

OPEN SPACE PLAN ELEMENT

(MASTER PLAN REVISION)

TOWNSHIP OF CHATHAM

Adopted by Chatham Township Planning Board

2020

PREPARED BY THE

TOWNSHIP OF CHATHAM OPEN SPACE ADVISORY COMMITTEE

FOR THE

CHATHAM TOWNSHIP PLANNING BOARD

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Table of Contents

Executive Summary	3
Definitions	3
Scope of Open Space	4
Open Space Committee and Mission Statement	4
Open Space Principles, Goals and Objectives	5
Principles	
Goals and Objectives	
Economic Value of Open Space	6
Open Space Needs	7
Active Recreation	
Passive Recreation	
Current Open Space Inventory	7
Public Lands	
Non-profit Lands	
Private Recreational Lands	
Utilities and Commercial Lands	
Private Open Lands	
Natural, Historic, and Recreational Resources	11
Open Space Resource Assessment	12
The Heritage Greenway	
The Hickory Tree Greenbelt	
Proposed Bikeways	
Potential Open Space and Greenway Lands	14
Identification Criteria	
Prioritization Schema	
Prioritization Results	
Guidelines for Stream and River Buffers	15
Establishment of Greenways and Open Space	16
Acquisition Methods	
Financial Tools	
Regulatory Tools	
Action Plans	19
Acknowledgments	21
Attachments	22
Economic Value of Open Space References	
Prioritization Methodologies	
Chatham Township Open Space Map	
Loantaka Brook Reservation Map	

*“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 Element is a key part of the Township Master Plan. The element 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 element 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. It recognizes Chatham Township’s central position in the headwaters of its own water supplies. It also 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. The element also serves to protect ecologically sensitive flora and wildlife in Chatham Township. Most importantly, it pulls these various elements together into an overall open space system of interconnected green space (called greenways) 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 unifying factor for the community as a whole. It also serves as a link to our neighboring communities, thus tying Chatham Township into the region.

DEFINITIONS

Open Space. For the purposes of this element, 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 ELEMENT

The element (also referred to herein as “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;
 - farmland, forested areas and wildlife habitats,
4. To expand recreational opportunities,
5. To preserve scenic vistas.

The principles are supported by the following goals and objectives:

1. Provide open space in balance with other land uses in the Township. Meet current and future recreational needs.
2. Recommend strategies for acquiring and preserving undeveloped lands.
3. Preserve properties that are ecologically important due to their natural features and resources, particularly water supply sources, and/or historic attributes.
4. 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 resale 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, by protecting local water quality and supplies, and by purifying the air. In recent years, research increasingly points to the cognitive and behavioral benefits for both children and adults of living near and enjoying open space. 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

Active Recreation

Open space needs are determined by local members of the public and are not dictated by rules or national standards.

Among the few nationwide “standards” available, The National Recreation and Park Association (NRPA) concluded in 2018 that there are 10.8 acres of developed recreational park lands per 1,000 population in participating municipalities with 20,000 or fewer residents. The NRPA also recommends standards for the development of various recreational facilities. These standards can be considered as guidelines for communities identifying their own recreational needs.

Currently Chatham Township has 57.8 acres of municipal land dedicated to active recreational use. The Township population is approximately 10,500. This results in 5.5 acres per 1,000 residents, placing it below the NRPA standard.

However, adding the Board of Education properties as well as the Morris County properties of Loantaka Brook Reservation, Great Swamp Outdoor Education Center and an accessible portion of Passaic River Park, greatly increases the amount of open space accessible to the public.

Undeveloped Open Space and Passive Recreation

The national ratios do not include guidelines for conservation of undeveloped open space. These are based on local preferences and desired environmental conditions, such as clean water, air and the desire for a healthful and enriching overall feeling in the community. 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

To identify 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 may be sub-dividable even though they contain a habitable dwelling. The Open Space Map for Chatham Township is 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 7,800 acres under its management, 1,397 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 798.0 acres within Chatham Township’s borders. We include the 101-acre Giralda Farms Preserve in this number, despite Chatham Township’s primary ownership (and the County’s 8.0882% undivided interest in the parcel) because it is managed and marketed as part of the County’s Loantaka Brook Reservation.

Loantaka Brook Reservation is located in sections of Chatham, Harding and Morris Townships. 615.4 acres are in Chatham, including approximately four miles of hiking trails. (See ATTACHMENT E)

The Passaic River Park is located in Chatham and Long Hill Townships. 141.3 acres are in Chatham Township, including a ballfield and access to fishing along the river.

The Great Swamp Outdoor Education Center is 41.1 acres 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, and other municipal-owned open space.

Municipal Parks and Recreational Facilities at the following locations total 85.3 acres, of which 59.8 are active recreation lands:

Shunpike Field and Recreational Area (15.35 acres) on Shunpike Road contains four (4) playing fields for football, baseball and soccer, and basketball and a large playground area.

Nash Field (14.4 acres) is located on Southern Boulevard. It has Little League baseball diamonds, basketball courts, a tot lot, and two natural ice skating rinks.

Esternay Field (14.0 acres) 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 (4.9 acres) is located on Spring and School

Streets. It contains swimming, playground 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.

Hillside Avenue Trail (19.5 acres) has received a grant to extend and improve the existing walking trail in the woods, just steps from the Chatham Glen Community along River Road.

Municipal Complex (10.43 acres total, of which 2.34 acres are devoted to 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.

Woodland Road land - shared with Chatham Borough (6.3 acres) which contains the Community Garden of the Chathams.

Other Municipal-owned open space may not be appropriate for active recreation but may be appropriate for passive recreation due to the nature of their slope or wetlands. These properties total 254.6 acres. They are as follows:

Green Village Rd properties	46.0 ac.	B 48.17 L 137.01, 139, 130.01 B144 L39, 19.01
Hillside Avenue property	19.5 ac.	B67 L21
Long Hill Road properties	48.1 ac.	B48 57,58,65,74,77 B 16 L71
Nash Field Extension	6.2 ac.	B48.16 L123
Passaic Street property	15.8 ac.	B64 L1, 2
River Road properties	31.6 ac.	B63 L12, 13, 21.01
Shunpike Road property	42.2 ac.	B144 L21, 23
Southern Blvd properties	9.0 ac.	B 48.16 L 119, B 62 L93, 94
Spring Street property	0.9	B106 L10
Tanglewood Lane properties	32.7 ac.	B17 L86, 87, 88, 89

Wilson Ave property (contains pumping station) 2.5 ac. B43 L7

Two of the Green Village Road properties contain a 1-mile public hiking trail marked by a kiosk and several foot bridges, and the Hillside Avenue property contains a one-third mile figure-eight

trail also marked by a kiosk. Both trails are maintained primarily by volunteers.

The figures above exclude the privately-owned, conservation easement lands at the corner of Shunpike Avenue and Loantaka Way, and other land along Loantaka Way totaling 41.3 acres.

Board of Education

Totaling 40.2 acres, Board of Education property within the Township dedicated to active recreation is at the following properties:

High School and Lafayette School offer 10 acres dedicated to active recreation.

Southern Boulevard School offers 1.1 acres devoted to active recreation.

Cougar Field is 29.1 acres, mostly devoted to active recreation

Non-Profit Lands

Totaling 66.6 acres, these lands include 16.2 acres owned by St. Hubert's Giralda, 3.3 acres owned by the Great Swamp Watershed Association, 4.7 acres owned by the Chatham Township Fire Department and 36.2 acres owned by the Green Village Fire Departments, and 6.2 acres owned by the Passaic River Coalition.

Private Recreational Lands

A total of 185.7 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 Fields, The Chatham Club, 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 without conservation easements

Approximately 620 acres of land currently in private ownership may be appropriate for consideration 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

A broad natural and geographic analysis of Chatham Township is provided by the Chatham Township Conservation Plan of June 2005, prepared by the Chatham Township Planning Board.

The Great Swamp National Wildlife Refuge is the most significant natural resource in the region. The Refuge 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 Wildlife Refuge is operated by the Department of the Interior's US Fish and Wildlife Refuge System. The Great Swamp is a geologic depression formed approximately 19,000 years ago 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. Natural conservation of this area is vitally important to preserving Chatham Township's water quality, since New Jersey American Water's primary intake pipes from the Passaic River are downstream of Chatham and serve 99% of Chatham Township residents' water supply. In addition, 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. As of 2019, a pair of bald eagles could be seen nesting and breeding in the center of the Great Swamp.

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 in Chatham Township, a National and New Jersey Historic Site.

Historic resources in the Township are well documented by the Chatham Township Historic Society, which has erected plaques identifying 15 historic landmarks. In 2018, an Eagle Scout created a "Tour Chatham Township" app for smartphones, guiding residents through these landmarks. In addition, a portion of Giralda Farms Preserve has revealed Revolutionary War-era artifacts.

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” of upland areas spread around the expansive wetlands found in 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. On this map, an attempt was made to indicate the connecting areas between the end points; the shadings are not meant to depict precise connection routes. 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); and from Loantaka Reservation to the eastern edge of Chatham Township to the Great Swamp National Wildlife Refuge (C1).

Section 3. From Nash Field(D) to the Great Swamp Outdoor Education Center(E).

Section 4. From the Outdoor Education Center(E) to the Colony Recreation Center(L) and Cougar Field(F); and from the Outdoor Education Center(E) to the Municipal Building(K) and 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 Colony Recreational Center(L) to Shunpike Field(M).

This proposed greenway provides linkages between the various communities and points of interest in 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, as well as safeguard the beauty and value of this area

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

Proposed Bikeways

Currently the residents of Chatham Township are predominantly dependent on the automobile for transportation in and around the community. There have been improvements to connect recreational areas to the town center by bicycle, but further progress is needed. 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 may 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 ensure the safety of the bike lanes, the remainder of the storm drains need to be converted to “biker friendly” grates.

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.

Trail Easements

Several public right-of-way easements on private land in the Township exist for recreational purposes or to facilitate pedestrian connections to schools and between neighborhoods. These easements exist to unite parts of the community, ease children’s passage to school, remove unnecessary car traffic from the roads, enhance safety for all residents, and increase the enjoyment of the outdoors. The Open Space Committee recommends the continued use of such easements, and the planning of new ones, especially in areas that are being newly developed or re-developed. The Committee also recommends proper care be taken to avoid and control erosion risks within easements, and trail areas more generally as well.

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 create. 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 which defines the southeastern boundary of the Township and flows downstream to the NJ American Water intake pipes along the Passaic River, which provides the source water to 99% of Township residents. 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 ensure that water entering the stream

or river has sufficient land and plant and animal life to minimize pollution.

These principles are based on the Riparian Zone Model Ordinance published by the NJ DEP, Division of Watershed Management in 2008. The importance of the principles has only increased in the last 10 years, with the increasing pressures on our water quality. 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. Chatham Township ordinance 2017-20, titled “Great Swamp Watershed Overlay District Stormwater Management Ordinance,” also provides protections consistent with the Open Space Element.

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, placing permanent limits on building on the property. 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:

Open Space Trust Fund. Monies collected through the Open Space Tax on assessed real property. In 2005, Township voter approved a \$0.02 collection per \$100 of assessed valuation. In 2009, the Township Committee established that the Open Space Tax would revert to \$0.02 in the beginning of each calendar year, in the absence of an ordinance in that year. In 2009 and 2010 the rate was set at \$0.01 per \$100 by ordinance, and 2011-2017 it was \$0.005 per \$100 by ordinance. In 2018, the rate of \$0.01 per \$100 resumed by resolution.

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.

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. For some projects, grants from the Morris County Park Commission and the Morris County Municipal Utilities Authority may also be available.

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.

Grants from non-profit organizations.

Transfer of development rights. In certain cases, corporations or other entities that receive special permission to develop sensitive natural areas are required to preserve nearby land of equal

value.

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:

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, and aquifer recharge areas; and set up specific techniques to protect them, such as large lot zoning, useable land calculations and buffers. Chatham Township regulates critical areas through subdivision and site plan standards and lot grading plan requirements.

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. § 30-64.1 f regulates residential cluster design.

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. § 30-64.1 g regulates residential lot averaging design.

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. Chatham Township's two environmental protection overlays are found at § 30-83.2 Protection of Great Swamp Watershed Overlay District and at § 30-83.3 Protection of Upper Passaic River Watershed Overlay District.

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. § Section 30-117{17} contains Chatham Township's Flood Plain Management Regulations.

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. § 30-64.3b{9} Environmentally Critical Areas includes stream corridor protection but "stream corridor" is not defined in the Code.

Non-contiguous development. This provision of the Municipal Land Use Law 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 protected as open space. The Chatham Township Code does not address non-contiguous development.

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. The Chatham Township Code requires that all single-family residential lots within the R-1, R-1A, R-2, R-2A, R-2B-1, R-2B-2, R-3, R-5 and R-5A Zones that are created in a subdivision shall have a minimum usable lot area of 7,000 square feet in which the dwelling and other permitted structures shall be constructed.

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

Township of Chatham Master Plan

Morris County Open Space, Farmland, Floodplain Protection and Historic Preservation Trust Fund, November 2018

Chatham Township Conservation Plan, June 2005

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

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.

A Handbook for Public Financing of Open Space in New Jersey, ANJEC, 2001

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

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

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). A lengthy 2017 study in Pennsylvania made the same conclusions (title: Economic Impact of Local Parks, Recreation and Open Space). Hundreds of other independent reports are linked at https://conservationtools.org/library_items/topic/132-Economic-Benefits-of-Open-Space, and in the Trust for Public Land's link-library of independent research.

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 one of the earlier broad studies 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." Another broad study of research literature, titled "An Investment that Pays – The Economic Benefits of Parks and Open Space," concluded in 2009: "Parks and preserved lands boost land values and property taxes, attract residents and businesses, encourage economic development, boost the economy of surrounding areas, save money over some types of development, preserve ecosystem services, and reduce health care costs." Research referenced by the NJ Keep It Green coalition 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.

Two of the broader 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), and in a continually updated website titled "Economic Benefits of Land Conservation" by the State of Pennsylvania, along with many other studies and bibliographies.

Finally, recent research about the economic benefits of open space cannot 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. In the past ten years, many scientific publications have revealed the psychological and behavioral benefits of access to open space, for both children and adults.

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/STchng/LTchng): _____

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 Land's Acquisition Procedures

Factor **Point Score**

Environmental Factors:

- a). Presence of Wetlands:
 - 1). Present on property 2
 - 2). Buffer for wetlands 1
 - 3). Not present on property 0
- b). Riparian Corridor/Water Frontage:
 - 1). Exceptional water frontage 3
 - 2). Some water frontage 2
 - 3). Protects water frontage..... 1
 - 4). Water not present on property 0
- c). Presence of Woodlands:
 - 1). Mature hardwoods over major portion of property 4
 - 2). Mature hardwoods on minor portion of property..... 3
 - 3). Less mature woods/conifers..... 2
 - 4). Immature woods/scrub/tree line..... 1
 - 5). Not present on property 0
- 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 contamination 0
- e). Steep Slopes
 - 1). Present on property 1
 - 2). Not present on property 0
- f). Unique Habitat
 - 1). Present on property 1
 - 2).Not present on property..... 0

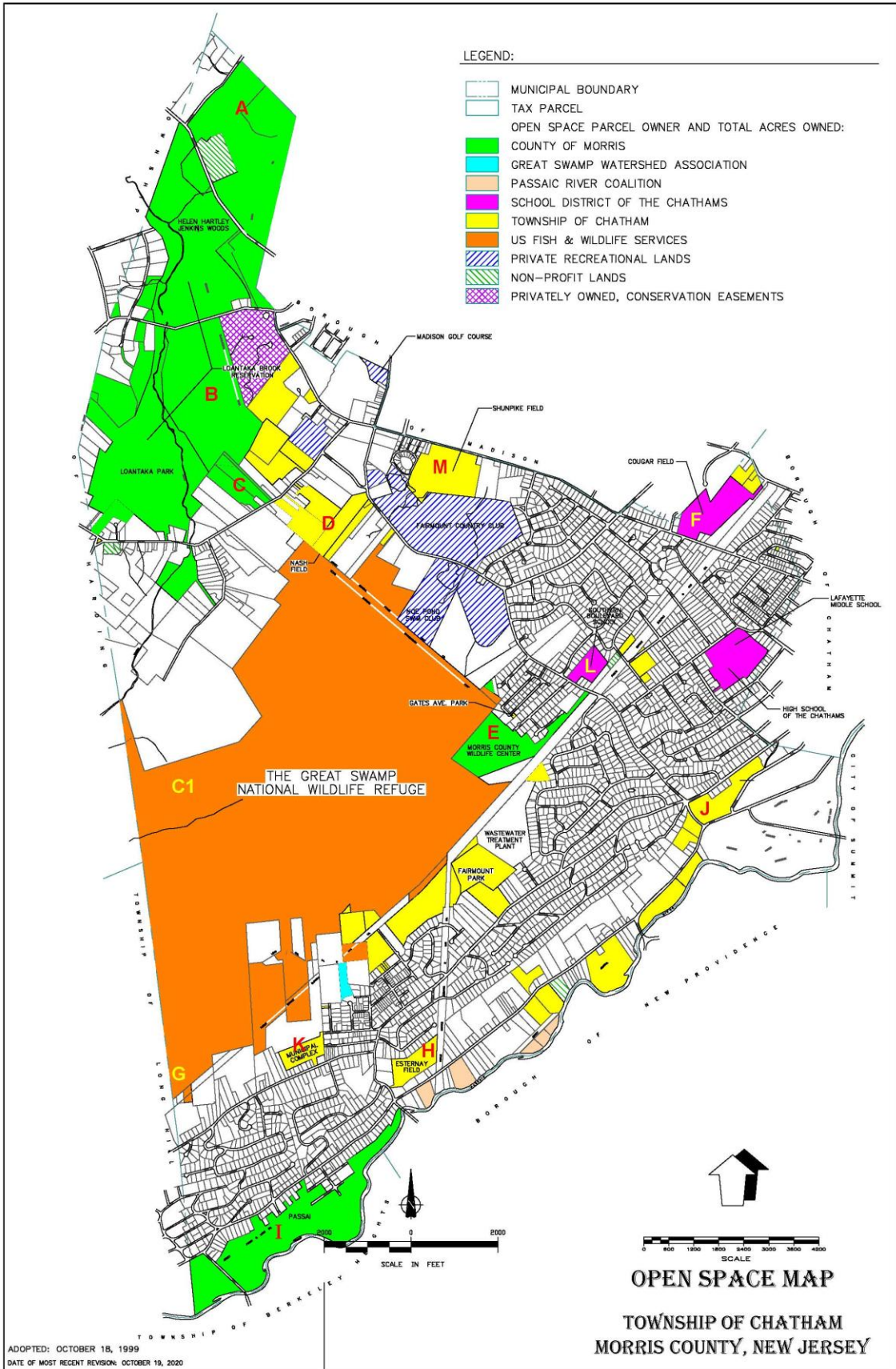
Rural Preservation Characteristics:

a). Proximity to Protected Open Space	
1). Adjacent to Open Space.....	2
2). Compliments Open Space.....	1
3). No significant contribution	0
b). Proximity to Protected Farm Land	
1). An active farm	4
2). Adjacent to farm land.....	3
3). Complements farm land.....	2
4). No significant contribution	0
c). Proximity to Scenic Views	
1). Contains scenic views	2
2). Complements scenic views	1
3). No significant contribution	0
d). Passive Recreation Opportunities	
1). Contains or links proposed trail/ greenway plans ...	3
2). Provides access to proposed trail	2
3). Complements proposed trail	1
4). No significant contribution	0

Development Pressure Factors:

a). Ownership	
1). Absentee, estate, foreclosure.....	2
2). Resident owner	1
3). Other	0
b). Market Availability	
1). For sale.....	5
2). Under market investigation.....	4
3). Future availability likely	3
4). Unlikely to become available.....	0
c). Suitability for Development	
1). Subdivision approved-easily developed.....	8
2). Subdivision application filed-minor impediments	4
3). Subdivision application filed-major impediments ...	2
4). Subdivision plans underway but not filed.....	0
d). Infrastructure Availability	
1). Available roads, public water and sewer	3
2). Any 2 of above.....	2
3). Any 1 of above.....	1
4). None of the above	0

ATTACHMENT D: CHATHAM TOWNSHIP OPEN SPACE MAP



ATTACHMENT E: Loantaka Brook Reservation, including municipal boundaries

