

OPEN SPACE & RECREATION PLAN



June 2020

Byram Township-2020 Update

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Open Space & Recreation Plan

BYRAM TOWNSHIP-2020 UPDATE

INTRODUCTION



Byram Township is dedicated to protecting its natural resources through sound land use planning and management strategies. This includes a comprehensive open space preservation program. In 2019, Byram Township received a grant from the New Jersey Highlands Council to assist with the preparation of an update to the Township's 2010 Open Space & Recreation Plan. This update is designed to gauge the Township's progress towards achieving its goals for the preservation of open space, the provision of recreational opportunities for its residents, to assess the long-term needs for recreational infrastructure and to identify methods of utilizing the Township's natural resources to provide opportunities for economic growth. This includes specific areas of concern:

- Identifying Key Parcels for Continued Acquisition Efforts
- Creating an Inventory of the Recreational Facilities of the Township
- Assessing the Balance Between Future Recreational Needs and Existing Facilities
- Providing an Asset Management Strategy for the Township's Facilities & Open Space Holdings
- Creating a Recreational Trails Master Plan
- Creating a Sustainable Economic Growth Strategy Based Upon the Benefits of the Township's Open Space and Natural Resources
- Providing Budgeting Guidance for Land Acquisition, Facilities Maintenance, & Facilities Construction
- Utilizing the Township's Open Space, Parks and Recreation initiatives to further the broader planning goals of the Township as contained in the Township's Master Plan and as developed through conformance with the Highlands Regional Master Plan.

Greener by Design (GbD), an environmental asset management firm, was engaged by the Township to conduct this effort in 2019. Over the course of a year, GbD conducted extensive public outreach, field assessments,

research, data collection and collaboration with the Township officials, professional staff and volunteer boards to provide the foundation of this report. The report provides an assessment of the current state of the Township's open space & recreational holdings, identifies the trends that will impact the Township over the next decade, evaluates the public input concerning demand for recreational facilities, assesses the likely costs of maintaining current facilities and constructing additional facilities and amenities and makes recommendations for consideration by the municipal governing body for managing the Township's open space holdings.

This report is divided into five sections.

1. Executive Summary
2. Open Space & Recreation Plan
3. Trails Master Plan
4. Stewardship & Asset Management
5. Economic Development Strategies

The elements of this plan are all interrelated. The Township will need to strategically take advantage of the natural resources present to maintain the quality of life for its residents, protect the resources the residents rely upon, to provide adequate recreational opportunities for Township residents and to recognize and develop the economic development opportunities these resources represent.

A comprehensive online survey was open for public input for approximately 6 months. There was a substantial response rate from Township residents. There were also several public sessions designed to solicit input on the state of the Township's facilities, the adequacy of existing programs, ideas for new facilities or programs and identify any unserved or underserved populations in the community. This brought forth a host of ideas, some of which are feasible and consistent with the Township's planning goals. A summary of the survey results and of the public input can be found in the Appendix to this plan.

This effort was supplemented with a series of in-depth interviews. This part of the outreach effort centered around the main user groups in the Township, mainly the recreational sports programs. In addition to gauging the demand, usage and allocation of facilities among the groups, recent enrollment numbers in these programs were also analyzed. The Township's population is relatively stable, and this was reflected in the participation statistics for the local sports programs. Establishing enrollment trends is an important element of predicting future demand.

Byram shares its youth sports programs with the neighboring communities of Netcong and Stanhope. These towns also share the Lenape Valley High School district. There is a natural relationship between these towns when it comes to sports programming. However, Byram plays a larger role in providing facilities for the local youth sports programs. Nearly all active recreation facilities used by these sports programs are located in Byram Township. This places a disproportionate financial burden on Byram as the host community for these activities. This led to an examination of the available facilities at Lenape Valley High School. The district is funded by taxpayers from all three communities and it was important to evaluate where adequate available public recreational infrastructure already exists to avoid unnecessary duplication of investments.



The first and most timely aspect of this plan was the update of the Open Space and Recreation Plan. Periodic updates are required to be compliant with the rules governing the NJ Green Acres program. Maintaining a current Open Space & Recreation Plan is a prerequisite for eligibility for future Green Acres grants and other funding opportunities. This plan updated the Township's open space mapping, inventoried the restricted public open space assets, and reevaluated the list of priority parcels for acquisition. These actions were necessary to maintain the Township's Green Acres Planning Incentive Grant (PIG). This plan additionally evaluated current management and governance of municipal open

space assets and includes a budgeting tool that incorporates project costs, potential funding sources, and best practices for carrying out its identified goals.

Similarly, the Trails Master Plan creates an integrated trails system for the Township, with the goal of improving trail conditions and attracting visitors. The Trails Master Plan evaluates the existing trail system, including the trail conditions. It also outlines opportunities for creating an integrated and comprehensive trail system that takes advantage of state, municipal and privately held lands that are available for public recreation. This included the identification of key parcels for acquisition or easement access to provide links between existing trails as well as an asset management plan, promotional materials and strategies for encouraging trail usage, updated mapping, and a proposed budgeting tool for construction and maintenance.

The Trails Master Plan feeds into the Eco-Tourism based Economic Development Plan, which establishes a sustainable economic development strategy that is consistent with all other municipal goals, as outlined in Byram's Master Plan. The Eco-Tourism Plan effectively promotes sustainable economic development, devises a strategy to promote the Township as a destination for hiking, biking, hunting, fishing, and kayaking; and develops branding and marketing materials for the Township's natural assets. It contains specific recommendations to promote economic activity that is in line with reasonably allowable uses in the constrained regulatory environment governing development in the Township. It is designed to identify ways to make the best use of the Township's natural assets.

Finally, the Stewardship and Asset Management Plan updates the township's Stewardship and Maintenance Plan for open space holdings. It begins with updates of the existing baseline conditions. The plan accounts for new acquisitions and new conditions or threats to town lands and creates a budgeting tool to assist with implementation of the recommended actions set forth in the plan. Further, the Stewardship and Asset Management Plan evaluates the town's current management structure for open space assets, resulting in

recommendations for oversight and usage. This includes an evaluation of holdings identified in the Open Space and Recreation Plan and an evaluation of completed stewardship activities, threats, and next actions.

Like most suburban and exurban communities, Byram's population is geographically dispersed. Residents are more likely to identify with the neighborhood or development they live in rather than with the Township as a whole. In Byram, the existence of distinct private lake communities adds to this fragmentation. The municipal open space, facilities and natural assets provide an opportunity to bring the community together and strengthen a sense of identity. The Township's recreational facilities currently serve as focal points for residents to gather and meet, however there are many opportunities to make better use of these assets to build a stronger community. Connecting neighborhoods with hiking or biking trails would provide alternatives to automobile travel as would direct links from residents' homes to the trails and open space. Making connections to the Township's commercial center on Route 206 or with community facilities like the schools or active parks would also be beneficial.

EXECUTIVE SUMMARY

Introduction



The Open Space & Recreation Plan has four distinct elements. Those elements are the strategic plan for the Township's open space and recreation programs, a trails master plan for the development of a Township-wide trails system, a guide for management of the Township's open space assets and an economic development strategy to utilize the Township's open space assets to generate new economic opportunities. The plan was developed after an extensive period of public outreach, research and field work. This plan also includes a

complete update of mapping of the Township's open space assets to reflect changes that have occurred over the past 10 years and to align with Byram's priorities going forward. The purpose of this plan is to create a comprehensive approach to guide the Township's policies to maximize the value of Byram's abundant natural resources to Township residents.

The main goal of this plan is to provide a rational and objective approach to managing the investments that Byram has made, and will make, in obtaining, maintaining and developing the Township's open space resources. This plan is designed to establish a basis for making fiscally responsible budgeting decisions for maintenance of facilities, to guide strategic future acquisitions of public land and to fairly and objectively prioritize future projects. Finally, this plan acknowledges the relationship between the natural assets that define the Township and the quality of life for residents, the economic health of the Township and the characteristics that make Byram a great place to live.

While there are four distinct sections of this plan, they are all inter-related. Open Space preservation is a vital component of responsible land use planning. The services that open space assets provide are important for public health and well-being. The Township's public lands create opportunities for both passive and active recreational opportunities for residents. Making strategic use of existing land holdings and future acquisitions can allow for uses that will help connect residents throughout the Township and foster a greater sense of community. Recognizing that the natural assets present in the Township have value to both residents and visitors to Byram alike can provide the basis for sustainable economic development opportunities based on outdoor recreation. These are all elements of a comprehensive approach that will define the Township's future.

Open Space & Recreation

Preservation of open space must be planned just as any municipal infrastructure. This plan is about much more than just preservation of land. It incorporates planning for the use of properties that have been acquired; the maintenance and stewardship of the Township's open space assets; and assessing and balancing the needs of the

community with the ability to provide for those needs. It also provides guidance for the implementation of the identified initiatives contained in the plan. The Open Space & Recreation Plan is guided by a set of community goals designed to inform future acquisitions and maintenance and development of recreational facilities. The goals are:

- Provide for the present and future Recreational needs of ALL Byram residents
- Make optimal use of the Township's Open Space and Recreational assets to foster a greater sense of community
- Maintain the existing Open Space and Recreational facilities in a fiscally responsible manner
- Use Open Space acquisitions to establish a Township-wide trails system
- Continue the comprehensive land acquisition strategy that includes protection of defined "Greenways" within the Township.
- Protect the important natural assets of the Township, acting as responsible stewards of the forests and other natural features.
- Protect the drinking water of Township residents

These goals are intended to act as a guide for Byram as it continues to pursue its open space preservation strategy, as decisions are made to invest in facilities and to help decide how to best provide for the needs of the Township's residents. They also provide guidance on how to invest Township resources in an efficient and fiscally responsible manner. The goals focus on preserving undeveloped and environmentally sensitive land, protecting water resources, developing appropriate facilities, maintain the Township's assets and creating recreational opportunities for both natural resource-based and facility-based recreation.

Current Conditions

The current conditions in the Township were assessed and evaluated to provide a baseline for planning the next 10 years of management and investment. This assessment included population trends, enrollment in sports programs, existing park facilities, available resources and public demand. Understanding the existing status of the factors that impact use of the Township's open space assets is a vital part of an appropriate forward-looking strategy.

Geography/Demographics

Byram is approximately 22.7 square miles (14,505 acres) in area and has an estimated population of 7,933 as projected by the 2018 Census update. This represents a decline of approximately 5% from the 8,350 people counted in the 2010 Census. This is consistent with a larger trend that has seen Sussex County as a whole, along

with the other rural counties in New Jersey, undergo a population decline over the course of the last decade. Approximately 3.96 square miles (2,534 acres) or 17% of the Township's land is classified as "developed". The majority of that area consists of low-density residential uses. There is a small amount of commercial development and scattered industrial uses included in that calculation.

The declining population is reflected in declining enrollment numbers for the Township's youth sports programs. These programs are the primary users of the active recreation facilities in Byram. The declines are not significant, but they do represent a change from decades of continuing steady growth the number of participants. It should also be noted that Stanhope and Netcong, two communities that share youth sports programs with Byram, have also experienced similar drops in population. There are several influences on the enrollment numbers that include specialization of athletes, participation in "elite" travel programs and gains made by some sports programs, particularly lacrosse, that have attracted participants away from other sports.

Properties

A large portion of Byram Township is currently in some form of permanent land preservation with public access. This includes lands owned by Byram, lands owned by the State of New Jersey and lands owned by private entities with permanent conservation restrictions that also provide for public use.

Byram has embarked on an ambitious land acquisition effort that spans several decades. The Township has had success both in the purchase of land and in securing donations of land from developers. Byram Township currently owns 480.3 acres of land designated for public open space. The tracts are detailed in the Recreation and Open Space Inventory (ROSI) that can be found in the appendix to this report. An additional 2.661 acres is managed by the Township under lease with the NJ Department of Environmental Protection. The Township properties include the following:

- Briar Ridge Park
- Brookwood Park
- Byram Township Civic Park (Neil Gylling Park)
- C.O Johnson Park
- Cranberry Overlook
- Forest South
- Glenside Woods
- Lackawanna Trail
- Mohawk View (Stonehedge Park)
- Municipal Park (Mansfield Woods)

- Raccoon Trail
- Riverside Park
- Tamarack Park
- Tomahawk Lake Park (Mountain View)

These properties are all encumbered by conservation restrictions consistent with the requirements of the NJ DEP's Green Acres program. They are managed for both active and passive recreation activities as appropriate for each tract. Some of the properties are small parcels obtained as a consequence of residential development and have little utility. Most, however, are important components for providing recreational opportunities and the protection of vital natural resources for the Township's residents.

State lands include Allamuchy Mountain State Park which includes the Waterloo Village Historic Site. Approximately 3,000 acres of the park are within Byram. Additionally, Lubber's Run Preserve is owned and managed by the New Jersey Natural Lands Trust. The bulk of the Township west of Route 206 consists of state-owned public land. These holdings, while managed by the state, have value to the Township, both for the amenities it provides for the residents and for the opportunity to manage municipally held lands for complementary uses. The critical natural resources found in the Township are generally landscape scale habitat areas that stretch beyond the Township's borders. Understanding the relationship between all of the vacant tracts of land in Byram is an important element for planning for preservation as well as stewardship and management.

Finally, there are several large private land holdings. The Tamarack Greenway was purchased by Byram in cooperation with the New Jersey Conservation Foundation (NJCF) and is managed as part of Tamarack Park. This is a 153-acre tract in between C.O. Johnson Park, Tamarack Park and the Cranberry Overlook Tract. It is subject to more restrictive conservation easements that are managed by NJCF. Hudson Farms owns and manages over 3,000 acres in Byram, Hopatcong and Allamuchy Township. 1,329 acres of Hudson Farms lands are within Byram. These properties have recently been encumbered by a permanent conservation easement that allows for public access via hiking trails that are yet to be developed. Finally, the 894-acre Mt. Allamuchy Boy Scout Reservation is in the southwestern corner of the Township adjacent to the state park. Each of these privately held tracts are adjacent to existing publicly owned open space and can be incorporated into a comprehensive use plan.

Financial Resources

The Township currently collects a dedicated Open Space Tax as part of the property tax levy. This money can be used for direct expenses such as the purchase of open space tracts and improvements or maintenance projects in the parks. It can also be used to support long-term bonding by dedicating a portion of the tax to the payment of bond installments and thereby increase the buying power of the tax. Byram Township created the Open Space, Recreation, Farmland, and Historic Preservation Trust Fund in 2000 after a November 1999 referendum vote that dedicated a portion of the Township revenue toward the preservation of open space. Specifically, the referendum outlined the dedication of local property tax not to exceed \$0.02 per \$100 of assessed value for the acquisition, development, and maintenance of lands intended for recreation, conservation, historic and farmland preservation, and open space acquisition. Following a reevaluation of the Township in 2009, the open

space tax rate was reduced to one cent per \$100 assessed value. On average, this tax produces approximately \$110,000.00 in revenue annually.

Byram has historically used its open space tax as a source of matching funds for other grant programs. The Township has been successful in securing funds from sources such as the State of New Jersey's Green Acres program and from private funders such as the William Penn Foundation. The result has been that each dollar spent by the Township has been supplemented by at least two dollars from other sources and often more. The fund maintains a reserve for debt servicing (principal and interest payments) for bonds issued by the Township to fund past acquisitions. The current bond was issued in 2004 in the amount of \$1.2 million for purchasing open space properties. The bond will be retired in October 2024. At the close of 2019 the balance owed was \$335,850.00 with an Open Space Reserve Account Balance of \$419,945.70 available. These funds have been used to match other sources of funding and remain available for that purpose.

As the inventory of parcels prioritized for acquisition starts to shrink, there is a temptation to reduce the Open Space Tax to offset increases in the tax rate for general budgeting expenditures. Additionally, using open space funds for other expenses like infrastructure improvements or maintenance of parks may seem attractive. There are still acquisitions to be made in the Township, particularly if the Trails Master Plan is implemented. Also, the repeating predictable fund that the Open Space Trust Fund represents allows for bonding of larger expenditures related to the Township's open space assets and for being able to make financial projections on the tax impact of these projects. The Township should maintain the tax at its current rate or even consider increasing the levy to the voter-authorized level if some of the more costly open space and recreation projects go forward.

Facilities



The Township has three active recreation facilities owned, operated and maintained by Byram. Responsibility for maintenance and care rests with the Township Department of Public Works. The recreational infrastructure in the parks is also the responsibility of the Township and there has been an investment in regular maintenance and replacement of equipment, construction of fields, irrigation, improvements to park infrastructure and other appurtenant features that support the use and care of these facilities. Active recreational

facilities have been developed at C.O. Johnson Park, Tamarack Park and Neil Gylling Park. There are additional facilities located at the Byram Intermediate School complex.

The greatest use comes from youth sports programs. Byram has private adult recreational programs for softball and soccer in town but the primary demand comes from the youth programs. The youth sports programs are operated as a joint program with the neighboring communities of Stanhope and Netcong. The exception is the youth baseball activities which are run independently in each of these municipalities. The majority of participants

in the sports programs come from Byram Township, which has the largest population of the three towns. A handful of facilities are located in the other two communities. The exceptions to this are youth baseball fields that are owned or controlled by Stanhope Little League, the complex of multi-use fields at Indian Fields in Netcong and Arbolino Field.

The Lenape Valley High School District maintains a full range of sports fields for the use of the school-sponsored programs. Football, soccer, field hockey, baseball, softball and lacrosse fields are located on the school's campus. Several of the youth sports programs utilize the school facilities. Youth football and youth lacrosse use the football stadium for competition on a fee basis. This access meets most of their needs. A major addition of artificial turf fields at the campus have recently been completed which have included provisions for soccer, softball, baseball, lacrosse and field hockey.

Indoor Recreation is provided in partnership with the Byram Township School District. The Byram Middle School and Byram Lakes Elementary School on Mansfield Drive are used seasonally for the youth basketball and youth wrestling programs. Access to the facilities is managed through the school district directly with these programs. The school district has taken on the responsibility for allocation and scheduling of the facilities.

Developed recreational facilities within Township parks include the following:

- Baseball Fields
- Softball Fields
- All-Purpose Fields
- Tennis Courts (with provisions for Pickleball)
- Youth Football Field
- Sports Courts
- Hiking/Biking Trails
- Paved Walking Paths
- Gazebos/Pavilions
- Field House
- Playgrounds
- Skate Park

The recreational fields are in excellent condition and are well-maintained. There is a drainage issue with "Field 8" at C.O. Johnson Park that will need to be addressed. The all-purpose fields at Tamarack Park are the most recent addition to the Township's inventory of active recreation fields. Neil Gylling is a softball-only facility. The tennis courts at C.O. Johnson were recently renovated with the addition of striping for use as Pickleball Courts in addition to Tennis. The football field is an "80-yard" field that is no longer a standard for youth football. The field house at C.O. Johnson Park is in need of either upgrade or replacement.

Historic Resources



The Township is home to a number of historic resources including the Lockwood Cemetery and Roseville Schoolhouse. These sites are important for understanding the history of Byram and the surrounding areas and can also serve as an attraction for visitors. The historic features in the Township are eligible for the use of the Open Space Trust Fund's resources for acquisition, maintenance or improvements. Wherever possible, the historic sites should be viewed as elements of the overall inventory of Township assets. They can be incorporated into the trail system as points of interest or as part of other initiatives designed to increase eco-tourism or other economic growth opportunities. The historic resources

include Waterloo Village that attracts nearly 50,000 visitors to the Township each year. The ability to tap into an attraction like this can have a significant impact on reaching the overall goals of this plan.

Future Initiatives

As a result of the public outreach and research conducted as part of the preparation of this plan, a series of potential actions for the Township to consider over the next 10 years and beyond were identified. It should be noted that these actions are not all necessary and constitute in part a "wish list" of items cited during interviews and in the survey conducted in conjunction with this effort. Some of these items will be necessary to achieve some of the ambitious goals contained in the plan, such as the creation of a Township-wide trails system. Others were improvements or additions designed to serve portions of the population that are optional for the governing body to undertake as demand or resources permit.

Land Acquisitions

The Township has maintained a priority list of candidate properties for land acquisition. That list has been updated to reflect both the past success in the Township's land acquisition efforts and the current priorities set forth in this plan. When the Township began its open space planning efforts, there was substantial development pressure in the community that threatened to both change the character of Byram Township and compromise the important natural resources located there. The primary concern was protection of water quality and quantity. Those circumstances have changed somewhat since the early 2000's when the Township's aggressive preservation program began. There is a sentiment in the Township that there is sufficient preserved land within the community. This is certainly understandable when evaluating the sheer volume of preserved acres of combined state, local and private conservation lands. The updated list of priority tracts is found in the appendix of this plan.

Nevertheless, there are still properties that should remain preservation priorities for the Township. There are still large tracts of undeveloped land in private ownership that are not restricted by conservation easements or other impediments to development. Even at low densities, these properties have the capacity to impact the Township's future and adversely affect the important natural resources that have always driven the community's

preservation efforts. These properties remain on the priority acquisition list in the appendix to this plan and are also depicted on a map of targeted parcels.

There are four main categories for including targeted properties on the priority list. They are:

- Expansion of Existing Open Space Holdings
- Important Open Space/High Environmental Value Properties
- Greenway Acquisitions
- Trail Connections

The “greenway” concept that has driven the Township open space planning in the past remains a sound foundation for future acquisition efforts. There are key connecting parcels that link existing preserved land that should continue to be targeted for purchase. These parcels become more important as the Township pursues the creation of a comprehensive trails network connecting state, local and private preserved lands with the neighborhoods and the planned town center. This cohesive network of trails is achievable with the purchase of a limited number of tracts. They are smaller parcels and, in many cases, may only need the purchase of a trail easement or corridor necessary to make the connections.

There are several major large parcels that would fit both into a strategy to expand existing open space holdings and constitute important lands due to their size and environmental characteristics. They include the Boy Scout Camp at Mt. Allamuchy, the Tilcon properties, the Lake Lackawanna Properties (including the golf course) and the Stag Lake Properties. While they currently appear to be in stable ownership, should they become available, the Township needs to be prepared to pursue acquisition of all or a portion of any of these properties as necessary. They would likely need to be purchased in partnership with other entities such as the Green Acres Program or the NJ Conservation Foundation as have many of the other open space properties owned by the Township. The cost estimating tool for use in projecting park maintenance costs in the Appendix to this document has provisions for projecting acquisition costs as well and should be used to assess the necessary long-term investment needed to acquire these priority properties.

Capital Investments

A list of potential capital investment and projects was developed as part of this plan. The Township may choose to pursue all of these projects over the next 10 years, some of them, or decide to forego these undertakings altogether. The decision concerning which of these investments to pursue is within the discretion of the Township’s governing body. Some of these proposed actions may not be feasible from either a regulatory standpoint or from a fiscal standpoint. However, that decision should be based upon the assessment of need, the utility of the project, the regulatory environment that controls land use within the Township’s parks and the fiscal impacts. The financial analysis should also inform decisions regarding the amount of the Township’s open space levy which can be used to fund some of these initiatives or to support bonds for larger expenditures.

This list of candidate investments is presented without prioritization (they are presented in alphabetical order) and reflects the issues that were raised by residents of Byram and the interested stakeholder groups participating in the development of this plan. These were identified through the public outreach and research process. None of them would be considered necessary for meeting the needs of the Township’s residents.

Nonetheless, they each may provide a return of value to the Township through increased utility, improved quality of the asset or new facilities. Ultimately the governing body must make a cost/benefit analysis of these projects. Even implementing some of these proposals will require a multi-year approach with budgeting implications that should be managed. The expectation of the residents should also be informed by this rational and structured approach to implementation. The guiding principles should be what is feasible, what is necessary, what is fiscally responsible and what provides the best return on investment to Byram's residents.

- Dog Park
- Forest Stewardship Initiative
- Gazebo/Pavillion
- Handicap Accessible Facilities
- Neil Gylling Park Bathroom Renovation/Replacement
- Trails Development
- Artificial Turf Field & Lighting
- C.O. Johnson Field #8 Improvements
- C.O. Johnson Field House Improvements/Replacement
- C.O. Johnson Football Field Improvement/Replacement
- C.O. Johnson Walking Paths Improvement/Expansion

The list of candidate projects includes:

Recreation Programs

There is a need and a demand in the community for programming and events that serve a broader cross-section of the population. These activities can be difficult to assess. There is rarely a dedicated constituency that is easily identified as the youth sports groups are. Additionally, these activities do not have a built-in support system to advocate and volunteer for the organization and the conduct of these programs. Specific activities identified during the public outreach for this plan included:

- Outdoor Concerts
- Guided Canoe/Kayak Trips
- Adult Sports Teams
- Historical Walking Tours

- Outdoor Movie Nights
- Group Hikes
- Mountain Biking Activities
- Cultural Programming
- Programs/facilities for Physically Challenged Residents

The Township should explore the potential for sharing programs with the neighboring communities of Stanhope and Netcong wherever feasible to increase enrollment and share costs.

Other passive recreational opportunities define Byram's open spaces. The ability to hike the forests, fish in the Township's lakes and streams, bicycle, kayak, hunt, and participate in other related outdoor activities is one of the prime benefits of the public lands available to both residents and visitors. The Township is already a well-known destination for fishermen, hikers, mountain bikers and trail runners. The maintenance and expansion of these recreational opportunities will be an important aspect of managing the Township's open space assets in the future.

Trails Master Plan

A major component of this plan was the development of a Township-wide trails master plan to guide the development of a comprehensive system of hiking and multi-use trails that will take advantage of the significant open space assets found in the Byram. This system, when built, will take advantage of the existing trails on state land and on municipally owned land and supplement them with new connecting trails. Creating a larger and more complex system of trails will make for more opportunities for Byram residents to enjoy the public lands within their community and attract visitors to Byram looking for places to hike or mountain bike. Additional trails will provide the prospect for longer hikes, loop routes and a variety of experiences that will make Byram an attractive destination for outdoor recreation and provide new avenues for economic development based upon the Township's abundant natural resources.

The proposed trail system has several guiding principles:

- Respect for the natural resources of the New Jersey Highlands.
- Expanding the trails system into a comprehensive integrated Township-wide network.
- Using the trails system as a catalyst for sustainable economic development.
- Managing uses of the trails in ways that enhance the benefits to current and future residents.
- Achieving the goals of this plan in a fiscally responsible manner.
- Recognize the Township's trails as an important enhancement to resident's quality of life.
- Ensuring that the trail network will continue to be an asset to the Township.
- Protecting the ability of future generations to enjoy this wonderful resource.

The Trails Master Plan section of the Open Space & Recreation Plan is intended to provide guidance to Byram for the continued development of its recreational trails program, so it can effectively manage and maintain a formalized system of sustainable trails that will serve the year-round needs of area residents.

Current Trails



The current system of public trails consists of several disconnected paths in scattered parks around the Township. They provide the residents with opportunities for recreation, but only provide a fraction of what is possible in a community that is host to several thousand acres of publicly accessible preserved land. The existing trail system is limited in both its reach and its utility. Trails in Byram consist of primarily single paths constructed in individual parks that are contained within that park. The most used trail is the Tamarack Trail that runs from Tamarack Park to C.O. Johnson Park, a distance of approximately 1 ½ miles. There is a connection available at Johnson Lake to a trail that climbs to

Cranberry Overlook. This trail dead-ends at the overlook and is just under ½ mile in length. The Township's Briar Ridge Park has a single trail that is just over 1 ½ miles long with a trail head on Andover-Mohawk Road. The trail runs just about ¾ of a mile in each direction from this trail head. There is a short circular path within Glenside Woods that is about ¾ of a mile in length and a very short walking path (1/10th mile) in Brookwood Park.

The Township has constructed multi-use paths on Byram Township property at Mansfield Woods and within Allamuchy Mountain State Park to connect Route 206 to the Sussex Branch Trail (Jefferson Bike Path). A short Township-maintained trail also provides a connection from the parking lot of the Salt Restaurant on Route 206 to the Highlands Trail and eventually the Sussex Branch Trail also within Allamuchy Mountain State Park (Cat Swamp Connector). A short segment of a longer proposed trail in the state-owned Lubber's Run Preserve has been constructed and is maintained by Byram Township. A map of the entire Township-wide trail network can be found in the appendix to this document.

In addition to the trails on Byram Township owned land, there is an extensive existing system of trails in Allamuchy Mountain State Park that is limited to the portion of the Township west of Route 206. There are nearly 20 miles of marked and maintained trails available for multiple uses including hiking, horseback riding and mountain biking in the section of the park within Byram. The long-distance Highlands Trail, which runs from Riegelsville on the Delaware River in Hunterdon County to Storm King Mountain on the Hudson River in Orange County, New York, passes through Byram.

There are a number of trailheads that provide access to hiking opportunities within Byram. These access points include:

- Waterloo Road South
- Waterloo Village
- Hi-Glen Road
- Cat Swamp/Salt Gastropub
- Tamarack Park
- Cranberry Overlook/Johnson Lake
- C.O. Johnson Park
- Brookwood Road
- Mansfield Drive
- Lee Hill Road
- Andover Mohawk Road

Additions to the System

The heart of this trails plan is the development of additions to the existing trails system. This includes new trails, new trail segments, new trail access points, trail crossings, signage and other amenities that will be the hallmark of the Byram Trails Network. This also includes the acquisition or securing of access to critical land parcels that will facilitate the creation of new trails and the establishment of connections that will enable the creation of a township-wide trails network.

The biggest part of the expansion of the existing system will be accomplished by creating connection between existing trails on state and municipal land as well as the construction of key new trail segments. Connecting Byram's trails to these other existing trails is within reach. Additionally, a recent conservation transaction has made the three Hudson Farm Holdings available to the public. Development of new trails on these properties that connect to the network of existing trails can provide the opportunity to both create an integrated system of paths and allow accessibility to that trails system for most of the Township's neighborhoods.

There are 5 main elements to the expansion of the trails system:

- Acquisition/Access to Key Land Parcels
- Construction of New Trail Segments
- Creation of Unified Wayfinding System
- Establishment of Additional Trailheads
- Addition of Supporting Infrastructure

There were 12 trail segments identified for construction that are essential to creating the envisioned Township-wide system. These segments should be prioritized based upon a set of rational guidelines that include cost, opportunity and utility. A map of the proposed new trail segments can be found in the appendix of this plan.

New Trail Segments

Creating a Township-wide trail system will require establishing new trails, trail connections or extensions of existing trails to take advantage of the extensive publicly accessible land. The ultimate goal is to connect as many of the Township's parks to the trail network as possible and to integrate trails within Allamuchy Mountain State Park and the Hudson Farms Property into a comprehensive system that includes the Byram Township trails. These connections will allow for more interesting hiking/biking experiences that include significantly longer routes and loop options that will not require "out and back" hiking. There will also be opportunities to connect neighborhoods that do not currently have direct access to the trails. The 12 identified trail segments are:

- Glenside Woods-Briar Ridge Connector
- Glenside Woods-Mohawk View Connector
- Forest South Connector
- Stag Pond Connector
- Trail "A" Hudson Farms-Westby
- Trail "B" Hudson Farms-Wolf Lake
- Trail "C" Hudson Farms-Main Property
- Cranberry Overlook Connector
- West Brookwood-Sussex Branch Connector
- Lubber's Run Completion
- Highlands Trail Re-route
- Lubber's Run North (LLIC Property)

New Trail Heads

Additions to the trails system will require establishing new trailheads throughout the Township. This will be particularly true with the Hudson Farms properties being made available to the public. Public access will likely be from parking areas established along Township roads. Hudson Farms also expressed an interest in designing the access points as aesthetics were an important factor and representatives wanted input into the design of new trailheads and the content of rules, regulations and information available at kiosks. They would also be willing to contribute financially to the installation and construction of the new trail access points. The following are potential new access sites for Byram Trail System trailheads:

- Hudson Farms-Westby

- Hudson Farms-Main (Roseville Road)
- Hudson Farms-Main (Lackawanna Drive)
- Tamarack Road
- Old Indian Springs Road
- Lackawanna Drive North

Other Improvements

Other upgrades to the trails system include improved wayfinding, trail blazing, signage and branding of the “Byram Trails”. Trail kiosks should be constructed at every trailhead and be of uniform design. Road crossings should be signed and roadways should be striped at these crossings wherever feasible for safety. A unified system of trail blazing should be established on municipal, state and Hudson Farms properties that will allow for seamless navigation throughout the system. Trails should be color-coded and clearly identified. A new trails sign (Byram Trails) should be designed. This symbol should be used consistently to mark all entrances to the trails network as well as with all materials produced to support the trail system. A system of intersection numbers and distance information should be incorporated to assist users in navigating the system and to permit emergency responders to locate incidents or to help lost, injured or sick hikers/bikers.

Maintaining the System

The trails plan calls for the creation of an additional 18 1/2 miles of hiking trails. This will result in an increase in the responsibility for maintaining these trails as well as cost for new construction. While these investments may be relatively low-cost, particularly when compared to the return in value, responsible budgeting practices require careful planning and an assessment of the tasks the Township will be undertaking. Planning for maintenance, construction, replacement and routine tasks is part of a best practices approach to keeping a trails system in a state of good repair. This includes planning for the upkeep and replacement of trail infrastructure such as bridges, signs, blazes, parking areas and other associated hard assets.

Maintenance can be placed in three categories:

- Routine maintenance, which includes all the general activities, such as brush clearing, trash collection, and debris removal, that is needed on a regular basis.
- Minor Repairs, which usually can be expected every five years or so, such as amenity replacement, trail resurfacing, maintenance of trailheads, and inspection and replacement of trail blazings/markers.
- Major Reconstruction involving significant expenditure such as resurfacing or reconstruction of trailheads and trails. These activities tend to be the costliest and should be planned for in advance.

A well-planned and responsive maintenance management system is crucial to success of any trail system and ensures many enjoyable years of multi-use trails activities. Safety and security for trails users is a prime concern when designing a trail system and opening the way for public use. Appropriately planning for periodic repair, upkeep and replacement of the trails infrastructure is an important element of maintaining the integrity and aesthetic qualities of the system. While initial construction of trails is generally accomplished through a combination of capital projects and cost-saving volunteer efforts, trail maintenance is often an afterthought to the

initiation of a new pathway. This section is designed to provide guidance for the long-term preservation of the trail system and for protection of the investment the Township has made in this community asset.

A combination of Township resources and volunteer maintainers can be deployed to monitor conditions and perform trail maintenance tasks. Typical tasks include:

- Periodic Inspections
- Yearly facility evaluation to determine the need for minor repairs and tree and brush clearing.
- Mowing.
- Map/signage updates.
- Trash removal/litter clean-up.
- Repair flood damage: over-wash or silt clean-up, culvert clean-out, etc.
- Patching, minor regrading, or gravel surface or asphalt repair replacement.
- Planting, pruning, and general beautification.
- Installation and removal of seasonal signage.

A schedule for all related maintenance tasks should be established and an annual budget item should reflect the costs for these tasks and the allocation of Township personnel to undertake them.

Asset Management

Open space resources must be managed and maintained as important public infrastructure. They provide services to the community that go beyond the mere value of the land itself. Parks and open spaces provide substantial benefits for Byram's residents however, public resources to create and operate these spaces are limited. This makes having a rational long-term strategy to provide for the maintenance of these assets a vital part of the Township's Open Space & Recreation planning process. This strategy will incorporate an assessment of what the Township has, the condition of these assets, the lifespan of these assets (where applicable), the costs for maintenance and replacement of these assets, the resources dedicated to caring for them and how they are being utilized.

The acquisition of land, the construction of playing fields and other facilities and the creation of publicly accessible amenities requires an expenditure of public funds. At the same time, the accumulation of these assets carries an obligation for their upkeep, care, maintenance and, in some instances, regularly scheduled replacement or renewal. This obligation comes with costs and the need for dedication of public resources, such as dedicated personnel. Having an asset management plan in place will assist the Township in making important long-term decisions that are also fiscally responsible and predictable for carrying out these responsibilities. A cost estimating tool is included in the appendix to this document to use in making financial projections. This tool can be continuously updated to reflect actions taken, added or deferred on an ongoing basis.

Current State of Assets

A baseline assessment of the Township's open space resources was conducted as part of this plan. The overall condition of the parks and open space infrastructure was good to excellent with only a few notable exceptions. This assessment provides a rational starting point for making projections of the necessary actions that will be required to properly maintain these assets and the costs and resources needed to accomplish those tasks. This will allow for responsible pro-active fiscal decisions to be made regarding the care of the Township's Open Space and Recreation facilities.

The assets that were evaluated included:

- Playing Fields
- Sports Courts
- Trails/Walking Paths
- Playgrounds
- Structures
- Affiliated Support Infrastructure

It is apparent that there has been regular maintenance and replacement of these items over the past 10 years and they are in overall good to excellent condition. Routine maintenance of these items is generally within the capability of the Township's Public Works Department. However, budgeting for regular replacement of items with a known limited lifespan should be done on an ongoing basis. Planning ahead with each annual budget cycle will allow for the allocation of resources in a logical and rational manner that will keep these expenses within the reasonable parameters of the municipality's spending plan.

Fortunately, the starting base conditions are good. Parking areas are well-graded and maintained. The surfaces are primarily crushed gravel with limited paved areas. The paved areas at Tamarack Park are in excellent condition and should remain so for the next 10 years. Parking areas at C.O. Johnson Park are older, but still have substantial useful life. The use of millings and a layer of rolled oil and stone was a cost-effective method of surfacing the upper parking area, but only has a limited expected life span. Re-surfacing at C.O. Johnson should be anticipated towards the end of the 10-year horizon of this plan. The parking area and guardrails at Mohawk View are nearing the end of their lifecycle and will likely need to be replaced within the next 5 years. Signs at the parks were installed in the recent past and are attractive and in good condition. Safety lighting of parking areas is also relatively new and in good condition.

Management Strategy

There is a strategic approach to maintaining the Township's open space assets. There are several steps to this strategy. They include funding and personnel allocation, identification of ongoing regular maintenance tasks and a planned replacement schedule for infrastructure that has a finite lifespan. Following an orderly and rational roadmap for undertaking these responsibilities will allow for fiscally responsible budgeting for necessary tasks and a methodology of ensuring the Township's assets remain in a state of good repair.

Funding

Currently, the regular maintenance activities are carried out as a function of the Township's Public Works Department (DPW). The tasks required to keep the parks and related infrastructure in a state of good repair can be difficult to parse out from the general DPW annual budget because much of the same equipment, materials and man-power that are allocated to the general duties of the department are applied within the parks. The Township does recognize that there are discreet functions related to the care of the parks and makes provisions within the budget to approximate some of the costs within the DPW's overall allocation.

There are individual line items within the DPW budget for Park Maintenance, Park Operating and Park Vehicle Repair. The 2020 municipal budget provided \$50,000.00 for these expenses. It does not include salary and wages for employees. This is likely a partial representation of the true costs involved in maintaining the parks and keeping park infrastructure in a state of good repair. Using a portion of the Open Space Trust Fund for park maintenance and upkeep is one option for the Township to consider. Recent maintenance projects, such as the upper lot stair replacement and re-surfacing of the tennis courts at C.O. Johnson Park, have been funded from this source. This may require increasing the amount of the open space levy to the full taxpayer approved assessment.

Regular Maintenance

The most common maintenance activity is cutting the grass fields. In addition to the Township-owned parks, the Department of Public Works also mows the fields at the Byram Elementary/Middle School complex. Additionally, the department prepares the baseball fields, performs turf maintenance and repairs such as seeding and fertilizing, collects garbage, daily dragging of the baseball and softball fields in season and recycling from the park bins and is charged with maintenance of the Township's hiking trails. The department currently employs 12 full time workers. During the height of the summer months three full-time workers and two part-time Summer hires are assigned to park maintenance duties.

It was estimated that the year-round requirements for maintenance and upkeep of the parks and related facilities could utilize two full-time employees supplemented by part-time Summer hires. However, as in most rural communities, the overall needs for maintenance and upkeep of roads, buildings and grounds, sewer lines and other general obligations of the department require the entire authorized staff. This is highlighted during the Winter months when the entire staff of 12 is needed for the 12 snow routes that cover the Township's roads. Hiring additional staff to permit the allocation of more resources to the parks is a policy decision for the governing body to consider.

Replacement Schedule

All park infrastructure was identified, assessed and inventoried as part of the field work related to the preparation of this plan. In addition to identifying the type, amount or number of each item, the current condition and estimated life span were assessed. This provided a basis for projecting the replacement cycle for each item. This includes a schedule and rough cost estimate for replacement. This information was further divided into a park-by-park listing. This presentation of data is primarily designed for use in annual budgeting for park upkeep and determining what tasks can be accomplished each year within the set fiscal allocation. This will provide a rational basis for making decisions regarding the portion of the municipal budget dedicated to

upkeep or replacement of park infrastructure and allow for determining which of these expenditures is necessary and what specific items the investment of resources will purchase. The spending tool can be found in the appendix to this document.

Forest Stewardship

Stewardship of the Township's forested open space holdings is a vital component of overall asset management. The Township has an ongoing obligation to care for the natural resources under its ownership. There is a tendency to believe that this could be accomplished through the creation and enforcement of appropriate rules and regulations for public use. However, the health of the forests on Byram's publicly owned lands has been severely impacted by the same threats impacting woodlands throughout the northeastern United States.

These threats include forest fragmentation, the introduction and proliferation of non-native invasive species (including both plants and insects) and an over-population of deer. There is a responsibility to both current and future generations of Byram residents to appropriately manage these forest resources to the best extent possible to ensure they will remain an important part of the Township's future landscape.

The Township commissioned a 10-year forestry stewardship plan to cover the period from 2020-2030 in 2019. That plan continues the forestry management practices that had been in place for at least the last 10 years. The Forest Stewardship plan assesses each of the Township's significant open space holdings. Each open space parcel has been divided into tracts to allow for implementation on a manageable scale. The plan has not been submitted to the N.J. Department of Parks & Forestry for approval. Plan approval from the N.J. Department of Parks & Forestry is necessary to support requirements of plan and to be eligible for possible grants. The Township should consider engaging a consulting forester with experience in project management to take on the tasks set forth in the stewardship plan.

Important forest stewardship tasks that need to be undertaken are:

- Invasive Species Control
- Deer Management
- Reforestation
- Selective Timber Harvest

These tasks may require expansion of the existing deer hunting program, the incorporation of controlled burns as a forest management tool and aggressive mechanical removal of invasive plants where they have become prevalent.

Economic Development

In 2016, the Township prepared an overall economic development plan. This plan identified a number of opportunities, strategies and recommendations to promote sustainable economic growth consistent with the Highlands Regional Master Plan and with the Township's stated long-term vision. The Open Space & Recreation Plan contains a section addressing the use of the Township's open space assets as a tool for promoting sustainable economic development opportunities. While the primary purpose of this study was to chart the future

of parks, opens space and recreational facilities located in the Township, this important aspect has been included.

This analysis is designed to supplement the 2016 Economic Development Plan, in particular the recommendations concerning the promotion of eco-tourism. Those recommendations include the following:

- Reviewing and tailoring the Township's Open Space and Recreation Master Plan to meet the needs of eco-tourism objectives.
- Developing an initiative with a specific focus on marketing and promoting athletic events, cultural activities, and eco-tourism opportunities.
- Creating a program with context-sensitive transportation solutions identified in the Township's Master Plan to support bicycling and road running in concert with eco-tourism opportunities, to build on and support open space and recreational facilities.
- Working with Lake Associations, Byram business owners or similar groups and entertainment facilities to explore community-wide opportunities.

This assessment evaluates the outdoor and ecotourism opportunities and sets forth recommendations that Byram should consider implementing to generate economic growth based upon the Township's natural resources. It also details the current conditions and the impediments that exist. There are a number of examples of successful marketing efforts that have promoted communities as eco-tourism destinations. A similar approach can be implemented to drive economic growth in the Township in a manner consistent with other important planning goals. Byram has the geographic advantage of a large nearby population center that can provide a source of visitors and the attendant economic activity they would bring.

Opportunities

Byram has made a substantial investment in preserving open space. This effort has resulted in the creation of public parks with a combination of active and passive recreational facilities. In addition to municipally owned lands, the State of New Jersey owns and maintains nearly 3,000 acres in Allamuchy Mountain State Park along with historic Waterloo Village. The New Jersey Conservation Foundation has partnered with the Township on the acquisition of land and also holds conservation easements on several large private land holdings. A recent conservation transaction has resulted in the Hudson Farms properties making another nearly 3,000 acres of land available for public use. When assessed together, these lands represent a huge contiguous stretch of publicly accessible open space. This is the Township's most valuable and most marketable asset.

Within these lands are opportunities for hiking, fishing, mountain biking, walking, and other outdoor activities that can compete with any other location in the New York Metropolitan Area. Marketing Byram as a destination for urban residents looking for day activities or for multiple day/multiple activity visits is a prime avenue for economic development. Activities or features that can attract visitors to Byram Township include:

- Open Space/Parks
- Hiking

- Fishing
- Kayaking/Canoeing
- Mountain Biking
- Historic Features

The Township's natural features are its greatest asset. Accessibility of the public open spaces with the availability of a wide range of outdoor activities is one of the unique characteristics that sets Byram apart from other communities in the Highlands.

Strategy for Sustainable Economic Development

Byram should pursue a multi-faceted strategy to promote and market the Township as a destination for the New York Metropolitan Area. This includes developing the types of facilities and businesses that can attract and accommodate visitors. This strategy includes creating a “brand” for Byram as a known destination for specific outdoor related activities. This will allow the Township to take advantage of both its natural assets and its geographic proximity to a large population looking for the opportunity to engage active recreational pursuits. The Township should also actively pursue solutions to issues that constrain its ability to promote economic growth. Increased access via public transportation, establishment of facilities for multi-day stays and the creation of support businesses are some of these solutions.

Encourage Support Businesses and Services

The biggest growth potential for the economy in Byram is in creating a network of businesses that cater to visitors interested in the outdoor recreational assets of the Township. If the Township is going to successfully capitalize on these assets, an integrated economy that both serves and attracts visitors will need to be established. The biggest potential comes from marketing the Township to as broad a marketplace as possible and demonstrating that Byram is both welcoming of visitors and offers multiple activities to warrant day visits, multiple visits or multi-day visits. These businesses and services include:

- Restaurants
- Accommodations/Campgrounds
- Outfitters/Outdoors Stores
- Activity Specific Amenities
- Transit Shuttles

These facilities are largely absent. Hotels, Bed and Breakfast establishments and campgrounds are potentially important additions. Creating relationships with existing nearby hotels and providing shuttle transportation between these hotels or between existing NJ Transit stations in Mount Olive and Netcong and with the proposed station on Roseville Road in Andover can be valuable steps in attracting visitors.

Create a Comprehensive Marketing Strategy

Byram should establish a brand that features and promotes the Township as a destination for ecotourism activities. The brand should be utilized by both the Township and by local businesses. The Township should develop promotional materials designed to attract visitors to the Township. These include printed materials, web-based elements and promotional videos that highlight the Township's attractions and outdoor recreational opportunities. Additionally, maps of hiking trails, mountain bike trails, fishing access and tours that incorporate features like Waterloo Village into multiple purpose visits should be an important component of a marketing strategy.

Specific Recommendations

1. Develop a unified trail system that incorporates state, municipal and private lands. A trail network that offers a variety of hiking opportunities that can attract hikers of differing capabilities and also multiple hikes that will attract return visitors will maximize the value of this asset.
2. Work with the State of New Jersey and the New York/New Jersey Trails Conference to promote Byram Township as both a hiking destination and a host community along the long-distance Highlands Trail.
3. Develop a system of mountain biking trails within the overall trail system. Promote Byram as a destination for mountain biking similar to locations such as Bentonville, Arkansas and the Mountain Kingdom in Vermont. This includes the addition of amenities designed to service mountain bikers and commercial establishments that cater to the mountain biking community.
4. Promote and plan for the creation of facilities for overnight stays. This can include existing or new campgrounds or campsites, bed and breakfast operations, or other short-stay opportunities. Additionally, creating relationships with nearby commercial hotels located in the Foreign Trade Zone in nearby Mount Olive would allow for multiple-day visits.
5. Advocate for increased public transportation services. Existing NJ Transit train service to the International Trade Zone station only operates on weekdays and only sporadically. It does not provide the type of service that would encourage urban residents to travel to Byram.
6. Aggressively market the Township as an open space destination for eco-tourism related activities. Create a multi-faceted program that incorporates all available media to publicize the Township's offerings. This includes the Township's web site and periodic newsletters.
7. Work with existing Township businesses, particularly restaurants, to attract visitors to the community and encourage hikers, bikers, fishermen and others coming to Byram to patronize these establishments as part of their visits.

8. Create a “brand” that identifies Byram Township as a unique destination for eco-tourism and promote that brand to increase visitation. The branded materials should be shared with local businesses via a free licensing agreement.
9. Accommodate visitors with a pedestrian and bike-friendly town center and welcome them both physically and socially within the community.
10. Create a series of events or local marketing promotions that establish a positive connection between local businesses and the attractions that will bring visitors to the community

Summary

This plan outlines a comprehensive view of the natural assets of Byram Township and the opportunity to administer them responsibly, provide the greatest value for Township residents, to develop these assets in the future and to utilize them as a catalyst for sustainable economic development. This document provides guidance for the Township on making future decisions for acquiring additional open space lands, for developing a wide range of uses for the parks that meet the need of residents, for maintaining its assets in a state of good repair and for accomplishing these tasks in a fiscally responsible manner. It also provides a guide for broader policy decisions that are designed to leverage the Township’s natural resources to promote opportunities that are consistent with the capacity and constraints that come with being a Highlands community but that also recognize the unique advantages that come from having a myriad of outdoor recreational activities available in close proximity to a population of over 20 million people. A balanced and rational approach to managing the advantages that come from being a community with abundant natural resources will provide Byram Township with a bright future.

OPEN SPACE & RECREATION PLAN

Overview

The basic analysis begins with a survey of the characteristics that define Byram Township. Understanding the current status of the Township is essential for planning its future. The Open Space & Recreation Plan will set forth a series of recommendations that have their foundation in existing conditions. Assessing the resources found within the Township, both the natural assets and the built infrastructure, and matching those assets to the current and anticipated needs of the residents is the focal point of this plan. This requires an evaluation of the following factors:

- Demographic Trends in Byram
- Geography of the Township
- Important Natural Resources
- Historic Resources
- Inventory of Facilities
- Financial Capacity of the Township
- Available Financial Resources to Assist the Township
- Anticipated Future Needs

The purpose of this plan is to provide an objective assessment of the long-term needs of the Township and a rational strategy for meeting those needs. It will provide the Township's governing body with the guidance necessary to make sound decisions that are also fiscally responsible to provide for the current and future residents of Byram.

Goals

Preservation of open space must be planned just as any municipal infrastructure. However, this plan is about much more than just preservation of land. It incorporates planning for the use of properties that have been acquired; the maintenance and stewardship of the Township's open space assets; and assessing the needs of the community with the ability to provide for those needs. It also provides guidance for the implementation of the identified initiatives contained in the plan. The development of this Open Space and Recreation Plan, and the Township governing body's commitment to implement this Plan, will be important factors for maintaining Byram's community character, and to preserve and improve the quality of life for its residents over the next decade.

The following goals should act as a guide for Byram as it continues to pursue its open space preservation strategy, as decisions are made to invest in facilities and to help decide how to best provide for the needs of the Township's residents. They also provide guidance on how to invest Township resources in an efficient and fiscally

responsible manner. The goals focus on preserving undeveloped and environmentally sensitive land, protecting water resources, developing appropriate facilities, maintain the Township's assets and creating recreational opportunities for both natural resource-based and facility-based recreation.

- Provide for the present and future Recreational needs of ALL Byram residents
- Make optimal use of the Township's Open Space and Recreational assets to foster a greater sense of community
- Maintain the existing Open Space and Recreational facilities in a fiscally responsible manner
- Use Open Space acquisitions to establish a Township-wide trails system
- Continue the comprehensive land acquisition strategy that includes protection of defined "Greenways" within the Township.
- Protect the important natural assets of the Township, acting as responsible stewards of the forests and other natural features
- Protect the drinking water of Township residents

Geography/Demographics

Byram Township is located in the southeast corner of Sussex County. The Township is bordered by the Sussex County communities of Green Township and Andover Township to the northwest, Andover Township, Andover Borough and Sparta Township to the north, Hopatcong Borough to the east and Stanhope Borough to the southeast. The Township also borders the Morris County communities of Mount Olive Township and Netcong Borough to the south.

Byram is approximately 22.7 square miles (14,505 acres) in area and has an estimated population of 7,933 as projected by the 2018 Census update. This represents a decline of approximately 5% from the 8,350 people counted in the 2010 Census. This is consistent with a larger trend that has seen Sussex County as a whole, along with the other rural counties in New Jersey, undergo a population decline over the course of the last decade. Approximately 3.96 square miles (2,534 acres) or 17% of the Township's land is classified as "developed". The majority of that area consists of low-density residential uses. There is a small amount of commercial development and scattered industrial uses included in that calculation.

Byram is located in the Highlands Region of northwestern New Jersey as defined by the Highlands Water Protection & Planning Act of 2004. This legislation imposed strict development restrictions and resource protection measures on the 88 municipalities within the defined geographic boundaries of the region. 22.3 square miles (14,272 acres) or 98.4% of the total area of the Township is within the defined "Preservation Area" where conformance with the Highlands Regional Master Plan (RMP) is mandatory and strict land use regulations are in place.

A small portion of the Township consisting of .36 square miles (233 acres) is located in the "Planning Area" where conformance with the RMP is voluntary. Byram chose to conform the entire township with the RMP in 2010 and was one of the first communities in the region to have its conformance plan approved by the Highlands

Council in 2014. The Township's Highlands Conformance petition included the designation of a "village center" within the portion of the Township that is in the Planning Area where limited commercial development would be encouraged. This roughly mirrors the area where existing commercial development is concentrated along Route 206. Even within the planning area portion of the Township, there are protected natural resources that limit the development potential.

Important Resources

The Open Space & Recreation Plan has its foundation in the resources of Byram Township and recognition of the value these resources represent to the residents. These resources include the natural features of the Township, the forests, the rivers and lakes, and the important wildlife habitat. They also include the passive and active recreation facilities of the Township. The historic features that date back to the origins of the Township should also be considered as assets that need to be identified, managed and protected. They are part of the community's heritage and also an important element of a comprehensive and integrated approach to highlighting the many resources available to both Byram residents and visitors to the Township. Finally, the financial resources that are available to purchase additional land, manage and improve existing facilities, develop new facilities and provide opportunities for Byram to take full advantage of its many assets. Understanding the fiscal capacity and constraints of the Township is an important part of responsible sound long-term planning.

Natural Resources



Byram Township is defined by the abundant natural resources found there. Known as the "Township of Lakes", Byram has nearly two dozen larger ponds and lakes scattered throughout the Township and many smaller ponds. Nearly the entirety of the undeveloped land in the Township is environmentally constrained. Wetlands, steep slopes, critical habitat, important forest resources and high-quality streams and rivers are found throughout the municipality. An environmental resource inventory was created during the Highlands Conformance process that lists the extent of these features. The presence of these resources triggers strict environmental regulations that limit development and land disturbance within the Township.

The Township is located in the Musconetcong River Watershed. Lubber's Run, a major tributary of the Musconetcong, courses through much of the Township, including the designated village center. These two waterways are classified as "Trout Production" waters. They attract fishermen from all over New Jersey. Cranberry Lake is also a popular destination for sportsmen. Protection of water quality has always been a priority for the Township's preservation efforts.

Forested land covers over 11,000 acres of the Township. Nearly all of the forested land is classified as a high-value resource. Lakes and Ponds make up another 870 acres. In all, nearly 6,500 acres of land in Byram (over 10 square miles) are permanently preserved. Of the non-preserved land, an additional 7,700 has been identified by the Highlands Council as a Conservation Priority Area. This includes high-value wetlands and substantial areas of confirmed habitat for threatened and endangered species.

The Township has utilized the preservation of high-environmental value lands to prioritize its acquisition efforts to date. That should continue. Protection of the critical resources found throughout Byram should serve as the foundation of the Township's ongoing land preservation strategy. The Township has adopted principles to guide future land preservation and stewardship efforts that apply prioritization criteria defined by the Highlands Council to guide non-agricultural land preservation. They apply to preservation efforts through both fee simple acquisitions and easement dedications. The use of established environmental criteria in combination with the effort to create "greenways" of contiguous public preserved land will define future land preservation decisions.

Historic Resources



Byram Township was incorporated on Feb 21, 1798. Its heritage includes serving as a center for iron mining and forging, as a way station on the Morris Canal and as a summer resort community. The Township has a rich history in both the early manufacturing industry and in transportation. The abundance of iron ore, timber and waterpower made Byram an attractive location for the early commercial industries in the Highlands region. Mines and forges were located throughout the Township. Early Transportation included the Morris Turnpike, now Route 206. One of two historic Sussex County toll gates for the Turnpike was in Byram.

The Morris Canal was built in 1832 to supply coal replacing charcoal as fuel to the iron forges and furnaces of northwestern New Jersey and to carry iron and other products to market. The opening of the Morris Canal was followed by the construction of railroads. The Sussex Mine Railroad was built and operated for three years. The railroad hauled iron ore by mule power from the Andover Mine on Limecrest Road to the Morris Canal at Waterloo. In 1853, the Sussex Mine Railroad was replaced by the Sussex Railroad and its steam locomotives. In 1881 the

Delaware Lackawanna & Western Railroad (DL&W) purchased the Sussex Railroad, which was called the Sussex Branch of the Lackawanna and later the Erie-Lackawanna. The DL & W also constructed the "Lackawanna Cut-off" between 1908 and 1911, a portion of which passes through Byram.

There are seven discreet historic resources that have been identified by the NJ State Historic Preservation Office and officially listed for the purpose of preservation, protection and documentation. They include Waterloo Village and the surrounding historic district, the entirety of the Lackawanna Cut-off, including the Roseville Tunnel,

the Morris Canal, the Rutan Log Cabin, the Bushkill-Roseland Electric Transmission Line and the Concrete Barrel Arch Bridge on Sussex County Route 605 (Sparta Road) that passes over the Lackawanna Cut-off. Protection of the Township's historic resources has been recognized as a priority. Byram has set forth five main goals that are contained in the Master Plan that include the following:

- To consider the educational value of the community's Historic, Cultural, and Archaeological resources and encourage opportunities to celebrate and share information about the community's heritage.
- To examine the character and qualities of the community's Historic, Cultural, and Archaeological resources to gain further understanding of the extent of their contributions to the aesthetics, character, economic vitality, and sense of place of the community.
- To consider the character and qualities of the community's Historic, Cultural, and Archaeological resources in any development application that may affect them, whether directly or indirectly.
- To examine the potential for development and adoption of regulatory provisions that are protective of the Historic, Cultural, and Archaeological resources of the community.
- To consider the character and qualities of the community's Historic, Cultural, and Archaeological resources in development of the Land Use Plan, Community Facilities Plan, Circulation Plan, and all other aspects of the Highlands Element.

Many of the Township's historic resources have been preserved and are available for public visitation. These historic sites can be incorporated into the Township's trail system or into a "historic driving tour" of the township and can serve as a component of a strategy to encourage tourism and multi-purpose visits that can combine historic features with other attractions in the Township. Many of these sites are already part of historic restorations or are designated with historic markers. Waterloo Village is a major attraction maintained by the State of New Jersey. The former Sussex Branch railroad has been re-purposed as a multi-use rail trail. Other sites can similarly be developed as attractions.

Waterloo Village



Waterloo Village was a mill town along the Morris Canal that was about the half-way point in the 102-mile trip along the canal. The Village includes all of the facilities necessary to serve the canal operation, including a general store, an inn, a church, gristmill, and blacksmith shop. In the 18th Century, the village was originally part of the Andover Iron Works and was known as Andover Forge. Waterloo Village was repurposed during the 19th-century to service the Morris Canal traffic. The "Waterloo Village Historic District" is recognized by, and officially listed with,

the NJ State Historic Preservation Office. The historic resources are eligible for protection and funding for restoration and there are current major restoration projects underway.

Today, the historic Waterloo Village contains a working gristmill, a general store, blacksmith shop, a canal museum and several historic houses. The site serves as an open-air museum where visitors can stroll along the historic streets. The village is located on the banks of the Morris Canal. An early 19th-century log cabin farm site and 17th-century Lenape Indian Village exhibit are also located at the site. The Village is managed as part of Allamuchy Mountain State Forest with a park office and staff on site. The historic site hosts over 13,000 visitors each year, including thousands of New Jersey school children who come to learn about the state's early industrial past.

Sussex Branch Railroad

The Sussex Mine Railroad started in 1850 as a mule train railroad hauling iron from the Andover Iron mine on Limecrest Road to the Morris Canal at Waterloo Village and later expanded as a steam train powered railroad serving Sussex County. The Sussex Railroad was later sold and became the Sussex Branch of the Lackawanna Railroad. Regular passenger service on the branch ended in 1966. The right-of-way was purchased by the State of New Jersey's Green Acres program in 1982 to establish a recreational trail. In Allamuchy Mountain State Park, a three-mile section of the Sussex Branch Trail starts at Waterloo Road and goes northwest to Cranberry Lake. Using the old railroad bed, this trail provides the hikers and mountain bikers easy access from Waterloo Road via the Sussex Branch Trail in Allamuchy Mountain State Park through Kittatinny Valley State Park (passing close to the Andover Iron Mine) to Branchville, New Jersey.

Roseville Schoolhouse Museum

This one-room schoolhouse was moved from its original location on Lackawanna Drive (originally known as Roseville Road) to its' current location near the Municipal Building on Mansfield Road and Beatrice Johnson Way. Four Roseville Schoolhouses have served the Roseville area of Byram since 1812. In 1860, Byram had 6 schoolhouses spread throughout the Township, over an area, that back then included Stanhope and Hopatcong. The building was moved onto a new foundation, refurbished, and opened as a Schoolhouse Museum on Byram Day, September 13, 1986. Since its opening, the museum has been open for special events like Byram Day and has also been a site for weddings. The museum is normally open by appointment only.

Delaware, Lackawanna, Western Railroad Lackawanna Cut-Off Historic District

The Delaware, Lackawanna, Western Railroad (DL&W) was a 400-mile, Class 1 railroad that connected Hoboken, NJ and Buffalo, NY. The Lackawanna Cut-Off was built between 1908 and 1911, running from, Port Morris Junction in New Jersey to Slateford Junction in Pennsylvania. The cut-off provides 28.45 miles of almost grade-less, straight bed from Lake Hopatcong to the Delaware Water Gap. It was considered a "super-railroad" due to its high-speed travel time that permitted unrestricted speeds for passenger trains of 70 miles per hour. It was considered one of the great engineering feats of its age.

In Byram there are three road tunnels under the Cut-Off and one roadway overpass as well as the 1/5- mile Roseville Tunnel, bored through solid rock, located between C.O. Johnson Park and Roseville Pond. Several sections of the right-of-way in Byram were constructed atop rock fill that spanned across valleys to provide the level grade needed for high-speed train operation. The "Lackawanna Cut-Off Historic District" is recognized by, and officially listed with, the NJ State Historic Preservation Office.

Morris Canal

The Morris Canal was a 107-mile common carrier coal canal that operated from 1829 to 1924, connecting canals at Easton, Pennsylvania to Phillipsburg, New Jersey, New York Harbor, New York City, Newark, and Jersey City. The canal carried coal, iron, and other minerals to industrializing cities by using water-drive inclined planes. The canal passes through Waterloo Village, where visitors can access the canal as well as a dam and lock structure. The “Morris Canal Historic District” is recognized by, and officially listed with, the NJ State Historic Preservation Office.

Rutan Log Cabin

The Rutan Log Cabin was constructed in 1825 in Frankford Township. The cabin is an example of a typical 1820's farm homestead. It was relocated to Waterloo Village in 1989 for preservation. It is open for tours on limited dates as part of the historic programming at the village.

Lockwood Cemetery

Byram Township is the owner of the cemetery. Revolutionary soldiers are buried here. The Lockwood Methodist Church was also located on this property. The Church congregation moved to Waterloo around 1859. Part of the foundation is still visible at site. The cemetery is maintained by the Byram Historical Society. The Open Space Committee has allocated funds for the maintenance of records and the structures through grants to the Historical Society. Additional investment will be necessary to keep the grounds maintained and to ensure the site is safe for visitors.

The Lost Hamlet of Byram

Known also as “Starport” or “Stourport”, this was a once bustling settlement along the Morris Canal in the vicinity of Waterloo Village. There are still remnants of the village visible including building foundations and bridge abutments. Its former location is denoted by a historical marker. The Hamlet included a several dwellings, a boarding house for workers, Acid Works (making tannic acid from tree bark), a Sawmill, a Flax Factory (creating thread for weaving), several stores. It had a port with a store on the Morris Canal. The former Waterloo Railroad Station at the junction of Sussex Railroad with Morris and Essex Railroad was accessible across the Musconetcong River.

Bushkill-Roseland Transmission Line

Started in 1927 and completed in 1928 the 220kV transmission line, at the time, was a state-of-the-art engineering feat in large scale electrical pooling and transmission. The northwest NJ portion built by Public Service Electric & Gas spanned 45 miles from the PSE&G switching station in Roseland, New Jersey, to the Pennsylvania Power & Light generating station at Bushkill PA. The project was one of the first to create an electrical grid to pool power and create redundancy via the grid design. The creation of the 210-mile-long transmission line known as the Pennsylvania-New Jersey Interconnection (PNJ) was a significant step in the extension of efficient and reliable electrical supply to Pennsylvania and New Jersey and balanced the service needs of the region's rural, industrial, urban, and suburban areas.

Approximately 2 ½ miles of the right-of-way passes through Byram along the northern border of the Township. The transmission right-of-way is recognized by, and official listed with, the NJ State Historic Preservation Office. It passes close by the Township's Mohawk View Park. The original towers and related infrastructure were replaced as part of the construction of the Roseland-Susquehanna powerline project in 2015.

Non-Listed Historic Sites

There are additional historic resources within the Township that can serve as elements of historic tours of Byram that can both provide insight into the community's past and attract visitors to the community. There are points of interest that are commemorated with historical markers. These include:

- Amity School
- Cat Swamp Hijacking & Murder Site
- Hamlet of Lockwood
- Morris Turnpike Toll Gate

These markers are erected and maintained by the Sussex County Historic Preservation Society with support from the Sussex County Board of Chosen Freeholders. The markers are visible from the roadways and provide historical context for the sites.

There are additional historic features not identified with markers. The original right-of-way of the Sussex Mine Railroad that used mule drawn carts to transport iron ore is partially on publicly accessible land. The site of the Cranberry Lake Railroad Station on the Sussex Branch as well as the amusement park site and the suspension bridge over the lake (which has been temporarily closed due to structural deterioration) are historically significant, as are the many mines and forges located within the Township. These features, along with remaining original homes, churches and schoolhouses may be considered for recognition by the State Historic Preservation Office. Many of these historic resources have been reduced to remains but may still be of interest to historians and visitors. A listing of the 65 recognized historic sites is included in the appendix to this document.

Financial Resources

The financial resources considered have traditionally centered around sources of acquisition funding for new open space properties. The Township maintains a voter approved Open Space Trust Fund that can be used to fund purchases of land, bond payments for the purchase of land or capital improvements in the Township's parks and for funding park improvements. The predictable repeating source of funds enables the Township to make rational borrowing decisions and a share of the trust fund is dedicated towards payment of bonds that have given the municipality tremendous buying power in acquiring key parcels of land. Bonding spreads the cost of land acquisition over multiple generations of taxpayers for open space assets that have both an infinite lifetime and permanent benefits to residents without burdening a single generation of taxpayers with the full costs of the purchase.

The Township has been very successful in leveraging its open space funds with matching funds from other public and private open space grant programs. The Township has a revolving balance in a Green Acres Planning

Incentive Grant (PIG) available to contribute towards acquisitions used to match and supplement funds from the Open Space Trust. The Sussex County Preservation Trust Fund, the New Jersey Conservation Foundation, the NJ Highlands Council and the William Penn Foundation have also contributed substantial matching grants to subsidize acquisitions by Byram Township. A listing of grant programs applicable to Byram's Open Space program can be found in the appendix to this document.

Open Space Trust Fund

Byram Township created the Open Space, Recreation, Farmland, and Historic Preservation Trust Fund in 2000 after a November 1999 referendum vote that dedicated a portion of the Township revenue toward the preservation of open space. Specifically, the referendum outlined the dedication of local property tax not to exceed \$0.02 per \$100 of assessed value for the acquisition, development, and maintenance of lands intended for recreation, conservation, historic and farmland preservation, and open space acquisition. Following a reevaluation of the Township in 2009, the open space tax rate was reduced to one cent per \$100 assessed value. At its current level, the Open Space Tax produces approximately \$110,000.00 in revenue annually. Those funds are allocated to debt service, select capital expenditures (including historic sites), and land acquisition.

The Byram Township Council an Ordinance on January 10, 2000, enabling the establishment of the "Open Space and Recreation Trust" which established a reserve in the general Capital fund. The Township Council also created a 5-member Open Space Committee (expanded to 7-members in 2002) to oversee the administration of the Open Space & Recreation Trust and to make recommendations to the governing body regarding the management and acquisition of public open space properties.

The Open Space Committee is a "committee of committees" with representatives from the Township's other appointed boards. The committee is comprised of the Township Manager, a member of the Township Planning Board, a member of the Environmental Commission, a member of the Recreation Committee, one citizen of the Township holding no other elected or appointed position, a member of the Township Council, and a citizen of the Township who may hold another elected or appointed position. This provides a broad range of representation and the ability to coordinate the committee's activities with other Township initiatives.

Members serve three-year terms and are tasked with determining which parcels of land should be acquired by the Township (in full or development rights) and submitting a prioritized list of properties to the Township's governing body for review. If the Open Space Committee neglects to acquire properties over a period of five consecutive years, the Council is responsible for reviewing and reporting on the Committee's activities, then providing recommendations regarding the Trust Fund. The Committee is also responsible for preparing the Township's Open Space and Recreation Plan for New Jersey Department of Environmental Protection (NJDEP) Green Acres Program ROSI requirement.

Funds collected by the municipality under the ordinance are allowed to be used for the preservation of open space, recreation land, farmland, and historic sites in Byram. Funds may be used to acquire, develop, and maintain vacant land as well as land which has improvements upon it, as long as the principle purpose of the land that is acquired matches the preservation criterion. The Fund is also permitted to accept donations and

bequests. The fund maintains a reserve for debt servicing (principle and interest payments) for bonds issued by the Township to fund past acquisitions. The current bond was issued in 2004 in the amount of \$1.2 million for purchasing open space properties. The bond will be retired in October 2024. At the close of 2019 the balance owed was \$335,850.00 with an Open Space Reserve Account Balance of \$419,945.70 available. These funds have been used to match other sources of funding and remain available for that purpose.

As the inventory of parcels prioritized for acquisition starts to shrink, there is a temptation to reduce the Open Space Tax to offset increases in the tax rate for general budgeting expenditures. Additionally, using open space funds for other expenses like infrastructure improvements or maintenance of parks may seem attractive. There are still acquisitions to be made in the Township, particularly if the Trails Master Plan is implemented. Also, the repeating predictable fund that the Open Space Trust Fund represents allows for bonding of larger expenditures related to the Township's open space assets and for being able to make financial projections on the tax impact of these projects. The Township should maintain the tax at its current rate or even consider increasing the levy to the voter-authorized level if some of the more costly open space and recreation projects go forward.

State Financing Programs

The State's primary funding mechanism is the Green Acres Program administered by the NJ Department of Environmental Protection. (NJDEP) The Township maintains a revolving balance in its Planning Incentive Grant that is currently at \$400,000.00. These funds are available to match up to 50% of the certified appraised value of any property purchased by the Township for open space purposes. The Planning Incentive Program provides grant and loan funding to local governments that have enacted an open space tax and have adopted an open space and recreation plan. There are several other state programs that can provide funding as well. Funds are generally available for land acquisition, but not for development of facilities.

- **NJ Green Acres Program-** The Green Acres was created in 1961 to meet New Jersey's growing recreation and conservation needs. Together with public and private partners, Green Acres has protected over 650,000 acres of open space and provided hundreds of outdoor recreational facilities in communities around the State. The program also provides low interest (2%) loans to municipal and county governments to acquire open space and develop outdoor recreation facilities.
- **New Jersey Urban & Community Forest Grants (NJUCF)-** The New Jersey Forest Service awards grants to local governments and shade tree commissions to assist in the implementation of an approved comprehensive Community Forestry Management Plan. (CFMP) Grants are awarded on a competitive basis to encourage projects that strongly link the use of best management practices to achieve urban and community forestry management goals defined in the CFMP. Applicants must be NJUCF Accredited according to the current program guidelines.
- **Green Communities Grant-** Communities that need assistance in creating a Community Forestry Management Plan (CFMP) are eligible for the Green Communities grant. The grant is offered every year for municipalities and counties. Currently the grants are up to \$3,000 with a 100% match, that can be made through either in-kind services or by use of volunteer hours calculated at the federal volunteer rate.
- **Environmental Infrastructure Trust (NJEIT)-** Working in partnership with the NJDEP, the I-Bank has leveraged the funds available from the federal government through the Clean Water Act to make more money available at the lowest possible cost. The Financing Program provides funding to local and county government units and some private water companies to finance wastewater systems, combined sewer

overflow abatement, nonpoint source pollution control, safe drinking water supplies and open space acquisition.

- **New Jersey Highlands Council-** The Highlands Open Space Partnership Funding program is a matching grant program designed to support the acquisition of property for the protection of resources within the Highlands Region, and to further the goals of landowner equity as specified in the Highlands Water Protection and Planning Act of 2004 and the Highlands Regional Master Plan. This program provides a maximum grant award of 50% of the total purchase price of eligible property. Transactions considered include both the acquisition of property in fee simple or through conservation easements for any passive recreation or conservation purposes.
- **State Agriculture Development Committee (SADC)-** The Farmland Preservation Program is administered by the SADC, which coordinates with County Agriculture Development Boards, municipal governments, nonprofit organizations and landowners in the development of plans that best meet the needs of individual landowners. Land is eligible for the Farmland Preservation Program if it meets the SADC's minimum eligibility criteria, qualifies for farmland tax assessment and is part of an agricultural development area (ADA).
- **Forest Stewardship Grants (CSIP)-** New Jersey's Community Stewardship Incentive Program provides support for approved forest management activities. Available pursuant to the New Jersey Shade Tree and Community Forestry Assistance Act (NJSA13:1L-17.4(c)) the New Jersey Forest Service Urban and Community Forestry program (NJUCF) is provides grants to local governments and shade tree commissions to assist in the implementation of an approved comprehensive Community Forestry Management Plan (CFMP). Grant availability is subject to the extent monies are appropriated or otherwise made available on an annual basis. Grants of up to \$10,000 are available for Resiliency Planning while grants of up to \$30,000 are available for reforestation and replanting. Only projects carried out on public property owned or maintained by a municipal or county government are eligible for grant funding. Grants are made based upon scoring of proposals submitted by eligible applicants that are due each year by the end of May.

Other Funding Sources

There are other sources of funding, both public and private that can help fund open space and recreation needs in Byram Township. Primarily, the funding is directed towards acquisition of property. The New Jersey State Agriculture Development Committee (SADC) provides funding for agricultural retention through its Farmland Preservation Program. This achieves its goals by purchase of agricultural easements instead of fee simple purchase of land. While there are a substantial number of farmland assessed properties in Byram, traditional agriculture is not a large presence in the Township. Nevertheless, opportunities to enroll select eligible properties in this program should be considered where appropriate.

These funding sources can be accessed directly by the municipality or in partnership with any of the conservation non-profits that have been active in Byram such as the New Jersey Conservation Foundation, the Land Conservancy of New Jersey, the Trust for Public Land and the Open Space Institute. Additionally, individual projects may qualify for specific funding from private foundations if they meet specific eligibility criteria. Funding for each acquisition should be evaluated for potential availability from these other sources.

- **Sussex County Open Space Trust Fund-** Sussex County collects a dedicated open space tax levy similar to the municipal levy assessed in Byram Township. This was also authorized by a voter approved referendum.

Sussex County open space funds can be used in partnership with municipal, state and private funding to help with acquisitions. A portion of the funding has also been dedicated for trails construction. This is a competitive source of funding with an annual application cycle. Sussex County funds can also be utilized for preservation of farmland.

- **Land & Water Conservation Fund (LWCF)**- A Federal program that directs revenues from offshore oil and gas drilling and directed toward multiple public benefits including recreational access for hunting and fishing, natural areas that sustain clean water and provide other community benefits , working farms and ranches, National parks and forests, neighborhood parks and trails, historic battlefields and cultural sites and fish and wildlife refuges.
- **The Forest Legacy Program (FLP)**- A Federal conservation program administered by the U.S. Forest Service in partnership with State agencies to encourage the protection of privately-owned forest lands through conservation easements or land purchases. Protection of private forests through FLP maintains a multitude of public benefits that include opportunities to hunt, fish, and camp, clean and abundant drinking water, habitat for fish and wildlife, and timber, fuel wood, and other forest products.
- **William Penn Foundation**- William Penn has created a fund for land acquisition for protection of water quality in the Delaware River Watershed. Byram is eligible for this funding as the entire Township is within the greater Delaware River basin.
- **National Fish & Wildlife Foundation (NFWF)**- The National Fish & Wildlife Foundation administers two specific grant programs that would apply to Byram township. The Delaware River Conservation Fund and the Delaware River Restoration Fund provide support for municipalities pursuing projects that include on-the-ground implementation of restoration and conservation measures include sustaining and enhancing fish and wildlife habitat; improving and maintaining water quality for fish, wildlife and people; sustaining and enhancing water management to benefit fish and wildlife; and improving outdoor recreational opportunities within the Delaware River watershed.
- **Transportation Alternatives Program (TAP)**- Federal transportation funds for community-based "non-traditional" projects that build infrastructure for cyclists and pedestrians. Planning, design, and construction of on-road and off-road facilities including sidewalks, trails, cycle tracks, bike lanes, buffered bike lanes, and pedestrian and bicycle signals are all eligible.
- **Safe Routes to Schools (SRTS)**- Program designed to make bicycling and walking to school safe and appealing to children of all ages. The program provides grants to local governments and school districts for construction of pedestrian and bicycle infrastructure, including bike lanes, multi-use trails, and traffic calming measures, within two miles of K-8 schools
- **Recreational Trails Program**- A Federal program administered by the NJDEP that provides funding for maintenance and restoration of existing trails; development and rehabilitation of trailside and trailhead facilities and trail linkages for trails); purchase and lease of trail construction and maintenance equipment; construction of new trails in existing parks or in new right of way; for motorized use only, acquisition of easement and fee simple title to property for trails.

Consistency with Other Plans

The Township's Open Space & Recreational Planning efforts should be consistent with the policies and goals of other plans that impact the Township. The acquisition, use and management of open space properties, the development of amenities and the ability to capitalize on the natural resources of the Township to create

sustainable economic development opportunities should all be accomplished in a manner that both corresponds to applicable planning aims and fosters the implementation of those goals. These include both internal community goals as expressed through the Township's local Master Plan and the goals that recognize the role that Byram plays on a regional or state-wide basis as the host community for important natural resources that are important to the state as a whole.

Prior Plans

Byram Township last adopted an Open Space & Recreation plan in 2010. Evaluating the prior plan has been an important part of assessing where the Township succeeded or failed in implementing this plan or where, if any, adjustment may be needed. In addition to the creation of an Open Space & Recreation Plan, the Township amended its municipal Master Plan in 2014 to conform with the Highlands Regional Master Plan (RMP) through the Highlands Council's Plan Conformance process. That effort included the incorporation of specific land conservation, acquisition and stewardship goals designed to further the intended purposes of the Highlands legislation as reflected in the RMP.

The 2010 Open Space Plan included an inventory of permanently preserved lands in the Township, identified target properties for acquisition and set forth a series of goals for the Township's Open Space planning efforts. They were largely consistent with goals and policies developed for the Township through the Highlands Conformance process in 2014. The broad goals of the 2010 plan were as follows:

- Preserve the Lubbers Run Greenway
- Add connections from smaller communities to the center of Byram and to larger Township parks
- Continue to develop a town-wide trail system, as demonstrated by the Byram Trails Map
- Acquire, enlarge, and connect protected State, municipal, and non-profit lands in the Township
- Establish a green boundary that helps delineate the growth zone but continues to allow important connections between the Village Center and the outlying Environs
- Use open space acquisition to protect the sources of the Township's drinking water
- Acquire and develop land for additional active recreation field space
- Continue to actively maintain existing forested open space by implementing the Township's Forest Stewardship Plan's recommendations
- Protect the Township's agricultural lands, forests, and steep slopes
- Promote recreational opportunities for all residents, especially teenagers and senior citizens
- Enhance the recreational opportunities through better use of current and future facilities

Since 2010, the Township has consistently pursued the plan's outlined goals. Significant progress was made, including acquisition of high-priority targeted properties. These acquisitions included the Tamarack Park

greenway as well as the Carl & Carol Johnson property. The latter purchase resulted in doubling the size of the existing Cranberry Overlook park.

The 2010 plan set forth a series of specific one, three, five and ten-year goals. Many of these were attained while others remain aspirational. The focus of the 2010 plan was on a “greenway” based strategy designed to connect existing open space holdings by acquiring connecting properties and then linking the Township’s open space parcels to key sites within the community. This is sound open space planning policy. Many of these goals will be reflected in this 2020 plan. This plan has a great deal of continuity with the 2010 plan.

The underlying conditions in Byram Township and the long-term land use goals have not significantly changed over the past decade. One change is in the demand on the Township’s recreational facilities. In 2010, there was concern over a shortage of playing fields. The build-out of C.O. Johnson Park with additional multi-use fields and the addition of fields at Tamarack Park combined with a stabilization of the population has resulted in an ease in the demand and the elimination of these concerns. Youth sports programs are experiencing a decline in enrollment. Other factors, like sports specialization and the growth of private sports academies have contributed to this downward trend in enrollment. There are still demands for new or additional facilities, but it is not based upon an acute shortage of fields or a lack of access.

Demographic changes and a shift in development patterns in New Jersey have combined to reduce development pressure in the Township. Additionally, the Township has been successful in the implementation of past open space initiatives. These factors will limit the scope of future land use changes. The remainder of the open space planning goals developed during Highlands Conformance and those contained in the 2010 plan remain applicable. Highlands Conservation Priority Area lands should continue to receive attention. They included properties with exceptional water and ecological resource value. It will remain important for Byram Township to protect Highlands Area water resources and environmentally sensitive lands and to utilize open space acquisitions to create large contiguous areas of sensitive lands, habitat corridors and to connect existing preserved open space.

Township Master Plan

The Byram Township Master Plan sets forth a community-wide long-term vision for the Township that is strongly related to the natural beauty and resources found in Byram. This makes the use of the Open Space & Recreation Plan an important tool for promoting and achieving the goals set forth in the Master Plan. In fact, the first general goal listed within the Master Plan is to retain the Township's natural features and environmental resources that provide open space and recreation, protect water quality, and maintain wildlife habitat. The Master Plan also includes specific goals and policies related to environmental, economic, and quality of life attributes of the community, which provide the basis for the recommendations contained in the Open Space & Recreation Plan.

Among the stated goals of the Township Master Plan, open space preservation plays an important role in achieving the following:

- Guide land development and the location of community facilities to meet the community's needs while also preserving the natural environment

- Maintain the current character of development in each lake community, surrounded by environmentally sensitive and largely undeveloped lands that establish the distinct land use pattern for the Township and ensure the basic water quality of the lakes.
- Preserve and maintain major areas of open space, Byram's lakes and ponds, and groundwater through enhanced land use controls, open space acquisitions, better stormwater management, and septic management programs
- Create open-space trail linkages between all neighborhoods and destinations in Byram while connecting with regional trails and Allamuchy Mountain State Park
- Plan for the acquisition of parcels needed for future community facilities and services

The Township's open space program has always been an important component of implementation of the community's land use vision. Within the Township's Master Plan is the creation of a "Village Center" along Route 206. This center plan includes the creation of an additional 20 acres of public open space within the anticipated developed core. The continued use of targeted acquisitions, development of recreational facilities, development of a comprehensive trails system, and good stewardship of the Township's natural assets will be an important part of meeting the aspirational goals set forth in the Master Plan.

Highlands Regional Master Plan

Byram is located in the Highlands Region as defined by the Highlands Water Protection & Planning Act of 2004 (Highlands Act). Nearly the entire Township is within the Act's designated "Preservation Area". The provisions of the Highlands Act require Highlands municipalities to conform their zoning ordinances and planning guidance documents with the Highlands Regional Master Plan (RMP) for all areas of the municipality located within the Preservation Area. Conformance with the RMP is optional for portions of a municipality located within the "Planning Area" of the Highlands.

The Highlands RMP was created to determine the optimal land uses and policies to achieve the goals of the Highlands Act. The RMP does not distinguish between the Preservation Area and the Planning Area in its assessment of the conditions throughout the Highlands. The RMP assigns land use capability designations throughout the region in a manner that is "blind to the line" regarding the designated Preservation and Planning Areas of the Highlands. Byram has chosen to conform the entire municipality with the RMP and was one of the first Highlands communities to have their petition for plan conformance approved by the Highlands Council.

Forest Stewardship Plan

A substantial portion of the Township's land holdings consist of environmentally important forested lands. The Township has adopted a comprehensive Forest Stewardship Plan to provide a guide for the responsible and scientifically sound management of these public assets. The use of the Township's public lands and the administration of those lands should be consistent with recommendations contained in that plan. This includes incorporating stewardship projects into budgeting for the maintenance of the Township parks. These measures are part of accepted sustainable forest management practices that have the following goals:

- Conservation of biologic diversity.

- Maintenance of productive capacity of forest ecosystems.
- Maintenance of forest ecosystem health and vitality.
- Conservation of soil and water resources.
- Maintenance of forest contribution to the carbon cycle.
- Maintenance and enhancement of long term, multiple socio-economic benefits to meet the needs of society.
- Legal, institutional and economic framework for forest conservation and sustainable management.

The Township's forested lands face several issues that have impacted the health of ecosystem. The explosion of the deer population, the proliferation of non-native invasive plants and insects and forest fragmentation have all had a substantial negative effect on Byram's forests. Plant species such as barberry and multi-flora rose and insects like the Gypsy Moth and Hemlock Woolly Adelgid have made their presence felt in the woodlands of the Township. These factors need to be addressed.

There are a defined series of actions recommended in the Forest Stewardship Plan that include deer management, invasive species control and targeted harvesting that need to be scheduled and funded over the course of multiple years. Additionally, emerging threats to the forest such as the Emerald Ash Borer and the Spotted Lantern Fly (two new invasive insect species) will need to be addressed. The Township's forested lands need to be treated as an asset in the same manner as the other park facilities. They require appropriate care and investment to insure they will provide value for current and future residents. The Township has also adopted a Community Forest Management plan for the municipality as a whole. Resource constraints have limited implementation of this plan to a bare minimum. The Township may wish to devote additional resources to actions recommended in this plan in addition to the management of the publicly owned forest lands.

Preserved Open Space



Byram Township has a substantial amount of preserved land that is accessible to the public. Over 45% of the Township's land is in some form of permanent preservation. Those preserved properties are owned by the State of New Jersey, Byram Township and private entities, like the New Jersey Conservation Foundation and the substantial Hudson Farms/Kellogg properties. The properties have been set aside for active public recreation, passive recreational activities, water supply protection and for the protection of important natural features. This represents a significant public investment in Byram that has created an incredibly valuable resource that can provide benefits for the Township and for all residents of New Jersey.

While ownership is divided amongst several owners and several jurisdictions, a comprehensive view that accounts for the relationship and importance of these properties taken as a whole needs to be taken. Resources cross both parcel and jurisdictional boundaries. Additionally, facilities, like a comprehensive trails system, would benefit greatly by utilizing all of the available preserved publicly accessible properties. The resource value and utility of the properties can be greatly increased by assessing how they complement surrounding lands.

Municipal

Byram Township has embarked on an ambitious land acquisition effort that spans several decades. The Township has had success both in the purchase of land and in securing donations of land from developers. Byram Township currently owns 480.3 acres of land designated for public open space. The tracts are detailed in the Recreation and Open Space Inventory (ROSI) that can be found in the appendix to this report. An additional 2.661 acres is managed by the Township under lease with the NJ Department of Environmental Protection. The Township properties include the following:

- Briar Ridge Park
- Brookwood Park
- Byram Township Civic Park (Neil Gylling Park)
- C.O Johnson Park
- Cranberry Overlook
- Forest South
- Glenside Woods
- Lackawanna Trail
- Mohawk View (Stonehedge Park)
- Municipal Park (Mansfield Woods)
- Raccoon Trail
- Riverside Park
- Tamarack Park
- Tomahawk Lake Park (Mountain View)

These properties are all encumbered by conservation restrictions consistent with the requirements of the NJ DEP's Green Acres program. They are managed for both active and passive recreation activities as appropriate for each tract. Some of the properties are small parcels obtained as a consequence of residential development and

have little utility. Most, however, are important components for providing recreational opportunities and the protection of vital natural resources for the Township's residents.

Briar Ridge Park

Briar Ridge Park is an amalgamation of several acquisitions the Township has made over time. It includes tracts formerly referred to as the "Arnell", "Heitman" and "Owner's Maintenance" properties. It consists of 92.62 acres of land on Andover-Mohawk Road near the border with Sparta Township. This rugged property contains hiking trails and is open seasonally to hunting for deer management purposes.

Brookwood Park

This park also known as the "Vetter" tract or the "Byram Mini Park" is located on Brookwood Road on the eastern side of Route 206 and is adjacent to a residential neighborhood. The property is 4.2 acres in size, is undeveloped and includes a short trail to access Lubber's Run at the rear of the property. A pump station for the local utility authority is located at the front of this property. There is no on-site parking at this site. Visitors are required to park on the adjacent street.

Byram Township Civic Park (Neil Gylling)

This is a 13.87-acre tract located on Mansfield Drive directly opposite the Township Municipal Building. The park contains two baseball/softball fields used by youth sports organizations in the Township and also contains environmentally sensitive lands along Lubber's Run. A discussion of the active recreational facilities here can be found in the Recreational Facilities portion of this report. Although not actually located on the same tract, there are municipal tennis courts located directly across Mansfield Drive on the property housing the Township municipal building. This site also is the home of the Roseville School museum which was relocated to the municipal building site.

C.O. Johnson Park

C.O. Johnson is the Township's main active recreational facility. It includes 55.6 acres of land on Roseville Road. The Township has made significant investments in C.O. Johnson Park over the course of the last 20 years. The property contains baseball fields, a football field, multi-use fields, tennis courts, a skate park, bocce courts, a field house, basketball courts, a playground and walking trails. This is the center of the Township's recreational sports programs. A discussion of the active recreational facilities here can be found in the Recreational Facilities portion of this report. The field house is used for meetings and storage of equipment in addition to serving as a public polling location for elections.

Cranberry Overlook

Cranberry Overlook consists of several municipal holdings between Tamarack Road near Johnson Lake and Old Indian Spring Road. It includes multiple acquisitions of tracts formerly known as the "Beckman-Kostry" and "Carl & Carol Johnson" properties. This park encompasses approximately 99 acres of rugged environmentally sensitive land. The property currently has a hiking trail leading from Johnson Lake to a spectacular overlook of Cranberry Lake with a vista that reaches westward to the Delaware Water Gap. This trail connects to the Tamarack Trail at Johnson Lake. A spur trail leads to a trail head located at the end of C.O. Drive. Opportunities exist to extend

the trail system in Cranberry Overlook and to create a dedicated canoe/kayak access near the small parking area for Johnson Lake. The Cranberry Overlook Trail connects to the Tamarack Trail at this parking area.

Forest South

Forest South is a recent acquisition obtained via a donation from the Forest South Homeowner's Association. It is located on Lee Hill Road and Lynn Drive and is part of the Forest South neighborhood. It is approximately 19.5 acres of undeveloped land with no recreational facilities at this time. This property has not been surveyed. This will need to be done. Woodland management measures for this property should also be added to the Township's forest stewardship program.

Glenside Woods

Glenside Woods is an aggregation of properties formerly referred to as the "Gamski" and "Boyd" tracts. It consists of approximately 90 acres of rugged land and wetlands on Catalina Drive and Lee Hill Road. The property is undeveloped and contains a one-mile loop trail with access from both Lee Hill Road and Ranger Road.

Lackawanna Trail

This incorporates 6 small tracts acquired by the Township in the Lake Lackawanna community. These were formerly referred to as the "Buis" properties. These tracts total approximately 6.5 acres and are adjacent to the Lackawanna Cut-off rail right-of-way. The property includes a scenic elevated overlook of Lake Lackawanna.

Mohawk View (Stonehedge Park)

Mohawk View is located just off Stonehedge Lane. It is a 5.39-acre tract that contains an improved athletic field used for youth soccer and neighborhood recreational activities. There is adjacent parking and a walking path that circles the playing field.

Mountain View (Tomahawk Park)

Located on Tomahawk Trail, this property is undeveloped with no available recreational facilities. It is located directly across from Tomahawk Lake. This is a small tract of land acquired by the Township via donation. It is 1.33 acres in size. There was a basketball court at this park that was removed during the construction of the Roseland-Susquehanna Transmission Line that was not replaced due to constraints created by the proximity to the electric transmission wires.

Municipal Park (Mansfield Woods)

This unnamed tract is approximately 24 acres of environmentally sensitive land adjacent to the Byram Township Middle School. It includes a short improved multi-use trail suitable for hiking and biking that leads from the end of Mansfield Drive and includes a short section of the long-distance Highlands Trail. It is also adjacent to the Lackawanna Cut-Off rail right-of-way.

Raccoon Trail

This is a small undeveloped tract of land acquired by the Township through donation. The property is 0.134 acres in size. There are no recreational facilities at this location.

Riverside Park

This park is a 2.66-acre tract on River Road on the western side of Route 206 adjacent to a residential neighborhood. This property is leased from the NJ Department of Environmental Protection. The park contains a children's playground and access to Lubber's Run for fishing at the rear of the property. There is limited public parking at this site.

Tamarack Park

Tamarack Park is a recent acquisition by the Township. It includes land between Route 206 and Roseville Road where it is adjacent to C.O. Johnson Park. It contains a combination of rugged environmentally sensitive land, Johnson Lake and the Tamarack Trail. The portion of the property nearest to Route 206 has been developed into an active recreational facility with irrigated multi-purpose fields and parking. The greenway created by this park covers multiple tracts of land that are owned and managed by the Township and by the NJ Conservation Foundation. The entire park consists of approximately 224 acres. Allamuchy Mountain State Park and the Sussex Branch Trail are directly across Route 206 from the entrance to Tamarack Park. A discussion of the active recreational facilities here can be found in the Recreational Facilities portion of this report.

State

The State of New Jersey is a major landowner in Byram Township. The bulk of the Township west of Route 206 consists of state-owned public land. These holdings, while managed by the state, have value to the Township, both for the amenities it provides for the residents and for the opportunity to manage municipally held lands for complementary uses. The critical natural resources found in the Township are generally landscape scale habitat areas that stretch beyond the Township's borders. Understanding the relationship between all of the vacant tracts of land in Byram is an important element for planning for preservation as well as stewardship and management.

Allamuchy Mountain State Park

Allamuchy Mountain State Park includes approximately 3,000 acres within the Township and incorporates a significant portion of the municipality west of Route 206. There is an extensive network of multi-use recreational trails within these state lands (14 miles of marked trails and 20 miles of unmarked trails and woods roads). The trails include a 10-mile long section of the regional long-distance Highlands Trail. Historic Waterloo Village and three miles of the Morris Canal are also maintained by the State Division of Parks & Forestry as part of its management of the Allamuchy tract, as is a 3-mile "water trail" along the Musconetcong River. Public access to Cranberry Lake is also managed through this park. Activities permitted in the park include canoeing/kayaking, hiking, biking, rock climbing, horseback riding, fishing and hunting. Waterloo Village provides interpretive activities and a site for events and public concerts. Also within Allamuchy Mountain State Park, the Sussex Branch rail trail runs from a parking area on Waterloo Road to Cranberry Lake and beyond. This important recreational asset is both a popular draw for visitors to the Township and a key component of the Township's trails plan. Trail connections to neighboring Mount Olive Township and Stanhope Borough are available from Waterloo Road as well.

Lubber's Run Preserve

The New Jersey Natural Lands Trust (NJNLT) owns 106.13 acres of land along and near Lubber's Run adjacent to the Township-owned Neil Gylling Municipal Park. The NJNLT was created in 1968 by the Legislature as an independent agency in, but not of, the Division of Parks & Forestry in the New Jersey Department of Environmental Protection (DEP). Its mission is to preserve land in its natural state for enjoyment by the public and to protect natural diversity through the acquisition of open space. The Trust acquires open space primarily by donations of land and easements. This parcel referred to as the "Lubber's Run Preserve" consists of three adjoining tracts of land with high-value forest and wetlands as well as documented endangered and threatened species habitat. This property was preserved through a donation of land and is open to public visitation & passive recreational activities.

Private

There are substantial private landholdings in the Township dedicated to open space use. Some are open to the public; some have limited access, and some are not publicly accessible. These privately held properties complement the Township and State preservation efforts in the Township. They all have existing or proposed trails that cross them. They all have similar environmental values to the surrounding preserved properties owned and managed by the State of New Jersey and Byram Township. The Township should work to partner with these landholders to find mutually beneficial ways to steward and utilize these landholdings to take advantage of the benefits of the large contiguous swaths of preserved land the combination of state, local and privately held lands have created.

Mt. Allamuchy Boy Scout Reservation

The Patriot's Path Council of Boy Scouts owns 894 acres of land on Waterloo Road adjacent to Allamuchy Mountain State Forest. This is maintained as the "Mt. Allamuchy Boy Scout Reservation". The property is used for camping and other recreational activities by the Boy Scouts. The property contains two small lakes (Frenches Pond & Lake Wheeler), campsites and some limited permanent structures to support camping operations. A trail system within the reservation directly connects to the extensive network of trails in Allamuchy Mountain State Park. Some trails within the reservation are built, maintained and leased by the Jersey Off-Road Bike Association (JORBA). In the unlikely event that the owner would seek to divest this property, the Township should be prepared to work with the State of New Jersey, the Highlands Council and conservation non-profit organizations to secure the permanent protection of this site.

Tamarack Greenway

The New Jersey Conservation Foundation (NJCF) owns 153.3 acres of property near the Township's Tamarack Park. It was part of the larger purchase conducted in cooperation with the Township that resulted in the creation of Tamarack Park and links that facility with C.O. Johnson Park. The NJCF land is managed for conservation by that organization but is accessible to the public and includes an approximately one-mile-long section of Byram's Tamarack Trail. This property was purchased and is maintained in cooperation with the Township. That relationship should continue.

Hudson Farms Properties

The privately held Kellogg/Westby Farms properties were recently made available to public hiking through a conservation easement transaction. These holdings consist of approximately 1,329 acres of land, much of it contiguous to lands owned by Byram Township. These lands are part of the larger “Hudson Farm” complex of properties that total 3,191 acres in Byram, Hopatcong, Sparta and Andover Township. Referred to as the “Hudson Farms” properties collectively, they were preserved through a partnership with the Land Conservancy of New Jersey, the Open Space Institute, The William Penn Foundation and the New Jersey Green Acres Program.

A system of trails within the Hudson Farms properties is currently proposed and will utilize existing woodland roads to create a multi-use network of paths. There are three separate parcels that will be open to access, the Wolf Lake property, the Westby Farms property on Roseville Road and the Amity Road tract north of Lake Lackawanna. The Township should partner with the land managers to extend and connect the trail systems in these parcels to incorporate existing and proposed municipal trails on adjacent public lands.

Recreational Facilities

Byram Township has three main active recreational facilities. They are well-maintained and well used. An inventory of the facilities that summarizes all of the infrastructure found in the parks, from fields and facilities to parking areas, guard rails and lighting, can be found in the appendix to this plan. Byram has made a substantial investment over the years in developing recreational amenities. The main recreational facility is C.O. Johnson Park on Roseville Road. Tamarack Park on Route 206 is the newest facility in the Township and together with Byram Civic Park (also referred to as Neil Gylling Park) on Mansfield Drive provides additional active recreational fields.

The greatest use comes from youth sports programs. Byram has private adult recreational programs for basketball, softball and soccer in town but the primary demand comes from the youth programs. The youth sports programs are operated as a joint program with the neighboring communities of Stanhope and Netcong. The exception is the youth baseball activities which are run independently in each of these municipalities. The majority of participants in the sports programs come from Byram Township, which has the largest population of the three towns. A handful of facilities are located in the other two communities. The exceptions to this are youth baseball fields that are owned or controlled by independent sports organizations, the complex of multi-use fields at Indian Fields in Netcong and Arbolino Field.

The Lenape Valley High School District maintains a full range of sports fields for the use of the school-sponsored programs. Football, soccer, field hockey, baseball, softball and lacrosse fields are located on the school’s campus. Several of the youth sports programs utilize the school facilities. Youth football and youth lacrosse use the football stadium for competition on a fee basis. This access meets most of their needs. A major addition of artificial turf fields at the campus is also underway.

Indoor Recreation is provided in partnership with the Byram Township School District. The Byram Middle School and Byram Lakes Elementary School on Mansfield Drive are used seasonally for the youth basketball and youth wrestling programs. Access to the facilities is managed through the school district directly with these programs. The school district has taken on the responsibility for allocation and scheduling of the facilities.

Active Recreation

The Township has three active recreation facilities owned, operated and maintained by Byram. Responsibility for maintenance and care rests with the Township Department of Public Works. The recreational infrastructure in the parks is also the responsibility of the Township and there has been an investment in regular maintenance and replacement of equipment, construction of fields, irrigation and other appurtenant features that support the use and care of these facilities.

C.O. Johnson Park

C.O Johnson Park is the center of the Township's recreation programs. The Township has made a significant investment in this property. Active recreational facilities located at C.O. Johnson include the following:

- Four (4) Baseball Fields
- One 80-yd. Youth Football Field with seating, press box & lights
- Three (3) Tennis Courts
- Two (2) Pickle Ball Courts (Lined within the Tennis Courts)
- Four (4) Multi-purpose Fields
- Two (2) Bocce Courts
- Full Size Basketball Court
- Children's Playground
- Skate Park
- Pavilion

This park also contains a field house with meeting space, storage areas, bathrooms and a snack stand. The structure is located near the park entrance at the western edge of the site. A paved walking path circles the park and leads from the parking areas to the fields. There is a system of paved walking paths that traverse the park linking the fields, parking areas and other facilities. They are used for access to the fields and by residents looking for a level place to walk for recreation.

The fields at C.O. Johnson Park are in excellent condition. They are natural surface fields. Field 8, a multi-purpose field, is irrigated. The baseball fields include dugouts, seating and backstops. There is ample parking for both events and the routine practice usage in season. The investments made by the Township and the priority given to maintenance is evident. However, there are issues at the park that need to be addressed.



Two maintenance issues identified during the field work for this report have already been addressed. The tennis courts, which had several large cracks in the surface, have been repaired and the playing surface replaced and re-lined. The stairway leading from the parking area on Roseville Road has been redesigned and re-built. These improvements were made utilizing funds from the Open Space & Recreation Trust Fund in 2019.

Field 8, the newest multi-purpose field at the southeast corner of the park has drainage issues. Ironically, this field is irrigated. After heavy rainfall events the field becomes too wet to support activities and results in closures that may last several days. This is particularly evident during the Spring season when abundant rainfall and snowmelt leave standing water on the field. Otherwise the field is level and well-graded with high quality turf. Resolving the drainage issues must be a priority.

The football field at C.O. Johnson is a reduced size field designed for a youth league that used an 80-yard field instead of the standard 100-yard football field. The youth football & cheer program (Lenape Valley Patriots) is open to participants from grades K-8 in Byram, Stanhope & Netcong. They utilize the lighted artificial turf field located at Lenape Valley High School for their home games. Practices and home games for their flag and developmental teams are held at C.O. Johnson. The program also utilizes the field house and its “snack shack” facility. Interest was expressed in building out the football field to a standard 100-yard size and improving or replacing the field house.

The Township’s youth soccer programs and youth lacrosse programs use the multi-purpose fields at C.O. Johnson. This is a joint program serving Byram, Stanhope and Netcong. The baseball fields serve the Byram Township Little League which is limited to Byram residents. An adult softball league uses two of the fields at this location on Sunday mornings. The number of fields is sufficient to meet existing and projected demand for space. Scheduling for use is handled by a Township employee in cooperation with a sub-committee of the recreation committee known as the sports council. This has been largely a cooperative exercise with no real conflicts between programs.

There was some concern regarding the condition of the baseball fields. The little league program representatives offered anecdotal evidence that the field needed additional materials on the infield surfaces. The primary concerns were that the infields did not drain well following rainfall. They also expressed a desire for lighting at the field to enable extended play for practice and competition into the evening hours. The Township has addressed some of these issues. Field 3 has a drywell system to assist with drainage.

Under Highlands regulations, if the Township intends to undertake any new construction at the site, the Township can utilize up to 125% of the existing impervious footprint. The Township can apply for a Highlands Area Determination (HAD) and request a Highlands Waiver (#4) to permit a new facility. If existing impervious surfaces are removed and restored to a natural condition, credit for that coverage can be transferred elsewhere on site. The total resulting impervious surface must remain within the 125% limitation. Determining the extent of all current impervious surface at the site would be an essential step to inform any decisions about future use and prior to undertaking any project.

Tamarack Park



This is the newest addition to the active recreation facilities in Byram Township. Acquisition and development of recreational fields on this property was a goal of the 2010 Open Space Plan. Two high-quality natural turf fields were constructed. Amenities include one full size and one youth size soccer field with irrigation. Additionally, parking with lighting and guard rails are provided. These fields are primarily used by the local youth soccer programs, although these fields can be configured for use as lacrosse or field hockey play. While there is little opportunity to develop additional playing fields at Tamarack Park, there was interest in constructing a small pavilion or gazebo at this site to accommodate picnics and outings. The construction of parking at this site used most of the allocation of permitted impervious coverage. Any future development would have to conform with Highlands restrictions on development. The site is constricted by regulated environmental features, including wetlands. Those constraints are depicted in mapping

contained in the appendix to this document. This location may have reached its maximum development potential under applicable environmental regulations. There is a barn structure located near the park entrance which should be evaluated for any historic significance and to determine if rehabilitation is warranted before continued deterioration would make this impractical.

Byram Township Civic Park (Neil Gylling)



Neil Gylling Park is located on Mansfield Drive, directly opposite from the Township Municipal Building. There are two softball fields at this site. The fields both have full backstops and are in good condition. This park is home to the Byram Girls' Softball program as well as the adult softball league on Sunday mornings. There is also an unused building with bathrooms that are currently out of service. Adjacent to the fields there is a parking lot and storage sheds used to support field use. While not on the actual Neil Gylling site, there are tennis courts directly across the street on the site of the Township Municipal Building and the historic Roseville School Museum has been relocated here as well.

The bathroom building is in disrepair. It will take a substantial investment to bring this amenity back into a usable condition. This may include rehabilitation or reconstruction of the septic disposal system and well. There is electric service for the building, but that has been disconnected. (Note: Service was disconnected because there was a break in the line. Was serviced by a

water connection from the municipal complex but this too has been inoperable due to possible break. Most of this is related to the age of inactivity.). The cost to rehabilitate the facility may be prohibitive. The site is also severely constrained by environmental features. The entirety of the site is within regulated wetland buffer areas. This will complicate efforts to repair or replace the building. Similar to the discussion of C.O. Johnson, under Highlands regulations, the Township is entitled to take credit for the existing impervious coverage at the site if

they choose to construct a new building or other facility elsewhere on the property or in the same location, however there will be significant regulatory obstacles and a new well or septic system may not be allowable under the restrictions impacting this park.

Lenape Valley High School

Lenape Valley Regional High School is located in the neighboring community of Stanhope. The regional district is shared by Byram Township, Stanhope Borough and Netcong Borough. The majority of the students attending the High School are from Byram. The High School maintains facilities typical of a modern suburban campus. They sponsor a full range of sports and therefore have a lighted artificial turf football field that is also used for the boys' and girls' lacrosse teams, the field hockey team and the boys' and girls' soccer programs.

A major expansion of these facilities was recently authorized and has been completed during the past year. This project has added two artificial turf facilities for baseball, softball and to supplement field availability for boys' and girls' lacrosse and soccer. Provisions for lighting these fields were incorporated in the construction. These additions will expand the number of fields available for public use. Currently the youth football and youth lacrosse programs utilize the High School for competition dates and practice elsewhere. The availability of the school site will impact the overall need for additional facilities in Byram. The ability to schedule use and the terms of the usage will dictate whether or not these fields are a viable option for meeting Byram's future needs or if the Township will need to duplicate these facilities.

Byram Township Intermediate School

The Byram Township Intermediate School campus on Mansfield Drive provides several fields that are available to the youth sports programs. Baseball fields are occasionally used by the baseball and softball programs. Byram little league uses these facilities primarily for t-ball level games. The youth field hockey program uses this site as their primary facility as does the Byram Bruins, the youth rugby program. Byram men's softball is also based at the intermediate school fields. There are no improvements or additions contemplated for this site. The facilities are currently sufficient for existing and projected demands. The Township Department of Public Works provides limited maintenance of the fields for the school district and provides regular grass mowing. The Byram Township Board of Education has been responsible for any improvements to fields and recently regraded and re-seeded many of the multi-use areas. Use is currently coordinated by the Township.

Indoor Facilities

A community with a successful recreation program will include a balance of sites for facility based and natural resource-based recreation, along with a variety of both outdoor and indoor recreation opportunities. Indoor space can serve both active recreational activities and passive recreational offerings and programming. The Township should be providing a broad range of both programs and facilities to serve more diverse interests and needs among Byram's residents. Indoor facilities are limited. The adult/senior citizen population has no place to exercise or attend cultural or educational programs. Additionally, programs targeting children with special needs, children who do not participate in team sports, adults looking for activities and senior citizens were all needs identified during the public outreach conducted for this plan. Byram would like to be able to answer the recreational needs of Township residents of all ages. The variety of recreation space and the scope of program offerings in the Township should reflect the variety of the residents in the community.

The indoor facilities available for active recreational uses are provided by the Byram Township Board of Education. They consist of the gymnasium at the Byram Township Intermediate School. This space is used for the Byram Youth Basketball program and the Lenape Valley Youth Wrestling program. Access to this space is allocated by the school district directly with these programs. Neither the school district or the programs reported any issues with access or conflicts with demand for space by the local programs. Byram Lakes Elementary School gymnasium is available for practice sessions. However, the facility is too small to host competition events. Additionally, there is no space for spectators or observers at this site. A shortage of indoor space for other activities beyond indoor sports is an issue in the Township.

The lack of indoor recreation space limits the potential offerings for the community. The Byram School District does make its space available for meetings and programs after school hours. The field house at C.O. Johnson Park, which features a meeting room, concession stand, and some storage space, is the only township run indoor facility. It is used extensively by the baseball and football sports organizations. It is used for meeting space for small groups. Investigating the indoor recreation needs of its residents will be a priority for the Township in the immediate future.

Passive Recreation

Recreational activities that are not related to sports programs need to be an important consideration in future planning. The Township provides recreational activities and programming for residents that enhance the quality of life in Byram. Additionally, because of the wealth of public open space, there are a myriad of outdoor activities that provide the opportunity for residents and visitors to Byram to enjoy the Township's natural resources. This includes hiking, fishing, hunting and biking along with many other outdoor pursuits.

Township Sponsored Activities

There are currently limited recreational opportunities for Byram residents outside of organized youth sports activities. The Township formerly offered a youth summer camp for residents of Byram, Netcong and Stanhope. This was discontinued in 2017. This included extensive programming for a 4-6 week period each summer that included field trips, arts and crafts, educational programs and swimming lessons. The Netcong Educational Foundation recently began to provide a summer camp experience for children between pre-Kindergarten and 8th grade through Camp Lenape Netcong. This program is open to Byram residents.

The annual "Byram Day" celebration is organized by volunteers. This event has included food and music, exhibits, merchandise, antiques, games for children, pony rides, 5K and a classic car show in the past and was hosted at Neil Gylling Park. The mayor has hosted hikes in the Township's parks and trails on an annual basis. Other events such as a youth triathlon and "Miss Byram" event have been sponsored by the Township Recreation Committee. There was a larger demand for programs expressed during the public outreach meetings than are addressed by current programs offerings. However, past experience with summer camps and after-school activities showed that participation levels were too low to sustain these offerings.

Recreation programs are overseen by the Township Recreation Committee. The committee's charge is to advise the Mayor, Council, Township Manager and Recreation Director on matters regarding the recreational programs of Byram Township. The Township no longer has a Recreation Director. The committees stated goals include:

- To develop and maintain a list of suggestions for additions, modifications and updates to the recreation programs, facilities, and policies.
- To work with the various sports organizations to ensure that our residents have a wide variety of athletic choices available to them.
- To work with other organizations to provide various leisure, social, cultural, and educational programs for Township residents.
- To ensure that our parks, fields, trails and facilities are maintained and accessible to all citizens of the Township.
- Establish a policy manual.

The bulk of the committee's current activities involve coordinating with the youth sports groups for use of the Township's parks. They have explored incorporating additional activities such as archery, hunting education and fishing programs. However, undertaking these activities has proven difficult because of the volunteer commitment required.

Publicly Available Opportunities

Other passive recreational opportunities define Byram's open spaces. The ability to hike the forests, fish in the Township's lakes and streams, bicycle, kayak, hunt, and participate in other related outdoor activities is one of the prime benefits of the public lands available to both residents and visitors. The Township is already a well-known destination for fishermen, hikers, mountain bikers and trail runners. The maintenance and expansion of these recreational opportunities will be an important aspect of managing the Township's open space assets in the future.

The township has hiking trails that are available in several Township parks and a system of walking paths at C.O. Johnson Park. Allamuchy Mountain State Park has an extensive system of hiking and mountain biking trails. One of the components of this plan is a vision of how to knit the existing trails together into a unified Township-wide system. This will involve identifying missing links between properties, developing and maintaining trails and increasing accessibility. There are also multi-use trails that can accommodate bikers and walking paths for users looking for light exercise or who are accompanied by children.

The Township has two high-quality trout streams in the Musconetcong River and Lubbers Run. Fishing and kayaking are available at Cranberry Lake, Jefferson Lake and Johnson Lake. The State of New Jersey maintains a boating access facility at Cranberry Lake as well. State lands and selected municipal properties are available for hunting in season.

New Initiatives

Providing for the future needs and demands for active recreational facilities is a priority for Byram Township. A more difficult task is defining what the reasonably expected future needs will be. Projecting the costs for developing new facilities is also a priority. This will allow the Township to make responsible fiscal decisions on where to invest, how to invest and how to finance facility construction. These decisions will ultimately be within the discretion of the Township's governing body, but those decisions should be informed by this analysis.

Decisions regarding investments in future facilities will need to account for several factors. The first of these is the regulatory impact of the Highlands Act on Township owned properties. There are stringent limitations on impervious coverage and soil disturbance that apply within the Highlands region. The Township is subject to many of the stricter controls. There are substantial areas of wetlands, steep slopes, threatened and endangered species habitat and other regulated features throughout Byram and these factors impact the open space parcels the same way they impact the remainder of the community. There are exceptions and provisions in the Highlands regulations that may provide a path forward for some projects. These include the ability to add up to 25% of impervious coverage on a lot as determined by existing conditions on the effective date of the Act and the ability to undertake linear development projects such as trails development.

The recreational lands within the Township are substantially affected by environmental constraints. Wetlands, wetland and stream buffers, endangered and threatened species habitat and steep slopes are all common constraints found on municipally held properties. Additionally, the township's recreational facilities are all located within the Highland Preservation Area and are subject to the strict limits on land disturbance and impervious coverage contained in the Highlands legislation. Any future development would need to either be within the parameters of the Act's limitations or be done after seeking relief provided under one of the Act's exceptions. A map depicting the environmental constraints on the Township's recreation facilities is contained in the appendix to this report.

Assessing future demand should also be informed by population trends and enrollment history. As previously discussed, Byram has shown a slight population decline over the past decade. The neighboring communities of Stanhope and Netcong that share youth sports programs with Byram have seen similar drops in population. Even if there is not a continued decline, the population of the Township should remain stable. This is the result of a combination of environmental restrictions on building at the state and local level and larger demographic trends. All youth sports programs show enrollment declines. (NOTE: *The youth lacrosse program showed a slight increase likely due to drawing participants from other spring sports programs*) A 5-year history of each program is contained in the appendix to this report.

Priority Land Acquisitions

When the Township began its open space planning efforts, there was substantial development pressure in the community that threatened to both change the character of Byram Township and compromise the important natural resources located there. The primary concern was protection of water quality and quantity. Those circumstances have changed somewhat since the early 2000's when the Township's aggressive preservation program began. There is a sentiment in the Township that there is sufficient preserved land within the community. This is certainly understandable when evaluating the sheer volume of preserved acres of combined state, local and private conservation lands.

The Highlands Water Protection & Planning Act that was enacted in 2004 changed the development landscape throughout the Highlands region and had a large impact on Byram Township. The Highlands Act serves to further many of the Township's aims, primarily when it comes to protection of water resources and the community's rural character. While there is still a fair amount of small-scale development potential, the threat of large sub-divisions or commercial centers being constructed in the Township has all but been eliminated by the Act. Additionally, for

Township needs to be prepared to pursue acquisition of all or a portion of any of these properties as necessary. They would likely need to be purchased in partnership with other entities such as the Green Acres Program or the NJ Conservation Foundation as have many of the other open space properties owned by the Township. The cost estimating tool for use in projecting park maintenance costs in the Appendix to this document has provisions for projecting acquisition costs as well and should be used to assess the necessary long-term investment needed to acquire these priority properties.

Potential Capital Investments

The following list sets forth potential capital investments the Township may make in its parks over the next decade. The Township may choose to pursue all of these projects over the next 10 years, some of them, or decide to forego these undertakings altogether. The decision concerning which of these investments to pursue is within the discretion of the Township's governing body. Some of these proposed actions may not be feasible from either a regulatory standpoint or from a fiscal standpoint. However, that decision should be based upon the assessment of need, the utility of the project, the regulatory environment that controls land use within the Township's parks and the fiscal impacts. The financial analysis should also inform decisions regarding the amount of the Township's open space levy which can be used to fund some of these initiatives or to support bonds for larger expenditures.

This list of candidate investments is presented without prioritization (they are presented in alphabetical order) and reflects the issues that were raised by residents of Byram and the interested stakeholder groups participating in the development of this plan. These were identified through the public outreach and research process. None of them would be considered necessary for meeting the needs of the Township's residents. Nonetheless, they each may provide a return of value to the Township through increased utility, improved quality of the asset or new facilities. Ultimately the governing body must make a cost/benefit analysis of these projects. Even implementing some of these proposals will require a multi-year approach with budgeting implications that should be managed. The expectation of the residents should also be informed by this rational and structured approach to implementation. The guiding principles should be what is feasible, what is necessary, what is fiscally responsible and what provides the best return on investment to Byram's residents.

Artificial Turf & Lights

One of the amenities requested during the public outreach sessions, including the interviews with the youth sports programs, was the addition of artificial turf fields with lighting. This is a common request in suburban communities in New Jersey. Weather concerns, particularly with Spring sports, often limit the use of natural grass fields, with some years seeing the fields closed until early or mid-April, depending upon snowfall. There are many nearby towns and school districts (including the Lenape Valley Regional District) that have recently installed or are currently engaged in the construction of turf fields. A survey of the costs for exemplar projects is contained in the appendix to this plan.

Area communities that have installed or are considering the installation of similar facilities can provide some cost guidance. Roxbury Township completed the installation of a single artificial turf at Horseshoe Lake Park in late 2019 with upgraded lighting. Chester Township is investigating the installation of a double size artificial turf and lights at Black River Fields. Both of these projects have similarities to the conditions at Byram's C.O. Johnson

Park. Chester Township also shares the characteristics of hosting youth sports programs for multiple municipalities and being located in the Highlands Preservation Area. Both communities also have similar populations. (Byram Township 7,933/Chester Township 7,838) These projects can provide guidance for estimating the scope of costs that would be involved in field construction at C.O. Johnson.

Costs for a single turf field with lighting at Roxbury were approximately \$1.5 million. The largest portion of the expenditure was for site preparation. The approximate cost for construction and installation of a double-size turf field as proposed in Chester Township would be \$2 million including excavation and other site preparation activities. The installation of the softball and multi-purpose fields at Lenape Valley High School cost was approximately \$1.5 million without new lighting. The precise costs at C.O. Johnson would be dependent upon the specific conditions at the site. In addition to the costs for site preparation and turf installation, lighting would increase the costs by approximately \$100,000.00 per light stanchion (4 stanchions for a single field/6 stanchions for a double field).

This would represent a substantial cost and investment by the Township. In addition to the installation costs, a fund would need to be established for replacement of the field(s) in the 10-15-year time frame. While replacement would not be as expensive as the initial installation, costs would likely be approximately \$1 million, meaning that about \$100,000.00/year would need to be allocated to a replacement fund. Before committing to an undertaking of this magnitude, there are several questions the Township must consider.

- Can a facility of this nature be constructed within the regulatory constraints on the site?
- Does demand for field space require this investment?
- Does added utility provided by turf fields warrant this investment/commitment?
- Can the cost of the facility be shared with the other communities using the field(s)?
- Can the uses contemplated be accommodated at the existing high school facility?
- Can equivalent use be achieved through investment in existing Township facilities?
- Is there an adequate return in value to Township residents to warrant this investment?

This is not an easy decision for the Township as there are compelling arguments both for and against the construction of a facility of this nature. However, the reality of the regulatory constraints and the accommodations necessary to allow for the construction may dictate the outcome.

Regardless of the decision concerning the installation of artificial turf, the Township should also consider the installation of modern lighting. Lighting at the youth football field is outdated and inadequate. The remainder of the fields, both baseball and multi-purpose, are unlit. There was interest among the user groups to provide lighting to extend the hours of use. Currently, the youth sports programs rent portable diesel-powered lights for practices. Lighting would end this practice and provide longer hours of use for both practice and competition, particularly in late fall and early spring.

C.O. Johnson Park -Field #8

The multi-purpose field at C.O. Johnson Park designated as “Field 8” is the most recent improvement at the park. It is a traditional rectangular field that can be configured to regulation dimensions for multiple sports dependent upon season or demand. When the field was constructed an underground irrigation system was installed. The field is in excellent condition with a healthy high-quality natural turf surface and level grading. However, the field has issues with drainage, particularly during the spring season. This often results in areas of standing water on the field that render the surface unplayable. This facility is an important part of the Township’s ability to meet its active recreation needs. Identifying and addressing the issues that are causing the drainage problem at this field should be a priority. It will likely require an engineered solution that will take the field out of use for a period of time. Planning the design and financing the repairs will need to be addressed as will accommodating field scheduling issues during the time the field is out of service.

C.O. Johnson Park Field House Replacement/Improvements

The existing field house at C.O. Johnson currently serves several purposes. It provides meeting and storage space for recreational programs operating within the Township. It is a designated polling place for elections. It houses a concession stand used by the recreational programs during events. It provides a community space that can provide a badly needed indoor facility for programs and meetings. It serves as a meeting spot for local scout groups. It also needs updating and renovation. If improved, it can better meet these needs. The installation of a generator system could allow the building to be used as a warming center in the event of an extended loss of power in the Township. These events have occurred in the past and are likely to occur again.

The need to improve the field house was highlighted in the 2010 Open Space & Recreation Plan. The same needs identified in that plan continue. The structure of the building is sound, but functionality is limited by the building layout and the condition of the building’s interior. The outdoor bathrooms are inoperable. Space for meetings and storage is limited and should be a factor in any renovation. Upgrading the building may also require upgrading the building’s septic system. This would involve investigation into the permitting issues that would accompany re-design or relocation of the septic field and possible upgrading of the system’s capacity. The existing septic system is located beneath the handicapped parking area to the south of the building.

Any improvements to the existing structure should include renovation of the bathroom facilities. These bathrooms were closed approximately 25 years ago. Maintenance and security of the bathrooms would need to be addressed. These were contributing factors to closing these facilities. This would not alleviate the need for use of port-a-potties as the distance between the field house and recreation fields would dictate the continued need for these facilities. There was also strong support for retaining the concession area. This would also need rehabilitation.

One consideration for evaluation is location of the building. The existing building is not in an optimal place for servicing the active recreation fields at C.O. Johnson. The current site location is ideal for allowing access by individuals with special needs or the elderly. There is very limited parking and the site is not easily accessible due to the elevation change from lower parking lot. Options for moving the building are limited but should at least be evaluated. This would necessitate trading of existing impervious surface for new as described in the discussion of artificial turf. The Highlands regulations may be difficult to overcome. This would also necessitate the installation

of electric utilities, water and a new septic system. These factors alone may preclude this approach and necessitate rehabilitation of the existing building as the only viable option.

C.O. Johnson Park-Football Field Replacement

Replacing the youth football field was a request from the Lenape Valley Youth Football program. The existing field is an 80-yard youth field that is no longer the standard for competition. Increasing the field dimensions to a full 100-yard field with 10-yard end zones would likely require extending the space occupied by the field to both the north and south. This may be challenging as space for expansion is limited. There are underground utilities present and relocating perimeter fencing would impact other usable areas of the park. Additionally, the football program plays the bulk of its games at Lenape Valley High School. The field at C.O. Johnson Park would be used for practice and auxiliary games played on Monday nights when there would be a conflict with the high school program. This may be able to be alleviated through schedule coordination. Upgrades to the football field would also require a cost/benefit analysis by the Township as the increased utility may be marginal.

Upgrades to the field would also make upgrading of the lighting prudent. A discussion of the need or usefulness of installing lighting for the multi-purpose and baseball fields is found elsewhere within this section of the plan. Upgrading the lighting for this field may be considered even if improvements to the field are not made. The recreational sports programs, including the football program, currently utilize temporary diesel generated lighting during their respective seasons. This solution is sufficient for practice situations but does not work for competition. Incorporating updated lighting of the football field should be considered if the installation of lighting for the other fields in C.O. Johnson Park is undertaken.

C.O. Johnson Walking Paths Improvement/Expansion

Related to the expansion and improvement of the township-wide trail system, the modification of the existing paved walking paths through C.O. Johnson Park was an issue raised through the outreach process. The existing paths are popular with Byram residents who use them for access between the existing recreation facilities as well as for exercise. These paths provide a place for residents to walk and are an alternative to the Township's more rugged hiking trails. This includes parents with young children and older residents who might not feel comfortable or physically capable of using the hiking trails. The repair, improvement and expansion of the walking paths has been evaluated by the Township and is currently under consideration. Design and cost estimates have been prepared. Additional paved paths would likely be permitted under the "linear development" exemption of the Highlands Act, but this would need to be confirmed. If this project is pursued, the establishment of a defined distance loop ($\frac{1}{4}$ or $\frac{1}{2}$ mile) to allow users to measure their walk or the addition of an exercise or "par" course should be considered.

Dog Park

There was interest expressed during the public outreach effort in the creation of a community dog park. Dog parks provide a safe space in which people can exercise their dogs and watch them play. Dog parks can facilitate socialization with a variety of breeds and breed types. They can function as a social center for the community and a place for residents to interact with each other, as well as for their pets to interact with other dogs. If the Township chooses to proceed with creating a dog park, they will need to select a site, invest in the construction and infrastructure to support the park and commit to regular monitoring and maintenance of park.

The American Kennel Club provides guidance for the design of dog parks. There are minimum requirements necessary to create a safe and useful space. An area of at least one acre is recommended. There are also features that should be included. They are:

- Fencing, which needs to be at least five feet high to keep dogs safe.
- Park benches for owners to sit on.
- Waste bag stations and covered waste cans.
- Water fountains for dogs and people.
- Trees for shade, or shade structures.
- Hardscape areas and paths.
- Signage listing the park's rules.
- Separate areas for large & small dogs

The site chosen for the dog park should be relatively flat and have permeable soils. If that isn't possible, the park should be designed such that erosion does not become an issue, water bodies are protected, and visibility to all dogs is possible within the fenced in area. It is also important to provide a sufficient buffer between the dog park area and other recreational facilities such as playgrounds, trails, ball fields, picnic shelters, game courts, or any existing heavily used or programmed area. Another consideration will be that public land dedicated to a dog park will no longer be available for general recreation purposes.

The Township will need to set a budget and choose a location for the park. Since the location would likely be within an existing park, acquisition of land would not be an issue. While there are basic requirements to create a park that meets the recommendations of the American Kennel Club, the Township would also need to determine the size of the park and select which features to include in the park. The allocated budget will ultimately govern the design of the dog park. Costs for construction of these facilities in other communities have ranged from approximately \$30,000.00 for a simple 100' x 200' facility to nearly \$750,000.00 for a 4-acre park with numerous amenities. The Township should expect to spend approximately \$50,000.00 to create a 1 acre facility.

Anticipated costs will include fencing, entrance gates, water supply, benches, plantings and facilities for exercising and training dogs. The biggest expense would likely be the installation of fencing. Typical installation costs for five-foot chain-link fence is approximately \$17.00 per linear foot. A 210' x 210' (840 linear feet enclosing approximately 1 acre) enclosure would cost on average \$14,280.00 for the perimeter fencing alone. There would need to be additional fencing to separate large and small dogs within the facility. Additionally, these costs do not include regular ongoing maintenance, cleaning and care of the facility. The Township will likely need to dedicate a significant amount of public works resources to these tasks and assign personnel to service the site on a daily basis.

There are also a number of best practices for operation of a dog park which should be incorporated into the park's creation and management. They include assigning staff to monitor the park during periods of heavy use, a

system of fines and warnings for users who don't abide by the park rules, establishing hours of operation consistent with other parks and a program to educate park users on dog etiquette, and to educate the community about dogs and dog parks in general. Also, much like active recreational facilities, the ability to "rest" grass areas to allow for regrowth and regeneration after periods of heavy use needs to be designed into the park. Other operational considerations such as permitting in conjunction with dog licensing, charging a fee for access or having a controlled gate access might also be measures incorporated into the rules controlling the park or the design.

Forest Stewardship

The Township's Forest Stewardship Plan contains a series of recommendations for projects designed to maintain sustainable and healthy forests. The Township has acquired a significant amount of forested lands. The forests in Byram, as they are in much of the northeastern United States, are facing a number of threats to the long-term health of their eco-systems. Over-browsing by deer, invasive species, climate change and destructive practices like unlawful ATV use have all had negative impacts on Byram's woodlands. These impacts are visible and measurable. Responsible stewardship of the forest assets of the Township requires intervention. This would also necessitate dedicating adequate resources to this effort.

The Forest Stewardship Management Plan has identified specific steps that can be taken to improve the conditions on the Township's lands. These projects are segregated into distinct actions for each forested tract owned by the Township. Some of them are ambitious labor-intensive undertakings that will require an investment of funds and engaging outside contractors to perform the on-the-ground work while others may be accomplished using volunteers. The largest projects are related to invasive species removal and control. This includes manual or machine removal, application of herbicides or controlled burns as methods of dealing with this important issue. Additionally, management of the deer population through a controlled hunt program should be continued. Maintenance of the Township's woodlands is an ongoing and multi-year undertaking. Incorporating implementation of the Forest Stewardship Plan into annual budgeting is imperative.

There are grant opportunities to support Forest Stewardship projects from the State of New Jersey. Byram was awarded a \$10,000 grant under the state's Resiliency Planning Program in 2019. Only projects carried out on public property owned or maintained by a municipal or county government are eligible for grant funding. Grantees are only reimbursed for expenses incurred. Work must be supervised by a NJ Approved Forester, a NJ Licensed Tree Expert, a Society of American Foresters Certified Forester, an International Society of Arboriculture Certified Arborist, or other professional who abides by the current forestry best management practices and arboricultural industry standards. In addition to Open Space Funding and grants, selective sustainable harvesting and the sale of timber should also be considered as a source of funding to support these stewardship activities.

Gazebo/Pavilion

There was an interest in creating a gazebo or pavilion structure that could be used for picnics and gatherings expressed both in the survey conducted and in the outreach process. There are limited places for a structure of this nature with the most likely location being at Tamarack Park. This would require a close examination of the regulatory restrictions on this property. The development of parking and playing fields at the site were likely close to the limitations of the Highlands Preservation Area allowances for soil disturbance and impervious coverage. If the Township elected to pursue the construction of an additional structure at this site, the availability

of additional impervious coverage allowances would need to be determined. It is likely that there is some minimal availability. The structure design would need to utilize a negligible footprint to meet the regulatory requirements. If there is no additional impervious coverage allowance available, using the methodology of “trading” existing impervious coverage for new could be considered. This would necessitate removal of existing parking area in proportion to the new impervious surface of the structure. Cost estimates for similar structures are contained in the appendix to this document.

Handicap Accessible Facilities

Children with disabilities experience fewer opportunities to participate in play, and therefore have fewer developmental opportunities. The Township can play a role in serving its residents with disabilities by providing accessible playground equipment as well as sensory experience installations. The portion of the population needing special needs facilities is under-represented in the survey results. Nevertheless, the importance of providing accessible recreation opportunities for the portion of the population that would benefit was raised during the outreach effort. ADA accessible facilities should include the following:

- An accessible playground must have available, unobstructed routes to the playground and connecting play equipment.
- The playground must include at least one of each type of ground-level play component on an accessible route.
- At least 50% of the playground’s elevated play components must be on an accessible route.
- Ramps must have handrails on both sides.
- Playgrounds must use specific safety surfacing that has met ADA criteria. Additionally, this surfacing should receive regular inspections and maintenance to ensure compliance.

In addition, the accessible facilities should be incorporated into the main play areas, not segregated. Some features to consider include ramps, inclusive slides, ground-level play activities, sensory activities, inclusive swings and wheelchair-accessible equipment. In terms of numbers, handicapped residents present a much smaller sector of the community. Green Acres now requires grant recipients to provide accessible facilities within the municipality as a condition for future funding awards. However, whether from a legal perspective under the Americans with Disabilities Act, or from a policy perspective where inclusion is an important goal, the Township should strive to provide adequate accessible recreational facilities.

Neil Gylling Park Bathroom Facilities

Neil Gylling Park is the main facility for the Township’s Girls’ Softball program. The site has a building with restroom facilities and electric service that has not been in use for an extended period of time. There was interest expressed in the potential for renovating or replacing the building. This was raised in both interviews with stakeholders and in survey results. Currently there are port-a-potties in use at the park during the softball season. Replacement or renovation of this building will be challenging. It may be possible to reconstruct a new facility elsewhere within the park but that would be subject to the ability to find a suitable location. The entire tract is constrained by regulated environmental features beyond just the impervious coverage limitations that

constrain this site along with other township properties. The septic system would need to be evaluated. Replacement would be difficult as wetland buffers and endangered habitat restrictions would likely preclude any new disturbance. The electric service panel has been disconnected. Re-opening the building would require reestablishing all services (septic, water & electric) in addition to any renovations. Connection to the public sewer system at the Municipal Building site may be an alternative. The Township may also want to consider access to rest room facilities at the municipal building across Mansfield Drive as an alternative to rehabilitation or reconstruction of the existing building.

Trails Development

The development of a Township-wide trails system is discussed at length in a separate chapter of this plan. The creation of a fully connected trail network will require Byram to invest in securing access to key properties that link publicly owned lands to allow for existing trails to be extended or new trails to be created in order to transform the current disjointed collection of walking paths. Lands within Allamuchy Mountain State Park, the Byram Township Parks and the publicly accessible private properties, such as the Hudson Farms tracts, can be knit together into a system of longer distance trails and loop trails to provide a myriad of hiking experiences. This access may require fee acquisitions or access through easements. Maintenance of existing trails and construction of new trails must also be accounted for in budgeting. These trails will likely include unimproved walking paths such as the Tamarack Trail and multi-use trails such as the trail in Mansfield Woods or the Jefferson Lakes connector. The creation of a more robust trail network will give residents greater use of the Township's parkland and serve as an attractive amenity for visitors. Costs will include trail construction, signs, trail markers & posts, kiosks, maps and other amenities that will facilitate trail use or accompany the system.

Financing Improvements

The Open Space Trust Fund currently produces approximately \$110,000.00 in annual revenue at its current rate. This money is allocated towards debt service for past land acquisitions, park improvement projects, historic site improvements and for costs incurred in conjunction with potential new land acquisitions. The Township has consistently been able to leverage its open space funds with other available sources of funding with the result that each dollar of open space trust fund money has been matched with at least two dollars in funds from other sources and often more. The capacity of the Open Space Trust Fund to support major investments is limited. Even with the retirement of the current bond debt in 2024, the amount of funds available can only be stretched so far. The trust fund can support bonding for the candidate capital projects outlined in this plan. However, allocating funding towards bond payments for even a single major project will compromise the ability of the fund to carry out other functions at its current levy.

The Township has taken advantage of Green Acres low interest loans to help fund capital improvements. These loans have been repaid using general funds of the Township. Repayment of these loans will be completed in the next several years. They have supported substantial investments in the Township's park system with over \$2 million dollars being spent, primarily in the development of facilities at C.O. Johnson Park. This plan outlines a 11 separate potential capital projects. They will cost several million dollars if even two or three of the larger candidate developments are undertaken. These major expenditures will almost certainly require long-term bonding. If the Township chooses to pursue these major investments, an increase in the open space tax levy should be considered. This would allow for the Township to carry out the multiple obligations outlined in this plan. If not, the Township will need to consider alternate means of financing these projects or forgoing them.

Recreation Programs

Non-sports recreation programs as well as active programs for adults should be considered by the Township. The primary focus of the Township has consistently been on active recreational programs, primarily for youth sports. This only meets the needs of a portion of the population. Youth sports programs in Byram, as in most communities, represent the largest share of available activities. These programs are allocated the lion's share of resources and serve only a portion of the Township's residents. During the public outreach effort, there were a number of suggestions for activities that are not centered on organized youth sports programs. Some of them are feasible, others are aspirational.

Byram has a strong sense of community and traditionally its residents have volunteered as coaches and administrators for sports organizations and some adult activities. The Township discontinued the position of Recreation Director, which had formerly been a full-time employee. The responsibilities of the position, such as the allocation and assignment of field space are still handled by Township personnel and a sub-committee of the volunteer recreation committee known as the "sports council". This has allowed for cooperation among the various youth sports programs and avoided conflicts for the use of available facilities.

Programming and planning for community events and activities such as "Byram Day" have likewise been managed by volunteers working in conjunction with Township employees. The Township has a full-time employee in the position of Community Relations Manager. This person is responsible for facilitating events that are being sponsored by the recreation committee. This includes the coordination of vendors, drafting and issuing Requests for Proposals (RFPs), overseeing purchasing and contract management and public communication. This individual also manages facility applications and all recreation policy enforcement.

There is a need and a demand in the community for programming and events that serve a broader cross-section of the population. These activities can be difficult to assess. There is rarely a dedicated constituency that is easily identified as the youth sports groups are. Additionally, these activities do not have a built-in support system to advocate and volunteer for the organization and the conduct of these programs. Specific activities identified during the public outreach for this plan included:

- Outdoor Concerts
- Guided Canoe/Kayak Trips
- Adult Sports Teams
- Historical Walking Tours
- Outdoor Movie Nights
- Group Hikes
- Mountain Biking Activities
- Cultural Programming

- Programs/facilities for Physically Challenged Residents

There was substantial support for these additional offerings. Without a sponsor or volunteer group adopting and committing to implementing these endeavors, they would need support from the Township. Generally, a comprehensive fully programmed recreation department would require a full-time position. This position was formerly staffed but was eliminated due to budgetary considerations and the inability to operate within statutory and auditing guidelines for municipal operations.

There is an opportunity to share programming with neighboring communities. Both Stanhope and Netcong expressed an interest in joint programming or hiring a shared full-time recreation director to serve all three communities as a shared service. This may eliminate some of the concerns that led to the Township eliminating this position. Additionally, combining the resources of three relatively small communities may allow for a more robust series of offerings. However, there are also impediments to this approach. Equitably using resources, fairly allocating costs, the geographic location of programming and the desire for maintaining events that are unique to each municipality would complicate this relationship. These obstacles may be surmountable, or they may be too difficult to overcome. The potential advantages make it worth exploring a cooperative relationship.

Regardless of the approach, the demand for these recreational programs exists. Meeting the needs of a broader demographic of the population is important for fostering a better quality of life and a stronger sense of community. It is also important for providing value to as many residents as possible. The Township will need to decide if sharing programs, re-establishing a dedicated recreation director's positions (part-time or full-time) or taking other steps to provide programming of this nature is the best method of meeting these community needs.

Introduction



The Township has invested a significant amount of resources into the acquisition of public open space properties. Byram's open space preservation efforts are complemented by significant state and private open space holdings within the Township that provide the opportunity to a connected system of hiking and multi-use trails that take advantage of the extensive publicly accessible lands that include Byram Township owned properties, State of New Jersey parks, and private conservation lands owned by Hudson Farms and the New Jersey Conservation Foundation.

The current system of public trails consists of several disconnected paths in scattered parks around the Township. They provide the residents with opportunities for recreation, but only provide a fraction of what is possible in a community that is host to several thousand acres of publicly accessible preserved land. Creating a comprehensive inter-connected system of trails, both for hiking and for multiple uses, would provide increased value to Byram's residents from the incredible resource these publicly owned properties represent. This plan explores the opportunities to create

a much larger and more inclusive system of trails that will take advantage of the potential for expansion of the existing system and the interconnection between trails within the Township and with neighboring communities. A map of the entire Township-wide trail network can be found in the appendix to this document.

In addition to the trails on Byram Township owned land, there is an extensive existing system of trails in Allamuchy Mountain State Park that is limited to the portion of the Township west of Route 206. The long-distance Highlands Trail, which runs from Riegelsville on the Delaware River in Hunterdon County to Storm King Mountain on the Hudson River in Orange County, New York, passes through Byram. Connecting Byram's trails to these other existing trails is within reach. Additionally, a recent conservation transaction has made the three Hudson Farm Holdings available to the public. Development of new trails on these properties that connect to the network of existing trails can provide the opportunity to both create an integrated system of paths and allow accessibility to that trails system for most of the Township's neighborhoods.

Creating a larger and more complex system of trails will provide for more opportunities for Byram residents to enjoy the public lands within their community and attract visitors to Byram looking for places to hike or mountain bike. Additional trails will provide the prospect for longer hikes, loop routes and a variety of experiences that will make Byram an attractive destination for outdoor recreation and provide new avenues for economic development based upon the Township's abundant natural resources.

After a nine-month process of community outreach, field work and research, the Byram Trails Master Plan has been created. The plan provides direction to assist the current and future governing bodies of the Township with planning and implementation of an expansion of the existing trails system as well as the management of the trails system in a manner that will best meet the current and future needs of the Township's residents. This plan contains recommendations for the maintenance and upkeep of the existing system, improvements to the system, expansion of the system and funding mechanisms to undertake these actions.

Vision



Byram Township is a rural exurban community in northern New Jersey with a variety of neighborhoods that have developed independently over time. The Township is home to both significant natural areas and wonderful parks. Over the past decade, Byram has developed a basic trail system to take advantage of its assets and provide recreational opportunities for its citizens and others. The existing network of multi-purpose trails has proven to be a well-used asset for the Township's residents but is limited in its scope. The Township views its trail system as a means to tie the community together by connecting neighborhoods with Byram's many parks, schools and municipal facilities and to foster a greater sense of community. The Trails Network also affords a healthy outdoor experience by providing options to Byram's residents for walking, hiking and biking.

The Byram Trails Plan section of the Open Space & Recreation Plan is being created to explore the many options available for maintaining the core trail network, improving the utility of that network, and building on the existing trail system to bring its benefits to as many neighborhoods as possible. The Township also looks to take advantage of opportunities to tie

its trail network to other trail systems, such as the Highlands Trail and the trails in Allamuchy Mountain State Park and connecting to trails in neighboring communities. This document is designed to guide the Township's governing body in strategically planning to maintain the current system and expand that system to serve current and future residents of Byram. It is also designed to provide budgeting support to assist with planning for financial commitments necessary to maintain and expand the network of trails. The vision contained in the Plan is fundamentally one of sustainability.

Trails Vision Statement

The vision guiding Byram Township's Trails Master Plan was developed from input provided through public outreach and stakeholder consultations between January and April 2019. The vision reflects the general view of Township residents regarding the existing trail system and their priorities for improving and expanding the network. It also expresses what people agree needs to be retained and what should be added to the system.

The primary objectives identified through this process are:

- Respect for the natural resources of the New Jersey Highlands.
- Expanding the trails system into a comprehensive integrated Township-wide network.
- Using the trails system as a catalyst for sustainable economic development.
- Managing uses of the trails in ways that enhance the benefits to current and future residents.
- Achieving the goals of this plan in a fiscally responsible manner.
- Recognize the Township's trails as an important enhancement to resident's quality of life.
- Ensuring that the trail network will continue to be an asset to the Township.
- Protecting the ability of future generations to enjoy this wonderful resource.

By adopting an approach that protects the local ecology while providing recreational, social and health benefits, the local trail system can become a model of sustainable recreational trails management. At the heart of achieving this vision is a commitment to balancing environmental protection with recreational uses and activity. This commitment will be shared by all who are responsible for this asset. This includes individuals using the area, partnering government agencies, surrounding private landowners, and other stakeholders. Common, sustainable strategies should emphasize awareness, education, safety and stewardship.

Through this plan, Byram Township is creating a collaborative and systematic vision for implementing these goals. How the Trails Network should be managed should be guided by a desire to minimize negative impacts on the environment and local residents, while maximizing community partnerships, education, habitat protection, or other positive outcomes. The Township may consider establishing a permanent Trails Advisory Committee to assist the governing body and Township staff with trail planning, design, construction, and maintenance. This Committee should consist of members representing the governing body, related established municipal committees, vested interest groups and the residents at-large. They would also establish criteria and recommendations for prioritizing trail projects. In the alternative the existing Open Space Committee or the Environmental Commission can serve this function.

The Trails Advisory Committee or the Open Space Committee/Environmental Commission will have the key responsibility to develop and oversee a volunteer program for trail construction and maintenance and to make recommendations to the Township Council and Township Staff regarding prioritization of projects. The Trails Advisory Committee will also be responsible for updating this Trails Master Plan periodically and presenting the update to the Township governing body for formal adoption. Township staff will lead project implementation activities, such as development of mapping and design details, review of deliverables from consultants, annual budget planning, bidding and assignment of trail construction contracts, public relations, and communications with partners.

Purpose

Trails provide opportunities for people to participate in outdoor recreation and outdoor adventure pursuits. Trails welcome all people regardless of age, income, ethnic background, or beliefs and provide benefits to a

dramatically wider population than golf courses, soccer fields, tennis courts and similar public facilities. Trails provide key access by allowing users to immerse themselves in the natural flora and fauna of the area and experience the splendor of nature and beauty of the New Jersey Highlands and to have easy access to opportunities for exercise and physical activity. Trails can also be very cost effective in comparison to other recreational facilities. They occupy minimal land and may be located in floodplains, utility corridors, detention areas, along roads, and in other areas that cannot be developed.

The Trails Master Plan section of the Open Space & Recreation Plan is intended to provide guidance to Byram for the continued development of its recreational trails program, so it can effectively manage and maintain a formalized system of sustainable trails that will serve the year-round needs of area residents. The plan offers a formalized trails maintenance program that follows sustainable principles and best management practices for trail design, construction, and upkeep. It offers recommendations on developing a routine and remedial maintenance program that emphasizes visitor safety, sustainability, and documented safety inspections. The plan puts forward the results of a sustainability assessment of existing trails and provides recommendations based on the findings. It also identifies new trail opportunities within the Township and presents cost estimates for these capital improvement projects. This plan is intended to evolve and should be periodically reviewed and updated as necessary to meet changing development conditions, community needs, and on-going trails program evolution.

Methodology & Outreach



The Trails Master Plan is the product of a significant amount of input from members of the Byram Township community and other important stakeholders. Ideas and consensus were obtained through interaction with the public; with organizations that create, manage and advocate for trails; with public safety officials; and through walking the trails themselves. The planning process was guided by the Byram Open Space Committee, consisting of municipal officials and interested citizens as well as members of the Byram Township municipal staff. This plan is the product of a comprehensive effort to engage as many interested parties as possible and to create a vision that addresses their concerns and the long-term needs of the community.

Input was gained through meetings, a public hearing and a survey to which nearly 1000 residents responded. The survey provided input on the public's use of the trail system, its condition, any concerns, the experience relative to other trails, and recommendations for improvements. A public hearing attended by more than 30 people provided valuable

suggestions on the existing trail system and potential future additions. Input on the Plan was sought from a wide range of municipal, county, and regional organizations and agencies, including those responsible for planning and public safety. Valuable information for the planning process was also obtained from organizations having expertise in trail planning, design and construction of trail systems, and from those managing other trails in Byram. Additionally, the owners of privately-owned, but publicly accessible property that provides the potential for future trail connections such as Hudson Farms and the NJ Conservation Foundation were consulted. Finally, Greener by Design staff hiked the entire trail system and conducted a drone overflight of part of the system to experience the trails from the user standpoint and to document the existing condition of the trail system.

Statement of Principles

The principles listed below were developed in conjunction with the vision statement, with input provided from the Open Space Committee, Township staff and through the public consultation process. The principles express the range of basic concepts which are crucial to the development of a successful recreational trails management program and the realization of the vision.

- **Public Health, Accessibility & Recreation-** To enhance the healthy outdoor recreational opportunities for Byram residents. Provide access to public open space to be enjoyed by local residents and visitors, and accessibility to meet recreational needs must be achieved while maintaining the ecological integrity of natural areas through the creation of appropriate supporting amenities like trailheads/access points and regulations regarding use. This includes providing infrastructure to support legitimate access and to balance neighborhood livability with recreational uses.
- **Safety and Risk Management-** Risks of use should be clearly communicated to trail users through appropriate trail signage and educational information. Implementation of an effective trail maintenance program also promotes good risk management. Keeping the system in a state of good repair, providing adequate means of navigation and wayfinding and being able to respond appropriately to emergencies on the trails are important elements of good trails management practices.
- **Financial Sustainability-** This plan recognizes that limited budgets exist for all the Township's planned capital projects. A variety of initiatives can be explored to further develop and implement this plan. The long-term success of the plan depends on reliable and sustainable funding strategies within the context of innovative partnerships, priority setting and cost/benefit considerations.
- **Stewardship and Responsibility-** Responsibility, accountability and stewardship must be fostered at all levels including individual users, community groups, resource managers and other partner agencies. This shared responsibility begins with public and multi-agency involvement in the development of this plan, including development of policies and standards for managing the social, environmental and economic aspects of trail use in the area. Policies should include opportunities for stewardship and ongoing involvement by local volunteers in monitoring and implementation of the recreational trails program.
- **Leadership, Partnerships and Innovation-** The challenges arising from growing recreational use present an opportunity for the Township to become a leader in effective, sustainable management of trails. Byram's value as a destination must be matched by leadership through innovation, cooperation, and partnerships promoted by a comprehensive plan for long term management and sustainability of the natural environment. Byram's recreational trail system is a regional as well as a local one. The Township can effectively optimize use of this system through partnerships with Morris County, surrounding municipalities and other stakeholders.
- **Awareness, Public Education and Advocacy-** Awareness, education and advocacy are integral to establishing community support for the trail network. Fostering respect for the natural environment and an appreciation for the health benefits for system users will help to build a supportive constituency. Building respect and awareness of these issues through public education and advocacy is crucial. This can be accomplished through creating an organized volunteer program, performing public outreach and education by providing printed and electronic information, and partnering with local organizations to promote use of the trails, environmental education and awareness.

- **Tourism and Economic Considerations-** Opportunities for marketing the availability of recreational trails should be considered. Trails that are easy to find and use and offer unique experiences for outdoor exercise and recreation will enhance property values for Byram residents and provide the opportunity for local businesses to capitalize on Byram becoming a destination for visitors looking to take advantage of the trails network.

Goals and Objectives

The establishment of an integrated comprehensive Township-wide trail system will be a remarkable asset for the Township's residents. Accomplishing this will require a multi-year investment to create connections to the existing trails and to expand upon the existing network with strategic new additions. This will also require securing access through land currently in private ownership to allow these connections to be established. The network should consist of a combination of multi-purpose trails with improved surfaces and single-track traditional hiking trails. The Trails Master Plan seeks to achieve four overarching goals to maintain and improve upon the Township's prior investment and guide future actions.

1. Enhance Recreational Opportunities for Township Residents

Byram Township's investment in securing open space and the surrounding properties in both public and private ownership has resulted in the creation of thousands of acres of contiguous parks and open space. As good as the existing trail system is, there is room for improvement. There are significant opportunities to develop a more robust trail system and connect portions of the Township that currently are not linked to the trails network. There are opportunities to make new connections between parkland and neighborhoods, and for the development of trail 'loops' which help avoid backtracking over the same route. This will enhance the utility of the system and the user's overall experience. Newly created/improved trails will also account for the wide variety of today's recreational uses, to include hiking, casual walking, birding, cycling, cross-country skiing, geocaching, and, possibly, horseback riding. Bringing the trail system to as many neighborhoods as possible and connecting that system to the region and beyond are attainable goals.

2. Allow residents to safely access the Township's many parks and destination areas

Byram Township hosts both a significant amount of open space and several major transportation arteries, such as Route 206 and Route 80. The safety of residents as they access local parks and trails is paramount and must be considered in the trails planning process. Careful planning should consider the need for marked road crossings and signage for both trail users and drivers. These protective measures will be augmented by educating residents, especially children, on how to safely navigate Township trails, pathways and roadways with pamphlets, school presentations and maps. The trails connect with every school in Byram Township, the Township Municipal Building and other community facilities. The Township is planning to create a town center near and along Route 206. Connecting the trail system to this commercial and residential development should also be an objective of this plan.

3. Promote health and fitness among Township residents through outdoor exercise.

The Byram Trails Master Plan will create a trail/pathway within safe walking distance of most residential neighborhoods in the Township, providing equivalent opportunity for healthy outdoor exercise. Trail routes will be attractive and accessible, properly maintained, and provide a viable alternative to motorized travel within the Township. Input on ways people measure exercise regimens (walking distance, time, steps) will be

considered in designing signage and designating trail segments. The Township will sponsor and promote events that encourage awareness and use of these local trails.

4. Maintenance, Upkeep and Expansion of the Trails Network

The creation of the Byram Trails system has also meant the responsibility of the Township to keep the trails in good repair. The ability to maintain the network of trails in a fiscally responsible and orderly manner is an important part of long-term planning. Additionally, the system is not fully accessible to the entire Township. Opportunities exist for expanding the system to bring the trails to neighborhoods that are not currently connected to the trails and to link the Byram Trails to other regional trails serving adjacent municipalities and the region at-large. These new trail connections will require a carefully planned investment for construction and will also add to the continuing maintenance responsibilities of the Township. The value returned to the community from the investment in maintenance, upkeep and expansion of the trails network can be clearly demonstrated. However, the limitations of the municipal budget require the ability to chart a strategic multi-year investment to meet the targets contained in trails master plan.

5. Utilize the trails network to establish Byram Township as an outdoor recreation destination

Byram Township is located within an easy drive for over 10 million residents of the New York/New Jersey Metropolitan Area. The Township has a unique position in that there is a substantial concentration of publicly accessible land within reach of this population. Providing attractive and accessible outdoor recreation opportunities, particularly for hiking and mountain biking, can make the Township a preferred destination for people who would otherwise need to travel a significant distance to experience what Byram has to offer. These assets should be developed to provide sustainable economic growth opportunities for the Township.

6. Incorporate Local Businesses, Points of Interest, Historic Sites and Township Facilities into Trail Routes Wherever Possible

Byram Township's trails should be designed to connect to historic features and points of interest wherever it is feasible. This includes connections to schools, parks and the municipal building. Creating utility and interest by using the trail system to access locations the public is interested in visiting will enhance usage and utility of the network. Additionally, providing connections to public transit at the Mount Olive, Netcong or future Andover NJ Transit Rail stations can encourage visitors to use the trails system.

Existing Trails

Planning the future of Byram's trail system begins with an analysis of the current assets available. There are two mainly separate trail networks. One has been constructed and maintained by Byram Township on municipally held land and the other a much larger and more complex system of trails on state-owned land in Allamuchy Mountain State Park. There have been some limited connections made to provide access to the state park, but there has not been a concerted effort to unify the trails. The State of New Jersey has also purchased the abandoned right-of-way of the former Erie-Lackawanna Sussex Branch and converted it to a multi-use rail trail. About 3 miles of this trail pass through Byram with the southernmost trailhead located on Waterloo Road in the Township. A substantial section of the Highlands Trail passes through the Township. A portion of the Morris Canal

Greenway and a designated “water trail” along a section of the Musconetcong River are also found within Byram.

Byram Township Trails



The existing trail system is limited in both its reach and its utility. Trails in Byram consist of primarily single paths constructed in individual parks that are contained within each particular park. The most heavily used trail is the Tamarack Trail that runs from Tamarack Park to C.O. Johnson Park, a distance of approximately 1 ½ miles. There is a connection available at Johnson Lake to a trail that climbs to Cranberry Overlook. This trail dead-ends at the overlook and is just under ½ mile in length. The Township’s Briar Ridge Park has a single trail that is bisected by Andover-Mohawk Road. The trail runs just about ¾ of a mile in each direction from this trail head with a total length of 1 ½ miles. The southern section dead ends at the Stag Lake property

and the northern section ends at the Byram-Sparta border. There is a short circular path within Glenside Woods that is about ¾ of a mile in length and a very short walking path (1/10th mile) in Brookwood Park.

The Township has constructed two multi-use paths on Byram Township property at Mansfield Woods and within Allamuchy Mountain State Park to connect Route 206 to the Sussex Branch Trail (Jefferson Bike Path). A short Township-maintained trail also provides a connection from the parking lot of the Salt Restaurant on Route 206 to the Highlands Trail and eventually the Sussex Branch Trail also within Allamuchy Mountain State Park (Cat Swamp Connector). A short segment of a longer proposed trail in the state-owned Lubber’s Run Preserve has been constructed and is maintained by Byram Township.

Other Trails

There is a much more extensive network of trails within Allamuchy Mountain State Park. These trails are maintained by the NJ Department of Parks & Forestry. The park spans several municipalities and encompasses most of the land area of Byram west of Route 206. There are nearly 20 miles of marked and maintained trails available for multiple uses including hiking, horseback riding and mountain biking in the section of the park within Byram. In addition to the marked hiking trails, mountain biking trails have been constructed and are maintained by the Jersey Off-Road Bike Association (JORBA) within the park. Nearly three miles of the state-maintained Sussex Branch Rail Trail are within Byram as well.

An approximately 5 ½ mile section of the long-distance Highlands Trail passes through Byram Township. This trail has been laid out, constructed and is maintained by the New York-New Jersey Trails Conference, a non-profit organization. About 3 ½ miles of the route is within Allamuchy Mountain State Park. The two-mile portion of the route within Byram is primarily an on-the-road route along Mansfield Drive and Lackawanna Drive. The Highlands Trail utilizes a section of the Mansfield Bike Path between the Byram Intermediate School and the Hopatcong border. Re-routing the Highlands Trail away from a road walk is a priority.

Highlands Trail



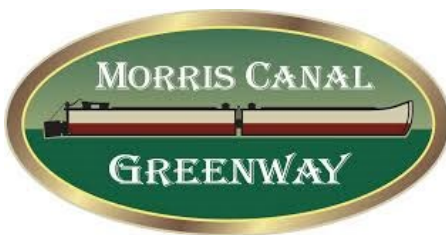
The Highlands Trail is a long-distance trail currently being developed in the spirit of the world-famous Appalachian Trail, providing a unique way to appreciate and enjoy the New Jersey Highlands Region. When complete the trail will connect Pennsylvania, New Jersey, New York, and Connecticut. The Highlands Trail is maintained by volunteers of the New York-New Jersey Trail Conference who contribute many hours each year, constituting an ongoing in-kind contribution to Byram Township's open space resources. Any interpretive materials produced about open space and recreation opportunities in Byram Township should feature the Highlands Trail as a

major connective greenway passing through the area. The Township should look to communities like Damascus, VA which has made the Appalachian Trail a key part of the town's identity, as a potential model for incorporating the trail into the local culture.

Not only does a significant portion of the trail pass through Byram Township, but the Township is located roughly mid-way on the trail's route. This would place the Township in a strategically important position to become a "host community" where services catering to both long distance and day hikers can provide economic opportunities for the Township. Simple amenities, such as fast-food restaurants and convenience stores are extremely valuable to people doing multi-day backpacking trips, and Byram Township has them in close proximity to the trail. In order to maximize the attraction of Byram Township to hikers, the Township should work with local land managers on securing designated overnight campsites (either simple or with amenities) or other lodging along the trail. Services catering to both long-distance and day hikers attracted to the community represent the chance to promote appropriate economic growth for the Township.

The Highlands Trail presents an opportunity to draw outdoor enthusiasts to Byram Township and show them what the area has to offer. This will open the door to other recreational opportunities such as fishing, hunting, wildlife observation, mountain biking and visiting historic sites. Salt Gastropub, a local business, has already adopted the Highlands Trail as a key component of its culture and promotes its partnership with the Trail Conference. The NJDEP and the NJ Highlands Council are currently working with the Trail Conference to promote the Highlands Trail through mapping and signage resources, and they may be able to assist Byram Township in efforts and resources pertaining to the trail.

Morris Canal Greenway



The Morris Canal Greenway is envisioned as a 111-mile continuous pedestrian and bicycle trail connecting six counties in northern New Jersey. Once completed it will extend from the Delaware River on the west to the Hudson River on the east. The route of the proposed greenway passes through Byram Township and through Waterloo Village and follows the former route of the canal. There is a Morris Canal Greenway trail head in

Byram on Route 604 (Waterloo Road) just south of the Route 80 overpass. This section of the greenway has historic significance as the location of the "Lost Hamlet of Byram", also known as "Starport" or "Stourport".

A study funded by the North Jersey Transportation Planning Authority (NJTPA) identifies a continuous route of 111 miles for development of an improved surface multi-use trail that will include pedestrian and bicycle facilities. The greenway route makes connections between all the remaining segments of the original canal towpath. When completed the greenway will provide residents of northern New Jersey a facility for recreation and active transportation. It will also provide connections between business districts along the route, which closely aligns with the goals of the Byram Open Space & Recreation Plan.

The greenway should be incorporated into the overall Byram Township Trail System. The route of the greenway is co-aligned with a section of the Highlands Trail now. An improved route under route 80 should be investigated. The State of New Jersey is currently investigating the expansion of trails within Waterloo Village, including a crossing of the canal via either the old “mule bridge” or using the remains of the Sussex Railroad bridge over the canal and adjacent Musconetcong River. These improvements would allow connections between Morris, Sussex and Warren Counties at this point within Byram Township.

Trail Heads

Trailheads will provide the gateways to the Byram Township trails system. The location and design of these access points is an important part of trails network. Providing appropriate parking, identifying the location as a trail access point, creating a consistent and attractive appearance, posting rules of use and information on the trails are all important functions served by a properly designed trailhead. Currently the access points to Byram’s trails are primarily marked by a single post with a small sign that identifies the name of the trail. They are difficult to locate and serve only the single purpose of designating a beginning point of the trail.

The existing trailheads are functional. The Township may choose to leave some as they currently exist. However, developing select locations into primary access points should be part of the trails development initiative. Locations chosen as primary points of entry should have parking for at least three cars, information kiosks with maps and general trail information and fencing to restrict access to pedestrians and bicyclists. Parking need only be a rolled gravel surface and fencing could be simple post and rail construction. Whatever the eventual design, it should be consistent throughout the Township and indicate to visitors that they are entering the Byram Township trails network.

Trail kiosks should similarly have a uniform design. They should have a map of the entire township-wide trails network posted. Hand-held maps should be available. The current trail heads have “QR” codes that can be scanned by smart phone on the posts. This should continue to be available. The QR codes will link to a web-based map and information page for the trail system.

The following existing trail access points are located within Byram Township:

- **Waterloo Road**-This is the main access point for the Sussex Branch Trail and the trails network in Allamuchy Mountain State Park. Located directly across from the intersection of Waterloo Road and Continental Drive. There is parking for approximately 20 cars at this site. Maintained by the NJ Department of Parks & Forestry, there is an informational kiosk here.
- **Waterloo Road South**- Located on Waterloo Road (County Route 604) near the entrance to the Waterloo Village Historic Area. There is a gravel parking area for approximately 5 cars. This is where the Highlands Trail crosses Waterloo Road to access the former Morris Canal Towpath to pass under Route 80 and continue south. There are no other facilities here.

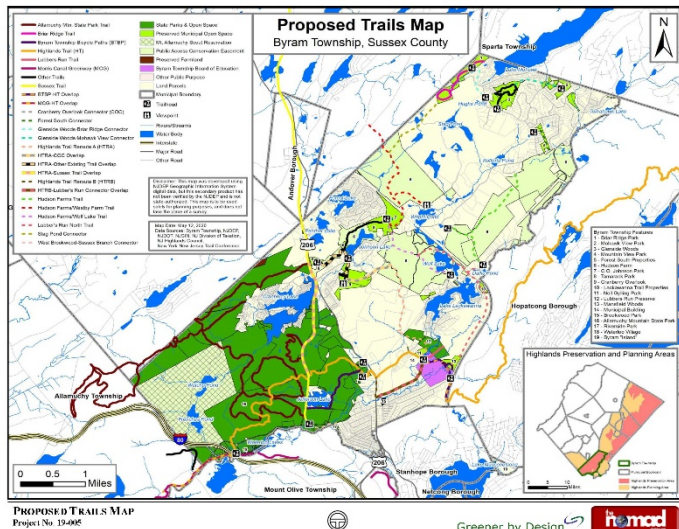
- **Hi-Glen Road**-Located at the cul-de-sac of Norman Terrace there is parking for approximately 5 cars. This is the access point for the Jefferson Bike Path and where the Highlands Trail enters Allamuchy Mountain State Park from the north.
- **Cat Swamp Connector**-Located in the parking lot of the current “Salt Gastropub” on the western side of Route 206 approximately ¼ mile north of the intersection with Lackawanna Drive. This is the beginning of a short connector trail that provides access to the Highlands Trail and the trail network within Allamuchy Mountain State Park. Cars may use the parking area for the restaurant. The trail head is marked by a single post with the trail name and a QR code.
- **Tamarack Park**-Located within Tamarack Park at the far northern end of the parking lot. This provides access to the southern end of the Tamarack Trail. The trailhead is marked by a single post with the trail name and a QR code. There is a large parking lot available that also serves the active recreation fields at this location.
- **Cranberry Overlook/Johnson Lake**- Located at the southern end of Johnson Lake on Tamarack Road across the intersection with Old Indian Spring Road. There is parking for approximately 5 cars. This provides access to a short connector trail leading north to the Tamarack Trail and to the Cranberry Overlook Trail which enters the woods on the south side of Tamarack Road. This trailhead is marked by a single post with the trail name and a QR code.
- **C.O. Johnson Park/Roseville Road**-This is the northern terminus of the Tamarack Trail. The actual trailhead is located on the west side of Roseville Road. Parking is available in the upper lot of C.O. Johnson Park directly across Roseville Road from the trail’s end. The trail is marked by a single post with the trail name and a QR code. There is parking for approximately 20 cars in a lot that also serves the recreation fields at C.O. Johnson Park.
- **Brookwood Road**-Located at the cul-de-sac of Brookwood Road. There is limited parking. This primarily provides access for the Brookwood neighborhood to the Mansfield Bike Path. The trailhead is marked by a single post with the trail name and a QR code.
- **Mansfield Drive**- Located on Mansfield Drive just east of the Township Municipal Building and across from the Byram Intermediate School. There is an information kiosk. This provides access to the Lubber’s Run Trail heading north and to the Mansfield Bike Path/Highlands Trail heading north and east. This also marks the beginning of an approximately 1 1/2-mile road section of the Highlands Trail.
- **Lee Hill Road**- Located on the north side of Lee Hill Road just east of the intersection with Camelot Drive. This provides access to the trail in Glenside Woods. There is no formal parking at this site although there is room for several cars to pull to the side of the road. The trail is marked by a single post that has the name of the trail and a QR code. (Note: Glenside Woods can also be accessed at the water tower located at the end of Ranger Road)
- **Andover-Mohawk Road**-Located on the south side of Andover-Mohawk Road (County Route 613) near the border with Sparta Township. There is a gravel pull-off that can accommodate one car. This provides access to Briar Ridge Park. The trail heads in both directions from this location. The ends of the trail are slightly offset. The trail segments on both the north side and south side of the road are marked by single posts with the trail name and QR codes.

Some of these trailheads are in difficult or dangerous locations. Some provide little in the way of parking. Improvements to these sub-standard access points should be considered.

Trail Development Initiatives

The heart of this trails plan is the development of additions to the existing trails system. This includes new trails, new trail segments, new trail access points, trail crossings, signage and other amenities that will be the hallmark of the Byram Trails Network. This also includes the acquisition or securing of access to key land parcels that will facilitate the creation of new trails and the establishment of connections that will enable the creation of a township-wide trails network.

New Trail Segments



Creating a Township-wide trail system will require establishing new trails, trail connections or extensions of existing trails to take advantage of the extensive publicly accessible land. The ultimate goal is to connect as many of the Township's parks to the trail network as possible and to integrate trails within Allamuchy Mountain State Park and the Hudson Farms Property into a comprehensive system that includes the Byram Township trails. The newly obtained public access to the Hudson Farms properties will go a long way towards realizing this goal.

The creation of new trails on the Hudson Farms lands will provide not only more miles of trails but enable

connectivity between Byram Township parks. These connections will allow for more interesting hiking/biking experiences that include significantly longer routes and loop options that will not require "out and back" hiking. There will also be opportunities to connect neighborhoods that do not currently have direct access to the trails.

- 1. Glenside Woods-Briar Ridge Connector-** A short approximately $\frac{1}{2}$ mile connection between the existing trails at Briar Ridge Park and Glenside Woods. The route will roughly follow the JCP&L power line right of way and the PSEG power line right of way near the intersection of Lee Hill Road and Andover-Mohawk Road. This would link Glenside Woods Park and Briar Ridge Park. The JCP&L right of way crosses several private holdings and use of this route would require securing permission of the landowners and JCP&L.
- 2. Glenside Woods-Mohawk View Connector-** A short approximately $\frac{1}{2}$ mile connection between the existing trails at Glenside Woods and Mohawk View Park via the PSEG powerline right of way. Byram Township retained a 25' corridor leading northeast from Glenside Woods park to the power line right of way. Permission from PSEG would need to be secured.
- 3. Forest South Connector-** This approximately $\frac{1}{2}$ mile trail would connect the Forest West neighborhood to the Hudson Farms property using land recently acquired by the Township. A portion of the land is traversed by a power line right of way providing a clear path of travel. This would require a crossing of Amity Road near the intersection with Stanhope-Sparta Road. This would provide a connection and access to "Trail C" on the Hudson Farms property and allow for travel south to the Lake Lackawanna section of the Township.
- 4. Stag Pond Connector-** This approximately $\frac{3}{4}$ mile connection would utilize an existing woods road on the Stag Pond property connecting the trail at Briar Ridge Park with "Trail A" on the Hudson Farms property. This

would provide a continuous route between Briar Ridge Park, the Hudson Farms Property, C.O. Johnson Park, Tamarack Park and Allamuchy State Forest to create an 8-mile trail within Byram Township. This trail would intersect with several other existing and proposed trails to allow for extensive travel within the Township. Permission from the Stag Pond Homeowner's Association would need to be secured or purchase of an easement or a portion of the Stag Pond property to accommodate the trail would be necessary. The longer route would be blazed a unique color.

- 5. Trail "A" (Hudson Farms/Westby Farm)-** This trail would take advantage of the recent conservation restrictions placed on the Hudson Farms/Westby Farm property allowing for public access. The trail would follow a defined path through the Hudson Farms/Westby property on Roseville Road to connect Andover-Mohawk Road in Andover Township with C.O. Johnson Park in Byram. The trail would cross the Lackawanna Cut-Off right of way over the top of the Roseville Tunnel. A portion of this trail would be incorporated into the 8-mile route described elsewhere in this report. A $\frac{3}{4}$ mile spur trail following an existing woods road would lead to a scenic overlook of Wright Pond with views westward to the Delaware Water Gap.
- 6. Trail "B" (Hudson Farms/Wolf Lake)-** A new approximately 1 $\frac{1}{2}$ mile trail would be created, partially on Byram Township property, partially on the Hudson Farms Wolf Lake parcels. The trail would begin at a junction with the existing Tamarack Trail on Byram Township land and run south approximately .3 miles to a crossing of Tamarack Road. The trail will cross Tamarack Road and enter the Hudson Farms/Wolf Lake property following the trace of an old wood road south around the west shore of Wolf Lake to Roseville Road in the vicinity of the intersection with Lackawanna Drive.
- 7. Trail "C" (Hudson Farms Main Property)-** Trail "C" includes 2 segments. It begins on Roseville Road near the intersection with Amity Road. The trailhead is marked by a metal gate across an existing woods road. It follows that road north and east approximately 2 miles to Stanhope-Sparta Road near the intersection with Amity Road. A $\frac{1}{2}$ mile branch of this trail follows a woods road east to Lackawanna Drive.
- 8. Cranberry Overlook Connector-** This trail will utilize a portion of the existing Cranberry Overlook Trail that begins at an intersection with the Tamarack Trail near Johnson Lake. The trail crosses Tamarack Road and climbs to a scenic overlook with a branch heading downhill to the cul-de-sac of CO Trail. A new section of this trail will head east from the overlook through the newly acquired Johnson Property to Old Indian Spring Road near the entrance to the Cartridge Activated Devices property. The trail will cross Old Indian Spring Road and then enter the Hudson Farms/Wolf Lake property. The trail will follow an old woods road to an intersection with "Trail B". The ability to reach the Hudson Farms property is dependent upon gaining access through purchase or easement of a portion of the Greg Kihm property on Old Indian Spring Road. This would require the construction of approximately $\frac{3}{4}$ mile of new trail.
- 9. West Brookwood Sussex Branch Connector-** This short $\frac{1}{4}$ mile trail will connect the West Brookwood neighborhood with the existing trail head for the Sussex Branch Trail on Waterloo Road. This route will utilize the NJ DEP property on the south side of Waterloo Road. It will intersect with a trail leading into Mount Olive Township.
- 10. Lubber's Run Completion-** Extension of existing Lubber's Run Trail south along Lubber's Run to Route 206 where the trail will connect with the proposed Town Center. This will require a new bridge to cross Lubber's Run in the vicinity of the Byram Intermediate School property. It would utilize municipal property and the Wild West City property.

11. Highlands Trail Reroute- The New York/New Jersey Trails Conference, which is responsible for the management of the long-distance Highlands Trail proposes to re-route a section in Byram Township to avoid an extended road walk between Mansfield Drive and Route 206 along Lackawanna Drive. There are several options. One route (Alternate Route A) would depend upon the purchase or the securing of through-access to the “Tilcon” properties located on Lackawanna Drive. This would allow the Highlands Trail to travel north on publicly owned preserved land (including Township-owned Cranberry Overlook and Tamarack Park) crossing Route 206 at Tamarack Park to enter Allamuchy State Park and follow the Sussex Branch Trail south to its existing route. Another option (Alternate Route B) would utilize Byram Board of Education property, Wild West City property (the same path as the Lubber’s Run Completion) and the property in the designated “Town Center” and the sidewalks along the east side of Route 206 to reach the intersection of Lackawanna Drive & Route 206 where the Highlands Trail currently crosses to enter Allamuchy State Park.

12. Lubber’s Run North- A northward extension of the existing Lubber’s Run Greenway into the Lake Lackawanna Investment Company lands. This segment would run parallel to Lubber’s Run and the right-of-way of the Lackawanna Cut-off to connect the Township’s Mansfield Woods property to the “Buis” properties and to Lackawanna Drive near the intersection with Old Wolf Lake Road. From this point the trail would be able to connect to both the Hudson Farms Main Property thru the road tunnel and to the Hudson Farms Wolf Lake Property via Old Wolf Lake Road. This would require either fee acquisition or acquisition of an access easement to the Lake Lackawanna properties along the eastern side of Lake Lackawanna.

Land Acquisition



The proposed new trails and connections identified through the planning process would primarily take advantage of existing publicly accessible lands. The land consists of current parkland, land acquired by the township as part of residential development approvals, the Hudson Farms properties and utility rights of way. A small number of privately held parcels are located along the routes of proposed trail additions. Some of these are key tracts that are essential to creating key trail linkages or expansions. Others would facilitate easier or more convenient routes for the trail additions. Fee acquisition of these properties is not necessarily required. Obtaining a trail access easement or the partial

purchase of a corridor for a trail can accomplish the proposed connections adequately in most cases.

Additionally, partners for acquisition such as the New Jersey Conservation Foundation or the New York-New Jersey Trails Conference can participate and assist with funding these transactions.

The Open Space Plan has identified a number of potential acquisition parcels. These include the identified properties that would enable the construction of new trails or new connections or new access points. The opportunity to secure these key linkages should be considered and prioritized in conjunction with the greater open space goals of the community. Additionally, the planning board should take notice of these parcels when considering future development approvals. Taking advantage of opportunities to secure access points or trail routes as part of the approval process, where appropriate, should be a standard element of the evaluation of land use applications. Development and re-development projects are prime occasions for acquiring trail accommodations.

The parcels identified for trail connections include the following:

- **Esposito Property**-A small 15-acre parcel located along the Lackawanna Cut-off right of way at the Roseville Tunnel. Acquiring this property or securing access through this property would provide a direct connection over the top of the Roseville Tunnel between C.O. Johnson Park and the Hudson Farms-Westby property. This would connect the Hudson Farms property to the greater Byram Trails System and enable a significant expansion of that network.
- **Kihm Property**-Formerly the “Larry Johnson” property, this is a key link between the former Carl Johnson property that is now part of Cranberry Overlook on Old Indian Springs Road. This would accommodate a connection between Cranberry Overlook (and the greater Byram Trail System) to the Hudson Farms-Wolf Lake property. Acquisition of a small corridor or an access easement linking Cranberry Overlook to Hudson Farms is a key element of creating a township-wide trail network and may be incorporated into a reroute of the Highlands Trail.
- **Tilcon Property**-The large holdings of Tilcon Industries between Lackawanna Drive and the Township’s Cranberry Overlook property would provide a key link to the area immediately surrounding the Municipal Complex and to the Hudson Farms Wolf Lake property. Existing woods roads would make ideal trail additions. Purchase of a portion of the property or an access easement through the portion of the property not anticipated to be included in quarrying operations would accomplish the goal of re-routing the Highlands Trail off of a significant road section and expand the Township-wide trails network.
- **Stag Lake Property**- This would not require any fee acquisition (which would be unlikely). The Township should explore obtaining a trail access easement along the existing woods road that connects the Township’s Briar Ridge Park with the Hudson Farms-Westby property. This is a key element of creating a township-wide trails network and would allow the creation of an eight-mile-long trail running from Allamuchy Mountain State Park in the south to Briar Ridge Park in the north.
- **Wild West City Property**- The property lying between the municipal complex on Mansfield Drive, the Byram Intermediate School and Route 206 along Lubber’s Run. This would allow the completion of the Lubber’s Run Trail as well as the Lubber’s Run Greenway. This section of trail would also facilitate a re-route of the Highlands trail from a significant road walk. This re-route would bring the Highlands Trail to the proposed Town Center along Route 206 and provide direct access between the Highlands Trail and the commercial businesses in the center.
- **Lake Lackawanna Properties**- There are two Lake Lackawanna Investment Company parcels along the eastern side of Lake Lackawanna that would allow for a connection from the area of the Municipal building northward to Lackawanna Drive. These two properties would be necessary to allow for connecting the trails

These are the major priority parcels for the Township to consider. Other smaller acquisitions may be necessary to create connections identified in this plan. These may include access to the PSEG right-of-way near the Sparta border to facilitate the connections between Briar Ridge Park, Glenside Woods, and Mohawk View Park. Access through several private holding may also be necessary at this location. The Township should always be cognizant of lands that may become available over time that have the capacity to facilitate trail connections or trail expansion. Fee acquisition will not always be necessary but easements or rights-of-way when they can be secured will serve the appropriate function, often at little or no cost.

Priority

The construction of new trails segments needs to be conducted in a cost-effective and efficient manner. While all of the identified additions to the existing network have value, a methodology of prioritization needs to be identified. Some of the segments are subject to obtaining funding to permit the construction. Other segments are subject to the acquisition of key properties along their proposed routes. The new additions should be categorized into high, medium and low priority for construction as well as into short-term, intermediate term and long-term priorities. Some segments may have high utility but also high cost and therefore be subject to securing adequate funding. Other segments may not be nearly as valuable but are simple and relatively inexpensive to construct. An objective set of criteria should be established to guide the prioritization of additions to the system. They should assign relative value to the following factors:

- Utility and Usefulness
- Cost
- Availability
- Ease of Construction
- Functionality
- Importance to Achieving Goals of the Plan
- Public Interest/Demand
- Access to Outside Funding

There are many other details that can enter into the choices that are made associated with these factors as well. The requirement for environmental permits, local opposition, opportunities to collaborate with other communities or other considerations can enter into the evaluations. Adherence to rational guidelines will allow for good long-term decisions and for important functions such as application for trail construction grants from the State of New Jersey, the US Department of Transportation or Sussex County trails construction programs. Applications that further a clearly understood and definable plan have a competitive advantage in programs with limited available funding.

Way Finding, Signage & Trail Marking



Providing trail users with adequate guidance through the use of appropriate signs and directional methods is an important feature of any trail system. The trails in Byram have no unified method of navigation. Byram Trails are blazed with a common marker that does not differentiate between trails. It is not necessary at this point in time because other than the Cranberry Overlook and Tamarack Trail connection, each trail is isolated from others. Trails within Allamuchy Mountain State Park are blazed and color-coded in a manner consistent with traditional trail blazing principals. There are no marked trails on the Hudson Farms properties. At the point where interconnections are made and new or longer trails are created, this will change significantly. Developing a system to mark the trails,

provide directional assistance, allowing trail users to determine their location and to brand the trail network will be an essential part of optimizing the experience of residents. Coordination and agreement between Byram, the State Department of Parks & Forestry, the New York New Jersey Trails Conference and Hudson Farms will be required.

Entrances to the trail system are currently marked by single posts with small signs. Information kiosks and trail maps are almost non-existent. A new comprehensive map of the trail system has been prepared. This map should be available in print form, online, through smart phone app services such as “Map my Hike”, “Trail Forks” or “Avenza” and posted on kiosks at entry points. However, the absence of a consistent blazing system combined with the complex network of paths that lack unique identifiers such as names or colors provides a challenge in way finding. Without these features selecting routes for a walk on the trails and establishing a user’s location with any precision is difficult. The latter issue can be important in cases of emergency. Past experience has shown that it is difficult for first responders trying to locate hikers who are lost or who may be in need of medical assistance.

These issues can all be addressed through a comprehensive system to mark the trails. A combination of trail marking, the establishment of trunk routes and spurs, the numbering of trail intersections keyed to an updated map will provide trail users with an enhanced ability to navigate the trail network. The proposed methodology is designed to allow for the expansion of the trail network and to allow for the establishment of uniquely identified main trails that will serve as the foundation of the trails system. Additionally, providing location assistance throughout the system by giving trail intersections unique numbers keyed to the trails map and distance information from trail heads will allow for more precise location determination for both users and first responders.

Blazing

Currently the trail system is marked as described above. This will become confusing or obsolete as the trail system is expanded. Directional signs and traditional trail markings have not been used to date. A detailed map of the trails is available online and via a QR code at all major trail heads. Navigation is not difficult, but users may have trouble determining their exact location. In the future, planning loop hikes, navigating direct routes and general use of the trail system would be enhanced by establishing a consistent blazing scheme. Color coding the trails and providing regular marking is an important element in creating a means of following the trails and identifying which trail a user is on. This becomes more essential as the trail system expands and becomes more complex.

The establishment of unique color- coded routes necessitates the use of a trail marking system. The traditional system of blazing trails utilizes color rectangles or other markings on trees. There is an established method for indicating the trail route, the beginning and end of a trail and turns. However, there are portions of the system that cross open areas where blazes on trees are impossible. Future additions may have long stretches of open fields along the route. There is also substantial maintenance required to keep the blazes current as paint fades or trees fall. Alternative blazing methods should be considered.

The use of composite posts is recommended. They are commercially available and are designed specifically for use on hiking trails. The State of New Jersey currently uses these posts in several state parks such as Wharton

State Forest and Brendan Byrne State Forest where trails follow old woods roads. They are easily seen. They are relatively inexpensive and durable. They are easy to install. A single post can also be used to convey additional information beyond merely the color indicator of the trail. Other recommendations contained in this section call for the numbering of trail intersections and periodically indicating the distance from trailheads. These posts can be used to carry this additional information where appropriate. These posts require little or no maintenance and can be installed by Township personnel or volunteers. One manufacturer's product can be ordered with color caps that can also serve as trail blazing. The limited need to install markers and to have increased intervals between markings would also limit the expense involved in utilizing this style of trail marker.



The color identification system is an important element of creating main trunk routes utilizing both established trails and proposed additions to the trails network. These major routes will be blazed in unique colors and those colors should be consistent on state, municipal and private land. Easily identifiable colors such as red, white, blue or yellow should be used for these routes. The trails should also be named to assist with differentiation of each trail. A number of spur trails will also be incorporated from both existing and proposed routes. Some of these spur trails will be substantial enough to warrant unique marking. Others that may only lead a short distance to a trail head or provide a connection between main trails should be marked in a systematic fashion which identifies them as connector trails and also indicates which trail they connect to. This plan calls for the establishment of a number of new trail heads in neighborhoods throughout the Township with connections to the main system. Logically and appropriately blazing these connections will become increasingly important as the trail network is expanded.

Navigation

There are three recommendations for additions to the trail system centered on improving navigation. The first is to identify and establish main trunk routes utilizing both established and proposed new trails. These main routes will be blazed as described in the previous section. The second recommendation is to create a numbering system for all trail intersections throughout the trails network. The numbers will be keyed to the trails map and provide the ability to precisely identify the location of a hiker through the unique identifying number. The third is to use the trail blazes to periodically carry distance information informing users of their location in relation to a trail head or trail origin point. These features will provide information to both system users and first responders in case of emergency. An updated Trail Map would need to be drafted to incorporate these features.

- **Main Routes-** The establishment of primary trunk routes will improve both the utility of the trail system the ability of users to navigate the network. Creating main through routes will provide users with options for planning trips and to give organization and order to the current system. This route system would take advantage of both existing trails and proposed new trail segments and connections. These main routes would eventually traverse the Township from end to end and serve to connect the system to as broad an area as possible. These main trails would also link the Township's parks and municipal facilities as well as provide connections with trails such as the Highlands Trail and Morris Canal Greenway. Spur trails would be related to these main routes to either provide loop hike opportunities or direct connections to trail heads and neighborhoods. A user entering the trail system at any point would have the ability to access these main routes in a relatively short distance.

- **Intersection Numbers-** A simple system of identifying each intersection on the trail network with a unique number is a reliable method of providing location information. The recommendation is to utilize a number technique that is linked, to the greatest extent possible, to the geographic location of the intersection. The numbers would be keyed to the trails map available at all trail entrance points as well as online. Users would be able to precisely determine their location through these intersection numbers. Numbers would be assigned to each intersection based upon their location in relation to a central location such as C.O. Johnson Park. The numbering system would also need to have the ability to accommodate new intersections added as the system expands in a manner that is consistent with the methodology by which the numbers are assigned.
- **Distance Information-** A recommendation was made by emergency services professionals to incorporate mileage markers along the trails. This suggestion was made in response to difficulties in locating lost or injured trail users in the past. This additional information would also assist users in navigating the trails network. Frequent distance marking is not required. Distance information at either ½ mile or ¼ mile intervals would be sufficient. This distance information could easily be posted on the markers used for trail blazing. They are not necessary on shorter trails. Distances should be indicated in a consistent manner. Distance should be shown from trail head to trail head.

Branding

The final recommendation concerns establishing a recognizable brand for the trails network. A new trails sign should be designed. This symbol should be used consistently to mark all entrances to the trails network as well as with all materials produced to support the trail system. The Trail Maps, the trail heads and the web site should all feature this brand prominently. Additionally, any future additional materials, such as a web-based or mobile phone application should utilize this design for consistency and for identification purposes. The Byram Trails should become a well-known unique asset of the Township. Raising awareness of the existence of the trail system and providing the public with an easily recognizable symbol of that system will have help to increase usage and public support for the trails network. The proposed design also communicates the different uses for the trail system in a simple and clear manner.

New Trailheads

Additions to the trails system will require establishing new trailheads throughout the Township. This will be particularly true with the Hudson Farms properties being made available to the public. Public access will likely be from parking areas established along Township roads. Hudson Farms also expressed an interest in designing the access points as aesthetics were an important factor and representatives wanted input into the design of new trailheads and the content of rules, regulations and information available at kiosks. They would also be willing to contribute financially to the installation and construction of the new trail access points. The following are potential new access sites for Byram Trail System trailheads:

- **Hudson Farms Westby-** To be located on Roseville Road near the entrance to the Westby property near the site of the new Andover Train Station.
- **Hudson Farms Main Property-** To be located on Roseville Road at the site of an existing woods road that is blocked with an iron gate near the intersection of Roseville and Amity Roads.
- **Hudson Farms Main Property-** To be located on Lackawanna Drive near Dalis Pond where an existing woods road emerges from the Hudson Farms property.

- **Tamarack Road-** To provide access to the Hudson Farms Wolf Lake property from the north. This is where the connecting trail to the Tamarack Trail will cross. There is an existing pull out to accommodate approximately 4 cars at this location now.
- **Old Indian Springs Road-** To be located where the Cranberry Lake Connector Trail will emerge and where the potential connection to the Hudson Farms Wolf Lake property will continue across the road.
- **Lackawanna Drive-** In the event the Lubber's Run North trail is constructed through both Township and Lake Lackawanna Investment property, it will reach Lackawanna Drive near Old Wolf Lake Road. The trail can cross here and continue on either side of the Lackawanna Cut-off right of way to both the Hudson Farms Wolf Lake property and the Hudson Farms Main property.

These trail heads should be designed in a manner consistent with all other trailheads. Guidance and coordination with the Hudson Farms owners will be valuable in creating this design.

Trail Crossings

As a rural community, the Township's roads are not designed for pedestrian travel. Additionally, crossing Route 206 is a significant safety issue. Sight distance and speed will be an important consideration. If the Township is to establish a comprehensive Township-wide trails system, getting across roadways in a safe and secure manner is essential. The design and methodology of crossing will be an important safety consideration. The Township should consider marking road crossings in two ways. The first with "hiker crossing" signs on either side of a crossing site. These should be in place now at the locations where the Tamarack Trail crosses Roseville Road, where the Cranberry Lake Trail crosses Tamarack Road and on Andover-Mohawk Road where the Briar Ridge Trail crosses that roadway. Additional crossing signs will be necessary as the system expands. Township roads should also be striped at all trail crossings.

Crossing Route 206 presents its own challenges. A heavily trafficked high-speed road is inherently dangerous to cross. Connecting the trails in Allamuchy Mountain State Forest with the Township trails on the eastern side of the highway will necessitate getting safely across. Currently the Highlands Trail crosses at the traffic light at Lackawanna Drive. That may eventually be the only safe crossing point. However, if the connections are made to Hudson Farms it may be highly desirable to continue the Tamarack Trail across 206 to connect with the green-blazed "Wavin' Willy Trail" directly on the other side of the road in the State Park. This would also accommodate one of the proposed Highlands Trail re-routes.

It is possible to accomplish this crossing with signage and striping. The Appalachian Trail crosses Route 206 at Stokes State Forest approximately 1.5 miles north of this location in this manner. However, it may alternatively need a pedestrian bridge at this site. This would be a project sponsored and funded by the NJ Department of Transportation. This would be a major undertaking. It would require the Township to request this project and have it included in the DOT's capital budget. If it is part of a comprehensive trail network, it may be considered.

Uses

The final consideration for future trails development will be the permitted uses. This is ultimately a policy decision for the Township to make. The recommendation is that wherever possible, the trails be designed for multiple uses. That impacts the design and construction. Multi-use trails should be wider than primitive single-track hiking trails. The surfaces should at a minimum be compacted earth. Ideally, an improved surface such as crushed and rolled gravel would be installed. This requires periodic maintenance and replacement and particular attention to area

where water accumulates or there are washouts. However, the increased utility and the ability to attract users may make this investment worthwhile.



The Jersey Off-Road Bike Association (JORBA) participated in the outreach for this plan. They are interested in seeing the Byram Trail System designed for mountain bike use. They are willing to participate in trail design, construction and maintenance. One of the recommendations contained in the economic development section of this plan is to develop the Township as an outdoor recreation destination, including attracting mountain bikers in a manner similar to Bentonville, Arkansas or the Mountain Kingdom in Vermont. Whichever choice the Township makes, trail use should be consistently managed across the state, municipal and private lands the trail system will cross. Potential uses include hiking, mountain biking

horseback riding, cross-country skiing and wildlife observation.

Construction & Maintenance

The trails plan calls for the creation of an additional 18 1/2 miles of hiking trails. This will result in an increase in the responsibility for maintaining these trails as well as cost for new construction. While these investments may be relatively low-cost, particularly when compared to the return in value, responsible budgeting practices require careful planning and an assessment of the tasks the Township will be undertaking. Planning for maintenance, construction, replacement and routine tasks is part of a best practices approach to keeping a trails system in a state of good repair. This includes planning for the upkeep and replacement of trail infrastructure such as bridges, signs, blazes, parking areas and other associated hard assets.

Trail Maintenance & Management

The creation of a trails system carries the responsibility for the maintenance of the network in a safe and appropriate manner. Byram currently maintains less than 10 miles of existing trails. However, implementation of this plan will result in significant additions to the system. Additionally, the network is comprised of both multi-use and pedestrian-only trails featuring either crushed gravel or natural surfaces for most of system. Preventing illegal ATV use, which currently occurs, will be a continuing challenge as the system grows.

The Public Works Department is currently charged with maintenance of the trails. This includes cutting fallen trees and keeping the routes passable. The construction and incorporation of additional miles of trails will increase this obligation. The creation of multi-use trails will make these tasks more complicated. These same crews have responsibilities for athletic fields, turf cutting and care, courts, and building maintenance with seasonally high workloads during the months of April through November.

Currently trail assessment for maintenance needs is not undertaken on a scheduled basis, but rather as these duties may periodically be assigned due to weather, project down time, or based on a citizen complaint. This is not to suggest any substandard level of attention to Byram's trails, but trail system growth, as proposed in this

plan, will place greater demands on available personnel resources for regular maintenance. Routine maintenance ensures trail safety and adds to user security. A Maintenance Plan that incorporates documented inspection frequency for individualized trail segments is also a prime defense against negligence claims.

A more systematic management system is recommended in the future for planning, scheduling, conducting and evaluating trail maintenance activities. Adopting the practices set forth in the New York New Jersey Trails Conference's Maintainer's Manual provides a good start for establishing "best practices". Such a system will allow for rational budgeting decisions and scheduled repeating maintenance actions. A systematic approach will also help reduce exposure to accidents related to trail conditions and potential exposure to liability claims. Such a system would be based on the above-stated goals and objectives and include:

- A trails inventory with physical descriptions and general maintenance needs for each trail.
- Inspection and conditions reports.
- Standard work orders.
- Labor completion reporting.
- A cost tracking system.
- Volunteer or staff inspection reporting.
- Tracking for outside maintenance contracts or invoices.
- Tracking of public complaints, comments and responses.

All of the above factors should be incorporated into an inspection frequency document that will guide the Department in developing inspection schedules for each trail segment.

Inspection is the initial element of the Trails Maintenance Plan, followed closely by Routine Scheduled Maintenance. Geographic features, such as slope, wetlands, drainage, forest cover and soils need to be considered on a segment by segment basis. Surfacing differences (paved, gravel, dirt) and trail structures such as bridges, waterbars, hollows and drains all require inventory, an assessment of current condition, projected lifespan, and replacement cost. Visitation should be considered, particularly method of transportation – foot, bicycle, ski, or horse. Trail Segments planned to be suitable for individuals with mobility impairments should be maintained at a level of frequency that eliminates trail surface changes of greater than 1/4 inch in the treadway. The management system should also allow for information sharing with key trails system partners such as the State Division of Parks & Forestry and the New York New Jersey Trails Conference.

Maintaining the Trail Network

Planning, designing and constructing trails is not the end of the story. Expansion of the trails network will open new recreational opportunities to resident and bring about associated construction, information and maintenance costs. Regular maintenance, along with associated costs, is required to keep trails open, ensure users can find and follow trails, address erosion and blockages, deal with trespass and dumping, and ensure trail surfaces remain viable for their intended use(s). These costs should be viewed in the context of offering Township residents even

more places to enjoy and appreciate the Township's natural beauty and heritage and have access to more places to maintain fitness and offset the stresses of daily life.

Maintenance can be placed in three categories:

- Routine maintenance, which includes all the general activities, such as brush clearing, trash collection, and debris removal, that is needed on a regular basis.
- Minor Repairs, which usually can be expected every five years or so, such as amenity replacement, trail resurfacing, maintenance of trailheads, and inspection and replacement of trail blazings/markers.
- Major Reconstruction involving significant expenditure such as resurfacing or reconstruction of trailheads and trails. These activities tend to be the costliest and should be planned for in advance.

Following is a list of trail maintenance activities that constitute good stewardship of the trail network:

- **Trailheads:** Trailheads should be inspected periodically to monitor parking conditions, check for dumping, ensure signs are in place, and ensure safe ingress and egress.
- **Signs:** Regulatory and directional signs should be inspected at a minimum of once per year by the municipality. This task should be monitored with the assistance of an overall signage placement schedule and mapping, and a maintenance record. Missing or damaged signs should be promptly replaced to maintain continuity of the signage system. Routine monthly inspections should note any major issues. Any safety concerns from missing or damaged signs should be corrected immediately. Since missing signs are a common occurrence on the existing trails system, maintenance crews should stock common signs and blazes and bring them along on maintenance inspections.
- **Trails:** A system that allows users to report problems with trail access and the condition of trails should be established. Improved trails should be inspected at least once per year to ensure viability for the intended use and the presence of hazardous conditions. Instances of trespass by vehicles and dumping should be documented and referred to Township Police for ongoing monitoring. Modifications may be needed to prevent future vehicle access. Trails should be maintained on a somewhat regular basis to prevent vegetation from obstructing the trail corridor. This can be accomplished with volunteers, but professionals may be needed for more significant obstructions, such as downed trees and overgrowth by woody vegetation.

A well-planned and responsive maintenance management system is crucial to success of any trail system and ensures many enjoyable years of multi-use trails activities. Safety and security for trails users is a prime concern when designing a trail system and opening the way for public use. Appropriately planning for periodic repair, upkeep and replacement of the trails infrastructure is an important element of maintaining the integrity and aesthetic qualities of the system. While initial construction of trails is generally accomplished through a combination of capital projects and cost-saving volunteer efforts, trail maintenance is often an afterthought to the initiation of a new pathway. This section is designed to provide guidance for the long-term preservation of the trail system and for protection of the investment the Township has made in this community asset.

Documenting Trail Conditions

Establishing a system to document trail conditions and to report problems or issues that arise is an important function. The ability for Township personnel, volunteer trail maintainers and trail users to quickly, efficiently and

accurately report on conditions requiring the attention of the Township needs to be created. A paper system is burdensome and would also result in either delays in reporting problems or the failure to report and document them at all. The advent of smartphone technology provides easy access to both the internet and to high quality cameras along with geo-location capabilities. A system that allows photographs of trail conditions to be transmitted with the precise geographic location of any problems is a relatively inexpensive and efficient means of providing responsible personnel with necessary information to address them.

There are a number of applications available that can provide this capability. One existing commercially available product is “See Click Fix”, a smart phone application that enables the general public to report issues they encounter. This is currently in use in many municipalities for allowing members of the public to document and report issues such as potholes in roads, sidewalk defects, and other conditions that a municipal government might need to address. This application could easily be adopted and put to use for assisting with maintenance and upkeep of the Township’s trail system. Utilizing a system such as SeeClickFix gives a paperless, quick reporting method to the general public with a simple tracking and reporting method for the municipality. Encouraging the public to participate in monitoring trail conditions and providing volunteer trail maintainers with a simple tool to report problems that require the attention of the Township will greatly enhance the ability to keep the trail system in optimal condition.

Routine Maintenance

Routine Maintenance should be incorporated into the duties of the Public Works Department. Duties can be shared by department maintenance staff and supplemented by volunteers. Activities that should be considered as routine maintenance include:

- Periodic Inspections
- Yearly facility evaluation to determine the need for minor repairs and tree and brush clearing.
- Mowing.
- Map/signage updates.
- Trash removal/litter clean-up.
- Repair flood damage: over-wash or silt clean-up, culvert clean-out, etc.
- Patching, minor regrading, or gravel surface or asphalt repair replacement.
- Planting, pruning, and general beautification.
- Installation and removal of seasonal signage.

The yearly cost for routine maintenance depends on the maintenance capabilities already in place and the amount of volunteer labor used. In general, yearly routine maintenance costs can be estimated at \$6,000 per mile for performing the tasks described above. This includes accounting for staff time. This figure will vary depending on labor rates, the location of the trail, materials used and intensity of its use.

Regulatory and directional signs should be inspected at a minimum of once per year by the municipality. Trail inspection is a task that can be assigned to interested and dedicated volunteers. This task should be monitored with the assistance of an overall signage placement schedule and mapping, and a maintenance record. Missing or damaged signs should be promptly replaced to maintain continuity of the signage system. Routine monthly inspections should note any major issues. Any safety concerns from missing or damaged signs should be corrected immediately. Since missing signs are a common occurrence on the existing trails system, maintenance crews should stock common signs and blazes and bring them along on maintenance inspections.

Surface Conditions

Byram Township's trail network is predominantly a mix of natural surface trails and gravel multi-use trails. Some of the natural surface trails follow old established woods roads, as will many of the new trail miles proposed. Conditions will vary based upon environmental factors. For example, heavy forest cover can leave deep deposits of organic matter. Storms will result in downed branches, limbs or even entire trees that will block the pathway. Water flow can cause ponding, rutting or wash-outs. This can result in very slippery conditions in wet weather or during periods when snow or ice are present. Gravel sections should have deep holes filled and rutted or eroded areas replaced as soon as possible. Stone surfaces need periodic replenishment. Wear and tear from bicycle tire travel also results in displacement of gravel surfaces.

It is important to note that this is a trail system, not a pedestrian walkway. While efforts should be made to monitor trail conditions, the state of the trails will never be perfect or free from all hazards. Users will encounter and should expect conditions such as uneven surfaces, slippery surfaces, and treadways covered with leaves and debris. The Township should not be expected to, and it is unreasonable to expect that, all trails will be clear and free from debris or defects at all times. Reasonable efforts should be made to maintain the system in a state of good repair on an ongoing basis, however, this should not be interpreted to be a requirement for constant inspection or clearing. Trail users must accept the risk of ordinary and expected hazards for the conditions present.

Vegetation

The existing trail system runs through miles of forest cover lands. Aside from routine tree and branch falls, Byram Township's higher elevation within the Highlands Region also results in comparatively more extreme snowfalls which increase the frequency of limb drops from snow weight or from weakened branches in windstorms. There are sections of the Cranberry Overlook Trail that are difficult to navigate due to extensive tree damage. A regular inspection and maintenance program should anticipate frequent deadfall removal. Nearly every trail in the system is currently free from encroaching dense vegetation; however, some limb and shrub trimming will always be required.

Recommended extensions to the trails system need to be evaluated for ongoing vegetative cutback needs. Both single tread hiking trails and single-track mountain bicycle trails must be considered to need frequent cutbacks in the side-trail areas and overhead. Removal of vegetation in the treadway may also be needed depending on the frequency of use – more foot and tire traffic suppress treadway vegetative growth. Trees should also be kept clear of all drainage structures, bridges and walls that may be subject to mechanical damage by tree roots. Weed control along trails can be limited to areas in which certain weeds create a hazard to users, or where the

potential encroachment of invasive plants can be suppressed. Environmentally safe weed removal methods should be used, especially along waterways, culverts and bridge crossings. Vegetation control should discourage poison ivy along the trail along with other noxious weeds and invasive plants.

Volunteer Maintainers

The Township should consider establishing a citizen volunteer program to assist with trails maintenance. There is a strong core of trail users in the Township evidenced by the participation in information sessions and response to the trails survey. The Township can model, at least in part, the system operated by the New York-New Jersey Trails Conference (NYNJTC). The Trails Conference maintains over 2,000 miles of hiking trails in the New York/New Jersey Connecticut region, primarily through the efforts of volunteer trail crew coordinators and maintainers. Minor routine maintenance and inspection responsibilities can be undertaken by a corps of residents leaving more substantial or complex tasks to the Township's paid employees. JORBA also has a network of trail volunteers who participate in trail construction and trail maintenance. They are already active in the Township.

The Trail Conference model involves assigning each volunteer a section of trail. Each section is roughly as long as can be reasonably maintained by a volunteer putting in 6 to 8 hours of work. Volunteers spend two days each year checking their section(s) of trail. A single volunteer coordinator often oversees the work of field volunteers. They clear debris, check blazes, and generally ensure their section is accessible. Volunteers then make notes and send brief trail reports to a central point of contact. Reports include notes about blow-downs, where trees or large branches have fallen across the trail, wash-outs, or any other maintenance work that requires a special trained crew. NYNJTC coordinates with these crews to get the work done. This method can be easily implemented by the municipality. Coordinating participants at the municipal level will allow the Township to take advantage of residents who may be willing to undertake responsibility for adopting a section of trail. Nearby, Morris County currently employs volunteers to maintain the Patriots' Path trails system using a similar methodology. The county's volunteer maintainer program has been very successful.

Emerald Ash Borer

The advancing range of the Emerald Ash Borer should be considered with some urgency as forestry and natural resource professionals predict that the infestation of this insect pest will result in a 90 plus percent loss of untreated ash trees in Byram Township. Byram is in an area that features some of the highest densities of Ash as a component of the overall forest makeup. The Borer has made its first appearance in Byram in 2017. Since then the Township has implemented a program to monitor and cut high-hazard trees. Untreated ash trees along trails and popular recreation facilities are a cause for user safety concern as the dying ash trees become very brittle with major limb drops. The trees also become more dangerous to fell if left to die in place. It is recommended that within the next 6 to 12 months the Township shall inventory the location of ash trees within 50 ft. of the trail bed, trailheads, and parking facilities. Since Byram has a high percentage of ash trees in forested areas, it is likely that hundreds of ash trees will be present along the trail system. Once the nature of the infestation's impact is understood along the trails system, the Township can assess removal or treatment options. In most instances leaving dead trees in forested areas provides cover for wildlife and it is ecologically beneficial to allow organic decay to improve the soil cover. It is likely that the Township will need to make a decision regarding the volume of dead ash trees that it can sustain on the forest floor without losing the aesthetic attributes of the forest for trail users.

Erosion and Drainage

The trail network has minimal drainage and erosion issues. Most of the trails treadway has been engineered to reduce erosion and manage drainage. Significant investment has been made to bridge streams and wetland areas to reduce impacts of trail usage. Gravel or paved sections also minimize erosion. Despite the care taken to prevent erosion, there are sections needing drainage improvement. The entire trail network should be evaluated for washouts, particularly on the portions of the trails featuring steep slopes. Future construction of trail segments should be designed based upon experience with the existing system. Installation of culverts or pipes to carry water under the trail at points where heavy precipitation will cause erosion, improving the surface of sections of steep slopes and proper design of high traffic areas should be standard practice for new trails. The cost of these construction methods should be part of the planning for additions to the trail network. While the trail system has traditionally taken advantage of existing woodland roads and paths, the routes of future additions should avoid the conditions that have proven to be problematic on the existing trails.

Wildlife

The open space in Byram Township is key to maintaining a healthy population of indigenous wildlife and to foster habitat diversity. Residential growth has fragmented some habitat within the Township, particularly in the eastern portion of the Township. The lands of the trail system serve to provide corridors for open space for wildlife migration, even along the trails themselves. Managing wildlife along the trail necessitates the maintenance of a peaceful co-existence between wildlife and trail users and neighbors, and ultimately the informed regulation of human activities on the trails. The Open Space Committee and core volunteers should be annually assessing the impact of human-wildlife encounters along the trails and seeking habitat improvements. Like much of the forested areas of New Jersey, the explosion of the white-tailed deer population has decimated the original understory of native plants and tree seedlings, allowing non-edible invasive plants to dominate and preventing regeneration of the forest.

The over-browse by white-tailed deer is very evident in almost every segment of the trails system. Efforts to reduce white-tailed deer by permit hunting should be continued. Restoration of native plants at select areas along trails corridors, with associated protection against browsing is recommended to begin restoring habitat diversity and wildlife cover. Additionally, periodic encounters with Black Bear should be expected. Information on appropriate precautions and behavior when coming into contact with bears should be posted at trail heads and included in informational literature on the trails network and on social media.

Trail Bridges and Culverts

Maintenance of the trail bridges and culverts is a critical component of the overall trail management program. Keeping them in a state of good repair is crucial to maintaining the integrity and aesthetic quality of the trail system. While inspection during the field work revealed the existing bridges to be in apparent excellent condition, it is recommended that an initial inspection by licensed engineering professionals of those structures be conducted as part of a maintenance plan. This will provide a baseline of existing conditions and identify any necessary repairs.



Periodic inspections of the trail bridges and culverts should be scheduled to identify any deficiencies that may exist and to allow for planning repairs or replacement where necessary. Other than the initial structural evaluation, inspection of the bridges and culverts can be assigned to volunteer trail maintainers. Most bridges and culverts within the Byram Trails System are installed in areas where water flows are low. However, seasonally high-volume flows must be considered and planned for. Bridge and culvert inspections should be completed annually and immediately following significant high rainfall events. If washouts occur around bridge abutments and foundations or culverts cannot handle high volume flows.

All culverts should be thoroughly cleaned a minimum of once each year. Maintenance and replacement costs will vary depending on the type, size, and location of the bridge or culvert structures. Trail operations personnel may perform routine, minor maintenance procedures; however, major operations, such as structural repair will generally require hiring a specialty contractor. The maintenance program for the bridges will also include the approach ramps, walls, and stairways.

Maintenance Costs

The cost for replacement, repair, or repainting of trail amenities should be closely tracked. The Department of Public Works should maintain detailed records of the general costs of trail amenities along with man-hours spent as a means of estimating future repair and replacement costs. Replacement of a portion of a trail may be necessary due to flooding, erosion, or weak soils. Maintenance costs will vary greatly depending on the type of trail, amount of volunteer labor use, available services, and geographic location of the trail. These costs, however, must be considered during the trail planning process. Maintenance costs are rarely broken down into specific tasks such as those above. Most trails will be maintained by an existing agency, such as a local or state park, public works, or maintenance department. Estimated costs, therefore, are broken down by the type of maintenance performed. A matrix of estimated costs based upon distance and type of surface is included in this plan. This tool should be used as a guide for budgeting and planning for upkeep, repair and replacement of the trails and associated infrastructure.

Minor Repairs

The need for minor repairs should be determined by a yearly facility evaluation (see routine maintenance above). Minor repairs may include the following activities:

- Replacement, repair, or repainting of trail support amenities, such as signage, benches, trash receptacles, or hitching posts
- Repair of wooden bridges
- Replacement of a portion of the trail

- Relaying sections of gravel pathways

Major Reconstruction

Complete replacement of a trail involves removing the existing trail, re-grading the trail base, and resurfacing the facility. This kind of comprehensive maintenance will be necessary approximately every 20-25 years, regardless of trail type. Even natural surface trails may need to be fully regraded after 20 years of use. Bridges will need to be replaced periodically. Even the steel bridges installed in Byram will need to be upgraded, repaired or replaced at some point. Trail costs for reconstructions are the same as the cost of a new trail plus the cost of demolishing the existing trail. As with any major trail project, however, a detailed cost estimate should be performed during the project planning stages. The best guide for estimating the replacement cost of a trail is to consider the original construction cost.

Introduction



Open space resources must be managed and maintained as important public infrastructure. They provide services to the community that go beyond the mere value of the land itself. Parks and open spaces provide substantial benefits for Byram's residents however, public resources to create and operate these spaces are limited. This makes having a rational long-term strategy to provide for the maintenance of these assets a vital part of the Township's Open Space & Recreation planning process. This strategy will incorporate an assessment of what the Township has, the condition of these assets, the lifespan of these assets (where

applicable), the costs for maintenance and replacement of these assets, the resources dedicated to caring for them and how they are being utilized. This requires evaluating the following factors:

- Number of Fields
- Condition of Fields
- Other Recreational Assets
- Open Space Parcels
- Condition of those Parcels
- Related Infrastructure
- Condition of that Infrastructure
- Maintenance & Stewardship Requirements
- Projected Costs & Resource Commitments
- Allocation of Use Facilities

The acquisition of land, the construction of playing fields and other facilities and the creation of publicly accessible amenities requires an expenditure of public funds. At the same time, the accumulation of these assets carries an obligation for their upkeep, care, maintenance and, in some instances, regularly scheduled replacement or renewal. This obligation comes with costs and the need for dedication of public resources, such as dedicated personnel. Having an asset management plan in place will assist the

Township in making important long-term decisions that are also fiscally responsible and predictable for carrying out these responsibilities. A cost estimating tool is included in the appendix to this document to use in making financial projections. This tool can be continuously updated to reflect actions taken, added or deferred on an ongoing basis.

Baseline Conditions

Management includes several aspects. It begins with the establishment of baseline conditions as they existed at the time of this plan. This begins with an inventory of all infrastructure along with an assessment of the condition and projected continued lifespan of that infrastructure. The Township's Open Space properties, both those used for active recreation and for other purposes, are included in this compilation. This will provide a rational starting point for making projections of the necessary actions that will be required to properly maintain these assets and the costs and resources needed to accomplish those tasks. This will allow for rational and responsible fiscal decisions to be made regarding the care of the Township's Open Space and Recreation facilities.

In order to determine a starting point for assessment of the Township's Open Space resources, a comprehensive inventory of the tangible assets was conducted. This was the core purpose of the field work that included documenting the number and condition of the fields, buildings, facilities and related items that comprise the Township's Open Space and Recreation infrastructure. This also included a review of the available Township records to ascertain when purchase, installation, rehabilitation or other maintenance of these assets last occurred.

Fields

This is an assessment of the current number, conditions and issues (if any) associated with the Township-owned fields. The Township maintains active recreation facilities in four parks. C.O. Johnson Park is the main facility and provides multi-purpose fields, baseball fields and a dedicated football field. Tamarack Park has two multi-purpose fields. Neil Gylling Park has two softball fields. A multi-purpose field is located at Mohawk View Park. There are additional playing fields available for use by Township programs at the Byram School District complex where the Township provides limited maintenance services. All fields are natural surface. The overall condition of these facilities is good to excellent. They are well constructed and well maintained.

Multi-Purpose Fields

These are rectangular fields of varying dimensions suitable for use for field sports such as soccer, lacrosse and field hockey. They are adaptable and can be converted to different sports through changes of goals and field lining. The Township maintains seven of these fields that are used by the youth soccer, lacrosse and field hockey programs. There are four fields at C.O. Johnson Park, two at Tamarack Park and one at Mohawk View Park. One field each at C.O. Johnson Park and Tamarack Park have underground irrigation systems. The fields are largely in good to excellent shape. Grading is not an issue. The turf is healthy. Field #8 at C.O. Johnson Park has existing drainage issues that need to be addressed. Drainage issues were also noted at the Mohawk View field. None of the fields are lit for night play. The number of fields currently meets the demands of the local sports programs.

Baseball Fields

The Township maintains four baseball fields at C.O. Johnson Park. The dimensions vary between one full-sized field (60/90) with provisions to be configured into an intermediate field (50/70) to two that are configured for Little League standard play (46/60) and one that may support Little League play. Each field has a backstop and benches. Three of the fields have dugout structures and two have outfield fencing. Three of the fields have bleacher seating for spectators. The Little League field does not have seating for spectators. The fields are all in good to excellent shape with “skin” infields. They are well-graded. The outfield turf is healthy. There are issues with use of the fields after rainfall events which should be addressed with the baseball programs that use the facilities. None of the fields are lit for night play. The number of fields currently meets program demands.

Softball Fields

There are two dedicated softball fields, both located at Neil Gylling Park. Both fields have benches, backstops and safety fencing. They have “skin” infields that are well-graded. The outfield grass is healthy. There are stone outcrops that come to the surface along the extreme left side of the outfield of the field nearest the municipal building. These do not interfere with play or usage and do not present a safety hazard. There is bleacher seating for spectators. The fields are not lit for night use. The number of fields meets the current demands by the sports programs. There is also a gravel parking area, a storage shed, storage boxes for equipment and an out-of-service bathroom building located at this site.

Football Field



There is one youth football field located at C.O. Johnson Park. The field is in good shape. The turf is healthy but is stressed by heavy use late in the football season when increased rainfall and the end of the growing season contribute to degradation of the surface. The facility is configured with an 80-yard field of play that is an antiquated standard for youth play. Game play has largely been moved to the field at Lenape Valley High School. However, auxiliary games scheduled for developmental teams need to be played at C.O. Johnson and are hampered by the field size. There is an antiquated lighting system that

is difficult to source for replacement parts. There are bleachers and a press box at the field that are in deteriorating condition.

Other Facilities

The Township maintains other recreational facilities within its parks and open spaces to serve uses that are not related to the youth sports programs. These other developed facilities are located at C.O. Johnson Park, the Township Municipal Building and Riverside Park. They include hiking trails, walking paths, playground equipment, a skate park and courts for basketball, tennis, bocce and pickleball. They

are an important part of meeting the recreational needs of Township residents. The tennis courts in particular are extensively used by residents. The trails are also extremely popular and well-used. Trails of varying length are available in most of the Township parks.



The skate park and the bocce courts located at C.O. Johnson Park receive limited use. The skate park has been subjected to vandalism and graffiti over the years. During field investigation, this facility was observed to be in use on several occasions. The bocce courts appeared to be unused. They were not reported as an important facility during interviews, public meetings or in the survey conducted as part of this plan. Some of the related equipment, in particular a scoreboard for this court and benches, have been removed. The Township may consider removing this amenity and re-purposing the space occupied by this court.

Trails/Walking Paths

This plan contains a dedicated section on the development of a Township-wide trails system. For the purpose of assessing baseline conditions, this will be a discussion of the general condition of the trails. There are natural surface hiking trails located Cranberry Overlook, connecting Tamarack Park to C.O. Johnson Park via Johnson Lake, at Briar Ridge Park and at Glenside Woods. A small connector trail is just off Route 206 (Cat Swamp Connector). There are two multi-use trails with improved gravel surfaces at Mansfield Woods and running from Hi-Glen Drive near the CVS on Route 206 to Jefferson Lake and the Sussex Branch Trail. There are paved or partially paved walking paths at C.O. Johnson Park and a short, paved section of walkway at Mountain View Park to allow for handicap accessibility to the playing field.

The hiking trails are clear and marked with plastic blazes. It should be noted they are currently all marked with the same style markers. There are wooden posts and signs at the entrance to each trail with the trail name. The Township Public Works Department will clear downed trees and other obstructions as necessary. The multi-use trails at Mansfield Woods and the trail running from Hi-Glen Drive to Jefferson Lake are in good condition and of recent construction. There are two steel bridges that were installed by the Township along this trail. This trail is maintained in cooperation with the NJ Department of Parks & Forestry. The Mansfield Woods trail includes three steel bridges that are in excellent condition. The surfaces of these trails are level and the right-of-way is clear.

The paved walking paths at C.O. Johnson Park and are in good condition. They are constructed of asphalt. There has been public input encouraging the expansion of these paths. The paths at C.O. Johnson Park connect the parking areas with the fields and the field house with an additional path following the perimeter of the park. The paved surfaces are nearing the end of their lifecycle and may need replacement in the next five years. There is also sentiment to expand these paths to provide additional access and additional opportunities for recreational walking. They are popular with Byram residents. There is a short path at Mohawk View providing handicap access to the playing field from the upper parking area.

Courts

The Township maintains a number of sports/recreation courts at its parks. There is a full-size basketball court at C.O. Johnson where there are also three tennis courts, also lined for pickleball play. There is also a bocce court at C.O. Johnson Park. There are two tennis courts with surrounding fencing at the Township Municipal Building. There is a full-size basketball court at Riverside Park and there was formerly a basketball court at Mountain View Park that was required to be removed during the construction of the Roseland-Susquehanna Transmission Line. The surface remains but the baskets have been removed and the surface is no longer suitable for play. Replacement of the baskets is not possible because of the proximity of the transmission line.



The tennis courts at C.O. Johnson are in excellent condition, having been re-surfaced in 2019. The tennis courts at the municipal building are playable, but the surface exhibits cracking, and resurfacing will be needed soon. The basketball court at C.O. Johnson is in good condition but may need resurfacing in the next five years. The basketball court at Riverside Park is in fair condition, having an asphalt surface. It is playable, but resurfacing should be considered. The bocce court in C.O. Johnson Park is in good condition.

Playgrounds

There are playground facilities at C.O. Johnson Park and at Riverside Park. At C.O. Johnson Park the playground equipment is in good condition. At Riverside Park, the equipment is in fair condition. Accessibility for children with disabilities is lacking and when these facilities reach the end of their lifecycles, replacement with accessible equipment/installations should be considered.

Structures

There are a limited number of structures in the Township's parks. There is a field house and pavilion at C.O. Johnson Park. There is a bathroom building at Neil Gylling Park. There is a pavilion located at Riverside Park. There are moveable storage sheds located at Neil Gylling, Tamarack Park the Byram Intermediate School and C.O. Johnson Parks. (Note: These were purchased and are maintained by the youth sports groups which utilize these for equipment storage.) There is a "press box" at the football field in C.O. Johnson Park.

The field house is functional but needs renovations or replacement. The bathroom facilities at the field house have been closed for a substantial period of time based upon maintenance and security issues. The field house contains meeting space and a snack stand along with storage areas. Equipment for limited food preparation within the snack stand is owned by the sports groups. The interior is in fair condition. The roof and structure are sound with the walls being constructed of concrete cinder block. The interior needs renovation and the flooring has been damaged by players wearing cleats walking through the meeting areas.

The covered pavilions at C.O. Johnson Park and at Riverside Park are in good condition. They provide shelter from rain and mid-day sun. These structures should have at least 10 years of continued function with regular care and maintenance. The equipment storage sheds appear to be in good condition at both Neil Gylling and C.O. Johnson and should be functional for at least 10 years. The press box at C.O. Johnson was constructed by volunteers from the football program and is in poor condition. There is limited



utility for this structure. Replacement or removal should be considered.

The bathroom building at Neil Gylling is not usable without a major investment. Water and electric service would need to be re-installed. Abandonment of the existing septic system and the construction of a new system, if possible, would be required to return this building to functionality. It is otherwise structurally sound being constructed of concrete cinder block. Alternatively, access to the bathrooms at the municipal building directly across Mansfield Drive during events can provide rest room services.

Supporting Infrastructure

There is a substantial amount of ancillary infrastructure that supports the Township's parks. This includes parking areas, safety lighting, guardrails, signs, entrance roads, underground irrigation systems and other related items. These items have been inventoried and categorized. The inventory of this infrastructure with expected useful lifespans and expected replacement costs has been incorporated into a cost projection tool that can be found in the appendix to this plan.

It is apparent that there has been regular maintenance and replacement of these items over the past 10 years and they are in overall good to excellent condition. Routine maintenance of these items is generally within the capability of the Township's Public Works Department. However, budgeting for regular replacement of items with a known limited lifespan should be done on an ongoing basis. Planning ahead with each annual budget cycle will allow for the allocation of resources in a logical and rational manner that will keep these expenses within the reasonable parameters of the municipality's spending plan.

Fortunately, the starting base conditions are good. Parking areas are well-graded and maintained. The surfaces are primarily crushed gravel with limited paved areas. The paved areas at Tamarack Park are in excellent condition and should remain so for the next 10 years. Parking areas at C.O. Johnson Park are older, but still have substantial useful life. The use of millings and a layer of rolled oil and stone was a cost-effective method of surfacing the upper parking area, but only has a limited expected life span. Re-surfacing at C.O. Johnson should be anticipated towards the end of the 10-year horizon of this plan. The parking area and guardrails at Mohawk View are nearing the end of their lifecycle and will likely need to be replaced within the next 5 years. Signs at the parks were installed in the recent past and are attractive and in good condition. Safety lighting of parking areas is also relatively new and in good condition.

There are no major investments in support infrastructure that are required at the time of this assessment. However, there will always be unanticipated expenses that will arise. Keeping pace with regular upkeep of supporting infrastructure will lower replacement costs and provide flexibility in the event that an unforeseen expense is necessary.

Maintenance/Usage

Having assets comes with the responsibility of maintaining those assets to keep them in good condition, to allow for safe use and to provide the greatest utility in a fiscally sound manner. In Byram Township, responsibility for maintenance rests with the Public Works Department. They are charged with preparing the fields for play in the spring, with maintenance of the fields during the playing season and with making repairs and changes as necessary. They are also responsible for care and maintenance of the related infrastructure. The Township needs to ensure that appropriate resources are devoted to these tasks in the form of adequate personnel and funding to carry out these responsibilities.

Regular Maintenance

The most common maintenance activity is cutting the grass fields. In addition to the Township-owned parks, the Department of Public Works also mows the fields at the Byram Elementary/Middle School complex. Additionally, the department prepares the baseball fields, performs turf maintenance and repairs such as seeding and fertilizing, collects garbage and recycling from the park bins and is charged with maintenance of the Township's hiking trails. The department currently employs 12 full time workers. During the height of the summer months three full-time workers and two part-time Summer hires are assigned to park maintenance duties.

Annually, the Township Department of Public Works purchases bulk materials for use in maintaining the parks. The primary need is for grass seed, topsoil, fertilizer and clay. The Department uses seed blankets to foster early season growth of grass on high wear areas of the fields. The staff prepares the baseball fields each spring by applying clay and grading the infields. In addition, the staff performs routine miscellaneous tasks that include maintenance of the parking areas, the guard rails, general upkeep of the parks and related infrastructure. Port-a-potties are placed at C.O. Johnson, Mohawk View, Neil Gylling and Riverside Parks. These are maintained by an outside contractor. Rental costs are currently \$10,400 per year.

It was estimated that the year-round requirements for maintenance and upkeep of the parks and related facilities could utilize two full-time employees supplemented by part-time Summer hires. However, as in most rural communities, the overall needs for maintenance and upkeep of roads, buildings and grounds, sewer lines and other general obligations of the department require the entire authorized staff. This is highlighted during the Winter months when the entire staff of 12 is needed for the 12 snow routes that cover the Township's roads. Hiring additional staff to permit the allocation of more resources to the parks is a policy decision for the governing body to consider.

The Department of Public Works uses four (4) 72" scag zero turn mowers to maintain the grass fields. The mowers are projected to last for 15 years with regular repairs and maintenance of the equipment. It was estimated that the Public Works department cuts approximately 200 trees per year as part of the trail maintenance duties. The Department Director indicated that the staff uses a single John Deere tractor with a bucket and backhoe to maintain the trails. An off-road "gator" type vehicle would be useful for trail

management and maintenance tasks. This is a purchase the Township should consider, particularly if an expansion of the trail system is pursued.

Replacement Schedule

All park infrastructure was identified, assessed and inventoried as part of the field work related to the preparation of this plan. In addition to identifying the type, amount or number of each item, the current condition and estimated life span were assessed. This provided a basis for projecting the replacement cycle for each item. This includes a schedule and rough cost estimate for replacement. This information was further divided into a park-by-park listing. This presentation of data is primarily designed for use in annual budgeting for park upkeep and determining what tasks can be accomplished each year within the set fiscal allocation. This will provide a rational basis for making decisions regarding the portion of the municipal budget dedicated to upkeep or replacement of park infrastructure and allow for determining which of these expenditures is necessary and what specific items the investment of resources will purchase. The spending tool can be found in the appendix to this document.

The replacement schedule is not static. It is designed to allow for adjustments for actual experience in the useful life of items and for deferring expenditures because they are either not necessary or because budgeting decisions require delay. Wherever possible, estimated costs were based upon past expenditures, quotes prepared by the Township's professionals or actual estimates submitted by contractors. An inflation factor of 3% per year was applied to the cost estimates to account for changes in price for materials and expected necessary replacement items over the course of, not just the 10-year time horizon of this plan, but can projected out over an infinite period for each inventoried item. Estimated capital expenses for park infrastructure over that 25-year time period are estimated to be approximately \$5 million or about \$200,000.00 per year on average. However, these costs are not anticipated to be evenly spread over each year.

Funding

Currently, the regular maintenance activities are carried out as a function of the Township's Public Works Department (DPW). The Township does recognize that there are discreet functions related to the care of the parks and makes provisions within the budget to approximate some of the costs within the DPW's overall allocation. There are individual line items within the DPW budget for Park Maintenance, Park Operating and Park Vehicle Repair. The 2020 municipal budget provided \$50,000.00 for these expenses. This does not include salaries and wages for DPW personnel. This is likely a partial representation of the true costs involved in maintaining the parks and keeping park infrastructure in a state of good repair. The tasks required to keep the parks and related infrastructure in good repair can be difficult to parse out from the general DPW annual budget because the much of the same equipment, materials and man-power that are allocated to the general duties of the department are applied within the parks.

Using a portion of the Open Space Trust Fund for park maintenance and upkeep is one option for the Township to consider. Recent maintenance projects, such as the upper lot stair replacement and resurfacing of the tennis courts at C.O. Johnson Park, have been funded from this source. The current open space tax produces approximately \$110,000.00 annually. These funds are used for debt service, land

acquisition and selected capital projects. Increased utilization of open space funds for expenditures of this type may require raising the amount of the open space levy to the full taxpayer approved assessment.

Allocation/Usage

One of the major responsibilities is the allocation of the municipality's resources and the conditions under which they are used. The in-season demands from the youth sports programs account for the vast majority of use. The Township has a dedicated employee who allocates field time in consultation with the recreation committee and the "sports council" which is comprised of representatives of the various programs. Adult recreation programs, primarily an adult softball league, account for a fraction of facility use. The fields are fully subscribed from Approximately April 1 until December, or until the first snowfall occurs. In the Spring, the fields are targeted for opening the first full weekend in April or possibly earlier depending upon weather conditions and Township's ability to prepare fields for use. The sports programs have been able to avoid conflicts arising from demand for field space and the current number of fields is adequate for the existing level of participation. However, the demands make "resting" of fields difficult. Better scheduling, not block scheduling, will make more efficient use of the field available and support resting and maintenance of fields more possible.

There are issues related to weather, primarily in the Spring. Rainfall events can render the fields unplayable or create conditions where usage would cause damage to the fields. The decision to close the fields is at the discretion of the Director of the Department of Public Works. There is a system in place where the Director sends a text message to representatives of the sports programs to advise them of the status of the fields. The Township may want to supplement this system with postings on the Township web page that is updated with the current status. There have been issues with the sports programs, particularly the baseball program, accessing to the fields following rain events. This is primarily due to the short window for play during the Spring season. Overall, the current system is adequate.

The Township currently does not market its facilities to sports programs from outside the community. There is a growing trend for professional operated sports clubs to supplement or even replace the traditional in-town recreation programs. Soccer, baseball and lacrosse in particular have seen growth in these "club" teams for participants who are specializing in a single sport on a year-round basis. Many of these programs operate during the Summer months when school (and school sponsored sports programs) is not in session. Rental of fields can provide a supplemental stream of income for the Township. This is a policy decision for the Township to consider. There are both advantages and disadvantages to allowing access to these groups, not the least of which would be increased wear and tear on the fields, that the governing body should weigh in making a decision in this regard.

Forest Stewardship

Stewardship of the Township's forested open space holdings is a vital component of overall asset management. The Township has an ongoing obligation to care for the natural resources under its ownership. There is a tendency to believe that this could be accomplished through the creation and enforcement of appropriate rules and regulations for public use. However, the health of the forests on Byram's publicly owned lands has been severely impacted by the same threats impacting woodlands throughout the northeastern United States.

These threats include forest fragmentation, the introduction and proliferation of non-native invasive species (including both plants and insects), an over-population of deer and the effects of climate change. There is a responsibility to both current and future generations of Byram residents to appropriately manage these forest resources to the best extent possible to ensure they will remain an important part of the Township's future landscape.

Forest Stewardship Plan

The Township commissioned a 10-year forestry stewardship plan to cover the period from 2020-2030 in 2019. That plan continues the forestry management practices that had been in place for at least the last 10 years. The Forest Stewardship plan assesses each of the Township's significant open space holdings. Each open space parcel has been divided into tracts to make allow for implementation on a manageable scale. The plan has not been submitted to the N.J. Department of Parks & Forestry for approval. Plan approval from the N.J. Department of Parks & Forestry is necessary to support requirements of plan and to be eligible for possible grants.

The plan's foundation is in sustainable forestry management concepts. They include conservation of biologic diversity, maintenance of a productive forest ecosystem, conservation of soil and water resources, maintenance of the forest's contribution to the carbon cycle, maintenance and enhancement of long-term benefits to society and the legal, institutional and economic framework of sustainable forest management. These are the same long-standing concepts that have guided the U.S. Forest Service's management of public lands since Gifford Pinchot professionalized forest management in the early 20th Century. These sound principles should guide the Township's stewardship efforts as well.

The Forest Stewardship Plan recommends a series of actions based upon Forest Management Best Practices (BMP's) that are incorporated into the recommended actions for each tract delineated in the plan. These practices account for the regulatory constraints that guide activities in environmentally sensitive areas and address the necessary steps for sound forest management. They account for the following factors:

- Recreation
- Soil Protection
- Reforestation
- Timber Management
- Aesthetics
- Carbon Management

These principles guide the recommended steps necessary to maintain a healthy forest. The implementation of these actions will be a challenge, however. The Township will need to allocate appropriate resources, both personnel and financial investments, to accomplish the goals of the plan.

The Forest Stewardship Plan contains a recommended management and implementation schedule that parses out the actions set forth in the plan over a period of 10 years. The Township should use this

schedule to budget for the activities recommended in that time frame. Some of these actions are labor intensive and will require engaging outside contractors to perform the work. Other activities can be accomplished through volunteer efforts. In either case, execution of these tasks needs to be done in a rational and orderly manner. The majority of these actions should be funded through the Open Space trust with some of these actions needing to be incorporated into the municipal budget on an annual basis. They will all need substantial lead time to allow for planning and implementation. Caring for the Township's forests will be an ongoing obligation that will last beyond the 10-year horizon of this plan.

Forest Management



Management of the Township's forest resources will be based upon the findings and recommendations in the 2020 Forest Stewardship Plan. The recommended tasks will require targeted expenditures by the Township to implement many of the more ambitious steps outlined in that plan. There are grant opportunities to help underwrite the costs of these actions and as each activity is planned, an investigation of these financing programs should be conducted as well. This ten-year plan should allocate activities and the support for those activities for each year of the plan's life. This will divide the tremendous effort needed to accomplish these activities into manageable units.

The purpose of Forest Management is to ensure healthy, productive forests for present and future use. The forest can be used by many different groups for a variety of purposes. As the owner of substantial tract of forested land, the Township takes on the role of a forest manager. Forest managers plan for the wise use of the forest and its resources. Some of the managers

of the forest are concerned with wildlife, forest industry, recreation, wilderness, fire and insect control, and watershed. All of the managers must consider and plan for the use, improvement, protection, and regeneration of the forest. The Township needs to account for responsible stewardship of the resource entrusted to it and providing Township residents with the value and use of these resources.

The management best practices that guide these activities are contained in the Forest Stewardship Plan. They account for the following:

- Streamside Management Zones
- Stream Crossings
- Access
- Timber Harvesting

- Site Preparation
- Use of Pesticides/Herbicides
- Reforestation
- Fire Protection

These are basic considerations for sustainable forestry practices and should guide the Township's efforts in implementation of the plan. Any Requests for Proposals from contractors should incorporate these factors into the requirements for performance of these tasks.

Selective Harvest

Selective cutting of a forest is generally an economic action that allows for the sustainable harvesting of timber for sale in a sustainable manner that allows for regrowth and regeneration of trees for future harvest. That is not the purpose of utilizing selective harvesting on the Township's forested lands. The goal of harvesting timber within the Township's forests may provide for some economic return. However, the prime consideration is the removal of hazardous trees, providing for the regeneration of forest and improving the overall health of the forest. The harvest of trees in the Township's lands is more appropriately described as the "Selection" method of forestry. Selection is a regeneration method designed to create or perpetuate an uneven-aged forest. Trees may be removed singly or in small groups. A selection cut removes trees from all diameter classes, leaving the stand with a variety of sizes. The intent is to improve the residual stand, encourage regeneration in the gaps created, and, most important, retain trees in all size classes, especially some larger trees.

The Township may also want to accommodate the salvage of downed trees that have fallen as a result of recent storm events that have had a major impact on the Township's forests. Harvesting to salvage dead or dying trees can reduce fire risk and contain outbreaks of insects and disease. Removing high-risk or infected trees can maintain forest health and vigor, thereby reducing the stand's susceptibility to outbreaks. Selected dead trees or snags may be left as den trees for cavity-nesting species or as perches for raptors and other birds. All timber harvest must be completed in compliance with Forest Management BMPs. Skid trails and logging decks must be laid out prior to any harvesting activities and the Township may consider limiting activity to low-impact forestry practices.

Access issues would have to be worked out prior to any timber being removed from these sites. Timber management is not the highest priority on these tracts but will be possible as trees mature increasing the amount of timber available for a logging operation to take place. A harvest plan should also be completed prior to a commercial harvest to lay out landings, logging roads and skid trails that will minimize impact to the surrounding forest, soil and water resources and to protect regeneration of the future forest.

Site productivity on these properties is good for growth of forest products. Forest stand improvement activities will improve growth of future crop trees left in the forest Stand while creating openings in the canopy to promote advanced regeneration. Incremental growth will provide added value to the future timber sale. If overall forest health declines or if potential timber trees do not appear healthy enough to

survive through the planning period, a limited timber sale may be administered on the property once access issues are worked out.

Invasive Species Control

The New Jersey Invasive Species Council (NJISC) has adopted the definition developed by the National Invasive Species Council, which defines an invasive species as “a species that is 1) non-native to the ecosystem under consideration and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health.” An invasive species can be a plant, animal or microbe. Thousands of non-native species have been introduced to our state. Although most non-native species do not become invasive or cause harm, the small percentage that do pose important threats to our environmental, economic and social welfare.

The Township’s forests are heavily impacted by non-native invasive species, particularly plant species. These species are pervasive on Township-owned lands. There are tracts within the open space parcels that are relatively healthy, but nearly every property exhibits some impact. These species negatively affect the health of the Township’s forests. The identified plant species include:

- Ailanthus (Tree of Heaven)
- Japanese Barberry
- Asiatic Bittersweet
- Garlic Mustard
- Wineberry
- Japanese Knotweed
- Japanese Stilt Grass
- Multiflora Rose
- Russian Olive
- Mile-a-Minute Vine

There are other invasive insect species impacting the Township’s forests that include the Emerald Ash Borer, the Woolly Adelgid, the Asian Long-horned Beetle and the latest threat, the Spotted Lantern Fly. The Emerald Ash Borer presents a particularly substantial threat as Ash is the predominant hardwood species in the Township’s forests.

Managing the extent of the impact will require a multi-step approach. Removal of plant species will likely require a combination of manual removal, machine cutting, application of herbicides and prescribed burns. Some of these steps will need to be repeated in consecutive years. The effectiveness of these activities is also impacted by the overabundance of deer which make regeneration of native growth to replace the non-native plants difficult to achieve. The implementation of these actions will require retaining contractors to carry out these tasks under the supervision of a licensed forester. There may be grant programs that will underwrite some of the costs of these steps. Demonstrating these activities are a

part of a coordinated effort under a forest management plan that has been approved by the N.J. Department of Parks & Forestry will be an advantage when seeking grants.

Deer Management

Byram's forests are impacted by an overpopulation of deer. The density of the deer population is described as a "super-abundance" due to the tremendous imbalance between the number of deer and the capacity of the forest to sustain that population. Many factors have contributed to this condition including the absence of predators and the proliferation of suburban landscapes.

At the densities present in Byram Township, deer cause severe degradation of the forest ecosystem by feeding on or damaging tree seedlings and saplings which prevents forests from naturally regenerating. Plant abundance and diversity decline rapidly. This leads to a cascade of negative impacts. The shrub and herbaceous layers also disappear, leaving a barren woodlot of trees rather than a healthy, functioning forest. This creates the opportunity for invasive plant species, which deer do not eat, to proliferate. The lack of leaves falling to the ground each autumn results in poor quality soils, increased erosion, and a lack of nutrients required for plant growth and reproduction.

As deer increase in abundance, browsing pressure reaches a tipping point, where individual plants cannot recover from the damage. Habitat changes caused by over browsing are also detrimental to native birds, small mammals, and invertebrates. Many birds nest in native vegetation on or close to the forest floor, while others rely on the constant supply of insects within the leaf litter and in vegetation to feed themselves and their young. The absence of nuts and berries in over browsed forests also leads to a decrease in food supply for small mammals and migratory birds, making it difficult for them to survive at critical times during the year. Management of deer populations in the Township's forests is an essential element of sound forestry management.

Measures to control the deer population are limited. The Township has implemented a hunting program in its parks. This has had a minor impact. The number of hunters and the number of deer harvested has been relatively small and certainly not on the scale needed to make a difference. The Township should consider making adjustments to this effort to increase the number of deer taken, but that may still be beyond the ability of a hunting program to reach the desired effectiveness. Any reforestation projects may require installation of deer exclosure fencing. This may be effective on a limited scale, but larger fencing efforts are expensive and difficult to maintain. Other methods such as using repellants or chemical sterilization are likely not practical for Byram. The Township may need to consider a targeted aggressive hunt or the use of sharpshooters to remove a sufficient number of deer to reach a sustainable population. However, these measures can create objections in the community.

Reforestation

Reforestation will be completed through natural regeneration via canopy openings or through selective planting of seedlings. The ridgetop on the Cranberry Overlook tract and the Hemlock stand on the Cranberry Overlook tract which has been decimated by the Woolley Adelgid, are areas that would be amenable for this approach. Some efforts would need to await the removal of invasive plant species. For example, once invasive species have been removed along the roadway on the Briar Ridge South tract, this area should be replanted with native trees and shrubs to revegetate this area. Additionally, the Glenview parcel would benefit from this type of intervention to help with forest regeneration.

All regeneration will be closely monitored during this planning period. If this is unsuccessful due to aspect, excessive deer populations or lack of seed sources in the immediate area, fencing and planting will be required on these properties and a plan amendment will be completed. The single most important activity that could benefit forest regeneration would be to reduce the deer population via a deer reduction program with dedicated hunters. Deer fencing would have a huge positive benefit for native tree and shrub seedlings and their development and maturation. If the Township applied for the Sussex County or New Jersey Stewardship grant this would be a great project to be added.

Introduction

Byram Township is located within the Highlands Region as defined by the Highlands Water Protection and Planning Act of 2004. The majority of the Township's land area is within the region's designated "preservation area" which imposed substantial restrictions on building, development and infrastructure extension. The Township has aligned its municipal planning with the Highlands Regional Master Plan (RMP) through the Plan Conformance Process which designated a portion of the Township as a planned center where limited development and infrastructure support is permitted. The Township's traditional economic development opportunities are found within this designated center, which is roughly along the southern portion of U.S. Route 206.

In 2016, the Township prepared an overall economic development plan. This plan identified a number of opportunities, strategies and recommendations to promote sustainable economic growth consistent with the Highlands Regional Master Plan and with the Township's stated long-term vision. In 2019, Byram has undertaken a comprehensive assessment of the Township's Open Space and Recreational assets. While the primary purpose of this study was to chart the future of parks, open space and recreational facilities located in the Township, an additional important aspect has been included. The ability of the Township to utilize the natural assets for both active and passive recreation as a catalyst for appropriate economic growth has been included in the Open Space and Recreation planning process.

This analysis is designed to supplement the 2016 Economic Development Plan, in particular the recommendations concerning the promotion of eco-tourism. Those recommendations include the following:

- Reviewing and tailoring the Township's Open Space and Recreation Master Plan to meet the needs of eco-tourism objectives.
- Developing an initiative with a specific focus on marketing and promoting athletic events, cultural activities, and eco-tourism opportunities.
- Creating a program with context-sensitive transportation solutions identified in the Township's Master Plan to support bicycling and road running in concert with eco-tourism opportunities, to build on and support open space and recreational facilities.
- Working with Lake Associations, Byram business owners or similar groups and entertainment facilities to explore community-wide opportunities.

This assessment evaluates the outdoor and ecotourism opportunities and sets forth recommendations that Byram should consider implementing to generate economic growth based upon the Township's natural resources. It also details the current conditions and the impediments that exist. There are a number of examples of successful marketing efforts that have promoted communities as eco-tourism destinations. A similar approach can be implemented to drive economic growth in the Township in a manner consistent with other important planning goals. Byram has the geographic advantage of a large nearby population center that can provide a source of visitors and the attendant economic activity they would bring.

Overview

Byram Township is located in southern Sussex County, approximately 45 miles west of New York City. New York and the densely populated areas of northeastern New Jersey are around an hour's drive from Byram. A population of more than 12 million people reside within that region. This represents a substantial market for the Township. Byram has the potential to be a destination for both day trips and short overnight (primarily weekend) stays for visitors looking to engage in outdoor activities such as hiking, mountain biking, fishing, kayaking and nature watching. The possibility of attracting substantial numbers of tourists would provide economic opportunities consistent with the character of the Township, the vision of the Township's residents and the Highlands Regional Master Plan.

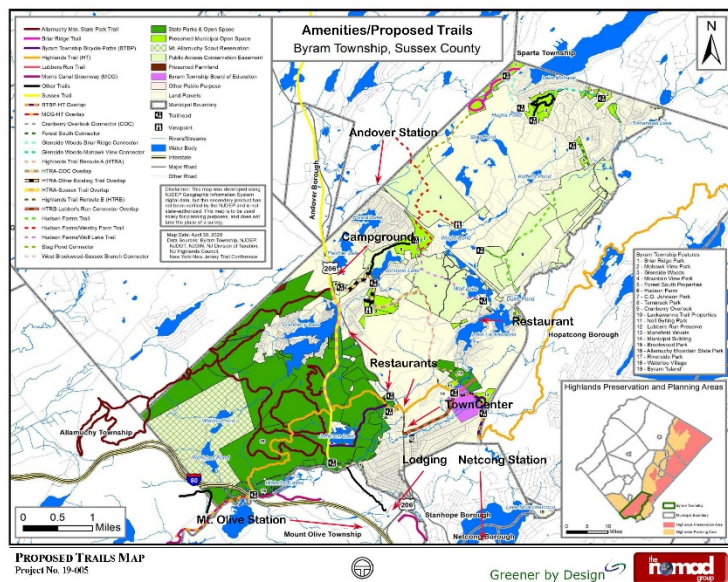
There are several key elements to attracting visitors for eco-tourism activities. Availability of these features can serve to make Byram a preferred destination and provide economic development opportunities. They include:

- Trails
- Food & Dining
- Lodging
- Activity Specific Services
- Multiple Activities
- Welcoming Atmosphere

The Township has a number of existing attractions but would need to make an investment in developing a comprehensive set of outdoor amenities that would bring visitors to the community. This would also necessitate encouraging the development of businesses and services along with an affirmative marketing strategy targeted at publicizing the Township's assets and appealing to the residents of the urban area of the New York/ New Jersey Metropolitan Area looking for an outdoor experience. It will be important to provide the right businesses and services that will accommodate the needs of visitors. Easily accessible grocers, ice cream stands, and restaurants are important as are support businesses such as a full-service bicycle shop. Overnight lodging that can include camping areas near the trails, nearby motels or a historic home that has been turned into a bed and breakfast in the central area of town are also important. Finally, public transportation access can bring urban residents to the community.

This approach will take several years to implement but will also provide a sustainable source of economic growth that can provide opportunity for Byram's existing residents and businesses as well as a catalyst for creating new business opportunities. Ideally, a successful implementation will result in complimentary activities that will have a broad appeal and encourage visitors to return to Byram for multiple visits. A map that shows the location of businesses and amenities in relation to the open space assets of the Township is incorporated into the Appendix to this document.

Open Space



Byram has made a substantial investment in preserving open space. This effort has resulted in the creation of public parks with a combination of active and passive recreational facilities. In addition to municipally owned lands, the State of New Jersey owns and maintains nearly 3,000 acres in Allamuchy Mountain State Park along with historic Waterloo Village. The New Jersey Conservation Foundation has partnered with the Township on the acquisition of land and also holds conservation easements on several large private land holdings. A recent conservation transaction has resulted in the Hudson Farms properties making another nearly 3,000

acres of land available for public use. When assessed together, these lands represent a huge contiguous stretch of publicly accessible open space. This is the Township's most valuable and most marketable asset.

Within these lands are opportunities for hiking, fishing, mountain biking, walking, and other outdoor activities that can compete with any other location in the New York Metropolitan Area. Marketing Byram as a destination for urban residents looking for day activities or for multiple day/multiple activity visits is a prime avenue for economic develop.

Trails

The opportunity to establish Byram as a hiking destination should be a key component of any economic development strategy. There are specific steps that can be taken to develop Byram's identity as a "trail town". These steps include the following:

- Enticing trail users to get off the trail and into the town center
- Welcoming trail users to Byram by making information about the community readily available at the trail
- Making a strong and safe connection between Byram and the trail system
- Educating local businesses on the economic benefits of meeting trail tourists/visitors
- Promoting the "trail-friendly" character of Byram
- Working with neighboring communities to promote the entire trail corridor as a tourist destination

- Recruiting new businesses or expanding existing ones to fill gaps in the goods or services that trail users need

Creating a trail system that will attract visitors is also part of a strategy to attract visitors. The more trails and the greater the variety of hiking experiences available, the further people will travel to visit. Studies have shown that a day-tripper will spend four times as much as a local user will spend, and an overnight visitor will spend twice the amount that a day-tripper will spend.

Byram has established several hiking trails within its municipally owned open space. The longest trail runs from Tamarack Park on Route 206 to C.O. Johnson Park on Roseville Road, a distance of about 1.5 miles. Other shorter trails can be found in Briar Ridge Park, Cranberry Overlook Park, Glenside Woods and Brookwood Park. Two bike trails have been constructed. One leads to Jefferson Lake while the Mansfield Bike Trail provides about a 1-mile section trail co-aligned with the Highlands Trail beginning near the school and municipal buildings on Mansfield Drive. The Township Trails Master Plan, created as part of this document, provides for the addition of over 18 miles of new inter-connected trails within the Township. When fully constructed, the trail system will allow for an extensive array of hiking experiences that will serve as an attraction for visitors.

The State of New Jersey maintains the Sussex Branch rail trail with a trailhead located on Waterloo Road in Byram. Byram has constructed a short trail known as the Cat Swamp Connector to connect the rail trail to Route 206 in the vicinity of the Salt Restaurant. The State maintains a substantial network of hiking trails within Allamuchy Mountain State Park. These trails connect to the Sussex Branch trail near Waterloo Road. Pursuant to the Trails Master Plan, the trails within the state lands will be incorporated into a unified system of trails that will allow for hiking and biking on trails that connect all of the public lands located within the Township.



Private lands within Byram owned by the Kellogg family have recently been opened to public use for hiking. A conservation easement obtained by the New Jersey Conservation Foundation has made these lands available and a trail system will be developed within these substantial holdings. Many of the Kellogg properties are contiguous to municipally owned open space and may provide the opportunity for trail connections as the township develops a comprehensive integrated trail network that incorporates State, Municipal and Privately held land to establish the Township as a destination location for the hiking community.

The long-distance Highlands Trail runs through Byram. This trail begins along the Delaware River in Holland Township, Hunterdon County and makes its way northeastward to Cornwall, NY on the Hudson River. The full route of the trail is still under development, but when complete, the trail will cover a distance of approximately 150 miles. Byram is strategically located along the trail and has the opportunity to develop support facilities and market the Township as a “host community” along the trail. A host community is a safe place

where both town residents and trail users can walk, find the goods and services they need, and easily access both trail and town by foot or vehicle. The trail is an integral and important part of the community.

The New York-New Jersey Trails Conference, a non-profit organization that is dedicated to creating and maintaining hiking trails in the New York Metropolitan Region, is responsible for management of the Highlands Trail. A proposed re-routing of the trail in Byram will bring the trail into the Township's planned Town Center. This will allow hikers to directly access businesses within the Township. Byram can develop a relationship with the Highlands Trail that is similar to that of Damascus, VA with the Appalachian Trail and take advantage of economic development opportunities centered on both through hikers and day hikers using the Highlands Trail.

Mountain Biking

Byram is already a noted mountain biking destination. The Jersey Off Road Bike Association (JORBA) maintains a network of mountain biking/multiple use trails within Allamuchy Mountain State Park. Byram's trails system should incorporate multiples uses, wherever practical to expand the mountain biking options for visitors. Communities that have established themselves as mountain biking destinations have been able to foster substantial economic growth centered on attracting and catering to the mountain biking community. There are limited opportunities for mountain bikers in New Jersey, and no communities that currently have or have the potential to create an attractive destination for this community to the extent that Byram can.

Mountain bikers are seeking experiences that are either currently available or that can be provided in Byram Township. The International Mountain Biking Association has identified key factors that will attract bikers to a location. They include:

- Access to Trails
- Exercise
- Skill Progression and Challenge
- Social Interaction
- Access to Nature

As part of the development of mountain biking opportunities, the creation of amenities designed to serve visitors to the Township should be incorporated. Events, such as an off-road "tour de Byram" could become an annual occurrence. Other measures would include development of parking areas, facilities for changing clothes, water sources, directional and navigational signs and mapping as well as set touring routes that incorporate destinations and points of interest. These types of features are an integral part of creating a "bike infrastructure" to support increased visitation. Mountain biking trails should also be connected to the Byram Town Center to allow for bikers to patronize local businesses and restaurants. These types of measures have proven successful in places such as Bentonville, Arkansas, Park City, Utah, Copper Harbor, Michigan and the Mountain Kingdom of Vermont.

Fishing

The Musconetcong River is one of the premier trout fishing waters in New Jersey. Several miles of publicly accessible water along this river are found within Byram. Additionally, Lubber's Run, a trout stocked tributary of the Musconetcong, flows through the Township. In addition to these waterways, the State of New Jersey maintains a public boat launch on Cranberry Lake which provides opportunities for not just fishing but sailing and kayaking as well. Cranberry Lake offers fishing for bass, pickerel, perch and other warm-water species, as well as ice-fishing when conditions permit. Township-owned Johnson Lake provides fishing for bass, pickerel and panfish and has provision for launching kayaks.

Historic Features



Waterloo Village, which is maintained as part of Allamuchy Mountain State Park contains a restored village with interpretive displays. The Village offers programs and events throughout the year that attracts thousands of visitors each week. Additionally, Byram is host to a number of other historic features such as the Amity Schoolhouse, the Roseville Schoolhouse Museum and the Morris Canal. The Township has developed a “historic map” that locates over 65 sites of historic interest located in the Township. Developing a self-guided tour to the publicly accessible sites would have value in both attracting visitors and providing

additional activities for visitors coming to Byram for other recreational purposes.

Support Businesses

The biggest growth potential for the economy in Byram is in creating a network of businesses that cater to visitors interested in the outdoor recreational assets of the Township. If the Township is going to successfully capitalize on these assets, an integrated economy that both serves and attracts visitors will need to be established. The biggest potential comes from marketing the Township to as broad a marketplace as possible and demonstrating that Byram is both welcoming of visitors and offers multiple activities to warrant day visits, multiple visits or multi-day visits.

There are recognized businesses that are compatible and supportive of the concept of creating a community that welcomes and thrives on outdoor recreation. Having the appropriate mix of businesses and ensuring that those businesses are an integral part of establishing the character of the municipality as a center for outdoor activities such as hiking, mountain biking, fishing or other related pursuits is an essential part of a successful strategy. Typical businesses should include the following:

- Equipment Rental/Repair

- Lodging
- Food Services/Restaurants
- Ice Cream/Convenience Stores
- Restroom Facilities
- ATM's
- Emergency Medical Services

In addition to these types of businesses, each store or shop should feature the local branding, provide information and mapping and, where possible, provide accommodations like bike racks and benches.

Outfitters/Outdoor Stores

Sporting goods and outdoor oriented stores that sell fishing gear, bait, rent kayaks, sell/rent mountain bikes, sell/rent camping gear, sell hiking maps, provide local information and support outdoor activities are absent from the Township. These businesses are instrumental for attracting eco-tourism visitors. This is particularly true with hikers and mountain bikers.

Accommodations

Facilities for overnight/multi-day stays do not currently exist in Byram. There are several national chain hotels that are nearby in the International Trade Zone in Mount Olive. There are no such establishments in the Township, nor are there likely to be. That does not mean that these hotels cannot be harnessed to serve visitors to Byram. Byram should approach the operators of these hotels and take the following steps to promote visitation to the Township:

- Provide branded promotional materials highlighting activities in Byram Township
- Advocate for policies at these hotels that would support visitation by patrons for eco-tourism purposes
- Hotels should have the capacity to accommodate mountain bikes, canoes & kayaks
- Arrange for transportation to attractions in Byram from the hotels

Bed and Breakfast establishments catering to short-term visitors also do not exist but can be created. This will require zoning changes that allow for the conversion of existing residential homes for this purpose. Similar arrangements to those recommended at area hotels for outdoor recreation-based visits should be encouraged.

Accommodations can include camping facilities. The existing Panther Lake Campground on Route 206 has a portion of its sites available for short term rental. The Highlands Trail has no existing facilities for overnight stays along its route. Filling this gap, along with providing ancillary services for through hikers, would give the Township an advantage in developing its identity as a Highlands Trail “host” community. The Highlands Trail has the potential to be a strong attraction as the route is completed. It would offer an

alternative to distance hikers who do not have the time to devote to a longer distance hike like the Appalachian Trail and potentially would be a more accessible option.

Restaurants

Existing and potential new restaurants that would market their establishments to eco-tourists visiting the Township represent a potential growth area for the economic development of Byram. Other food service facilities like convenience stores and ice cream shops are attractive to trail users. Salt Gastropub on Route 206 currently makes an effort to market itself to trail runners using the extensive network of trails in Allamuchy Mountain State Park. Hosting the “Salt Shakers” running club is a regular event from April to November. Additional marketing efforts to visitors to Waterloo Village as well as mountain bikers, hikers, fishermen and others coming to the Township to enjoy the natural beauty of Byram would benefit the restaurants already operating and represents a potential opportunity for new businesses. This may be a particularly important aspect of making Byram a preferred destination for the mountain biking and hiking community.

Branding & Marketing Materials

The Township should undertake a coordinated program designed to raise the profile of the community as an eco-tourism destination. That program should include the creation of a distinctive brand for Byram that provides a unique and discernable identity for the Township. This would include creating a logo or other graphic that would be visually distinguishable as belonging to the Township and used in multiple applications. As a companion to the creation of the brand, promotional materials, both print and multi-media, should be produced to help market Byram as a destination for eco-tourism activities.

Many of these efforts can be supported by local businesses and by the Highlands Council as part of its sustainable economic development policies under the Highlands Regional Master Plan. There should be a cooperative approach that recognizes the important relationship between the attractions that will bring visitors to the community and the businesses that can support that visitation. The overall marketing strategy will need to incorporate all available outlets. That includes traditional media, blogs, social media, online marketing and distribution of print materials such as trails brochures and maps. Marketing materials for local businesses should also be featured at main trailheads and parking areas. Trailheads should be a place to invite visitors to explore Byram Township further and to patronize local establishments.

- **Byram Township as a “Brand”**- Byram Township already has an identity as the “Township of Lakes”. Town nicknames usually highlight attractive local characteristics, and this is the case in Byram. Using that as the basis, the Township should create a graphic that will be utilized in all aspects of the eco-tourism economy. A logo, common color scheme, fonts and other identifiable features should be part of that brand. The brand should also be used for the promotion of all local activities. This includes having branded materials present at all local attractions, including all trail heads. All mapping and online materials should feature the brand prominently. This branding should be licensed, and the use then allocated to local businesses for incorporation into their marketing activities. Licensed businesses can feature window decals or other “Byram branded” signage. This is an important part of the overall marketing strategy.

- **Promotional Videos-** Create a series of promotional videos featuring activities in Byram Township. These videos can be used in different platforms that include sites like YouTube and Instagram as well as on the Township's web site. As part of the preparation of this document, a number of drone overflights were conducted. This provided substantial aerial footage that highlights the natural assets of the Township. This can be supplemented with additional on-the-ground video that incorporates businesses and activities into short two to three-minute features that highlight the attractions that will entice visitation to the Township.
- **Printed Materials-** Create printed materials such as trails brochures and trail guides that can be distributed at local businesses and critical sites. These can be made available at local transit stations as well. These materials can provide the foundation for other marketing efforts such as press releases and other promotional efforts. They can also be made available for download on the Township's web site and at trailhead locations.
- **Social Media-** Use social media platforms to the greatest advantage. Establish a "Hike Byram" or "Mountain Bike Byram" web page that provides visitor information and access to trail guides and maps. Link these sites to local businesses that support eco-tourism. Establish a Byram Township ecotourism Facebook page to allow for interactive engagement. Use YouTube and Instagram to highlight outdoor activities in the Township. Be flexible to incorporate emerging platforms such as TikTok into any social media marketing strategy. The Township should designate a "social media director" to coordinate all activities and to keep all materials current and up to date.

Recommendations

1. Develop a unified trail system that incorporates state, municipal and private lands. A trail network that offers a variety of hiking opportunities that can attract hikers of differing capabilities and also multiple hikes that will attract return visitors will maximize the value of this asset.
2. Work with the State of New Jersey and the New York/New Jersey Trails Conference to promote Byram Township as both a hiking destination and a host community along the long-distance Highlands Trail. Establish Byram's identity as a "trail town".
3. Develop a system of mountain biking trails within the overall trail system. Promote the Township as a destination similarly to locations like Bentonville, Arkansas and the Mountain Kingdom in Vermont. This includes the addition of amenities designed to service mountain bikers and commercial establishments that cater to the mountain biking community.
4. Promote and plan for the creation of facilities for overnight stays. This can include existing or new campgrounds or campsites, bed and breakfast operations, or other short-stay opportunities. Additionally, creating relationships with nearby commercial hotels located in the Foreign Trade Zone in nearby Mount Olive would allow for multiple-day visits.
5. Advocate for increased public transportation services. Existing NJ Transit train service to the International Trade Zone station only operates on weekdays and only sporadically. It does not provide the type of service that would encourage urban residents to travel to Byram. Linking the

Township's open space assets to NJ Transit at Netcong Station or the proposed Andover Station on Roseville Road are also important opportunities to capitalize for attracting visitors.

6. Aggressively market the Township as an open space destination for eco-tourism related activities. Create a multi-faceted program that incorporates all available media to publicize the Township's offerings. This includes the Township's web site and periodic newsletters.
7. Work with existing Township businesses, particularly restaurants, to attract visitors to the community and encourage hikers, bikers, fishermen and others coming to Byram to patronize these establishments as part of their visits.
8. Create a "brand" that identifies Byram Township as a unique destination for eco-tourism and promote that brand to increase visitation. The branded materials should be shared with local businesses via a free licensing agreement.
9. Accommodate visitors with a pedestrian and bike-friendly town center and welcome them both physically and socially within the community.
10. Create a series of events or local marketing promotions that establish a positive connection between local businesses and the attractions that will bring visitors to the community.

APPENDIX

- I. Map of Existing Open Space
- II. Results of Survey
- III. Youth Sports Enrollments
- IV. Updated ROSI
- V. Map & List of Priority Future Acquisitions
- VI. Map of Existing Trails
- VII. Map & List of Additional Trails/Proposed Trail System
- VIII. Open Space Map with Local Amenities
- IX. Maps of Individual Parks
- X. Environmental Constraint Mapping
- XI. Parks Management System
- XII. Historic Byram Map
- XIII. List of Stakeholder Engagement
- XIV. Forest Stewardship Plan