



Township of Brick
Floodplain Management Plan

APPENDIX D
SAMPLE PROGRESS REPORT



Township of Brick
Floodplain Management Plan

APPENDIX D.
EXAMPLE PROGRESS REPORT

APPENDIX D. EXAMPLE PROGRESS REPORT

Township of Brick, NJ Floodplain Management Plan Annual Progress Report

Reporting Period: *(Insert reporting period)*

Background: Township of Brick developed a flood hazard mitigation plan to reduce risk from flooding by identifying resources, information, and strategies for risk reduction. To prepare the plan, Township of Brick organized resources, assessed risks from flooding, developed planning goals and objectives, reviewed mitigation alternatives, and developed an action plan to address probable impacts from floods. Stafford Act. The plan can be viewed on-line at:

XXX

Summary Overview of the Plan's Progress: The performance period for the Flood Management Plan became effective on [redacted], 2016, with adoption by the Township Committee. The initial performance period for this plan will be 5 years, with an anticipated update to the plan to occur before [redacted], 2011. As of this reporting period, the performance period for this plan is considered to be [redacted] % complete. The Flood Management Plan has targeted XX flood hazard mitigation initiatives to be pursued during the 5-year performance period. As of the reporting period, the following overall progress can be reported:

- ___ out of ___ initiatives (___%) reported ongoing action toward completion.
- ___ out of ___ initiatives (___%) were reported as being complete.
- ___ out of ___ initiatives (___%) reported no action taken.

Purpose: The purpose of this report is to provide an annual update on the implementation of the action plan identified in the Township of Brick Flood Hazard Mitigation Plan. The objective is to ensure that there is a continuing and responsive planning process that will keep the Hazard Mitigation Plan dynamic and responsive to the needs and capabilities of Township of Brick and stakeholders. This report discusses the following:

- Flood events that have occurred within the last year
- Changes in risk exposure within the planning area (all of Township of Brick)
- Mitigation success stories
- Review of the action plan
- Changes in capabilities that could impact plan implementation
- Recommendations for changes/enhancement.

The Floodplain Management Plan Committee: The Floodplain Management Plan, made up of stakeholders within the planning area, reviewed and approved this progress report at its annual meeting held on [redacted], 201[redacted]. It was determined through the plan's development process that a steering committee would remain in service to oversee maintenance of the plan. At a minimum, the Committee will provide technical review and oversight on the development of the annual progress report. It is anticipated that there

- _____
- _____
- _____
- _____
- _____
- _____

Public review notice: *The contents of this report are considered to be public knowledge and have been prepared for total public disclosure. Copies of the report have been provided to the Township of Brick governing board and to local media outlets and the report is posted on the Township of Brick Flood Management Plan website. Any questions or comments regarding the contents of this report should be directed to:*

XXXXX



Township of Brick
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APPENDIX E
REPETITIVE LOSS AREA MAPS

(Redacted from public document and retained by Township of Office of Land Use and Planning.)





Township of Brick
Floodplain Management Plan

APPENDIX F
RESOLUTION TO FORM PLANNING
COMMITTEE



Flood Mitigation Plan Resolution

Creating the Flood Mitigation Planning Process

WHEREAS, The Township of Brick is subject to flooding that can damage property, close businesses, disrupt traffic, and present a public health and safety hazard; and

WHEREAS, funding support from the New Jersey Department of Community Affairs, Post Sandy Planning Grant Program has been obtained to help prepare a flood mitigation plan for the Township; and

WHEREAS, a useful and effective plan requires the participation and support of different public and private agencies and organizations that are impacted by natural hazards and/or that can help mitigate the impacts; and

WHEREAS, several Federal programs require that the Township has an adopted flood mitigation plan to qualify for their benefits.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The Township of Brick Flood Mitigation Planning Committee, is hereby established as a temporary advisory body to this Council.
2. The Flood Mitigation Planning Committee shall be composed of representatives from:
 - a. The following Township offices:
 - 1) Public Safety & Emergency Preparedness 2) Land Use Planning 3) Engineering 4) Public Works 5) Inspections 6) Administration
 - b. Representatives of other interested agencies, residents, organizations and associations appointed by the Business Administrator/Mayor to represent the stakeholders in flood mitigation and the general public.
3. Michael P. Fowler, AICP/PP and Tara B. Paxton, AICP/PP are hereby appointed to serve as the Co-Chairs of the Flood Mitigation Planning Committee.
4. The Flood Mitigation Planning Committee is charged with the following:
 - a. Collect data on the floods facing the Township;
 - b. Assess the impact of those hazards on people, property and public services;
 - c. Review the programs and activities currently undertaken by the Township, participating municipalities, State and Federal agencies, and the private sector to mitigate the impact of the hazards;
 - d. Identify new activities or changes in current programs that will better reduce the Township's vulnerability to flooding;
 - e. Prepare a flood mitigation plan for the Township that recommends appropriate measures;
 - f. Submit the recommended plan to this Council and the participating municipalities for adoption; and
 - g. Keep the public informed of its deliberations and recommendations.
5. The Flood Mitigation Planning Committee shall complete its work by February of 2016. At that time, it is expected that the Committee will be disbanded. The Committee should deliberate the advantages and disadvantages of a permanent organization to coordinate mitigation activities in the Township and include its recommendation in the hazard mitigation plan.
6. Members of the public and interested organizations are encouraged to:
 - a. Attend Flood Mitigation Planning Committee meetings;

Agenda #	4	Date	4/7/15
Agenda #		Date	
Agenda #		Date	

- b. Monitor the activities of the Committee on the Township's website; and
- c. Attend the public meeting that will be scheduled to review the recommended plan.

CERTIFICATION

I, Lynnette A. Iannarone, Township Clerk of the Township of Brick, County of Ocean and State of New Jersey, do hereby certify the foregoing to be a true and correct copy of a resolution adopted by the Township Council on April 7, 2015.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of this Township this 7th day of April, 2015.



LYNNETTE A. IANNARONE
TOWNSHIP CLERK

Flood Management Planning Committee							
Member	Title	Representing	Committee Title	Govt	Non-Govt Stakeholder	Non-voting	
John G. Ducey	Mayor	Township of Brick	Ex-Officio Member	-	-	x	
Jim Fozman	Councilman	Township of Brick	Council Representative	-	-	x	
Joanne Bergin	Business Administrator	Township of Brick		-	-	x	
1	Tara Paxton, AICP	Brick Township Planning	Township of Brick AICP/PP Planner	Chair/Resident	x		
2	Michael Fowler, AICP	Brick Township Planning	Township of Brick CRS Coordinator	Deputy Chair	x		
3	Elissa Commins (Alternate-Kurt Otto)	Brick Township Engineer	Floodplain Administrator		x		
4	Glenn Campbell	Brick - DPW Director	Public Works Director/ Resident	Resident	x		
5	Joe Pawlowicz (Alt-Joe Gilsenan)	OEM Coordinator	Emergency Management Office/ Resident	Resident	x		
6	Dan Newman (Alt-Ken Kiseli)	Brick - Construction Code Official	Township of Brick/ Resident	Resident	x		
7	Lisa Auermueller (Alt-Chris Hutch)	JCNRR	Stakeholder/Academia	Non govt stakeholder		x	
8	L. Stanton Hales, Jr.	Barnegat Bay Partnership	Stakeholder/Watershed Committee	Non-govt stakeholder		x	
9	Art Halloran	Brick Planning Board/Master Plan Committee Chair	Township of Brick	Non-government stakeholder Resident		x	
10	Rob Karl	Brick Township MUA	Brick MUA			x	
11	Tomas Kazmarek	Public	Resident	Resident		x	
12	Mark Ellsworth	Public	Resident	Resident		x	
13	Van Varick	Public	Resident	Resident		x	
14	John Santamaria	Public	Resident	Resident		x	



Township of Brick
Floodplain Management Plan

APPENDIX G
NATURAL BENEFICIAL FUNCTIONS PLAN





APPENDIX G NATURAL BENEFICIAL FUNCTIONS PLAN

OVERVIEW

1.1 What Are Beneficial Floodplain Functions?

Flooding is a natural event, and floodplains provide many natural and beneficial functions. Riparian areas—the zones along the edge of a river or stream that are influenced by or are an influence upon the water body—generally have a greater diversity and structure of vegetation than upland areas. Shelter, space, food and water available in these areas determine the health of wildlife populations. Riparian communities are of special importance for many animals since water supply is a major limiting factor to the animals' population. Animals depend upon a supply of water for their existence.

1.1.1 CRS Credit for Protecting Natural Floodplain Functions

Wildlife and fisheries are impacted when plant communities are eliminated or fundamentally altered to reduce habitat. Human disturbance to riparian areas can limit wildlife's access to water, remove breeding or nesting sites, and eliminate suitable areas for rearing young. Changes in hydrologic conditions also can alter the plant community. FEMA's Community Rating System provides credits for adopting plans that protect one or more natural functions within a community's floodplain (Activity 510), such as the following (FEMA, 2013):

- A habitat conservation plan that explains and recommends actions to protect rare, threatened, or endangered aquatic or riparian species
- A habitat protection or restoration plan that identifies critical habitat within the floodplain, actions to protect remaining habitat, or actions to restore fully functioning habitat.
- A green infrastructure plan that identifies open space corridors or connected networks of wetlands, woodlands, wildlife habitats, wilderness, and other areas that support native species, maintain natural ecological processes, or sustain air and water resources (the corridors or networks must include some floodplains)
- All or part of a comprehensive or other community plan that includes an inventory of the ecological attributes of a watershed or floodplain and recommends actions for protecting them through a mechanism such as a development regulation, development order, grant program, or capital improvement plan.

The credit requires that the following criteria be met:

- The plan may cover more than one community, but it must have an impact on natural floodplain functions within the community seeking credit.
- The plan must be adopted. If the plan is not a community plan adopted by the community's governing body, it must be adopted by an appropriate regional agency.
- The plan must be updated at least once every 10 years. The update must include a review of any changes to conditions as well as progress made since the original plan was prepared. Any changes to the adopted plan must be approved by the original adopting agency.



- The plan must include action items for protecting one or more identified species of interest and natural floodplain functions. The action items must describe who is responsible for implementing the action, how it will be funded, and when it will be done. General policy statements with no means of implementation are not considered action items.
- There is no credit (under CRS Activity 510) for a plan that addresses water quality issues as a requirement for a permit under the National Pollution Discharge Elimination System (credit for such plans may be available under other CRS activities).
- The plan must include a comprehensive inventory of the natural floodplain habitat within the community. It must identify areas that warrant protection or preservation in order to maintain fully functioning habitat for the species of interest. Where threatened or endangered species are present, each species must be addressed and a restoration plan must be included.
- A community can get credit for other plans that meet these credit criteria. These could be single-issue or single-species plans or plans that cover only one area of the community's floodplain.

The Township of Brick has two documents that meet these requirements: the Township of Brick Conservation and the Green Building and Sustainability Element elements of the Township Master Plan. Both of these plans lay out long range visions for improvements, with timelines for implementation greater than the 10-year life span specified by the CRS program. This chapter integrates these two plans into the 2015 Floodplain Management Plan, so that the Township can review their status every five years when the FMP2015 is updated. In addition the Township has been an active participant in the development of the Meteteconk Watershed Plan which supports the beneficial use of water resources.

As noted in Section 5, areas in the floodplain that typically provide these natural functions are wetlands, riparian areas, sensitive areas, and habitats for rare and endangered species. According to NJ DEP 2015 Land-Use Land-Cover data and 2012 NJDEP Landscape Project Data, Brick Township has several floodplain areas that could serve natural and beneficial functions (Landscape Project contains the endangered species data). This information is summarized in Table 5-9.

The following sections provide an overview of the two plans, inventory the key resource areas, and identify an integration strategy.

1.2 THE TOWNSHIP OF BRICK CONSERVATION ELEMENT OF THE MASTER PLAN

The following content is excerpted from the Township of Brick Master Plan Conservation and Open Space Element. Further information is available online: <http://www.scribd.com/doc/136278450/Brick-Township-Master-Plan#scribd>.

Open Space

The Township of Brick recognizes the need to preserve open spaces for conservation and recreational purposes. Conservation of environmentally sensitive areas provides protection from flooding, provides food and shelter for endangered and threatened species protects surface and drinking water quality and quantity and provides for better planning and watershed protection. Presently, the Township has approximately 3,000 acres of preserved lands owned by the Federal, State, County, Municipal governments and non-profit entities.



The origin of the Open Space Preservation initiative in Brick Township began as a series of recommendations in the 1981 Natural Resource Inventory (NRI). As a part of the NRI, a Green Belt Study was produced to identify undeveloped lands in the Township, to inventory the surface and subsurface conditions, soil types, vegetation, fish and wildlife, and as a result of the inventory, make recommendations concerning the potential for preservation of the subject areas. These areas were prioritized by value, both monetary and ecological. The process for preservation not only looked at fee simple purchase but also the utilization of the acquisition through development rights, conservation easements and other options resulting in less costly alternatives. The municipality took action from these recommendations to preserve open spaces to provide areas of passive and active recreation.

The purpose of the initial preservation campaign was to preserve sensitive areas for open space, recreation and/or preservation, while still allowing for growth through zoning and responsible planning. These purposes include the following:

- a. To encourage municipal action to guide the appropriate use of or development of all lands in the Township in a manner which will promote the public health, safety and general welfare;
- b. To secure safety from fire, flood, panic and other natural and man-made disasters;
- c. To provide adequate light, air and open space;
- d. To promote the establishment of appropriate population densities and concentrations that will contribute to the well-being of persons, neighborhoods and communities, and the preservation of the environment;
- e. To provide sufficient space in appropriate locations for a variety of residential, recreational, commercial and industrial uses and open space, both public and private, according to their respective environmental requirements in order to meet the needs of all Brick Township citizens.
- f. To protect water supply sources through preservation and management of headwaters, aquifer recharge and drainage areas.

As a result of the initial plan, Brick began to acquire property through Green Acres funding, private non-profit partnerships and partnerships with other agencies such as the U.S. Department of Interior, Fish, Game and Wildlife Service and Ocean County. Since the 1981 plan, many parcels have been preserved. Since 1994, more urgency has been placed on preserving parcels to provide contiguous areas of protection for surface water, ground water, drinking water quality, wildlife protection, and flood plain management and to preserve areas subject to significant development pressures. These areas have been preserved through Green Acres funding, partnerships with other agencies and non-profit organizations as well as fee simple purchases.

Goals and Policies

Brick Township has a tradition of the protection of natural resources as a means for providing a better quality of life for its residents. To that end, we have continued to pursue the preservation of sensitive areas and the acquisition of appropriate recreational areas into the 21st century.

Goals

The main goals and policies of the Open Space and Recreation Plan have been designed to reflect this philosophy.

They include the following:



- To enhance, preserve or restore unique natural areas or land types
- Protect the natural and historic resources for the maintenance and enhancement of the quality of life in Brick Township
- Preserve land and natural areas in order to provide an aesthetically pleasing environment
- To reduce potential of inappropriate development and protect environmentally sensitive areas from land use shifts
- To reduce the future impacts of development in inappropriate areas on traffic congestion, stormwater management and floodplain protection
- To maintain recreational and conservation areas to be useable and enjoyed by all citizens
- To protect potable water supply sources and the drainage areas that supply them
- To provide open space and recreation opportunities on an equal and accessible basis for all citizens
- To protect stream corridors with adequate buffers
- Acquire environmentally sensitive properties threatened by inappropriate development.
- Acquire lands to “fill in” areas where some preservation exists. This will provide contiguous preservation areas along stream corridors for floodplain management, water quality protection, non-point source pollution control, and stream buffering and wildlife corridors.

We also recognize that conserving open space makes great economic sense. The economic benefits of conservation include:

- Enhanced quality of life in the vicinity of the protected area
- Enhanced property values in the vicinity of the protected area
- Avoidance of costs that accompany development that are ultimately paid by the taxpayer for schools, police, fire, emergency services, sewage, trash collection and roads
- Relatively low costs of maintaining public lands, particularly passive recreation
- Potential enhancement of outdoor recreation and ecotourism
- Improved bond ratings for communities having a conservation plan

Policies

- Provide accurate, current information on the supply, demand and need for outdoor recreation facilities and
- open space in Brick Township
- To encourage designated conservation areas in development applications, where appropriate



- To foster partnerships with other government agencies and non-profit groups towards the preservation of open spaces
- To utilize a consistent funding source for the preservation, acquisition and maintenance of recreational and conserved areas through an Open Space Tax
- To provide consistency between the Master Plan and all other planning documents for conservation and preservation purposes
- To preserve properties in an orderly, planned, contiguous fashion to create protected greenways
- To provide adequate walking and bicycling trails along greenways for citizen recreation and utilization of preserved area
- To protect water supply sources so that they may be continued to be used as a potable water supply source

Inventory

Through GIS mapping, all existing conservation and recreation properties were identified in the Township. These areas were used as a basis for identifying available properties adjacent to or in the vicinity of the existing preserved areas. These available properties were then prioritized by size, existence of structures, zoning, ecological value and current development pressures.

Other public and private land and waters maintained as conservation areas dedicated to the preservation of natural and cultural resources are currently maintained by the municipality in numerous locations. Over the past ten years, many of these areas have been the target of preservation initiatives. Parcels have been preserved, as funding became available, resulting in a “puzzle piece” effect. It is the goal of this plan to include those areas still available for preservation to “fill in” those missing preservation areas. Specific planning areas have been identified in this plan to include all areas worthy of preservation to provide contiguous, preservation areas akin to a greenway plan.

Priority Acquisition Plan

The municipality has benefited from the relationships developed with NJDEP, Green Acres program, Ocean County Freeholders, the Izzack Walton League – Save Barnegat Bay and the Department of Interior, Edwin B. Forsythe Wildlife Refuge program. It will continue to foster these relationships and looks forward to the preservation of remaining critical environmental areas in the Township.

The Priority Acquisition goals include the continued fostering partnerships to achieve acquisition of the properties identified in the Open Space and Recreation Plan in addition to utilizing the Open Space tax to purchase lands.

Preservation Goals

The Township, through various partnerships, has successfully preserved over 3,000 acres of recreational and open space lands. Although this is a very impressive fact, more still needs to be accomplished. Through the Open Space and Recreation Plan submitted to the Green Acres program and additional funding sought at the New Jersey Environmental Infrastructure Trust, approximately 2,000 acres of additional lands are planned for preservation over the next five years. These areas include those planned preservation areas identified above in



addition to infill areas where preservation efforts can provide contiguous areas for wetland, habitat and floodplain protection.

In reviewing the abovementioned plan for the purpose of this document, it is important to note that the amount of acreage identified for preservation includes all environmentally sensitive lands that may not be developable due to current environmental regulation such as CAFRA, the NJ Freshwater Wetlands Act or current zoning laws.

Water Quality Protection

The Township's drinking water supply is provided through wells and surface water from the Metedeconk River. These water supplies must be protected from non-point source pollution through the process of education and land conservation. Preserving properties that drain to the river will ensure the quality of the water supply source for future generations. Preservation of these areas will act as filtration buffers for pollution sources, aquifer recharge areas for well supply sources and floodplain protection from eroding shorelines.

Conservation

Vacant, privately owned and privately owned, underutilized parcels were identified in the plan inventory. These parcels have been identified as potential preservation areas depending on their proximity to preserved areas and the intensity of the development on the individual parcel. Some of the parcels are appropriate for subdivision to provide for consistency with zoning. These parcels will also provide additional acreage to existing conservation areas. Other vacant, privately owned parcels may add to already preserved areas to provide contiguous areas for water supply, wildlife, and water quality protection. In addition, those areas identified, as proposed conservation areas will support community objectives for buffers along stream corridors, stormwater protection, contiguous greenways, floodplain protection and areas of passive recreation through the use of walking and biking trails.

Parcels of two acres or more with small residential structures and accessory structures on them were identified as Privately Owned, Underutilized and parcels of two acres or more with no structures on them were identified as Privately Owned, Vacant. After these parcels were identified, they were prioritized by ecological value and vicinity to other preserved areas. Those parcels, which were identified as having preservation potential, were added to the Proposed Conservation category to provide a more generalized plan.

Areas located along stream corridors including the North and South Branches of Beaver Dam Creek, Kettle Creek, Reedy Creek and the South Branch of the Metedeconk River will provide potential areas of access to inland and coastal waters for passive recreation purposes. These areas will also protect associated inland and coastal wetlands from surrounding developments through providing significant stream buffer areas. These buffer areas will also provide wildlife mobility corridors and protection from non-point source pollution to the receiving waters.

Zoning

Zoning regulation is a tool used by local governments to provide direction for the orderly and coordinate execution of development. Zoning can also be used to protect environmentally sensitive areas. The Township of Brick has zoned many of the parcels targeted for development as R-R –1 zone. R-R Zoning specifies rural-residential, low density, large lot development. Areas along stream corridors within the township have been zoned as Rural Residential development for many years. This large lot zoning restricts densely developed areas within these zones and provides for buffers to waterways. In addition, many of these areas have wetland areas associated with them, providing for wildlife and water quality protection. The yard, area and building requirements in the R-R Zones allow for a minimum of 40,000 square foot per building lot or approximately one acre.



Permitted uses in the R-R-1 zone include:

- A. Customary and conventional farming operations
- B. One-family dwellings
- C. Public and accredited private schools and institutions which may be conducted as a business
- D. Municipal parks, playgrounds and other such municipally owned buildings and uses as are deemed appropriate and necessary by the Township Council or the Township of Brick.

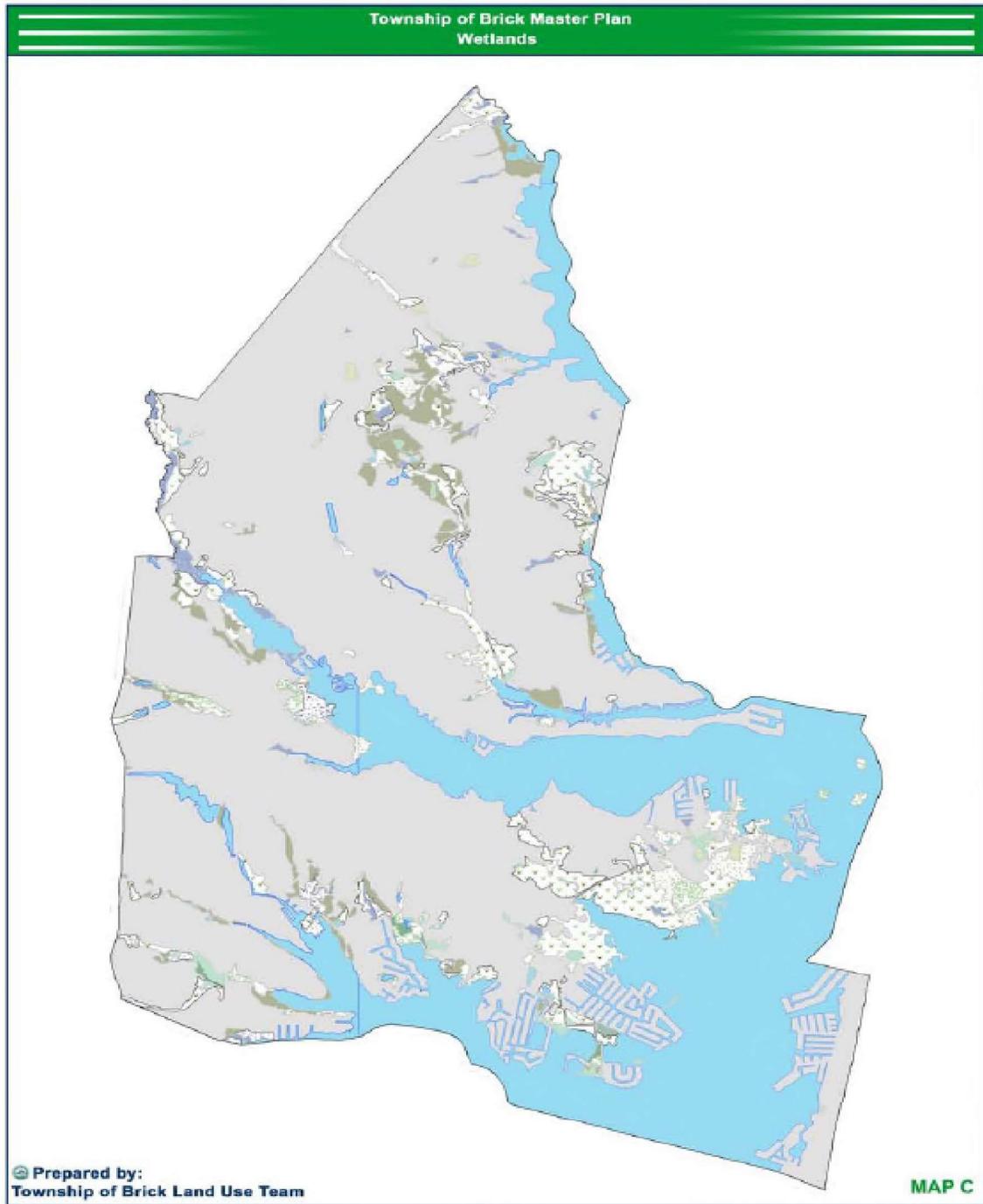
Analysis

The preservation of the additional acres of open space identified by the Township will have numerous benefits including;

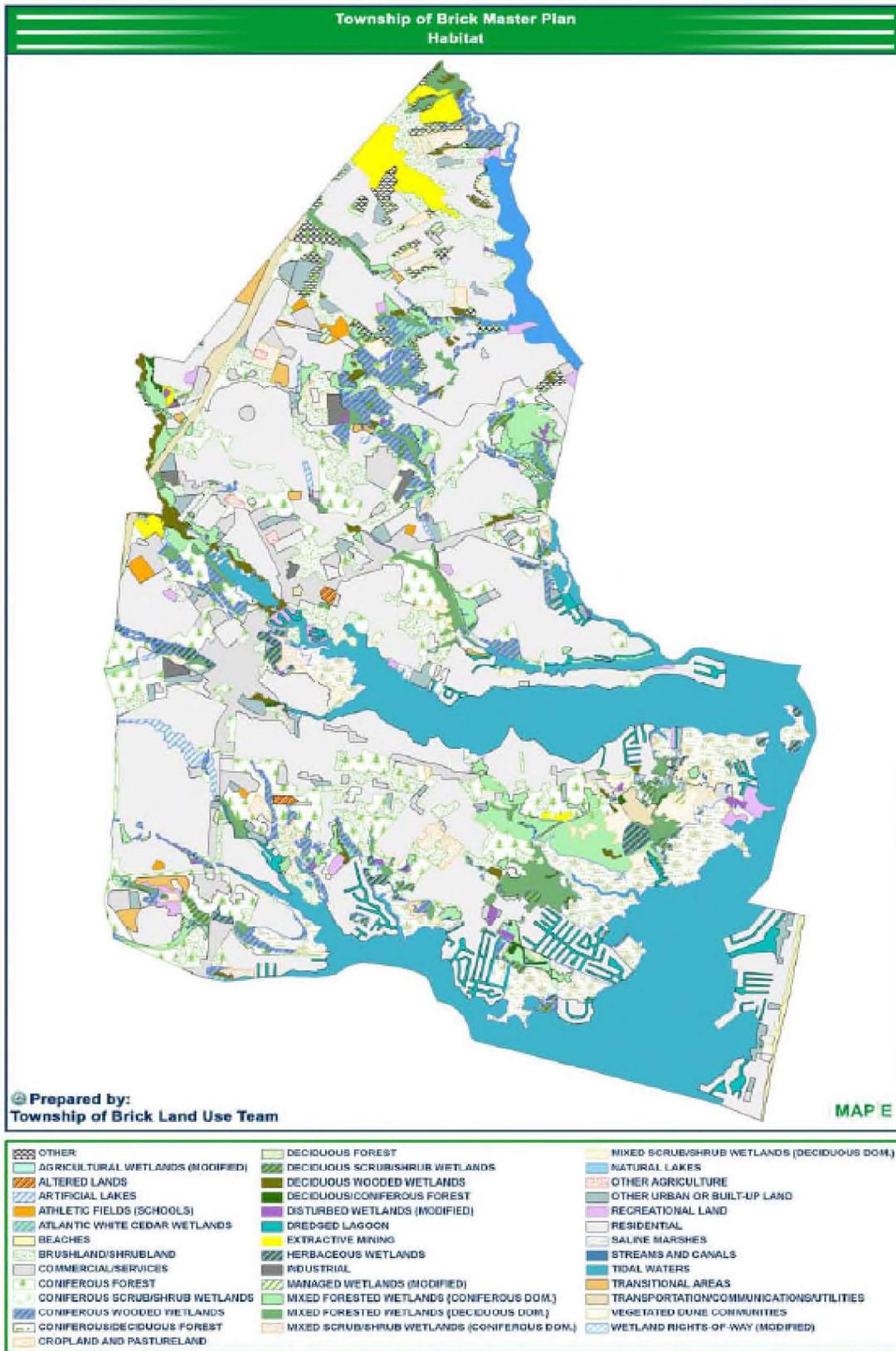
- contiguous areas of wildlife habitat,
- floodplain protection,
- aquifer protection,
- surface, ground and drinking water quality and quantity protection,
- watershed protection,
- more recreational areas
- buffers for non-point source pollution controls

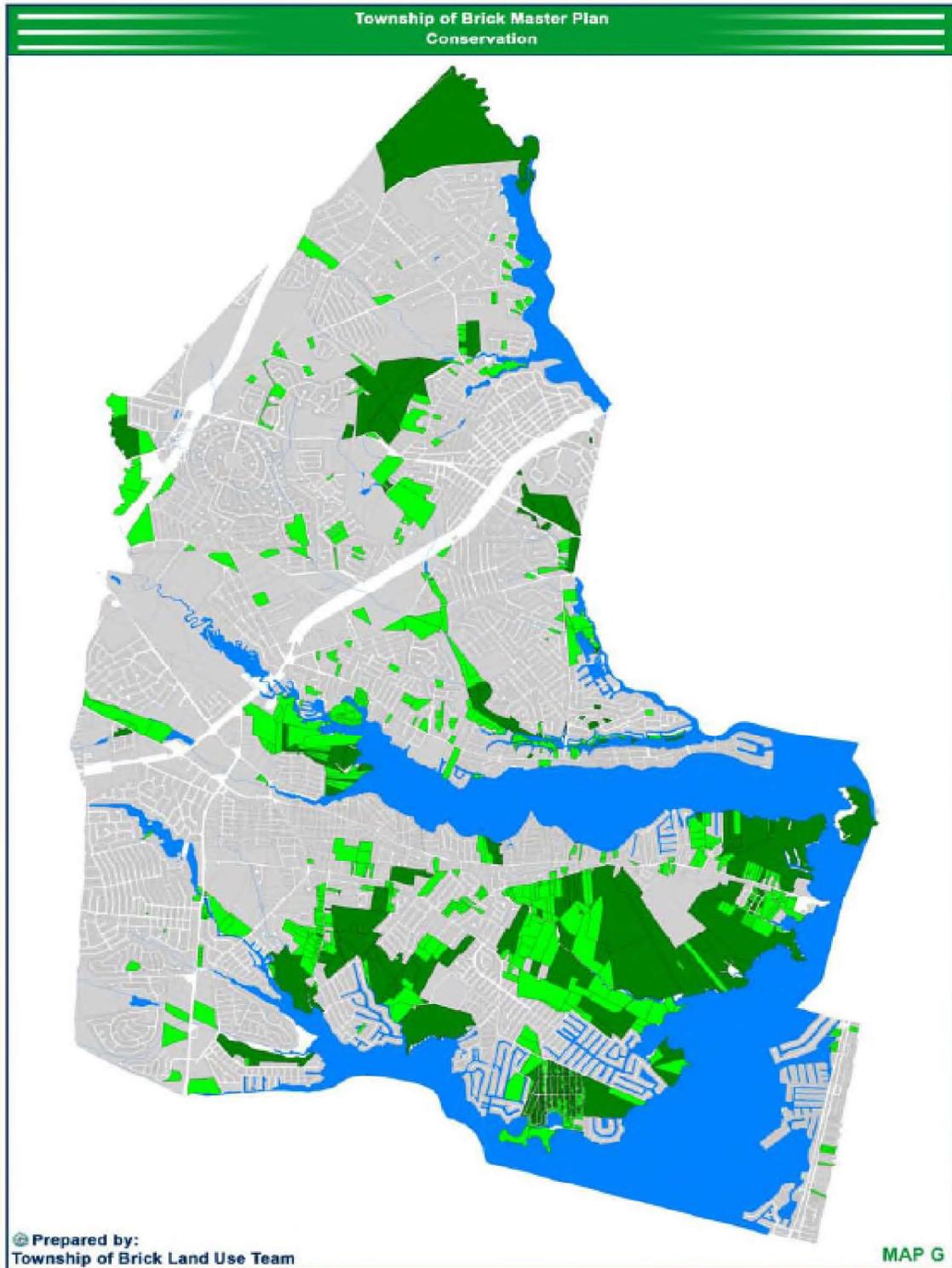
In addition, the preservation of these areas will reduce the amount of developable land that when developed, place a drain on the local tax base, contribute to traffic congestion and increase non-point source pollution.

Below are maps indicating the habitat, conservation and wetland areas to provide guidance in ongoing conservation efforts.



AGRICULTURAL WETLANDS (MODIFIED)	MIXED FORESTED WETLANDS (CONIFEROUS DOM.)
ARTIFICIAL LAKES	MIXED FORESTED WETLANDS (DECIDUOUS DOM.)
ATLANTIC WHITE CEDAR WETLANDS	MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)
CONIFEROUS SCRUB/SHRUB WETLANDS	MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)
CONIFEROUS WOODED WETLANDS	NATURAL LAKES
DECIDUOUS SCRUB/SHRUB WETLANDS	SALINE MARSHES
DECIDUOUS WOODED WETLANDS	STREAMS AND CANALS
DETRITED WETLANDS (MODIFIED)	TIDAL WATER
HERBACEOUS WETLANDS	UPLANDS
MANAGED WETLANDS (MODIFIED)	WETLAND RIGHTS-OF-WAY (MODIFIED)







1.3 MASTER PLAN GREEN INFRASTRUCTURE ELEMENT

The Township of Brick has adopted a Green Building and Sustainability Element to the Master Plan to encourage sustainable development in the community.

1.4 ENHANCED WATERSHED MANAGEMENT PLANS

The Township of Brick has been an active participant in the Meteteconk Watershed Plan.

1.5 PLAN INTEGRATION

To ensure full integration of the natural beneficial functions plans, two actions included in the 2015 Floodplain Management Plan action table involve coordination of actions identified in the Township of Brick Master Plan. There is a significant overlap in the goals and objectives of these plans, and coordinating their implementation will help to ensure the success of all. The plan maintenance strategy identified in Section 7 will enhance the Township's abilities to coordinate these plans.