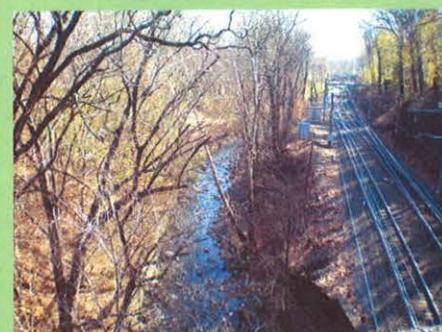


*Township of*

# Montclair

MASTER PLAN

Conservation Plan Element



Essex County, New Jersey

June 29, 2007

~ Prepared by T&M Associates ~

# Conservation Master Plan Element

## Township of Montclair Essex County, New Jersey

**June 29, 2007**

**PREPARED BY:**



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**Adopted on July 9, 2007**

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## **INTRODUCTION**

Montclair has prepared this conservation plan in accordance with the requirements of the Municipal Land Use Law (N.J.S.A. 40:55D-28.b.(8)) to provide for the preservation, conservation, restoration, and appropriate utilization of natural resources. Natural resources include open space, energy, water supply, air, forests, soils, wetlands, rivers and other waters, endangered and threatened species and wildlife, and other resources important to the well being of the community and the region. This element of the Conservation Master Plan responds to civic concerns that the Township's environment, open spaces, and neighborhood character are being altered and compromised by incremental land development practices that reduce open space, disturb steep slopes, aggravate flooding, impair water quality and reduce wildlife habitat.

This document is the Township of Montclair's first Conservation Plan Element of the Master Plan. However, it builds upon past conservation initiatives. In 2003, the Montclair Environmental Commission prepared a Sustainable Montclair Planning Guide, which recommends increased opportunities for sustainable development for both the Montclair community and municipal government operations. In 2004, a Natural Resource Inventory (NRI) was prepared to identify the natural and environmental characteristics of the community.

Both these reports were utilized as the basis for many conservation planning recommendations in this Conservation Master Plan.

Municipalities shall, in a Conservation Master Plan, consider the natural resource conditions located within its boundaries as well as devise goals and objectives consistent with the Municipal Master Plan to preserve, conserve and utilize its natural resources. In addressing the requirements of the Conservation Master Plan, consideration must be given to the significant investment in transit, roads and community facilities in Montclair, as well as the historic and cultural resources attributed to the Township. Recognizing that Montclair Township is fully developed, the natural resource conditions have been altered to suit a community of 6.25 square miles with a population of 39,440<sup>1</sup> people. Despite being fully developed and suburbanized, Montclair's conservation planning is critical to the long-term quality of life provided to its residents.

The Conservation Master Plans overriding goals, objectives and recommendations are intended to retain and improve the quality and character of the lives of the citizens of Montclair. The Conservation Master Plan is built upon the premise that Montclair's existing natural and historic resources shape the way in which leisure time is spent, affect the long term strength of the economy, determine whether there is clean air and water, support the network of living things of which we are all a part, and affect the character of the community.

This Conservation Master Plan identifies an implementation strategy and additional planning steps necessary to continue this effort and makes recommendations to improve the balance between manmade and natural resources. The approach taken is to describe the natural resource conditions and, through a variety of suburban community- based programs, suggest alternative mechanisms to support the local environment of the community.

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<sup>1</sup> 2005 North Jersey Transportation Planning Authority (NJTPA)

## **MONTCLAIR'S NATURAL RESOURCES**

### ***Overview***

To conserve natural resources from degradation, the Conservation Master Plan identifies the key resources and features within the Township that should be maintained and protected as the green infrastructure of the Township. The conservation Master Plan also recommends the actions that the Township should undertake to focus public and private conservation efforts to achieve Montclair's conservation goals.

Montclair's conservation goals are to:

- ❑ Protect existing trees to improve air quality, reduce erosion, and to preserve community character.
- ❑ Minimize environmental impacts resulting from developing and redeveloping properties.
- ❑ Protect groundwater resources and promote the recharge of groundwater.
- ❑ Preserve open space.
- ❑ Preserve floodplains to reduce the hazards to life and property from flood events and to maintain the ecological health of stream corridors.
- ❑ Preserve the Township's natural areas and buffer them from development.
- ❑ Incorporate energy-efficient technologies into new development to reduce heat island effects.
- ❑ Continue to implement the shade tree planting program by planting additional street trees in Montclair.
- ❑ Promote development and redevelopment in existing nonresidential areas that accommodate alternative modes of transportation and shared parking.
- ❑ Encourage development and redevelopment opportunities at Township Transit Stations to increase mass transit ridership.
- ❑ Support the goals and objectives of Montclair's Stormwater Management Plan to improve water quality.
- ❑ Remediate brownfield sites.
- ❑ Encourage sustainable development practices.



### ***Resource Protection Needs***

Montclair must manage its environmentally critical lands to protect the Township's natural resources. The critical environmental lands of the Township are characterized by environmentally-sensitive features whose functions are integral or important to a natural system or landscape. The critical lands of the Township include:

1. Water Resources
2. Stream Corridors
3. Water Quality
4. Floodplains & Flood Hazard Areas
5. Wetlands
6. Wellhead Protection Areas
7. Steep Slopes
8. Preserved Open Space



Resource protection in Montclair will be addressed through the following actions:

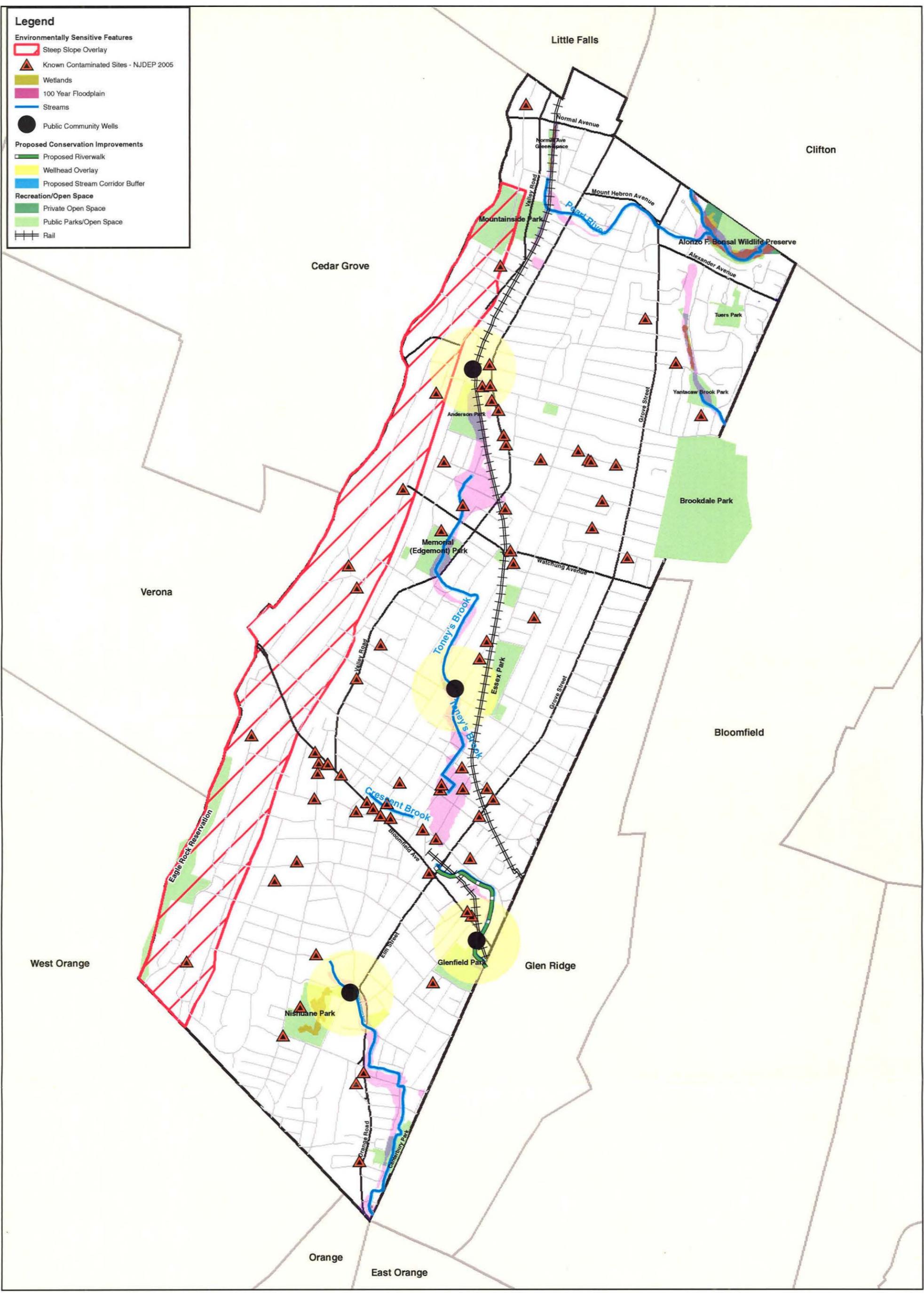
- ❑ Township land use regulation to implement the Conservation Master Plan for greenways and environmentally critical lands through the Township zone plan and through appropriate site plan and subdivision design standards.
- ❑ State regulations that protect wetlands, wetlands transition areas, and air and water resources.
- ❑ The creation of partnerships with various state agencies and professionals to encourage brownfield remediation.
- ❑ Acquisition of available state and federal grants.

The major environmentally sensitive features that the Township plans to conserve are shown on the Conservation Plan Map (Figure CO 1: Conservation Plan). The importance of these features to the Township Conservation Master Plan and Montclair are reviewed below.

## **CONSERVATION PLAN**

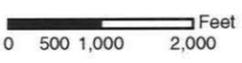
### ***Water Resources***

The surface waters of the Township are important as habitat areas, as recreational resources, as scenic resources, and for flood control and drainage. Surface waters are vulnerable to further degradation and pollution from development and mismanaged land use. Both the groundwater and surface water resources in the Township are finite resources that need to be conserved and restored. As indicated in the Township's 2005 Stormwater Management Plan, surface waters in the Township include Nishuane Brook, Crescent Brook, Toney's Brook and an unnamed tributary to the Nishuane Brook, which are tributaries of the Second River. Other water features include Clark's Brook and Pearl Brook, which are tributaries to the Third River.



**Figure 1**  
**Conservation Plan Map**  
**Township of Montclair**  
**Essex County, New Jersey**

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Prepared by: PNR, June 22, 2007  
 Source: NJDEP, NJDOT, 2004 Natural Resource Inventory, USGS  
 File Path: H:\MNCL\00020\GIS\Projects\Figure 1 - Conservation Resources.mxd

NOTE: This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not State-authorized.

The rivers and stream corridors within the Township are subject to flooding and are vulnerable to adverse impacts from suburban land development.

The environmentally critical lands and the measures for protection of the Township water resources are reviewed below.

#### Stream Corridor Protection

The stream corridors of the Township consist of streams and associated wetlands, together with adjacent upland areas, including the floodplain and areas that support protective bands of vegetation that line the waters edge. The maintenance of a stream buffer as part of the corridor along the bank of a surface water body is recommended to protect the stream from development impacts. A stream buffer is an area of undisturbed vegetation that is maintained along the bank of a surface water body to protect the stream corridor from development impacts. Buffer widths may vary depending upon the degree to which the stream, its resources and the functions need to be protected. Considerations include water quality and stream functions, such as wildlife habitat, scenic value, and recreational value.

#### *Water Quality*

All living things need water. Healthy water contains a balanced amount of nutrients and normal fluctuations in temperature. It also has plenty of oxygen and little sediment so that underwater living species can breathe or receive enough sunlight to grow. Impacts from land development and urban runoff contribute to nonpoint sources of pollution in the Township's local waterways. These impacts include siltation of rivers, streams and ponds, increased nutrient, bacterial, and chemical contaminants.

NJDEP Water Monitoring Standards Division monitors impairments to waterways; referring to waterways that exceed the permitted State's total maximum daily loads for a particular heavy metal or biological impairment. As documented in the Township's 2004 Natural Resource Inventory (NRI), both surface water and groundwater in the Watershed Management Area (WMA) in which Montclair is located are somewhat impaired.

The use of fertilizers to create the "perfect lawn" is an increasingly common problem in many residential areas. Fertilizer run-off increases the level of nutrients in water bodies and can accelerate eutrophication<sup>2</sup> in the lakes and rivers. The excessive use of fertilizer causes nitrate contamination of groundwater. Good fertilizer maintenance practices can help in reducing the amount of nitrates in the soil and thereby lower its content in the water. Almost as important as the use of fertilizer is the combination of over fertilizing and over watering lawns. In many cases, this leads to nutrient rich runoff, which ultimately may terminate into a nearby stream, lake or other water body. If fertilizer is applied correctly, the natural characteristics of the underlying soils will absorb or filter out the nutrients in the fertilizer.

#### Stormwater Management

In 2005, the Township adopted a Stormwater Management Element of the Master Plan. The 2005 Plan provides a strategy for Montclair to plan for and manage increased runoff associated with future development and land use changes. While stormwater management is addressed in the above referenced plan, proper stormwater management contributes to improved water quality and the preservation of floodplains maintains the natural spillways for stormwater to flow.

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<sup>2</sup> Eutrophication – The normally slow aging process by which a lake evolves into a bog or marsh and ultimately assumes a completely terrestrial state and disappears.

In suburban Montclair, many streams have been placed within culverts or urbanized (located within concrete). In most cases, this results in a reduction in the volume of water that can be carried by a watercourse. Once a stream is urbanized, the conditions that affect runoff, water quality, sediment, and aquatic life within the watershed are changed permanently. In Montclair, the continuation of this practice should be discouraged. While it may be infeasible to “daylight” or remove these concrete stream channels, consideration should be given to this concept if opportunities arise, as it is now generally accepted that natural stream channels can exist in urban environments.

#### ***Flood Plains and Flood Hazard Areas***

Floodplains are usually flat areas of land bordering streams, which are periodically inundated by floodwaters. Rainstorms of severe intensity may cause the entire floodplain to flood. Floodplains are areas of substantial ecological value. The sediments deposited in the floodplain by slow-moving floodwaters increase the fertility of the land. Where floodplains are undeveloped, the natural shrub and lowland forest vegetation provide excellent habitats for wildlife. Proximity to water heightens the floodplains’ value to wildlife, and overhanging vegetation offers shade and refuge for stream organisms and helps maintain natural stream temperatures. Vegetated floodplains can also act to filter out non-point source pollutants before they enter streams, thus providing a natural mechanism for water quality benefits. Floodplains are excellent locations for water-related recreation sites, as well as for nature study. Since standing floodwaters are steadily absorbed by flood plain soils, groundwater supplies are maintained and flood peaks downstream are reduced.

Flood hazard areas are the areas within the floodplain that are subject to flooding from a storm with a frequency of recurrence of once or more per 100 years. In general, development should be discouraged within the flood hazard areas, and the flood hazard areas should be preserved from development. Uses that are not significantly harmed by periodic flooding, such as recreation, and nature study, should be permitted.

#### ***Wetlands***

Wetlands provide critical habitats for endangered and threatened species, as well as being vital to the recharge of aquifers, the control of flooding, and the removal of pollutants from the environment.

The wetlands within the Township are regulated and protected by the NJDEP pursuant to the State Freshwater Wetlands Protection Act.

#### ***Wellhead Protection Areas***

An important water supply and groundwater protection issue is the protection of public community water supply wells from the impact of contaminants associated with particular land uses and chemical management practices. Pollutants can seep through the soil from the land surface and contaminate groundwater and the water supply. Utilizing NJDEP’s wellhead protection guidelines, there is a need to protect the three (3) existing wellheads and the fourth (4) reserve/new wellhead within the Township located within Nishuane Park, adjacent to the intersections of Llewellyn Road, Elm and High Streets. To reduce the risk of further contamination to the Township’s water supply, the Township needs to regulate the placement and operation of land use activities within wellhead protection areas. The USEPA identifies common sources of contaminants by land use categories as follows:

**Table CO-1: Protecting Wellhead Protection Areas: Land Uses and Contaminant Sources**

Category	Contaminant Source	
<b>Commercial</b>	Airports	Jewelry/metal plating
	Auto repair shops	Laundromats
	Boatyards	Medical institutions
	Construction areas	Paint shops
	Car washes	Photography establishments
	Cemeteries	Railroad tracks and yards
	Dry cleaners	Research laboratories
	Gas stations	Scrap and junkyards
	Golf courses	Storage tanks
	<b>Industrial</b>	Asphalt plants
Chemical manufacture/storage		Pipelines
Electronics manufacture		Seepage lagoons and sludges
Electroplaters		Storage tanks
Foundries/metal fabricators		Toxic and hazardous spills
Machine/metalworking shops		Wells (operating/abandoned)
Mining and mine drainage		Wood preserving facilities
<b>Industrial (Continued)</b>		
<b>Residential</b>	Fuel oil	Septic systems/cesspools
	Furniture stripping/refinishing	Sewer lines
	Household hazardous products	Swimming pools (chemicals)
	Household lawns	
<b>Other</b>	Hazardous waste landfills	Recycling/reduction facilities
	Municipal incinerators	Road deicing operations
	Municipal landfills	Road maintenance depots
	Municipal sewer lines	Storm water drains/basins
	Open burning sites	Transfer stations

Source: U.S. Environmental Protection Agency. (1991). Protecting Local Ground-Water Supplies Through Wellhead Protection. <http://www.epa.gov/r10earth/offices/water/whpgprnt.pdf>. Accessed March 15, 2007.

Wellhead protection areas are delineated around public community water wells based on site-specific wellhead information, such as time of travel, rate of pumping and aquifer characteristics (thickness, transmissivity, porosity, and hydraulic gradient). Time of travel of the pollutant to the well is directly

related to the distance the water has to travel to arrive at a well once its starts pumping. The time is divided into three tiers based on travel time to wells:

- Tier 1: 2 years (730 days) - This boundary accounts for the time travel to the outer boundary and presence. The boundary extends from the well to the boundary established to represent the 2-year time travel.
- Tier 2: 5 years (1,826 days) - This boundary accounts for the discharge of known pollution contamination and the ability of the NJDEP to locate responsible parties. The boundary accounts for the “smearing effect” observed in pollution plumes and the acceleration of groundwater near a pumping well. The Tier 2 boundary extends from the perimeter of Tier 1 to the boundary representing the 5-year time travel.
- Tier 3: 12 years (4,383 days) - This boundary is the complete zone of contribution and the limit of the wellhead monitoring areas. The Tier 3 boundary extends from the perimeter of Tier 2 to the outer boundary representing the 12-year time travel.

To identify potential environmental threats to Montclair’s water supply, a review of known contaminated sites was compared to the previously mentioned wellhead protection areas. Known contaminated sites include those that are located on the National Priority list, and the NJDEP known contaminated list. Appendix A contains a detailed description of the contaminated sites that make up contaminated sites in Montclair.

Several known NJDEP contaminated sites are located within wellhead protection areas in Montclair. Community wells within 1,000 feet of contaminated sites include:

**Community Well 26-04597**

- 314 Upper Mountain Avenue
- Bellevue Theater, 260 Bellevue Avenue
- JP Morgan And Chase Company, 580 and 600 Valley Road
- Mobil #57285, 632 Valley Road

**Community Well 26-03687**

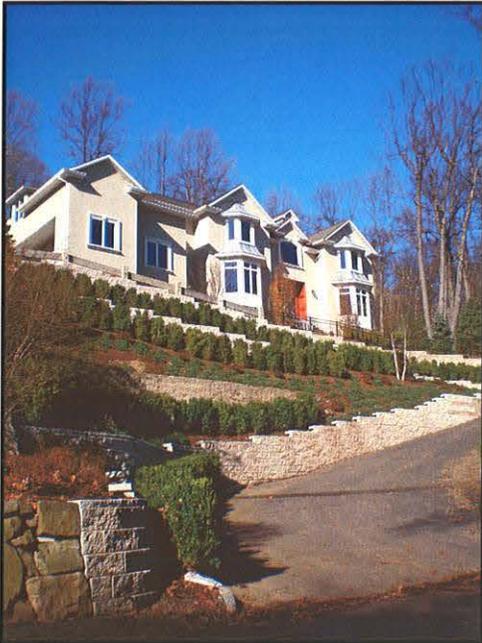
- Montclair Public Works, 219 North Fullerton Avenue

**Community Well 26-03688**

- NJ Transit Bay Street Station, Pine Street and Bloomfield Avenue
- Shell Service Station #138430, 115 Bloomfield Avenue

Montclair should work with NJDEP to be familiar with the extent of contamination within Montclair and the status of on-going cleanup. From an economic development perspective, in most instances, owners of contaminated sites cannot transfer ownership. In cases where contaminated sites are vacant, the Township should consider actions that maximize the amount of state and federal funding to clean up these sites. Additional monies are available for contaminated sites that are located within redevelopment areas. As part of economic development efforts, Montclair should consider creating scattered site redevelopment areas to leverage the maximum amount of funding available to clean up existing contaminated sites.

### ***Steep Slopes***



Impacts of disturbing steep slopes are well documented in planning literature. In steep slope areas, existing and altered drainage patterns and the amount and speed of runoff can cause erosion, soil creep, and landslides. By changing the existing topography through grading the foot of a slope or cutting into the face of a hillside, instability and erosion occur. Typically, soils on ridgelines and steep slopes are already thin and susceptible to wind and water erosion, which warrants engineering review for all development.

During rainfall, stormwater runs down sloped areas onto the low-lying areas. This problem worsens as slopes and immediate surrounding areas are covered with additional impervious surfaces, such as roads, driveways and buildings. Since water cannot percolate into the soil, it runs off down the slope, picking up speed as it travels across these smoother surfaces. If not collected, the silt from the eroding surrounding soils will run off into local waterways.

### ***Preserved Open Space***

Open space is critical for the protection of the Township's environment, for maintaining a desirable visual character for the community, and for providing a balanced pattern of land use to address public needs. Preserved open space maintains vegetative and wildlife habitats, provides a natural amenity for the community and opportunities for passive and active recreation, and helps safeguard public health and safety through the protection of air and water quality.



Within Montclair, 340 acres of land are publicly owned and dedicated for open space and recreational purposes. This represents 8.5 percent of the total land area in Montclair of which nearly 32 percent is managed by the County. In addition to the 340 acres of land in Montclair, portions of the Eagle Rock Reservation located in West Orange and Verona border Montclair along its southwest border. Furthermore, the Mills Reservation and portions of Brookdale Park are located in Cedar Grove and Bloomfield. Despite their location outside of Montclair, these parks provide open space and recreation opportunities to Township residents.

The existing preserved open spaces of the Township are shown on Map CO-1: Conservation Plan Map and identified in the table below.

**Table CO-2: Existing Preserved Open Spaces – Township of Montclair**

Township of Montclair	County
Alonzo F. Bonsal Wildlife Preserve	Brookdale Park
Canterbury Park	Eagle Rock Reservation
Essex Park	Glenfield Park
Memorial (Edgemont) Park	Anderson Park
Mountainside Park	Kip's Castle
Nishuane Park	
Porter Park	
Sunset Park	
Tuers Park	
Yantacaw Brook Park	

Compiled by: T&M Associates

The Township, working with the State, the County, private land owners and conservancies should preserve additional open space within the community. The Township Conservation Master Plan proposes to add additional natural areas for open space preservation purposes. Appendix B contains a listing of Township owned properties and conservation recommendations.

The public effort to preserve open space should include lands in addition to the above natural areas in order to protect the Township's resources and environmentally critical lands.

#### Open Space and Recreation Needs

To determine open space and recreation needs in Montclair, two distinct methodologies were utilized. The first analysis, called the balanced land use approach, estimates the land area which should be owned and controlled by the Township and dedicated for public use and access for outdoor recreation. The second analysis, known as the core system standard, predicts the necessary amount of open space to protect the important natural resources and to retain a high quality of life for Township residents.

Recreation is required to maintain a healthy way of life. What people do to recreate is a response to their internal needs and desires. The quality and quantity of recreational opportunities available to a community has a direct effect on the community's general quality of life. To satisfy the recreational needs and wishes of an entire community, many variables must be considered. It is important to realize that the recreational opportunities will serve a variety of different individuals. To ensure that the Township can provide residents with a variety of needed recreation programs and facilities, there should be a core system of lands owned and controlled by the Township and dedicated to local public recreation use.

#### Estimate of Need Based Upon Balanced Land Use Standards

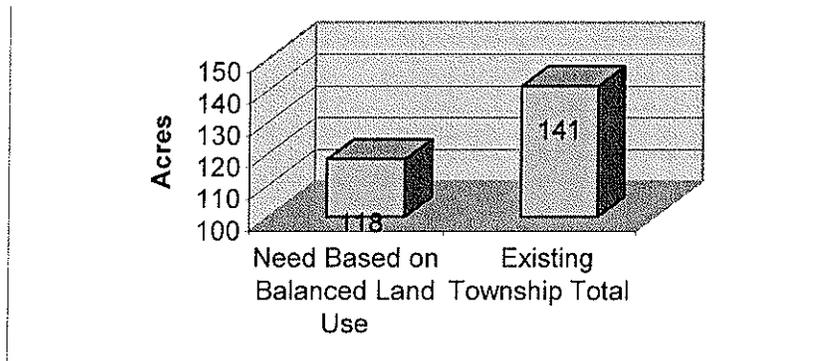
The first estimation method is the Balanced Land Use approach. Balanced Land Use is the methodology utilized by the State of New Jersey to calculate public open space needs. This approach estimates the *minimum* land area in Montclair that should be dedicated as Township public open space. The approach takes into consideration that recreation and open space demands are generated by development, which will occupy the remaining land area of the Township.

The Balanced Land Use Standard indicates that individual municipalities should set aside 3% of their developed and developable area for recreation. The guidelines also suggest 7% be set aside by each county, 10% by the state, and 4% by the federal government. Undevelopable land such as wetlands and land preserved as open space by the County or State governments is subtracted out of the total land area to calculate the municipal need for public recreation and open space land.

	<b>ACRES</b>
Total Township Area =	4,003
(-) Undeveloped Wetlands and Floodplains =	2 (approximate)
(-) State, and County Parklands =	58 <sup>3</sup>
Total =	3,943
<hr/>	
3% of Total =	118

Source: NJDEP GIS Data, 2003 Essex County Recreation and Open Space Master Plan & T&M Associates

**TABLE CO-4  
MONTCLAIR TOWNSHIP  
NEED FOR MUNICIPAL PARK AND RECREATION AREAS (BALANCED LAND USE)**



Compiled by: T&M Associates

Using the Balanced Land Use standard, the estimated land required for local public recreation and open space in Montclair is 114 acres (see Exhibits CO-3 & 4). Based upon the existing 141 acres of park and recreation land in the Township<sup>4</sup>, a marginal surplus exists in comparison to the minimum suggested by the Balanced Land Use criteria.

<sup>3</sup> Based upon the April 2003 Essex County Park Master Plan

Cal-3-Based upon the April 2003 Essex County Park Master Plan

<sup>4</sup> Based upon information contained in the 2003 Essex County Recreation and Open Space Master Plan.

Estimate of Need Based Upon Core System Standards

The second estimation of need method is the Core System standard. The National Park and Recreation Association (NPRA) developed this method. The Core System standard is used to estimate need based on existing and projected population. The NRPA standards, published in the NRPA *Recreation, Park, and Open Space Standards and Guidelines*, provide guidance for developing a core system of public parks for local close-to-home recreation uses. The standards, as utilized in the County Recreation Plan, suggest public park and recreation areas be provided to local residents at the ratio of 8.375 acres of parkland per 1,000 people.

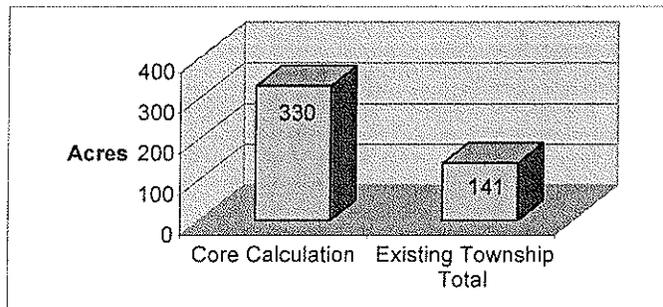
**TABLE CO-5  
CORE CALCULATION**

**Standard = 8.375 acres per 1,000 people**

	Population	Calculated Acres
2005	39,440	330

*Source: North Jersey Transportation Planning Authority (NJTPA)*

**TABLE CO-6  
MONTCLAIR TOWNSHIP  
NEED FOR MUNICIPAL PARK AND RECREATION AREAS  
(CORE CALCULATION)**



Based upon the existing 141 acres of park and recreation land and the Township's 2005 population of 39,440 people, there is a shortfall of open space and parklands. In summary, the Core System approach suggests that the Township park system can not adequately support the existing or future population.

The Balanced Land Use Standard and the Core System Standard are methodologies that should be used with caution. They are intended to serve as a guide to determine the necessary open space in a community and are not an exact science.

During the creation of this Conservation Master Plan, needs for community gardens, stream walks, bike trails in addition to active and passive open space were identified as recreation and open space needs. The Township's recreation and open space planners should further evaluate these needs as well as other local recreation and open space needs.

#### Green Acres Program

One opportunity to acquire monies to create recreation and open space opportunities is through the New Jersey Department of Environmental Protection Green Acres Program (Green Acres). Green Acres provides 50% matching grants and low-interest loans to local governments for the acquisition of land for recreation and conservation purposes. To qualify for this funding, local governments must have an adopted open space and recreation plan, and either an open space tax or an approved alternative funding source which is stable and sufficient to affect an annual tax levy.

### **CONSERVATION PLAN RECOMMENDATIONS**

The development and redevelopment of Montclair should be consistent with the principle of sustainable development. Sustainable development meets the needs of the present without compromising the ability of future generations to meet their needs. Development should not exceed the limits of Montclair's natural systems and its infrastructure system, nor should it degrade those systems. Consistent with the principle of sustainable development, the Township should take the following actions—not listed in any particular order—to achieve its conservation goals and objectives and meet the Township's conservation needs:

#### ***RESOURCE PROTECTION***

##### ***Conserve Stream Corridors and Flood Hazard Areas***

Montclair should regulate development to preserve the existing stream corridors and its flood hazard areas. Township regulations should conserve stream corridors from development and from activities that would adversely affect the stream environment. The flood hazard areas should be regulated to minimize the potential for damage to life and property from flood events and to recognize that the flood hazard area needs to be maintained as an open space area to reduce the impact of flood events on the Township.

The state is leading this effort by considering more stringent environmental restrictions to the New Jersey waterways. Under the rule proposed, the potential to fill up to 20 percent of the land area within the 100-year flood hazard area would be eliminated.

The Township should craft its own minimum standards to protect all stream corridors and to restrict the development of flood hazard areas. The minimum standards for stream corridor protection should provide for a stream buffer with a minimum width as part of the stream corridor. The Township should regulate all flood hazard areas to conserve the flood hazard area from development and minimize the potential for flood damage. The regulations should identify the activities and uses that would be permissible within the stream corridor and the flood hazard areas. These regulations would limit impacts associated with expanding buildings and creating new impervious areas within floodways.

##### ***Establish Greenways***

Greenways are one technique to preserve riverfront land and restore regional ecosystems. They have traditionally been formed along riverfront lands, along ridgelines, as hedgerows dividing farmlands, as

greenbelts around cities, as rails-to-trails programs, and in many other areas. "A greenway is, in simplest terms, a linear open space." In Montclair, greenways could be developed that link Montclair's historic core and outlying areas, public recreation areas, and environmentally sensitive areas. Parts of greenways may be established as scenic or recreational open space, and parts may be set aside for wildlife habitat. To implement this recommendation, consideration should be given to creating a rails-with-trails project adjacent to the existing Montclair-Boonton NJ Transit line and extended along trails and streams. It is important to note that greenways or parts of greenways may not allow public access. Greenways may be owned either publicly or privately and acquired as open space through fee simple acquisition or through conservation easements. For example, areas of Toney's Brook northwest of Essex Park are privately owned.

The Township greenway system should include the Township's stream corridors in conjunction with a program of stream corridor protection and restoration.

#### ***Regulate Development in Wellhead Protection Areas***

According to the Township's 2004 Natural Resource Inventory<sup>5</sup>, 20 percent of the Township's drinking water is drawn from three wells within Montclair. The remaining 80 percent is supplied by the North Jersey District Water Supply Commission (NJDWSC). The sources of NJDWSC water are the Wanaque and Monksville Reservoirs. Montclair provides and maintains the public water treatment and distribution system in the Township. Consequently, protecting the three (3) public wellheads and the fourth planned wellhead (currently a reserve well) in the Township from contamination is essential to the public health, safety, and welfare.

The State has mapped wellhead protection areas for the public community wells in Montclair. These are the protection areas for wells that serve at least fifteen (15) service connections to year-round residents or regularly serve at least twenty-five (25) residents. The Township should establish wellhead protection areas for public community wells based upon the State mapping.

A wellhead protection area is the area around a well from within which groundwater is likely to flow to the well and through which ground-water pollution, if it occurs, poses a significant threat to the water quality of the well. The wellhead protection area should be regulated to control the siting and development of land uses to reduce the potential for ground water contamination and the migration of pollutants into the ground water.

Land uses of special concern within wellhead protection areas are industrial facilities, including manufacturing installations, fuel and chemical storage, railroad yards and energy plants. In the Montclair suburban setting, highways, utility lines and automotive repair facilities may also produce contaminants. Land uses of less concern consist of single-family residential, institutional uses, commercial facilities (excluding those with large parking lots), parks and open space.<sup>6</sup>

#### ***Protect Hilltops and Ridgelines***

The placement of buildings/structures on or near hilltops or ridges should show a high degree of sensitivity to the terrain and its visual impact. Consideration should be given to creating a ridgeline protection ordinance to ensure that development near ridgeline areas blends in with, rather than interrupts or modifies, the natural contour elevations of a tract of land. It is the intention to retain ridgeline areas in

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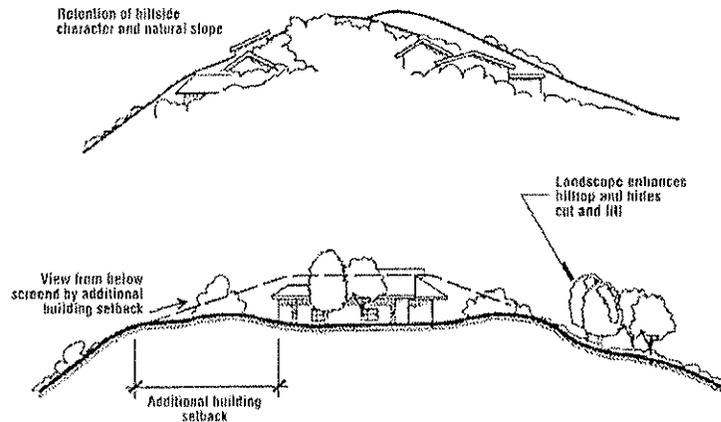
<sup>5</sup> Amy S. Greene Environmental Consultants, Inc., *Natural Resource Inventory*. Flemington, NJ: July 19, 2004

<sup>6</sup> Marsh, William M., *Landscape Planning Environmental Applications*. New York, John Wiley & Sons, Inc., 1991

a natural state and development should be sited in a manner so as not to create a silhouette against the skyline. To achieve this goal, additional provisions should be added to the R-O Mountainside Zone.

### ***Strengthen Steep Slope Regulations***

The Township created a steep slope ordinance, “to protect the health, safety and welfare of people and property within the Township from improper construction, building and development on steep slope areas in the township and, more particularly but without limitation, to reduce the peculiar hazards, which exist on steep slopes by reason of erosion, siltation, flooding, soil slippage, surface water runoff,” etc. However, while this ordinance acknowledges potential hazards and negative impacts associated with development in steep slopes, the same intensity of development is permitted in steep slope areas as long as engineering requirements are met.



Source: City of Santa Clarita, California, Ridgeline Preservation and Hillside Development Guidelines, 20.

On hillsides and on sloping surfaces, it is nearly impossible to build structures and roads without disturbing the surface. Disturbed surfaces create loose materials that may tend to move downhill. Structures also experience a component of gravitational force that tries to move them downhill. For these reasons, hillside structural design is inherently more complicated than structural design for flatland buildings. Within sloped areas, structures must be either excavated into the slope or protrude over the slope. Furthermore, because of geometry, when grading a level building pad or roadway, much more than the resultant level area is disturbed. The cut and fill extends for a greater distance up and down slope before it meets the natural grade.<sup>7</sup>

New regulations should be crafted which recognize the built character of this area while minimizing the further disturbance of steep slope areas associated with home additions or home razing in order to replace them with larger homes.

New provisions should be added to include:

- Slope/density regulations<sup>8</sup>
- The maximum permitted level of disturbance
- Terrain-adaptive architecture (see illustration) and/or hilltop architecture guidelines
- Grading requirements

<sup>7</sup> Olshansky, Robert B., *Planning for Hillside Development. Planning Advisory Service Report Number 466*. American Planning Association, 1996.

<sup>8</sup> Slope/Density Regulations. These reduce allowable densities on hillsides: the steeper the slope, the less the allowed density. This can be accomplished by (1) establishing minimum lot sizes for steep slopes, (2) specifying a percentage of each hillside site to be retained in natural state, or (3) reducing the number of allowable dwelling units on steep slopes.

***Encourage Energy Efficiency and Renewable Energy Goals in Community Development and at Community Facilities***

Energy consumption is growing and energy is increasingly expensive. An opportunity exists for the Township to act as a leader to more efficiently use energy in community buildings and vehicles. This Conservation Master Plan suggests creating energy efficiency goals for all municipally owned and operated buildings and for the municipal mobile fleet to reduce energy demand. Upon the completion of an energy audit for municipal vehicles, criteria could be established for the purchase and leasing of municipal vehicles.

The Township has taken steps to achieve energy efficiency goals. In 2003, the Township prepared an award winning Sustainable Montclair Guide. In 2004, a comprehensive Energy Audit report for buildings was prepared. This Conservation Master Plan strongly urges that the Township continue to implement the recommendation from these documents in the near future.

This strategy supports the vitality of the Township's urban and suburban areas that already have in place the appropriate infrastructure and community facilities to support and serve the Township population. The Township will promote energy conservation by utilizing its existing urban and suburban footprint more efficiently through the continued redevelopment and rehabilitation of the Township's downtown, by reclaiming brownfields for beneficial economic development, through the adaptive reuse of existing developed sites, by promoting the infill of areas where sewer and water lines are currently available, and by designing walkable neighborhoods in an environment that is friendly to pedestrian, bicycle, and public transportation use.

In addition, the Township should incorporate LEED® (Leadership in Energy Environmental Design) building standards into all public buildings and encourages their use in new development. The U.S. Green Building Council has established a green building certification process called LEED. LEED establishes specific standards for site suitability, water efficiency, energy and atmosphere conservations, building materials and resources and indoor environmental quality for new construction, existing buildings, and commercial interiors. LEED standards are currently being applied in New Jersey. The Township should continue to monitor LEED standards and periodically update local requirements in accordance with any changes.

***Promote Tree Conservation***

The established urban forest in Montclair is important to the Township's identity and environmental health, in addition to providing habitat for local species. Trees protect water and air quality, control flooding, and reduce stormwater runoff and erosion. They absorb carbon dioxide and release oxygen into the atmosphere. They reduce greenhouse gas emissions, especially carbon dioxide, and they help control global warming.

Trees are important to urban and suburban areas. The planting, maintenance, and protection of trees benefit the urban and suburban environment. Planting or preserving trees in strategic locations can reduce energy demand in buildings and heating and cooling costs. Trees are beneficial for stormwater management, for controlling erosion, and for masking urban noise. Trees can mitigate the adverse impacts of the urban heat island effect. When planted in parking lots and streets, trees are effective in cooling and beautifying the urban and suburban environment.

The clear cutting of forests and trees to prepare a development site has substantially adverse environmental impacts. To conserve its forests and trees, this Conservation Master Plan recommends the

enactment of development design standards and requirements to effectively conserve the Township's forest and tree resources and mitigate their loss to development. The requirements would include submission of information and an inventory to identify the existing trees and forest resources of sites proposed for development, measuring, protecting and retaining specimen trees or tree stands as part of a tree-save plan, limitations on clear-cutting, and requirements for replacement planting, landscaping, or reforestation to mitigate the adverse impact of the development on the Township's tree and forest resources. These recommendations should be implemented and coordinated with recommendations within the Forestry Plan that is currently being prepared by the Township in accordance with the State Forestry Act. It is anticipated that a recommendation regarding whether a Shade Tree Commission should be created in Montclair will be addressed in the previously mentioned tree save plan.

The Tree City USA® program, sponsored by The National Arbor Day Foundation in cooperation with the USDA Forest Service and the National Association of State Foresters, provides technical assistance, national recognition and other services for community forestry programs throughout the country. According to the National Arbor Day Foundation<sup>9</sup>, every community, regardless of size, benefits in different ways from being a Tree City USA. Benefits include: education, public image, citizen pride, financial assistance and publicity. This Conservation Master Plan recommends applying for designation as a Tree City USA® community.

### ***Recycling***

The primary goal of recycling in Montclair is to reduce the township's waste stream to reduce disposal costs as well as to save energy, reduce greenhouse gases, conserve natural resources and provide other environmental benefits.

The New Jersey Mandatory Source Separation and Recycling Act of 1987 (N.J.S.A.) 13:1E-99.11 et seq.) requires that municipalities incorporate the State Recycling Goals for collection, disposition, and recycling as a component of their Master Plans.

The current *Statewide Solid Waste Plan 2006 Update* reaffirms the New Jersey recycling goal as 50% of the municipal solid waste stream. This plan requires that each county and municipality review its recycling plan and strategy for reaching this goal.

The Essex County Solid Waste and Recycling Plan Update has been completed and currently awaits State approval. It is now time for the Township to review its own recycling plans and ordinances required to implement these goals.

In their plans, the State and County strategies to increase recycling tonnage target specific generators such as schools, multifamily housing complexes as well as small- and medium-sized businesses. They also emphasize the need for increased education and promotion as well as the enforcement of local recycling mandates.

The Township must now investigate opportunities to increase recycling in the community with an implementation framework. This should reflect the need to increase tonnages of the traditional recycling materials such as glass, plastic and metal containers and paper, and also of other recyclable items such as computers and other consumer electronics.

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<sup>9</sup> <http://www.arborday.org/programs/treeCityUSA.cfm>

The Township recycling plan should incorporate the State's *Environmentally Preferable Purchasing* (EPP) Policy, which includes requirements that all office paper products are made with 30% post-consumer recycled content. The plan should also create any new recycling ordinances in accordance with all state and county requirements.

The resulting plan should be included as a Recycling Element of the Master Plan.

### ***Habitat for Wildlife***

Across the nation there has been a resurgence of wildlife in suburbanized areas. In New Jersey, the increase in the number of deer is so great that wildlife professionals are currently evaluating such population dynamics as can the numbers survive?, will there be mass starvation?, and the like.

Many experts believe that suburban habitats foster more deer than forests because forests have been allowed to regrow without logging or burning, so they lack the "edge" that allows sunlight in and encourages vegetation suitable for deer.

Many animals other than deer are repopulating suburban areas. Some of these include squirrels, chipmunks, opossums, raccoons, and rabbits, as well as various types of birds.

To encourage backyard habitats in suburbanized Montclair, the Township should encourage the preservation of existing densities and overdevelopment on existing lots. Over time, individuals make additions to homes or replace existing homes with new, larger homes. This Conservation Master Plan encourages the maintenance of the existing single-family residential zone plans to encourage this resource.

Environmental groups acknowledge habitat within the suburban environment. A project of the National Wildlife Federation is called "Backyard Wildlife Habitat." As part of this program, the National Wildlife Federation advises amateur naturalists on how to develop wildlife friendly yards and then certifies individual backyards that have been designed to attract wildlife. A local chapter exists in Montclair called Montclair Backyard Habitat Project. This group is well on its way towards certifying local properties in accordance with "Backyard Wildlife Habitat" requirements with a goal of ultimately certifying the town as a recognized "Backyard Wildlife Habitat" community.

This Conservation Master Plan encourages opportunities to increase the habitat potential in Montclair without providing the necessary flora to support a local deer population.<sup>10</sup> Rather, the emphasis should be to attract birds and other small species such as rabbits and squirrels. The Habitat for Wildlife program encourages non-manicured passive open space, which differs from green spaces in the County Parks. Additional information about this program can be found at [www.montclairwildlife.com](http://www.montclairwildlife.com).

### ***Evaluate the Township Noise Ordinance***

Many writers, artists and other professionals choose Montclair to conduct their home occupation related businesses. This reflects a nationwide trend as a result of advances in telecommunications. There is a need to be sensitive to these uses. A leaf blower ordinance is one way in which the Township addresses this issue. However, there is a need to monitor and update this ordinance over time.

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<sup>10</sup> <http://www.nwf.org/backyard/index.cfm>

## ***OPEN SPACE, RECREATION AND NONVEHICULAR CIRCULATION***

### ***Establish a Township Open Space and Preservation Program***

Montclair should establish a program to preserve additional open space to protect the Township's natural resources. A successful Township program will include municipal funding to leverage monies from the County, the State or both for preserving open space. This will expand the protected natural areas in Montclair and help implement a system of greenbelts and greenways. Montclair should take the following actions to implement an open space preservation program:

- ❑ Maintain a dedicated source of funding or alternative means to fund open space preservation in Montclair and use the funds to leverage additional County or State funds for open space in Montclair.
- ❑ Consideration should be given to applying to the State Green Acres Program and/or the Essex County Park Program to secure grants for open space and recreation programs in Montclair.
- ❑ Create a recreation and open space master plan element that identifies specific properties appropriate for acquisition. This plan should also create an evaluation matrix to assist in the prioritization/ranking of properties that may be considered for acquisition.

### ***Require Development and Redevelopment Practices that Preserve Open Space and Reduce Environmental Impacts***

Protecting environmentally sensitive lands and historic resources areas is a principle of the Township Conservation Master Plan. Montclair should provide for development practices that support this principle. Consequently, this Conservation Master Plan recommends the consideration of utilizing the State's newly enacted Transfer of Development Rights (TDR) regulations to preserve this resource.

Pervious hardscape materials such as asphalt and concrete provide numerous environmental benefits. The use of pervious materials often eliminates the need for stormwater devices such as retention ponds and swales, which can limit land disturbance on a tract of land. The use of pervious materials are best management practices (BMP) recommended by the Environmental Protection Agency and the New Jersey Department of Environmental Protection (NJDEP) and other agencies for the management of stormwater runoff on a regional and local basis.

Pervious materials typically provide projects with points toward certification under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) Green Building Rating System.

Pervious pavement integrates hardscape surfaces with stormwater management by allowing rainwater to seep into the ground. Pervious materials can be instrumental in recharging groundwater and reducing stormwater runoff.

This Plan recommends the use of pervious materials when appropriate for:

- Parking lots
- Sidewalks and pathways
- Patios
- Tennis courts

- Swimming pool decks
- Foundations/floors for greenhouses and similar uses
- Sound barriers
- Tree grates in sidewalks
- Low-volume pavements
- And other appropriate uses as recommended by the Township Engineer

### ***Encourage Pedestrian Circulation and Bikeways***

According to the Montclair Bicycle and Pedestrian Local Assistance Study (MBPLAS), the Township of Montclair is traversed by approximately three and a half miles of active railroad tracks and the right-of-way for the railroad varies between 70 and 100 feet, with an additional Class II easement of 50 feet between Normal Avenue and Mt. Hebron Road.

MBPLAS, locally known as the Bike PED Action Plan, indicates that a portion of this right-of-way could be acquired to create a bicycle/pedestrian corridor traversing the Township north of Bloomfield Avenue that would connect residents to train stations, businesses and other community facilities. MBPLAS further suggests a phasing of any improvements to limit start-up costs. Phase I proposes design and construction between Normal Avenue and Mt. Hebron Road. This section of the proposed trail could provide an excellent connection between residences, the Montclair Heights Train Station, and Montclair State University.

Furthermore, MBPLAS indicates that “in Montclair, a ‘rail-with-trail’ could benefit residents desiring non-motorized access to train stations, students and faculty, business owners and recreational users.

This Conservation Master Plan recommends that the Township continue to investigate the implementation of the Bike Ped Action Plan subject to a safety feasibility analysis.

### **Alleys**

As identified in Appendix B, Montclair has numerous alleys or pedestrian connections between Township roads. These alleys are a resource that few communities which developed over a century ago have. As with any resource, improvements are necessary to maintain their viability. This Conservation Master Plan supports improvements to maintain and increase the pedestrian usage of Township alleys. Appendix B identifies the Block and Lot numbers of existing alleys in Montclair.

### **Bicycle Storage**

Conservation planning requires educating the public so individuals are aware of alternative options or ways of conserving a resource. Conservation planning also requires the creation and placement of services to make the conservation of a resource easier for users to implement. An excellent example in Montclair is the numerous alley connections between streets that encourage individuals to walk to the train or nearby areas in Town. Another opportunity to encourage bicycling to the train, nearby commercial areas, community facilities and other locations is the placement of bicycle racks. The Township working with Bike Montclair, a private entity stakeholder, should identify locations where bicycle racks are needed to encourage their use.

Township ordinances should also be amended to require bicycle racks associated with all major development.

### ***BEST MANAGEMENT PRACTICES***

#### ***Improve the Water Quality of Local Streams***

To protect streams from further degradation of water quality, stream restoration and best management practices are needed. The Township should establish minimum standards for stream corridor protection. Ideally, a stream buffer width having a minimum distance of 75 feet and an average distance of 100 feet, as measured from the 100 year floodline is appropriate. If there is no 100 year floodline, then the buffer should be maintained from the bank of the stream, lake, or pond. An exact buffer width should be determined during the crafting of implementation ordinances.

The buffer will slow water entering the stream and trap sediment, fertilizers, pesticides, pathogens and heavy metals, thereby filtering particulates from entering the surface water body. The buffer will also provide a source of food, nesting, cover and shelter for wildlife species and a corridor for the migration and movement of wildlife. Buffers are desirable that provide at least three (3) layers of vegetation, including herbaceous plants that serve as ground cover, under story shrubs, and trees that, when fully mature, will form an overhead canopy. When constructing a buffer area, vegetation should be indigenous, non-invasive species and be consistent with the soil, slope and moisture conditions of each site.

This Conservation Master Plan specifically recommends the maximum practical use of the following nonstructural strategies for all major developments in accordance with Subchapter 5 of the DEP Best Management Practices manual:

1. Protect areas that provide water quality benefits or areas particularly susceptible to erosion and sediment loss.
2. Minimize impervious surfaces and break up or disconnect the flow of runoff over impervious surfaces.
3. Maximize the protection of natural drainage features and vegetation.
4. Minimize the decrease in the pre-construction "time of concentration."
5. Minimize land disturbance including clearing and grading.
6. Minimize soil compaction.
7. Provide vegetated open-channel conveyance systems discharge into and through stable vegetated areas.
8. Provide preventative source controls.

#### **Recommended Measures**

##### ***Vegetated Filter Strips***

Vegetated filter strips are engineered stormwater conveyance systems that treat small drainage areas. Generally, a vegetated filter strip consists of a level spreader and planted vegetation. The level spreader ensures uniform flow over the vegetation that filters out pollutants, and promotes infiltration of the stormwater. Vegetated filter strips are best utilized adjacent to a buffer strip, watercourse or drainage

swale since the discharge will be in the form of sheet flow, making it difficult to convey the stormwater downstream in a normal conveyance system (swale or pipe).

#### *Stream and Valley Corridor Buffer Strips*

Buffer strips are undisturbed areas between development and the receiving waters. There are two management objectives associated with stream and valley corridor buffer strips:

- To provide buffer protection along a stream and valley corridor to protect existing ecological form and functions; and
- To minimize the impact of development on the stream itself (filter pollutants, provide shade and bank stability, reduce the velocity of overland flow).

Buffers only provide limited benefits in terms of stormwater management, however, they are an integral part of a system of best management practices.

#### *Public Education*

Montclair should educate the public regarding best management practices. For example, homeowners could be educated on the impacts of the overuse of fertilizers. The educational approach should include other techniques for homeowners to create a “green lawn” without over fertilizing.

#### *Improve Requirements to Stabilize Stream Banks, Shoreline and Slopes*

The root systems of trees, shrubs and plants effectively bind soils to resist erosion. Increasing the amount of required plant material for new and redeveloped residential and non-residential sites should be encouraged throughout the Township. Planting schemes should be designed by a certified landscape architect to combine plant species that have complementary rooting characteristics to provide long-term stability.

#### *Regulate Stormwater Management for Infill Development*

Applying stormwater management practices for infill development in Montclair may be a challenge. In most cases, the level of disturbance and the amount of new impervious surface associated with home expansions will not trigger NJDEP stormwater management regulations. Furthermore, the limited available vacant land and its cost may limit stormwater management options for infill development situations.

In Montclair, the most common form of infill development is the demolition of a home and replacement with a home containing a larger building footprint. This Conservation Master Plan does not contemplate the replacement of single-family homes with higher density land uses, i.e., multi-family housing, which would have greater stormwater management impact as a result of increased impervious coverage.

In most instances, infill development creates a more intensive use than previous uses and has higher levels of impervious cover, runoff, and contaminant loading per unit of area. In Montclair, the impacts of numerous expansions to single-family homes are significant. For infill development that conforms to existing zoning requirements, typically only a building permit is required rather than minor site plan approval, which is granted by the Construction Official rather than the Planning Board.

In many cases, areas surrounding the new infill development were built before the need for stormwater controls was recognized and may be experiencing stormwater management problems. While the development of single, individual infill sites may not have significant stormwater impacts, the development of many individual sites can have cumulative effects and exacerbate existing problems or create new stormwater problems by increasing flooding, erosion, or water quality degradation.

On residential properties, infill development is often limited by lot-level controls. In most cases, having residential roof leaders that discharge to ponding areas is the prevalent practice, e.g., lawn. However, there are additional opportunities to increase groundwater recharge and reducing evaporation by using structural stormwater systems, such as a drywell. Other options include:

- Redirecting gutters to lawns;
- Creating of shrubby rain gardens;
- Promoting awareness of problems associated with soil compaction; and
- Encouraging public education.

To properly regulate infill development, this Conservation Master Plan specifically recommends the creation of regulations that require stormwater improvements for construction that substantially increase the building footprint. Revisions to the Township's grading and disturbance requirements is one method to regulate infill development.

**STORMWATER MANAGEMENT THRESHOLDS (EXAMPLE)**

**A. Residential Development**

1. Total lot disturbance, including new building and lot coverage, soil disturbance and/or re-grading, exceeds X square feet in the R-X, R-X or R-X Zone District or 7,000 square feet in other zone districts; and/or
2. New impervious surface exceeds 10,000 square feet; and/or
3. A building permit is required and:
  - a. Building coverage or lot coverage exceeds or will exceed 75% of the maximum permitted in the R-X, R-X or R-X Zone District or 85% of the maximum permitted in the other zone districts; and
  - b. Building coverage added as a result of the development exceeds 1,200 square feet in the R-X, R-X, or R-X Zone District or 400 square feet in other zone districts.

## ***INNOVATIVE PLANNING TECHNIQUES***

### ***Create Scatter Site Redevelopment Areas and Plans***

To leverage the maximum amount of funding to cleanup existing Brownfields, consideration should be given to creating scattered site redevelopment areas<sup>11</sup> and plans.

### ***Transfer of Development Rights (TDR)***

Transfer of Development Rights (TDR) is the transfer of the development potential of one piece of property to another by leveraging the power of the real estate market. TDR redirects growth from areas with important natural or community resources to places where growth and development are more appropriate. For Montclair, an individual in a "receiving area" would purchase TDR credits from the Township's "sending area," which could include privately owned open space (not already protected) who, through easement or deed restriction, would be preserved in perpetuity. Property owners in the "receiving area" are provided with development incentives that would encourage the purchase of credits from the sending area that would promote the long range planning and economic development objectives of Montclair.

In order to implement a TDR program as authorized by the State Transfer of Development Rights Act, Montclair would have to complete additional analyses and planning documents as required by the State in order to adopt and implement a TDR ordinance.

### ***Create a Township GIS***

The Township of Montclair has historically been proactive in planning for its future. The preparation of this Conservation Master Plan was based upon the review of numerous reports, studies and maps. A more detailed level of analysis could have been undertaken by utilizing a Geographic Information System (GIS) that contained a tax lot line base map.

The current trend in Montclair is to prepare data, i.e., various reports, studies and maps, and place them on shelves or in drawers when completed. Much of this information was most likely created in some type of digital format that could be distributed to the Township as a final deliverable and imported into a Township GIS.

#### What is GIS?

A geographic information system (GIS) may be defined as "...a computer-based information system which attempts to capture, store, manipulate, analyze and display spatially referenced and associated tabular attribute data, for solving complex research, planning and management problems" (Fischer and Nijkamp, 1992).

The major advantage of such a system is that the user can interact with the system, as opposed to geographic data appearing on static, paper maps. The Township has conducted a needs assessment to determine the feasibility of implementing a Township-wide GIS. However, at this time has chosen not to implement a GIS system.

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<sup>11</sup> Redevelopment areas dispersed throughout the Township.

## **ORDINANCE RECOMMENDATIONS**

1. Tree Preservation. To preserve the established shade tree resource in the Township, a tree preservation ordinance should be created and located within Chapter 202, entitled “Land Use Procedures”. The creation of such an ordinance would be “triggered” by development as defined by the Municipal Land Use Law (MLUL). Accordingly, an ordinance located within Chapter 202 would not prohibit individual property owners from cutting trees unless such an action was considered “development” as defined by the MLUL. Such an ordinance should include provisions for:
  - a. Inventory – A list of all trees with a diameter breast height (DBH) (typically defined as the diameter as measured at 4.5 feet above the forest floor on the uphill side of the tree.)
  - b. A visual tree assessment of the trees health and condition.
  - c. Additional Provisions for Major Development. A site plan should be prepared that indicates:
    - i. Existing wooded areas;
    - ii. The location of streams and other watercourses;
    - iii. The total acreage of the tract;
    - iv. The location of slopes in excess of 10%;
    - v. The total number, by species of existing trees with a DBH of six inches or greater;
    - vi. The total number, by species of existing trees to be removed; and
    - vii. Approved method of disposal.
  - d. Recommendations regarding which trees should be saved, which includes a construction management recommendation regarding tree protection for trees identified to be saved.
  - e. Replacement Plan
  - f. Fees in lieu of planting of replacement trees
  - g. Provision allowing a reduction of replacement trees when their cost exceeds an “x” percentage of the project.

It should be noted that a tree preservation ordinance located within Chapter 202 of the Township’s ordinance will not prevent the removal or clear cutting of trees prior to the filing of a development application. For this reason, consideration should be given to requiring a permit for the cutting of any private tree with a DBH of 15 inches or greater and an absolute prohibition on the clear cutting of trees.

The creation of a permit system would enable the Township to track the number of trees that are being removed. This information could be monitored by the Shade Tree Division within the Department of Community Services and Environmental Commission to make further recommendations to the Township Council regarding the need to further regulate tree removal.

The existing street tree ordinance protects public trees from removal. However, this ordinance should be reviewed and periodically updated.

This Conservation Master Plan supports the creation of an historic tree ordinance which is currently being drafted under the supervision of the Community Services Department.

2. Recreation and Open Space - require “In lieu” contributions for recreation fees. These are fees paid by the developer in lieu of providing the necessary amount of recreation on-site.
3. Bicycle racks – create an ordinance in accordance with the body text of this plan.

4. Steep slopes – revise the current ordinance in accordance with the body text of this Conservation Master Plan.
5. Stream corridor protection – create an ordinance in accordance with the body text of this Conservation Master Plan.
6. Landscape plans – to encourage the creation of landscape plans with greater consideration to creating plans with year round interest and designed by trained professionals, the Township should require that a certified landscape architect prepare all landscape plans for major development.
7. Environmental Impact Statement. To evaluate potentially harmful effects on the natural and aesthetic environment, consideration should be given to requiring an Environmental Impact Statement for all major site plan and subdivision applications and a modified environmental impact statement for minor site plan and subdivision applications. This Conservation Master Plan recognizes that the level of detail required for various types of applications should vary depending on the size of the development proposal, the nature of the site and the location of the project. Consideration should be given to conducting a pre-application conference with the Township Planner and the environmental commission chairman to determine the content of the environmental impact statement.
8. Wellhead protection overlay – create an ordinance in accordance with the body text of this Conservation Master Plan.
9. Stormwater Management – The Township may wish to create provisions that:
  - a. Revise Township ordinances to permit the use of permeable materials where appropriate (see page CO-19 of this Plan);
  - b. Require vegetative filters and improved landscaping in off-street parking areas (see illustration);
  - c. Permit flush curbs and/or curb cuts to allow for runoff to discharge into adjacent vegetated areas as sheet flow;
  - d. Permit an open filter area adjoining a catch basin.
10. Recycling Ordinance – Prepare a recycling ordinance in accordance with the recommendations of this Plan.

#### **IMPLEMENTATION/ACTION PLAN**

This section is intended to provide concrete steps towards implementing the objectives of this Conservation Master Plan. This Conservation Master Plan recommends a course of action to improve conservation policies and an implementation agenda. The Environmental Commission, working with the Township Planner, Township Engineer and associated Township personnel should be responsible for implementing the goals and specific objectives of this Conservation Master Plan.

Successful implementation will require the participation of existing Township boards, committees and staff including, but not limited to, the Township Council, Planning Board, Recreation Department, Community Services Department, and others.

Accomplishing the conservation objectives will require time and commitment from Township personnel. Where money is required, it may be sought from state, county and federal governmental agencies, private non-profit conservation agencies, foundations, and individual donations in addition to municipal funds.

As part of the Township's conservation implementation efforts, the following studies and/or actions should be explored:

1. Prepare ordinance amendments as indicated in the Ordinance section of this Conservation Master Plan.
2. Consider the Creation of a Township GIS in accordance with the Township's GIS Needs Assessment.
3. Evaluate the feasibility of a local open space tax to be utilized for recreation and open space land acquisitions.
4. Prepare a recreation and open space plan. Investigate applying to Green Acres and/or Essex County for open space and recreation monies.
5. Create files for each known contaminated site within the Township. Supplement each file as NJDEP copies the Township on any new undertakings at each contaminated site. Accordingly, the Township and its citizenry will be more readily able to investigate the level of contamination and the status of its remediation.
6. Consider creating scattered site redevelopment areas to expedite environmental cleanup.
7. Work with the NJDEP Office of Brownfield and NJ Economic Development Agency to remediate brownfield sites. Monies are available to:
  - Conduct project feasibility studies
  - Predevelopment funding
  - Investigation and remediation
  - Cleanup underground storage tanks
8. Investigate where appropriate and provide technical assistance to encourage the clean up and reuse of contaminated sites pursuant to the Economic Opportunity Zone Act, which expands eligibility for property tax exemptions to residential developers, and extends the maximum tax exemption term from ten to fifteen years where developers agree to fully remediate sites rather than using engineering controls, i.e., capping a site.
9. Assist property owners and the Township of Montclair in assessing the extent of environmental contamination of properties by accessing the Hazardous Discharge Site Remediation Fund (HDSRF) to prepare environmental assessments on contaminated sites.
10. Petition the New Jersey Department of Transportation for Transit Village designation to improve transit friendly projects in the business districts and decrease dependency on vehicles as the sole source of transportation.
11. Investigate implementing a rails-with-trails along the NJ transit right-of-way and trails along Toney's Brook as identified on the Conservation Map.

12. Monitor the condition of existing pedestrian alleys as documented in Appendix B and allocate funds for improvements in the Township's capital budget.
13. Create a recycling plan element of the Master Plan.
14. Support policy recommendations within the Township's Stormwater Management Plan.
15. Incorporate pedestrian and bicycle friendly design into redevelopment projects and improvements near train stations.
16. Work with Bike Montclair to identify locations where bicycle racks should be installed.
17. Continue to monitor Fanwood and other towns' TDR activities to evaluate the potential for a TDR program in Montclair.
18. Implement the stormwater management recommendations within this Plan.
19. Investigate and implement the necessary steps to participate in the Tree City USA program.

## APPENDIX A

### *Contaminated Sites*

The United States Environmental Protection Agency (USEPA) lists properties that meet the criteria set by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (42 USC Section 9610). CERCLA provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances by defining liability of responsible parties. The law authorized both short-term and long-term remedial responses. The National Priority list is such a response to sites that do not pose an immediate threat to human health. The Act also established a trust fund, entitled Superfund, to provide for cleanup when no responsible party could be identified. The Superfund tax is levied on the chemical and petroleum industries. In New Jersey, the Site Remediation Program of the Department of Environmental Protection (NJDEP) administers the Superfund program.

The National Priority List (NPL) identifies the Montclair-West Montclair Radium site as a Federal-radium remedial project in Montclair and West Montclair. According to the EPA, "The soil on the site was contaminated, to varying degrees, with radium. When this material is located in and around a home, it may result in high levels of radon gas and gamma radiation in the home. Radon is a decay product of radium, and gamma radiation is the energy released during the decay process. People who are exposed to the radium, radon, radon-decay products and elevated levels of gamma radiation may be at risk. In addition, accidental ingestion of radium contaminated soil may cause adverse health effects.

The Site Remediation Program also provides a listing of the Known Contaminated Sites where contamination of soil or ground water is confirmed. In Montclair, there are 73 sites that have been identified.

The Site Remediation & Waste Management, Division of Remediation Support and the Division of Remediation, Management and Response administers the Industrial Site Recovery Act of 1993 (ISRA) (N.J.S.A. 13:1K and N.J.A.C. 7:26B). ISRA is directed toward the regulation of both the owner of the real property and operator of an industrial establishment and affects the sale, transfer, or closure of said operations. An "industrial establishment" refers to the North American Industry Classification System (NAICS) code listed in N.J.A.C. 7:26 B - Appendix C with specified exceptions and limitations; the start of operations on or after December 31, 1983; and business activities that involve the generation, manufacture, refining, transportation, treatment, storage, handling, or disposal of hazardous substances or hazardous wastes. ISRA also addresses adaptive reuse of brownfield sites and the funding mechanisms for remediation of sites. The goal is to ensure that these sites are not abandoned for State cleanup.

ISRA encompasses three elements: discharge response, industrial site evaluation and responsible party cleanup. The industrial site evaluation element is the most crucial for Montclair. Part of this element includes properties that are in compliance with the Underground Storage Tank requirements. In addition, ISRA includes sites listed on the Brownfield Site Mart, Department of Community Affairs, and New Jersey Brownfields Redevelopment Task Force.

**APPENDIX A  
KNOWN CONTAMINATED SITES**

SITE NAME	SITE ADDRESS	IDENTIFICATION NUMBER	STATUS	STATUS DATE	MUNICIPALITY
<b>Federal National Priority List</b>					
Montclair/West Orange Radium Site		NJD980785653	Active	9/15/2005	Montclair Town
<b>NJDEP Known Contaminated Sites List (2005)</b>					
114 UPPER MOUNTAIN AVENUE	114 UPPER MOUNTAIN AVE	161630	Active	7/31/2002	Montclair Town
11 UNDERCLIFF DRIVE	11 UNDERCLIFF DR	245284	Active	1/11/2005	Montclair Town
130 WESTVIEW ROAD	130 WESTVIEW RD	245286	Active	1/11/2005	Montclair Town
133 SUMMIT AVENUE	133 SUMMIT AVE	232189	Active	6/30/2004	Montclair Town
149 CLAREMONT AVENUE	149 CLAREMONT AVE	196861	Active	6/24/2003	Montclair Town
16 WINDSOR PLACE	16 WINDSOR PL	241397	Active	12/1/2004	Montclair Town
154 UNION STREET	154 UNION ST	215780	Active	11/5/2003	Montclair Town
15 BRUCE ROAD	15 BRUCE RD	230277	Active	6/8/2004	Montclair Town
161 WILDWOOD AVENUE	161 WILDWOOD AVE	246389	Active	1/26/2005	Montclair Town
17 PARKWAY AVENUE	17 PARKWAY AVE	132828	Active	1/15/2002	Montclair Town
18 GLENSIDE TERRACE	18 GLENSIDE TER	216315	Active	11/12/2003	Montclair Town
19 WHEELER ST	19 WHEELER ST	G000059965	Active	10/12/2000	Montclair Town
215 GLENRIDGE AVENUE	215 GLENRIDGE AVE	160120	Active	7/3/2002	Montclair Town
218 UPPER MOUNTAIN AVENUE	218 UPPER MOUNTAIN AVE	171409	Active	12/10/2002	Montclair Town
21 EDGEWOOD ROAD	21 EDGEWOOD RD	133076	Active	2/11/2002	Montclair Town
248 FULLERTON AVENUE	248 N FULLERTON AVE	226734	Active	4/16/2004	Montclair Town
314 UPPER MOUNTAIN AVENUE	314 UPPER MOUNTAIN AVE	G000033595	Active	4/13/1998	Montclair Town
35 WARREN PLACE	35 WARREN PL	244944	Active	1/7/2005	Montclair Town
36 CAROLIN ROAD	36 CAROLIN RD	249481	Active	3/21/2005	Montclair Town
45 GODFREY ROAD	45 GODFREY RD	207788	Active	9/9/2003	Montclair Town
45 NORTH FULLERTON AVENUE	45 N FULLERTON AVE	017305	Active	5/5/2004	Montclair Town
46 LLOYD ROAD	46 LLOYD RD	228400	Active	5/10/2004	Montclair Town
574 HIGHLAND AVENUE	574 HIGHLAND AVE	203714	Active	8/21/2003	Montclair Town
60 BEVERLEY ROAD	60 BEVERLEY RD	G000041080	Active	6/28/2004	Montclair Town
619 631 BLOOMFIELD AVENUE	619 631 BLOOMFIELD AVE	129556	Active	9/18/2001	Montclair Town
61 NORTH WILLOW STREET	61 N WILLOW ST	217638	Active	12/11/2003	Montclair Town
67 CLUB ROAD	67 CLUB RD	248088	Active	2/28/2005	Montclair Town
77 PORTER PL	77 PORTER PL	G000062799	Active	8/6/2001	Montclair Town
8 CLOVERHILL PLACE	8 CLOVERHILL PL	231051	Active	6/16/2004	Montclair Town
95 GORDONHURST AVENUE	95 GORDONHURST AVE	173335	Active	1/27/2003	Montclair Town

**APPENDIX A  
KNOWN CONTAMINATED SITES**

<b>SITE NAME</b>	<b>SITE ADDRESS</b>	<b>IDENTIFICATION NUMBER</b>	<b>STATUS</b>	<b>STATUS DATE</b>	<b>MUNICIPALITY</b>
97 SUMMIT AVENUE	97 SUMMIT AVE	194118	Active	5/5/2003	Montclair Town
98 SUMMIT AVENUE	98 SUMMIT AVE	240985	Active	11/23/2004	Montclair Town
99 SUMMIT AVENUE	99 SUMMIT AVE	246319	Active	1/31/2005	Montclair Town
9 BELVIDERE AVENUE	9 BELVIDERE AVE	231970	Active	6/29/2004	Montclair Town
AMOCO SERVICE STATION 4223	525 VALLEY RD	000893	Active	4/1/2003	Montclair Town
ANGELO MIELE & SONS INC	328 ORANGE RD	008748	Active	4/1/2003	Montclair Town
BELLEVUE THEATER	260 BELLEVUE AVE	G000027132	Active	8/4/1997	Montclair Town
CHURCH ST PLAZA	45 CHURCH ST	021601	Active	9/29/1997	Montclair Town
CLAIRIDGE LINCOLN MERCURY INC	33 TO 39 GREENWOOD AVE	023751	Active	2/23/2002	Montclair Town
CVS PHARMACY	510 516 BLOOMFIELD AVE	196838	Active	6/24/2003	Montclair Town
DECAMP BUS LINES-BUS GARAGE	101 GREENWOOD AVE	025181	Active	12/28/2001	Montclair Town
EASTERN OIL COMPANY	694 BLOOMFIELD AVE	008179	Active	11/22/1999	Montclair Town
EXXON R/S 3-2098	264 BLOOMFIELD AVE	007827	Active	4/13/1995	Montclair Town
EXXON STORE 3-1062	572 VALLEY RD	008144	Active	5/11/1995	Montclair Town
EXXON STORE 3-5331	23 ORANGE RD	008450	Active	9/29/1995	Montclair Town
FERRARAS AUTO BODY INC	33 TO 37 ORANGE RD	004378	Active	5/5/1996	Montclair Town
FIRST FEDERAL SAVINGS & LOAN	323 ORANGE RD	G000032059	Active	6/18/1997	Montclair Town
FRANK & RICKS INCORPORATED	651 BLOOMFIELD AVE	006394	Active	3/9/1995	Montclair Town
JP MORGAN CHASE AND COMPANY	19 FULLERTON AVE	187616	Active	2/4/2003	Montclair Town
JP MORGAN CHASE AND COMPANY	600 VALLEY RD	187608	Active	2/4/2003	Montclair Town
JP MORGAN CHASE & CO	475 BLOOMFIELD AVE	164709	Active	1/29/2003	Montclair Town
JP MORGAN CHASE & CO	580 VALLEY RD	187636	Active	2/4/2003	Montclair Town
JP MORGAN CHASE & CO	17 WATCHUNG PLZ	187688	Active	2/4/2003	Montclair Town
LARRY'S AUTO REPAIR INC	142 VALLEY RD	004548	Active	10/31/2002	Montclair Town
MAR-KAL PRODUCTS CORP	105 WALNUT ST	022311	Active	4/8/1997	Montclair Town
MITCHELL SUPREME FUEL CO	103 GROVE ST	009029	Active	6/12/2003	Montclair Town
MOBIL #57285	632 VALLEY RD	003763	Active	12/20/1999	Montclair Town
MONTCLAIR ATI	113 GROVE ST	002286	Active	10/21/1993	Montclair Town
MONTCLAIR CITGO	527 VALLEY RD	009211	Active	7/8/1992	Montclair Town
MONTCLAIR FIRE DEPARTMENT FIREHO	151 HARRISON AVE	031537	Active	12/11/2002	Montclair Town
MONTCLAIR TOWN BOE FORTUNATO FIE	ESSEX AVE	221762	Active	2/19/2004	Montclair Town
MONTCLAIR TWP PUBLIC WKS	219 NORTH FULLERTON AVE	011764	Active	11/21/2002	Montclair Town
MONTCLAIR & WEST ORANGE RADIUM C	VARIOUS LOCATIONS	G000005323	Active	11/15/1984	Montclair Town
NJ TRANSIT BAY STREET STATION	PINE ST & BLOOMFIELD AVE	G000044443	Active	1/26/2001	Montclair Town

**APPENDIX A  
KNOWN CONTAMINATED SITES**

<b>SITE NAME</b>	<b>SITE ADDRESS</b>	<b>IDENTIFICATION NUMBER</b>	<b>STATUS</b>	<b>STATUS DATE</b>	<b>MUNICIPALITY</b>
NJ TRANSIT RIGHT OF WAY	BLOOMFIELD & GLENRIDGE AVES	G000061359	Active	2/6/2001	Montclair Town
REGENCY MOTORS	BLOOMFIELD AVE & VALLEY RD	005625	Active	1/11/1996	Montclair Town
SAM'S GARAGE INC	118 WATCHUNG AVE	008739	Active	6/7/1993	Montclair Town
SHELL SERVICE STATION #138430	115 BLOOMFIELD AVE	012157	Active	2/6/2002	Montclair Town
SOUTHEND PYRAMID	399 ORANGE RD	032880	Active	12/4/2000	Montclair Town
SOUTH ORANGE COMMUTER PARKING L	S ORANGE AVE & CHURCH ST	G000032678	Active	10/21/1997	South Orange Village
WATCHUNG AVE PUMP STATION	54 WATCHUNG AVE	011763	Active	11/18/1996	Montclair Town
WEST ESSEX REHABILITATION CENTER	83 WALNUT ST	030910	Active	1/10/2001	Montclair Town
YWCA OF MONTCLAIR BD OF TRUSTEES	159 GLENRIDGE AVE	155309	Active	11/12/2003	Montclair Town

**Appendix B - Recommendations for Municipally Owned Land**

Block	Lot	Location	Acres	Lot Usage	Recommendation
103	26	BRIAR HILL ROAD	0.575	Water Department	None
403	1	BLOOMFIELD AVENUE	0.2132	Park	Preserve as open space/park
601	1	204 HIGHLAND AVENUE	0.5014	Water Department	None
601	25	HIGHLAND AVENUE	0.0854	Walkway from Cedar Grove to Highland Avenue	None
602	1	WATCHUNG AVENUE	0.2014	Pedestrian Connection between Upper Mountain Road and Highland Ave.	Investigate improvements to increase pedestrian activity
801	9	HIGHLAND AVENUE	20	Park	Preserve as open space/park
802	27	UP. MOUNTAIN AVENUE	10.64	Mountainside Park	Preserve as open space/park
803	17	UP. MOUNTAIN AVENUE	0.2376	Green space next to rail r-o-w	Preserve as open space/park
803	25	UP. MOUNTAIN AVENUE	5.04	Mountainside Park	Preserve as open space/park
905	24	NORMAL AVENUE & REAR	3.45	Township open space buffer between rail line and single-family homes	Preserve as open space/trail improvements
1003	15	CARLISLE ROAD	0.0521	Public sidewalk connection	None
1301	27	SO. MOUNTAIN AVENUE	0.1125	Walkway from Mountain Avenue to Clinton Avenue	Investigate improvements to increase pedestrian activity
1404	18	ORANGE ROAD & REAR	1.13	Parking Deck	None
1509	18	17 TALBOT STREET	0.1194	Hollow Day Care Center	None
1607	11	VALLEY ROAD	15.5	Memorial Park	Preserve as open space/park
1702	1	EDGEMONT ROAD	0.5	Edgemont Rd. Park	Preserve as open space/park
1703	50	WATCHUNG AVE.	3.5	Water Department	None
1711	31	VALLEY ROAD	0.1919	Engine Company #2	None
1711	37	BELLEVUE AVE. & REAR	0.77	Parking Lot	None
1712	1	NORTHVIEW AVE.	0.1882	Triangular green space (intersection of Valley Rd and Northview Ave.)	Preserve for open space and pedestrian improvements. Consider transportation improvements as necessary
1801	54	UP. MOUNTAIN AVENUE	0.0627	Green space between Upper Mountain Ave. and rail r-o-w.	Preserve as open space/park
1916	1	VIRGINIA AVE.	0.0977	Green space next to the intersection of Franklin and Virginia Avenue's	Preserve for open space and pedestrian improvements. Consider transportation improvements as necessary
2003	4	CEDAR AVE.	30.05	Nishuane Park	Preserve as open space/park
2003	5	HARRISON AVE.	0.1722	Engine Company #3	None
2101	32	LLEWELLYN ROAD	0.3169	Park	Preserve as open space/park
2106	1	HARRISON AVE.	1.6	Porter Park	Preserve as open space/park
2202	5	50 SO. FULLERTON AVENUE	0.7259	Library	None
2206	13	CRESCENT PLAZA	1.8	Parking Deck	None
2208	1	630 BLOOMFIELD AVE.	1.02	Parking lot	None
2209	15	647 BLOOMFIELD AVENUE	0.1423	Police Headquarters	None
2210	3	MAPLE PLACE	0.2984	Parking Plaza	None
2211	11	MAPLE PLACE	0.4077	Parking Plaza	None
2212	7	PARK ST. & NO. FULLERTON A	0.7912	Parking Plaza	None
2213	7	MONTAGUE PLACE	0.1761	Parking Plaza	None
2213	16	PORTLAND PLACE	0.1492	Parking lot	None
2311	14	205 CLAREMONT AVE	1.2591	Municipal Building	None
2407	20	PARK ST	0.16	Pedestrian connection between Midland Ave. and Park Street	Investigate improvements to increase pedestrian activity
2408	1	PARK STREET	0.0848	Irregular shaped (triangular) green space	Preserve as open space/park
2408	18	PARK ST	0.06	Public alley between Park Street and Fullerton Avenue.	Investigate improvements to increase pedestrian activity
2408	29	PARK ST.	2	Rand Park	Preserve as open space/park

Appendix B - Recommendations for Municipally Owned Land

Block	Lot	Location	Acres	Lot Usage	Recommendation
	2408	41 NO. FULLERTON AVE.	0.8462	Improved municipal lot with outdoor storage	Potentially underutilized lot. Investigate potential for lot.
	2503	24 WATCHUNG AVENUE	0.0918	Green space next to Watchung Plaza	Preserve as open space
	2507	1 WATCHUNG AVE.	1.03	Park/green space	Preserve as open space/park
	2601	9 BELLEVUE AVE.	1.33	Parking Lot	None
	2601	10 NO MOUNTAIN AVE	0.5992	Parking lot	None
	2601	12 BELLEVUE & LORRAINE	0.3547	Bellevue Plaza	None
	2602	8 BELLEVUE & LORRAINE	1	Parking lot	None
	2602	22 185 BELLEVUE AVE.	0.4591	Public Library	None
	2707	1 NORWOOD AVE.	0.9789	Park	Preserve as open space/park
	2803	1 NASSAU ROAD	0.3512	Green space on Nassau Road	Preserve as open space/park
	2903	1 HILLTOP PLACE	0.0884	Green space at the intersection of Enfield Avenue/Hilltop Place	Preserve for open space and pedestrian improvements. Consider transportation improvements as necessary
	2905	1 ORANGE RD.-BY-PASS	0.528	Parking Plaza	None
	3001	28 ORANGE RD. & ELM ST.	0.2755	Park	Preserve as open space/park
	3006	36 SEARS PLACE	0.0606	Undersized lot - 33' x 80'	Preserve as open space/park
	3105	2 SEYMOUR STREET	0.61	Parking lot	None
	3106	13 43 SO. FULLERTON AVE	0.5999	Parking lot	None
	3106	17 SO. FULLERTON AVE.	1.52	Parking Plaza	None
	3108	2 GATES AVE.	0.1517	Parking lot	None
	3205	26 GLENRIDGE AVE.	1	Parking lot	None
	3205	27 202 GLEN RIDGE AVE.	0.0819	Parking lot	None
	3206	11 LACKAWANNA PLAZA	0.123	Pedestrian connection from North Willow to Lackawanna Plaza	Investigate improvements to increase pedestrian activity
	3207	1 LACKAWANNA PLAZA	0.2824	Crane Park	Preserve as open space/park
	3209	12 WALNUT STREET	0.225	Engine Company #1	None
	3302	14 NO. FULLERTON AVE.	2.6492	Parking Lot	None
	3303	1 NO. FULLERTON AVE.	0.1469	Triangular green space (intersection of Fullerton Ave and the rail line)	Preserve for open space and pedestrian improvements. Consider transportation improvements as necessary
	3303	10 219 NO FULLERTON AVE	0.46	Department of Community Services	None
	3303	60 ESSEX AVE	10.6	Essex Park	Preserve as open space/park
	3303	62 FOREST ST	0.0574	Driveway easement	None
	3307	5 16 LABEL STREET	0.272	Auto Test Station	None
	3307	8 WALNUT ST. & DEPOT SQ	1.2567	Parking Plaza	None
	3307	10 2 MONTCLAIR AVENUE	2.05	Green space	Preserve as open space/park
	3307	25 CHESTNUT ST.	3.3	Clary Anderson Arena	None
	3307	40 ERIE STREET	0.1354	Pedestrian connection from Erie Street to Label Street	Investigate improvements to increase pedestrian activity
	3308	1 CHESTNUT ST.	2.1	Essex Park	Preserve as open space/park
	3401	1 WATCHUNG PLAZA	0.41	Green space on Watchung Plaza	Preserve as open space/park
	3402	13 FAIRFIELD ST. & REAR	0.62	Parking Lot	None
	3403	16 NO. FULLERTON AVE. R	1.4	Parking Plaza	None
	3506	12 COOPER AVE. REAR	0.0682	Land locked lot between Summit and Cooper Avenues. Appears to have a detached garage.	Township to investigate
	3706	38 YANTACAW BROOK ROAD	2.62	Yantacaw Park	Preserve as open space/park
	3802	45 GROVE STREET	1.4711	Pumping Station	None

**Appendix B - Recommendations for Municipally Owned Land**

Block	Lot	Location	Acres	Lot Usage	Recommendation
	3802	90 RIVERVIEW DR. WEST	0.0703	Utility easement	None
	3802	91 ALEXANDER REAR	0.3128	Part of Alonzo F. Bonsall Wildlife Preserve	Preserve as open space/park
	3802	100 RIVERVIEW DR. W. R.	0.2039	Part of Alonzo F. Bonsall Wildlife Preserve	Preserve as open space/park
	3802	101 ALEXANDER AVE REAR	2.5	Part of Alonzo F. Bonsall Wildlife Preserve	Preserve as open space/park
	3802	150 ALEXANDER AVE. REAR	2.07	Part of Alonzo F. Bonsall Wildlife Preserve	Preserve as open space/park
	3802	151 ALEXANDER AVE. REAR	4.03	Part of Alonzo F. Bonsall Wildlife Preserve	Preserve as open space/park
	3802	152 ALEXANDER AVE. REAR	5.05	Part of Alonzo F. Bonsall Wildlife Preserve	Preserve as open space/park
	3802	153 ALEXANDER AVE. REAR	5.42	Part of Alonzo F. Bonsall Wildlife Preserve	Preserve as open space/park
	3904	65 ORANGE ROAD	0.0689	Undersized 30' x 100' lot	Preserve as open space/park
	3904	66 ORANGE ROAD	8.22	Park	Preserve as open space/park
	3905	15 ROSEDALE AVE.	0.0574	Undersized lot - 20 to 27 feet in width x 100 foot depth (next to Pleasant way)	Preserve as open space/park
	4004	16 WASHINGTON AVE.	0.1377	Nishunae Brook culvert	None
	4308	362 WALNUT STREET	2.03	Parking Lot	None
	4508	1 CLAIRIDGE COURT	0.5	Clairidge Court Park	Preserve as open space/park
	4601	80 WILDWOOD AVENUE	2.2199	Open Space	Preserve as open space/park
	4601	82 PARK PLACE	0.4	Open Space	Preserve as open space/park
	4702	69 YANTACAW BROOK ROAD	7.14	Yantacaw Park	Preserve as open space/park
	4805	52 ALEXANDER AVE. REAR	7.79	Tuers Park	Preserve as open space/park

**ESSEX COUNTY OPEN SPACE TRUST FUND**  
Local Aid Program  
Project Evaluation Criteria

***Significance (up to 11 points)***

The project meets public needs for recreation, environmental education or protects and provides public access to important natural and cultural resources or features. (0 to 5 points)

The project is particularly beneficial to the disadvantaged or disabled. (0 to 2 points)

The project is the joint application of two or more municipalities. (0 to 2 points)

The project provides opportunities for a variety of user groups and multiple active and passive recreation activities. (0 to 2 points)

***Location (up to 7 points)***

The site is accessible to the public. (0 to 1 point)

By public transportation. (1 additional point)

By walking and bicycling. (1 additional point)

Creates public access where none exists or where existing access is undeveloped or restricted. (1 additional point)

The site expands an existing public park. (1 point)

The site buffers a public park from incompatible or intrusive uses. (1 point)

The site links or is part of a plan to link existing public open spaces. (1 point)

***Community Support (up to 3 points)***

The municipality and public or private groups have demonstrated their support of the proposed project through adopted resolutions, letters, fund raising activities, and/or other affirmative measures taken to advance the project.

***Local Cost Share (up to 5 points)***

The local cost share will be 75% or more of the project cost. (4 points)

The local cost share will be 50% to 75% of the project cost. (2 to 3 points)

The local cost share will be less than 50% of the project. (0 to 1 point)

The cost of future maintenance and operation is addressed. (0 to 1 point)

***First time applicants (1 point)***

***Presentation (up to 3 points)***

***TOTAL POINTS POSSIBLE - 30***

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