

Section XIII

SUSTAINABILITY PLAN ELEMENT

OCTOBER 14, 2009

Introduction

Sustainability is described by the American Planning Association as “the capability to equitably meet the vital human needs of the present without compromising the ability of future generations to meet their own needs by preserving and protecting the area’s ecosystems and natural resources. The concept of sustainability describes a condition in which human use of natural resources, required for the continuation of life, is in balance with Nature’s ability to replenish them.”¹

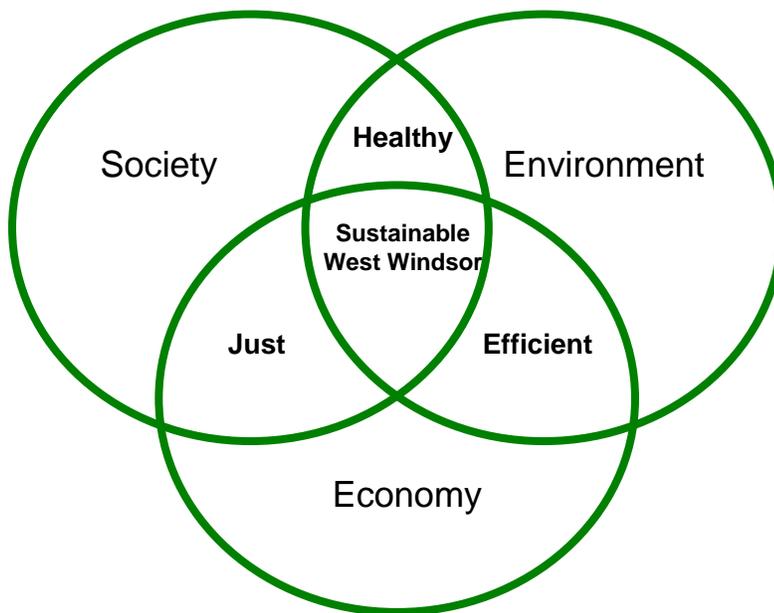
In recognition of the importance of sustainability to sound land use and resource planning, on August 5, 2008 the New Jersey Legislature enacted an amendment to the Municipal Land Use Law (NJSA 40:55D-28b(15)) that permits municipalities to prepare and adopt a Green Buildings and Environmental Sustainable Master Plan Element. This Element “shall provide for, encourage, and promote the efficient use of natural resources and the installation and usage of renewable energy systems; consider the impact of buildings on the local, regional and global environment; allow ecosystems to function naturally; conserve and reuse water; treat storm water on-site; and optimize climatic conditions through site orientation and design.”

Based on this authority, the West Windsor Township Planning Board has adopted a Master Plan **Sustainability Element**. The purpose of this Sustainability Element is to formally and explicitly commit West Windsor Township to examine and implement actions that will continue to move the Township in a more sustainable direction and thus help ensure that its environmental, economic and social objectives are balanced and mutually reinforced. The over-riding goal is to make sustainability inherent in community policies and regulations. The Element was derived from the *Sustainable West Windsor Plan 2007* that was developed under the direction of the West Windsor Township Environmental Commission.

This Element assembles a wide array of potential actions to “green” or make West Windsor a more sustainable community. The value of a dedicated Sustainability Element is that it provides a coherent vision and distinct description of what sustainability means to West Windsor Township and the suite of actions that will be employed in the greening of West Windsor. Because sustainability is such an inherently comprehensive concept, the Element structure necessarily reflects the breadth of issues and priorities of importance to the Township and includes the following chapters: Land Use, Circulation, Society, Natural Resources and Government. In addition, many of the issues and actions included in this Element directly relate to other Plan Elements in the Master Plan, including but not limited to, Land Use, Circulation, and Conservation. It is anticipated that, as understanding is developed of how sustainability is best implemented by the Township, other Master Plan Elements will be amended to include additional actions that will both complement and supplement the strategies in this Sustainability Element.

¹ American Planning Association – Policy Guide on Planning for Sustainability – p. 3

This Sustainability Element also offers a comprehensive scope of recommendations or actions. It should be recognized that while some of these recommendation can or should be “acted” upon soon, many are offered to guide further investigation or “contemplation.” Thus, this element may offer some recommendations that seem to contradict other actions or recommendations within the element or elsewhere in the Master Plan. Since the path to sustainability is one of continually seeking a balance of factors and results, it is appropriate to present seemingly discordant recommendations that contribute to the comprehensive analysis necessary to make our future destination a more sustainable environment. It is felt that the Master Plan is a guiding document that allows for such a broad vision.



Background – Sustainable West Windsor Plan 2007

The *Sustainable West Windsor Plan 2007* began within the township's Environmental Commission (EC) as an initiative to evolve to a more environmentally sustainable community. The Township subsequently applied for an ANJEC (Association of New Jersey Environmental Commissions) grant to facilitate a sustainability planning process. Upon receiving it, a consultant was hired to assist in this endeavor. Numerous meetings of the Environmental Commission have furthered the plan concept and content – resulting in a draft framework of sustainable development (goals, objectives, indicators, targets, strategies and actions). In addition, a public outreach meeting was held on November 17, 2005 both to inform residents about the plan and to solicit their input on a draft framework. A significant list of potential sustainable practices, goals and targets was compiled as a result of this meeting. Shortly thereafter, the Township of West Windsor received the Office of Smart Growth Green Planning Grant, which has funded the studio and consultant work involved in researching and drafting the Sustainable West Windsor Plan 2007.

Methodology

The indicators and targets as well as the strategies and actions presented in this plan are drawn from various sustainability plans, initiatives, and programs available in the public domain. In addition, the plan's overall organizational structure, design, and layout combine elements from various sustainability plans. The authors looked to leading cities and towns for model sustainability policies and practices and then tailored these to the unique environmental, economic and social climate of West Windsor Township. In particular, the authors looked at the sustainability plans of Seattle, WA, New York, NY, Santa Monica, CA, Vancouver, BC, Cambridge, MA, Minneapolis, MN, Jacksonville, FL, among others considered to contain "best practices". The plan also draws upon international examples, including sustainability plans produced by Ottawa, Canada, and Geelong, Australia. Other sources, such as the Cool New Jersey Handbook and the Mayor's Wellness Campaign: Communities in Motion Handbook were consulted and utilized in developing the Sustainable West Windsor Plan 2007 and its companion document, the Reference Compendium. The Reference Compendium provides a path to other documents or links that offer more detailed descriptions of the concepts or programs discussed in this document. The Reference Compendium is not included since some of the links or paths may become outdated, but this document is available at the West Windsor Municipal offices for review for those with an interest.

Acknowledgements

The West Windsor Sustainability Plan 2007 document, which is the basis of the Master Plan Sustainability Element, was produced by Rutgers University, Edward J. Bloustein School of Planning and Public Policy with funding from the Smart Future Grant Program - Administered by the NJ Department of Community Affairs, Office of Smart Growth. The following document builds upon work undertaken by graduate students of the Spring 2006 West Windsor Sustainability Studio at the Edward J. Bloustein School of Planning and Public Policy. Subsequent work was completed by Jennifer Senick, Executive Director of the Rutgers Center for Green Building; Randy Solomon, Executive Director of The New Jersey Sustainability State Institute (NJSSI); and NJSSI staff- Maren L. Haus and Afton Enger. In addition, Marty Rosen and Dan Dobromilsky of the West Windsor Environmental Commission have provided invaluable input and knowledge, reviewed numerous initial drafts, and helped edit and publish the final plan.

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What is Sustainability?

As defined in the *Sustainable West Windsor Plan 2007*, sustainability is...

Adopting practices for living, today, that will complement and enhance, without depleting, the opportunity and quality of life tomorrow.

It is a principle of sustainability that sustainable practices will attempt to balance the environmental, economic and social impacts of any action.

What is an Environmentally Sustainable Community?

An environmentally sustainable community is one that manages and stewards its natural resources and environmental assets such that their value is preserved, restored and enhanced for the present and future generations and in which such stewardship complements the community's efforts to foster economic and social health.

Proposed Mission Statement:

The mission of SWW Plan 2007 is to establish environmental sustainability as a guiding principle for municipal government planning and practices, and ultimately influencing the planning and practices of the broader community to become more sustainable.

Framework for Sustainability Planning

The entire Sustainability Plan Element is organized by the following framework and hierarchy. The plan is divided into five GOALS: Sustainable Land Use; Sustainable Circulation; Sustainable Society; Sustainable Natural Resources; and Sustainable Government. Each goal is broken down into a set of objectives. Each objective has a set of corresponding indicators, targets, strategies, and actions. In addition, actions are classified in three different ways:

1. Based on which sectors of the community would be directly involved (i.e., B= Business Community, G= Municipal Government, I= Institutions, R= Residential).
2. Based on stage of action implementation (i.e., ACT, EVALUATE, CONTEMPLATE).
3. Based on their linkages to other sustainability goals.

Mission Statement



Goals – General descriptions of what one can achieve in the future. These sustainability Goals come from the basic Elements and Goals of the West Windsor Township Master Plan



Objectives – These statements provide standards that are more specific and descriptive of Goals' achievement.



Indicators – Indicators measure progress toward the Targets and Objectives. For example, indicators can track improvement (trends) in a desired environmental quality condition, or Township progress in carrying out a selected program. They will enable one, over time, to track the direction and effectiveness of actions toward achieving specific Targets and Objectives, and sustainability in general.

Targets – These measurable milestones and explicit endpoints describe in detail what one thinks must be achieved to move toward the Goals and Objectives.



Strategies – Specific projects, programs and policies designed to achieve the Milestones and Objectives.



Actions – Detailed tasks that describe how the strategies will be implemented and by whom they will be carried out.

Responsible Party – After many of the recommended actions a “Responsible Party” is listed. The plan is suggesting that this group would seem to have the expertise or authority to logically take leadership in reviewing, analyzing and determining a path to implementation, or not, for the action. It is not intended to reflect and shall not be construed as a legal obligation or empowerment for the group.

Sustainable Goal/ Indicator Matrix

The Sustainable Goal/Indicator Matrix lists all the Indicators from each Sustainable Goal category down the left side and the five Sustainable Goals across the top. While each indicator was developed to measure progress towards meeting goals in one area, this matrix shows that many of the indicators measure the conditions, impacts or effectiveness of actions in several overlapping goal areas. This demonstrates the **linkages** between each of the goal areas and the impact of West Windsor’s decisions across environmental, economic and social parameters.

	Land Use	Circulation	Society	Natural Resources	Government
Sustainable Land Use (LU) Indicators					
1.1.1 Residents Employed Locally	•	•	•	•	
1.1.2 Proximity of Residents to transit nodes	•	•			
1.2.1 Jobs-to-housing balance	•	•			
1.2.2 Livable Housing	•	•	•		
1.3.1 Population adjacent to parks	•	•	•	•	
1.3.2 Progress toward completion of green belt and farmland preservation per Master Plan goals	•			•	
1.4.1 Green Building Practices in Private Development	•	•	•	•	
1.4.2 Green Home Building & Remodeling Practices	•	•	•	•	
Sustainable Circulation (SC) Indicators	LU	SC	SS	NR	SG
2.1.1 Vehicles Miles Traveled (VMT) Growth Rate		•		•	
2.1.2 Vehicle Hours Traveled (VHT)		•		•	

Sustainable Circulation (SC) Indicators	LU	SC	SS	NR	SG
2.1.3 Traffic Congestion		•		•	
2.1.4 Vehicle Ownership		•	•	•	
2.1.5 Sustainable Transportation Options		•	•	•	
2.1.6 Bus, Shuttle, Train and Mass Transit Ridership		•	•	•	
2.2.1 Pedestrian/Bike Safety		•	•		
2.2.2 Sidewalk Connectivity		•	•		
2.2.3 Bike Lanes		•	•		
2.2.4 Bike Rack and Locker Usage		•	•		
2.2.5 Children Walking/Biking to School		•	•		
2.3.1 Township-wide total vehicle emissions		•		•	
2.3.2 Alternative fuel vehicles (AFVs)		•		•	
Sustainable Society (SS) Indicators	LU	SC	SS	NR	SG
3.1.1 Sustainable Planning Guide			•	•	•
3.1.2 Sustainability Awareness			•	•	
3.1.3 Sustainability Education			•	•	
3.1.4 Sustainability Education Trust Fund	•		•	•	
3.1.5 Sustainability Curriculum			•	•	
3.1.6 K-12 Professional Development Program: Sustainability Education			•	•	

Sustainable Society (SS) Indicators cont.	LU	SC	SS	NR	SG
3.1.7 Sustainability Focus in Civic and Community Organizations			•	•	
3.2.1 Non-Family Residents			•	•	
3.2.2 Community Diversity			•		
3.2.3 Youth/Teen Involvement			•		
3.2.4 Housing Affordability			•		
3.3.1 Residents' perception of safety			•	•	•
3.3.2 Reported or recorded acts of vandalism against township natural resources			•	•	•
3.4.1 Voter Turnout			•		•
3.4.2 Neighborhood Association Participation			•		
3.4.3 Community, cultural and sustainability-focused events			•		
3.4.4 Volunteer Rates			•		
3.4.5 Community groups taking concrete actions as a result of the sustainability plan			•		
3.5.1 Teen alcohol and drug use			•		
3.5.2 Participants in organized sports and fitness programs			•		
3.5.3 Regular Exercise			•		
3.5.4 Obesity Rate			•		
3.5.5 Healthy, Local Food Sales			•	•	
3.5.6 Local Produce Availability			•	•	
3.5.7 Local Produce in Restaurants			•	•	

Sustainable Natural Resources (NR) Indicators	LU	SC	SS	NR	SG
4.1.1 Air Quality Index (AQI)				•	
4.1.2 Wood Smoke emissions				•	
4.1.3 Non-certified wood stoves				•	
4.1.4 Indoor air quality (IAQ) – Radon				•	
4.1.5 Indoor Air Quality (IAQ) – Environmental Tobacco Smoke (ETS)				•	
4.1.6 Indoor Air Quality (IAQ) – Green Cleaning				•	
4.2.1 Greenhouse Gas (GHG) emissions				•	
4.3.1 Participation in Clean Power Choice Program			•	•	
4.3.2 Solar Power			•	•	
4.4.1 Stream impairment				•	
4.4.2 Stream Corridor Protection				•	
4.4.3 Streams in need of restoration				•	
4.4.4 Groundwater nitrogen levels				•	
4.4.5 Urban Runoff				•	
4.4.6 Annual Water Consumption				•	
4.4.7 Non-Potable Water Use				•	
4.5.1 High quality species habitats	•			•	
4.5.2 Species Diversity and Quantity within Habitat				•	
4.6.1 West Windsor Township recycling rate				•	

4.6.2 WW municipal solid waste				•	
4.6.3 Household Hazardous Waste (HHW)				•	
4.6.4 WW yard waste generated				•	
4.6.5 WW yard waste composted				•	
Sustainable Government (SG) Indicators	LU	SC	SS	NR	SG
5.1.1 Recycled or Refurbished Street Furnishings				•	•
5.1.2 Recycled Content Products				•	•
5.2.1 Township Grants, Certifications & Awards				•	•
5.2.2 Green Cleaning Practices				•	•
5.3.1 Municipal Fleet emissions				•	•
5.3.2 Alternative fuel vehicles (AFVs)				•	•
5.3.3 Local Employment of Municipal Staff				•	•
5.4.1 Government Electrical Energy Consumption				•	•
5.4.2 Government Building Energy Use				•	•
5.4.3 LED Traffic lights				•	•
5.4.4 Renewable Energy Use				•	•
5.5.1 Municipal Facility Potable- Water Use				•	•
5.5.2 Municipal Non-potable Water Use				•	•
5.6.1 Regionally Appropriate Vegetation	•			•	•
5.6.2 Sustainable Landscaping Practices	•			•	•
5.6.3 Municipal Green Building Projects				•	•

Sustainable Goal/ Action Matrix

The Sustainable Goal/Action Matrix lists the proposed Actions that impact at least 3 or more Sustainable Goals. Actions are listed down the left side and the five Sustainable Goals across the top. While each action was developed to achieve progress towards meeting Objectives in one area, this matrix shows that many of the actions have impacts in several overlapping goal areas.

Key: A= ACT: (West Windsor has identified this action as easily accomplished, has committed to do this action, or is in the process of accomplishing this action) E= EVALUATE: (West Windsor will collect information and research the cost/benefits before taking action) C= CONTEMPLATE: (West Windsor will bank these ideas until the right resources and opportunities become available)	Land Use	Circulation	Society	Natural	Government
Sustainable Land Use Actions					
A- Make bicycle facility planning a routine part of the Township's transportation planning. When changes to intersections, traffic signal operations, or travel lane widths are planned, the needs of cyclists are considered	●	●		●	
A- Maintain zoning codes that increase the amount of bike parking as well as develop incentives and/or regulations for new commercial construction to include bicycle facilities such as bike racks, storage lockers and showers	●	●		●	
A- Allow developers to contribute to a shared biking facility in exchange for reduced parking requirements	●	●		●	
A- Identify technical and financial assistance available to support Smart Growth initiatives in the township	●	●	●	●	
E- Encourage sidewalk commerce by zoning requirements that encourage walk-up windows, sidewalk dining and retail displays in appropriate settings	●	●	●		
E- Examine bond financing tools such as RAD and TIFs for use in future projects	●	●	●		
E- Reexamine Township-wide walkability and bikeability assessment; Improve pedestrian and bike access for existing neighborhoods to transit nodes where possible.	●	●	●		
E- Reconnect discontinuous streets and dead-ends to improve neighborhood accessibility	●	●	●		

Sustainable Land Use Actions cont.	LU	SC	SS	NR	SG
E- Pass zoning ordinance that allows accessory dwelling units (ADUs). Provide an “ADU How to Manual” for residents	●	●	●	●	
E- Establish a by ordinance a Neighborhood Activity Center Overlay District (NACOD) in order to encourage small-scale commercial and mixed-use development in convenient locations that provide daily services and jobs within walking distance of neighborhoods	●	●	●	●	
A- Distribute information and provide incentives for WWT businesses to provide workforce housing by participating in NJ HMFA’s Employer-Assisted Housing Program	●	●	●	●	●
A- Partner with NJ HMFA to offer the Live Where You Work Program to local residents. Work with NJ HMFA to structure an incentive program for homeowners	●	●	●	●	●
A- Create vibrant, well-used public places and public gathering spaces that serve as the framework around which housing, retail and commercial buildings are planned and designed	●	●	●	●	
E- Promote school locational standards that preserve and develop neighborhood schools	●	●	●		
E- Plant Community (flower/butterfly/hummingbird) gardens	●		●	●	
C- Make small grants and resources available for the development of community gardens in Brownfields or underutilized parks	●		●	●	
C- Encourage establishment of a community vegetable garden and local schools to plant organic gardens	●		●	●	
A- Require that green building practices be considered for all buildings at Princeton Junction Train Station	●	●	●	●	
A- Host Green Home tours in local communities	●		●	●	
E- Promote LEED certification and West Windsor green building program participation through zoning incentives, expedited permit reviews, education, cash incentives, and tax abatement programs	●		●	●	
E- Develop and disseminate information on green building and remodeling practices on Township website	●		●	●	
E- Provide Green Home Building and Remodeling Workshop Series at local library, Whole Food Stores, Community Centers, and/or Schools etc.	●		●	●	

E- Adopt LEED green building standards or develop township green building criteria for evaluating and promoting new development projects and major renovations of residential structures, office space, multi-family dwellings, municipal buildings etc.	●	●	●	●	
C- Provide grants for single-family residential and community development projects to help offset the cost of certifying and designing innovative green projects throughout West Windsor	●	●	●	●	
Sustainable Circulation Actions	LU	SC	SS	NR	SG
A- Consider sustainability criteria when determining parking standards	●	●		●	
E- Conduct a pilot Community Readiness Study to identify the community's readiness to embrace VMT reduction efforts; follow with implementation of recommendations	●	●	●		
E- Promote staggered working hours to extend work start and work finishing times in order to extend traffic peak hours and reduce traffic jams	●	●	●		
C- Publicize proximity to transit as a reason to shop in local stores, distribute free bus and shuttle passes to customers where parking vouchers are provided, and offer discounts to cyclists	●	●	●		
A- Work with community groups to promote walking and biking for health	●	●	●		
A- Create incentives for private/public bicycling facilities to developers and businesses	●	●	●	●	
A- Employ traffic calming devices: widen sidewalks, install curb extensions, center islands and plantings, road narrowing, diagonal parking, and raise and repaint crosswalks at priority locations such as schools, high-density commercial areas and at transit stops to make it easier for people to cross the street	●	●	●	●	
A- Maintain zoning codes to require sufficient bike parking as well as develop incentives and/or regulations for new commercial construction to include bicycle facilities such as bike racks, storage lockers and showers	●	●	●	●	
A- Maintain and expand Bicycle and Pedestrian Safety Education Programs	●	●	●	●	
E- Establish a “walking bus” program in schools	●	●	●	●	
E- Establish a township-wide bicycle-sharing/repair program	●	●	●	●	

Sustainable Circulation Actions cont.	LU	SC	SS	NR	SG
E- Establish 'park and ride' facilities on the edge of the Princeton Junction Redevelopment zone. Educate the public regarding cost, locations, accessibility and services available at Park and Ride lots	●	●	●	●	
E- Provide parking incentives and rebates to encourage switch to AFVs and minimum-sized vehicles		●	●	●	●
C- Create a "How to get in and around West Windsor Township" Campaign that markets and promotes the use of HOV lanes or rail lines, Bus, Shuttles, car-sharing programs, ride-matching services and bicycle and pedestrian pathways on WWT website, newspaper advertisements, brochures etc.		●	●	●	●
C- Establish a trip reduction program with local businesses. Voluntary (and mandatory) programs can be developed with local businesses to establish carpooling incentive.		●	●	●	●

Sustainable Society Actions	LU	SC	SS	NR	SG
A- Design and administer a comprehensive annual sustainability survey that assesses resident awareness, and knowledge of and participation in both Township wide and individual sustainable activities, and that gathers information for Indicators that is not readily available by other methods of data collection			•	•	•
A- Create sustainability educational displays in municipal buildings			•	•	•
A- Celebrate residents or local businesses that have helped promote sustainability within West Windsor Twp (WWT) through public recognition			•	•	•
A- Host “Local Garden Tours” of area homes, businesses, and organizations (e.g., organic fruits & vegetables, natural vegetation, wildlife habitat gardens, water efficient landscaping, green roofs, and organic lawn & gardens)	•	•	•	•	
E- Develop environmental guidelines or owner’s manual for residents and/or communities and develop a program to distribute to new residents	•		•	•	
E- Define a municipal awareness campaign using messages in local publications (i.e. a regular column in local newspapers and township newsletters about sustainability issues such as local air quality; radio broadcasts; channel 27 presentations; and outreach efforts at community events, etc.)			•	•	•
E- Create a sustainable business program that distinguishes sustainable businesses throughout WWT with identifiable stickers to be placed on storefront/business windows			•	•	•
E- Develop Adopt-A-Spot Programs.	•		•	•	
A- Continue to enforce littering ordinances			•	•	•
A- Create and enforce ordinance prohibiting all-terrain vehicles on public lands	•	•	•	•	•
E- Develop an information kit for distribution to local schools and non-profit groups regarding participation in sustainability efforts in WWT	•	•	•	•	•
E- Establish a trip reduction program with local businesses. Voluntary (and mandatory) programs can be developed with local businesses to establish carpooling incentive		•	•	•	•

Sustainable Natural Resources Actions	LU	SC	SS	NR	SG
A- Coordinate efforts with Greater Mercer Transportation Management Association and their NJ Ozone Action Partnership Program		•	•	•	
A- Publicize the health & environmental costs of motor vehicle emissions with tips on how to reduce individual emissions on a Sustainability Awareness page on the WWT website	•	•	•	•	
A- Publish a regular column in local newspapers and township newsletters about sustainability issues such as local air quality	•	•	•	•	•
E- Organize a series of Community Sustainability Events that help to raise awareness about local air quality (i.e., Walk Your Child to School Day, Bike to Work Day, Car Free Day etc.)		•	•	•	•
A- Provide information on WWT website about green cleaning practices and include listing of local suppliers for green cleaning products and services			•	•	•
A- Work with local stores to promote Energy Star products and educate consumers about the Energy Star label. Provide links to ENERGY STAR's product locator and buyer's guide on WWT website	•		•	•	
A- Hold informational workshops to raise awareness about the Energy Star business partnership programs and the Energy Star Home program			•	•	•
E- Distribute free energy efficiency starter kits to interested individuals and groups or wherever township staff is communicating with the public (farmers market, community meetings, etc.). The starter kit could be a collection of information and simple energy efficiency measures, such as CFLs, low flow showerheads (< 1.5 gpm), and faucet aerators, along with information on the actions residents can take and how to go about taking them (e.g. how to sign up for wind power, how to plant trees for electricity savings, or how to take advantage of and apply for Energy Star rebates)			•	•	•
A- Provide landscaping workshops for residents on how to use vegetation to shade buildings and to reduce the urban heat island effect	•	•	•	•	•
E- Require that green roofs be considered in new construction or major renovations and encourage their use in private construction			•	•	•
E- Provide developers and property owners with information about using green roofs or high reflectance roofs on buildings and other techniques for parking lots and impervious surfaces			•	•	•

Sustainable Natural Resources Actions cont.	LU	SC	SS	NR	SG
E- Develop one or more projects with schools to install solar energy systems and conduct associated classroom activities			•	•	•
E- Offer incentives to foster solar photovoltaic installations in the community			•	•	•
A- Provide information and guidance to residents and local business owners on rain water collection and landscaping for water conservation (e.g., native species; xeriscaping)	•		•	•	
E- Develop and install appropriate interpretative signs and information brochures on biodiversity values at West Windsor conservation reserves	•		•	•	
E- Provide information and guidance to residents and local business owners on how to maintain lawns in natural state with native trees, shrubs and wildflowers	•		•	•	
Sustainable Government Actions	LU	SC	SS	NR	SG
A- Recruit businesses and organizations into the federal Energy Star program. Utilize pledges, peer exchanges, and public recognition programs to sustain involvement			•	•	•
A- Strive for LEED ND certification for West Windsor Township's Princeton Junction Redevelopment Project and all planned/future Redevelopment Projects.			•	•	•
A- Publicize every grant, certification or award achieved or maintained by the Township by the following three means; a press release; posting of a plaques or certificate in the municipal building lobby; and posting an announcement on the Township web page			•	•	•
E- Facilitate the certification of Energy Star Homes by providing a listing of qualified certifiers, and by marketing the program to homeowners			•	•	•
E- Offer a financial incentive to share the cost of the audit and certification with the homeowner, as well as facilitate the improvements necessary to earn the ENERGY STAR rating (e.g. by assisting homeowners with rebates).			•	•	•
E- Achieve a minimum of LEED Certification on all newly constructed and major renovation projects	•	•	•	•	•
E- Create a Township staff level position for a Sustainability Coordinator.	•	•	•	•	•
C- Provide mini-grants to promote recycling awareness. encourage schools, or community groups to develop innovative source reduction, reuse, or recycling projects			•	•	•

Sustainable Government Actions cont. **LU** **SC** **SS** **NR** **SG**

A- Publicize New Jersey's existing Anti-Idling Laws with signage and enforce with penalties for drivers of municipal vehicles and vehicles contracted to do work with the municipality.		•		•	•
A- Obtain bikes that are available for municipal employees to use to carry out their work.		•		•	•
A- Increase the number of municipal employees enrolled in Direct Deposit.		•		•	•
A- Retire old and under-used municipal vehicles		•		•	•
A- Provide a program on driving and maintenance practices that reduce fuel use and emissions for employees who use township vehicles and for the community		•		•	•
E- Adopt a Township green fleet policy that incorporates energy efficiency criteria for acquiring municipal vehicles, including sizing of vehicles appropriate to their tasks and giving preferences to alternative fuels and hybrid vehicles where possible as well as promotion of using the smallest vehicle necessary for jobs (including township bikes or scooters).		•		•	•
E- Purchase Alternative Fuel Vehicles (AFVs) and badge these to promote the City's focus on sustainability		•		•	•
E- Establish infrastructure for (AFVs), including fueling stations and reserved spaces for Zero Emission Vehicles (ZEVs) and Super-Ultra Low-Emission Vehicles (SULEVs) in municipal garages and parking lots outside of Redevelopment Area		•		•	•
E- Encourage Princeton Junction police officers on bicycles		•		•	•
E- Offer public access bike storage, changing rooms, and showers in municipal buildings		•		•	•
C- Encourage car-pooling, van-pooling, and mass transit use by municipal employees by offering free services or incentives		•		•	•
C- Use car sharing programs in lieu of a township fleet		•		•	•
A- Institute a "lights/computers out/off at night" policy			•	•	•

Sustainable Government Actions cont.	LU	SC	SS	NR	SG
C- Launch an “energy efficiency challenge” campaign for municipal employees			●	●	●
A- Provide information, resources and tools for residents and local businesses on energy conservation on Township Website			●	●	●
C- Establish an “electric energy reduction meter” that is updated quarterly to reflect the progress toward achievement of this target. This “meter” could be posted on the Township web page and Municipal building message boards to publicize the reductions, savings and benefits			●	●	●
C- Establish a “water consumption meter” that is updated annually to reflect the progress toward achievement of this target. This “meter” could be posted on the Township web page and Municipal building message boards to publicize the reductions, savings and benefits.			●	●	●
A- Develop a simple one page Environmental Impact and Status Statement (EISS) to be utilized to quickly evaluate the anticipated impacts upon woodland, water quality, wildlife, air quality associated with Township Facilities and Assets	●			●	●
A- Require that all municipal lands adopt sustainable landscaping techniques and Integrated Pest Management (IPM) practices	●			●	●
E- Provide developers, citizens, and township staff with information to assist them in applying LEED standards			●	●	●
A- Engage community in municipal green building projects by providing information on the building process, from groundbreaking to completion via the website, photographs, documentaries, and stories on local news and radio stations and in local newspapers			●	●	●
E- Establish a “green building meter” that is updated annually to track the progress toward achievement of the “green” building target. This “meter” could be posted on the Township web page and Municipal building message boards to publicize the reductions, savings and benefits			●	●	●

Goal 1: Sustainable Land Use

1.1 OBJECTIVE: Develop and implement smart growth strategies that foster pedestrian-scale, mixed-use, transit-oriented development.

1.1.1 INDICATOR: Residents Employed Locally **LU SC SS NR**
(Percentage of Residents who live and work in West Windsor)

Target: Increasing percentage over previous years

Status: TBD

1.1.2 INDICATOR: Proximity of Residents to transit nodes. **LU SC**
(Percentage of residences, mixed-use developments and employment within ¼ mile of transit nodes)

Target: Increasing percentage over previous years

Status: TBD

Strategy 1:

Use zoning and incentives to encourage pedestrian-scale, mixed-use, development and redevelopment near public transportation.

Proposed Actions:

ACT:

- Employ traffic calming devices: widen sidewalks, install curb extensions, center islands and plantings, road narrowing, diagonal parking, and raise and repaint crosswalks at priority locations such as schools, high-density commercial areas and at transit stops to make it easier for people to cross the street. [G] **LU SC NR** (See RC 2.2 under *Traffic Calming* for more information)
 - Responsible Party: PB

ACT cont.

- Make bicycle facility planning a routine part of the Township's transportation planning. When changes to intersections, traffic signal operations, or travel lane widths are planned, the needs of cyclists are considered. [G] **LU SC NR** (See RC 2.2 under *Pedestrian & Bike Friendly Community Design* for more information)
 - Responsible Party: Engineering Division, Bike & Pedestrian Alliance
- Maintain zoning codes that increase the amount of bike parking as well as develop incentives and/or regulations for new commercial construction to include bicycle facilities such as bike racks, storage lockers and showers. [G] **LU SC NR**
 - Responsible Party: PB
- Allow developers to contribute to a shared biking facility in exchange for reduced parking requirements. [G] **LU SC NR**
 - Responsible Party: PB
- Identify technical and financial assistance available to support Smart Growth initiatives in the township. [G, B, I R] **LU SC SS NR** (See RC 1.1 under *Smart Growth Resources* for more information)
 - Responsible Party: Township (Twp)
- Continue to enforce Township cluster ordinance to minimize street length by concentrating development in the least sensitive areas of site. [G] **LU NR** (See RC 1.1 under *Smart Growth Regulations* for more information)
 - Responsible Party: PB, Twp
- Continue to enforce Township ordinance to reduce parking lot size by encouraging shared parking among adjacent businesses and on-street parking spaces. [G] **LU NR** (See RC 1.1 under *Smart Growth Regulations* for more information)
 - Responsible Party: PB, Twp
- Reduce parking requirements for developments in proximity to public transportation. [G] **LU NR** (Refer to LEED NC 2.2 SS Credit 4.4 Alternative Transportation-Parking Capacity)
 - Responsible Party: PB, Twp
- Provide incentives or opportunities for structured parking rather than surface parking. [G] **LU NR**
 - Responsible Party: PB
- Reduce frontage requirements in residential areas to reduce road length. [G] **LU NR** (See RC 1.1 under *Smart Growth Regulations* for more information)
 - Responsible Party: PB

EVALUATE:

- Encourage sidewalk commerce by zoning requirements that encourage walk-up windows, sidewalk dining and retail displays in appropriate settings. [G] **LU SC SS**
 - Responsible Party: PB, Twp. Council

- Implement an expedited plan and permit approval process for smart growth projects. [G, B, I R] **LU NR**
 - Responsible Party: PB, Twp

- Examine creative finance strategies to encourage sustainable, green development and affordable, transit-oriented development. [G, B, I R] **LU NR**
 - Responsible Party: PB, Twp

- Reexamine Township-wide walkability and bikeability assessment; along with inter-township connectivity to Improve pedestrian and bike access for existing neighborhoods to transit nodes, schools, public/municipal facilities, religious facilities, parks, commercial centers and employment centers where possible. Reconnect discontinuous streets and dead-ends to improve neighborhood bicycle and pedestrian accessibility. [G, B, I R] **LU SC SS** (See RC 2.2 under *Pedestrian & Bike Friendly Community Design* for more information)
 - Responsible Party: PB, Bike & Pedestrian Alliance

- Examine bond financing tools such as RAD and TIFs for use in future projects. [G, B, I R] **LU SC SS NR** Note: *RADs and TIFs allow municipalities to capture the future tax benefits of the proposed improvements to pay the present cost of the proposed improvements.*
 - Responsible Party: PB, Twp. Council

1.2 OBJECTIVE: Develop and implement environmental initiatives that improve housing quality and livability

1.2.1 INDICATOR: Jobs-to-housing balance **LU SS**

Target: 1.5 workers per household

Status: 1.46 workers per household

1.2.2 INDICATOR: Livable Housing **LU SC SS**
(New housing units' proximity to grocery stores, parks and transit nodes)

This indicator is a compilation of four measures:

- 1) Number of new housing units in non-residential districts as a percentage of the total new housing.
- 2) Percentage of new units within in ¼ mile of a transit stop.
- 3) Percentage of new units with ¼ mile of open space.
- 4) Percentage of new units with ¼ mile of a grocery store.

Target: Increasing number of new housing units in non-residential districts and an increasing percentage of new units with ¼ mile of transit, open space and a grocery store.

Status: TBD

Strategy: Continue to promote the existing neighborhood pattern of development in concert with new Smart Growth development that provides a variety of housing choices and employment opportunities.

Proposed Actions:

ACT:

- Continue to monitor balance of jobs to housing ratio during master plan updates. [G, R] **LU SS**
 - Responsible Party: Township (Twp), Planning Board (PB)
- Continue to evaluate impact of new development proposals on jobs-to-housing ratio as a prerequisite of approval. [G,R] **LU SS**
 - Responsible Party: Twp, PB

EVALUATE:

- Pass zoning ordinance that allows accessory dwelling units (ADUs). Provide an “ADU How to Manual” for residents. (ADUs, also known as a “mother-in-law” unit is an additional living unit that has separate kitchen, sleeping and bathroom facilities, attached or detached from the primary residential unit on a single-family lot.) [G,R] **LU SC SS NR** (See RC 1.2 under *Livable Housing* for more information)
 - Responsible Party: PB, Twp, Zoning Board (ZB)
- create Neighborhood Activity Center Overlay District (NACOD) in order to encourage small-scale commercial and mixed-use development in convenient locations that provide daily services and jobs within walking distance of neighborhoods. [G,R] **LU SC SS NR** (See RC 1.2 under *Livable Housing* for more information)
 - Responsible Party: PB, Twp, ZB
- Distribute information and encourage WWT businesses to provide workforce housing by participating in NJ HMFA’s Employer-Assisted Housing Program. *Workforce housing includes single-family homes, townhouses, starter homes, and apartments that are affordable to area workers.* [G] **LU SC SS NR SG** (See RC 1.3 under *Live/Work Programs* for more information)
 - Responsible Party: Twp
- Partner with NJ HMFA to offer the Live Where You Work Program to local residents. Work with NJ HMFA to structure an incentive program for homeowners. *The Live Where You Work Program is a home mortgage incentive program that provides low-interest mortgage loans to homebuyers purchasing homes in towns where they are employed.* [G] **LU SC SS NR SG** (See RC 1.3 under *Live/Work Programs* for more information)
 - Responsible Party: Twp

1.3 OBJECTIVE: Develop and maintain a sufficient open space system that balances efforts to enhance biodiversity, natural preservation, and both passive and active recreation opportunities with commercial and residential development and redevelopment throughout the community

1.3.1 INDICATOR: Population adjacent to parks **LU SC SS NR**
(Percentage of population and households that live within ½ mile and ¼ mile of a park)

Target: Increasing percentage over previous years

1.3.2 INDICATOR: Progress toward completion of green belt and farmland preservation per Master Plan goals **LU NR**

Target:

Status:

Strategy 1: Provide incentives to local business and residents to provide a diversity of open spaces accessible to all members of the community.

Proposed Actions:

ACT:

- Continue to conduct consistent open space review during the permitting process for development projects to incorporate open space into project design. [G] **LU NR**
 - Responsible Party: Twp, PB
- Continue to provide incentives for planting trees and creating additional green space open to the public as part of new development and major renovations. [G] **LU NR**
 - Responsible Party: Twp, PB
- Continue to create appealing small-scale public gathering spaces with well-adapted vegetation as part of development and redevelopment projects. [B,I] **LU NR**
 - Responsible Party: Twp, PB
- Continue to utilize brownfield sites and underutilized properties whenever possible [G, B, I, R] **LU NR**
 - Responsible Party: Twp, EC

ACT cont:

- Develop a landscaping requirement for all new development to meet a landscaping target through use of a menu of landscaping strategies. [G] **LU NR** (See RC 1.3 under *Open Space & Public Green Space Resources* for more information)
 - Responsible Party: PB, Site Plan Review Authority Board (SPRAB), Twp
- Create vibrant, well-used public places and public gathering spaces that serve as the framework around which housing, retail and commercial buildings are planned and designed. [G, B, I R] **LU SC SS NR** (See RC 1.3 under *Open Space & Public Green Space Resources* for more information)
 - Responsible Party: PB, ZB, SPRAB
- Replace unnecessary pavement with landscaping. [G, B, I R] **LU NR**
 - Responsible Party: Twp, PB, SPRAB
- Continue to promote the cluster development ordinance, which allows developers to increase the construction density (but no increase in gross density) on a portion of the buildable property in exchange for preserving open space on another portion of the tract. [G, B, I R] **LU NR** (See RC 1.3 under *Open Space & Public Green Space Resources* for more information)
 - Responsible Party: PB, ZB, SPRAB

EVALUATE:

- Use Transfer of Development Rights (TDRs) to preserve existing open space in the township. (*Transfer of development rights is a realty transfer system where development potential in a specified preservation area can be purchased by private investors for use in a targeted growth area.*) [G, B, I R] **LU NR** (See RC 1.3 under *Open Space & Public Green Space Resources* for more information)
 - Responsible Party: PB, Twp
- Promote school locational standards that preserve and develop neighborhood schools. [G, B, I R] **LU SS NR**
 - Responsible Party: PB, Twp
- Establish a municipal wetlands mitigation bank. [G, B, I R] **LU NR** (See RC 1.3 under *Open Space & Public Green Space Resources* for more information)
 - Responsible Party: Twp, EC
- Plant community (flower/butterfly/hummingbird) gardens [G] **LU NR SS** (See RC 4.4 under *Wildlife Habitats* for more information)
 - Responsible Party: Twp, EC

CONTEMPLATE:

- Make small grants and resources available for the development of community gardens in brownfields or underutilized parks. [G] **LU** **NR** **SS**
 - Responsible Party: Twp, EC

- Encourage development of a community vegetable garden and local schools to plant organic gardens. [G] **LU** **SS** **NR** (See RC 4.4 under *Organic School Gardens* for more information)
 - Responsible Party: Twp, EC

1.4 OBJECTIVE: Promote adoption of “green” building and development practices in private projects (including appropriate consideration of aesthetics, design opportunities and community standards)

1.4.1 INDICATOR: Green Building Practices in Private Development **LU SC SS NR**
(Percentage of new and substantially remodeled buildings that are LEED certified, and/or built according to WW green building guidelines)

Target: LEED certify all new buildings which are 10,000 sq. feet or larger. (20% LEED Silver, 10% Gold and 2% Platinum, and remainder Certified). LEED certify all new buildings less than 10,000 sq. feet to obtain at least LEED certification or to meet WW green building criteria.)

Status: TBD

1.4.2 INDICATOR: Green Home Building & Remodeling Practices **LU SC SS NR**
(Percentage of new and substantially remodeled housing that complies with WW green home building & remodeling standards, and or Energy Star Homes and LEED Homes standards)

Target: Increasing percentage over previous years

Strategy: Promote awareness, disseminate information and provide incentives to encourage green building in the residential and commercial building sectors.

Proposed Actions:

ACT:

- Require that green building practices be considered for all buildings at the Princeton Junction Redevelopment Project. [G, B, I R] **LU SC SS NR**
 - Responsible Party: EC, PB, Twp
- Host Green Home tours in local communities. **LU SS NR** (See RC 1.4 under *Green Home Building/Remodeling Workshops* for more information)
 - Responsible Party: EC, PB, Twp

EVALUATE:

- Adopt LEED green building standards or develop township green building criteria for evaluating and promoting new development projects and major renovations of residential structures, office space, multi-family dwellings etc. [G, B, I R] **LU SC SS NR**
 - Responsible Party: EC, PB, Twp

- Promote LEED certification and West Windsor green building program participation through zoning incentives, expedited permit reviews, education, cash incentives, and tax abatement programs. [G, B, I R] **LU SS NR**
 - Responsible Party: EC, PB, Twp

- Develop and disseminate information on green building and remodeling practices on Township website. [G, B, I R] **LU SS NR** (See RC 1.4 under *Green Building/Remodeling Guidelines & Programs* for more information)
 - Responsible Party: EC, Twp

- Provide Green Home Building and Remodeling Workshop Series at Local Library, Whole Food Stores, Community Centers, and/or Schools etc. **LU SS NR** (See RC 1.4 under *Green Home Building/Remodeling Workshops* for more information)
 - Responsible Party: EC, PB, Twp

CONTEMPLATE:

- Provide grants for single-family residential and community development projects to help offset the cost of certifying and designing innovative green projects throughout West Windsor. [G, B, I] **LU SC SS NR** (See RC 1.4 under *Green Home Building Incentives* for more information)
 - Responsible Party: Twp

Strategies & Actions Refresher:

Actions are classified based on which sectors of the community would be directly involved:

- B= Business Community
- G= Municipal Government
- I= Institutions (i.e., schools, religious groups, non-profit organizations)
- R= Residential

Actions are classified based on stage of action implementation:

- ACT: (West Windsor has identified this action as easily accomplished, has committed to do this action, or is in the process of accomplishing this action)
- EVALUATE: (West Windsor will collect information and research the cost/benefits before taking action)
- CONTEMPLATE: (West Windsor will bank these ideas until the right resources and opportunities become available)

Actions are classified based on their linkages to other sustainability goals:

- LU**= Sustainable Land Use
- SC**= Sustainable Circulation
- SS**= Sustainable Society
- NR**= Sustainable Natural Resources
- SG**= Sustainable Government

GOAL 2 : SUSTAINBLE CIRCULATION

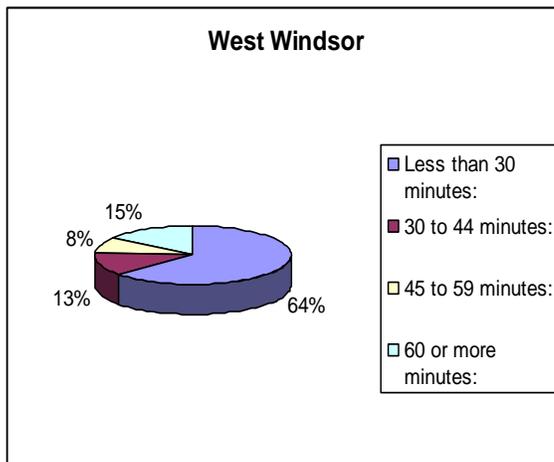
2.1 OBJECTIVE : Develop and implement efforts that decrease motor vehicle use and increase access to and convenience of alternative transportation options

2.1.1 INDICATOR: Vehicles Miles Traveled (VMT) Growth Rate **SC NR**
(Total number of miles traveled by all vehicles on West Windsor roadways on an average day. Eventually track local vs. drive-through vehicle miles.)

Target: Decreasing Number each year

Status: TBD

2.1.2 INDICATOR: Vehicle Hours Traveled (VHT) **SC NR**
(Annual average daily Auto Commute Time (hrs/day))



Target: Decreasing average hours of daily commute

Status: 64% of West Windsor residents drive less than 30 minutes to work, 15% of residents travel 60 minutes or more each way to work

2.1.3 INDICATOR: Traffic Congestion **SC NR**
(Number of signalized intersections with unacceptable motor vehicle congestion (level of service (LOS) of D, E, F) during peak hours. LOS for sustainable transportation options at impacted intersections. Number of locally classified streets that exceed desired traffic levels)

Target: Decreasing number of signalized intersections impeded by congestion during peak travel periods. Downward trend in the number of locally classified streets that exceed desired traffic levels and an increase in the LOS of sustainable transportation at impacted intersections.

Status: Annual Average Daily Traffic (AADT) on West Windsor Roads has been fairly consistent over the past few years

Location	AADT
Millstone Road (Between Cranbury Road & Millstone River)	10/02/2000 = 9,042 7/07/2003 = 5,431
Penn-Lyle Road (~ 0.7 miles north of Village Road)	5/15/2001 = 4,378 5/05/2004 = 4,168
Village Road West (Between Rt.533 & Deerfield Drive)	10/02/2000 = 10,541 5/01/2001 = 11,564 8/09/2004 = 10,574
Clarksville Road (Between N. Post and Penn-Lyle Roads)	10/02/2000 = 13,270 6/30/2003 = 13,040
South Mill Road (~ 1.6 miles South of Rt. 571)	10/02/2000 = 2,379 7/07/2003 = 4,511
Princeton-Hightstown Road (Between Rt.526 & Rt. 535)	12/31/2000 = 20,000 12/31/2001 = 20,600 12/31/2002 = 20,400
Hightstown Road (Between Alexander & Clarksville Roads)	10/02/2000 = 20,427 7/07/2003 = 19,405
U.S. 1 (Between Alexander Road & Rt. 571)	8/27/2001 = 73,673 10/11/2004 = 73,410

2.1.4 INDICATOR: Vehicle Ownership SC NR SS

(Number of cars per driver; Percentage of cars which are Super-Ultra Low-Emission Vehicles (SULEVs))

Target: 10% reduction from 2000 levels on the number of cars per driver by 2010; upward trend in the percentage of SULEVs of the total number of vehicles in West Windsor.

Status: TBD

2.1.5 INDICATOR: Sustainable Transportation* Options SC NR SS

(Residents choice of Sustainable Transportation and their perception of the availability of sustainable modes of transportation (based on survey))

Note: Sustainable Transportation is used to describe all forms of transport which minimize emissions of carbon dioxide and pollutants. It can refer to public transport, car sharing, walking and cycling as well as technology such as electric and hybrid cars and biodiesel.*

Target: Increase in the number of sustainable transportation options for residents and a positive perception of sustainable transportation accessibility.

Status: TBD

2.1.6 INDICATOR: Bus, Shuttle, Train and Mass Transit Ridership SC NR SS
(Ridership on BRT, Community Shuttle and Train)

Target: Increase in the ridership over previous years

Status: TBD

Strategy 1:

Reduce dependence on the automobile and increase Sustainable Transportation Options and Mass Transit Ridership. Create parking incentives, improve transportation services and accessibility, and provide education and outreach.

Proposed Actions:

ACT:

- Install shelters or benches at busy bus stops. [G] SC NR
 - Responsible Party: Township (Twp)
- When giving directions to businesses, events, and institutions, include directions by train, bike, foot, shuttle, bus, and car. [G, B,I] SC NR
 - Responsible Party: Twp
- Consider sustainability criteria when determining parking standards. [G] LU SC NR
(See RC 1.1 under *Smart Growth Regulations* for more information)
 - Responsible Party: Planning Board (PB)

EVALUATE:

- Conduct a pilot Community Readiness Study to identify the community's readiness to embrace VMT reduction efforts; follow with implementation of recommendations. [G] SC SS NR
 - Responsible Party: Twp
- Promote staggered working hours to extend work start and work finishing times in order to extend traffic peak hours and reduce traffic jams. [G, I, B] SC SS NR
 - Responsible Party: Twp, Environmental Commission (EC)

CONTEMPLATE:

- Establish a car-sharing service such as Zipcar or Flexcar, that provides car-sharing services for fee-paying members and provide discounted parking spaces to help launch the program. [G] SC NR (See RC 2.1 under *Car Sharing Services* for more information)
 - Responsible Party: _____
- Install real-time signs with schedule and route information at bus and shuttle stops in West Windsor. [G] SC NR
 - Responsible Party: _____
- Publicize proximity to transit as a reason to shop in local stores, distribute free bus and shuttle passes to customers where parking vouchers are provided, and offer discounts to cyclists. [G, I, B] SC SS NR
 - Responsible Party: _____
- Institute an alternative transportation program that informs employees of alternatives to the automobile for commuting. [G, I, B] SC NR (See RC 2.1 under *Commute Trip Reduction* for more information)
 - Responsible Party: _____

2.2 OBJECTIVE: Develop and implement initiatives that improve access to and safety for pedestrian and bicycle circulation

2.2.1 INDICATOR : Pedestrian/Bike Safety **SC SS**
(Number, location, type and severity of bicycle and pedestrian collisions and reported areas of concern involving motor vehicles)

Target : Downward trend in the number of collisions

Status: TBD

2.2.2 INDICATOR: Sidewalk Connectivity focusing on areas in proximity to schools, transit nodes, parks, public/municipal facilities, religious facilities, retail centers and employment centers. **SC SS**
(Percentage of roads with sidewalks on both sides of the road in West Windsor and length of continuous sidewalk segments)

Target : Significantly increase the percentage of roadways with sidewalks on both sides and decrease the percentage of roadways with no sidewalks.

Status :

Existing Sidewalk Inventory

Condition	Length (miles)	Percent of Total
Sidewalks on both sides of the Roadway	91.1	56%
Sidewalks on one side of the Roadway	24.5	15%
No Sidewalks on Roadway	40.7	25%
Pedestrian Pathway	5.2	3%
Total	161.5	

Source : West Windsor Bicycle & Pedestrian Taskforce (October 2004)

2.2.3 INDICATOR: Bike Lanes SC SS

(Percentage of arterial streets and collector roads which have bike lanes. Total miles of bike paths, lanes, routes and multi-use paths.)

Target : Increasing number and percentage over previous years. Consider participation and ratings with the League of American Bicyclist's Bicycle Friendly Community program.

Status : TBD

2.2.4 INDICATOR: Bike Rack, Shelter and Locker Usage SC SS

(Number of and usage of bike racks and lockers at the train station and throughout Township)

Target: Increase number and percentage of bike racks and bike lockers that are covered over previous year.

Status:

2.2.5 INDICATOR: Children Walking/Biking to School SC SS

(Annual Percentage of children walking and riding bikes to school)

Target : Increased percentage over each previous year.

2.2.6 INDICATOR : People walking and biking to train station, employment centers, retail centers, public/municipal facilities, parks, and religious facilities.

Target : Increased percentage over each previous year.

Increase LAB Bike Friendly businesses over year previous year.

Increase usage of Bicycle Commuter Act program over each previous year.

Status :

Strategy 1:

Improve safety and accessibility of facilities for walking and bicycling

Proposed Actions:

ACT:

- Work with community groups to promote walking and biking for health recreation and transportation. [G, R] SC SS NR (See RC 2.2 under *Pedestrian & Bike Friendly Community Design* for more information)
 - Responsible Party: EC, Recreation and Health Dept., WW Bike & Ped Alliance
- Employ traffic calming devices: widen sidewalks, install curb extensions, center islands and plantings, road narrowing, diagonal parking, and raise and repaint crosswalks at priority locations such as schools, high-density commercial areas and at transit stops to make it easier for people to cross the street in consultation with West Windsor BPA. [G] LU SC SS NR (See RC 2.2 under *Traffic Calming* for more information)
 - Responsible Party: TWP
- Make bicycle facility planning a routine part of the Township's transportation planning. When changes to intersections, traffic signal operations, or travel lane widths are planned, the needs of cyclists are considered. [G] LU SC SS NR
 - Responsible Party: Engineering Division, Bike/Ped Alliance
- Expand the pedestrian program to provide benches, and make aesthetic improvements, e.g., trees, flowers, buildings with windows, fences that are low and transparent. [G, B, I, R] SC NR
 - Responsible Party: PB
- Create incentives for developers and businesses to establish private/public bicycling facilities. . [G] LU SC NR
 - Responsible Party: PB as to developers, GMTMA and Bike/Ped Alliance as to businesses
- Install additional bicycle parking at commercial areas, parks, transit nodes, and schools and look for new opportunities to install bicycle lanes or guidelines and improve intersections for cyclists. [G] SC NR
 - Responsible Party: PB and Recreation Dept
- Maintain zoning codes to require sufficient bike parking as well as develop incentives and/or regulations for new commercial construction to include bicycle facilities such as bike racks, storage lockers and showers. [G] LU SC SS NR
 - Responsible Party: PB

- Maintain and expand Bicycle and Pedestrian Safety Education Programs at schools, businesses, and public/municipal and religious facilities, including Ride Smart Safe program to provide helmets, lights, reflective vests and ankle bands to those in need and adding bicycle and pedestrian safety elements to drivers' education and School Officer programs. [G, I] **SC SS NR**
 - Responsible Party: Police Dept., Recreation Dept., School Board, WW Bike-Ped Alliance
- Any parking structure built must including covered bicycle parking,
 - Responsible Party: PB

EVALUATE:

- Establish a "walking bus" program in schools. [G,R] **SC SS NR**
 - Responsible Party: WW Bike- Ped Alliance in possible combination with a Safe Routes to School Program, Twp., School Board, GMTMA
- Encourage sidewalk commerce by facilitating permit requirements that encourage walk-up windows, sidewalk dining and retail displays in appropriate settings. [G] **LU SC SS NR**
 - Responsible Party: PB
 - Evaluate the number and percentage of covered/sheltered bike racks and percentage of bike parking vs. car parking in Township ordinances vis a vis NJDOT guidelines
 - Responsible Party: Twp
 - West Windsor Township shall consider applying for the League of American Bicyclist's Bicycle Friendly Community program and consider making improvements to achieve Bronze status within 3 years, Silver status within 5 years, Gold status within 7 years and Platinum status within 10 years.
 - Responsible Party: Twp

CONTEMPLATE:

- Program traffic signals to allow pedestrians to cross before turning vehicles and to have adequate time to complete the crossing. [G] SC NR
 - Responsible Party: Bike/Ped Alliance, Twp.

- Establish a township-wide bicycle-sharing/repair program. [G,B] SC SS NR (See RC 2.2 under *Township Bicycle Sharing / Repair Programs* for more information)
 - Responsible Party: Bike/Ped Alliance, Twp.

- Promote bicycle transportation by creating a bicycle recycling shop. Bike recycling shops provide bicycles for citizens to purchase at a reasonable price or borrow on loan. [G,B] SC NR (See RC 2.2 under *Township Bicycle Sharing / Repair Programs* for more information)
 - Responsible Party: Bike/Ped Alliance, Twp.

- Establish a Safe Route to Schools Program. [G, I] SC SS NR (See RC under *Pedestrian & Bike Friendly Community Design* for more information)
 - Responsible Party: Bike/Ped Alliance, Twp.

2.3 OBJECTIVE: Develop and implement strategies to reduce motor vehicle emissions

2.3.1 INDICATOR: Township-wide total vehicle emissions SC
(Tons per day of VOC, NOx, PM 2.5)

Target: Reductions over previous years

Status: TBD

2.3.2 INDICATOR: Alternative fuel vehicles (AFVs) SC NR
(Number or percentage of AFVs owned and operated by businesses, institutions and residents of West Windsor Township.)

Target: increasing number or percentage of AFVs over previous years

Status: TBD

Strategy 1:

Reduce motor vehicle emissions through use of alternative fuel vehicles (AFVs), incentives for parking and alternative transportation, and education & promotion.

Proposed Actions:

ACT:

- Publicize and continue to promote implementation of regional and West Windsor's Bus Rapid Transit Program. [G, B] SC NR (See RC 2.3 under Bus Rapid Transit for more information)
 - Responsible Party: Twp., County, State
- Undertake an anti-idling campaign. Help enforce State code on anti-idling of school buses and cars outside schools. Provide education about idling through signs, targeted mailings to schools, parents, bus companies; follow up with enforcement. [G,R] SC NR
 - Responsible Party: EC, Twp., State
- Encourage implementation of free air pumps at service centers in the community and develop stickers on tire pressure for optimum energy efficiency and install at service station air pumps. [G,B] SC NR
 - Responsible Party: EC, Twp.

EVALUATE:

- Establish Commercial and Municipal Air Pump Stations. [G, B] SC NR
 - Responsible Party: EC, Twp.
- Require that electric vehicle recharging facilities be provided in new, large parking facilities. [G] SC NR
 - Responsible Party: Twp., State
- Provide parking incentives and rebates to encourage switch to AFVs and minimum-sized vehicles. [G] SC SS NR SG
 - Responsible Party: Twp., State
- Switch school buses, transit buses, shuttles, refuse haulers, taxis, delivery vehicles, traffic enforcement vehicles, police cars, and long haul trucks to alternative fuels. [G, I, B] SC NR (See RC 2.3 under *Green Fleets* for more information)
 - Responsible Party: EC, Twp.
- Establish ‘park and ride’ facilities on the edge of the Princeton Junction Redevelopment zone. Educate the public regarding cost, locations, accessibility and services available at Park and Ride lots. [G, B] LU SC SS NR
 - Responsible Party: Twp.

CONTEMPLATE:

- Work with State agencies to develop a system to more closely tie vehicle insurance costs to vehicle miles traveled. [G,R] SC NR
 - Responsible Party: _____
- Link parking sticker fees to engine size and put a cap on the tonnage of vehicles eligible for residential parking permits. Increase fees for second, third cars. [G] SC NR
 - Responsible Party: _____
- Create a “How to get in and around West Windsor Township” Campaign that markets and promotes the use of HOV lanes or rail lines, bus, shuttles, car-sharing programs, ride-matching services and bicycle and pedestrian pathways on WWT website, newspaper advertisements, brochures etc. [G] SC SS NR
 - Responsible Party: _____
- Establish a trip reduction program with local businesses. Voluntary (and mandatory) programs can be developed with local businesses to establish carpooling incentive. [G] SC SS NR SG
 - Responsible Party: _____

CONTEMPLATE cont:

- Install a Traffic Signal Priority (TSP) System that use sensors to detect approaching vehicles and adjust traffic signal timing to enhance traffic flow and to minimize vehicle stops and other traffic delays which result in reduced travel and idling time, plus lower levels of vehicle emissions, including carbon dioxide. [G] SC NR (See RC 2.3 under *Transit Signal Priority Systems* for more information)
 - Responsible Party:_____

Strategies & Actions Refresher:

Actions are classified based on which sectors of the community would be directly involved:

B= Business Community

G= Municipal Government

I= Institutions (i.e., schools, religious groups, non-profit organizations)

R= Residential

Actions are classified based on stage of action implementation:

- ACT: (West Windsor has identified this action as easily accomplished, has committed to do this action, or is in the process of accomplishing this action)

- EVALUATE: (West Windsor will collect information and research the cost/benefits before taking action)

- CONTEMPLATE: (West Windsor will bank these ideas until the right resources and opportunities become available)

Actions are classified based on their linkages to other sustainability goals:

LU= Sustainable Land Use

SC= Sustainable Circulation

SS= Sustainable Society

NR= Sustainable Natural Resources

SG= Sustainable Government

Goal 3: Sustainable Society

3.1 OBJECTIVE: Develop and implement initiatives to educate the community about the movement towards sustainability **SS NR**

3.1.1 INDICATOR: Sustainable Planning Guide **SS NR SG**
(Number of hits on website and/or material requests for copies of Sustainable Planning Guide)

Target: TBD

Status: TBD

3.1.2 INDICATOR: Sustainability Awareness **SS NR**
(Number/percentage of residents who are aware of West Windsor's sustainability plan, once plan is implemented (based on comprehensive annual sustainability survey))

Target: Increasing number/percentage each year

Status: TBD

3.1.3 INDICATOR: Sustainability Education **SS NR**
(Number/percentage of residents taking concrete action as a result of the plan)

Target: Increasing number/percentage each year

Status: TBD

3.1.4 INDICATOR: Sustainability Education Trust Fund **LU SS NR**
(Percent dispersed toward sustainability education for new homeowners)

Target: TBD

Status: TBD

3.1.5 INDICATOR: Sustainability Curriculum **SS NR**
(Number/percentage of school children exposed to the program)

Target: TBD

Status: TBD

3.1.6 INDICATOR: K-12 Professional Development Program: Sustainability Education **SS NR**
(Number/percentage of teachers trained)

Target: TBD

Status: TBD

3.1.7 INDICATOR: Sustainability Focus in Civic and Community Organizations, Including Non-Profit Agencies and Religious Institutions **SS NR**
(Number/percentage of civic and community organizations with sustainability in their social mission)

Target: TBD

Status: TBD

Strategy 1:

Implement sustainability education programs for West Windsor Township (WWT) residents.

Proposed Actions:

ACT:

- Design and administer a comprehensive annual sustainability survey that assesses resident awareness, knowledge and participation in both Township-wide and individual sustainable activities and that gathers information for Indicators that is not readily available by other methods of data collection. [G, I] **SS NR SG**
 - Responsible Party: Environmental Commission (EC), Township (Twp.)
- Create educational displays in municipal buildings. [G, I] **SS NR SG**
 - Responsible Party: EC
- Celebrate residents or local businesses that have helped promote sustainability within WWT through public recognition. [G, I, B] **SS NR SG**
 - Responsible Party: EC

ACT cont:

- Host “Local Garden Tours” of area homes, businesses, and organizations (e.g., organic fruits & vegetables, natural vegetation, wildlife habitat gardens, water efficient landscaping, green roofs, and organic lawn & gardens). [G, R, I] LU SS NR
▪ Responsible Party: EC
- Host a “Meet the Artist Day” when local artists open up their studios to the public. [R, I] SS
▪ Responsible Party: EC, Twp.
- Create demonstration gardens or displays to promote sustainable practices. For example, a rain garden could be developed at the Township Arboretum. [G] LU SS NR
▪ Responsible Party: EC, Twp.
- Develop programs with the Arts Council that meld art and environment to promote sustainable practices. [G] LU SS NR
▪ Responsible Party: EC, Twp.

EVALUATE:

- Develop environmental guidelines or owners manual for residents and/or communities and develop a program to distribute to new residents. [G] SS NR SG
(See RC 3.1 under *Sustainability Education* for more information)
▪ Responsible Party: EC
- Define a municipal awareness campaign using messages in local publications (i.e., a regular column in local newspapers and township newsletters about sustainability issues such as local air quality; radio broadcasts; channel 27 presentations; outreach efforts at community events, etc.) [G, I, B] SS NR SG
▪ Responsible Party: EC
- Create a sustainable business program that distinguishes sustainable businesses throughout WWT with identifiable stickers to be placed on storefront/business windows. [G, I, B] SS NR SG
▪ Responsible Party: EC, Local Chamber of Commerce, Lions Club, Rotary Club
- Develop an information kit for distribution to local schools and non-profit groups regarding participation in sustainability efforts in WWT. [G, I] SS NR SG
▪ Responsible Party: EC

EVALUATE cont:

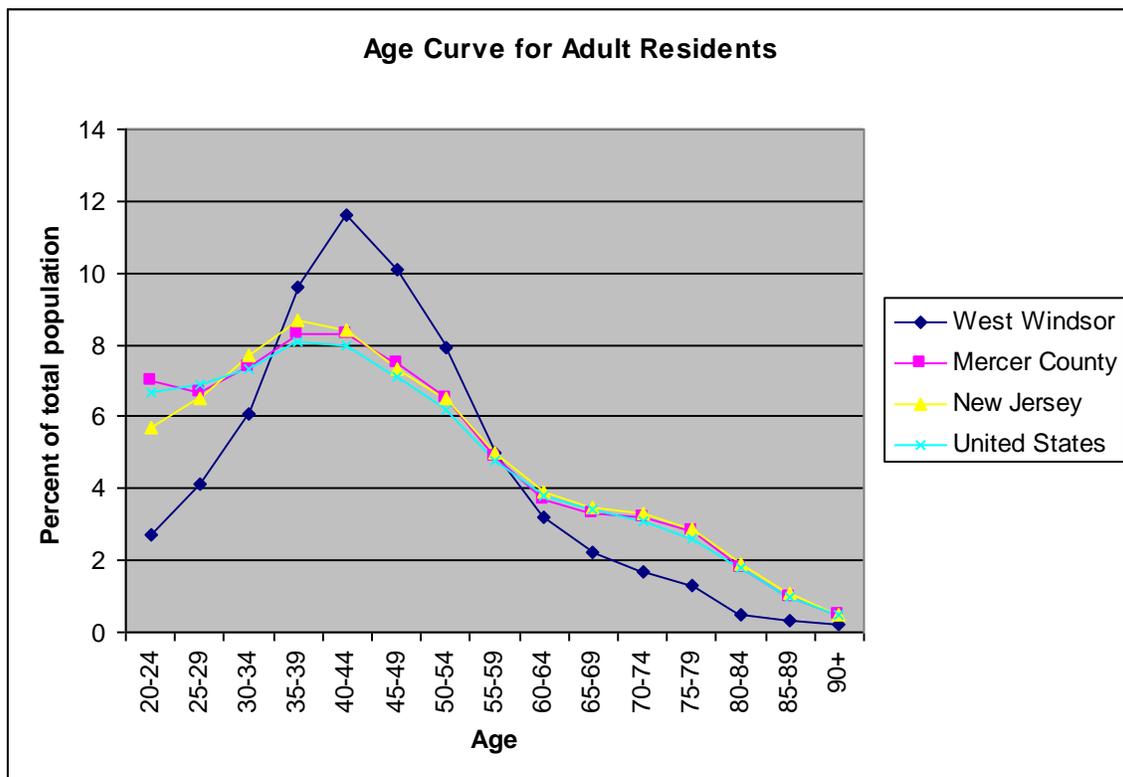
- Develop a flyer or newsletter highlighting sustainable business options in WWT. [G, I, B] **SS NR**
 - Responsible Party: EC
- Develop a guide for environmental or sustainable planning in the community. [G, I] **SS NR SG** (See RC 3.1 under *Sustainability Education* for more information)
 - Responsible Party: EC, Planning Board (PB)

CONTEMPLATE:

- Create sustainability curriculum in schools. [G, I] **SS NR** (See RC 3.1 under *Sustainability Education* for more information)
 - Responsible Party: EC, School Board of Education (BOE)
- Create and implement a professional development program for K-12 teachers to give them the tools to incorporate sustainability in the classroom. [G, I] **SS NR** (See RC 3.1 under *Sustainability Education* for more information)
 - Responsible Party: EC, School BOE
- Promote implementation of a small trust fund in association with land development, to be utilized to educate future homeowners about the environmental integrity and sensitivity of the land surrounding their new home. [G] **LU SS NR**
 - Responsible Party: EC

3.2 OBJECTIVE: Develop and implement environmental strategies that promote responsibility and stewardship in WWT by enabling citizens from different ages and economic groups to live in WWT through every stage of their lives, while being sensitive to and taking advantage of the strengths of the ethnic, age, and economic diversity of residents

3.2.1 INDICATOR: Non-Family Residents **SS**
 (Number/percentage of adults remaining in West Windsor after their children finish school)



Target: Demographic profile of WW looks more like Mercer Co., NJ and US (i.e., no population Drop-offs in 45-49 and 60-64 cohorts)

Status: Many fewer residents aged 45-60 as compared to Mercer Co., NJ and US.

3.2.2 INDICATOR: Community Diversity **SS**
(Number of youth and elderly who feel they have adequate places to socialize within West Windsor and within walking distance of home)

Target: TBD

Status: TBD

3.2.3 INDICATOR: Youth/Teen Involvement **SS**
(Youth/teen volunteer rate)

Target: TBD

Status: TBD

3.2.4 INDICATOR: Housing Affordability **SS**
(Housing affordability rates: median buyer, low-income renter, first-time buyer)

Target: COAH municipal obligation

Status: TBD

Strategy 1:

Ensure the inclusion of all WW residents in community sustainability activities.

Proposed Actions:

ACT:

- Include senior citizens and youth in sustainability planning, education and activities. [G, I] **SS NR** (See RC 3.1, 3.2, 3.3 for community sustainability programs)
 - Responsible Party: EC, Twp., Special Services Division

- Include senior citizen artists in annual Arbor Day Art Contest & Shade Tree Contest. [G, I] **SS NR**
 - Responsible Party: EC, Twp., Shade Tree Commission, Special Services Division

CONTEMPLATE:

- Advocate work environments that encourage family leave, flexible schedules and job-sharing to support child and elder care. This increases work life quality for WW residents. [G, I, B] LU SS
 - Responsible Party: Twp. Council/ Twp. Social Services

Strategy 2:

Create sustainability initiatives through social cohesion.

Proposed Actions:

ACT:

- Create spaces for public gatherings and interaction between various social groups and neighborhoods. [G] LU SS
 - Responsible Party: EC, Twp. Council, Recreation Dept, and PB
- Promote integration of sustainable practices into new senior programs. [G, I] SS
 - Responsible Party: PB, Twp. Social Services
- Create and maintain community gardens (flower/butterfly/hummingbird). [G, I, R] LU SS NR (See RC 3.2 under *Community Sustainability Programs* for more information)
 - Responsible Party: Twp. Council, EC

EVALUATE:

- Develop Adopt-A-Spot Programs. [G, I, B, R] LU SS NR (See RC 3.2 under *Community Sustainability Programs* for more information)
 - Responsible Party: Twp., EC
- Integrate methods from A Viable Futures Toolkit to ensure a “viable future for generations to come.” [G] SS (See RC 3.2 under A Viable Futures Toolkit for more information)
 - Responsible Party: EC, Social Service Division

3.3 OBJECTIVE: Develop and implement efforts to maintain community safety and order to prevent improper or unlawful degradation of community resources

3.3.1 INDICATOR: Residents' perception of safety **SS NR SG**
(Do residents feel safe walking or biking to destinations within the community?)

Target: TBD

Status: TBD

3.3.2 INDICATOR: Reported or recorded acts of vandalism against township natural resources **SS NR SG**

Target: TBD

Status: TBD

Strategy 1:

Implement methods to increase resident perception of safety.

Proposed Actions:

ACT:

- Assess perception of safety in public spaces and implement corrective measures (i.e., lighting, surveillance, emergency phones, etc.) [G] **SS SG**
 - Responsible Party: Police, Twp. Administration
- Form neighborhood watch groups throughout WW. [G, R] **SS**
 - Responsible Party: Police, Twp. Adm.

EVALUATE:

- Continue to ensure that all public safety and emergency services are responsive to all neighborhoods and sensitive to the needs of diverse ages and cultures. [G] **SS SG**
 - Responsible Party: Emergency Services, Police

Strategy 2:

Develop and implement programs or ordinances which reduce negative impacts on community resources.

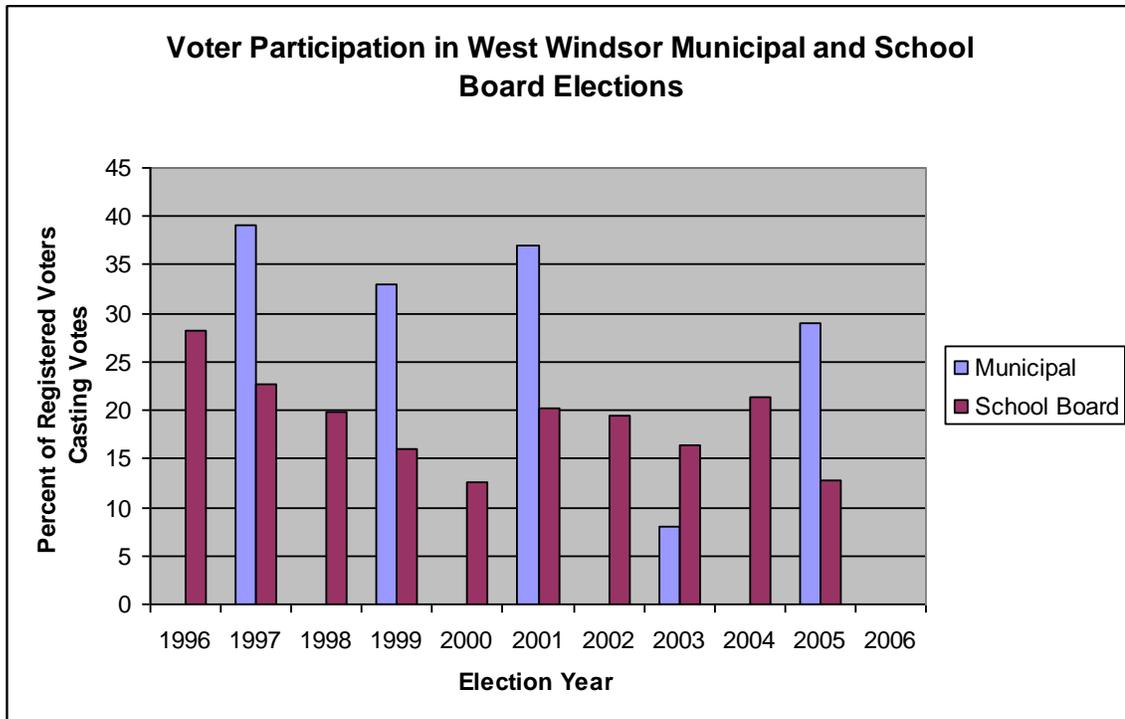
Proposed Actions:

ACT:

- Develop education programs to foster respect for natural environment and to discourage illegal burning, dumping, and littering. [G, I] **SS NR**
 - Responsible Party: EC
- Continue to enforce littering ordinances. [G] **SS NR SG**
 - Responsible Party: Health Dept., Police
- Create and enforce ordinance prohibiting all-terrain vehicles on public lands. [G] **SC SS NR SG**
 - Responsible Party: EC, Twp.

3.4 OBJECTIVE: Encourage and increase community involvement in municipal-wide issues and initiatives and involve community organizations, including religious, social, youth, ethnic, senior citizen and neighborhood groups, in the sustainability process

3.4.1 INDICATOR: Voter Turnout **SS SG**



Source: Town Clerk's election records

Target: Steadily increasing percentage of eligible voters turning out for township and school board elections.

Status: Above average turnout

3.4.2 INDICATOR: Neighborhood Association Participation **SS**
 (Number/percentage of residents participating in Neighborhood Associations in West Windsor Township)

Target: TBD

Status: TBD

3.4.3 INDICATOR: Community, cultural and sustainability-focused events **SS**
(Number of participants at events)

Target: Increasing attendance at public events each year

Status: TBD (Calculation should include Rec. Dept, Senior Center, Arts Council, Shade Tree, etc.)

3.4.4 INDICATOR: Volunteer Rates **SS**
(Volunteer rates of adults, youth, seniors)

Target: Increasing number of resident involvement each year

Status: TBD

3.4.5 INDICATOR: Community groups taking concrete actions as a result of the sustainability plan **SS NR**
(Number/percentage of groups taking action)

Target: TBD

Status: TBD

Strategy 1:

Promote community involvement in sustainability practices

Proposed Actions:

ACT:

- Promote volunteerism through public recognition of residents that have high rates of volunteer work. [G, I] **SS**
 - Responsible Party: Twp. Admin
- Create a cultural garden that celebrates and demonstrates the different inspiration, philosophy, style and techniques of ornamental gardening in other cultures to cultivate a respect and understanding of the diverse cultural background of residents. These gardens should be developed in concert with a cultural garden club that will sponsor, operate and maintain the garden as a community gathering space. [G, I, R] **LU SS NR**
 - Responsible Party: Twp., EC

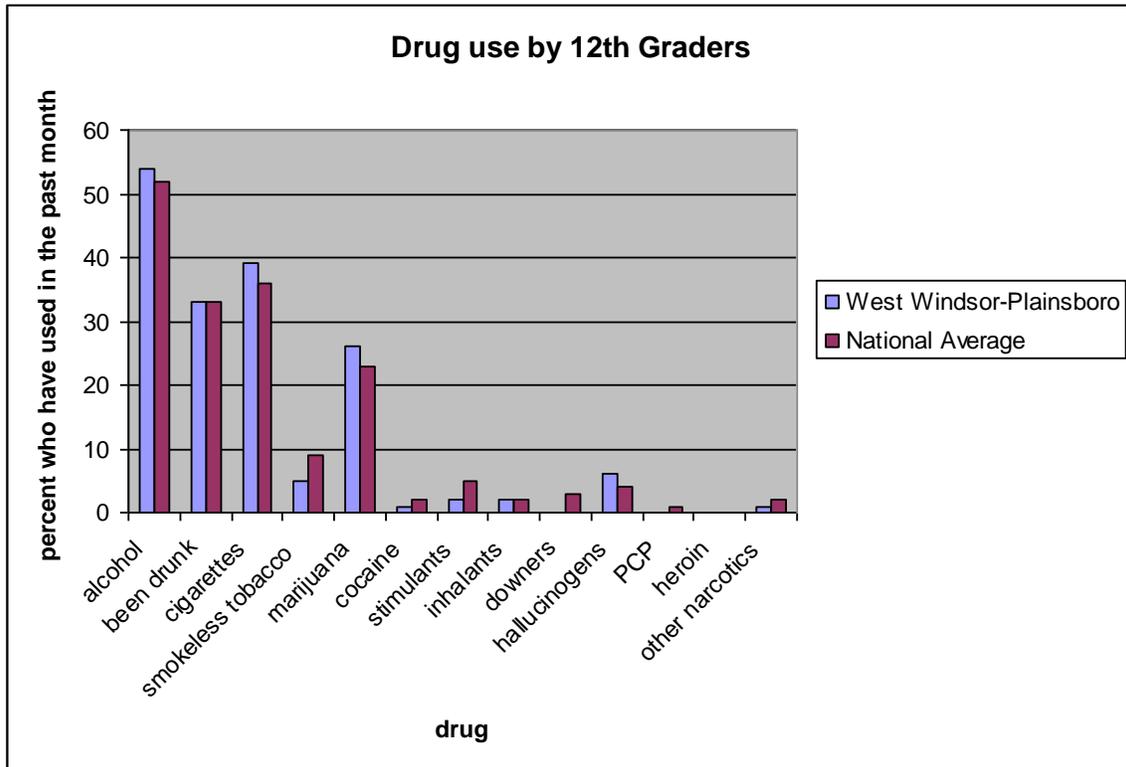
ACT cont:

- Develop programs with the Arts Council that meld art and environment to promote sustainable practices. [R, I] **SS**
 - Responsible Party: EC, Arts Council

EVALUATE:

- Organize and facilitate citizen groups to promote sustainability practices. [G, I, B] **SS NR**
 - Responsible Party: EC

3.5 OBJECTIVE: Develop and implement programs to support the health and fitness of West Windsor Residents by promoting healthy and sustainable recreational activities and lifestyle choices **SS NR**

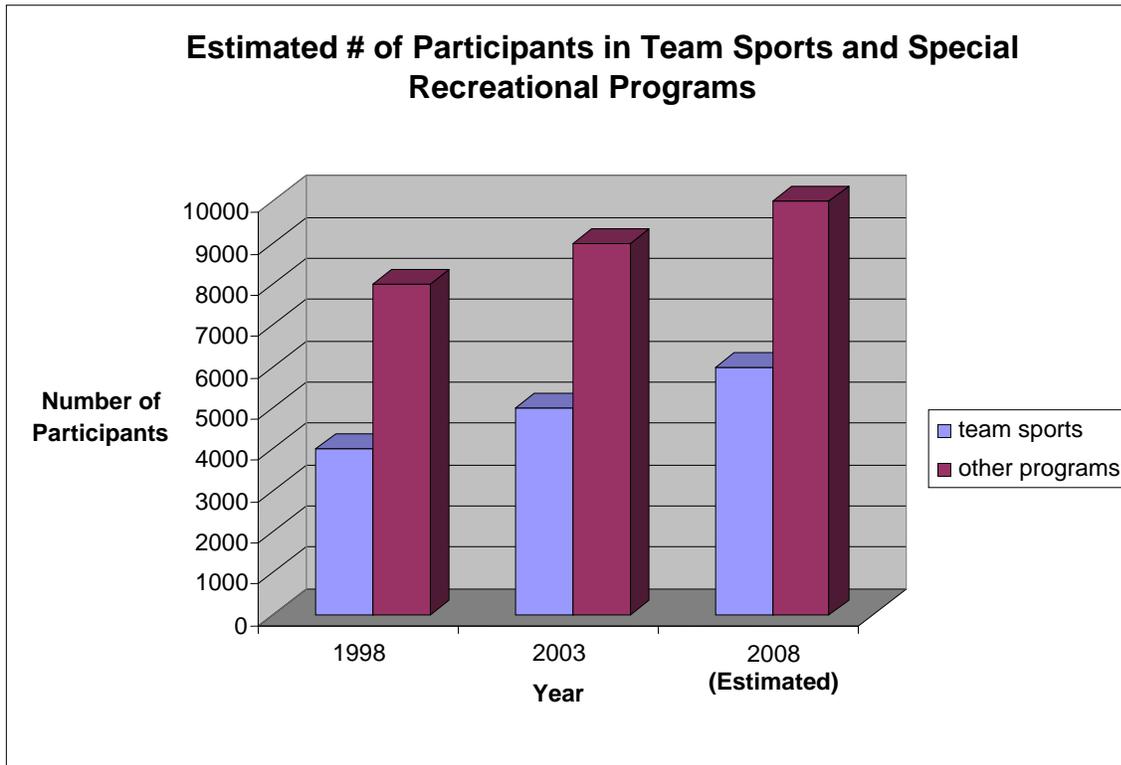


3.5.1 INDICATOR: Teen alcohol and drug use **SS**

Target: Rates below national averages

Status: Close to national averages

3.5.2 INDICATOR: Participants in organized sports and fitness programs **SS**



Target: approximately 50% of the population

Status: Over 16,000 participants

3.5.3 INDICATOR: Exercise **SS**
(Percent of residents who obtain regular and sustained physical activity)

Target: TBD

Status: TBD

3.5.4 INDICATOR: Obesity Rate **SS**

Target: Rates below New Jersey averages

Status: TBD

3.5.5 INDICATOR: Healthy, Local Food Sales **SS NR**
(Revenue from local Community Supported Agriculture, farmer's markets and farm stands)

Target: Increasing percentage/amount of produce sold each year

Status: TBD

3.5.6 INDICATOR: Local Produce Availability **SS NR**
(Percentage of fresh, locally-produced, organic produce served at municipal facilities and WW institutions (hospitals, schools and municipally-sponsored food programs))

Target: Increasing percentage each year

Status: TBD

3.5.6 INDICATOR: Local Produce in Restaurants **SS NR**
(Percent of WWT restaurants purchasing locally produced produce from New Jersey farms)

Target: Increasing percentage each year

Status: TBD

Strategy 1:

Create sustainability practices through community and local business involvement

Proposed Actions:

ACT:

- Create and implement Farmers Market Education Program. [G, I] **SS NR** (See RC 3.5 under *Farmers Market Programs* for more information)
 - Responsible Party: EC, Health Dept.
- Organize lunch/breakfast series featuring professionals in the sustainable-related industries leading discussion, sponsored by local businesses/restaurants (e.g., White Dog Café <http://www.whitedog.com/>)
[G, I, B] **SS NR** (See RC 3.5 under *Sustainability Education* for more information)
 - Responsible Party: EC, Chamber of Commerce, Lions Club, Rotary Club

Strategy 2:

Promote community health and mobility.

Proposed Actions:

ACT:

- Continue to create community design that encourages walking and outdoor recreation. (i.e., sidewalks, crosswalks, street lighting, parks) [G] **SC SS** (See RC 2.2 under *Pedestrian & Bike Friendly Community Design* for more information)
 - Responsible Party: EC, Twp., Health Dept., and PB
- Continue to create and implement health, wellness, and nutrition education programs that are tailored to different generations and cultural groups. [G, I] **SC SS**
 - Responsible Party: Health Dept.

EVALUATE:

- Implement the Mayors Wellness Campaign: Communities in Motion Program [G, I] **SS** (See RC 3.5 under *Mayor's Wellness Campaign* for more information)

Strategies & Actions Refresher:

Actions are classified based on which sectors of the community would be directly involved:

B= Business Community

G= Municipal Government

I= Institutions (i.e., schools, religious groups, non-profit organizations)

R= Residential

Actions are classified based on stage of action implementation:

- ACT: (West Windsor has identified this action as easily accomplished, has committed to do this action, or is in the process of accomplishing this action)

- EVALUATE: (West Windsor will collect information and research the cost/benefits before taking action)

- CONTEMPLATE: (West Windsor will bank these ideas until the right resources and opportunities become available)

Actions are classified based on their linkages to other sustainability goals:

LU= Sustainable Land Use

SC= Sustainable Circulation

SS= Sustainable Society

NR= Sustainable Natural Resources

SG= Sustainable Government

Goal 4: Sustainable Natural Resources

4.1 OBJECTIVE: Develop and implement initiatives to improve air quality

4.1.1 INDICATOR: Air Quality Index (AQI) **NR**

(The Air Quality Index, or AQI, is a color-coded system designed to inform the public about daily air pollution levels in their communities. The index relates concentrations of air pollutants (NO_x, O₃) to their effects on human health.)

(See chart below).

Air Quality Index Levels of Health Concern	Numerical Value	Meaning
Good	0-50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	51-100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101-150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151-200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201-300	Health alert: everyone may experience more serious health effects.
Hazardous	> 300	Health warnings of emergency conditions. The entire population is more likely to be affected.

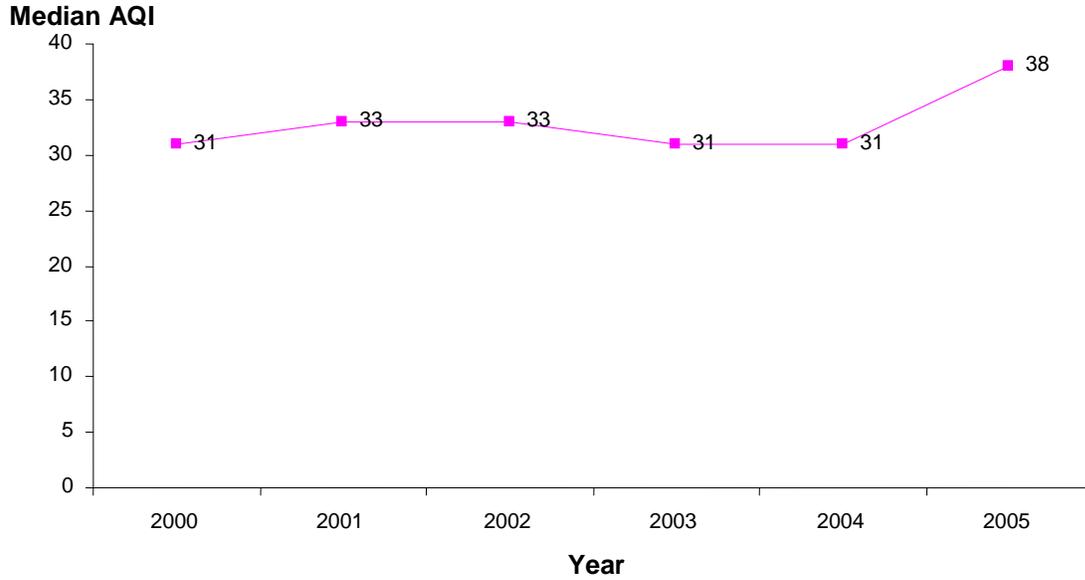
Targets:

- Sustain the median daily AQI at pre-2005 levels around or below 30
- Contribute to eliminating days in which Mercer County experiences air that is “unhealthy for sensitive groups or worse” (AQI not greater than 100)

Status:

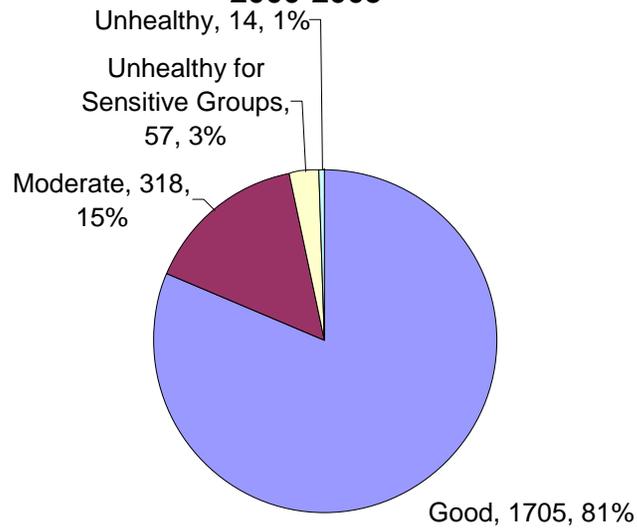
- Exhibit 1 shows relatively good and stable levels of air pollution since 2000
- Exhibit 2 shows that while most (81%) of days have seen “good” air quality, there remain a significant number of days when unhealthy levels of air pollution is present

Exhibit: 1 Median AQI in Mercer County, New Jersey 2000-2005



Source: United States Environmental Protection Agency

Exhibit 2: AQI Classifications in Mercer County, New Jersey 2000-2005



Source: United States Environmental Protection Agency

Strategy 1:

Foster integrated solutions to land use, transportation, and air quality problems; initiate and cooperate with other organizational efforts to improve air quality (other Township departments, county, regional, state, national, global) as well as the non-profit sector, and business and educational institutions.

Proposed Actions:

ACT:

- Track air quality measurements at closest air quality monitoring station (Rider University in Lawrenceville); focus West Windsor Township efforts on sources of pollutants exceeding standards. [G] NR SS (See RC 4.1 under *Air Quality Monitoring* for more information)
 - Responsible Party: Environmental Commission (EC)
- Coordinate efforts with Greater Mercer Transportation Management Association and their NJ Ozone Action Partnership Program <http://www.gmtma.org/> [G] SC SS NR
 - Responsible Party: EC, Township (Twp.)

EVALUATE:

- Work with NJ Clean Cities Coalition and take advantage of Clean Cities resources available at <http://www.eere.energy.gov/cleancities/> [G] SC SS NR
 - Responsible Party: EC

CONTEMPLATE:

- Explore feasibility of establishing local air quality station. [G] NR
 - Responsible Party: EC, Twp.

Strategy 2:

Communicate health impacts of air pollution to public; create incentives to reduce individuals' contributions to air pollution.

Proposed Actions:

ACT:

- Add link on West Windsor Township website to EPA's AirNow Website at <http://www.epa.gov/airnow> which provides local forecasts, health information, and maps showing real-time particle levels at the closest local air quality monitoring station (Rider University in Lawrenceville).
[G] NR SS
 - Responsible Party: EC
- Construct a publicly visible air quality index meter at Princeton Junction that provides continual feedback and awareness to public. [G] NR SS
 - Responsible Party: Architect/ Developer
- Publicize the health & environmental costs of motor vehicle emissions with tips on how to reduce individual emissions on a Sustainability Awareness page on the WWT website. [G] LU SC SS NR (See RC 4.1 under *Tips to Reduce Vehicle Emissions* for more information)
 - Responsible Party: EC, Twp.
- Develop an information kit for distribution to local schools and non-profit groups about the health impacts of ozone and poor local air quality.
[G] NR SS (See RC 4.1 under *Air Quality Education* for more information)
 - Responsible Party: EC
 - Organize a series of Community Sustainability Events that help to raise awareness about local air quality (i.e., Walk Your Child to School Day, Bike to Work Day, Car Free Day, Environmental – Greening of West Windsor Fair etc.) [G, B, I] SC SS NR SG
 - Responsible Party: EC, Bicycle and Pedestrian Alliance

EVALUATE:

- Publish a regular column in local newspapers and township newsletters about sustainability issues such as local air quality. [G] LU SC SS NR SG
 - Responsible Party: EC, Twp.

CONTEMPLATE:

- Prepare and disseminate biennial status reports on air quality indicators. Include in Environmental Commission annual report. [G] LU SC SS NR SG
 - Responsible Party: _EC_____

- Conduct biennial air quality survey to gather data on citizen views, actions and emissions. [G] SC SS NR
 - Responsible Party: _____

- Promote the availability of WWT sustainability resources and tips on reducing vehicle emissions and improving air quality on the township's telephone hold system. [G] NR SS SG (See RC 4.1 under *Tips to Reduce Vehicle Emissions* for more information)
 - Responsible Party: _____

4.1.2 INDICATOR: Wood Smoke emissions **NR**
(Township-wide emissions (tons per year))

Target: Reductions over previous years

Status: TBD

4.1.3 INDICATOR: Non-certified wood stoves **NR**
(Number of non-certified units in township (based on local survey))

Target: Reductions over previous year

Status: TBD

Strategy 1:

Provide educational materials on the health impacts of wood stoves/fireplaces and provide incentives/regulations to reduce emissions and the number of non-certified wood stoves.

Proposed Actions:

ACT:

- Design and implement a "Burn Clean Wood Program" that provides educational materials on the proper maintenance and use of wood stoves and fireplaces. Partner with local hardware stores or organizations to sponsor workshops that educate the public about the health impacts of wood burning emissions. [G, I] **NR SS** (See RC 4.1 under *Wood Smoke Emissions* for more information)
 - Responsible Party: EC, Twp.

EVALUATE:

- Design and implement a "Change-out" Program that provides grants and financial incentives to encourage members of the public to upgrade from a conventional wood stove or fireplace to cleaner technology, such as an EPA-certified wood stove. Expand the "Change-out" Program to include a lawnmower exchange program that partners with local hardware stores to offer electric and push lawnmowers at a discount. [G] **NR SS** (See RC 4.1 under *Wood Smoke Emission* for more information)
 - Responsible Party: EC, Twp.

EVALUATE cont.:

- Require removal of uncertified wood stoves upon sale of a home. [G] NR
 - Responsible Party: EC, Twp

CONTEMPLATE:

- Make burning garbage and other prohibited materials inside the home illegal. [G] NR
 - Responsible Party: _____

4.1.4 INDICATOR: Indoor air quality (IAQ) – Radon **NR**
(Percentage of residential homes tested/and remediated for Radon that are below the EPA action level of 4 pico- curies per liter (pci/L) indoor air <http://www.epa.gov/radon/pubs/mitstds.html>)

Target: 100% of WWT residences below EPA action level

Status: TBD

Strategy 1:

Create an Indoor Radon Program to educate residents on why to test for radon and how to reduce the level of indoor radon to concentrations less than the EPA action level of 4 pico-Curies per liter (pC/L).

Proposed Actions:

ACT :

- Use WWEC web page to share information regarding dangers of radon and steps to reduce risks.
 - Responsible Party : EC

EVALUATE :

- Provide free Radon Testing kits to the public and offer mitigation resources and consultant services through WWT website. [G] **NR SS** (See RC 4.1 under *Radon Testing* for more information)
 - Responsible Party: EC, Twp., State

4.1.5 INDICATOR: Indoor Air Quality (IAQ) – Environmental Tobacco Smoke (ETS)

NR

(Number of WWT households and business that take smoke free pledge.
<http://www.epa.gov/smokefree/pledge/index.html>)

Target: 95% of households and businesses

Status: TBD

Proposed Actions:

ACT:

- Sponsor smoke free pledge drives with local schools, non-profits and businesses. Create smoke-free pledge page with collected signatures on WWT web site. [G] NR
- SS
- Responsible Party: EC, Twp., Health Dept.

4.1.6 INDICATOR: Indoor Air Quality (IAQ) – Green Cleaning NR
(Number of businesses and residences that use green cleaning practices (base on survey))

Target: Increasing number each year

Status: TBD

Strategy 1:

Provide educational materials for residents on green cleaning. Set green cleaning standards for West Windsor Schools, Day Care Centers, private businesses, and institutions.

Proposed Actions:

ACT:

- Design and administer a comprehensive Annual Sustainability Survey, which among other questions on sustainable behavior, asks local business and residents about their green cleaning practices. [B, I, R] NR SS SG
 - Responsible Party: EC, Twp.
- Provide information on WWT website about green cleaning practices and include listing of local suppliers for green cleaning products and services.
[B, I, R] NR SS SG (See RC 4.1 under *Green Cleaning Practices* for more information)
 - Responsible Party: EC, Twp.

4.2 OBJECTIVE: Develop and implement strategies that reduce energy consumption and that are consistent with West Windsor Township’s commitment to the US Mayors Climate Protection Agreement

4.2.1 INDICATOR: Greenhouse Gas (GHG) emissions **NR**
(Township-wide emissions of CO2 (tons per year))

Target: 7% reduction in WWT GHG emissions from 1990 levels by 2012
Continue to reduce the Township’s area source carbon dioxide emissions by 15% every ten years.

Target is in line with NJ Governor Corzine’s State GHG reduction targets which call for reducing greenhouse gas emissions to 1990 levels by 2020, approximately a 20 percent reduction, followed by a further reduction of emissions to 80% below 2006 levels by 2050.

Status: TBD

Strategy 1:

Reduce Energy Consumption and Improve Energy Efficiency among West Windsor businesses through educational workshops, information campaigns, partnerships and incentive programs.

Proposed Actions:

ACT:

- Work with local stores to promote Energy Star products and educate consumers about the Energy Star label. Provide links to ENERGY STAR’s product locator and buyer’s guide on WWT website. [G, B] **NR SS SG** (See RC 4.2 under *Energy Efficiency Programs & Resources* for more information)
 - Responsible Party: EC, Twp.

- Hold informational workshops to raise awareness about the Energy Star business partnership programs and the Energy Star Home program. [G, B, I] **NR SS SG** (See RC 4.2 under *Energy Efficiency Programs & Resources* for more information)
 - Responsible Party: EC, Twp.

EVALUATE:

- Recruit businesses and organizations into the federal Energy Star program. Utilize pledges, peer exchanges, and public recognition programs to sustain involvement. [G, B, I] **NR SS** (See RC 4.2 under *Energy Efficiency Programs & Resources* for more information)
 - Responsible Party: EC, Twp.

- Establish commercial sector procurement guidelines or ordinance that all applicable electrical equipment be ENERGY STAR-rated. [B] **NR SS**
 - Responsible Party: EC, Twp.

- Sponsor local contractor and facility managers to attend technical training workshops on energy efficiency. [G, B, I] **NR SS**
 - Responsible Party: EC, Twp.

- Contribute to existing list-serves or newsletters and speak at routine meetings on energy efficiency issues. [G, B, I] **NR SS**
 - Responsible Party: EC, Twp.

- Offer one or two day trainings on energy efficiency best practices. Work with existing trade organizations to incorporate energy efficiency content into their materials. [G, B, I] **NR SS**
 - Responsible Party: EC, Twp.

Strategy 2:

Encourage residents to conserve energy through education, incentives, campaigns and programs.

Proposed Actions:

ACT

- Launch an “energy efficiency challenge” campaign for community residents. [G, B, I] **NR SS SG** (See RC 4.2 for under *Energy Efficiency Programs & Resources* for more information)
 - Responsible Party: EC, Twp.
- Provide information for residents on WWT website on how to reduce energy use and GHG emissions. The web site would include background information, instructions on how to receive rebates and federal tax credits, a home energy and GHG calculator, and links to other resources. [G] **NR SS SG** (See RC 4.2 under *Energy Efficiency Programs & Resources* for more information)
 - Responsible Party: EC, Twp.
- Promote energy and climate change awareness through a regular appearance in one or more of the local newspapers. Possible ideas are: 1) a regular (weekly, bi-monthly) column written by staff or a local energy/GHG expert, 2) case studies of local homes and households that have reduced emissions by a large percentage and/or success stories such as the house or household of the week. [G, B, I, R] **NR SS**
 - Responsible Party: EC, Twp.

EVALUATE:

- Implement a Winter Energy Savings Program for residents and post tips on how to save money and reduce energy consumption on WWT web site. [G, B] **NR SS** (See RC 4.2 under *Energy Efficiency Programs & Resources* for more information)
 - Responsible Party: EC, Twp.
- Facilitate the certification of Energy Star Homes by providing a listing of qualified certifiers, builders and homes and by marketing the program to homeowners, builders, and developers. [G] **NR SS**
 - Responsible Party: EC, Twp.

EVALUATE cont.

- Offer a financial incentive to share the cost of the audit and certification with the homeowner, as well as facilitate the improvements necessary to earn the Energy Star rating (e.g., by assisting homeowners with rebates).

[G] NR SS

- Responsible Party: EC, Twp.

- Distribute free energy efficiency starter kits to interested individuals and groups or wherever township staff is communicating with the public (farmers market, community meetings, etc.). The starter kit could be a collection of information and simple energy efficiency measures, such as CFLs, low flow showerheads (< 1.5 gpm), and faucet aerators, along with information on the actions residents can take and how to go about taking them (e.g., how to sign up for wind power, how to plant trees for electricity savings, or how to take advantage of and apply for Energy Star rebates). [G, B, I] NR SS SG

- Responsible Party: EC, Twp.

CONTEMPLATE:

- Require building energy benchmarking at time-of-sale, financing or re-financing events or other time period with the requirement that buildings reach an energy efficiency standard and that ratings are disclosed to tenants, buyers, lenders, and the township. [G, B] NR

- Responsible Party _____

Strategy 3: Optimize Use of Vegetation to Shade Buildings and Reduce the Urban Heat Island Effect.

Proposed Actions:

ACT:

- Continue to coordinate tree planting and care education programs such as neighborhood tree walks and Arbor Day celebrations in local schools, which feature tree identification and tips on caring for trees. [G, I] NR SS
 - Responsible Party: Shade Tree Commission, EC, Twp.
- Provide landscaping workshops for residents on how to use vegetation to shade buildings and to reduce the urban heat island effect. [G, R] LU NR SS (See RC 4.2 *Landscaping to Reduce Heat Island Effect* for more information)
 - Responsible Party: Shade Tree Commission, EC
- Provide landscaping manuals and tips on township website. [G, R] NR SS (See RC 4.2 *Landscaping to Reduce Heat Island Effect* for more information)
 - Responsible Party: Shade Tree Commission, EC

EVALUATE:

- Use GIS or other computer imaging, such as the CITYgreen software developed by American Forests (www.americanforests.org), to accurately determine current canopy cover, assess environmental benefits, and plan plantings. [G] NR
 - Responsible Party: EC, Twp.

Strategy 4: Reduce the Urban Heat Island Effect through Design of the Built Environment.

Proposed Actions:

EVALUATE:

- Require that green roofs be considered in new construction or major renovations and encourage their use in private construction. (See RC 4.2 under *Green Roofs* for more information. Refer also to LEED NC 2.2 SS Credit 5.1 Site Development-Protect or Restore Habitat and SS Credit 7.2 Heat Island Effect-Roof)
[G, B, I] NR SS SG
 - Responsible Party: EC, Twp.
- Provide developers and property owners with information about using green roofs or high reflectance roofs on buildings and other reflectance and shading techniques for parking lots and impervious surfaces. [G] NR SS SG (See RC under 4.2 *Green Roofs* and RC 4.2 under *Reflective Roofs* for more information)
 - Responsible Party: EC, Twp.
- Provide incentives for new construction and renovations to meet reflectance and shading standards under LEED NC 2.2 SS Credit 7.1 & 7.2 Heat Island Effect. [G] NR SS SG (See RC under 4.2 *Green Roofs* and RC 4.2 under *Reflective Roofs* for more information)
 - Responsible Party: EC, Twp.

4.3 OBJECTIVE: Develop and implement strategies that utilize renewable energy sources and encourage the development and use of renewable energy technologies and green power

4.3.1 INDICATOR: Participation in Clean Power Choice Program **NR SS**
(Percentage of green power purchased by residents, business and institutions via Clean Power Choice Program)

CleanPower Supplier Companies	Product Name	Resource	Additional Price per Kilowatt Hour	Percent of Monthly Electricity Usage	Additional Monthly Cost*
Sterling Planet, Inc. 1-877-457-2306 www.sterlingplanet.com	Sterling Select™	33% Wind 34% Landfill Gas 33% Small Hydro	1.2¢	100%	\$8.40
Community Energy, Inc. 1-866-WIND-123 www.newwindenergy.com	Community Energy	50% Wind 1% NJ Solar 49% Low-Impact Hydro	1.3¢	100%	\$9.10
Green Mountain Energy Co. 1-800-810-7300 www.greenmountain.com/nj	Green Mountain Energy®	50% Wind 50% Small Hydro	0.9¢	100%	\$6.30
Jersey-Atlantic Wind, LLC 1-877-NJ-WIND1 www.njwind.com	NJ Wind	100% NJ Wind	5.5¢	15%	\$5.78

New Jersey CleanPower Choice Program charges are in addition to your normal monthly charges. Check your electric bill for your actual monthly usage to determine your cost. Currently, the average residential customer pays between 12.17¢ and 13¢ per kilowatt hour.

*For a home using 700 kWh per month.

Target: 4 % of the electricity consumed within the Township should be produced by renewable sources in West Windsor by 2015 and 20% by 2020.

Targets are in line with NJ Governor Corzine’s State Renewable Energy Targets which call for twenty percent of the electricity consumed in New Jersey by 2020 to come from renewable sources, such as wind and solar.

Status: TBD

4.3.2 INDICATOR: Solar Power **NR SS**

(Percentage of megawatts of power produced by solar installations in the Township)

Target: Increasing percentage over previous years

Status: TBD

Strategy 1:

Implement renewable and clean energy projects.

Proposed Actions:

ACT

- Encourage community participation in Clean Power Choice Program through incentives, education and awareness. (See RC 4.3 under *Renewable Energy & Green Power* for more information)
 - Responsible Party: EC, Twp.

EVALUATE:

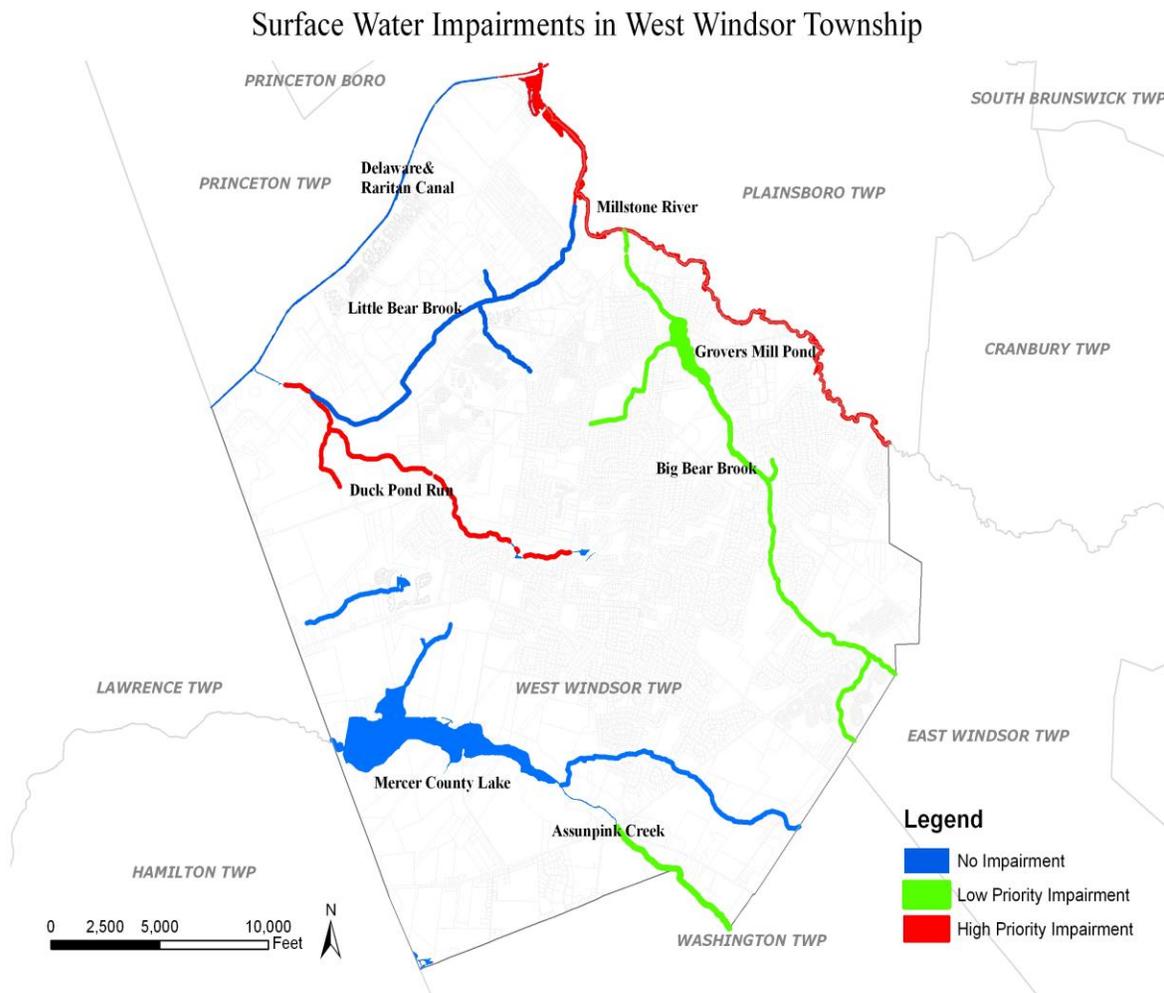
- Promote use and conversion to solar power generation on private buildings – offices, apartment complexes, retail establishments, multi and single-family homes. [G, B, I] **NR SG** (Refer to LEED NC 2.2 EA Credit 2 On-Site Renewable Energy)
 - Responsible Party: EC, Twp.
- Construct or retrofit gas station canopies with solar panels. [G, B] **NR SG** (Refer to LEED NC 2.2 EA Credit 2 On-Site Renewable Energy)
 - Responsible Party: EC, Twp.
- Construct shade canopies with solar panels at parking lots where applicable. [G, B] **NR SG** (Refer to LEED NC 2.2 EA Credit 2 On-Site Renewable Energy)
 - Responsible Party: EC, Twp.
- Develop one or more projects with schools to install solar energy systems and conduct associated classroom activities. [G, I] **SS NR SG**
 - Responsible Party: EC, Twp., School Board
- Offer incentives to foster solar photovoltaic installations in the community. [G] **NR SG**
 - Responsible Party: EC, Twp.
- Review vocational curricula to include course on renewable energy technologies and to develop programs to prepare students for employment in new energy-related fields. [G, I] **NR SS**
 - Responsible Party: EC, Twp., School Board, County College, Mercer County Vocational/Technical Schools

4.4 OBJECTIVE: Develop and implement efforts that improve the quality of the community water resources and reduce water use

4.4.1 INDICATOR: Stream impairment **NR**
(Miles (and percentage of total miles) of WW streams impaired according to NJDEP.)

Target: Reduce miles of impaired WW streams by 10% by 2010.

Status: 19 miles out of a total of 28.1 miles (68%) of WW streams are classified as impaired.



4.4.2 INDICATOR: Stream Corridor Protection **NR**
(Miles of streams under stream corridor protection)

Target: Increase miles of WW stream under corridor protection by 10% by 2010.

Status: TBD

4.4.3 INDICATOR: Streams in need of restoration **NR**
(Miles of streams in need of restoration)

Target: Reduce by 10% WW streams in need of restoration by 2010.

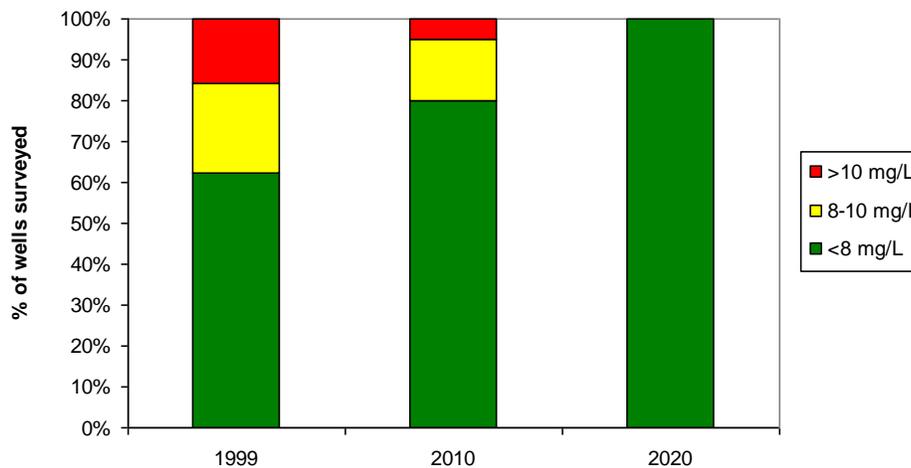
Status: TBD

4.4.4 INDICATOR: Groundwater nitrogen (nitrate) levels **NR**
(Percentage of sampled wells with groundwater nitrogen levels less than 8 milligrams/liter (ppm))

Target: 20% of sampled wells have less than 8 mg/l of nitrogen in the groundwater.

Status: As of 1999, 40% of sampled wells had groundwater nitrogen levels above 8 mg/l.

Exhibit 14: Desired Trend in Nitrate Concentrations of West Windsor Wells (mg/L)



4.4.5 INDICATOR: Urban Runoff **NR LU**
(Percent of permeable land area in West Windsor)

Target: Increase in percentage of permeable land area

Status: TBD

Strategy 1:

Minimize dominance of impervious surfaces such as roads, parking lots, driveways, and rooftops and reduce the quantity and rate of stormwater runoff and pollution loads to local water bodies.

Proposed Actions:

ACT:

- Continue to enforce Township ordinance to minimize street length by concentrating development in the least sensitive areas of site. [G] **LU NR**
 - Responsible Party: PB
- Continue to enforce Township ordinance to reduce parking lot size by lowering the number of parking spaces (minimum and maximum ratios) and by sharing parking among adjacent businesses. Shared parking can also apply to better use of on-street parking spaces. [G] **LU NR**
 - Responsible Party: Twp

EVALUATE:

- Incorporate sunken landscaped islands in the middle of cul-de-sac turnarounds. [G] **LU NR**
 - Responsible Party: Twp, **PB**
- Reduce parking requirements for developments in proximity to public transportation. [G] **LU NR** (Refer to LEED NC 2.2 SS Credit 4.4 Alternative Transportation-Parking Capacity)
 - Responsible Party: PB
- Provide incentives or opportunities for structured parking rather than surface parking. [G] **LU NR**
 - Responsible Party: PB
- Reduce frontage requirements in residential areas to reduce road length. [G] **LU NR**
 - Responsible Party: PB

Strategy 2:

Employ Low Impact Development technologies and use alternative surfaces and nonstructural techniques to reduce imperviousness and promote infiltration, thereby reducing pollutant loadings and increasing ground water recharge.

Proposed Actions:

EVALUATE:

- Provide incentives and guidance for local businesses and residents to use green roof technology. [G] NR (See RC 4.2 under *Green Roofs* for more information)
 - Responsible Party: EC, PB

- Encourage use of grid pavers and/or porous pavement in retail and private driveways and parking lots. [G] NR (See RC 4.4 under *Grid Pavers/Porous Pavement* for more information. Refer also to LEED NC 2.2 SS Credit 6.1 and 6.2 Stormwater Design)
 - Responsible Party: Twp. Engineer

- Promote use of stormwater best management practices such as rain gardens, vegetated swales, and rainwater recycling by providing guidelines and incentives for developers and residents. [G] NR (See RC 4.4 under *Stormwater Best Management Practices* for more information. Refer also to LEED NC 2.2 SS Credit 6.1 and 6.2 Stormwater Design and WE Credits 1-3)
 - Responsible Party: Twp. Engineer

- Provide guidance and encourage design of integrated natural and mechanical treatment systems such as constructed wetlands, vegetated filters, and open channels to treat stormwater runoff among developers and residents. [G] NR (See RC 4.4 under *Stormwater Best Management Practices* for more information)
 - Responsible Party: Twp. Engineer

Strategy 3:

Prevent pollutants from reaching waterways by regulating the source of local water pollutants.

Proposed Actions:

ACT:

- Continue to implement the Township's Stormwater Management Plan. [G] NR
 - Responsible Party: Twp. Eng

- Adopt and strictly enforce pet curbing ordinances. [G] NR
 - Responsible Party: Twp.

- Encourage residents and community volunteers to participate in community clean-up activities including programs offered by local environmental groups. [G] NR
 - Responsible Party: EC

EVALUATE:

- Initiate a goose management program. [G] NR (See RC 4.4 under *Goose Management Programs* for more information)
 - Responsible Party: EC

- Restrict residential use of pesticides and (chemical) fertilizers and encourage Integrated Pest Management (IPM) techniques. [G] NR (See RC 4.5 under *Integrate Pest Management (IPM)* for more information. Refer to LEED NC 2.2 SS Credit 5.2 Site Development- Protect or Restore Habitat)
 - Responsible Party: EC

- Develop township standards for organic yard care and sustainable landscape construction. [G] NR (See RC 4.5 under *Organic Yard Care* for more information)
 - Responsible Party: EC

4.4.6 INDICATOR: Annual Water Consumption **NR**
(Township-wide water consumption per capita)

Target: No increase in Township-wide potable water consumption from 2006 levels

Status: 2006 potable water consumption and population must be determined to establish the benchmark for this indicator. In addition, levels from several previous years should be examined to provide some relativity to this target.

4.4.7 INDICATOR: Non-Potable Water Use **NR**

(Number/Percentage of businesses and residents that have put in place water-efficient technologies that recycle rain water and/or greywater (i.e., domestic wastewater that does not contain human wastes such as tub, shower, or washing machine water) for non-potable uses such as landscape irrigation, toilets and urinal flushing and custodial uses (based on survey))

Target: Decreasing percentage of potable water use and increasing percentage of non-potable water use

Status: TBD

Strategy 1:

Reduce amount of water used for township-wide landscaping practices.

Proposed Actions:

ACT:

- Promote and provide guidelines for “rain gardens.” [G] **NR SS** (See RC 4.4 under *Stormwater Best Management Practices* and *Water Efficient Technologies* for more information. Refer also to LEED NC 2.2 SS Credit 6.1 and 6.2 Stormwater Design and WE Credits 1-3)
 - Responsible Party: Twp. Eng, EC
- Provide information and guidance to residents and local business owners on using a rainwater collection system (i.e., cisterns, underground tanks, ponds) to reduce or completely eliminate the amount of potable water used for irrigation. [G] **NR** (See RC 4.4 under *Stormwater Best Management Practices* for more information. Refer also to LEED NC 2.2 SS Credit 6.1 and 6.2 Stormwater Design and WE Credit 1 Water Efficient Landscaping)
 - Responsible Party: EC

ACT cont.:

- Provide information and guidance to residents and local business owners on rain water collection and landscaping for water conservation (e.g., native species; xeriscaping [low-water landscaping]). [G] LU NR SS (See RC 4.4 under *Water Efficient Technologies* for more information. Refer also to LEED NC 2.2 WE Credits 1 Water Efficient Landscaping)
 - Responsible Party: EC

- Provide information and guidance to residents and local business owners on reusing stormwater volumes generated for non-potable uses such as landscape irrigation, toilets and urinal flushing and custodial uses. [G] NR SS (See RC 4.4 under *Water Efficient Technologies* for more information. Refer also to LEED NC 2.2 WE Credits 1-3)
 - Responsible Party: EC, PB, Twp.

- Provide information and guidance to residents and local business owners on using high-efficiency irrigation strategies such as drip, micro misters, and sub-surface irrigation systems and smart irrigation controllers such as moisture sensor, rain shut-offs, and weather-based evapotranspiration controllers where applicable. [G] NR SS (See RC 4.4 under *Water Efficient Technologies* for more information. Refer also to LEED NC 2.2 WE Credits 1 Water Efficient Landscaping)
 - Responsible Party: Twp., EC

Strategy 2:

Reduce residential and commercial water consumption through water-efficient technologies and behavior change.

Proposed Actions:

EVALUATE:

- Organize a “Stop the Leak Campaign”. [G] NR SS
 - Responsible Party: EC

- Partner with local hardware stores to offer water efficiency workshops and water-efficiency home packages that include tips on reducing individual water use and coupons for low-flow shower heads and faucets. [G] NR SS
 - Responsible Party: EC

CONTEMPLATE:

- Encourage developers/builders to specify high-efficiency fixtures and dry fixtures such as composting toilet systems and non-water using urinals to reduce wastewater volumes during new construction and renovation projects. [G] NR (Refer to LEED NC 2.2 WE Credits 2-3 Innovative Wastewater Technologies)
 - Responsible Party: EC

4.5 OBJECTIVE: Develop and implement efforts that maintain and expand the community’s biodiversity and foster protection or expansion of native habitat for flora and fauna

4.5.1 INDICATOR: High quality species habitats **NR LU**
(Acreage of existing vegetative habitats within West Windsor Township)

Targets:

- Achieve a zero net-loss of lands classified as Rank 1 through Rank 5 Forest, Forested Wetlands, Emergent Wetlands, and Grasslands within the Township as depicted in the NJDEP Landscape Project <http://www.nj.gov/dep/fgw/ensp/landscape/index.htm>
- Achieve a zero net-loss of Greenbelt (important wildlife and migration corridors as depicted on the Township’s Greenbelt Map)
- Achieve a zero net-loss of any wetland, which includes areas not contained in the NJDEP Landscape Project data, as defined by the 1987 USEPA “Wetlands Identification and Delineation Manual.”

Status: TBD

Species Habitat	Area
Forest	
Forested Wetlands	
Emergent Wetlands	
Grasslands	
Greenbelt	
Wetlands (USEPA defined)	

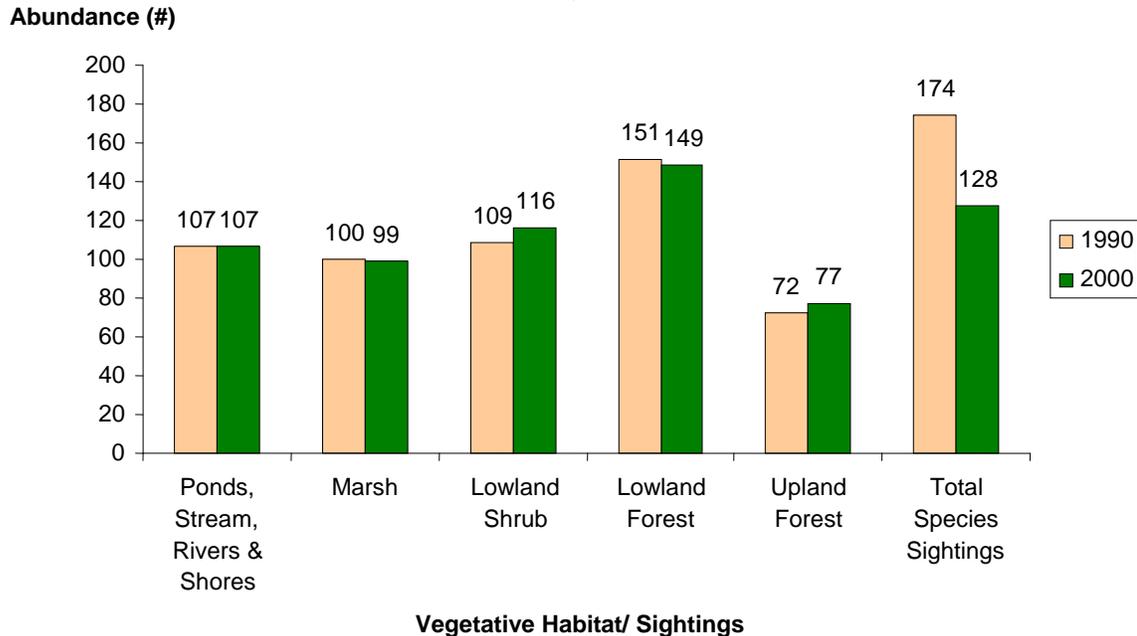
4.5.2 INDICATOR: Species Diversity and Quantity within Habitat **NR**
(Number of species in each of WW’s principal vegetative habitats)

Targets:

- Sustain or increase the number of species that are supported by each of the Township’s principal vegetative habitats.
- Increase the number of species sightings.

Status: The number of total species sightings in 2000 decreased by 13.5% compared to total species sightings in 1990.

Exhibit 18: Species Abundance in West Windsor Vegetative Habitats, 1990-2000



Source: West Windsor Township Wildlife Inventories, 1990 and 2000

Strategy 1: Improve biological diversity through conservation planning, native plantings, community stewardship and education.

Proposed Actions:

ACT:

- Manage public/private lands for wildlife conservation. Seek Community Wildlife Habitat Certification with the Nation Wildlife Federation.
 - [G] LU NR (See RC 4.5 under *Wildlife Habitats* for more information)
 - Responsible Party: EC, Shade Tree Commission, Friends of West Windsor Open Space
- Continue to enforce the municipal ordinance mandating the protection of existing trees. [G] NR
 - Responsible Party: Twp.

ACT cont:

- Continue to enforce the landscape ordinance requirements. [G] LU NR
 - Responsible Party: Twp.
- Continue to develop pocket parks throughout the municipality through minor land acquisition. [G] LU NR
 - Responsible Party: Twp.
- Develop and install appropriate interpretative signs and information brochures on biodiversity values at West Windsor conservation reserves. [G] LU NR SS
 - Responsible Party: EC, Shade Tree Commission, Field Operation Agency (FOA), Twp.
- Provide information and guidance on Integrated Pest Management Practices (IPM) on WWT website for local residents and businesses. [G] NR SS (See RC 4.5 under *Integrated Pest Management (IPM)* for more information)
 - Responsible Party: EC, Twp.

EVALUATE:

- Prepare a West Windsor Township flora and fauna brochure and distribute widely to schools, groups, tourist information centers, etc. [G] NR SS
 - Responsible Party: EC, Shade Tree Commission
- Investigate the support for a regular article to be included in newspapers promoting community awareness about biodiversity and flora. [G] NR SS
 - Responsible Party: EC, Shade Tree Commission
- Plant community (flower/butterfly/hummingbird) gardens [G] LU NR SS
 - Responsible Party: EC
- Prohibit plant materials listed as invasive or noxious weed species. [G] NR
 - Responsible Party: EC, Twp.
- Provide information and guidance to residents and local business owners on how to maintain lawns and landscaping in natural state with native trees, shrubs and wildflowers. [G] LU NR SS (See RC 4.5 under *Organic Yard Care* for more information)
 - Responsible Party: EC, Twp.
- Encourage and support regional research and monitoring programs regarding flora and fauna issues. [G] NR
 - Responsible Party: EC

CONTEMPLATE:

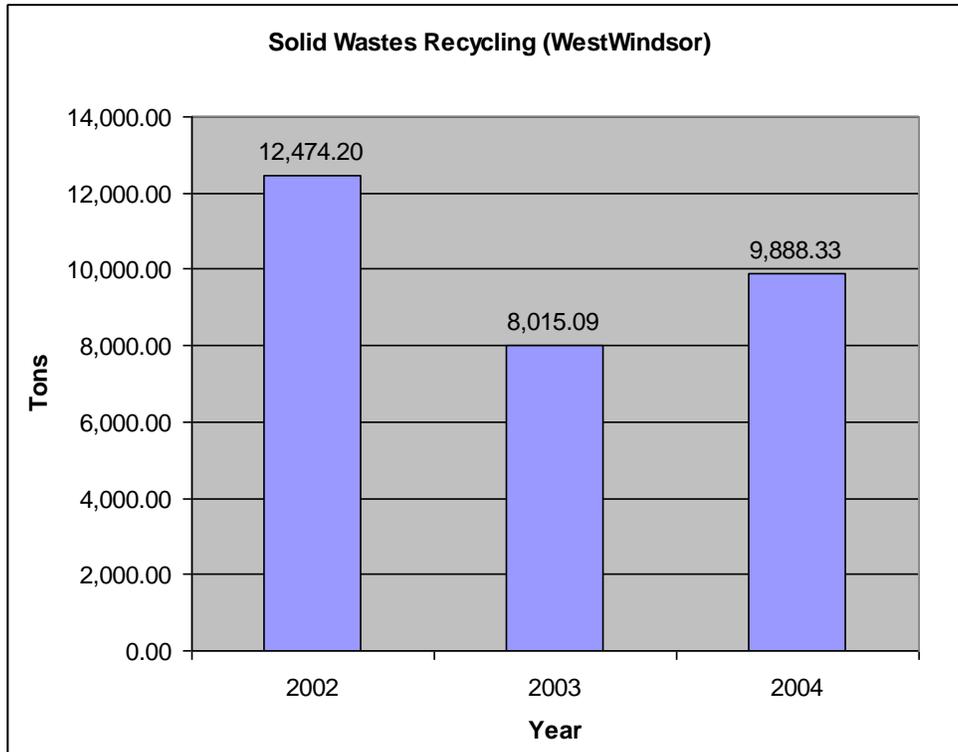
- Establish a native plant nursery. [G] NR
 - Responsible Party: Shade Tree Commission
- Make small grants and resources available for the development of community gardens in brownfields or underutilized parks. [G] LU NR SS
 - Responsible Party: _____
- Provide resources to community garden organizations such as free compost and native plant seeds. [G] NR SS
 - Responsible Party: EC, Department of Public Works (DPW)
- Establish an “adopt a block” program that allows small business owners to sponsor tree planting along a roadway in return for public recognition. [G] NR SS
 - Responsible Party: _____
- Encourage residents to replace existing lawns with native, natural plantings by offering incentives and providing information on the National Wildlife Federation’s Backyard Wildlife Habitat Program <http://www.nwf.org/backyard/> [G] NR SS
 - Responsible Party: _____
- Require that new construction adopt sustainable landscaping techniques. [G] LU NR
 - Responsible Party: _____
- Establish a significant tree register for individual exotic and native specimens and protect through planning regulation. [G] NR
 - Responsible Party: _____
- Establish an on-going monitoring program regarding indigenous flora and fauna and noxious and environmental weeds sources. [G] NR
 - Responsible Party: EC
- Encourage local schools to plant organic gardens. [G] LU NR (See RC 4.5 under *Organic School Gardens* for more information)
 - Responsible Party: _____

4.6 OBJECTIVE: Develop and implement the three “R’s” strategies for waste management: Reduce, Reuse and Recycle.

4.6.1 INDICATOR: West Windsor Township recycling rate **NR**
(WW recycling rate compared to itself over previous years.)

Target: Increase percentages of WW waste recycled to at least 35% and increase this percentage above 35% each year.

Status: WW recycled 9,888.33 tons in 2004 (as percentage of total Township municipal solid waste (MSW) needs to be calculated)



4.6.2 INDICATOR: WW municipal solid waste **NR**
(Daily average MSW in pounds per person generated, diverted and disposed;
annual tonnage of MSW generated, diverted and disposed)

Target:

- Average MSW generation rate at not more than 4.5 pounds per person per day.
- Reduce annual tonnage of MSW over previous years.

Status: TBD

4.6.3 INDICATOR: Household Hazardous Waste (HHW) **NR**
(Percentage of WW households that participate in these HHW collection day
programs (based on survey))

Target: Improve awareness

Status: TBD

Strategy 1: Provide incentives, convenient programs and easy to follow guidelines for local business and residents to reduce, reuse and recycle.

Proposed Actions:

ACT:

- Review other community recycling programs to determine if alternative programs could produce better results (e.g., commingle newsprint and other papers based on market conditions). [G] **NR**
 - Responsible Party: EC, Twp.
- Make it mandatory to maintain clearly marked, multiple recycling receptacles at private establishments such as restaurants, shops and local businesses. Clearly marked receptacles for trash should be available as well to discourage commingling of waste with recyclables. Use standardized shapes, colors, and signage to help promote public awareness and encourage proper use. [G] **NR**
 - Responsible Party: EC, Twp.

ACT cont:

- Continue to provide curbside recycling with regular and convenient pickup schedule and convenient containers. [G] NR
 - Responsible Party: Twp., County
- Publicize local material re-use programs such as Mercer County's MercerMax online community materials exchange program (<http://www.mercermax.org/aboutus.asp>) and Freecycle (http://groups.yahoo.com/group/Freecycle_Princeton/); establish a central designated site for residents to drop off unwanted materials. [G] NR SS
 - Responsible Party: EC, Twp.
- Publicize Mercer County's Bi-Annual Household Chemical Collection Day. Provide residents with information on "How to Detox Your Home." [G] NR SS (See RC 4.2 under *Green Cleaning* for more information)
 - Responsible Party: EC, Twp., County

EVALUATE:

- Provide mini-grants to promote recycling awareness. Small grants (\$500-1500) can encourage schools, community groups or non-profits to develop innovative projects that promote source reduction, reuse, or recycling in the community. [G] NR SS
 - Responsible Party: EC, Twp., County
- Encourage developers/builders to recycle at least 50% of construction and demolition (C & D) waste from job sites. [G] NR (See RC 4.6 under *Recycling Programs & Resources* for more information) (Refer also to LEED NC 2.2 MR Credit 2.1 and 2.2 Construction Waste Management)
 - Responsible Party: EC, Twp., County
- Host a "where does your garbage go" tour? [G] NR SS
 - Responsible Party: EC, Twp., County
- Designate odd materials recycling collection days. [G] NR
 - Responsible Party: EC, Twp., County
- Host a community wide yard sale to reduce waste disposal. [G] SS NR
 - Responsible Party: EC, Twp.
- Established procedures to conduct a periodic waste composition review. [G] NR
 - Responsible Party: EC, Twp., County

EVALUATE cont:

- Maintain mandatory residential and commercial recycling. [G] NR
 - Responsible Party: EC, Twp., County
- Provide residents with information on ways to reduce waste and on how to be more environmentally-friendly consumers. [G] SS NR (See RC 4.6 under *Recycling Programs & Resources* for more information)
 - Responsible Party: EC, Twp.

4.6.4 INDICATOR: WW yard waste generated for processing NR
(Annual tonnage of WW yard waste hauled and processed)

Target: Reduce annual amount of WW yard waste hauled and processed by 20% the first year and 5% for the next 3 years for a total 35% reduction by 2012.

Status: TBD

4.6.5 INDICATOR: WW yard waste composted by homeowners NR
(Annual percentage/tonnage of WW yard waste that is diverted from hauling and processing to be composted)

Target: 50% of WW yard waste composted by 2010.

Status: TBD

Strategy 1: Provide resources and incentives for township-wide composting.

Proposed Actions:

ACT:

- Provide composting bins at low or no charge to residents and information on how to compost on Township website. [G] SS NR (See RC 4.6 under *Composting* for more information)
 - Responsible Party: EC, Twp.
- Raise awareness about leaf disposal requirements. [G] SS NR
 - Responsible Party: EC, Twp.

EVALUATE:

- Promote milling of trees to be removed from a property for use with construction or furnishings on site. [G] NR
 - Responsible Party: EC, Twp.
- Collect leaves / compost / sell back to residents. [G] SS NR
 - Responsible Party: EC, Twp.
- Establish a commercial food waste collection program. [G, B] SS NR (See RC 4.6 under *Recycling Programs & Resource* for more information)
 - Responsible Party: EC, Twp.

Strategies & Actions Refresher:

Actions are classified based on which sectors of the community would be directly involved:

B= Business Community

G= Municipal Government

I= Institutions (i.e., schools, religious groups, non-profit organizations)

R= Residential

Actions are classified based on stage of action implementation:

- ACT: (West Windsor has identified this action as easily accomplished, has committed to do this action, or is in the process of accomplishing this action)

- EVALUATE: (West Windsor will collect information and research the cost/benefits before taking action)

- CONTEMPLATE: (West Windsor will bank these ideas until the right resources and opportunities become available)

Actions are classified based on their linkages to other sustainability goals:

LU= Sustainable Land Use

SC= Sustainable Circulation

SS= Sustainable Society

NR= Sustainable Natural Resources

SG= Sustainable Government

Goal 5: Sustainable Government

5.1 OBJECTIVE: Develop and implement environmental initiatives that are resource efficient and cost-effective and that help to stabilize the municipal budget

5.1.1 INDICATOR: Recycled or Refurbished Street Furnishings **NR SG**
(Number/Percentage of street furnishings produced using recycled materials or refurbished in lieu of new purchases.)

Target: Increasing number/percentage each year in lieu of new purchases

Status: TBD

5.1.2 INDICATOR: Recycled Content Products **NR SG**
(Percentage of products purchased by Municipality that contain at least 30% post-consumer recycled content and that are cost competitive) (See RC 5.1 under *EPP- Rutgers EPP Program* for more information)

Target: Increasing percentage each year

Status:

Strategy 1:

Implement an Environmentally Preferable (i.e., Green) Purchasing (EPP) policy.

Proposed Actions:

ACT:

- Complete an internal review of purchasing. [G] **NR SG**
 - Responsible Party: Twp, EC
- Increase specifications and implementation of street furnishings made from recycled materials. [G] **NR SG**
 - Responsible Party: Twp., EC

EVALUATE:

- Investigate the opportunity to implement bulk EPP among municipal departments and with other entities such as Rutgers University or other communities. [G] NR SG (See RC 5.1 under *EPP* for more information)
 - Responsible Party: EC

- Develop a required course in EPP for municipal staff. [G] NR SG
 - Responsible Party: Twp., EC

- Require that a set percentage of municipal wood purchases be certified by an independent body, like the Forest Stewardship Council (FSC), as sustainably harvested. [G] NR SG (See RC 5.1 under *EPP* for more information. Refer also to LEED NC 2.2 MR Credit 7 Certified Wood)
 - Responsible Party: Twp., EC

- Ensure that municipal produce and beverage purchases (e.g., coffee, tea, chocolate, cocoa and other commodities) support local sustainable practices. [G] NR SG
 - Responsible Party: Twp., EC

- Develop and post a WW guide to local businesses that sell organic and recycled products on Township website [G] NR SG (See RC 5.1 under *EPP* for more information)
 - Responsible Party: Twp., EC

- Establish municipal procurement guidelines directing that all applicable electrical equipment be ENERGY STAR-rated. [B] NR SG
 - Responsible Party: Twp., EC

5.2 OBJECTIVE: Develop and implement environmental services that improve the resource efficiency and cost-effectiveness of municipal services

5.2.1 INDICATOR: Township Grants, Certifications & Awards **NR SG**
(Maintain and expand Township certifications or awards by outside entities reflective of the Township’s actions, commitments and policies that promote and achieve environmental benefits and services to the population.)

Target: Expand Township’s collection of grants, certification and awards and maintain Township certification under the following programs:

- *Tree City USA* – National Arbor Day Foundation,
- *Green Town USA* – NJ Environmental Lobby
- *Energy Star, Energy Star Homes*
- *Environmental Education Fund*
- *Leadership in Energy & Environmental Design (LEED)*

Status: West Windsor Township has previously achieved the following awards and certifications:

- *Tree City USA* – National Arbor Day Foundation – Annual certification since 1979.
- *Environmental Achievement Award* -- ANJEC – Environmental Commission for Township Greenbelt -- 1991
- *Outstanding Planning Concept* -- APA – Recreation Preservation through TDR -- 1991
- *Chapter Award* -- NJASLA – Environmental Commission and Planning Board for environmental sensitivity and quality land development -- 1994
- *West Windsor Planning Board and Environmental Commission Outstanding Planning Project* – Mercer Co. Planning Board -- West Windsor Open Space Planning and Implementation -- 1995
- *National Award for Greenbelt* – Council for Environmental Sustainability – 1995
- *Governor’s Environmental Excellence Awards-* Abundant Open Space Category- 2000- Friends of West Windsor Open Space
- *Recycling Award* – Mercer County Improvement Authority – 2001
- *Green Town USA* – NJ Environmental Lobby and Environmental Education Fund – 2002

Strategy 1:

Research potential grants, certifications or awards that provide a benchmark or recognition for each new environmental conservation program or project implemented by the Township.

Proposed Actions:

ACT:

- Recruit businesses and organizations into the federal Energy Star program. Utilize pledges, peer exchanges, and public recognition programs to sustain involvement. [G,B,I] **SS NR SG** (See RC 4.2 under *Energy Efficiency Programs & Resources* for more information)
 - Responsible Party: EC, Twp.
- Launch an “energy efficiency challenge” campaign for community residents [G, B, I] **SS NR SG** (See RC 4.2 under *Energy Efficiency Programs & Resources* for more information)
 - Responsible Party: EC, Twp.
- Strive for LEED ND certification for West Windsor Township’s Princeton Junction Redevelopment Project and all planned/future Redevelopment Projects. [G] **LU SC SS NR SG** (See RC 5.1 under *Grants, Certification & Awards*)
 - Responsible Party: EC, Twp.
- Publicize every grant, certification or award achieved or maintained by the Township by the following three means; a press release; posting of a plaques or certificate in the municipal building lobby; and posting an announcement on the Township web page. [G] **LU SC SS NR SG**
 - Responsible Party: EC, Twp.

EVALUATE:

- Facilitate the certification of Energy Star Homes by providing a listing of qualified certifiers, and by marketing the program to homeowners. [G] **SS NR SG** (See RC 4.2 under *Energy Efficiency Programs & Resources* for more information)
 - Responsible Party: EC, Twp.
- Offer a financial incentive to share the cost of the audit and certification with the homeowner, as well as facilitate the improvements necessary to earn the ENERGY STAR rating (e.g., by assisting homeowners with rebates). [G] **SS NR SG**
 - Responsible Party: EC, Twp.
- Offer incentives to foster solar photovoltaic installations in the community. [G] **NR SG**
 - Responsible Party: EC, Twp.

EVALUATE cont:

- Establish as a specific task, for each Township environmental conservation project, that research shall be conducted to discover potential grants, certifications or awards that provide a benchmark or recognition validating the benefits of the project.
[G] NR SG
 - Responsible Party: EC
- Achieve a minimum of LEED Certification on all newly constructed and major renovation projects. [G] LU SC SS NR SG (See RC 5.1 under *Grants, Certification & Awards*)
 - Responsible Party: Twp., EC
- Create a Township staff level position for a Sustainability Coordinator. (Conduct a cost/benefit analysis; examine experiences of other communities that have implemented this action; and explore sharing the position with other communities or entities that are implementing sustainability initiatives.)
[G] LU SC SS NR SG
 - Responsible Party: Twp., EC

CONTEMPLATE:

- Provide mini-grants to promote recycling awareness. Small grants (\$500-1500) can encourage schools, community groups or non-profits to develop innovative projects that promote source reduction, reuse, or recycling in the community. [G] NR SG SS
 - Responsible Party: Twp., EC
- Make small grants and resources available for the development of community gardens in brownfields or underutilized parks. [G] LU NR SG SS
 - Responsible Party: Twp., EC

5.2.2 INDICATOR: Green Cleaning Practices **NR SG**
(Number/Percentage of green cleaning products and other low- or non-toxic products used on behalf of Township)

Target: Increasing number/percentage each year

Status: TBD

Strategy 1:

Reduce human exposure to physical and chemical hazards and odors associated with cleaning products and pesticides through custodial operations that employ appropriate methods and low-toxicity or non-toxic cleaning products.

Proposed Actions:

ACT:

- Complete an internal review of purchasing. [G] **NR SG**
 - Responsible Party: Twp., EC
- Evaluate current municipal cleaning operations and phase out potentially hazardous procedures and products. [G] **NR SG**
 - Responsible Party: Twp., EC

EVALUATE:

- Provide green cleaning training and educational materials for municipal custodial staff. Require staff to pass green cleaning exam. [G] **NR SG** (See RC 5.2 under *Green Cleaning Practices* for more information)
 - Responsible Party: Twp., EC
- Mandate municipal departments to use Green Cleaning Practices. [G] **NR SG** (See RC 5.2 under *Green Cleaning Practices* for more information)
 - Responsible Party: Twp., EC

5.3 OBJECTIVE: Develop and implement strategies that reduce municipal fleet emissions and provide sustainable transportation options for municipal employees

5.3.1 INDICATOR: Municipal Fleet emissions SC NR SG
(Average grams per mile as estimated by EPA's Mobile Model
<http://www.epa.gov/otaq/mobile.htm>)

Target: Reductions over previous years

Status: TBD

5.3.2 INDICATOR: Alternative fuel vehicles (AFVs) SC NR SG
(Number/Percentage of AFVs in municipal fleet)

Target: AFVs make up 75% of township fleet or an increasing
(Number/Percentage of AFVs over previous years)

Status: TBD

5.3.3 INDICATOR: Local Employment of Municipal Staff SC SS NR SG
(Percentage of municipal employees who live in West Windsor. Distance
municipal employees travel to work.)

Target: Increasing number/percentage of municipal employees who live in or
near West Windsor Township and a decrease in the distance municipal
employees' travel to work.

Status: TBD

Strategy 1:

Reduce municipal government motor vehicle emissions through use of Alternative Fuel Vehicles (AFVs), incentives for parking, carpooling and alternative transportation, and education & promotion.

Proposed Actions:

ACT:

- Obtain bikes that are available for municipal employees to use to carry out their work. [G] SC NR SG
 - Responsible Party: Twp.
- Increase the number of municipal employees enrolled in Direct Deposit. [G] SC NR SG
 - Responsible Party: Twp.
- Publicize New Jersey's existing Anti-Idling Laws with signage and enforce with penalties for drivers of municipal vehicles and vehicles contracted to do work with the municipality. [G] SC NR SG
 - Responsible Party: Twp.
- Retire old and under-used municipal vehicles [G] SC NR SG
 - Responsible Party: Twp.
- Provide a program on driving and maintenance practices that reduce fuel use and emissions for employees who use township vehicles and for the community. [G] SC NR SG (See RC 4.1 under *Tips to Reduce Vehicle Emissions* for more information)
 - Responsible Party: Twp.

EVALUATE:

- Adopt a Township green fleet policy that incorporates energy efficiency criteria for acquiring municipal vehicles, including sizing of vehicles appropriate to their tasks and giving preferences to alternative fuels: ([ethanol](#), [natural gas](#), [propane](#), [hydrogen](#), biodiesel, [electricity](#), [methanol](#), and [p-series](#) fuels*) and hybrid vehicles where possible as well as promotion of using the smallest vehicle necessary for jobs (including township bikes or scooters). [G] SC NR SG (See RC 2.3 under *Green Fleets* and RC 2.3 under *Alternative & Clean Fuels* for more information)
**Note: P-Series Fuels are a family of renewable, non-petroleum, liquid fuels that can substitute for gasoline. They are a blend of 25 or so domestically produced ingredients.*
 - Responsible Party: Twp.

EVALUATE cont.

- Purchase AFVs and badge these to promote the Township's focus on sustainability. [G] SC NR SG
 - Responsible Party: Twp.
- Establish infrastructure for Alternative Fuel Vehicles (AFVs), including fueling stations and reserved spaces for Zero Emission Vehicles (ZEVs) and Super-Ultra Low-Emission Vehicles (SULEVs) in municipal garages and parking lots. [G,B] SC NR SG (Refer to LEED NC 2.2 SS Credit 4.3 Alternative Transportation- Low-Emission & Fuel-Efficient Vehicles)
 - Responsible Party: Twp.
- Encourage Princeton Junction police officers on bicycles. [G] SC NR SG
 - Responsible Party: Twp., EC
- Offer public access bike storage, changing rooms, and showers in municipal buildings. [G] SC NR SG (Refer to LEED NC 2.2 Alternative Transportation-Bicycle Storage & Changing Rooms)
 - Responsible Party: Twp., EC

CONTEMPLATE:

- Encourage car-pooling, van-pooling, and mass transit use by municipal employees by offering free services or incentives. [G] SC NR SG (Refer to LEED NC 2.2 Credit 4.4 Alternative Transportation- Parking Capacity)
 - Responsible Party: Twp., EC
- Encourage telecommuting/teleworking for municipal employees. [G] SC NR SG
 - Responsible Party: Twp., EC
- Use car sharing programs in lieu of a township fleet. [G] SC NR SG (See RC 2.1 under *Car Sharing Services* for more information)
 - Responsible Party: Twp., EC
- Promote staggered working hours to extend work start and work finishing times in order to extend traffic peak hours and to reduce traffic jams. [G, I, B] SC NR SG
 - Responsible Party: Twp., EC

CONTEMPLATE cont:

- Distribute information and encourage WWT business to provide workforce housing by participating in NJ HMFA's Employer-Assisted Housing Program. *Workforce housing includes single-family homes, townhouses, condominiums, starter homes, and apartments that are affordable to area workers.* [G] LU SC SS NR SG (See RC 1.2 under *Live/Work Programs & Incentives* for more information)
 - Responsible Party: Twp., EC

5.4 OBJECTIVE: Develop and implement energy initiatives that conserve energy and that encourage the use of cleaner energy sources and technologies which will help to stabilize the municipal budget through resource efficiency and oil independence.

5.4.1 INDICATOR: Government Electrical Energy Consumption **NR SG**
(Electrical energy used by municipal government per capita (Kwh/yr/ Population))

Target: A 7% reduction in electrical energy consumption for municipal facilities, below 1990 levels, by 2012.

The Township has pledged to strive for a reduction of GHG emissions as targeted in the Kyoto Protocol, which is 7% below 1990 levels by the year 2012. Although it is not clear that a 7% reduction in emissions directly corresponds to a 7% reduction in consumption per capita such a target will clearly achieve this Objective and result in significant benefits.

Status: 1990 electrical energy consumption and population must be determined to establish the benchmark for this indicator. In addition, a current benchmark should be established for this indicator

5.4.2 INDICATOR: Government Building Energy Use **NR SG**
(Building energy use (per square foot))

Target: A 15% reduction in Municipal building energy use (per square foot) from the baseline of 2002, by the year 2012.

Status: TBD

5.4.3 INDICATOR: LED Traffic lights **NR SG**
(Traffic lights installed/retrofitted using LED (percentage))

Target: Increasing percentage of total lights

Status: TBD

5.4.4 INDICATOR: Renewable Energy Use **NR SG**
(Public Facilities Using Renewable Energy (percentage))

Target: Increasing percentage of total energy use

Status: TBD

Strategy 1:

Review energy use at municipal facilities and assets.

Proposed Actions:

ACT:

- Perform an audit of energy consumption by the Township. The audit should include specific observations and recommendations regarding present practices and Facilities and Assets that could be modified to improve conservation or convert to renewable electrical energy sources. [G] **NR SG** (See RC 5.4 under *Energy Audits & Retrofits* for more information. Also refer to LEED NC 2.2 EA Prerequisite 1 Fundamental Commissioning of the Building Energy Systems)
 - Responsible Party: Twp., EC

EVALUATE:

- Include energy management responsibilities in Township Sustainability Coordinator's job description. [G] **NR SG**
 - Responsible Party: Twp., EC

Strategy 2: Based on results of energy audit, implement retrofits, conservation measures, and behavior change programs regarding the physical plant as well as operations and management of existing township facilities and assets.

Proposed Actions:

ACT:

- Replace incandescent traffic signals with light emitting diode (LED) lights. [G] **NR SG** (See RC 5.4 under *Energy Audits & Retrofits* for more information)
 - Responsible Party: Twp., EC
- Institute a "lights/computers out/off at night" policy. [G,B,I] **SS NR SG** (See RC 5.4 under *Energy Efficient Computing* for more information)
 - Responsible Party: Twp., EC
- Institute a "lights/computers out/off when not in use" policy. [G, B, I] **SS NR SG** (See RC 5.4 under *Energy Efficient Computing* for more information)
 - Responsible Party: Twp., EC

EVALUATE:

- Perform energy-efficient lighting retrofits for street lights, exit signs and office/task lighting. [G, B, I] NR SG (See RC 5.4 under *Energy Audits & Retrofits* for more information)
 - Responsible Party: Twp., EC
- Install building/office occupancy sensors. [G, B, I] NR SG
 - Responsible Party: Twp.
- Purchase only ENERGY STAR equipment and appliances for township use. Negotiate prices by purchasing in bulk where feasible. [G] NR SG
 - Responsible Party: Twp.
- Install energy-efficient vending machines. [G, B, I R] NR SG (See RC 5.4 under *Energy Audits & Retrofits* for more information)
 - Responsible Party: Twp.

CONTEMPLATE:

- Install energy-efficient co-generation power production facilities at Princeton Junction Redevelopment Project. [G, B, I] NR SG
 - Responsible Party: Twp.
- Launch an “energy efficiency challenge” campaign for municipal employees. [G, B, I] SS NR SG (See RC 4.2 under *Energy Efficiency Programs & Resources* for more information)
 - Responsible Party: Twp., EC

Strategy 3: Implement renewable electrical energy source systems for existing and new Township facilities and assets.

Proposed Actions:

EVALUATE:

- Establish a policy for integration of renewable electric energy systems into all new Facilities and Assets constructed or rehabilitated by the Township. In establishing this policy, specific targets for the percentage of renewable to non-renewable energy should be established. [G] NR SG (Refer to LEED NC 2.2 EA Credit 2 On-Site Renewable Energy)
- - Responsible Party: Twp., EC
- Purchase green tags/renewable energy certificates to offset municipal greenhouse gas emissions. [G,B,I] NR SG (Refer to LEED NC 2.2 EA Credit 6 Green Power)
 - Responsible Party: Twp., EC

CONTEMPLATE:

- Use Waste-to-Energy technology to generate electricity from landfill or wastewater methane or refuse. [G] NR SG
 - Responsible Party: Twp., EC

Strategy 4: Track and publicize Township electrical energy consumption reductions, including, to the extent practical, a correlation to cost and pollution reductions. Promote energy conservation initiatives among businesses, institutions and the general public.

Proposed Actions:

ACT:

- Provide information, resources and tools for residents and local businesses on energy conservation on Township Website. [G, B, I, R] **SS NR SG**
 - Responsible Party: Twp., EC

EVALUATE:

- Promote energy and climate change awareness through a regular appearance in one or more of the local newspapers. Possible ideas are: a) a regular (weekly, bi-monthly) column written by staff or a local energy/GHG expert, b) case studies of local homes and households that have reduced emissions by a large percent and success stories such as the house or household of the week.
[G, B, I, R] **SS NR SG**
 - Responsible Party: EC
- Distribute free energy efficiency starter kits to interested individuals and groups or wherever township staff is communicating with the public (farmers market, community meetings, etc.). The starter kit could be a collection of information and simple energy efficiency measures, such as CFLs, low flow showerheads (< 1.5 gpm), and faucet aerators, along with information on the actions residents can take and how to go about taking them (e.g. how to sign up for wind power, how to plant trees for electricity savings, or how to take advantage of and apply for energy star rebates). [G, B, I] **SS NR SG**
 - Responsible Party: EC, Twp.
- Hold informational workshops to raise awareness about the Energy Star business partnership programs and energy star homes program. [G, B, I] **SS NR SG**
 - Responsible Party: EC, Twp.
- Sponsor local contractor and facility managers to attend technical training workshops on energy efficiency. [G, B, I] **SS NR SG**
 - Responsible Party: EC, Twp.
- Contribute to existing list serves or newsletters and speak at routine meetings on energy efficiency issues. [G, B, I] **SS NR SG**
 - Responsible Party: EC, Twp.

EVALUATE cont.

- Offer one or two day trainings on energy efficiency best practices. Work with existing trade organizations to incorporate energy efficiency content into their materials. [G, B, I] **SS NR SG**
 - Responsible Party: EC, Twp.
- Review vocational curricula to promote renewable energy technologies and to develop programs to prepare students for employment in new energy-related fields. [G, I] **SS NR SG**
 - Responsible Party: EC, Twp., School Board, County College, Mercer County Technical School

CONTEMPLATE:

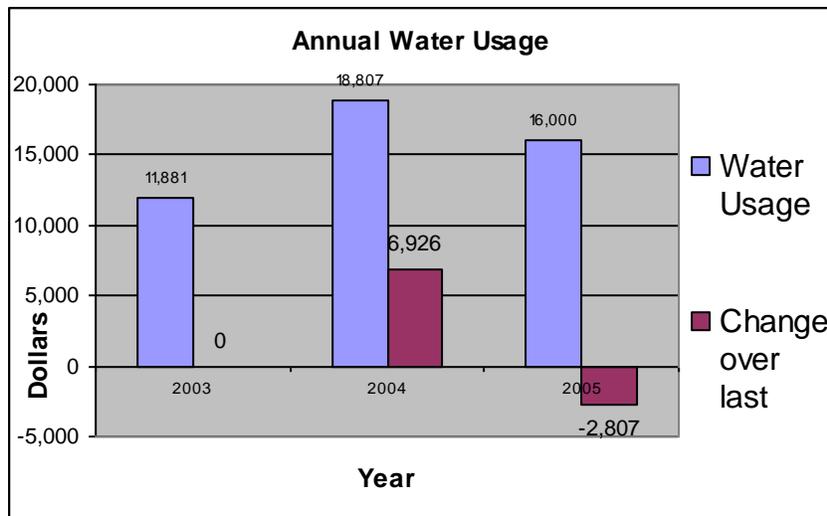
- Establish an “electric energy reduction meter” that is updated quarterly to reflect the progress toward achievement of this target. This “meter” could be posted on the Township web page and Municipal building message boards to publicize the reductions, savings and benefits. [G] **SS NR SG**
 - Responsible Party: EC
- Require building energy benchmarking at time-of-sale, financing or re-financing events or other time period with the requirement that buildings reach an energy efficiency standard and that ratings are disclosed to tenants, buyers, lenders, and the township. [G, B] **NR SG**
 - Responsible Party : _____

5.5 OBJECTIVE: Develop and implement water conservation initiatives that reduce potable water use and increase the percentage of water used from non-potable sources at all Municipal facilities and assets.

5.5.1 INDICATOR: Municipal Facility Potable- Water Use **NR SG**
(Annual water consumption at Municipal Facilities (Gallons/Dollars))

Target: Reduce water consumption by 10% by 2015.

Status: West Windsor’s municipal government spent \$16,000 on water in 2005, a 14.9% reduction in water usage compared to the previous year



5.5.2 INDICATOR: Municipal Non-potable Water Use **NR SG**
(Number/Percentage of municipal facilities and assets that have put in place water-efficient technologies where applicable that recycle rain water and/or greywater for non-potable uses such as landscape irrigation, toilets and urinal flushing and custodial uses)

Target: Decreasing percentage of potable water use and increase in the percentage of water from non-potable sources.

Status: TBD

Strategy 1:

Review potable water consumption at all Municipal facilities and assets.

Proposed Actions:

ACT:

- Perform an audit of potable water consumption by the municipal government facilities and services. The audit should include specific recommendations regarding present operations, facilities and assets that could be modified to improve conservation or to convert potable water uses to non-potable or recycled sources. [G] NR SG
 - Responsible Party: Twp., EC

Strategy 2:

Based on results of water consumption audit, implement water system retrofits and conservation measures regarding the physical plant as well as operations and management of new and existing Township facilities and assets.

Proposed Actions:

ACT:

- Require rain sensors when new irrigation systems are installed on municipal land. [G] NR SG
 - Responsible Party: Twp., EC

EVALUATE:

- Establish a policy for integration of non-potable or recycled water systems into all new Facilities and Assets constructed or rehabilitated by the Township. In establishing this policy, specific targets for the percentage of alternative or non-potable water use should be established. [G] NR SG
 - Responsible Party: Twp., EC
- Landscape municipal land for water conservation (e.g., native species; xeriscaping) [G] NR SG (See RC 4.4 under *Stormwater Best Management Practices* and RC 4.5 under *Organic Yard Care* for more information. See also LEED NC 2.2 WE Credit 1 Water Efficient Landscaping)
 - Responsible Party: Twp., EC
- Reuse stormwater volumes generated by municipal facilities for non-potable uses such as landscape irrigation, toilets, and urinal flushing and custodial uses. [G] NR SG (See RC 4.4 under *Water Efficient Systems* for more information. Also, refer to LEED NC 2.2 WE Credits 2-3 Innovative Wastewater Technologies)
 - Responsible Party: Twp., EC

EVALUATE cont.

- Use high-efficiency irrigation strategies such as drip, micro misters, and sub-surface irrigation systems and smart irrigation controllers such as moisture sensor, rain shut-offs, and weather-based evapotranspiration controllers where applicable at all existing and new municipal properties. [G] NR SG
 - Responsible Party: Twp., EC
- Use a rainwater collection system (e.g., rain gardens, cisterns, underground tanks, ponds) to reduce or completely eliminate the amount of potable water used for irrigation at municipal properties. [G] NR SG (See RC 4.4 under *Stormwater Best Management Practices* for more information. Refer also, to LEED NC 2.2 SS Credit 6.1 and 6.2 Stormwater Design and WE Credit 1 Water Efficient Landscaping)
 - Responsible Party: Twp., EC
- Design onsite or municipal level waste water recovery for greywater (instead of treating wastewater to tertiary standards) and re-distribute for irrigation use at municipal facilities. [G] NR SG (Refer to LEED NC 2.2 WE Credit 1 Water Efficient Landscaping and WE Credits 2-3 Innovative Wastewater Technologies)
 - Responsible Party: Twp., EC
- Specify high-efficiency fixtures and dry fixtures such as composting toilet systems and non-water using urinals to reduce wastewater volumes during new municipal construction and renovation projects. [G] NR SG (Refer to LEED NC 2.2 WE Credits 2-3 Innovative Wastewater Technologies)
 - Responsible Party: Twp., EC

CONTEMPLATE:

- Reuse stormwater or greywater for sewage conveyance or on-site wastewater treatment systems such as biological nutrient removal systems, constructed wetlands, and high-efficiency filtration systems at municipal facilities. [G] NR SG
 - Responsible Party: Twp., EC

Strategy 5:

Track and publicize Township potable water consumption reductions, including, to the extent practical, a correlation to cost and pollution reductions.

Proposed Actions:

EVALUATE:

- Establish a “water consumption meter” that is updated annually to reflect the progress toward achievement of this target. This “meter” could be posted on the Township web page and Municipal building message boards to publicize the reductions, savings and benefits. [G] SS NR SG
 - Responsible Party: Twp., EC

5.6 OBJECTIVE: Design, operate, manage, and maintain municipal facilities and assets in a manner that preserves and enhances the quality of local natural resources.

5.6.1 INDICATOR: Regionally Appropriate Vegetation LU NR SG
(Percentage of new or replaced, non-turf publicly landscaped areas and non-recreation turf areas planted with native or regionally appropriate vegetation)

Target: Increasing percentage of available public land that is planted with regionally appropriate vegetation

Status: TBD

5.6.2 INDICATOR: Sustainable Landscaping Practices LU NR SG
(Percentage of Public Land Managed Using Integrated Pest Management)

Target: Increasing percentage of Public Land managed with IPM

Status:

Strategy 2:

Review existing Township facilities and assets to assess opportunities to protect and restore existing natural resources.

Proposed Actions:

ACT:

- Develop a simple one page Environmental Impact and Status Statement (EISS) to be utilized to quickly evaluate the anticipated impacts upon woodland, water quality, wildlife, air quality associated with Township facilities and assets. [G] LU NR SG
 - Responsible Party: Twp., EC

EVALUATE:

- Perform an audit of existing Township Facilities and Assets, using the EISS, regarding conditions and actions that are presently degrading natural resources. [G] LU NR SG
 - Responsible Party: Twp., EC

EVALUATE cont.

- Include with the annual report by the Environmental Commission an analysis of the Commission's findings regarding EISS evaluations. The consultants hired to perform an audit should be commissioned to create the process and digital document to implement this action. Upon establishment, an Environmental Commission member, advisor, or a Township staff member should be charged as the monitor and updater of this data on a quarterly basis. [G] LU NR SG
 - Responsible Party: Twp., EC

Strategy 3:

Develop programs, policies and projects to mitigate impacts upon natural resources associated with the design, operation, management, maintenance and expansion of Township facilities and assets. (i.e., Woodland, Wildlife, Greenbelt, Air Quality, Water Quality, Noise, Glare and Odor shall be included.)

Proposed Actions:

ACT:

- Require that all municipal lands adopt sustainable landscaping techniques and Integrated Pest Management (IPM) practices. [G] LU NR SG (See RC 4.5 under *Integrate Pest Management (IPM)* and RC 4.5 under *Organic Yard Care* for more information)
 - Responsible Party: Twp., EC
- Maintain clearly marked, multiple recycling receptacles at municipal sites and throughout town, on sidewalks, pedestrian malls, and parks. Clearly marked receptacles for trash should be available as well to discourage commingling of waste with recyclables. Use standardized shapes, colors, and signage to help promote public awareness and encourage proper use. [G] NR SG
 - Responsible Party: Twp.

EVALUATE:

- Require use of grid pavers or porous pavement in municipal parking areas. [G] NR SG (See RC 4.4 under *Grid Pavers/Porous Pavement* for more information. Refer also to LEED NC 2.2 SS Credit 6.1 and 6.2 Stormwater Design)
 - Responsible Party: Twp.
- Require that a set percentage of construction and demolition (C & D) waste is recycled at all municipal construction sites. [G] NR SG (See RC 4.6 under *Recycling Programs & Resources* for more information) (Refer to LEED NC 2.2 MR Credit 2 Construction Waste Management)
 - Responsible Party: Twp., EC

5.6.3 INDICATOR: Municipal Green Building Projects **NR SG**
(Number of “Green” Building initiatives, products or systems implemented at Township facilities.)

Target: Continual growth in “Green” building implementation at Township facilities. Percentage of municipal buildings (new construction and major renovations) that are LEED certified.

Status: It is assumed that no significant “Green” building initiatives or products are presently in place, for the purpose of this evaluation.

Strategy 1:

Consider green building technology for all new construction and major renovations of municipal facilities.

Proposed Actions:

EVALUATE:

- Develop green standards or adopt LEED standards for renovation and new construction of all Township-owned properties (including appropriate consideration of aesthetics, design opportunities and community standards). [G] **NR SG**
 - Responsible Party: Twp., EC
- Require that green roofs be considered in new construction or major renovations of township buildings. [G,B,I] **NR SG** (See 4.2 under *Green Roofs* for more information)
 - Responsible Party: Twp., EC
- Incorporate LEED standards for reflectance and shading in all Township and private parking lots and in new construction and major renovations. [G,B,I,R] **NR SG** (Refer to LEED ND 2.2 SS Credit 7 Heat Island Effect)
 - Responsible Party: Twp., EC
- Provide developers, citizens, and township staff with information to assist them in applying LEED standards. [G] **SS NR SG SS**
 - Responsible Party: Twp., EC
- Encourage/Sponsor township staff to become LEED Accredited Professionals [G] **SS NR SG**
 - Responsible Party: Twp., EC

Strategy 3:

Track and publicize Township “green” building initiatives, by category.

Proposed Actions:

ACT:

- Engage community in municipal green building projects by providing information on the building process, from groundbreaking to completion via the website, photographs, documentaries, and stories on local news and radio stations and in local newspapers. [G] SS NR SG
 - Responsible Party: Twp., EC

EVALUATE:

- Establish a “green building meter” that is updated annually to track the progress toward achievement of the “green” building target. This “meter” could be posted on the Township web page and Municipal building message boards to publicize the reductions, savings and benefits. [G] SS NR SG
 - Responsible Party: Twp., EC