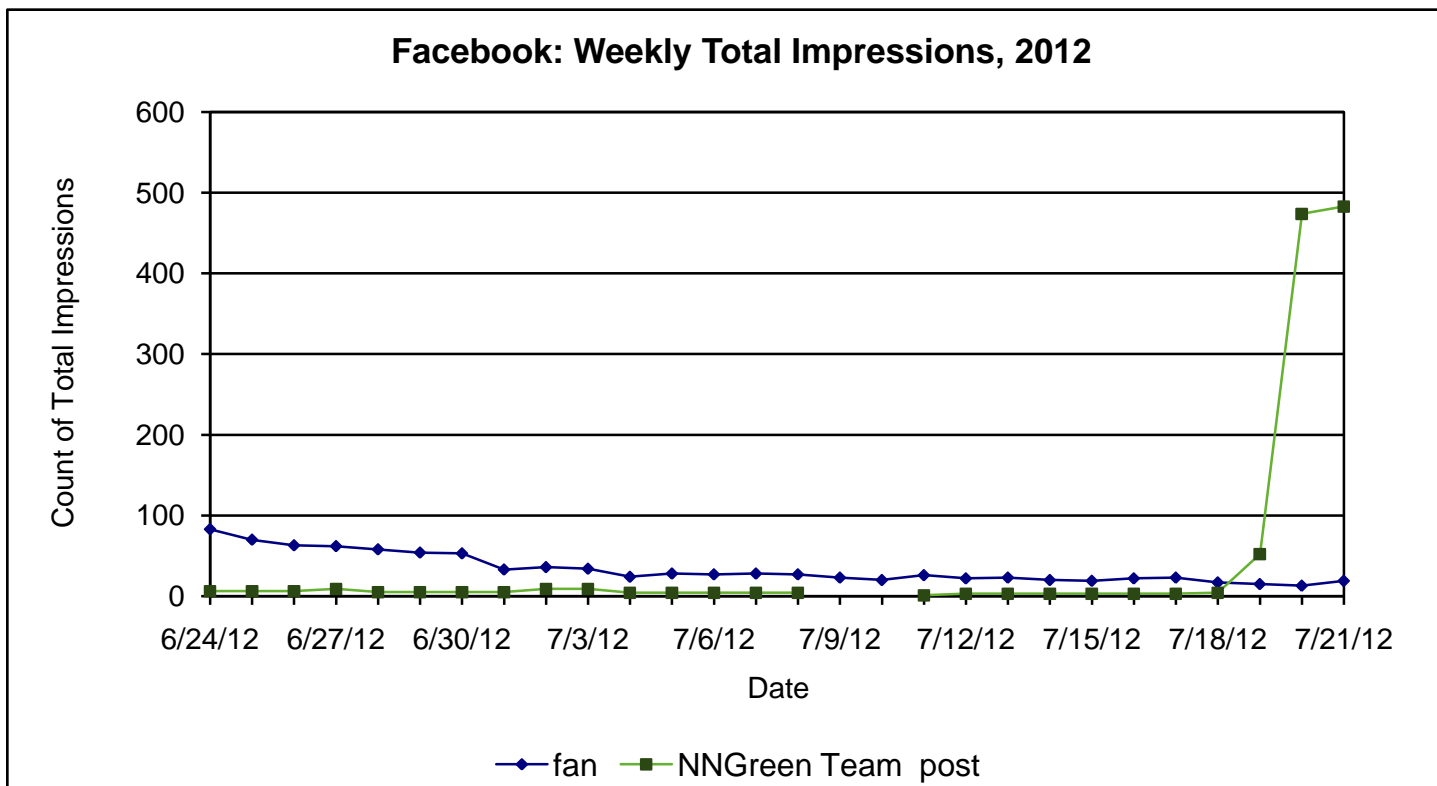


Members of City Council and City staff accept the VA Municipal League's Go Green Virginia Gold Award

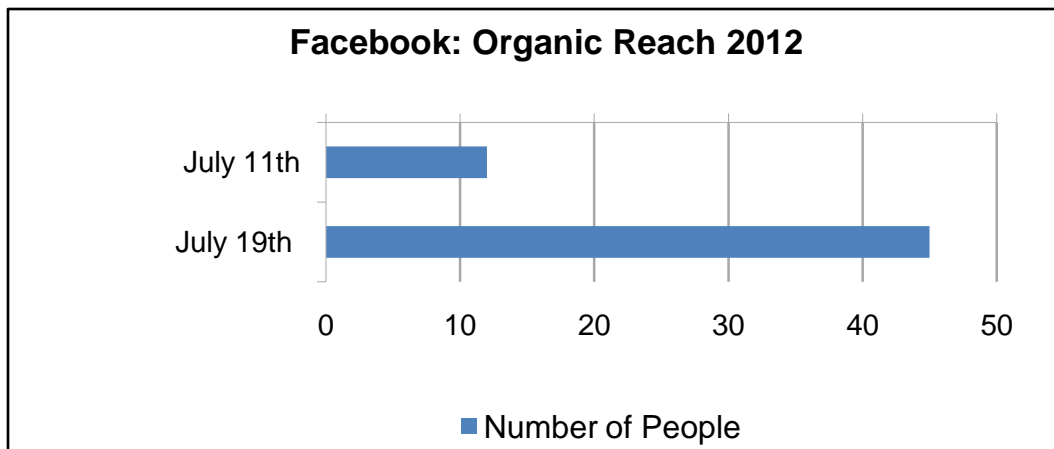
### Civic Engagement in Numbers

Data driven policy is a key aspect of the *NNGreen* Roadmap to Sustainability as seen throughout other sections of this report. Our pragmatic approach to policy applies to the social media campaigns as well as more concrete policy initiatives. For this reason we have begun tracking our impact on Facebook and Twitter to gauge which information resonates best with our readers and how to most efficiently tell the *NNGreen* story.

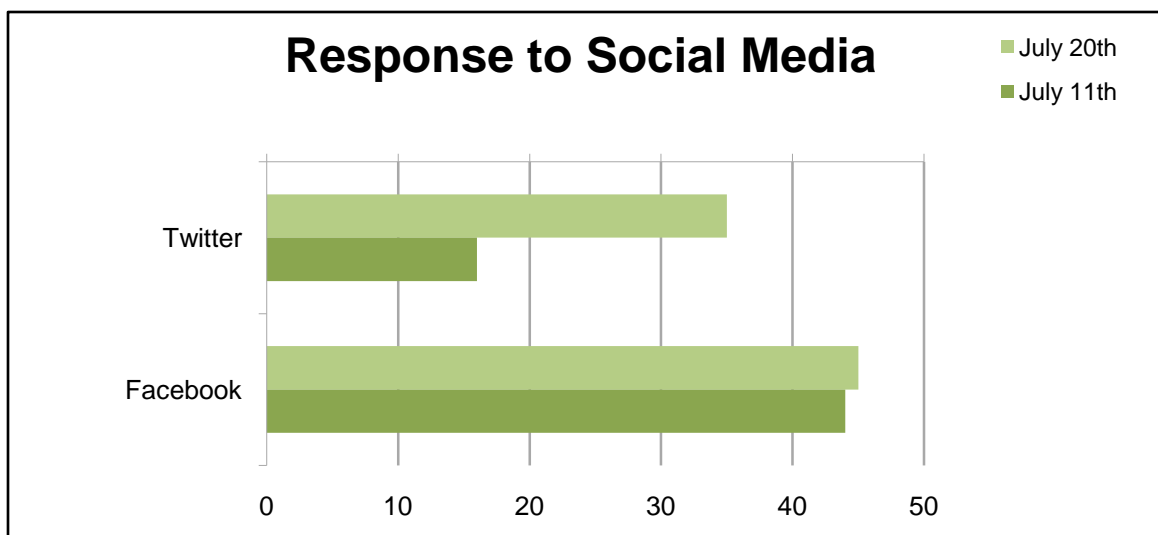
Weekly total impressions are the count of the times our stories were seen in the Newsfeed or on visits to our page. *NNGreen* team's Facebook social media campaign began to see results around the middle of July when the number of impressions increased from around 100 per week to almost 500 weekly impressions. Going forward the social media campaign will focus on more dynamic content such as links, videos, and photos in order to continue to gain a presence on Facebook and Twitter.



Engaged Users measures number of people who engaged with your Page. Engagement includes any click or story created (Unique Users).



Organic reach is the count of the number of people who visit or saw the page on their newsfeed or posts in their news feed ticker. Our beginning organic reach was 12 people and as of July 19th is up to 45.



Our overall response to social media is seen in the increase in followers we have gained on Twitter and our steady number of likes on Facebook. As seen by the graphs we need to focus on what type of content gains the most response on Facebook as we have not experienced the same type of follower growth in terms of actual “likes” on the page, while the page views and reach has increased steadily the number of actual follower growth has remained steady.

# Roadmap Progress Report on Sustainable Initiatives

**Priority:**  
 Short – 0-2 years  
 Medium – 2-5 years  
 Long – 5+ years



## Energy Efficiency and Conservation

Opportunity	Priority (Time Frame)	Status
<b>Goal 1: Promote energy efficiency and conservation practices and technologies in City facilities and vehicles</b>		
1.1 Establish an energy usage baseline and reduction goals	Short	In progress
1.2 Develop a GHG emissions inventory and set a reduction goal	Short	In progress
1.3 Develop and implement an energy use policy	Short	Completed
1.4 Identify processes, practices and routines to minimize energy use in computers and peripherals	Short	In progress
1.5 Install occupancy sensors for lighting in City facilities	Short	In progress
1.6 Use EPEAT guide for purchasing energy efficient electronics equipment	Short	In progress
1.7 Reduce energy usage for exterior wall mounted lighting to LED and use photo-cell or timer control	Short	In progress
1.8 Install timers on vending machines to turn off at night and require Energy Star machines at contract renewal with vendors	Short	In progress
1.9 Convert to more efficient building and parking lot lighting	Short	In progress
<b>Goal 2: Promote energy efficiency and conservation awareness in the community</b>		
2.1 Provide incentives to carpool or take mass transit or bike to work	Short	In progress
2.2 Provide energy audit information and tax credit information for homeowners and businesses	Short	In progress
<b>Goal 3: Promote green business and energy independence, and search for renewable energy opportunities</b>		
3.1 Use landfill gas for heating Mary Passage Middle School/Denbigh Recreation Center	Short	In progress





## Resource Conservation

Opportunity	Priority (Time Frame)	Status
<b>Goal 1: Reduce Waste</b>		
1.1 Identify opportunities for reduced paper usage in the workplace	Short	In progress
1.2 Promote use of reusable water bottles/mugs; discontinue use of Styrofoam cups at city functions	Short	In progress
1.3 Establish pallet collection program	Short	In progress
<b>Goal 2: Improve Recycling</b>		
2.1 Recycle broken trash and recycling carts	Short	In progress
2.2 Motivate citizens to recycle and reinforce recycling behaviors with City employees through awareness training	Medium	Upcoming
2.3 Assist local businesses, apartment complexes and condo developments in establishing recycling programs	Medium	In progress
<b>Goal 3: Identify Sensitive Environmental Resources</b>		
3.1 Develop a City-wide Integrated Natural Resources Management Plan	Medium	Upcoming
3.2 Complete an urban/suburban forest inventory	Medium	Upcoming
<b>Goal 4: Conserve Water</b>		
4.1 Retrofit existing vehicle washing facilities to closed-loop systems	Short	In progress
4.2 Retrofit existing toilets in buildings and outfit new buildings with low flow appliances	Medium	In progress
4.3 Promote installation of rain barrels and/or cisterns for harvesting rainwater	Short	In progress













Opportunity	Priority (Time Frame)	Status
<b>Goal 1: Institute a Smart Growth policy where site plan approval is expedited and fees are reduced for proposed development in strategic growth/transit oriented development districts</b>		
1.1 Update codes and ordinances to enforce sustainable neighborhood design standards	Long	<input type="checkbox"/> Upcoming
1.2 Revise current parking requirements to provide for additional green space or greater density	Short	<input type="checkbox"/> Upcoming
<b>Goal 2: Increase, protect, improve and conserve greenways, vistas, recreational trails, parks and open space</b>		
2.1 Expand and improve our network of constructed open spaces	Long	<input type="checkbox"/> Upcoming
2.2 Expand Adopt-A-Spot	Short	<input checked="" type="checkbox"/> In progress
2.3 Promote the creation of low or no maintenance vegetation on existing turf areas	Short	<input checked="" type="checkbox"/> In progress
<b>Goal 3: Promote Sustainable Development</b>		
3.1 Prioritize development of underutilized, vacant and brownfield sites while limiting development of greenfield sites	Short	<input checked="" type="checkbox"/> In progress
3.2 Protect and sustain watershed health by managing 50% of storm water from City facilities using sustainable practices	Medium	<input type="checkbox"/> Upcoming




## Transportation and Infrastructure

Opportunity	Priority (Time Frame)	Status
<b>Goal 1: Promote the development and use of mass transit</b>		
1.1 Increase use and efficiency of Public Transportation by enhancing service routes and frequencies	Short	<input type="checkbox"/> Upcoming
1.2 Support development and implementation of mass transit corridors	Long	<input type="checkbox"/> Upcoming
1.3 Adopt land-use plans that encourage transit-oriented development and encourage mixed-use communities	Short	<input type="checkbox"/> Upcoming
<b>Goal 2: Promote a bike friendly community</b>		
2.1 Develop a system of bicycle routes that connect the City in an efficient way	Long	<input type="checkbox"/> Upcoming
2.2 Expand and enhance bicycle paths/ways throughout the City	Medium	<input type="checkbox"/> Upcoming
2.3 Establish a Safe Routes to School program, which encourages walking and bicycling to neighborhood schools	Medium	<input type="checkbox"/> Upcoming
<b>Goal 3: Support sustainable transportation practices within City Government</b>		
3.1 Adopt an anti-idling policy for school/government fleet vehicles	Short	<input checked="" type="checkbox"/> Completed
3.2 Adopt a "Green Fleet" policy that incorporates technologies to conserve fuel and reduces emissions.	Short	<input checked="" type="checkbox"/> In progress
3.3 Establish a practice to reduce vehicle usage by ride sharing between meetings and events and encouraging telecom meetings	Short	<input checked="" type="checkbox"/> In progress
3.4 Enact policy that a minimum of 20% of eligible workforce participate in alternative work schedules	Short	<input type="checkbox"/> Upcoming
3.5 Provide employee benefits for ride sharing, walking, biking, or taking transit to work	Short	<input type="checkbox"/> Upcoming



Opportunity	Priority (Time Frame)	Status
<b>Goal 1: Enact development and growth policies and implement land use strategies that help advance Newport News as a more sustainable community</b>		
1.1 Adopt an urban/sustainable zoning overlay capability, to encourage increased densities and more mixed-uses, while promoting adequate open space	Medium	 Upcoming
1.2 Encourage higher density development by identifying Code/policy that should be reviewed for adjustments	Medium	 Upcoming
1.3 Identify and stimulate redevelopment of selected areas of the City into desirable mixed-use areas	Medium	 Upcoming
1.4 Revise Code (Zoning/Planning) to allow for wind turbines, solar panels, and other alternative energy sources	Medium	 Upcoming
1.5 Stimulate maintenance, protection (of character) and revitalization of older residential neighborhoods and encourage adaptive reuse of these structures	Medium	 In progress
<b>Goal 2: Promote and encourage buildings and site developments that are designed and constructed with sustainable practices and meet or exceed associated standards and practices</b>		
2.1 Encourage rehabilitation, reuse and preservation of existing buildings	Medium	 In progress
2.2 Review site plans to recommend sustainability best practices as first-mover examples	Medium	 Upcoming
2.3 Lease space that is Energy Star and LEED certified wherever possible	Short	 Upcoming
<b>Goal 3: Develop policy-level initiatives that result in meaningful and measurable outcomes both for the City's and for the community's sustainability efforts, as well as overall Smart Growth</b>		
3.1 Apply sustainable design standards to all new and renovated community facilities	Long	 In progress
3.2 Support Council adoption of a resolution stating that all new public buildings must meet standards complying with LEED, Energy Star, Green Communities or similar	Short	 Upcoming

Opportunity	Priority (Time Frame)	Status
3.3 Amend subdivision, site plan, and soil & erosion control ordinances to encourage cluster development on sensitive sites	Medium	 In progress
3.4 Council adoption of an ordinance to create a sustainable building classification of real property and to set a reduced tax rate for this classification	Medium	 Upcoming
3.5 Encourage construction contractors to recycle building materials	Short	 In progress



Opportunity	Time Frame	Status
<b>Goal 1: Raise community awareness about NNGreen and sustainability</b>		
1.1 Promote <i>NNGreen</i> via social media such as Facebook and Twitter	Completed	Completed
1.2 Use City and <i>NNGreen</i> websites to provide information to Citizens	Completed	Completed
1.3 Partner with NNTV to highlight <i>NNGreen</i>	Short	In progress
<b>Goal 2: Gather community input and feedback about sustainability</b>		
2.1 Administer Citizen Survey	Short	Upcoming
<b>Goal 3: Encourage citizen behavior changes that support sustainability</b>		
3.1 Use all available City communication tools to inform Citizens about Green practices	Short	In progress
3.2 Incentivize recycling	Medium	In progress
<b>Goal 4: Advocate on behalf of environmentally sound public policies</b>		
4.1 Support Green legislation at State and Federal levels	Ongoing	In progress
4.2 Promote sustainable City policies	Short	In progress
<b>Goal 5: Publicize City Council endorsed Sustainability Plan</b>		
5.1 Issue Press Release upon Council endorsement of plan	Short	In progress

# Newport News City Council



McKinley L. Price, D.D.S.  
Mayor



Herbert H. Bateman Jr.  
Vice Mayor



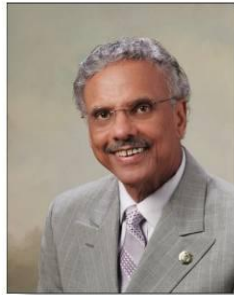
Robert S. Coleman  
Councilman



Sharon P. Scott  
Councilwoman



Tina L. Vick  
Councilwoman



Joseph C. Whitaker  
Councilman



Dr. Patricia P. Woodbury  
Councilwoman

## City Manager



Neil A. Morgan

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## Glossary

The list that follows contains definitions for terms found throughout this document. The definitions provided are as applicable to the City of Newport News and may not otherwise be a generally known industry term.

- **Adopt-A-Spot**  
Individuals, businesses, and organizations commit to keep a designated area within the city litter free. (Source: *Recycling Program*)
- **Brownfields**  
Abandoned, idled, or under used industrial and commercial facilities/sites where expansion or redevelopment is complicated by real or perceived environmental contamination. They can be in urban, suburban, or rural areas. USEPA's Brownfields initiative helps communities mitigate potential health risks and restore the economic viability of such areas or properties. (Source: USEPA Glossary of Terms. [http://iaspub.epa.gov/sor\\_internet/registry/termreg/searchandretrieve/termsandacronyms/search.do](http://iaspub.epa.gov/sor_internet/registry/termreg/searchandretrieve/termsandacronyms/search.do))
- **CFL**  
*Compact Fluorescent Lamps* - Small fluorescent light bulbs that use 75 less energy (electricity), and last up to 10 times longer than a traditional incandescent bulb, and can be screwed into a regular light socket. (Source: [USEPA Glossary of Terms](#))
- **Cistern**  
A rainwater cistern is a type of water system that collects rainwater off of a roof and channels it through gutters to a collection tank for storage *until* used by the household.(Source: [http://www.atsdr.cdc.gov/sites/washington\\_marietta/docs/plans\\_for\\_developing.pdf](http://www.atsdr.cdc.gov/sites/washington_marietta/docs/plans_for_developing.pdf))
- **Clean Air Act**  
Gives USEPA authority to set standards for air quality and to control the release of airborne chemicals from industries, power plants, and cars.(Source: [USEPA Glossary of Terms](#))
- **Cluster Development**  
A development design technique that concentrates buildings in specific areas on the site to allow the remaining land to be used for recreation, common open space and preservation of environmentally sensitive features.(Source: Framework for the Future 2030 Glossary. [http://www2.nngov.com/newport-news/plan/framework2008/section\\_d393749e1769.html](http://www2.nngov.com/newport-news/plan/framework2008/section_d393749e1769.html))
- **CMAQ**  
*Congestion Mitigation & Air Quality* - The CMAQ program provides federal funding to states and localities for transportation projects and programs that help improve air quality and reduce traffic congestion.(Source: <http://hrtpo.org/page/congestion-management/>)
- **Conservation Easement**  
Limit an owner's rights to develop a piece of property in order to preserve certain features.(Source: Framework for the Future 2030 Glossary. [http://www2.nngov.com/newport-news/plan/framework2008/section\\_d393749e1769.html](http://www2.nngov.com/newport-news/plan/framework2008/section_d393749e1769.html))
- **Dark Sky Compliance**  
Energy efficiency measures to reduce the amount of light pollution. Light pollution is any adverse effect of manmade light. Often used to denote urban sky glow.(Source: [www.darksky.org/about-ida](http://www.darksky.org/about-ida))
- **DEQ**  
*Department of Environmental Quality* - The Virginia Department of Environmental Quality's mission is to protect and enhance Virginia's environment, and promote the health and well-being of the citizens of the Commonwealth. (Source: <http://www.deq.state.va.us>)
- **DRPT**  
*Department of Rail and Public Transportation* - The Virginia Department of Rail and Public Transportation's mission is to improve the mobility of people and goods while expanding transportation choices in the Commonwealth.(Source: <http://www.drpt.virginia.gov/>)
- **EECBG**  
*Energy Efficiency and Conservation Block Grant Program* - It is intended to assist U.S. cities, counties, states, territories, and Indian tribes to develop, promote, implement, and manage energy efficiency and conservation projects and programs(Source: [www1.eere.energy.gov/wip/eeecbg.html](http://www1.eere.energy.gov/wip/eeecbg.html))
- **EnergyCAP**  
Energy management software that allows energy and greenhouse gas tracking, reporting, analyzing, auditing, and benchmarking capabilities.(Source: [www.energycap.com/about-us](http://www.energycap.com/about-us))
- **EPEAT**  
*Electronic Product Environmental Assessment Tool* - Definitive global registry for greener electronics. It's an easy-to-use resource for purchasers, manufacturers, resellers and others wanting to find and promote environmentally preferable products.(Source: [www.epeat.net/who-is-epeat/](http://www.epeat.net/who-is-epeat/))

- **Filterra Bioretention System**  
For effective stormwater management, the combination of landscape vegetation and a specially designed filter media allows bacteria, metals, nutrients and total suspended solids (TSS) to be removed naturally. (Source: <http://www.filterra.com/>)
- **Fine Grained Road Network**  
Contains the same lane miles as a hierarchy road system however the fine grained road network has greater capacity, gives the driver more options, creates a more pleasant drive, and lays for the framework for a pedestrian friendly community. (Source: Framework for the Future 2030 Glossary. [http://www2.nngov.com/newport-news/plan/framework2008/section\\_d393749e1769.html](http://www2.nngov.com/newport-news/plan/framework2008/section_d393749e1769.html))
- **FTA**  
*Federal Transit Administration* - Compiles statistics and makes recommendations for U.S. mass transit. (Source: [www.fta.dot.gov](http://www.fta.dot.gov))
- **GHG**  
*Greenhouse Gases* - any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include, but are not limited to, water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), halogenated fluorocarbons (HCFCs), ozone (O<sub>3</sub>), perfluorinated carbons (PFCs), hydrofluorocarbons (HFCs), and sulfur hexafluoride (SF<sub>6</sub>). (Source: [USEPA Glossary of Terms](#))
- **GHG Inventory**  
An accounting of the amount of GHGs emitted to and removed from the atmosphere over a specific period of time. A GHG inventory provides information on activities that cause emissions and removals, as well as background on the methods used to make the calculation. (Source: [USEPA Glossary of Terms](#))
- **Greenfields**  
Development on previously undeveloped (“green”) parcels in suburban or non-urban locations with limited existing infrastructure and development. (Source: [www.epa.gov/dced/pdf/infill\\_greenfield.pdf](http://www.epa.gov/dced/pdf/infill_greenfield.pdf))
- **Hampton Roads Planning District Committee**  
A regional organization representing this area's sixteen local governments designed to encourage and facilitate local government cooperation and state-local cooperation in addressing on a regional basis problems of greater than local significance. (Source: [www.hrpdc.org/page/about](http://www.hrpdc.org/page/about))
- **Heat Island Effect**  
Localized increase in ambient urban air temperatures resulting primarily from the replacement of vegetation with buildings, roads, and other heat-absorbing infrastructure. The heat island effect can result in significant temperature differences between rural and urban areas and contributes to global warming. (Source: [USEPA Glossary of Terms](#))
- **Infill development**  
The development of vacant parcels in a largely built up area. (Source: Framework for the Future 2030 Glossary. [http://www2.nngov.com/newport-news/plan/framework2008/section\\_d393749e1769.html](http://www2.nngov.com/newport-news/plan/framework2008/section_d393749e1769.html))
- **LED**  
*Light-Emitting Diode* - LEDs are small light sources that become illuminated by the movement of electrons through a semiconductor material. LED lighting uses both light and energy more efficiently. (Source: [http://www.energystar.gov/index.cfm?c=lighting.pr\\_what\\_are#what\\_are](http://www.energystar.gov/index.cfm?c=lighting.pr_what_are#what_are))
- **LEED**  
*Leadership in Energy and Environmental Design* – A national third-party rating system certified by the US Green Building Council for encouraging environmentally sensitive and sustainable development and design. (Source: Framework for the Future 2030 Glossary. [http://www2.nngov.com/newport-news/plan/framework2008/section\\_d393749e1769.html](http://www2.nngov.com/newport-news/plan/framework2008/section_d393749e1769.html))
- **Mass Transit Corridors**  
A broad geographic band that follows a general directional flow of travel connecting major origins and destinations of trips and which may contain a number of streets, highways and transit routes. (Source: West Eugene EmX Extension Project Alternatives Analysis Report)
- **Materials Recovery Facility**  
A facility that processes residentially collected mixed recyclables into new products available for market. (Source: <http://www.frtr.gov/glossary/mterms.htm>)
- **MPO/TPO**  
Metropolitan Planning Organization/Transportation Planning Organization – An MPO is a federally mandated and funded transportation policy-making organization made up of representatives from local government and governmental transportation authorities. The Hampton Roads Transportation Planning Organization (HRTPO) is the body created by the Hampton Roads localities and appropriate state and federal agencies to perform the duties of an MPO under the federal regulations. (Source: [www.hrtpo.org](http://www.hrtpo.org))
- **NEPA**  
*National Environmental Policy Act* - A federal law that assures that all branches of government give proper consideration to the environment prior to undertaking any major federal action that significantly affects the environment. (Source: [www.epa.gov/lawsregs/laws/nepa.html](http://www.epa.gov/lawsregs/laws/nepa.html))
- **Payback**  
The length of time required for an investment to recover its initial outlay in terms of profits or savings. (Source: [www.oxforddictionaries.com/definition/english/payback%2Bperiod](http://www.oxforddictionaries.com/definition/english/payback%2Bperiod))

- **PPM**  
Parts per million – is commonly used as a measure of small levels of pollutants in air, water, etc. PPM is the mass ratio between the pollutant component and the solution. (Source: <http://www.engineeringtoolbox.com>)
- **Rain garden**  
These *man-made* depressions in the ground collect water runoff and store it, so it can be filtered and slowly absorbed by the soil. (Source: <http://www.dof.virginia.gov/mgt/print/Rain-Gardens-Tech-Guide.pdf>)
- **Retrofit**  
The installation of new or modified parts or equipment in something *previously* manufactured or constructed. (Source: Merriam-Webster. Adapted from definition accessed at <http://www.merriam-webster.com/dictionary/retrofit>)
- **RSTP**  
*Regional Surface Transportation Program* - provides federal funding that may be used by states and localities for a wide variety of highway and transit projects. (Source: [http://www.hrtpo.org/uploads/files/hrtpo\\_cmaq\\_rstp\\_guide.pdf](http://www.hrtpo.org/uploads/files/hrtpo_cmaq_rstp_guide.pdf))
- **Superfund Site**  
An uncontrolled or abandoned place where hazardous waste is located, possibly affecting local ecosystems or people. (Source: <http://www.epa.gov/superfund/sites/>)
- **Teleworking**  
A work arrangement in which supervisors direct or permit employees to perform their usual job duties away from their central workplace.(Source: [http://www.dhrm.virginia.gov/hrpolicy/web/pol1\\_61.pdf](http://www.dhrm.virginia.gov/hrpolicy/web/pol1_61.pdf))
- **TOD**  
*Transit Oriented Development* - Planned, high density, mixed use development usually within 1/2 mile of transit stations designed to encourage people to walk or use public transit instead of driving their cars. (Source:[http://www2.nngov.com/newport-news/plan/framework2008/section\\_d393749e1769.html](http://www2.nngov.com/newport-news/plan/framework2008/section_d393749e1769.html))
- **Transfer Development Rights**  
The owner of a parcel in the sending district conveys development rights to the owner of parcel in the receiving district (American Planning Association). This implies that transfer of development rights are used to protect open space, farmland, and other areas which require preservation by moving the development rights to a more suitable parcel. (Source: [www.planning.org/divisions/planningandlaw/propertytopics.htm#Transfer](http://www.planning.org/divisions/planningandlaw/propertytopics.htm#Transfer))
- **Transit Nodes**  
A connection, station, or terminal on a transit network. (Source: [www.fra.dot.gov/Elib/Details/L03822](http://www.fra.dot.gov/Elib/Details/L03822))
- **Urban Forest**  
Urban forests broadly include urban parks, street trees, landscaped boulevards, public gardens, river and coastal promenades, greenways, river corridors, wetlands, nature preserves, natural areas, shelter belts of trees and working trees at industrial brownfield sites. (Source:[www.fs.fed.us/ucf/program.html](http://www.fs.fed.us/ucf/program.html))
- **USEPA**  
*United States Environmental Protection Agency* - An U.S. government agency whose mission is to protect human health and the environment. (Source: [www.epa.gov/aboutepa/whatwedo.html](http://www.epa.gov/aboutepa/whatwedo.html))
- **USGBC**  
*U.S. Green Building Council* - Non-profit organization dedicated to sustainable building design and construction. Developers of the LEED building rating system. (Source:[www.usgbc.org/](http://www.usgbc.org/))

## Acronyms

Acronym	Full Name
CFL	Compact Fluorescent Lamps
CMAQ	Congestion Mitigation & Air Quality
COTA	Virginia Tech's Center for Organizational and Technological Advancement
DRPT	Department of Rail and Public Transportation
EECBG	Energy Efficiency and Conservation Block Grant Program
EMS	Energy Management System
EMCS	Energy Management Control System
EPEAT	Electronic Product Environmental Assessment Tool
FTA	Federal Transit Administration
FWFTF	Framework for the Future
GHG	Greenhouse Gases
HRTPO	Hampton Roads Transportation Planning Organization
LED	Light-Emitting Diode
LEED	Leadership in Energy and Environmental Design
MRF	Materials Recovery Facility
NEPA	National Environmental Policy Act
NNTV	Newport News Television
RCRA	Resource Conservation and Recovery Act
RSTP	Regional Surface Transportation Program
TNS	The Natural Step Framework
TBL	Triple Bottom Line
TDR	Transfer of Development Rights
TOD	Transit Oriented Development
USEPA	United States Environmental Protection Agency
USGBC	U.S. Green Building Council
VML	Virginia Municipal League

Visit the City's NNGreen web site ([www.nngov.com/nngreen](http://www.nngov.com/nngreen)), "like" us on Facebook ([www.facebook.com/NNGreenTeam](http://www.facebook.com/NNGreenTeam)) and follow us on Twitter ([www.twitter.com/NNGreenTeam](http://www.twitter.com/NNGreenTeam))

