

VI. Natural Resources

INTRODUCTION

Woonsocket's natural resources provide a variety of health, public safety, and environmental benefits, which are critical to building the resiliency of the City to a variety of challenges. Whether those are environmental, economic, or social challenges, having a strong natural environment will enable Woonsocket to weather whatever storms may come. From improving air and water quality, to providing spaces for people to recreate and interact with nature, to reducing flood damage from increasingly frequent and intense storms, ensuring the maintenance and protection of these natural resources will benefit the environment and the people of Woonsocket.

Vision for Natural Resources

Over the next 20 years, Woonsocket will invest in the protection and improvement of its natural resources to support the creation of spaces that are safe and accessible, in addition to investing in sustainability and resiliency to coming challenges.

For greater detail on data and statistics related to natural resources, see the Natural Resources chapter of the Baseline Report of the Comprehensive Plan.



Booth Pond Conservation Area (Booth Pond Community Action)

WHAT WE HEARD

Based on community surveys and other methods of public engagement, residents want the City to focus on:

- Improving the health of and access to the Blackstone River.
- Reducing litter in natural resource areas.
- Making green spaces safe and accessible to all members of the community.
- Greening the City by planting more trees and creating and protecting green spaces/parks.
- Redeveloping vacant and polluted properties in the City.
- Reducing litter and trash pollution in the community.
- Increasing emergency preparedness for severe/extreme weather.

“If we want more people to enjoy our parks and the bike path, we need to keep them clean and functional.” – Survey respondent

“There is always room for more trees. It would be great if there was a beautification effort for the city.” – Survey respondent

PROTECTING, IMPROVING, & EXPANDING OUR NATURAL RESOURCES

Natural resources in Woonsocket provide substantial benefits for both the community and local ecosystems. From enhancing resiliency to natural hazard events to providing refuge for wildlife, ensuring the maintenance and protection of these resources is essential to ensure a sustainable future for the next generation of residents.



Left: The Blackstone River in Woonsocket (RocketRoberts). Right: Families fish together during the Early Intervention 3rd annual family fishing day at Cass Park in Woonsocket (Community Care Alliance).

IMPROVING & PROTECTING THE BLACKSTONE RIVER

The Blackstone River watershed's collective streams, ponds, and wetlands provide habitat for many aquatic organisms, including over 30 species of freshwater fish, and support one of the largest freshwater wetlands in Rhode Island. As one of the major birthplaces of the American Industrial Revolution, the Blackstone River played a significant role in the development and prosperity of the Southern New England region. However, over a century of industrial development significantly altered the hydrology and ecology of the Blackstone River, leading to substantial environmental degradation. As a result of the efforts and investments made by municipalities, non-profit organizations, state, and federal agencies, the Blackstone River watershed has seen substantial environmental improvements.

Yet even with these substantial improvements, more work is needed to fully restore the River and to ensure a healthy and resilient watershed. Like many urban communities, Woonsocket is challenged by significant water and wastewater infrastructure demands that can be difficult to meet with already stretched resources, leading to negative impacts for the Blackstone River. With major investments and repairs needed to meet state and federal requirements, all while providing affordable, consistent services to residents, The City needs considerable planning and funding resources to tackle these issues piece by piece. A major focus of these efforts will need to include upgrades to the Regional Wastewater Treatment Facility and furthering Citywide stormwater best management practices to capture and retain water during flooding events, as well as reduce the amount of polluted runoff entering local waterways. With these collective investments, the City can begin to improve the health of the Blackstone River, making it a safer place to recreate and making it a point of pride for the City. For more information on wastewater, see the Services & Facilities Element of this Plan.

Residents are overwhelmingly in favor of improving and protecting the Blackstone River. In the community survey, 88% of respondents said, "Protecting and improving the water quality of the Blackstone River and its tributaries" is "Important" or "Very Important."

What is Stormwater?

When rain falls on our streets or when large piles of snow melt in driveways and parking lots, the water that runs off into the storm drain, known as "stormwater," carries a surprising amount of pollution. These storm drains, often built decades ago, carry the polluted runoff directly to rivers and streams and, even in small storms, the results can be unhealthy for wildlife and people. Over time, these repeated doses of pollution can do long-term damage to the ecosystem and even cause closures of swimming and boating areas.

BETTER MAINTENANCE AND ENHANCEMENT OF GREEN SPACES

The City has approximately 175 acres of conservation lands within its limits. These spaces include Booth Pond, Iron Rock Brook, Rhodes Avenue Conservation Area, and Wood Estate. Conservation lands are important resources for a variety of reasons, including that they can provide passive recreation opportunities, offer refuge for local wildlife, improve air quality, increase the infiltration of rainwater during storm events to reduce flooding, and offer shade benefits during hot summer months. These areas are invaluable and irreplaceable resources that bring environmental, social, and economic benefits to a community.

It will be important for the City to continue to build on its network of parks and natural areas, especially those along the Blackstone River, to increase water retention during significant rainstorms to reduce local flooding. Residents are generally in favor of expanding conservation areas in Woonsocket. In the community survey nearly 2/3 of respondents said, "Pursuing additional land to be preserved for conservation purposes" is "Important" or "Very Important." The City should continue to pursue open space acquisition and should prioritize acquisition and preservation of properties of high conservation value that abut existing open space properties to support the establishment of wildlife corridors. The City should also emphasize equity in open space and conservation expenditure by targeting the City's densely developed, low-income neighborhoods. To increase the visibility of open space properties, the City should evaluate developing additional open space and conservation area support facilities to enhance personal safety and ease of use. Residents are strongly in favor of improving local conservation areas. In the community survey, 80% of respondents said, "Better maintenance and protection of conservation areas" is "Important" or "Very Important."

Enhancing existing conservation lands, forested areas, and tree resources in Woonsocket should also involve strengthening existing regulations, for example adding provisions requiring existing vegetation on properties that are proposed for development to remain to the greatest extent practicable. Residents are strongly in favor of supporting and expanding tree resources in Woonsocket. In the public policy survey, nearly 3/4 of respondents said, "Planting and better maintaining street trees throughout the City" is "Important" or "Very Important." To support an increase in tree resources, the City should consider establishing a system for residents to request the planting of trees on public properties.



Cass Park in Woonsocket (City of Woonsocket).

INVESTING IN THE CITY'S BROWNFIELDS PROGRAM

As the City and surrounding communities developed historically, many important natural resources were lost or significantly harmed to the point where they could no longer provide the same ecosystem benefits. We see these impacts at our old industrial or commercial sites known as “brownfields” where future use is affected by real or perceived environmental contamination. Woonsocket, like other cities, has several of these sites and has been working steadily over the years to clean them and put them back to use.

The City's Brownfields Program, managed through the Department of Planning & Development is committed to remediating contaminated brownfield properties by identifying potential brownfield sites, assessing contamination, developing remediation strategies, and cleaning the sites up for future development. The City regularly applies for brownfields grants from the U.S. Environmental Protection Agency (USEPA) and the RI Department of Environmental Management (RIDEM).

The City must be diligent in continuing to apply for brownfields grant funding through the USEPA, RIDEM, and other sources on a continuous basis. Developers should be required to assess current and former environmental risks associated with brownfields properties and provide narratives of how risks are managed. To ensure that remediation efforts are sustained and implemented strategically, the City should continue to update its Brownfields Inventory when necessary to ensure it remains a useful tool. The City should also work towards developing a systematic outreach program for the owners of suspected or documented brownfields sites to educate them about the benefits, incentive programs, and funding mechanisms available for remediation.

Residents are overwhelmingly in favor of improving brownfields in Woonsocket. In the community survey, over 85% of respondents said, “Investing in the environmental cleanup of old industrial buildings and ‘brownfields’” is “Important” or “Very Important.”

Brownfield Remediation and Redevelopment Spotlight



Seville Dye in Woonsocket prior to redevelopment (Andrew Metcalf, Patch).

In 2020, Seville Dye on 117 & 229 First Avenue, Woonsocket received \$292,800 for redevelopment from the RIDEM Brownfields Remediation and Economic Development Fund. A vacant site currently owned by the City, the property is planned for a 1.5 Mega-watt solar array.

BUILDING SUSTAINABILITY & RESILIENCY INTO OUR COMMUNITY

As Woonsocket continues to develop and progress, it is critical to ensure that our community passes down well-functioning systems, resilient infrastructure, and a healthy environment to the next generation.

INCREASE OPPORTUNITIES FOR RESIDENTS AND BUSINESSES TO REDUCE TRASH GOING TO LANDFILLS

Like many communities, Woonsocket has been challenged by the cost, logistical, and environmental challenges of managing waste flows responsibly. Issues such as litter are hardly a unique problem, but solving this issue can be a challenge. Trash collection and litter in green spaces were some of the most commonly mentioned issues by the public related to City services.

To reduce trash going to landfills and encourage proper disposal of waste, it is imperative that the City continues to explore new services and expand existing services that improve recycling rates and reduce the costs of waste being landfilled (e.g., providing more trash

receptacles at open space properties and providing more recycling bins per household). In addition, it will be beneficial for the City to fully evaluate options to remove food waste from the local waste stream through composting services and tools, and provide opportunities and incentives for the reuse of items that might otherwise be thrown away.

Residents are strongly in favor of improving local waste management systems. In the public policy survey, over 3/4 of respondents said, “Increasing opportunities for residents/business to reduce trash going to landfill” is “Important” or “Very Important.”



Woonsocket High School students volunteer to help clean up local parks (Woonsocket Recycles).

PROTECT NEIGHBORHOODS, BUSINESSES, & INFRASTRUCTURE FROM FLOODING, STORMS, AND OTHER HAZARDS

Woonsocket is exposed to several natural hazards that vary in potential intensity and impact. The City’s top hazards include major storms such as hurricanes, Nor’easters, and winter storms, flooding along rivers and streams, and epidemics. These hazards and vulnerabilities have direct impacts on residents, critical infrastructure, and community assets.

The City updated its Hazard Mitigation Plan in 2018 through the Woonsocket Hazard Mitigation Plan Working Group. In 2020, the City also participated in a Municipal Resilience Program workshop to further identify key issues. To address the highest risks, the City put forth several goals and specific mitigation actions. The goals include protecting the lives and property of the City of Woonsocket’s residents, protecting the City’s critical facilities and infrastructure, and protecting the City’s cultural, historical, natural, and economic resources. To meet these goals, it is imperative that as new hazard data become available, this data should be incorporated into local decision-making, particularly as it relates to infrastructure and operations to deliver services to residents. In addition, the City must continue to evaluate local land development policies and regulations to ensure that they encourage

resiliency to a changing environment and result in sustainable public and private investments that can withstand increasingly frequent natural hazard events.

Becoming a resilient City requires planning on the part of individuals, businesses, and the community as a whole. While natural hazard events impact everyone, some portions of the community are more vulnerable to these challenges. Factors that contribute to these vulnerabilities include reduced mobility, lack of access to services (including health care, transportation, education, job opportunities), chronic health conditions or mental illness, and poor living conditions. Members of these populations are less likely to be aware of and prepared for, more likely to be impacted by, and less capable of recovering from natural hazard events. Targeted efforts need to be made to ensure vulnerable populations are aware of available resources and involved in resiliency decision-making processes. In addition, first responders should be equipped to mobilize and meet needs as they arise during emergency events.

Residents are generally in favor of improving local resiliency to natural hazard events. In the community survey, nearly 2/3 of respondents said, “Protecting neighborhoods, businesses, and infrastructure from flooding, storms, and other hazards” is “Important” or “Very Important.”

GETTING IT DONE

GOAL VI-1: Protect and improve the quality of the City’s natural environment.

POLICY VI-1.1: Support efforts to improve the water quality of the Blackstone River and its tributaries.

ACTION VI.1.1.a: Continue to seek funding to complete necessary upgrades and improvements to the water and wastewater treatment facilities.

ACTION VI.1.1.b: Support the efforts of organizations working to make the Blackstone River fishable and swimmable.

ACTION VI.1.1.c: Educate residents about the impacts of fertilizers, lawn chemicals, pesticides, and herbicides on the Blackstone River and other local waterways and promote and encourage the use of alternative environment-friendly options. Evaluate developing a policy to minimize the use of such materials on City owned lands.

ACTION VI.1.1.d: Educate residents, property owners, and businesses about the benefits and different ways of managing stormwater on their properties. Promote the use of rain barrels, rain gardens, and permeable pavers for driveways and walkways, as well as the importance of cleaning up pet waste,

etc. Consider options for bulk purchase of rain barrels, permeable pavers, and other such items to sell at a reduced rate or provide free of charge to residents.

ACTION VI.1.1.e: Encourage nature-based solutions wherever practicable to manage stormwater as part of public projects and investments.

ACTION VI.1.1.f: Continue involvement in regional and watershed-based collaborations to help meet common stormwater management and water quality goals and objectives.

ACTION VI.1.1.g: Continue to evaluate standards for stormwater management in local regulations to ensure that best practices are required in proposed development and redevelopment projects.

ACTION VI.1.1.h: Evaluate updating parking regulations to shift away from parking minimums to parking maximums to reduce the size of new and redeveloped parking lots. Evaluate revising regulations to ensure all parking projects meet stormwater and green infrastructure requirements.

POLICY VI-1.2: Foster recognition and appreciation of the Blackstone River as a valuable resource.

ACTION VI-1.2.a: Support projects that achieve this policy such as river walkways, scenic overlooks, education and interpretation programs, fishing piers, and canoe launches.

POLICY VI-1.3: Enhance and increase stewardship of the City's conservation lands, forested areas, and tree resources.

ACTION VI-1.3.a: Require existing trees over a certain caliper to be identified on subdivision plans/surveys going before the Planning Board.

ACTION VI-1.3.b: Add a provision to Section 8 of the Subdivision Regulations requiring existing vegetation to remain to the greatest extent practicable.

ACTION VI-1.3.c: Establish a system for residents to request the planting of trees on public properties.

POLICY VI-1.4: Continue to maintain an active Brownfields Program as a vehicle for investigating, cleaning up, and redeveloping contaminated sites.

ACTION VI-1.4.a: Continue to apply for brownfields grant funding through the USEPA, RIDEM, and other sources on a regular and continuous basis.

ACTION VI-1.4.b: Continue to update the City's Brownfields Inventory when necessary to ensure it remains a useful tool.

ACTION VI-1.4.c: Require developers to assess current and former environmental risks associated with the property and provide a narrative of how risks are managed and addressed as part of the subdivision process.

ACTION VI-1.4.d: Develop a systematic outreach program for the owners of suspected or documented brownfields sites to educate them about the benefits, incentive programs, and funding mechanisms available for brownfields remediation.

GOAL VI-2: Preserve and protect significant undeveloped and environmentally sensitive areas.

POLICY VI-2.1: Pursue open space acquisition and appropriate management of open space lands. Prioritize acquisition and preservation of properties of high conservation value that abut existing open space properties.

GOAL VI-3: Increase visitation, quality, and the appropriate use of the City's conservation areas and open space lands.

POLICY VI-3.1: Improve public knowledge and awareness of the City's conservation areas and open space lands.

POLICY VI-3.2: Promote equity in open space and conservation expenditure by targeting the City's densely developed, low-income neighborhoods.

POLICY VI-3.3: Develop open space and conservation area support facilities to enhance patronage, personal safety, and ease of use.

GOAL VI-4: Decrease the amount of litter and trash in the City.

POLICY VI-4.1: Evaluate opportunities for residents and businesses to reduce trash going to landfills.

ACTION VI-4.1.a: Explore new services or expand existing services and programs that improve recycling rates and reduce the costs of waste being landfilled.

ACTION VI-4.1.b: Study all options for removing food waste from the local waste stream.

GOAL VI-5: Improve the resiliency of City residents and businesses to natural hazard events.

POLICY VI-5.1: Enhance efforts to ensure that vulnerable populations in the City are prepared for potential hazards.

ACTION VI-5.1.a: Develop relationships with key community stakeholders and organizations to create a network of support and communication, as well as a process to collaborate on decision-making around resiliency.

ACTION VI-5.1.b: Prioritize vulnerable communities for installations of green infrastructure and other strategies that reduce and minimize the impacts of natural hazards.

ACTION VI-5.1.c: Work with local community organizations and nonprofits to develop and perform public outreach and raise awareness within vulnerable populations to assist and prepare them for natural hazards. Erect signs in locations where homeless and vulnerable populations are known to frequent to provide information and resources about where to go and who to call during an event.

ACTION VI-5.1.d: Ensure that heating and cooling centers, and other community facilities and staff, are equipped to help homeless and vulnerable populations.

ACTION VI-5.1.e: Formalize a procedure for alerting, evacuating, and relocating homeless and other vulnerable populations prior to a severe event.

POLICY VI-5.2: Continue to invest in and ensure that existing infrastructure is well-equipped for future natural hazard events.

ACTION VI-5.2.a: Continue to maintain the City's flood control infrastructure to ensure these systems receive certification from the U.S. Army Corps of Engineers and are capable of managing future storm events.

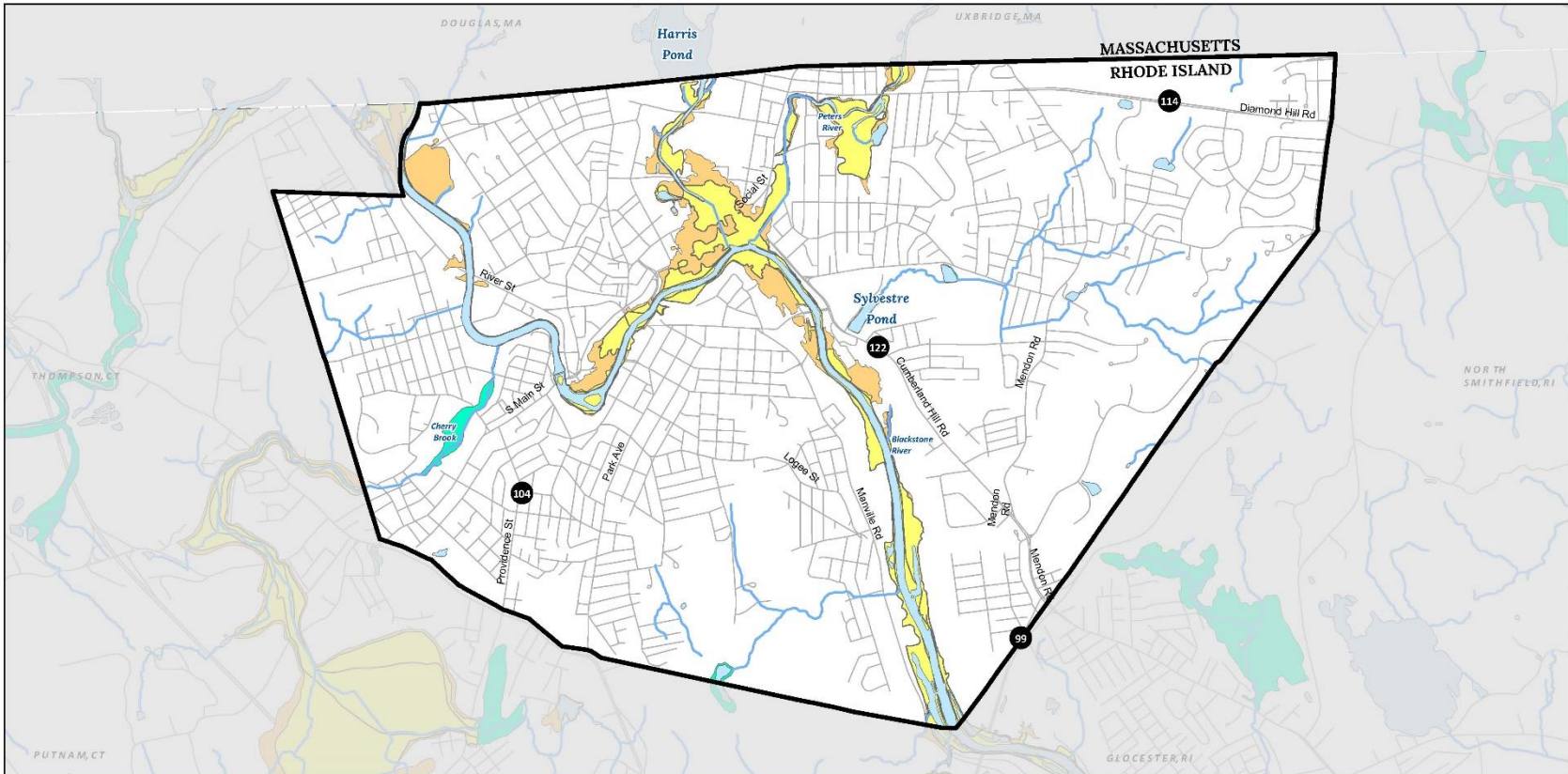
ACTION-5.2.b: Continue to implement the actions of the 2018 Hazard Mitigation Plan (HMP) Update and update the HMP every five years.

POLICY VI-5.3: Continue to plan for the future with natural hazard events in mind.

ACTION VI-5.3.a: Continue to monitor climate data and use this data in land development policy decisions as appropriate.

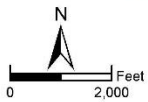
ACTION VI-5.3.b: Evaluate the implementation of resilience design standards for new non-residential and multi-family buildings.

ACTION VI-5.3.c: Develop a program for general public education to increase awareness of natural hazards.



CITY OF WOONSOCKET COMPREHENSIVE PLAN - APRIL 2021

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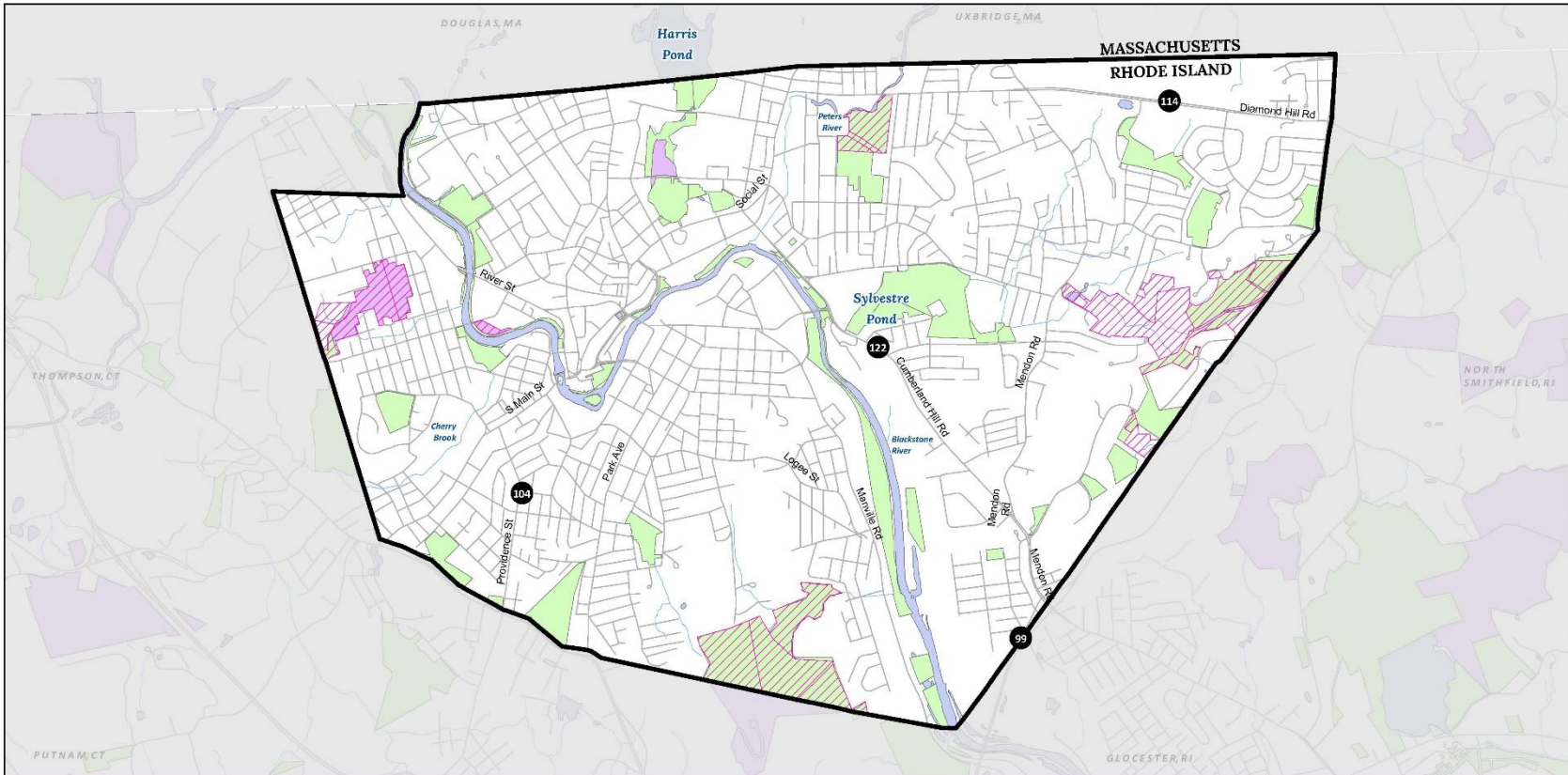


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Exposure to Flooding

- Flood Zone
- 0.2% Annual Chance
 - A
 - AE

*Data Source: RIGIS

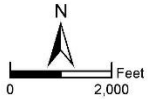


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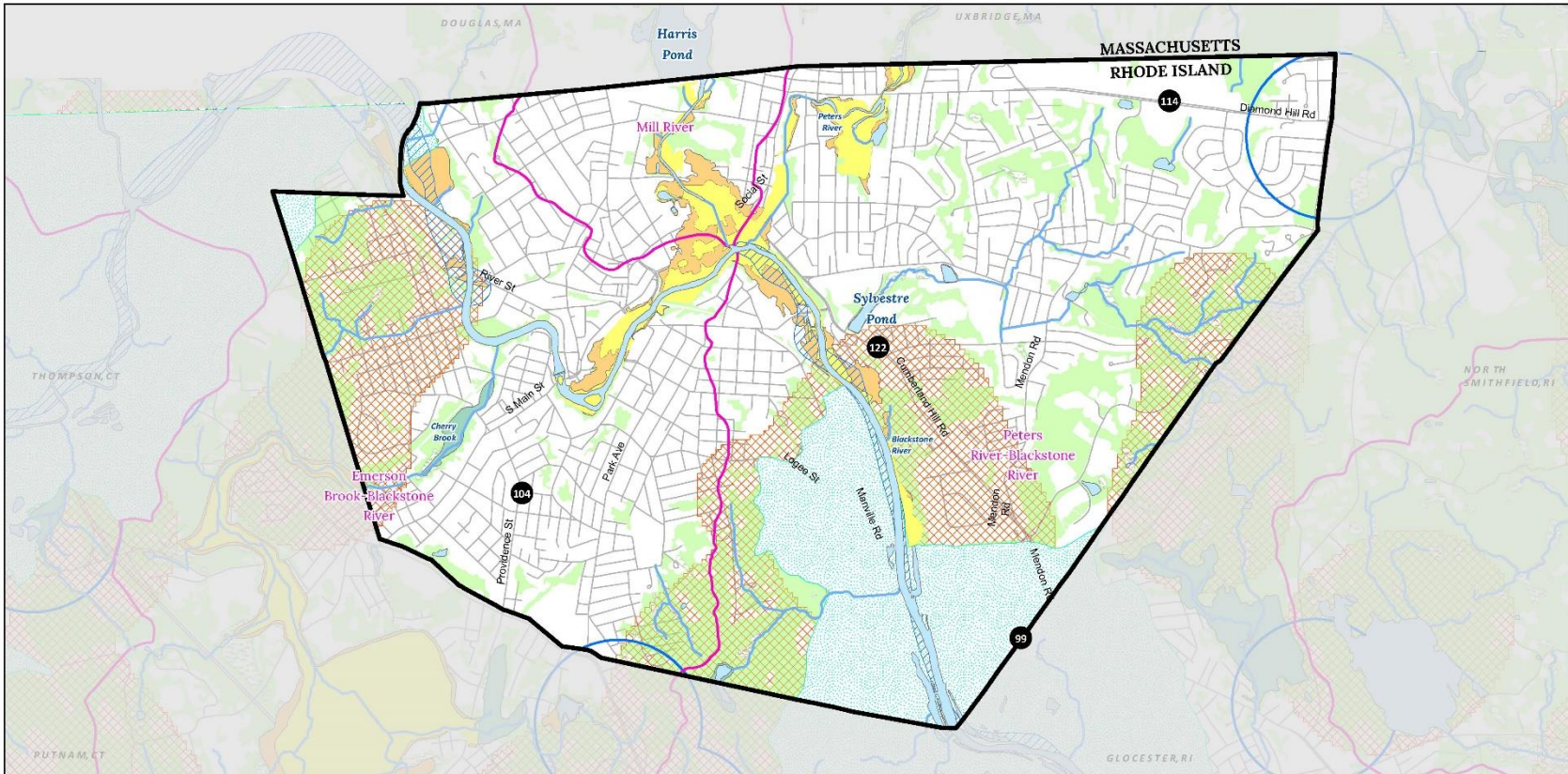


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Conservation Areas

-  Data from City
-  State Conservation Area
-  Local Conservation Area

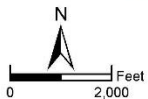
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- Watershed Boundary HUC 12
- Lakes and Ponds
- Groundwater Recharge Areas
- Groundwater Reservoirs
- Wellhead Protection Area Non Community

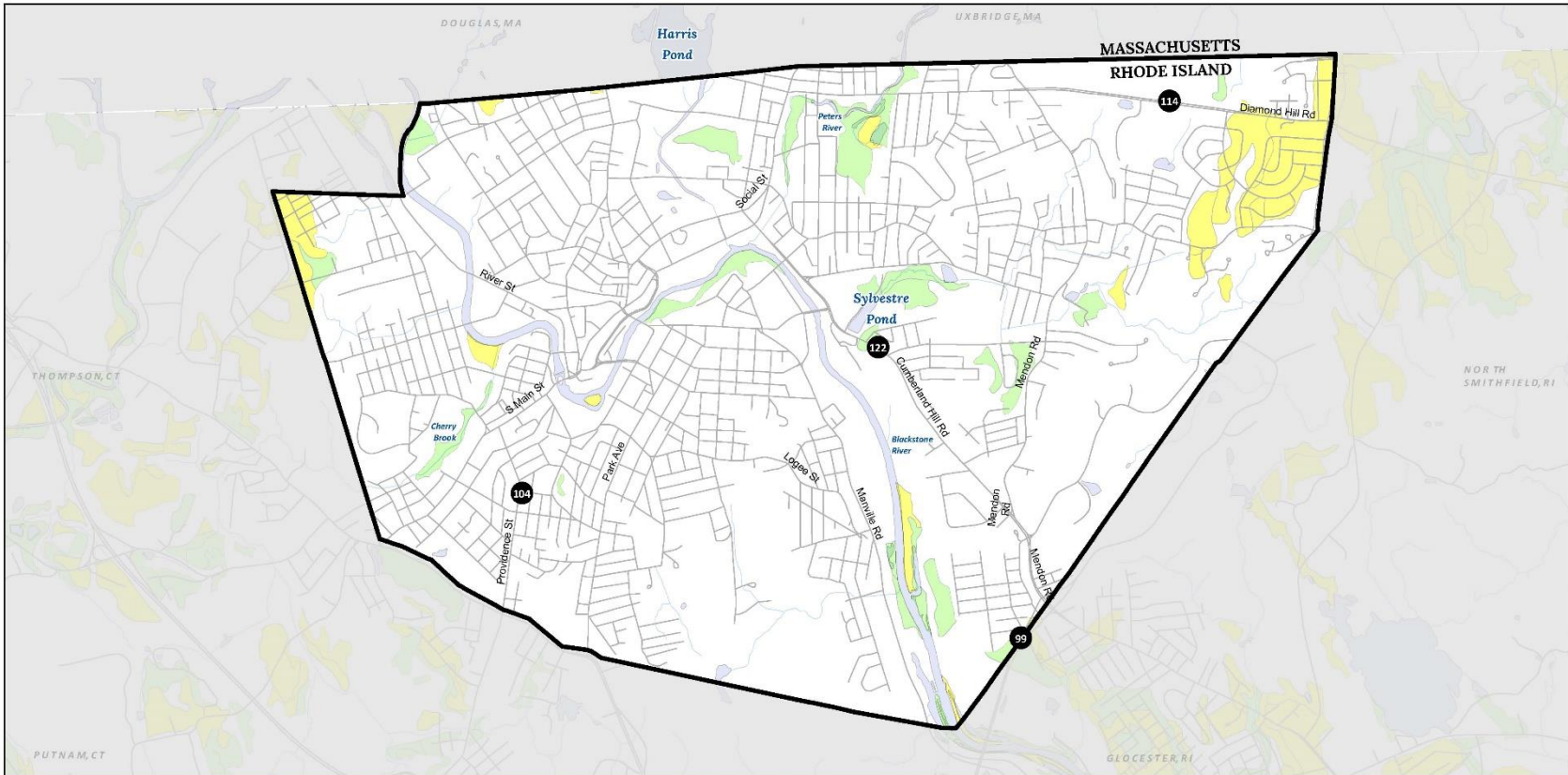
- Natural Heritage Areas
- Flood Zone**
- 0.2% Annual Chance
- Flood Hazard
- A
- AE

Natural Resources

Ecological Community Classification

- Forest
- Wetlands
- Freshwater Rivers and Streams

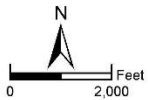
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Valuable Agricultural Soils

-  Not prime farmland
-  Prime farmland
-  Statewide Important

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