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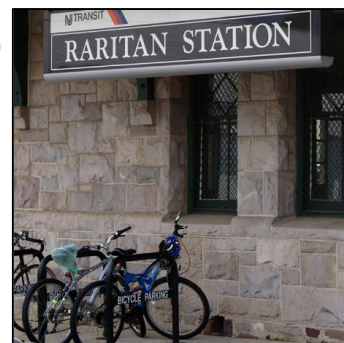
## Raritan Borough Environmental Commission

# SUSTAINABLE COMMUNITY PLAN

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*August\_\_\_\_, 2011*

**Borough of Raritan**  
Somerset County, New Jersey





## Raritan Borough Environmental Commission

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## I. Introduction

The generally accepted definition of “sustainability” is meeting the needs of the present without compromising the ability of future generations to meet their own needs. The concept of sustainability extends to all facets of community life with a particular focus on environmental stewardship, economic growth and social responsibility. The Raritan Borough Environmental Commission has prepared this plan in an effort to develop common goals and build support within the Borough government and the community for a sustainable agenda that will strive to use resources more efficiently, promote smart economic development, improve the environment, and lay the groundwork for investments that can have an impact on the overall sustainability and quality of life of the Borough.

There is no shortage of plans and studies at the local and regional levels that speak to the concept of sustainability under the guise of land use, economic, transportation or open space initiatives. The Sustainable Community Plan is an opportunity to organize those seemingly disparate plans under the umbrella of sustainability to form the basis of a coordinated action plan. As an understanding is developed of how sustainability is best implemented, master plan elements may be revisited to both complement and supplement the strategies in the Sustainable Community Plan. The objective is to make sustainability an integral component of all community policies and regulations.

Although Raritan has already undertaken or participated in several small initiatives aimed at enhancing sustainability, this plan can be considered the formal beginning of Raritan’s sustainability program. The Sustainable Community Plan will focus on attainable goals with an emphasis on education and awareness to build support for longer term and more ambitious initiatives. The Environmental Commission also anticipates that this plan will help lay the groundwork for the Borough’s participation in the Sustainable Jersey program and prioritizes Sustainable Jersey actions steps among the short term green strategies.



The Sustainable Community Plan contains three major sections:

- A review of current planning policies as they relate to sustainability;
- An overview of the Borough’s physical landscape; and
- A set of goals and actions for increasing sustainability.





## II. Planning Context

The Sustainable Community Plan was prepared within a universe of existing local, county and regional goals that relate to sustainability. This chapter provides a snapshot of the most relevant goals, many of which are carried forward through this plan. This chapter also provides an overview of the Borough's physical landscape based on information in the Environmental Resource Inventory.

### A. Planning Goals

#### Municipal Plans

This section provides a composite list of the sustainability related goals found in the 2003 Master Plan, 2005 Economic Development Plan, 2008 Orlando Drive Study, and 2009 Draft Open Space & Recreation Plan.

1. Provide a balanced land use pattern that preserves neighborhoods.
2. Preserve, maintain and develop a comprehensive open space and recreation system that provides active and passive recreation opportunities for all age groups and ability levels.
3. Continue to work with Somerset County to expand the greenways program; increase connectivity between the Raritan River greenway, the downtown and neighborhoods.
4. Allow for a diversity of uses in close proximity to transit stops and encourage the creation of a transit village surrounding the railroad station.
5. Provide alternative means of vehicular and non-vehicular transportation and work with transit agencies to improve and increase service for Borough residents.
6. Revitalize the central business district and generally create a sustainable and diversified economy for the Borough, providing local job opportunities for its residents.
7. Preserve the Borough's community forest resource to improve air and water quality, reduce energy costs, increase property values, improve citizen health and beautify the Borough.
8. Preserve the Borough's natural resources to protect water quality, manage stormwater, reduce the potential for flood damage, protect endangered habitats, and provide open space.
9. Promote the redevelopment and reuse of obsolete buildings and sites.
10. Pursue shared services with other communities.

## County & Regional Plans

This section provides an overview of some recent county and regional planning efforts that also support the general concept of sustainability.

### 2006 REGIONAL CENTER STRATEGIC MASTER PLAN

The Regional Center Strategic Master Plan was prepared for the Regional Center Partnership (Bridgewater, Raritan and Somerville). The plan provided a vision and an implementation agenda for moving the center forward. Following is a selection of what might be considered sustainability related goals.

- Focus future growth and development into downtowns while maintaining the historic character, mix of uses, activities, pedestrian character and events that make downtown areas unique.
- Encourage redevelopment that will return underutilized land to productive use and strengthen the municipal tax base.
- Foster diverse business opportunities to strengthen the Regional Center economic base.
- Promote mixed-use redevelopment in train station areas to increase ridership and promote pedestrian access to stations.
- Connect neighborhoods to downtowns and other destinations through safe and attractive streets.
- Ensure mass transit services are sustained and expanded and encourage connections with pedestrian and bicycle facilities.
- Encourage coordination between land use and circulation system planning to maximize land use efficiency, increase opportunities for transit, reduce vehicular trips and minimize conflicts with pedestrians and non-motorized vehicular movements.
- Incorporate publicly accessible parks and open space into major redevelopment projects.
- Utilize open space and greenways to create pedestrian/bicycle community connections.
- Encourage improvements in environmental regulations such as storm water management techniques.
- Continue to pursue shared service agreements among the Regional Center municipalities and with other governmental bodies such as the county and school districts.
- Make historic preservation an integral part of regional planning and the local land development review process.

### 2009 PEDESTRIAN, BICYCLE & GREENWAYS SYSTEMS CONNECTION PLAN

Somerset County initiated the development of the Regional Center Pedestrian, Bicycle & Greenways Systems Connection Plan to create a more walkable and bicycle-friendly Regional Center while improving environmental quality. The plan's goals are to:

- Create a designated bicycle and pedestrian network that connects every neighborhood with key destinations.
- Establish a greenways network to improve and enhance environmental quality.
- Make community destinations, transit facilities and recreation facilities accessible and convenient for use by all types and skill levels of bicyclists and pedestrians.

- Eliminate barriers to walking and bicycling by providing safer access across roadways, railroads, and streams.
- Update land use polices and ordinances to maximize opportunities for bicycling and walking.

#### 2002 RARITAN BASIN WATERSHED MANAGEMENT PLAN

Raritan is located in the Raritan Basin, which encompasses 1,100 square miles of land that ultimately drain to the Raritan Bay through the Raritan River. To better manage the resources of the basin, The Raritan Basin Watershed Management Plan was developed by The New Jersey Water Supply Authority under a Memorandum of Agreement with the New Jersey Department of Environmental Protection.

The major changes contemplated in the Raritan River Basin include:

- Protection and preservation of lands that play a critical role in the protection of Raritan Basin water resources, including headwaters streams.
- Maintenance and restoration of ground water recharge to ensure sufficient supplies for dry weather stream flow and public use, and to minimize stormwater runoff.
- Improved control of stormwater through watershed-based management plans, improved site design techniques and attention to the impacts of stormwater on stream stability and flooding.
- Restoration of streams and riparian areas that have been physically damaged by harmful land use and stormwater management practices, and protection of high-quality streams and riparian areas.

#### 2009 SUSTAINABLE RARITAN RIVER ACTION PLAN

In early 2009, a group of environmentalists joined staff from Rutgers University to form the Raritan River Collaborative to craft an action agenda that meets the goals of the U.S. Clean Water Act, restoring and preserving New Jersey's Raritan River and its tributaries, including the Raritan Bay. The plan provides a number of action items or tasks organized under 10 "commitments."

1. Increase awareness and use of river access points and trails.
2. Upgrade current river access points and develop a plan for future recreational uses.
3. Protect and preserve habitat and biodiversity in the river ecosystem.
4. Adopt the 3rs: restore, rehabilitate & regenerate.
5. Maintain and manage preserved open spaces.
6. Remediate contaminated sites.
7. Prevent future pollution.
8. Significantly reduce stormwater runoff.
9. Promote restoration and protection plans to address local subwatersheds (HUC14).
10. Balance redevelopment to sustain ecological values in the Raritan River watershed.

## B. Physical Characteristics

### Land Use

Map 1 illustrates the generalized land use pattern in Raritan. As seen in Table II-1, residential is the largest single land use category at 39% of the parcel acreage. This is followed closely by industrial, which accounts for the large corporate facilities straddling Route 202. Residential and industrial are followed by the commercial, public/charitable/exempt, and vacant categories.

Table II-1  
Generalized Land Use

Existing Land Use Category	Parcel Acres	Percentage
Residential	440.60	40
Commercial	168.90	15
Industrial & Railroad	335.90	31
Public School	22.10	2
Public Property	75.21	7
Church, Charitable & Other Exempt	10.50	1
Private Vacant Land	42.65	4
Total	1,095.77	100

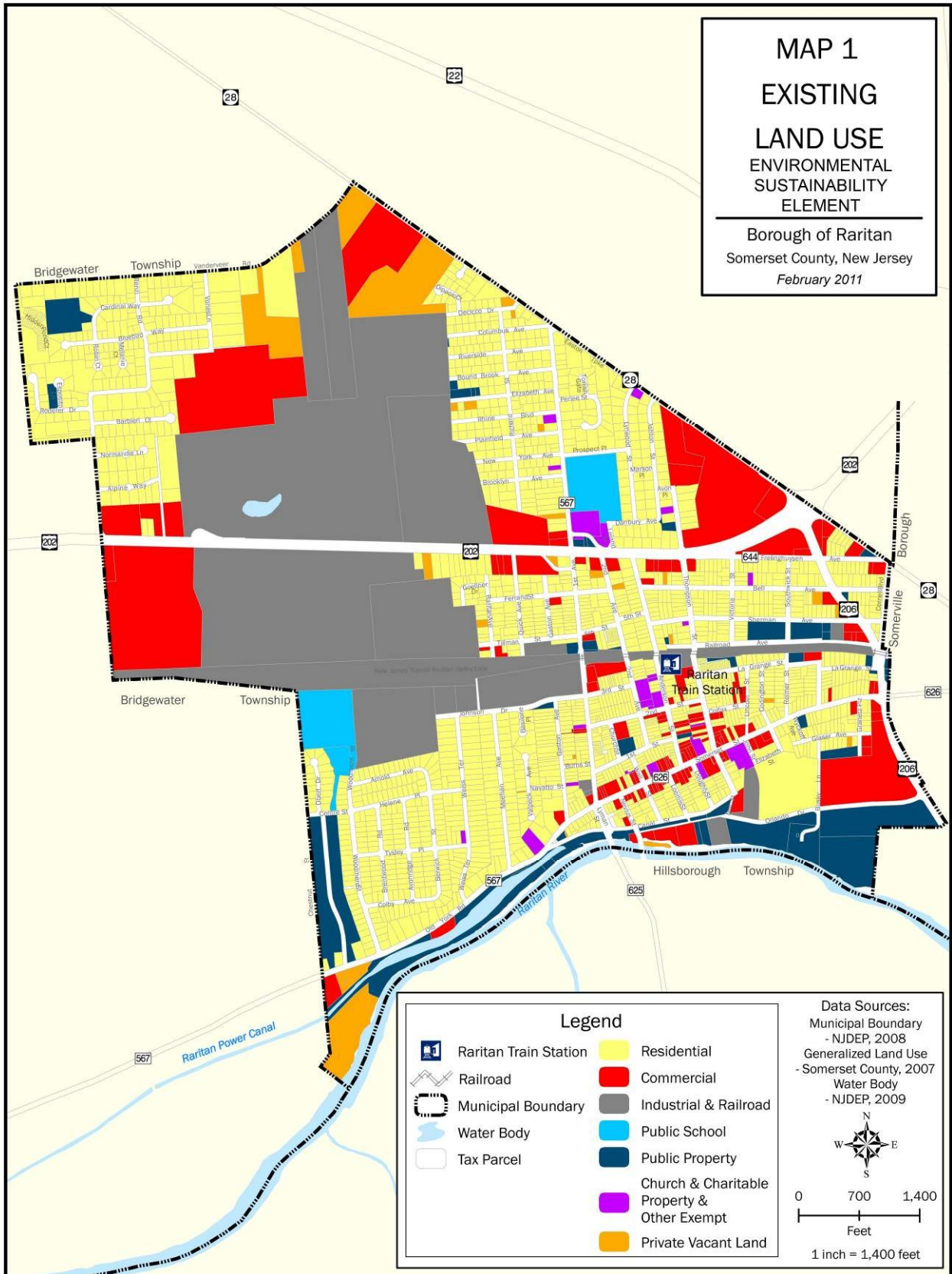
Zoning districts in the Borough generally reflect the land use. As illustrated on Map 2, there are 16 zoning districts and 2 overlay districts in Raritan. The districts permit a fairly wide range of uses including low to high density residential, and neighborhood commercial to corporate research facilities.

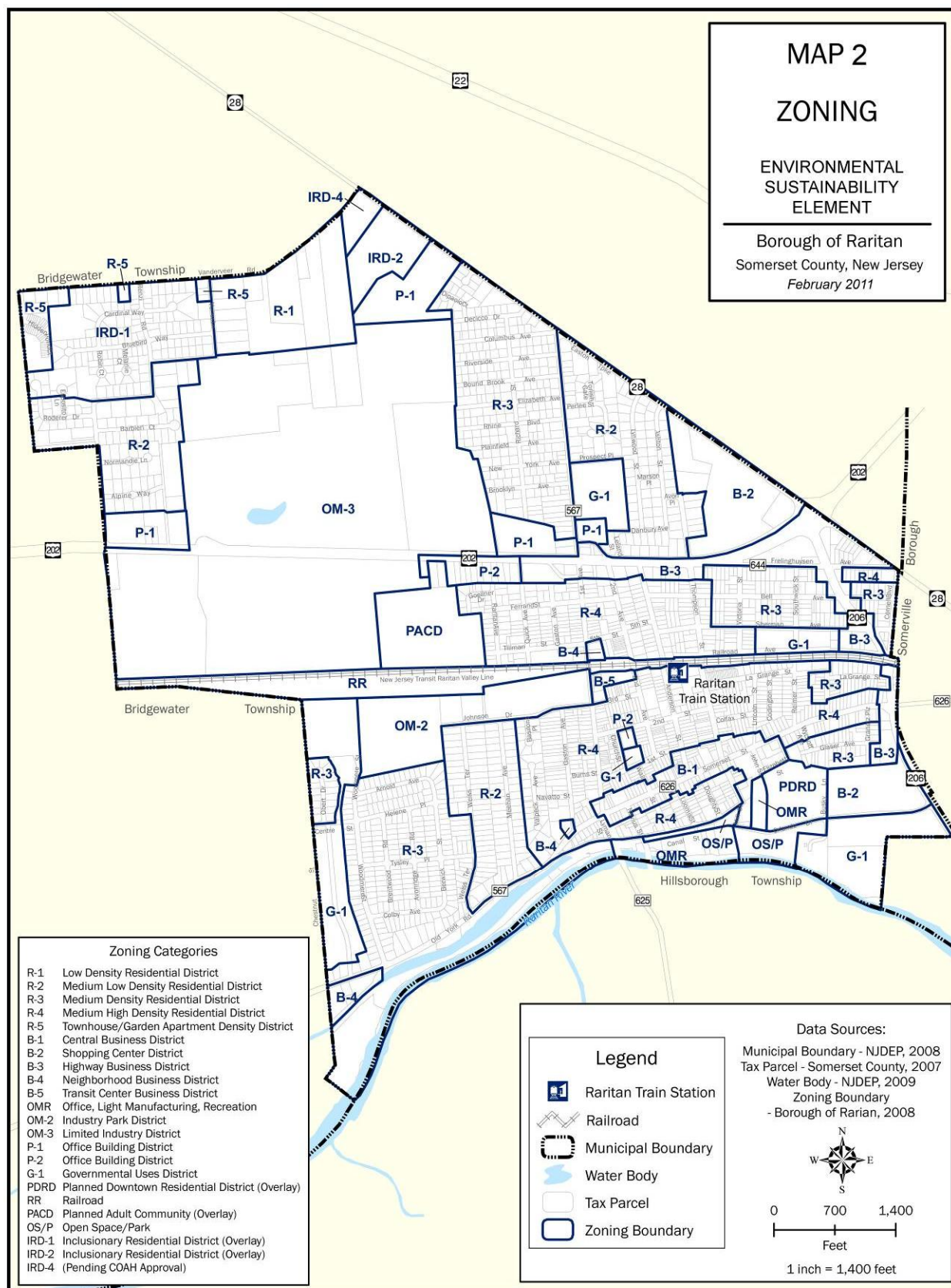
### Parks and Open Space

There are approximately 75 acres of open space and recreational land in the Borough (see Map 3). As seen in Table II-2 the majority of acreage is municipally owned. Somerset County owns approximately 22 acres of parks and open space in Raritan including the Basilone Monument, the First Avenue Tennis Courts, and Duke Island. There are no federal or state owned open space or recreation facilities in Raritan.

Table II-2  
Existing Parks and Recreation Summary

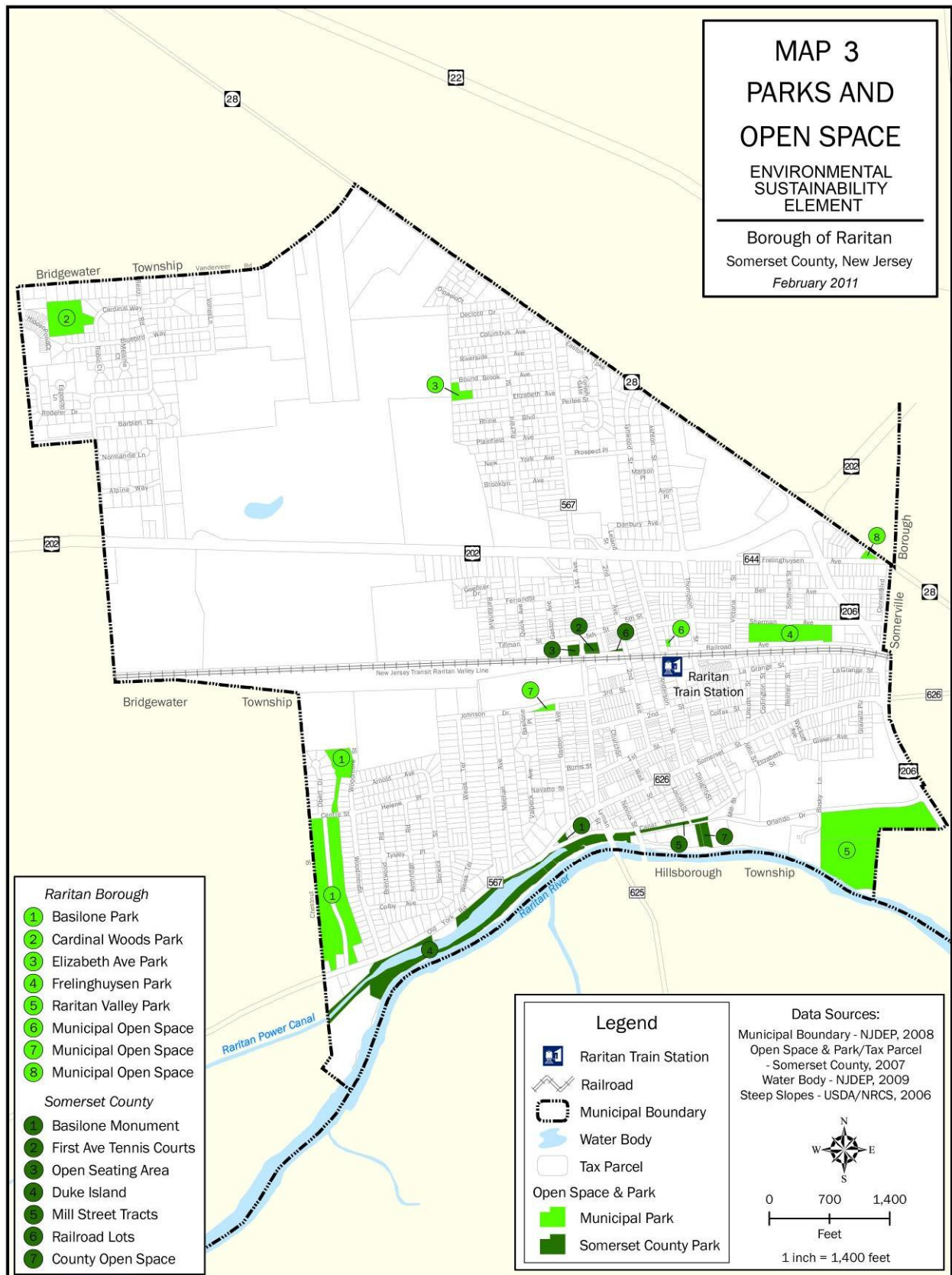
Jurisdiction	Acreage	% of Total
Federal	-0-	-0-
State	-0-	-0-
Somerset County	22	29%
Municipal	41	55%
School Properties	12	16%
Total	75	100%







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## Forests and Habitats

The majority of forested land in Raritan is found along the Raritan River and in the northern portion of the Borough, north of the Johnson & Johnson facility. Basilone Park and Duke Island also contain significant forest cover.

According to the NJDEP Landscape Project, Raritan contains critical habitat for state endangered species and state threatened species. State endangered habitat exists in the form of forested wetlands, forest, emergent wetlands, and bald eagle foraging grounds. These habitats are concentrated along the Raritan River and in an area north of Route 202.

## Wetlands, Floodplains & Major Water Bodies

As indicated on Map 4, wetlands in Raritan are not particularly extensive and can be found primarily along the Raritan River and several creeks. Map 5 illustrates the extent of the 100 and 500 year floodplains in Raritan as delineated by the Federal Emergency Management Agency (FEMA) in 1996. The area most impacted by the 100 year floodplain is in the southeastern corner of the Borough on either side of Orlando Drive.

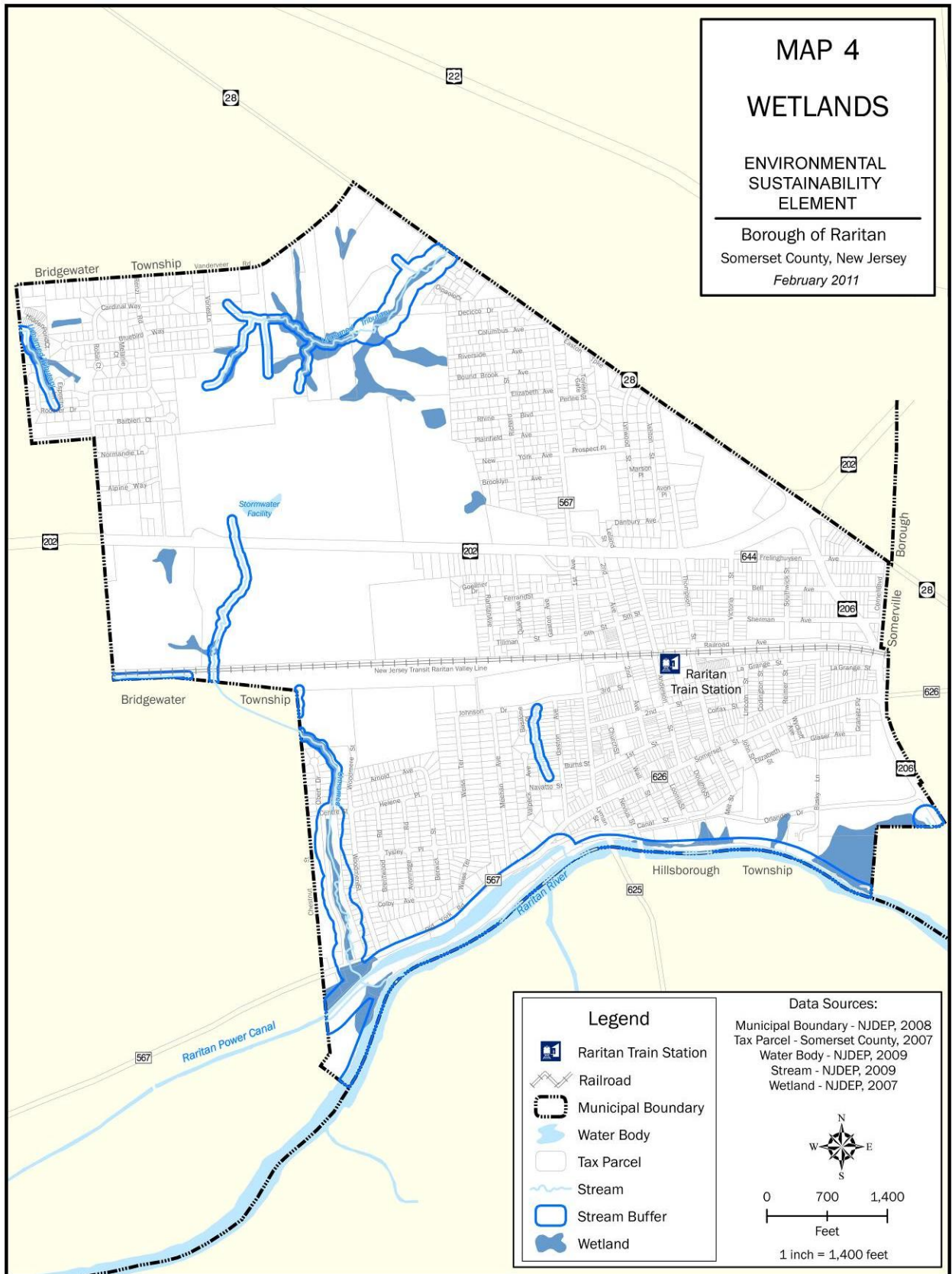
The dominant water feature in Raritan is the Raritan River, which is fed by several tributaries in the Borough. There are no Category One (C-1) waters mapped in Raritan Borough or in any surrounding municipalities.

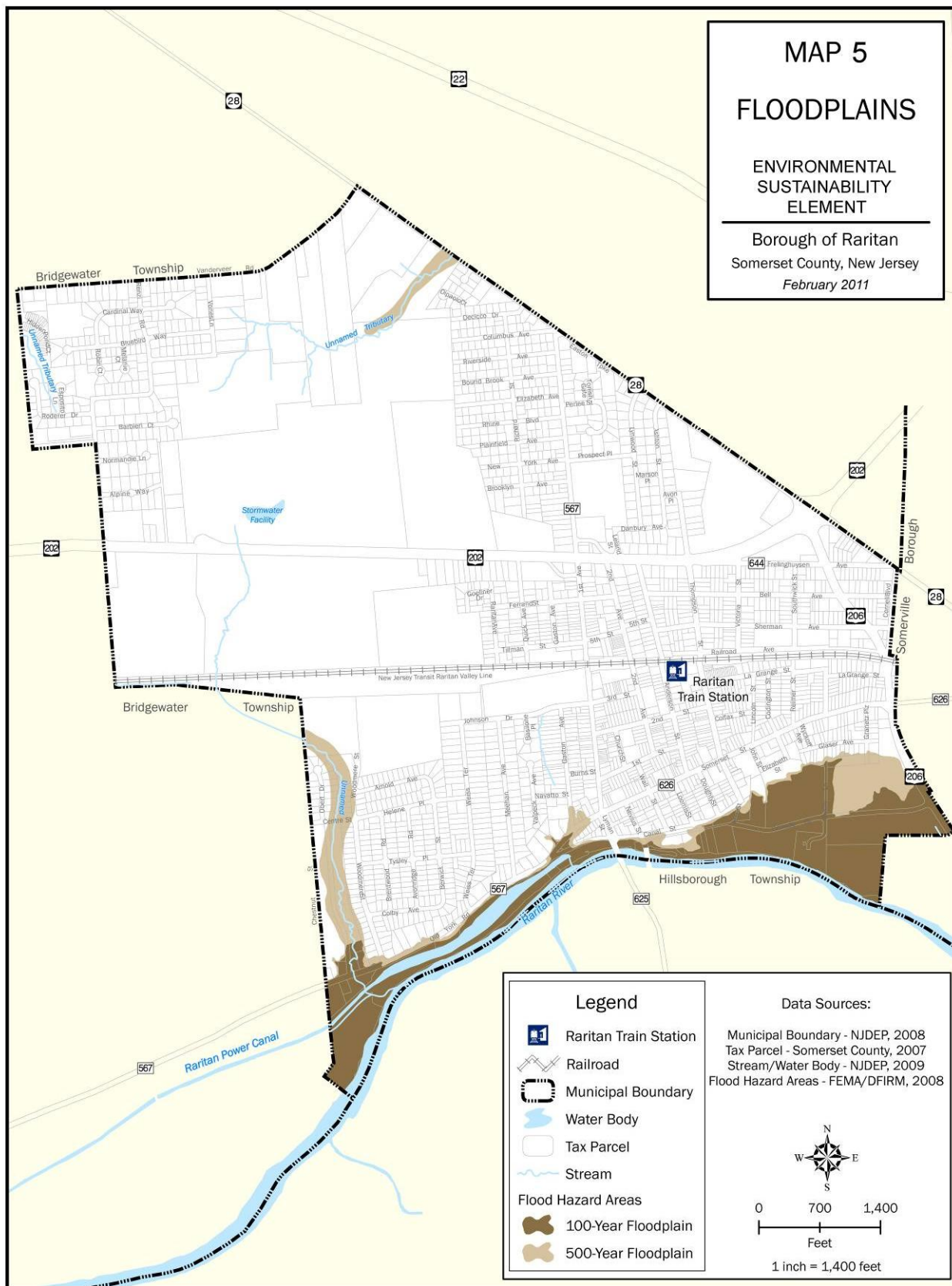
## Watershed Management Areas

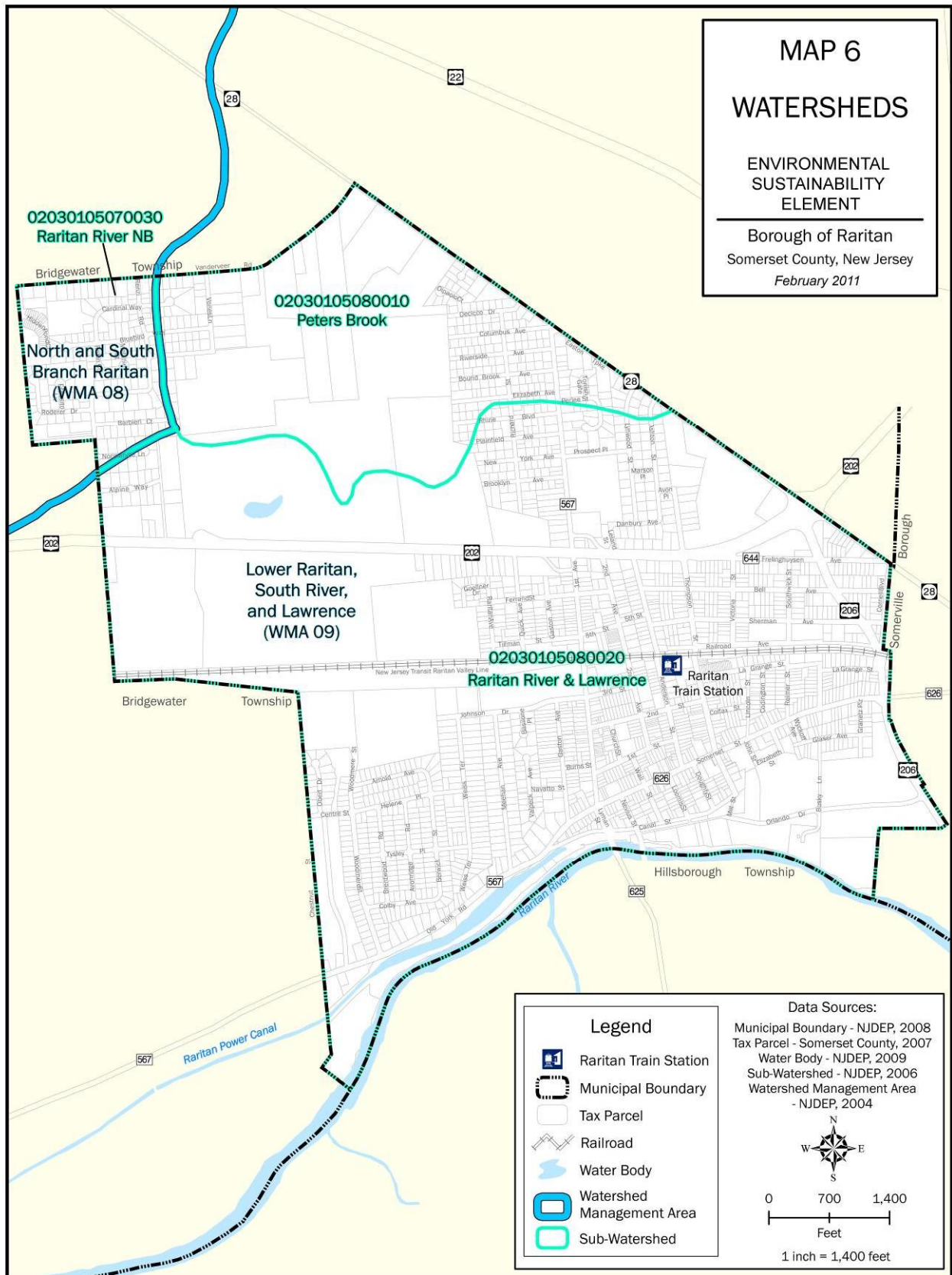
Watershed Management Areas were created by NJDEP and NJGS in 2000 to manage the State's water resources, and address water pollution and supply issues efficiently. As shown on Map 6, Raritan is primarily located in the *Lower Raritan, South River and Lawrence Watershed Management Area (WMA-9)*. WMA-9 extends from the Lower Raritan south to Matchponix Brook, and includes the main stem of the Raritan River, the South River and Lawrence Brook. The northwest corner of the Borough is located in the *North and South Branch Raritan Watershed Management Area (WMA-8)*. Raritan Borough is covered by three sub-watersheds - the Raritan River North Branch, Peter's Brook, and Raritan River & Lawrence (see Map 6).

Watershed Management Areas 8 and 9 are part of the larger Raritan Basin. The Raritan Basin is the largest river basin located entirely within the State of New Jersey encompassing 1,100 square miles of land that ultimately drain to the Raritan Bay through the Raritan River. The Raritan Basin is bounded by the Passaic River Basin to the north, by the Delaware River Basin to the west, by the Atlantic Coastal Basin to the South, and by the Hudson River Estuary to the northeast.











## Cultural Resources

There are four sites in Raritan listed on the State and/or National Registers of Historic Places (see Table II-3 and Map 7). There are also five “opinioned” assets in the Borough (see Table II-4 and Map 7). A SHPO Opinion is an opinion of eligibility issued by the State Historic Preservation Officer (SHPO). One of the SHPO opinioned sites has also received a Determination of Eligibility (DOE), a formal certification that a property is eligible for registration. There is also one “COE” asset in the Borough. A Certification of Eligibility is issued by the SHPO for properties not already listed on the New Jersey Register of Historic Places.

Table II-3  
State and National Historic Sites

Site Name & Inventory Number	Location	Designation
Gen. John Frelinghuysen House	Somerset St. and Wyckoff Ave.	NR:3/4/1971 SR: 2/1/1971
Raritan Bridge (Nevius St.)	Nevius St. over Raritan River	NR: 11/12/1992 SR: 9/11/1992
Raritan Railroad Station	Anderson and Thompson Streets	NR: 6/22/1984 SR:3/17/1984
Relief Hose Company No. 2 Engine House	16 Anderson St.	NR: 12/14/2000 SR:10/18/2000

*Source: New Jersey and National Registers of Historic Places*

Table II-4  
SHPO Opinions, DOE & COE

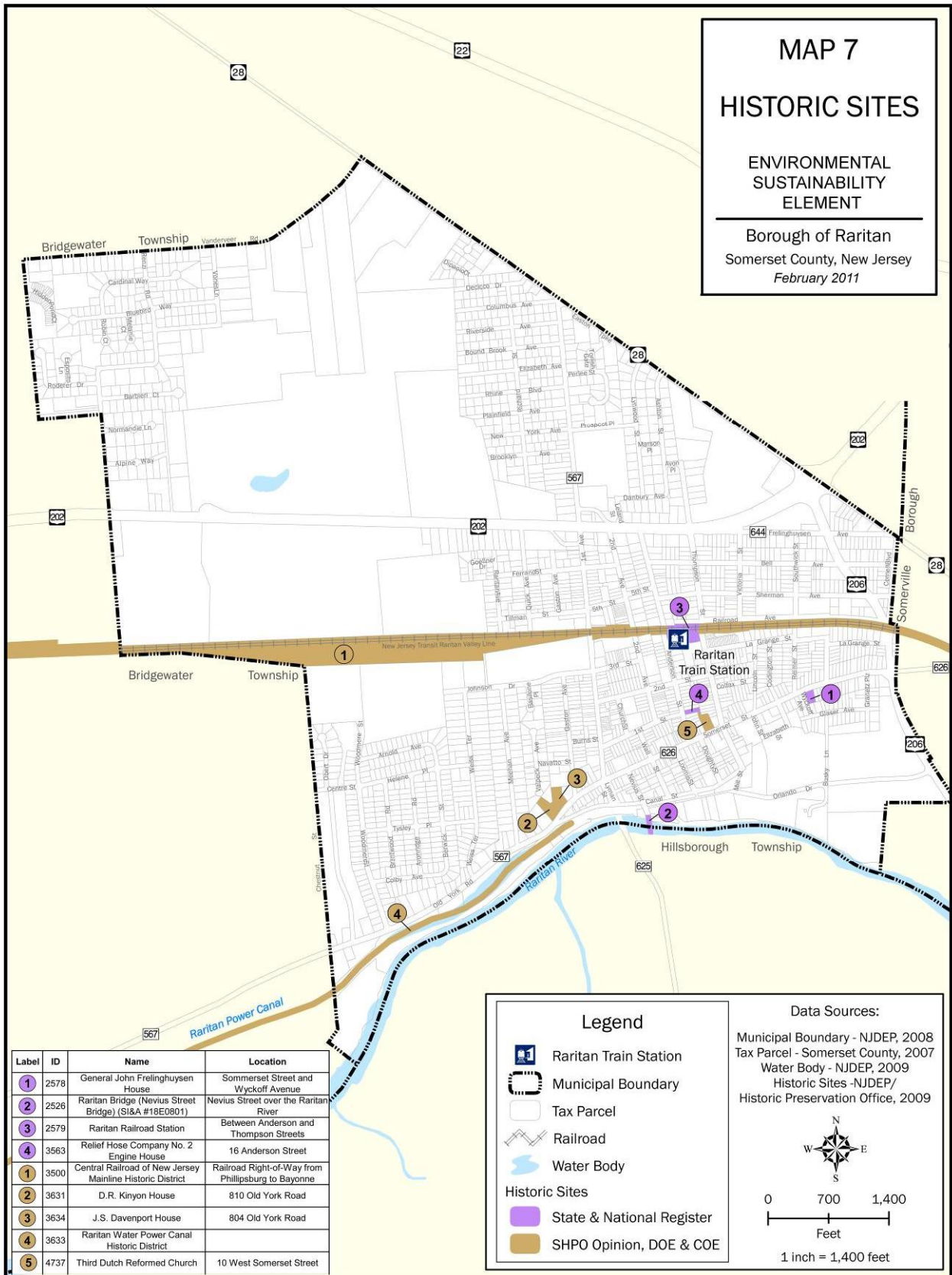
Site Name	Location	Designation
Central Railroad of NJ Main Line Corridor Historic District	Railroad ROW from Phillipsburg to Bayonne	SHPO Opinion: 7/19/1991 DOE: 11/30/1995
D.R. Kinyon house	810 Old York Road	SHPO Opinion: 8/14/2000
J.S. Davenport House	804 Old York Road	SHPO Opinion: 8/14/2000
Lyman St. Prehistoric archaeological site	NA	SHPO Opinion: 8/27/2001
Raritan Water Power Canal Historic District	--	SHPO Opinion: 8/27/2001
Third Dutch Reformed Church	10 West Somerset Street	COE: 8/30/2007

*Source: New Jersey and National Registers of Historic Places*

In addition to sites recognized by the SHPO, the Borough has recognized the following historically significant sites:

- The Basilone Monument.
- Veteran’s Memorial Plaque.
- Cornell Mansion-Middaugh Tavern on Glaser Avenue.
- The Shrine Chapel of the Blessed Sacrament, originally Saint Bernard's Church.

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## Infrastructure

### *Transportation*

Raritan Borough is situated at or near the convergence of several highways including Interstate 287, US 22, US 202, US 206 and NJ 28. Route 202 extends through the Borough in an east-west direction and provides access to I-287. Route 28 runs along the Borough's northeastern border with Bridgewater. The Raritan Station on NJ Transit's Raritan Valley Line is located on Thompson Street. The Raritan Valley Line provides direct commuter access to Penn Station in New York. Buses carry passengers to several points within New Jersey and north to New York City. NJ Transit provides bus line 884, from Somerville to Clinton as part of their "Wheels: Suburban Transportation Service" and "Ridewise" of Raritan Valley Transportation Management Association.

### *Water and Sewer Systems*

The public water system in Raritan is owned and maintained by NJ American Water. The sanitary sewer conveyance system is owned and maintained by the Borough. Sewerage is processed at the Somerset Raritan Valley Sewerage Authority (SRVSA) wastewater treatment plant.

### III. Action Plan

Raritan's physical landscape represents many of the compact small town qualities that make sustainable practices almost a matter of course. Raritan has, for the most part, been spared the inefficient use of land and infrastructure associated with suburban sprawl and provides relatively easy access to jobs, goods, services, transportation and recreation. The Sustainable Community Plan advocates the preservation and enhancement of those qualities, while at the same time mitigating some of the potentially harmful impacts of older development patterns such as industrial contamination, loss of green space, and stormwater management issues resulting from excessive impervious surfaces.

This Chapter presents a series of goal statements that form the basis of Raritan's sustainability program. The goals are organized around six general categories:

- A. Land Use
- B. Circulation
- C. Energy Conservation
- D. Resource Conservation/Stormwater Management
- E. Waste Reduction & Recycling
- F. Outreach & Education

The goals are followed by action steps that constitute the Borough's initial sustainability agenda. It is expected that additional action steps will be identified over time as the program progresses and matures.

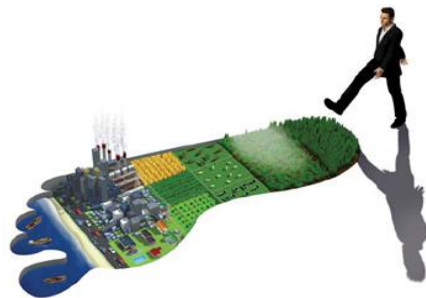
Sustainable solutions meet the "triple bottom line" by balancing environmental stewardship, economic growth and social responsibility.



The goal statements are derived from discussions with the Raritan Environmental Commission and previous local and county planning documents, as well as the Sustainable Jersey certification program and other local and national sustainability initiatives such as ICLEI (International Council for Local Environmental Initiatives). Some of the goals are more global and long-term than others but they are included here to maintain the larger context of sustainability within which localized actions will be taking place. The general intent is to encourage and support policies and actions that reduce the introduction of green house gasses by encouraging green building practices, promoting alternate means of transportation including walking, biking and public transit, and preserving natural resources.

While there is no shortage of green strategies that a town can pursue, this plan attempts to establish a reasonable agenda that is within reach. The intent is to provide some short term successes that will provide awareness and build support and momentum in the community for going forward with a more comprehensive and aggressive program.

The action steps laid out in this plan are not meant to be completed by any one committee or agency. Some will be within the purview of the Borough Council, others the Planning Board or Environmental Commission, and still others in partnership with other local and regional entities.



#### What is a Carbon Footprint?

The carbon footprint is a representation of the effect an individual or organization, has on the climate in terms of the total amount of greenhouse gases they produce (measured in units of carbon dioxide). Many actions generate carbon emissions. For example, when a person drives a car, each gallon of gasoline they burn produces carbon in the form of carbon dioxide. Depending on the fuel efficiency of the vehicle and the miles traveled, a gasoline-powered car can easily generate its own weight in carbon dioxide each year. In this case, a person can reduce their carbon footprint by driving a more efficient car, or driving less. They can also plant trees or help preserve forests to offset their emissions, since trees are a sink for carbon.

The total carbon footprint would account for the energy used to produce all the products and services a person or community consumes. Home energy use and transportation represent approximately 40% of all U.S. emissions.

Some environmental and government groups feature a broader concept than the carbon footprint – the ecological footprint, which is an estimate of how much land and water is needed to produce all the resources an individual consumes, and dispose of all the waste and pollution he or she generates.

*Source: NJ Global Warming website - [www.state.nj.us/globalwarming/home](http://www.state.nj.us/globalwarming/home)*

*Illustration: Berkeleyside*



**FOCUS AREA: LAND USE**

**GOAL STATEMENTS**

- ◆ Provide a healthy balance of land uses that preserves the residential character of the neighborhoods; maintains a balanced stock of quality housing; and provides convenient opportunities to acquire essential goods and services.
- ◆ Support and energize the central business district and create a sustainable and diversified economy for the Borough, providing local job opportunities for its residents.
- ◆ Reclaim and repurpose vacant, obsolete or contaminated land and buildings to improve community health and safety, increase environmental quality and provide economic benefits.
- ◆ Develop and maintain a comprehensive open space and recreation system that provides active and passive recreation opportunities for all age groups and ability levels.
- ◆ Shape the land use pattern and protect critical community resources by acquiring, conserving, and managing important landscapes.
- ◆ Locate and design public projects to minimize environmental impact, maximize financial efficiency, and reduce the community's carbon footprint.

**LAND USE ACTION STEPS**

- Review land development ordinances to ensure that smart growth and sustainability principals are supported.
- Evaluate & incorporate LEED ND guidelines into ordinances as appropriate.

LEED = Leadership in Energy & Environmental Design  
LEED ND = LEED for Neighborhood Development

- Incorporate publicly accessible parks and open space into major redevelopment projects.
- Adopt an Open Space & Recreation Plan.
- Update master plan community facilities element with an eye towards community linkages.
- Review, revise and implement 2005 Strategic Economic Plan.
- Continue streetscape and façade improvements along streets feeding into Somerset Street.
- Identify and map NJDEP Known Contaminated Sites, evaluate current zoning and determine appropriate end use.

LEED ND is a green neighborhood certification program that integrates the principles of smart growth, new urbanism, and green building into the first national program for neighborhood design. It is being developed by the U.S. Green Building Council (USGBC) in partnership with the Congress for the New Urbanism (CNU) and the Natural Resources Defense Council (NRDC).

The certification system promotes the location and design of neighborhoods that reduce vehicle miles traveled and communities where jobs and services are accessible by foot or public transit thereby promoting more efficient energy and water use.



## FOCUS AREA: CIRCULATION

### GOAL STATEMENTS

- ◆ Encourage coordination between land use and circulation system planning to maximize land use efficiency, increase opportunities for transit, reduce vehicular trips and minimize conflicts with pedestrians and non-motorized vehicular movements.
- ◆ Maximize circulation and mobility options for local and regional trips and link residential areas, commercial districts, and community facilities with an attractive free flowing circulation system.
- ◆ Reduce vehicle miles traveled and associated air pollutant emissions by enhancing the availability of, and access to, diverse transportation choices, including non-motorized modes and transit.

### CIRCULATION ACTION STEPS

- Allow for a diversity of uses in close proximity to transit stops and encourage transit oriented design principles (TOD) surrounding the railroad station.
- Work with NJ Transit to determine if there are opportunities for increased bus service.
- Create a designated bicycle and pedestrian network that connects neighborhoods with key destinations including community facilities, transit facilities and recreation facilities.
- Provide secure and accessible bicycle racks or lockers at community facilities, transit stops, parks and schools.
- Eliminate barriers to walking and bicycling by providing safer access across roadways, railroads, and streams.
- Require cross-access for pedestrians, bicycles and vehicles between commercial properties.
- Utilize public art, streetscape improvements, and trees to create attractive, interesting and safe walking environments.
- Survey local streets to identify opportunities for Class I, II or III bikeways based on ROW width, slopes, and traffic conditions.



Photo: RC Ped/Bike plan

Collingswood Borough has developed a unique bike-sharing program using unclaimed bicycles from police storage. Volunteers paint the bikes lime green and maintain them. The program operates like a library, enabling residents to borrow the bikes for short or extended periods. (Source: ANJEC & Collingswood websites)



- Adopt a complete streets policy.

Complete streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a complete street. Instituting a complete streets policy ensures that transportation agencies routinely design and operate the entire right of way to enable safe access for all users.

*Source: National Complete Streets Coalition*



City of Tacoma Complete Streets Guidelines



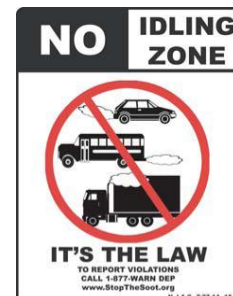
City of Tacoma Complete Streets Guidelines



- Utilize open space and greenways to create pedestrian/bicycle community connections.
- Encourage property owners to provide public easements for multi-use paths along scenic features and open space/recreation lands.
- Coordinate local efforts with the Regional Center greenways plan.



- Publicize and promote New Jersey's current regulations limiting engine idling for both diesel and gasoline vehicles to three minutes. (See "StopTheSoot.org")



## FOCUS AREA: ENERGY CONSERVATION

### GOAL STATEMENTS

- ◆ Achieve greenhouse gas emissions and air pollutant reductions in both municipal operations and the community at large.
- ◆ Encourage the use of alternative and renewable energy sources.

The New Jersey Global Warming Response Act adopted statewide limits on greenhouse gas emissions in July 2007. The law mandates the statewide reduction of greenhouse gas emissions to 1990 levels by 2020, approximately a 20 percent reduction, followed by a further reduction of emissions to 80 percent below 2006 levels by 2050.

### ENERGY CONSERVATION ACTION STEPS

- Expand participation in Somerset County's energy audit program to all public facilities.
- Conduct energy audit of all municipal buildings.
- Prepare & adopt standards for solar and wind energy facilities in residential and non-residential areas to remove unnecessary regulatory barriers while providing appropriate guidelines that are sensitive to location and context.
- Require landscaping plans to accommodate solar access as well as take advantage of passive heating and cooling opportunities resulting from proper placement and selection of tree types.



Roof-mounted solar panels – NJ Green Home Remodeling Guidelines



Ground mounted solar panels – J&J Consumer Products, Skillman, NJ

- Encourage energy conservation measures and LEED-type design features in all new and retrofitted buildings.
- Enact green building policies and ordinances.
- Encourage new public buildings and facilities to be constructed in accordance with the LEED Green Building Rating System or other comparable system.

LEED - Leadership in Energy & Environmental Design - is an internationally recognized green building certification system developed by the U.S. Green Building Council (USGBC), providing third-party verification that a building or community was designed and built using strategies aimed at improving performance in energy savings, water efficiency, CO2 emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts.

Green building techniques include energy efficient lighting, eco-friendly paints and finishes, reclaimed or reusable materials, green roofs, water saving fixtures, high-efficiency water heaters, energy star appliances, upgraded insulation, HVAC zone controls, rainwater collection & filtration.



- Evaluate site lighting requirements for opportunities to reduce required lighting while ensuring public safety.
- Establish a municipal green fleet program.

A "Green Fleet" minimizes negative impacts as well as operating costs by improving energy efficiency and reducing emissions through the use of alternative vehicles and fuels. Green fleets are developed by purchasing more fuel-efficient vehicles (cars, buses, and service vehicles), converting to cleaner fuels, training drivers to operate vehicles for maximum efficiency, downsizing to smaller vehicles, and reducing municipal use of motor vehicles. (Source: Sustainable Jersey)

- Promote awareness of the NJ CleanPower Choice Program.
- Promote awareness of New Jersey's Clean Energy Program.



New Jersey's Clean Energy Program (NJCEP) promotes increased energy efficiency and the use of clean, renewable sources of energy including solar, wind, geothermal, and sustainable biomass. NJCEP offers financial incentives, programs, and services for residential, commercial, and municipal customers. (Source: NJ Clean Energy Program)



The CleanPower Choice Program is a statewide program that allows you to choose clean, renewable sources of energy. When you make the CleanPower Choice, electricity is generated from clean, renewable energy sources located in New Jersey and the mid-Atlantic region. Each household that participates in the CleanPower Choice Program can avoid over 10,000 lbs. of CO2 emissions per year, which is equivalent to planting 1.35 acres of trees.

(Source: NJ Clean Energy Program)

- Promote the use of ENERGY STAR products.

In 1992 the US Environmental Protection Agency (EPA) introduced ENERGY STAR as a voluntary labeling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. Computers and monitors were the first labeled products. Through 1995, EPA expanded the label to additional office equipment products and residential heating and cooling equipment. In 1996, EPA partnered with the US Department of Energy for particular product categories. The ENERGY STAR label is now on major appliances, office equipment, lighting, home electronics, and more. EPA has also extended the label to cover new homes and commercial and industrial buildings.

(Source: ENERGY STAR website - [www.energystar.gov](http://www.energystar.gov))



## FOCUS AREA: RESOURCE CONSERVATION/STORMWATER MANAGEMENT

### GOAL STATEMENTS

- ◆ Preserve the Borough's natural resources to protect water quality, manage stormwater, reduce the potential for flood damage, protect endangered habitats and provide open space.
- ◆ Preserve and restore regional biodiversity, with a focus on promoting native species and avoiding and eliminating invasive species.
- ◆ Promote the preservation and reuse of historic resources, including buildings, structures, sites, neighborhood districts and cultural landscapes.
- ◆ Preserve the Borough's community forest resource to improve air and water quality, reduce energy costs, increase property values, improve citizen health and beautify the Borough.
- ◆ Restore streams and riparian areas that have been physically damaged by harmful land use and stormwater management practices.

### RESOURCE CONSERVATION ACTION STEPS

- Review and update stormwater management plan to encourage alternative systems such as green roofs and green streets.

Green Roofs – A green roof is a series of layers leading to a several inch growing medium planted with a variety of lightweight shrubbery. By covering a roof with vegetation, rainwater is absorbed before it enters the gutters and ultimately the watershed. Green roofs also provide important wildlife habitat, reduce the urban heat island effect, and provide further insulation for the building. ([www.Greenroofs.org](http://www.Greenroofs.org)).



Photo: NJ Green Home Remodeling Guidelines

Green Streets – Several stormwater BMPs can be very effective at both controlling pollution and flooding and beautifying the community. Installing vegetation between the sidewalk and curb serve the same function as filter strips in reducing stormwater pollution. The curb cutouts allow for inflow and outflow and absorb the stormwater from the street for filtration and recharge (*Somerset County Regional Center Strategic Master Plan 2006*).



Photo: City of Portland DOT

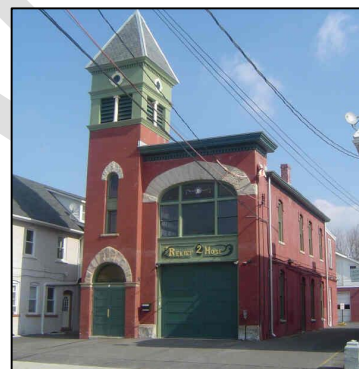
- Continue to work with Somerset County to expand the greenways program and increase connectivity between the Raritan River greenway, the downtown and neighborhoods.
- Increase awareness of and upgrade Raritan River access points and trails and develop a plan for future recreational uses.
- Promote the Sustainable Raritan River initiative.
- Establish an “adopt the river” program to support the maintenance and responsible use of the Raritan River.



Sustainable Raritan River Action Plan – Rutgers University

Photo:

- Make historic preservation an integral part of the local land development review process.

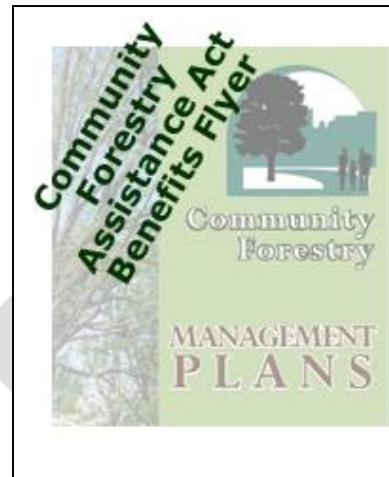


- Work with the County Extension Service and watershed associations to provide information about sustainable landscaping practices and appropriate native species.
- Incorporate sustainable landscaping practices into Land Development Ordinance.
- Promote functional landscaping that treats runoff, e.g. vegetated islands with dropped curbs and rain gardens.

Invasive plants are rapidly becoming one of the greatest threats to biodiversity. In New Jersey, 29 invasive plants have been identified as widespread and 65 others have been identified as newly emerging. Purple loosestrife is one example of a widespread invasive, out-competing several important species of native plants which are essential for food and cover to native wildlife. Purple loosestrife can also clog drainage channels and irrigation ponds and reduce the capacity of wetlands to hold and absorb rainfall. (Source: *Upper Raritan Watershed Association*)

- Complete a Natural Resource Inventory.
- Prepare a Community Forestry Management Plan.
- Prepare and adopt a tree ordinance.

Once a community completes a management plan and community representatives complete the State's training skills and accreditation program, the New Jersey Shade Tree and Community Forestry Assistance Act provides the community with liability protection under the New Jersey Torts Claims Act for their shade tree programs. (NJ Division of Parks and Forestry - [www.state.nj.us/dep/parksandforests](http://www.state.nj.us/dep/parksandforests))



- Review impervious coverage standards in the Land Development Ordinance to minimize use of impervious materials and encourage use of alternative materials by such means as reducing parking requirements, requiring shared parking, encouraging pervious material in overflow parking areas, and requiring minimum pavement breaks.

Pervious pavement is designed to allow percolation or infiltration of stormwater through the surface into the soil below. In contrast normal pavement is an impervious surface that sheds rainfall and associated surface pollutants forcing the water to run off directly into nearby storm drains and then into streams and lakes.

(Source: [lakesuperiorstreams.org](http://lakesuperiorstreams.org))



Photo: USACE

- Revise and update Flood Damage Prevention Ordinance.
- Encourage recycling of rainwater and reuse of "grey water" for landscape watering.
- Establish a green grounds and maintenance program to ensure that municipal parks and landscaped areas are managed in the most efficient and environmentally friendly manner.
- Inventory monitoring wells associated with NJDEP Known Contaminated Sites & provide updates on underlying conditions.



- Support and participate in the NJ Water Supply Authority (NJWSA) watershed programs such as the Peters Brook stormwater reduction project.

The Peters Brook Stormwater Reduction Project focuses on implementing small, low-cost best management practices (BMPs), such as rain gardens and rain barrels that will reduce the amount of stormwater, which carries pollutants including fecal coliform that reaches the Peters Brook. NJWSA is working with Rutgers Cooperative Extension to host "Build a Rain Barrel" workshops in targeted neighborhoods including Raritan. (Source: NJWSA)



A rain garden is a landscaped, shallow depression that allows for rain and runoff to be collected and then either infiltrates into the soil or evapo-transpires to the atmosphere. Rain gardens reduce the quantity of water that reaches waterways and improve the quality of water by filtering polluted runoff. Rain gardens are designed to collect runoff from roofs, lawn, driveways, or sidewalks, or any combination of those. (Source: NJWSA)

- Support and participate in the NJ Water Supply Authority (NJWSA) River-Friendly programs.

The New Jersey Water Supply Authority (NJWSA) implements a suite of River-Friendly programs, including those for golf courses, businesses and residents. Through these programs, NJWSA works with landowners to improve water resources by implementing actions in four categories:

- Water quality management & nonpoint source pollution management
- Water conservation
- Native habitat & wildlife enhancement
- Education and outreach

The voluntary River-Friendly programs are a cooperative effort between the participants and NJWSA. They provide an opportunity for landowners to become local stewards, to showcase positive environmental actions they have already taken and to work with NJWSA to implement new practices.



## FOCUS AREA: WASTE REDUCTION & RECYCLING

### GOAL STATEMENTS

- ♦ Minimize waste and optimally recycle material resources to protect natural systems by reducing resource extraction, greenhouse gas emissions, and air and water pollution.
- ♦ Meet statewide goals for recycling.

### WASTE REDUCTION & RECYCLING ACTION STEPS

*Waste Reduction is the first and most important tier of the “Reduce, Reuse, Recycle” solid waste management hierarchy. The term waste reduction is used to describe activities that decrease the amount or toxicity of waste entering the solid waste stream. The Sustainable Jersey waste reduction action step can be satisfied by accomplishing one of the following:*

- Adopt a pay as you throw system.
- Adopt a grass – cut it and leave it program.
- Adopt a backyard composting program.
- Implement a materials reuse program.
- Implement a waste reduction education program.
- Become an EPA wastewise partner.
- Adopt a toxicity reduction program.

WasteWise is a free, voluntary EPA program through which organizations eliminate municipal solid waste and select industrial wastes, benefiting their bottom line and the environment. US businesses, local governments, and non-profit organizations of all sizes and from all industry sectors can join WasteWise.  
([www.epa.gov/epawaste/partnerships](http://www.epa.gov/epawaste/partnerships))

#### Examples of Source Reduction (NJDEP, Bureau of Recycling and Planning)

“Pay-as-You-Throw” Systems - In communities with Pay-as-You-Throw programs (also known as per container systems, unit pricing or variable-rate pricing), residents are charged more or less for trash collection, depending on the amount they throw away. This encourages residents to reduce the amount of waste that they generate and to separate recyclables more carefully. Twelve towns in New Jersey now use such systems. Comparison studies show that these towns recycle more and dispose of less waste than their neighbors.

“Grass - Cut It and Leave It” – The objective of these programs is to get residents to leave grass clippings on the lawn when they mow as grass clippings provide a natural and healthy fertilizer for a growing lawn. By cutting your lawn higher and leaving the clippings on the lawn, you can use less water, fertilizer and pesticides, and expose yourself to fewer toxic materials.

Promote Green Shopping – Buy more durable goods, so you won’t be replacing them as often. Buy in bulk to save money and reduce packaging waste.

#### Reuse

While it is important to recycle to help reduce the amount of waste materials being disposed of in landfills, reuse is an easier, less consuming way of doing it. Reuse programs keep materials that would otherwise be discarded out of the waste stream and make items available at lower costs or at no cost. MercerMax is a materials exchange program sponsored by Mercer County. It is a free online resource enabling people to gain needed materials or to discard any unnecessary or unwanted materials. These products can range from construction equipment, to firewood, to glass, to old furniture, etc. This alternative involves simply logging in to the MercerMax website ([www.mercermax.org](http://www.mercermax.org)) and creating a “wanted” or “available” listing.



- Participate in and promote the County recycling program.
- Increase recycling efforts in public buildings.
- Require all multi-family residential, commercial properties with multiple tenants, and industrial properties to provide on-site recycling areas for the collection and disposition of recyclable materials.
- Conduct a waste audit of municipal buildings/facilities or schools.
- Establish a recycling depot.
- Adopt a construction and demolition waste recycling ordinance.
- Organize a community paper shredding day.
- Designate a municipal recycling coordinator.

## SOMERSET COUNTY RECYCLING HOW-TO GUIDE

How To Prepare	Acceptable Items
 <b>NEWSPAPERS</b> Newspapers must be bundled and tied with string or twine.	<ul style="list-style-type: none"> <li>Newspaper</li> <li>Inserts that come w/newspapers, such as comics, glossy coupons, TV/magazine sections &amp; colored food/store ads</li> </ul>
 <b>GLASS BOTTLES, ALL PLASTIC BOTTLES &amp; CONTAINERS (#1 - #7), STEEL, BIMETAL &amp; ALUMINUM CANS</b> These items should be rinsed thoroughly and placed inside your recycling bucket. Only the items listed at right are acceptable.	<ul style="list-style-type: none"> <li>Glass bottles (all colors)</li> <li>Glass jars (all colors)</li> <li>Steel cans</li> <li>Bimetal cans</li> <li>Aluminum cans</li> <li>All plastic bottles and containers #1 - #7</li> </ul>
 <b>OTHER PAPER/JUNK MAIL</b> Other paper should be placed in a brown paper bag or cardboard box and placed next to your blue bucket.	<ul style="list-style-type: none"> <li>Magazines</li> <li>Writing/school paper</li> <li>All envelopes</li> <li>Copy paper</li> <li>Paperback books</li> <li>Hardcover books w/hard covers removed</li> </ul>
 <b>CORRUGATED CARDBOARD &amp; CHIPBOARD</b> Corrugated cardboard must be cut into 2 ft. x 2 ft. squares and tied with string or twine. Please include chipboard with corrugated cardboard. Place tied bundle (chipboard & cardboard) next to your recycling bucket.	<ul style="list-style-type: none"> <li>Corrugated cardboard</li> <li>Brown bags</li> <li>Chipboard boxes including - cereal, cookie, pasta, cake, cracker, detergent (remove plastic liners), gift, shoe, shirt or any retail boxes. Poster board &amp; backing from writing pads also accepted.</li> </ul>

Recyclables are the property of Somerset County when placed at the curb. Please notify your local police department or the Somerset County Recycling Center if anyone other than county employees removes recyclables from your curb. Theft of recyclable materials is illegal.

### RECYCLING... DO IT RIGHT!

**IT'S OK TO RECYCLE...**

**All plastic bottles and containers numbered #1 - #7**

**WHAT NOT TO RECYCLE CURBSIDE...**

**PLASTIC:** Un-numbered plastics • Microwave trays • Plastic bags • Motor oil and antifreeze bottles • Plastic cups, plates, knives, forks, spoons • Plastic flower pots • Beer balls • Plastic toys • Pesticide containers • Plastic coat hangers • Plastic drums & crates • 5-gallon buckets (spackle & paint containers) • Pool chemical containers

**PAPER:** Waxed paper • Tissue paper • Napkins • Paper towels • Pizza boxes • Frosted food boxes • Paper plates • Cups • Metallic & plastic-coated paper • Paper with metal objects (file folders, binders, etc.) • Styrofoam®

**BATTERIES:** Alkaline, rechargeable & button-cell batteries.

**Christmas Tree Recycling**  
The Somerset County Park Commission will accept Christmas trees from December 26, 2010 through January 31, 2011 at North Branch Park, Parking Lot A, in Bridgewater or Colonial Park, Parking Lot E in Somerset. For more information about Christmas tree recycling, call 908-722-8292, press 6, or call your local municipal building for information.

**Recycling Buckets**  
Please keep your recycling buckets clean! All Somerset County residents are asked to thoroughly clean and rinse their recycling buckets periodically with hot soapy water. Clean buckets attract fewer pests and reduce offensive odors. Residents are reminded to rinse all bottles, jars and cans before placing them in the buckets. This maintains a sanitary container. Clean recyclables also are more desirable as they are considered a higher quality by the recycling mills, which purchase materials. If your household needs additional buckets, they can be purchased for \$10 each. Please call the Recycling Center at 732-468-3383 for further information.

**Curb Hunger Program**  
Somerset County collects canned food donations in June. Please put CANNED food donations in any plastic grocery bag. Place them at the curb on your recycling pickup days in June. Canned Goods ONLY. NO Glass - NO Perishables. Questions? Call 908-344-5571. www.curbhunger.org. Curb Hunger, Inc. Hunger Relief Solutions.

## FOCUS AREA: OUTREACH & EDUCATION

### GOAL STATEMENTS

- ◆ Provide residents with the informational and material resources they need to think critically about and address environmental problems and solutions, and include the environment as an important consideration in their work and daily living.
- ◆ Engage all audiences with a diverse offering of arts and cultural opportunities and use these platforms to address, environmental, educational and economic development issues in the community.
- ◆ Drive successful education inside and outside the classroom by building a strong school-community partnership and mutual ownership of successes.

### OUTREACH ACTION STEPS

- Establish a Green Team to coordinate and lead the sustainability program and the pursuit of Sustainable Jersey certification.
- Brand the sustainability initiative with a logo & slogan for visibility and consistency such as: *"Sustainable Raritan."*



- Continue to increase public awareness about sustainability through such forums as the Borough website, newsletters, school programs, the Public Library, and displays at community events and festivals.
- Create a green page on the Borough website with links to programs, events, practices, products and resources.
- Set up a "Sustainable Raritan" booth at local festivals, fairs, and recreation events. Host a series of community sustainability events.
- Organize training sessions for municipal staff regarding green practices related to purchasing, energy conservation, water conservation, waste reduction, alternative energy sources, green building practices, green cleaning, and general pollution prevention.

## IV. Next Steps

As noted in the Introduction, the Sustainable Community Plan marks the formal beginning of Raritan's sustainability program. Although there is much to do over the long-term, this section highlights certain short-term actions that can provide visibility and traction for Raritan's program. It is expected that once the Green Team is established and takes full ownership of the program, it will further refine the program and establish a more long-term sustainability plan.

These initial actions are also aimed at accumulating points for Sustainable Jersey certification. While most if not all of the actions listed below will qualify for Sustainable Jersey points, certain actions are identified as priority actions. The Bronze Level of certification requires the establishment of a Green Team, implementation of 2 out of 6 priority actions, and a total of 150 points. The Silver Level of certification requires the establishment of a Green Team, implementation of 3 out of 6 priority actions, and a total of 350 points.



- ☑ Establish a Green Team, prepare a community participation plan, and continue to pursue Sustainable Jersey Certification.

*The formation of a "Green Team" is the first step in establishing a community sustainability program. Green Teams leverage the skills and expertise of team members to develop plans, implement programs, and assist with educational opportunities that support the creation of a sustainable community. Such entities can go by any name, but the role is the same: lead and coordinate the sustainability activities of the community. It is mandatory that all communities participating in the Sustainable Jersey program establish a green team. (See Sustainable Jersey website for more detail - [www.sustainablejersey.com](http://www.sustainablejersey.com))*

- ☑ Organize a Green Fair.

*A Green Fair is a community-wide event that educates and encourages people of all ages to adopt a more sustainable lifestyle. Green Fairs allow participants to visualize how their seemingly small individual efforts can make a huge difference in their community.*

- ☑ Adopt a Green Building policy.

*"Green building" is a collection of better design, construction, and operating practices that have the potential to reduce or eliminate the negative impacts of development on the environment and on human health. Green building programs commonly address energy efficiency and carbon emissions reduction, water conservation, waste reduction, healthy and sustainably produced materials, indoor air quality, occupant productivity and health, and other components of green building and sustainable development. (See Sustainable Jersey website and Rutgers Center for Green Building at <http://rcgb.rutgers.edu>.)*



- ☑ Conduct an energy audit for municipal facilities. [SJ Priority Action](#)

*An energy audit of all facilities owned and operated by a municipality can be conducted to establish where and how energy is being used in buildings and facilities, and to identify opportunities for energy and cost savings. The audit process reveals annual energy use and costs associated with particular buildings and facilities, costs of suggested improvements, potential energy and cost savings, and the length of time that will be needed to recoup improvement costs. An energy audit also provides guidance on cost-effective practices and technologies that can improve energy efficiency. Recommendations in an audit can range from improved energy data management, to appropriate energy saving technologies, to structural improvements and system retrofits, to behavior change strategies for energy conservation. The energy audit can be the starting point for the eventual upgrade and retrofitting of municipal facilities. (See Sustainable Jersey website for more detail- [www.sustainablejersey.com](http://www.sustainablejersey.com))*

- ☑ Conduct a waste audit of municipal buildings and schools.

*A waste audit establishes what types of waste are being generated and in what quantities, making it possible to target specific materials and operating practices for waste reduction and recycling. Guidance on how to perform a waste audit, including sample worksheets, can be found at the following sites:*

*Rutgers Solid Waste Resource Renewal Group - <http://swrrg.rutgers.edu/audits.html>; and  
<http://www.cook.rutgers.edu/~envpurchas>  
San Mateo County - [http://www.recycleworks.org/schools/s\\_audits.html](http://www.recycleworks.org/schools/s_audits.html)*

- ☑ Complete an inventory of all municipal fleet vehicles, evaluate efficiency, and set goals for improvement. [SJ Priority Action](#)

*Performing a fleet inventory allows a municipality to evaluate its current vehicles and equipment to better understand where efficiency might be improved. The inventory includes surveying how the vehicle is used, as well as its environmental impact and fuel usage. Once the data has been considered, a strategy for greening the fleet can be developed, including specific efficiency targets. (See Sustainable Jersey website for more detail - [www.sustainablejersey.com](http://www.sustainablejersey.com))*

- ☑ Adopt an Open Space and Recreation Plan.

- ☑ Adopt a Natural Resource Inventory. [SJ Priority Action](#)

- ☑ Adopt a Complete Streets Policy.

- ☑ Adopt a Community Forestry Management Plan.

- ☑ Adopt a Water Conservation Ordinance. [SJ Priority Action](#)

*The Water Conservation Ordinance seeks to help extend available supplies through short-term drought periods, and to avoid recurrent drought warnings/water emergencies caused by late summer "drought." A model NJDEP ordinance can be viewed at: [www.njssi.org/uploaded\\_documents/waterordinance.pdf](http://www.njssi.org/uploaded_documents/waterordinance.pdf).*

- ☑ Update the stormwater management plan.
- ☑ Adopt an alternative energy ordinance.
- ☑ Adopt a Sustainable Land Use pledge. *SJ Priority Action*

*The Sustainable Land Use Pledge is a public affirmation of a municipality's intent to support sustainable smart growth land-use policies. Sustainable Jersey provides a model resolution to be adopted by a municipality as a first step towards community sustainability. The adoption of the resolution commits the municipality to a thoughtful, longer-term re-evaluation of current land use practices and planning policies. The result will be land-use decisions that balance economic, environmental, and social needs and provide the highest possible quality of life for all residents.*

DRAFT