

MASTER PLAN REVISION

OPEN SPACE PLAN ELEMENT

TOWNSHIP OF CHATHAM

**Adopted by Chatham Township Planning Board
2010**

PREPARED BY THE

TOWNSHIP OF CHATHAM OPEN SPACE ADVISORY COMMITTEE

FOR THE

CHATHAM TOWNSHIP PLANNING BOARD

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*“A town is saved, not more by the
righteous men in it than by
the woods and swamps that surround it...”*

- Henry David Thoreau

EXECUTIVE SUMMARY

The Chatham Township Open Space Plan is a key element of the Township Master Plan. The plan provides a framework for preserving open space in the Township. It is intended as a guide for the decisions being made about the preservation of open space in the township. The plan identifies the type of lands that should be preserved and recommends the methods to be used for the acquisition and/or preservation of such lands. The plan recommends the development of trails and paths to enhance the ability to enjoy our natural surroundings and to improve our ability to traverse through the township without the use of a motorized vehicle. It also serves to protect ecologically sensitive flora and wildlife in Chatham township. The plan, most importantly, pulls these various elements together into an overall open space system of interconnected green space and green ways with the objective of enhancing the quality of life for township residents.

The Open Space Committee has chosen the concept of a greenway for Chatham Township because of the advantages it provides to the community. It will provide a pathway that connects the existing parks, recreational areas and public buildings. Its location will allow access to the pathway from the many neighborhoods in the community, providing a uniting factor for the community as a whole. It also serves as a link to our neighboring communities tying Chatham Township into the region.

DEFINITIONS

Open Space

For the purposes of this plan, the definition of open space is that used in the Morris County Open Space and Farmland Preservation Trust Fund Rules and Regulations. That definition is as follows:

“Land or water areas to be retained in a largely natural or undeveloped state, for purposes of, among other things, providing park land or green spaces, protecting ecologically sensitive areas, preserving flora and wildlife, or protecting areas of scenic, historic and cultural value,

while at the same time affording, whenever practical, public outdoor recreational opportunities for residents.”

Greenway

Keeping Our Garden State Green: A Local Government Guide for Greenway and Open Space Planning, by Linda Howe of the Association of NJ Environmental Commissions (ANJEC) defines a Greenway as follows:

“A Greenway is a linear corridor of undeveloped land. The corridor may be miles wide or as narrow as a footpath. A Greenway may be publicly owned or it may be privately owned but protected by conservation easements. A Greenway may be created solely for conservation purposes - focusing on stream corridors and floodplains, a forested ridgeline, or animal migration routes. In other instances, a Greenway may link existing parks, preserves, or cultural features and focus on opportunities for various specific recreation activities such as biking, walking, and cross-country skiing. It may simply provide an opportunity to move through a natural landscape or tree lined cityscape in a pedestrian environment from one historic or cultural point of interest to another. Most Greenways address a combination of goals. No two Greenways are exactly alike.”

SCOPE OF OPEN SPACE PLAN

The plan considers all parcels of undeveloped vacant lands, all farmland and all developed residential properties of greater than 5 acres in the assessment and prioritization of parcels for township open space consideration. To provide a balanced assessment, the plan evaluates the current mix of land uses and notes the future demand for land and the impacts to the township if current undeveloped properties are developed according to allowable zoning regulations. A key result of the plan is the concept and definition of the Township Open Space System and how it will enhance the quality of life for the township residents. It is expected that this open space system will guide the Chatham Township Planning Board in decisions concerning new development. In addition, the plan identifies methods of acquisition and preservation that can be implemented by the Township Committee in permanently preserving open space.

CHATHAM TOWNSHIP OPEN SPACE COMMITTEE AND MISSION STATEMENT

In 1996, by a 71% majority vote, Chatham Township approved the establishment of an open space tax of \$0.01 per \$100 assessed valuation. Ordinance 97-012 was approved establishing a nine person Open Space Advisory Committee “whose purpose it is to review and recommend parcels of land to be included in an Open Space Plan for acquisition and preservation of lands within the Township of Chatham”. One of the duties of the committee is to “submit an Open Space Plan consisting of identification of undeveloped private land parcels.” The committee was formed in June 1997.

The Mission of the Open Space Committee is as follows:

“The Chatham Township Open Space Committee is dedicated to identifying, evaluating and facilitating the preservation of undeveloped lands within our town, subsequently increasing our parks, recreational areas, and greenways. Through these activities, we seek to conserve our environment and enhance the quality of life for all Chatham Township residents.”

OPEN SPACE PRINCIPLES, GOALS AND OBJECTIVES

The purpose of the Open Space Plan can be identified with the following five principles:

1. To enhance the quality of life for all Chatham Township and local area residents,
2. To preserve lands that connect existing public lands,
3. To protect the environmentally sensitive lands and natural resources of the township including, but not limited to:
 - stream corridors, flood plains, wetlands and hydric soils;
 - steep slopes and areas of shallow depth to bedrock;
 - recharge areas for aquifers;
 - open farmland, forested areas and wildlife habitats,
4. To expand recreational opportunities,
5. To preserve scenic vistas.

Goals and Objectives:

The principles are supported by the following goals and objectives:

1. Provide open space in balance with other land uses in the township.

2. Meet current and future active recreational needs.
3. Recommend procedures for acquiring and preserving undeveloped lands.
4. Preserve properties that are ecologically important due to their natural features and resources, particularly water supply sources, and/or historic attributes.
5. Provide linkages between elements of the open space system, enhancing the safety and pleasure of pedestrian and bicycle travel throughout the township.

ECONOMIC VALUE OF OPEN SPACE

Conservation of open space is a necessary element to local economic growth.

Communities that conserve land make an investment in future economic development in the following ways: by attracting current and prospective companies to an area that is desirable for their employees, by raising local property values, by creating a destination that nearby residents want to visit, by reducing the need for increased infrastructure and services spending, by preventing storm water damage, and by protecting local water quality and supplies. These benefits, among many others, are a necessary part of promoting sustainable development and smart growth in a town such as Chatham Township. The benefits of open space should be considered alongside the benefits of other proposed land uses in the community's ongoing dialogue about the appropriate level of investment in open space. For more information and documentation on the economic value of open space see Attachment A.

OPEN SPACE NEEDS ANALYSIS

Active Recreation

The National Recreation and Park Association (NRPA) recommends that there be approximately 10 acres of developed recreational municipal open space per 1000 population to be distributed in a system of parks of varying sizes and distances from residents. The NRPA also recommends standards for the development of various recreational facilities. These standards should be considered as guidelines for communities identifying their own recreational needs.

Currently Chatham Township has 56 acres dedicated to active recreational use. The Township population is approximately 10,000. This results in 5.6 acres per 1000 residents. The recommended amount of active recreational lands for the Township population is 100 acres, resulting in a shortfall of 44 acres.

The active recreational facilities are used by a joint (township and borough) recreation program. As a result it is also appropriate to look at active recreation acreage for the Chathams as a whole. The combined population of the Chathams is approximately 20,000. The total acreage of active recreational facilities in the Chathams is 81 acres. This results in 4.05 acres per 1000 residents. The recommended amount of active recreational lands for the Chathams is 200 acres, resulting in a shortfall of 119 acres.

Passive Recreation

The national ratios do not include guidelines for conservation, preservation or requirements for undeveloped open space. These are based on local preferences and desired environmental conditions. The amount of undeveloped open space needed to enhance the suburban and semi-rural atmosphere of our community and preserve our environment is a matter of discussion. It is better that we identify and purchase those areas we wish to retain as open vistas and preserve for passive recreation and environmental factors and do not look to national percentages for guidelines.

CURRENT OPEN SPACE INVENTORY

For purposes of identifying open space in Chatham Township, the Plan considers lots or parcels of land owned publicly, privately or commercially which either contain no habitable dwelling, or which are sub-dividable even though they contain a habitable dwelling. For the most part, these properties are described in Part 1 Background Studies to the Master Plan Revision, but are further described below. The Open Space Map for Chatham Township is pictured in Attachment D.

Public Lands

U. S. Government - The Great Swamp National Wildlife Refuge is the largest single holding of contiguous parcels of vacant land in Chatham Township. With almost 7800 acres under its management, 1397 acres exist within township boundaries. The Great Swamp is fed by two brooks in Chatham Township, Loantaka and Black Brooks, as well as Primrose, Great and Mill Brooks in Harding Township.

Morris County Park Commission – The Park Commission owns 616 acres within Chatham Township’s borders.

The Loantaka Brook Reservation is located in sections of Chatham, Harding and Morris Townships. 313 acres are in Chatham Township. There are three ball fields, two picnic areas, a recreational trail, bridle trail, and a pond area that offer opportunities for formal and informal recreation.

The Passaic River Park covers 264 acres in Chatham and Long Hill Townships. A picnic area and mile long hiking trail are available. The park provides opportunities for fishing and ice skating along the river as well.

The Great Swamp Outdoor Education Center is 41 acres in size and is located off Southern Boulevard at the eastern end of the Great Swamp. It provides extensive programs for school children during the week and for the public on weekends and evenings. It contains a comprehensive nature library and exhibits. A boardwalk trail extends about one mile into the Great Swamp through areas rich with flora and fauna.

Municipal Lands - The township-owned lands are broken out into the categories of township parks and recreational lands, other township properties and Board of Education lands.

Municipal Parks and Recreational Facilities are at the following locations:

Shunpike Field and Recreational Area (15.35 acres of which 8.99 acres are devoted to active recreation) on Shunpike Road contains four (4) playing fields for football, baseball and soccer, basketball courts and a large playground area.

Nash Field (14.4 acres of which 3.58 acres are devoted to active recreation) is located on Southern Boulevard. It has Little League baseball diamonds, basketball courts, a tot lot, and two natural ice skating rinks.

Esternay Field (14.4 acres of which 6.08 acres are devoted to active recreation) is off Fairmount Avenue near River Road. It has one soccer field with bleachers, one practice field, and a playground.

Colony Pool and Recreational Area (5.5 acres of which 4.1 acres are devoted to active recreation) is located on Spring and School Streets. It contains swimming, paddle tennis and tennis facilities.

Gates Avenue property (0.2 acres) is a small pocket park playground.

Green Village Park (0.2 acres) is a small park in the heart of Green Village.

Municipal Complex (10.43 acres of which 2.34 acres are devoted to active recreation) on Meyersville Road has a ball field and playground. Also on this property are the Township Municipal Building and the Senior Citizen Center of the Chathams. The facility is also used for indoor recreation and outdoor community events.

Municipal Passive Recreation and Undeveloped Property may not appropriate for active recreation but may be appropriate for passive recreation due to the nature of their slope or wetlands. Prior to the creation of the Open Space Committee in 1997 Chatham Township owned 130 acres of undeveloped land. They are as follows:

Spring Street Property	2.1 acres
Tanglewood Lane properties	63.2 acres
Fairmount Avenue	9.7 acres
Long Hill Road properties	47.7 acres
Wilson Ave property (contains pumping station)	2.3 acres
Passaic River property	4.9 acres

Since the establishment of the Open Space Committee in 1997, 13 properties have been added to the list of passive recreation/undeveloped lands. They are as follows:

Nash Field Extension	6.2 ac.	B 48.16 L 123
Green Village Rd properties	61.88 ac.	B 48.17 L 137.01, 139, 130.01 B144 L 38, 39, 19.01, 45

Shunpike Road properties	73.60 ac.	B 144 L 20, 21, 23
River Road properties	48.47 ac.	B62 L 68.03 B 63 L 12, 13, 21 B 64 L 1
Woodland Road properties	6.61 ac.	B 95 L 20, 21, 22
Southern Blvd properties	1.2 ac.	B 48.16 L 119

These properties account for an additional 198.07 acres added to the township open space inventory.

Board of Education properties within the township total 67 acres and consist of the following properties:

High School and Lafayette School is 28.1 acres of which 9.98 acres are devoted to active recreation.

Cougar Field is 29.1 acres of which 19.29 acres are devoted to active recreation.

Southern Boulevard School is 9.7 acres of which 1.09 acres are devoted to active recreation.

Semi-Public/Non-Profit Lands

Totaling 45.4 acres, these lands include 15.5 acres owned by St. Hubert's Giralda, 3.4 acres owned by the Great Swamp Watershed Association, 7 acres owned by the Chatham Township and Green Village Fire Departments and 19.5 owned by the Passaic River Coalition.

Private Recreational Lands

A total of 201 acres of open space are held privately for recreational purposes. The sites that make up this acreage are the Fairmount Country Club, the Noe Pond Club, Oak Knoll School and a small section of the Madison Golf Course.

Streets, Utilities and Commercial Lands

Streets, utilities and commercial properties total approximately 450 acres. These properties include the utility rights-of-way. Examples of utility rights-of -ways are the power lines that traverse the township.

Private Open Lands

Approximately 680 acres of land currently in private ownership may be appropriate for designation as future open space. To arrive at this acreage, the plan considered all parcels of vacant land and all parcels of land that are currently in private ownership with consideration to their zoning and current uses. While some of these properties may be small, they may be in a strategic location, such as adjoining existing open space or recreational property, or part of stream corridors. Of particular interest are about 200 acres of private property that are contiguous to preserved lands or along the Heritage Greenway.

NATURAL, HISTORIC AND RECREATIONAL RESOURCES OF SIGNIFICANCE IN CHATHAM TOWNSHIP AND THE REGION

The Great Swamp National Wildlife Refuge is the most significant natural resource in the region. The Great Swamp was created by an Act of Congress in 1964 following a public outcry to defeat the Port Authority of New York and New Jersey's proposal for a jetport on this site. The Great Swamp is operated by the Department of Interior's US Fish and Wildlife Refuge System. The Great Swamp is a geologic depression formed by the Wisconsin Glacier. Water, melted from the glacier, flowed into the basin behind a natural dam to form Lake Passaic - a giant lake, 30 miles long and 10 miles wide. It is surrounded by the hills of the Second Watchung Ridge and serves as a flood plain and natural retention basin for areas downstream in the Passaic River basin. This environmental wonderland provides a nesting and resting place for local and migrating birds, a sanctuary for animal species and an educational environment for the people of New Jersey and beyond.

The Morris County Park Commission provides a number of recreational opportunities as noted above both in Chatham Township and the surrounding area. One of the walking trails travels alongside the Gibbons Barn, a National and New Jersey Historic Site.

OPEN SPACE RESOURCE ASSESSMENT

The Heritage Greenway

The Chatham Township Heritage Greenway is proposed to be a multi-use trail connecting the passive and active recreational areas within Chatham Township. For some segments of the greenway, due to the geographic limitations of the land, the use of the trail will be limited to pedestrian use only.

The purpose of the Greenway is to provide a recreational pathway for the residents. It would provide an educational trail for the study of the environment, a recreational trail off the

main roads, a jogging or running trail for short or long distance runners, and serve as a connector between home and public places for all residents.

Chatham Township geographically resembles a wide “U” spread around the Great Swamp National Wildlife Refuge. The Greenway provides a linkage connecting the various neighborhoods to township parks, recreational fields and open lands. It links Chatham Township to Chatham Borough, Madison, Long Hill and Harding Townships and their respective greenways. It also supports the Morris County Park Commission Greenway plans and the Morris County Planning and Development Department’s walk and bikeway plans.

The end points of the sections of the Heritage Greenway are noted on the Open Space Map in Attachment D. The greenway plan is as follows:

Section 1. From Giralda Farms(A), across Woodland Road to Loantaka Brook Reservation(B) trails and on to the Green Village Post Office(C). The Morris County Park Commission is interested in connecting Loantaka Brook Reservation Trails to the Traction Line Trail in Madison. The Traction Line goes out to Morristown and ends close to the Patriot’s Path. This linkage would connect our Greenway eventually to Patriot’s Path.

Section 2. From the Green Village Post Office(C), across Green Village Road to Nash Field(D).

Section 3. From Nash Field(D) to the Morris County Outdoor Education Center(E).

Section 4. From the Outdoor Education Center(E) to Cougar Field(F) and from the Outdoor Education Center(E) to the boundary with the Township of Long Hill(G).

Section 5. From the Outdoor Education Center(E) to Esternay Field(H)

Section 6. Passaic River Park(I) along River Road to Township property at the foot of Southern Blvd(J).

Section 7. From the Outdoor Education Center(E)to the Municipal Building(K).

Section 8. From the Colony Recreational Center(L) to Shunpike Field(M).

This proposed greenway provides linkages between the various communities and endpoints of the township as well as linking our current and proposed passive and active recreational facilities. It provides linkage to our neighboring townships and also supports the county plans for a Greenway from the Passaic River Park to the Traction Line Path and Patriot’s Path.

The Hickory Tree Greenbelt

The Open Space Plan supports the development of a town center for the township, located in the area of the intersection of Southern Blvd., Shunpike Road and Green Village Road. As the town center is developed, the Open Space Committee recommends the creation of The Hickory Tree Greenbelt around it. The greenbelt would provide a clear delineation between the town center with its commercial buildings and the residential areas outside the greenbelt.

The Open Space Plan also supports the creation of bike lanes and sidewalks along Southern Blvd., Shunpike Road and Green Village Road to allow alternate safe methods of travel to the town center for its residents.

Proposed Bikeways

Currently the residents of Chatham Township are almost totally dependent on the automobile for transportation in and around the community. There is no safe access to the recreational areas or to the town center by bicycle. To improve the quality of life in the community and encourage adults and children alike to enjoy the sport of biking, the township needs to work with the county in the establishment of bike trails and bike lanes. The residents at the 1998 Open Space Public Forum identified bike lanes and paths as the highest priority. Understanding that bike lanes are not be feasible on all major roads in the township, the Open Space Committee recommends establishing marked bicycle corridors along the major roads in the Township, where possible.

To insure the safety of the bike lanes, the current storm drains need to be made “biker friendly”.

Additionally, the greenway trail is designated for multiple uses, allowing off-road cycling along its distance except in areas of steep slope or sensitive soils.

Bikeways are given more detailed attention in the Walkway/Bikeway Element of the Master Plan.

POTENTIAL OPEN SPACE AND GREENWAY LANDS

Identification Criteria

The criteria for selecting parcels for preservation are documented in Chatham Township Ordinance 97-012. This ordinance created an Open Space Advisory Committee. The Criteria for selection are as follows:

- Lands that connect existing public land
- Lands that include environmentally sensitive areas, streams, wetlands, floodplains, steep slopes, and aquifer recharge areas
- Lands that provide active and/or passive recreational uses
- Lands that preserve scenic vistas.

Prioritization Schema

To prioritize the parcels, the committee took two approaches. An Open Space Public Forum was held. The purpose of this forum was to gain information from the township residents as to (1) parcels of land they wanted to preserve and (2) projects, such as walking trails and bike paths they wanted to created. Residents offered opinions concerning future development in the township. The residents proposed and prioritized 29 parcels and projects.

With the above mentioned suggestions, planning areas were evaluated using prioritization schemas developed by (1) the Great Swamp Watershed Association for use in Saving Space, The Great Swamp Watershed Greenway and Open Space Plan and (2) The Trust for Public Lands. These criteria are listed in Attachments B and C.

Prioritization Results

The Open Space Committee used the results from the Open Space Public Forum. Analysis was performed and geographic planning areas were identified. Each planning area contains one or more of the projects and parcels. These planning areas were evaluated using the criteria in Attachments B and C. Available parcels within the planning areas are identified and discussions will be held with property owners as appropriate.

Although the plan addresses specific areas of the township, it does not identify or target individual properties for acquisition or other specific forms of preservation action. Rather, the plan is more conceptual in nature and, in that regard, it is more a policy statement or statement of goals and objectives towards which future implementation actions should be directed. Moreover, it has been concluded that identification of specific properties for acquisition could prove

counterproductive to the interests of both the landowner and the township in negotiating the most appropriate means of preservation.

GUIDELINES FOR STREAM AND RIVER BUFFERS

One of the principles upon which the Open Space Plan is founded is the preservation of ecologically important natural resources, especially water supply sources. With such a large part of the Great Swamp within the boundaries of Chatham Township, residents must take their role seriously as conservators of the swamp. This also holds true for the Passaic River valley that defines the southeastern boundary of the township. To this end we need to preserve and protect the lands that border the swamp and the river and the water sources that drain into them. This preservation takes the form of guidelines for stream and river corridors. Protecting Our Streams, published by ANJEC, defines corridors as “the areas of wetlands, floodplains, woodlands, forests and steep slopes associated with streams, through which most of the water drained from upland surfaces flows”. An important aspect of the Open Space Plan is to insure that water entering the stream or river has sufficient land and plant and animal life to minimize pollution.

The Open Space Committee recommends using the guidelines provided in the Technical Papers of the New Jersey State Plan. For the Passaic River and the major stem of streams feeding the Great Swamp, 150 foot corridors are recommended for both sides of rivers and streams. For small feeder streams flowing into a major stem, corridors of at least 25 feet are recommended for both sides. In addition to each of these basic corridor widths, all adjacent wetlands, floodplains and steep slopes must be included as part of the corridor.

ESTABLISHMENT OF GREENWAYS AND OPEN SPACE

Acquisition Methods

A number of acquisition tools are available to township planners. These tools include:
Purchase in Fee Simple - The purchase of land at fair market value, where the purchaser (in this case Chatham Township, other Government agency or land trust) possesses all rights to the land, unencumbered by any restriction.

Conservation Easement - The land remains in private ownership, but the government agency or land trust acquires certain appropriate rights, such as development rights. These are called easements. This preserves private ownership while promoting a public goal. A conservation easement is a legal document and is affixed to the deed such that the limits are placed on the property for all time in the future. The easement can be tailored specifically to the property.

Placing conservation easements on lands can reduce the value of the property, thus reducing local property taxes and the value of the property for estate purposes.

Bargain Sale - The sale (or purchase) of land or development rights at below appraised market value. The difference between the sale price and the fair market price can be considered a charitable contribution by the seller and is deductible from federal taxes.

Financial Tools

There are a number of financial tools available to the Township Committee for the purchase of properties in fee simple, or the purchase of conservation easements (e.g., purchase of the development rights for the property). These tools are:

Donations - Receiving donations of land or easements is more desirable than purchasing it outright. During subdivision and site plan review, local government can encourage applicants to donate land or conservation easements on wetland area designated in the greenway or stream corridor plans.

Purchase - Tools that support the ability to purchase land or development rights are:

1. Open Space Trust Fund. Monies collected through the Open Space Tax on assessed real property. As of 2010, the allowed rate of collection is \$0.02 per \$100 of assessed evaluation. However, in 2009 and 2010 the rate was decreased to \$0.01 per \$100 by ordinance.
2. Issuance of a bond. The issuance of a bond by the township, specifically designated for the purchase of open space, would allow for the purchase of a significant amount of land, more than would be possible with the Open Space Trust Fund. It is recommended that, when necessary, the township float such a bond and use the proceeds of the Open Space Tax to repay the bond.
3. Grants from Morris County. The process starts each year, in the July time frame, with an application to the Morris County Open Space and Farmland Preservation Trust Fund Committee. The process takes about six months and awards are given based on the merit of the request.
4. Grants from the State of New Jersey. With the approval of the Chatham Township Open Space Plan, the township is able to request funding from the New Jersey Green Acres program for the acquisition of open space. Green Acres grants provide 50% of the appraised evaluation.

The Intermodal Surface Transportation Efficiency Act (ISTEA) funds will be available for the development of bicycle corridors. It is highly recommended that the township utilize this funding source.

5. U. S. Fish and Wildlife funding. For properties that lie within the USFW Acquisition Boundary surrounding the Great Swamp, the township has and will continue to work with the USFW Agency to acquire parcels or conservation easements.

Regulatory Tools

The Municipal Land Use Law authorizes municipalities to implement land use regulations that establish standards for subdivision and site plan review that can promote open space preservation. The following ordinances are especially helpful:

1. Critical areas ordinances. These ordinances regulate and provide design standards for environmentally sensitive areas. It is important that such ordinances state their purposes clearly, define the critical areas such as steep slopes, floodplains, streams, aquifer recharge areas and set up specific techniques to protect them: such as large lot zoning, useable land calculations, buffers.

2. Open space/cluster ordinances. These enable municipalities to require that a certain percentage of a site be preserved as open space to provide desirable aesthetics and protect natural resources such as wetlands. The concept involves establishing a certain amount of dedicated open space and allowing development on smaller lots than provided under conventional zoning. The number of units on the site remains the same as could be obtained under the standard zoning. Preservation of the open space in perpetuity can be assured by including such a provision in a deed restriction.

3. Lot size averaging ordinances. These enable municipalities to provide design flexibility for subdivision layout to promote resource protection. The concept allows the planning board to approve some lots in a subdivision to be less than the standard minimum lot size, providing that other lots are larger than the minimum and conform to the overall intent of the zoning.

4. Overlay zoning ordinances. These enable municipalities to protect natural, cultural and other resources in more than one zone by establishing protection standards for specific resources that

apply in more than one zone. For example, an overlay stream corridor protection zone establishes buffer requirements that could include setbacks of a certain distance no matter what zone district the stream flows through.

5. Flood plain protection ordinances. These can limit development in floodplains to protect residents from flood damage. Activities can be restricted to uses such as recreational hiking, hunting and/or fishing.

6. Stream corridor protection ordinances. These require buffer areas along streams that go beyond the floodplain and can be especially effective when combined with stream corridor or greenway plans as part of the master plan.

7. Non-contiguous development. This is a new provision of the Municipal Land Use Law that allows planned development, either commercial or residential, and residential cluster development, on an area of minimum non-contiguous acreage to be developed as a single entity. For example, an ordinance may require a minimum of ten acres for a cluster development on lands that are not contiguous to each other. The ordinance could regulate the size of acreage where the development would take place. If the zoning was one unit per acre with a cluster option, ten acres could yield ten units. Under a non-contiguous provision, the ten units could be located on a minimum of five acres with the remaining five acres on a non-contiguous parcel.

8. Useable yard area ordinance. These provisions ensure that residents on newly created lots have yard areas where the use and enjoyment of their property is not limited. The ordinances define yards, lot areas and minimum area requirements and require contiguous yard areas outside of floodways, wetlands and other environmentally critical areas.

ACTION PLANS

On a yearly basis the Open Space Committee establishes a four-year action plan of projects it considers essential to the furthering of Chatham Township's open space mission. This four-year action plan is an outline of the goals and objectives to be achieved by the members of the Open Space Committee, the town residents, the Planning Board, Township Committee and our township administration and employees. The success of these action plans depends on the cooperation of all the people and groups involved.

ACKNOWLEDGMENTS

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The Open Space Committee would like to acknowledge the advice and assistance given for the writing of this document by Dorothea and Frank Stillinger, and Abigail Fair and would like to thank Hatch Mott McDonald for their assistance in developing the Chatham Township Open Space Map and associated documentation.

The following documents were used as sources of information and ideas for this document:

Keeping our Garden State Green by Linda Howe, ANJEC

Freshwater Wetlands Protection in New Jersey, A Manual for Local Officials, by Abigail H. Fair, ANJEC.

Saving Space; The Great Swamp Watershed Greenway and Open Space Plan by Karen Parrish and Anthony Walmsley

Greenway and Open Space Plan for Harding Township

Open Space and Recreational Plan, Township of Morris, October 1997

Randolph Township Open Space Plan: An Amendment to the Township Master Plan

Township of Chatham Draft Master Plan Revision 1989

Morris County Master Plan, Open Space Element, October 6, 1988

Protecting Our Streams, ANJEC

The Great Swamp of New Jersey website

ATTACHMENT A

There are countless independent academic and government studies supporting the economic value of open space. A major 2007 study by the NJ DEP, titled "Valuing New Jersey's Natural Capital: An Assessment of the Economic Value of the State's Natural Resources," identified significant accrual of the dollar-value benefits of open space. In 2010, the State of New York Office of the Comptroller published a report with similar findings (title: Economic Benefits of Open Space Preservation). Additionally, the governors of five New England states have recognized open space as helping to bring rapid economic growth to the region (Governor's Committee on the Environment, 1988).

Among the most important findings by numerous studies, property values are generally higher and increase at a faster rate when they are near permanently preserved open space. In perhaps the broadest study of this effect, a National Park Service publication (Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors, 1995) reviewed dozens of studies on the economic effects of open space and found: "Property value increases are likely to be highest near those greenways that: *highlight open space rather than highly developed facilities; *have limited vehicular access, but some recreational access; *have effective maintenance and security." Research referenced by the NJ Keep It Green coalition website (www.NJKeepItGreen.org/Resources.htm) indicates property values to be 5%-70% higher in areas near open spaces.

In New Jersey, the "ratables chase" at the expense of open space can prove elusive. Studies show that for every \$1.00 collected in taxes in New Jersey, residential development costs between \$1.04 to \$1.67 in services, according to numerous research reports summarized by ANJEC (Association of NJ Environmental Commissions) (Open Space is a Good Investment, 2004).

These service costs continue forever, while the cost of the open space is limited to the acquisition cost and very minimal ongoing costs. Among the municipalities whose research reports were summarized was Mendham, where the study of one proposed project found an outright economic advantage for preserving open space over development after the debt service period ended in year 20. In Washington Township here in Morris County, a study of a proposed project showed a payback period to be just 15 years, with benefits accruing each year thereafter. Perhaps the broadest single study in New Jersey was a 1994 report by the Pinelands Commission comparing local taxes in 13 towns within the Pinelands Protection Area, where there is substantial farmland and preserved public open space, with 13 similar towns outside the Pinelands. The results showed that living inside the Pinelands area costs the residents less. The average per capita tax increase from 1970 to 1990 was 42% lower in Pinelands towns than in non-Pinelands towns. Pinelands residents paid 6.0% of their income on local taxes while non-Pinelands residents paid 6.9%. Studies have extended to commercial development, where it has been found that municipalities sometimes underestimate the long-term costs to taxpayers. Importantly, these studies did not calculate the support for nearby property values that open space provides.

One of the broadest bibliographies of the economic benefits of open space can be found in The Trust for Public Land's report titled, The Economic Benefits of Land Conservation (2007) which can be found at www.njkeepitgreen.org/resources.htm, along with many other studies and bibliographies.

Finally, recent research about the economic benefits of open space can not discount the health benefits of living in proximity to open space, especially since healthcare costs consume a high and rising percentage of people's incomes. The annual rates of 15 out of 24 major physical

diseases were significantly lower among those living within a one kilometer radius of open space, according to an article published in 2009 by the Journal of Epidemiology and Community Health (Issue 63, pages 967-973). The relationship was strongest for children under age 12.

ATTACHMENT B

GSWA Greenway and Open Space Plan Inventory of Critical Properties/Parcels

Township/Municipality: _____

Block/Lot: _____ Name: _____

Location: _____

Size (acres): _____ Ownership (P/Semi/Private) _____

Public Road (Y/N) _____ Road Type (U/L/CD/A/X): _____

Use: _____ Zoning: _____

% Bldg Coverage: _____ % Impervious: _____

Possibility of change (Perm/SemiP/STchnng/LTchnng): _____

Development Activity (UC/PS/PP/None): _____

NATURAL FACTORS:

1. ___ Steep slopes (2X if >15%): _____

2. ___ Geologic features (X if yes): _____

3. ___ Critical Soils:(X if <10%, XX if 10-33%, XXX if > 33%): _____

4. ___ Lakes (1X for each lake/pond): _____

5. ___ Stream Corridors (2X per stream): _____

6. ___ Headwaters of a tributary (2X if yes): _____

7. ___ In flood plain (X if <10%, XX if 10-33%, XXX if > 33%): _____

8. ___ Wetlands (X if <10%, XX if 10-33%, XXX if > 33%): _____

9. ___ Aquifer recharge site (X if yes): _____ (dropped)

10. ___ Mature forests (X if <20%, XX if 20-60%, XXX if > 60%): _____

11. ___ Rare plants (X if yes) : _____ (dropped)

12. ___ Rare Habitat Type (X If yes): _____ (dropped)

13. ___ Endangered spp/endangered spp habitat: (XX if yes): _____

14. ___ High -rank remnant habitat: (X if yes): _____ (dropped)

15. ___ Abundance /diversity of wildlife (birds): (2X if yes): _____

CULTURAL FACTORS (XX if yes):

16. ___ Large size (> 20 acres): _____

17. ___ Insular (only o/s in large area): _____

18. ___ Contig/proximate to existing preserved o/s: _____

19. ___ Potential linkage between two existing o/s: _____

20. ___ Recreational value (X, XX, or XXX for Low, Med, High): _____

21. ___ Aesthetic value (X, XX, or XXX for Low, Med, High): _____

22. ___ Archaeological/historic features (x if yes, XX if exceptional): _____

23. ___ Possible public access: _____

24. ___ Hazardous waste site: (use for future planning): _____

SCORE: _____

Evaluation: _____

ATTACHMENT C

Trust for Public Lands Acquisition Procedures

Factor **Point Score**

Environmental Factors:

a). Presence of Wetlands:

- 1). Present on property2
- 2). Buffer for wetlands1
- 3). Not present on property0

b). Riparian Corridor/Water Frontage:

- 1). Exceptional water frontage3
- 2). Some water frontage2
- 3). Protects water frontage1
- 4). Water not present on property0

c). Presence of Woodlands:

- 1). Mature hardwoods over major portion of property4
- 2). Mature hardwoods on minor portion of property3
- 3). Less mature woods/conifers2
- 4). Immature woods/scrub/tree line1
- 5). Not present on property0

d). Contamination

- 1). Toxic.....negative 4
- 2). Hazardousnegative 3
- 3). Debris on site, hazard unknownnegative 2
- 4). Contamination present but remediation commitment
is an element of property transaction.....negative 1
- 5). No contamination0

e). Steep Slopes

- 1). Present on property1
- 2). Not present on property0

f). Unique Habitat

- 1). Present on property1

2). Not present on property0

Rural Preservation Characteristics:

a). Proximity to Protected Open Space

- 1). Adjacent to Open Space2
- 2). Compliments Open Space1
- 3). No significant contribution0

b). Proximity to Protected Farm Land

- 1). An active farm4
- 2). Adjacent to farm land3
- 3). Complements farm land2
- 4). No significant contribution0

c). Proximity to Scenic Views

- 1). Contains scenic views2
- 2) Complements scenic views1
- 3). No significant contribution0

d). Passive Recreation Opportunities

- 1). Contains or links proposed trail/ greenway plans ...3
- 2). Provides access to proposed trail2
- 3). Complements proposed trail1
- 4). No significant contribution0

Development Pressure Factors:

a). Ownership

- 1). Absentee, estate, foreclosure2
- 2). Resident owner1
- 3). Other.....0

b). Market Availability

- 1). For sale5
- 2). Under market investigation4
- 3). Future availability likely3
- 4). Unlikely to become available0

c). Suitability for Development

- 1). Subdivision approved-easily developed8
- 2). Subdivision application filed-minor impediments....4
- 3). Subdivision application filed-major impediments....2
- 4). Subdivision plans underway but not filed0

d). Infrastructure Availability

- 1). Available roads, public water and sewer3
- 2). Any 2 of above2
- 3). Any 1 of above1
- 4) None of the above0

ATTACHMENT D: CHATHAM TOWNSHIP OPEN SPACE MAP

