

# Bridgeton Township

## Comprehensive Plan Update



Prepared by:



# BCPC

Bucks County Planning Commission

# August 2024

Resolution No. 2024-3

**A RESOLUTION OF THE BOARD OF SUPERVISORS OF BRIDGETON TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA ADOPTING THE 2024 COMPREHENSIVE PLAN UPDATE.**

**WHEREAS**, Bridgeton Township is authorized by Article III, Section 302 of the Pennsylvania Municipalities Planning Code (Act 247 of 1968, as amended) to “adopt and amend Comprehensive Plan as a whole or in parts”; and

**WHEREAS**, the Board of Supervisors, in conjunction with Bucks County Planning Commission have prepared the Bridgeton Township 2024 Comprehensive Plan Update in accordance with the Pennsylvania Municipalities Planning Code (Act 247 of 1968, as amended) ; and

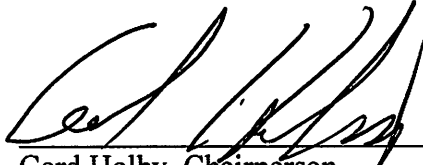
**WHEREAS**, the Bridgeton Township Planning Commission has favorably reviewed the Plan and has recommended its adoption; and

**WHEREAS**, it is the intention of the Board of Supervisors that this Resolution adopting the Bridgeton Township 2024 Comprehensive Plan Update accomplish the foregoing purposes; and

**NOW THEREFORE, BE IT RESOLVED**, that the Board of Supervisors of Bridgeton Township formally adopts the attached 2024 Comprehensive Plan Update.

**RESOLVED AND APPROVED** this 14th day of August 2024.

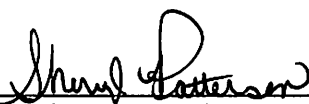
**BRIDGETON TOWNSHIP  
BOARD OF SUPERVISORS**

  
\_\_\_\_\_  
Gard Holby, Chairperson

  
\_\_\_\_\_  
Roger Keller, Vice Chair

  
\_\_\_\_\_  
Michael Lynch, Member

ATTEST:

  
\_\_\_\_\_  
Sheryl Patterson, Secretary/Treasurer

# **BRIDGETON TOWNSHIP 2024 Comprehensive Plan Update**



## **BRIDGETON TOWNSHIP BOARD OF SUPERVISORS**

Gard Holby, Chairperson  
Roger Keller, Vice-Chairperson  
Michael Lynch

## **BRIDGETON TOWNSHIP PLANNING COMMISSION**

C.C. Hopf, Chairperson  
Michael Doyle, Vice-Chairperson  
Terrence Brown  
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## **BRIDGETON TOWNSHIP SECRETARY/TREASURER**

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## Introduction

### WHAT IS A COMPREHENSIVE PLAN?

A comprehensive plan is a municipality's official public document that serves as a policy guide to decision making in a community. It is an explicit statement of a community's future goals and vision, to be used by the Bridgeton Township Planning Commission and the Bridgeton Township Board of Supervisors, as well as private stakeholders and regional, state, and federal entities.

Bridgeton Township is a sparsely populated, rural community on the banks of the Delaware River in Upper Bucks County. Known for its mature forests, rolling hills, significant natural resources, and historic setting, Bridgeton Township is relatively unchanged over the last 50 years. However, township officials have become concerned that—in our interconnected and digital age—more people have become aware of the township's setting and high quality of life, and change to the township has become a greater possibility in the future.

In response to the challenge of staying current with changing community dynamics and activities, the township has decided to update its comprehensive plan. Preparing a comprehensive plan serves two important functions.

First, the planning process allows elected officials, appointed officials, and residents to freely discuss what the future of the township should and could be. This discussion needs to be grounded in facts about the current conditions and elevated by the aspirations of community members about what the character and quality of the community should be in Bridgeton Township.

Second, the plan will form the basis for decision making, priority setting, and local codes and ordinances. By meeting the basic guidelines of the Pennsylvania Municipalities Planning Code, the comprehensive plan will provide guidance in critical areas of community development, community preservation, and quality of life.

The *Bridgeton Township Comprehensive Plan Update (2023)* provides an overview of the current conditions, assets, concerns, and future challenges to the township. Bridgeton Township's first comprehensive plan was adopted in 1968 and amended in 1980. The most recent plan, the *Bridgeton Township Comprehensive Plan (1994)*, focused planning efforts on guiding future development and preservation in the township to enhance the community's quality of life.

As with the 1994 Comprehensive Plan, the purpose of this plan is to understand the current state of Bridgeton Township and to use that information to plan for the future.

The preparation of the comprehensive plan has been initiated and directed by the township's planning commission, which guided plan preparation, and by the board of supervisors, which officially adopted the final plan. Analysis of these opinions can be found in many chapters throughout the plan and were instrumental to the plan's development.

At the core of a comprehensive plan are the values of the community and a vision of a better future. Comprehensive plans should articulate and express these ideas so that future policy choices are clear and consensus-driven.



## ASSETS and CONCERNS

Bridgeton's strengths and weaknesses form the basis for guiding the township's decision making for future development and preservation. The following assets and concerns directly influenced the majority of recommendations for this plan. The community survey asked residents to evaluate the township's best assets—the following were ranked as the top five:

**Rural Atmosphere:** Bridgeton is a sparsely populated, rural community in Upper Bucks County, and respondents noted this characteristic as the township's best asset. Residents hold a desire to preserve this rural character.

**Scenery:** Respondents agreed that the natural scenic beauty of the area was one of the township's top assets.

**Quality of Life:** While this ranking is a subjective measure of wellbeing, residents highly ranked their quality of life in the township and found this to be one of Bridgeton's greatest strengths.

**Natural Amenities:** Bridgeton Township is characterized by extensive woodlands, dramatic steep slopes that stretch across the northern end of the township, and several waterways that flow through the land. These natural resources serve to help maintain the character of a place and enhance the quality of life, which residents have highly ranked.

**Waterways:** From the Delaware River and Delaware Canal to each waterway that meanders throughout the township, these resources are multi-functional assets that provide economic, social, and environmental benefits to Bridgeton.

Along with the best assets in Bridgeton, the community survey asked residents to voice their concerns. The following were among the respondents top five concerns:

**Protection of River Road and Bridgeton Hill Road:** Both state owned roads traverse the township carrying residents and visitors to their destinations. Complaints of increased truck traffic, speeding, and noise have become significant issues for these roads. Both however, are eligible for scenic designation through PennDOT's Byways program, which could further protect these key elements of the township.

**Preserving Rural Quality:** Respondents claimed the rural atmosphere as the top asset for Bridgeton Township. Preserving this quality will be crucial in preserving the integrity and heritage of the township.

**Protection of Waterways:** Natural Amenities was ranked as a top asset for township respondents. The protection of those amenities, such as waterways, is a top issue.

**Water Quality:** Respondents are concerned with water quality—the township should continue work with the Bridgeton-Nockamixon-Tinicum Groundwater Committee to protect the quality and quantity of water resources in the township.

**Groundwater Supply:** The value of the groundwater supply and recharge is significant to any municipality, and respondents in Bridgeton ranked this as a top issue.

## PLAN PRINCIPLES

This comprehensive begins with a discussion of the township's regional character and history, demographics information, land use, and zoning. The remainder of the plan is organized by Plan Principle. These five main principles identify the priorities of the comprehensive plan and shall serve to guide future decisions in the township.

**PRINCIPLE 1. Protect Natural Resources** examines the township's geology, soils, topography and steep slopes, floodplains and wetlands, groundwater, and woodlands. This section discusses the township's natural resources and protection measures.

**PRINCIPLE 2. Preserve Historic and Cultural Heritage** reviews the history of Bridgeton and the importance of historic preservation within the township. Historic resources are discussed and protection measures and tools for preservation are examined.

**PRINCIPLE 3. Manage Mobility** discusses the township's circulation network and different challenges which encompass Bridgeton's circulation characteristics, scenic and rural roads, the township's bridges, and existing and proposed trail facilities.

**PRINCIPLE 4. Protect and Enhance Recreational Resources and Open Space** provides a current inventory of the township's parks, recreation, and open space resources, and evaluates the access and adequacy of the provided facilities.

**PRINCIPLE 5. Foster a Sustainable and Resilient Community** examines the current inventory of community facilities and services in the township, discusses the importance of hazard mitigation planning, and dives into a plan for the future.

## Township Profile



### REGIONAL CHARACTER AND HISTORY

Bridgeton Township is a 6.5 square-mile municipality in Upper Bucks County, situated along scenic River Road (Route 32), adjacent to the notable and federally recognized Wild & Scenic Delaware River, and historic Delaware Canal State Park.

In Bucks County, Nockamixon Township borders Bridgeton’s western side, and Tinicum Township borders its southern end. Bridgeton is located 20 miles north of popular Bucks County cultural centers—New Hope Borough and Doylestown Borough (the county seat). The Delaware River runs along Bridgeton’s eastern border, with River Road connecting the county’s quaint river villages that serves as hubs for river tourism. Holland Township and Milford Borough are located across the Delaware River in Hunterdon County, New Jersey. The Lehigh Valley metropolitan area is located 20 miles northwest of the township, Philadelphia is located 60 miles to the south, and New York City is 70 miles to the northeast. Bridgeton’s location within the regional transportation network allows relatively convenient access to and from the surrounding major employment centers.

Primary access is provided from the north and south via Route 611 (Easton Road), Route 412 (Harrow Road/Durham Road), and Route 32 (River Road) which holds certain truck restrictions, and from the east and west via Routes 212/412 (Quakertown Road/Bethlehem Road/Hellertown Road), Route 563 (Mountain View Drive), and Route 113 (Bedminster Road). Milford Bridge, which cross the Delaware River, provides convenient interstate access from Bridgeton to Milford Borough in New Jersey.

Before the arrival of European settlers in the 17th century, what is currently known as Bridgeton Township was once Native American territory. The Lenape Nation were the first inhabitants and the original caretakers of this land. The Lenape were peacemakers who welcomed William Penn upon his arrival. This relationship changed after the Walking Purchase of 1737, which resulted in a loss of 1.2 million acres of Lenape land. Over a period of 250 years, many Lenape people were removed and dispersed throughout the country. Some took refuge with other tribes, but many Lenape Nation families remained in their homelands and continue the traditions of their ancestors. Today, the Lenape Nation of Pennsylvania offers leadership and commitment for the protection of the environment and the Delaware River.

Bridgeton Township's history as a political entity began circa 1860, when the eastern part of Nockamixon Township was designated as its own voting district. The area did not formally petition to become a township until 1890; however, there was enough support around 1860 to request from Nockamixon that the eastern part of the township should be its own voting district and elect its own leadership.

The 1860 Federal Census of Population contains data for the district of Bridgeton, separate from the rest of Nockamixon, and the census indicates that a plurality of the workers in the Bridgeton district were employed as boatmen on the Delaware Canal.

The township's name was derived from the covered bridge which once crossed the Delaware River between the village of Upper Black Eddy and Milford Borough in New Jersey. The original wooden covered bridge opened in 1842 but was partially destroyed by a flood in 1903. It was replaced in 1933 by the current steel truss bridge.



The Delaware Canal connected Easton to Bristol and was constructed through the Bridgeton area circa 1830. Primarily, the Delaware Canal was built to carry anthracite coal from Mauch Chunk (Jim Thorpe) to Philadelphia via the Lehigh Canal. The Delaware Canal was constructed by the Commonwealth of Pennsylvania and was originally known as the Delaware Division of the Pennsylvania State Works. In 1858, the canal was sold to the Lehigh Coal and Navigation Company which operated the Delaware Canal until 1931. The Delaware Canal was one of the oldest continually operating canals in the United States. In 1940, the Commonwealth of Pennsylvania purchased the Delaware Canal and created Theodore Roosevelt State Park, which provides adjacent communities, like Bridgeton Township, with recreational, historic, and cultural activities and amenities. The canal brought new development and growth to Bridgeton. One direct impact of the canal was the establishment of a store along the canal that served canal workers and the surrounding area; the Homestead General Store still serves the township today.

The township is home to three villages, Upper Black Eddy being the largest and most intact today. Prior to the separation of Bridgeton Township from Nockamixon Township, the village known today as Upper Black Eddy was known as Bridgeton. Eventually the name changed to Upper Black Eddy because Bridgeton was selected as the name for the township. The village's name is derived from its location along the longest eddy on the Delaware River, as well as the Black family who settled here and ran a local inn.

An eddy is a place on a river where there is a reversal of the flow along one or both of the shorelines. Eddies were places where raft workers could steer the rafts into the shore and take a temporary break. As a result, the locations of eddies became places where hotels, eating places, and taverns sprung up to provide accommodations for the raft workers. Farther downstream on the Delaware River was Lower Blacks Eddy, which today is a village known as Point Pleasant. Today, Upper Black Eddy is the focal point of the township, consisting of over 100 houses, a post office, a volunteer fire company, and several commercial amenities.



*Residential street in Upper Black Eddy*

The village of Narrowsville is located in a dramatic setting of steep cliffs and woodlands along the Delaware River, located in both Bridgeton and Nockamixon Townships. Narrowsville is located in both municipalities. The cliffs, which reach 500 feet above sea level are known as the Palisades or the Nockamixon Cliffs. This formation is considered an outstanding scenic and geologic feature of Pennsylvania.

Rupletown village was home to many canal boatman and their families in the days when the Delaware Division Canal was still in operation. It is situated on the high plateau above the river around the intersection of Bridgeton Hill and Chestnut Ridge Roads, and was named after the Ruple family, who departed the village over 150 years ago.

The Upper Bucks region is the most rural area in the county and contains a significant portion of natural resources including wetlands, floodplains, steep slopes, and significant agricultural lands, as well as significant natural and geologic features. Recreation and tourism play a significant role in the vitality of the Upper Bucks region. In fact, this region contains the highest concentration of park and recreational resources and State Game Lands in the county. Parks in the region include Nockamixon State Park, Lake Towhee County Park, Lenape Park, Tohickon Valley County Park, High Rocks County Park, and Ralph Stover State Park; as well as the Delaware Canal State Park and Ringing Rocks County Park, which are located within Bridgeton Township.

## LAND USE

Bridgeton Township contains 4,045 acres of land (about 6.5 square-miles). Land use is described as the purpose for which land or buildings are used. Table 1. Existing Land Use provides the land use acreages within the borough in 2023 and Map 1. Existing Land Use displays 2023 parcel-by-parcel land use.

**Table 1. Existing Land Use, 2023.**

Land Use	Acres	Percent
Single-Family Residential	588.85	14.54
Multifamily Residential	8.19	0.19
Rural Residential	1913.28	47.30
Commercial	76.97	1.90
Government and Institutional	30.18	0.74
Parks, Recreation, and Protected Open Space	653.24	16.14
Industrial	43.59	1.10
Transportation and Utilities	11.67	0.30
Vacant	719.17	17.78

Source: DVRPC

Bridgeton is primarily categorized as Rural Residential, the land use which takes up nearly half of the township. Rural Residential in Bridgeton are lots that are typically single-family residential but are larger than 3 acres and don't qualify as agricultural.

Vacant land use takes up nearly 18 percent of the township and includes parcels without dwelling units or buildings, but may include structures such as barns, stables, or sheds.

Parks, Recreation, and Protected Open Space accounts for around 16 percent of the township and consists of municipal, county, and state parks, state gamelands, and county and municipally preserved properties. This includes land preserved by conservation organizations and deed-restricted lands and common open space areas associated with residential developments.

Single-Family Residential land uses account for nearly 15 percent of the township and consists of properties with single-family detached, or attached, one- or two-unit dwellings, and may also include mobile home parks.

Commercial land uses only account for nearly two percent of the township. Industrial land use accounts for around one percent of the township and consists of heavy manufacturing industries.

Government and Institutional, Multifamily Residential, and Transportation and Utilities land uses each account for less than one percent of the township. Government and Institutional includes all municipal buildings and facilities. Multifamily includes properties with three or more attached dwelling units, and Transportation and Utilities consists primarily of utility installations and rights-of-ways.

## DEMOGRAPHICS

The U.S. Census Bureau conducts several hundred surveys a year, with a national census mandate to occur every ten years for the purpose of counting every person living in the United States. For the purpose of this comprehensive plan update, census data is used to better understand Bridgeton Township and how the community relates to its adjacent municipalities, and Bucks County as a whole. The 2020 Census gathered data on race, sex, and housing, but at the time of drafting this comprehensive plan update, the entirety of the 2020 Census data had not yet been released. As such, the census data will be accompanied by the American Community Survey (ACS) 5-year estimates, 2016–2020. The ACS is a U.S. Census Bureau product and an ongoing survey that provides vital information on a yearly basis. Both the 2020 Census and ACS data are used in the presentation and analysis of Bridgeton’s demographics.

### Population

**Table 2. Total Population, Bridgeton, Adjacent Townships, and Bucks County, 1980–2020.**

Total Population	1980	1990	2000	2010	2020	Change, 1980-2020
<b>Bridgeton Township</b>						
Population	1,242	1,378	1,408	1,277	1,234	-
Change	-	136	30	-131	-43	-8
Percent	-	11.0	2.2	-9.3	-3.4	-0.6
<b>Nockamixon Township</b>						
Population	2,787	3,329	3,517	3,441	3,379	-
Change	-	542	188	-76	-62	592
Percent	-	19.5	5.6	-2.2	-1.8	21.2
<b>Tinicum Township</b>						
Population	3,533	4,167	4,206	3,995	3,818	-
Change	-	634	39	-211	-177	285
Percent	-	18.0	9.4	-5.0	-4.4	8.1
<b>Bucks County</b>						
Population	479,211	541,224	597,635	625,249	646,538	-
Change	-	62,013	56,411	27,614	21,289	167,237
Percent	-	12.9	10.4	4.6	3.4	34.9

Source: U.S. Census, 1980–2020

Over the last several decades, Bridgeton Township’s population experienced slow growth, followed by slow decline. Between 1980 and 2000, the township’s population grew by 166 residents, or 13.2 percent, and between 2000 and 2020, the population declined by 174 residents, or 12.7 percent. The township’s population declined by roughly eight residents over the last 40 years, making today’s population size nearly the same as in 1980.

The adjacent municipalities of Nockamixon and Tinicum Townships saw a similar trend of population increases between 1980 and 2000, with a slow decline between 2000 and 2020. Bridgeton remains the smallest out of the three municipalities, both in land acreage and population size. The county’s population has continued to grow since 1980 and according to the 2020 Census, is the fourth most populated county in Pennsylvania. Bridgeton is a relatively homogenous area, according to the 2020 Census. Approximately 92.8 percent of the population identify as white alone and 5.3 percent of the population identify as two or more races.

**Table 3. Projected Population, Bridgeton Township, 2015–2050.**

Year	Projected Population		
	Population	Change	Percent
2020*	1,234	-	-
2025	1,289	55	4.5
2030	1,292	3	0.2
2035	1,292	0	0.0
2040	1,296	4	0.3
2045	1,304	8	0.6
2050	1,314	10	0.8
<b>Total Change</b>	-	80	6.5

Source: \*U.S. Census 2020 data  
Delaware Valley Regional Planning Commission Population Forecasts, 2015–2050

The Delaware Valley Regional Planning Commission (DVRPC) develops projected population forecasts for each municipality in the Delaware Valley region. The DVRPC estimates that the township’s population will grow to 1,314 by 2050, an increase of 80 residents, or 6.5 percent from the 2020 Census data.

**Table 4. Age Distribution, Bridgeton Township and Bucks County, 2010 and 2020.**

Age Group	Bridgeton Township				Bucks County			
	2010		2020		2010		2020	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Under 5	51	4.0	64	5.6	34,150	5.5	30,315	4.8
5 to 9	39	3.1	40	3.5	38,919	6.2	33,987	5.4
10 to 14	73	5.7	15	1.3	43,070	6.9	38,832	6.2
15 to 19	74	5.8	17	1.5	41,724	6.7	38,627	6.2
20 to 24	49	3.8	58	5.1	32,984	5.3	35,929	5.7
25 to 34	104	8.1	94	8.2	66,297	10.6	69,686	11.1
35 to 44	159	12.5	90	7.9	83,959	13.4	73,672	11.7
45 to 54	261	20.4	151	13.2	109,090	17.5	89,935	14.3
55 to 59	127	10.0	121	10.6	46,067	7.4	52,576	8.4
60 to 64	112	8.8	177	15.5	37,770	6.0	46,838	7.5
65 to 74	138	10.8	223	19.5	47,259	7.6	66,997	10.8
75 to 84	65	5.1	77	6.7	30,573	4.9	35,156	5.6
85 and up	25	2.0	18	1.6	13,387	2.1	15,118	2.4
<b>Total</b>	<b>1,277</b>	<b>100.0</b>	<b>1,145</b>	<b>100.0</b>	<b>625,249</b>	<b>100.0</b>	<b>627,668</b>	<b>100.0</b>
<b>Median Age</b>	<b>48.4</b>	<b>-</b>	<b>57.2</b>	<b>-</b>	<b>42.0</b>	<b>-</b>	<b>44.0</b>	<b>-</b>

Source: U.S. Census, 2010 and American Community Survey 5-year Estimates, 2016–2020

Breaking down the township’s population by age group shows how the population has changed between 2010 and 2020. In 2010, residents ages 60 years and older comprised 26.7 percent of the population. In 2020, the same age group comprised 43.3 percent of the population. Additionally, the population has experienced a decline in teenagers and young adults. Bridgeton Township has a population older than the county average; according to the 2020 ACS data, the median age of Bridgeton residents is 57.2, whereas the median age of the overall county is 44. Between 2010 and 2020, the median age in the county increased by two years. The township’s median age increased from 48.4 in 2010 to 57.2 in 2020.

**Table 5. Household Characteristics, Bridgeton Township and Bucks County, 2010 and 2020.**

Household Characteristics	Bridgeton Township		Bucks County	
	2010	2020	2010	2020
Median household income	\$59,632	\$79,688	\$74,828	\$93,181
Total households	569	544	234,849	240,763
Family households	358	314	168,665	173,010
Married-couple households	285	277	136,531	139,648
Other family households	73	37	32,134	33,362
Nonfamily households	211	230	66,184	67,753
Householder living alone	170	187	53,912	55,769
Householder not living alone	41	43	12,272	11,984
Average household size	2.24	2.10	2.63	2.57
Average family size	2.89	2.70	3.17	3.03

Source: U.S. Census, 2010, American Community Survey 5-year Estimates 2006–2010, and American Community Survey 5-year Estimates, 2016–2020

Between 2010 and 2020, the median household income for Bridgeton residents increased by over \$20,000. The substantial increase in median household income was also experienced countywide. However, Bridgeton’s median household income is around \$13,000 less than the county average. According to the 2020 ACS data, 58 percent of households in the township are family households. Between 2010 and 2020, the number of family households, the average family size, and the average household size decreased, while the number of nonfamily households increased.

## Employment and Education

**Table 6. Employment Characteristics, Bridgeton Township and Bucks County, 2020.**

Employment Characteristics	Bridgeton Township		Bucks County	
	Number	Percent	Number	Percent
Population 16 years and over	1,022	100.0	516,530	100.0
In labor force	640	62.6	347,974	67.4
In civilian labor force	640	100.0	347,540	99.9
Employed	624	97.5	333,063	95.8
Unemployed	16	2.5	14,477	4.2
Armed forces	0	0.0	434	0.1
Not in labor force	382	37.4	168,556	32.6

Source: American Community Survey 5-year Estimates, 2016–2020

According to the 2020 ACS data, 1,022, or 89 percent, of Bridgeton residents are ages 16 or older. Of the residents ages 16 and older, 640, or 62.6 percent, are in the labor force. Approximately 97.5 percent of residents in the labor force are employed. These trends are similar to employment characteristics at the county level. Around 67 percent of county residents ages 16 and older are in the labor force, and 96 percent of those residents are employed. Additionally, the poverty rate in Bridgeton is around 4.6 percent, lower than the countywide the poverty rate, which is around 5.6 percent.

**Table 7. Employment by Occupation, Bridgeton Township and Bucks County, 2020.**

Employment by Occupation	Bridgeton Township		Bucks County	
	Number	Percent	Number	Percent
Civilian employed population 16 years and over	624	100.0	333,063	100.0
Management, business, science, and arts occupations	242	38.8	154,028	46.3
Service occupations	76	12.2	44,310	13.3
Sales and office occupations	103	16.5	74,070	22.2
Natural resources, construction, and maintenance occupations	121	19.4	25,701	7.7
Production, transportation, and material moving occupations	82	13.1	34,954	10.5

Source: American Community Survey 5-year Estimates, 2016–2020

Of the estimated 624 workers in the township, around 39 percent work in Management, Business, Science, and Arts occupations. Around 19 percent of employed residents work in Natural Resources, Construction, and Maintenance occupations and 16.5 percent of employed residents work in Sales and Office occupations. Bridgeton residents have a higher rate of employment in Natural Resources, Construction, and Maintenance and Production, Transportation, and Material Moving occupations than residents in the rest of the county.

**Table 8. Educational Attainment, Bridgeton Township and Bucks County, 2020.**

Education Attainment	Bridgeton Township		Bucks County	
	Number	Percent	Number	Percent
Population 25 years and over	951	100.0	449,978	100.0
High school graduate or higher	902	94.8	424,327	94.3
Associate degree or higher	420	44.2	225,748	50.2
Bachelor degree or higher	373	39.2	190,042	42.2
Graduate degree or higher	151	15.8	77,020	17.1

Source: American Community Survey 5-year estimates, 2016–2020

Township residents ages 25 years and older generally are on par with the county average of educational attainment. Approximately 95 percent of township residents have at least a high school diploma and around 39 percent have at least a bachelor's degree. These numbers are close to the county averages, as around 94 percent of county residents have at least a high school diploma and around 42 percent have at least a bachelor's degree.

## HOUSING

**Table 9. Year Structure Built, Bridgeton Township and Bucks County, 2020.**

Year Structure Built	Bridgeton Township	Bucks County
<b>Total housing units</b>	624	251,373
2014 or later	0.0%	1.9%
2010 to 2013	0.5%	1.4%
2000 to 2009	3.5%	9.3%
1990 to 1999	6.7%	13.7%
1980 to 1989	10.6%	14.2%
1970 to 1979	12.9%	16.5%
1960 to 1969	7.9%	12.2%
1950 to 1959	8.2%	17.1%
1940 to 1949	3.7%	3.2%
1939 or earlier	46.0%	10.5%

Source: American Community Survey 5-year Estimates, 2016–2020

According to the 2020 ACS data, there are 624 housing units in Bridgeton. Around 4 percent of Bridgeton’s housing stock has been constructed between 2000 and 2020. Between 1980 and 2000, around 17 percent of the housing stock was constructed.

**Table 10. Units in Structure, Bridgeton Township and Bucks County, 2020.**

Units in Structure	Bridgeton Township		Bucks County	
	Number	Percent	Number	Percent
<b>Total</b>	624	100.0	251,373	100.0
1, detached	540	86.5	161,054	64.7
1, attached	10	1.6	39,372	15.7
2	37	5.9	6,033	2.4
3 or 4	27	4.3	5,956	2.4
5 to 9	0	0.0	8,647	3.4
10 to 19	0	0.0	9,357	3.7
20 to 49	0	0.0	6,985	2.8
50 or more	0	0.0	9,166	3.7
Mobile home	10	1.6	4,764	1.9
Boat, RV, van, etc.	0	0.0	39	0.02

Source: American Community Survey 5-year estimates, 2016–2020

The type of dwelling units in the township are primarily single-family detached structures. Townhouses, twins, duplexes, and other multifamily dwelling units comprise 11.8 percent of the housing stock. The housing stock in Bridgeton is less diverse than the mix of housing unit types available throughout the county. Approximately 65 percent of dwelling units in the county are single-family detached, around 18 percent are townhouses, twins, or duplexes, and around 16 percent have three or more dwelling units within the structure.

**Table 11. Housing Occupancy, Bridgeton Township and Bucks County, 2016–2020.**

Housing Occupancy	Bridgeton Township		Bucks County	
	Number	Percent	Number	Percent
Total housing units	624	100.0	251,373	100.0
Occupied	544	87.2	240,763	95.8
Owner-occupied	499	91.7	187,963	78.1
Renter-occupied	45	8.3	52,800	21.9
Vacant	80	12.8	10,610	4.2

Source: American Community Survey 5-year estimates, 2016–2020

Around 92 percent of housing units in Bridgeton were owner-occupied and 78 percent of units in the county were owner-occupied. According to the 2020 ACS data, around 13 percent of housing units in the township were vacant, and 4 percent of units in the county were vacant.

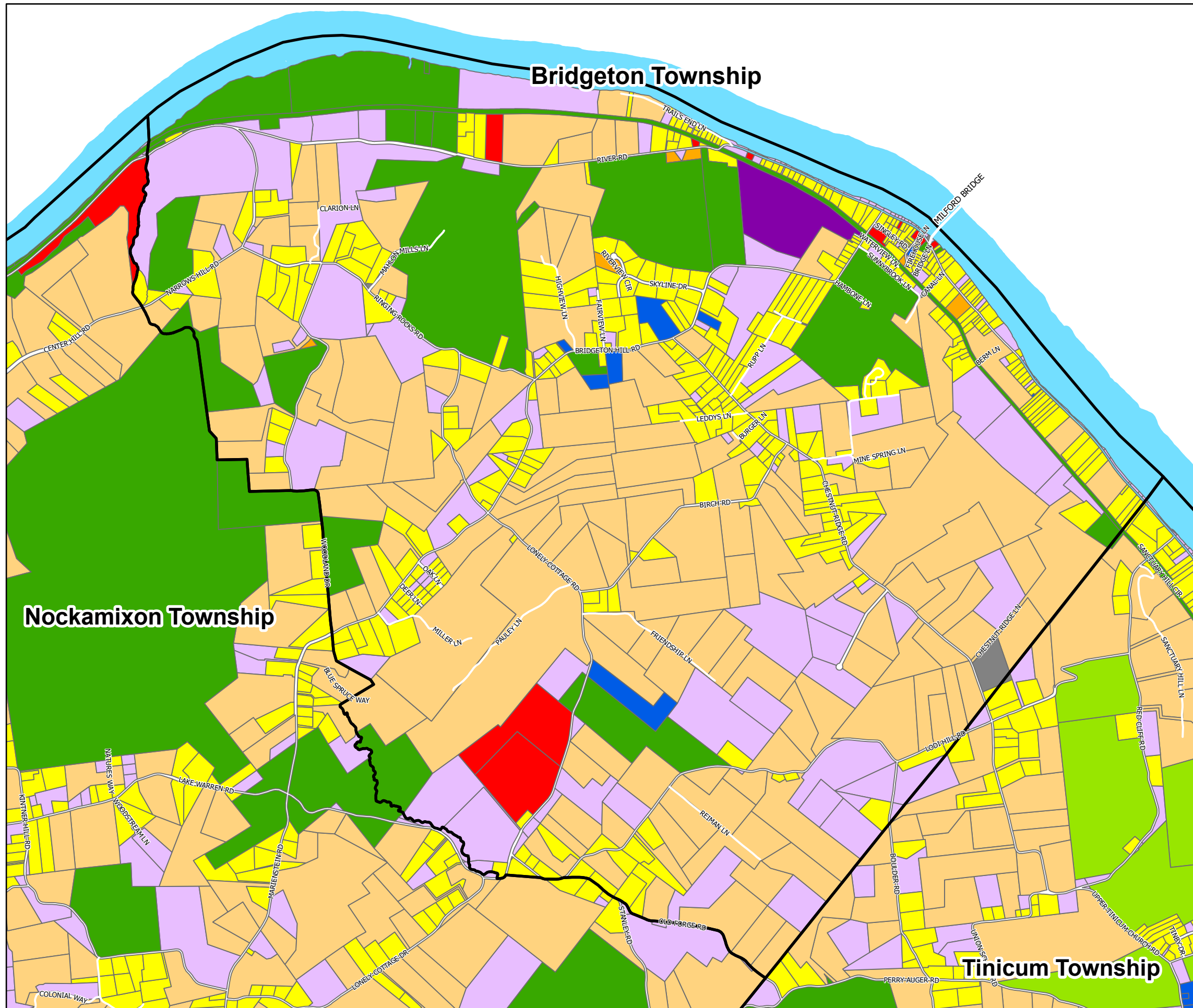

## TOWNSHIP PROFILE SUMMARY

- Bridgeton is a small, rural municipality in Upper Bucks County, located along the Delaware River.
- Bridgeton is part of a connection of river villages along River Road in Bucks County.
- Bridgeton’s location within the regional transportation network allows relatively convenient access to and from the surrounding major employment centers.
- The Lenape Nation were the first inhabitants and the original caretakers of this land.
- Bridgeton became its own political entity in 1860 when it split from Nockamixon Township.
- The construction of the Delaware Canal brought new development and growth to the township.
- The township is rich in history and contains three villages—Narrowsville, Rupletown, and Upper Black Eddy. Upper Black Eddy is the most prominent and serves as a focal point for the township.
- The land use is primarily categorized as Rural Residential, which accounts for nearly half of the township.
- Bridgeton’s population is slowly declining but projections predict a 6 percent increase by 2050.
- Compared to its adjacent Bucks County municipalities, Bridgeton has the smallest land size and population.
- Bridgeton’s population continues to age with the median age of 57.2 in 2020. Bridgeton is the second oldest municipality in Bucks County.
- The township has a high employment rate, especially in Natural Resources, Construction, and Maintenance and Production, Transportation, and Material Moving occupations.
- 95 percent of the population graduated from high school and the township’s educational attainment is similar to the county’s.
- Most households are single-family and owner-occupied.


**Map 1.**  
**Existing Land Use**  
 Bridgeton Township  
 Comprehensive Plan Update

**Existing Land Use**

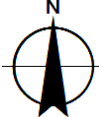
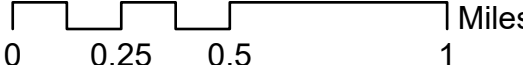
-  Single Family Residential
-  Multifamily Residential
-  Rural Residential
-  Commercial
-  Agricultural
-  Government and Institutional
-  Parks, Recreation and Protected Open Space
-  Industrial
-  Transportation and Utilities
-  Vacant

**Bucks County**



**BCPC**  
 Bucks County Planning Commission

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**PRINCIPLE 1.**

**Protect Natural Resources**





## Natural Resources



Bridgeton Township is characterized by extensive woodlands, dramatic steep slopes that stretch across the northern end of the township, and several waterways that flow through the township. These natural resources serve not only to help maintain the character of a place and enhance the quality of life, but understanding their importance is also crucial for helping guide land use planning and future development. This chapter provides an inventory of the existing natural resources in the township, including wetlands, floodplains, geologic formations, steep slopes, woodlands, and waterways.

### SIGNIFICANT NATURAL AREAS

Bucks County contains a diversity of unique natural features. In 2011, an update to a 1999 county-wide inventory was performed to identify and rank the most significant natural areas remaining in the county, including those in Bridgeton Township. This survey, titled *Bucks County, Pennsylvania Natural Areas Inventory Update* was conducted by the Morris Arboretum of the University of Pennsylvania (Ann F. Rhoads and Timothy A. Block) for the Bucks County Commissioners and is intended to provide guidance for implementation of natural resource protections, allocation of open space funds, and preparation of municipal zoning ordinances.

Specifically, the inventory identified 13 distinct conservation landscapes that make up approximately 40 percent of the land area of the county. Of those 13 conservation landscapes, two exist in Bridgeton Township—the Coffman Hill Conservation Landscape and the Delaware River Conservation Landscape.

This inventory categorized sites based on their significance and uniqueness ranging from the highest ranked Priority 1 sites, which include sites of state-wide and county-wide significance, based on the uniqueness or exceptionally high-quality of the natural features they encompass, through the lowest ranked Priority 4 sites, which are characterized as sites with biological or ecological importance at the local level. In Bridgeton Township, Coffman Hill is listed as one of the highest priority sites.

Map 2. Conservation Landscapes, displays the location of the two conservation landscapes in Bridgeton Township.

### Coffman Hill Conservation Landscape

The Coffman Hill Conservation Landscape includes all of Bridgeton and portions of Tinicum and Nockamixon Townships. The boulder-strewn landscape has resisted high intensity development and much of the area remains forest-covered. Due to the elevation, Coffman Hill contains headwater streams of several drainages including Gallows Run, Beaver Creek, Rapp Creek, Swamp Creek, High Falls Creek, and several unnamed tributaries of the Delaware River. The landscape includes Ringing Rocks County Park and State Game Lands 56, which is divided among several separate parcels. Although the majority of the landscape is forest-covered, private residences are tucked into the woods along many of the roads.

One of the core areas in the Coffman Hill Conservation Landscape is Ringing Rocks County Park. Ringing Rocks Park is named for a boulder field with rocks that ring with a metallic tone when struck with a hammer. The ringing is due to weathering of the outer layer of the boulders, which creates tension on the core. Strain resulting from the tension alters the resonant frequency of the rock. Similar rocks in the shade of adjacent woodlands do not ring, nor do all of the rocks in the open areas. Located at the border of the Coffman Hill diabase sheet, this boulder field is listed as an outstanding scenic geological feature of Pennsylvania.

One of the recommendations from *Bucks County, Pennsylvania Natural Areas Inventory Update* is connectivity and land protection priorities. Ninety acres of contiguous forested land at the base of the slope and on the floodplain of the Delaware River are under the ownership of the Bridgeton Athletic Association. One of the recommendations from the inventory update is to protect these parcels of land and the existing native forest cover to maintain a continuous corridor of woodlands spanning from Ringing Rocks down to the river.

### Delaware River Conservation Landscape

The Delaware River Conservation Landscape is located along the eastern border of Bucks County. It comprises the ecological and scenic resources of the 26-mile-long river corridor, including islands, floodplains, and scenic cliffs and forested slopes.

One of the core areas of the Delaware River Conservation Landscape is Delaware Canal State Park. The Delaware Canal State Park includes the Delaware Canal which operated from 1832 to 1931. The restored canal, towpath, and locks, as well as interpretive exhibits, describe the importance of the canal as a transportation corridor. It is part of the Delaware and Lehigh National Heritage Corridor established in 1988. Today, the towpath and the canal are a major recreational resource for residents of Bridgeton Township.

## Map 2. Conservation Landscapes

Bridgeton Township  
Comprehensive Plan Update

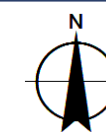
- Atlantic Coastal Plain
- Coffman Hill
- Cooks Creek
- Delaware River
- Lake Galena-Pine Run
- Lower Tohickon Creek
- Mid-County Ridges
- Neshaminy Creek
- Nockamixon-Haycock
- Paunacussing Creek
- Tinicum Creek
- Upper Tohickon Creek
- Upper Unami Creek



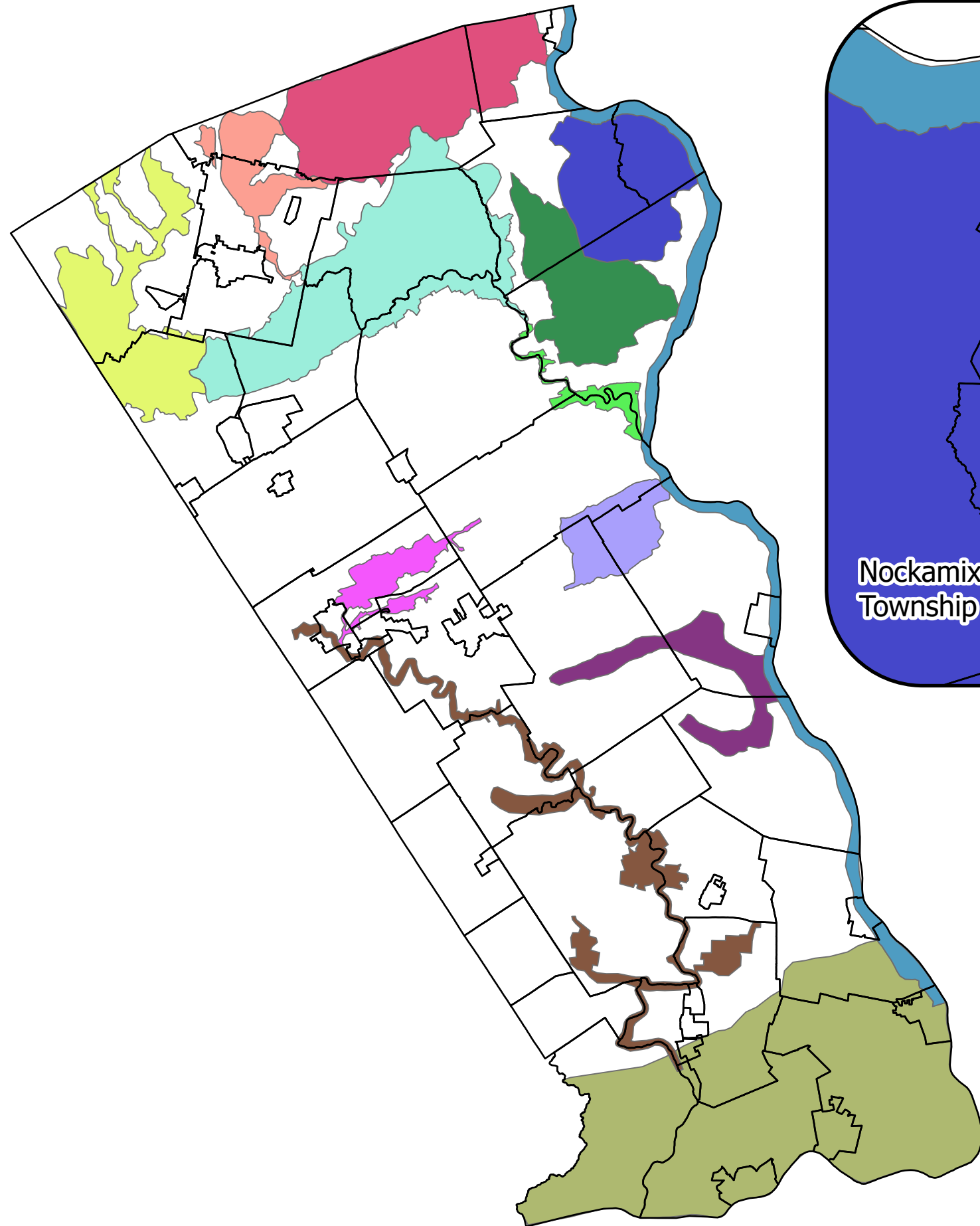
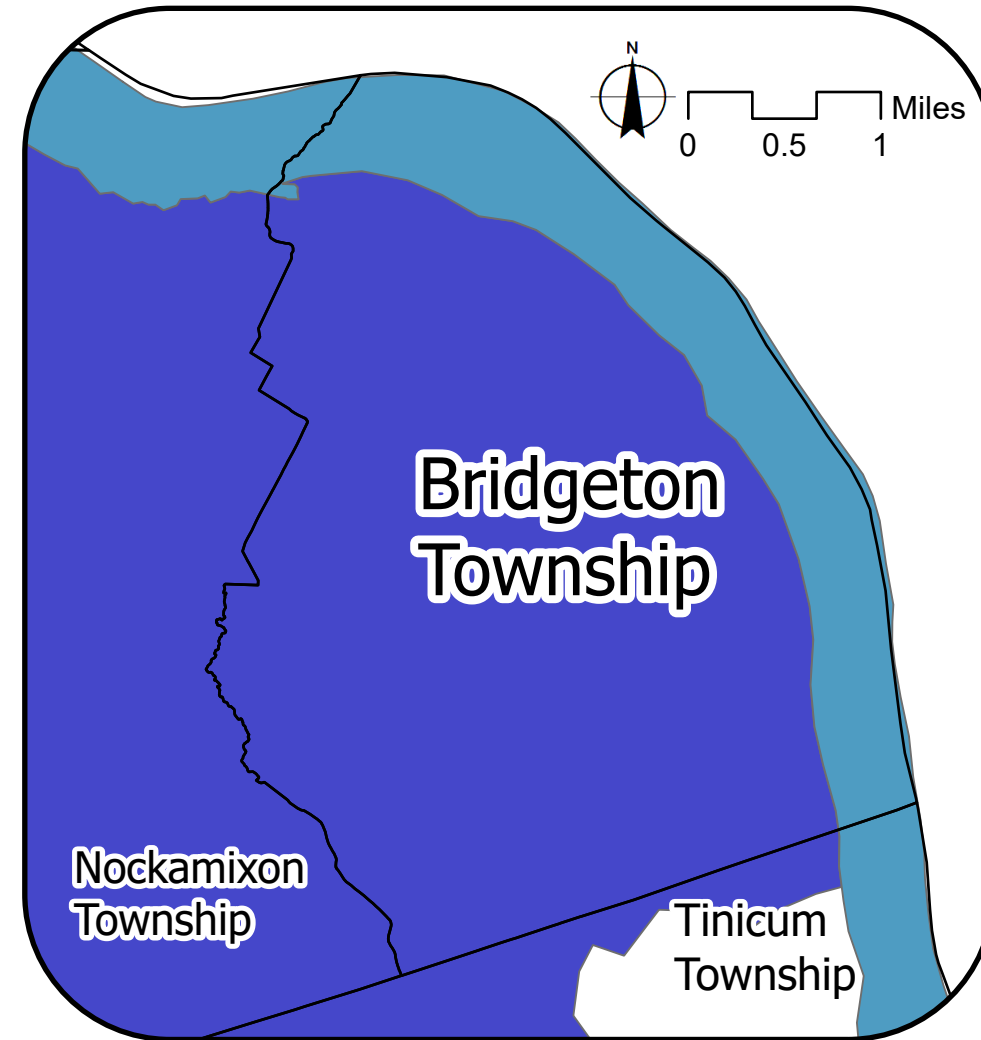
Bucks County



**BCPC**  
Bucks County Planning Commission



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## GEOLOGY

The geology of an area, although seldom seen except for surface outcrops, is the foundation of the natural features of a community and influences development choices. The underlying bedrock of an area has an influence on the type of soil formed, and in conjunction with the hydrologic cycle, is responsible for the changes in groundwater, elevation, steep slopes, locations, and orientation of streams.

Bridgeton Township has four major geologic formations: Diabase, Brunswick Lithofacies, Lockatong Lithofacies, and Wisconsin (see Map 3. Geology). Groundwater supplies largely depend upon geology, surface characteristics, water use, and seasonal precipitation. The capacity of aquifers to transmit and store water is directly related to the specific physical and chemical properties of the geologic formations which underlie the township. The descriptions and water bearing characteristics of the township's geologic formations are described below:

- **Diabase:** The prevailing geologic formation, is the poorest aquifer in Bucks County. There is no significant porosity in this formation, therefore, all groundwater moves through fractures. A groundwater study conducted for northern Bucks County<sup>1</sup> showed that little groundwater storage is available. Groundwater in this formation only lies an average of 50 feet below the ground, meaning that wells drilled in diabase rock are susceptible to contamination from harmful ill-advised land use activities and sewage disposal. The capacity of diabase rock to store and transmit water is very low, with many well failures. The average yield of wells in the aquifer is 5 gallons per minute.
- **Brunswick Lithofacies:** Located along Route 32, groundwater from this formation can be as deep as 600 feet. The water in this formation is moderately mineralized. According to the *Bucks County Water Supply Plan and Wellhead Protection Study—Technical Reference* (1997), groundwater within the Brunswick Formation flows primarily through fractures and closely spaced joints in the siltstone and shale. In the shallow, weathered portions of the aquifer, groundwater is under unconfined conditions. The deeper fracture zones within the formation are permeable and unweathered. However, groundwater is under confined conditions in the deeper portions of the aquifer. Of the three hydrologic units within Bridgeton Township, the Brunswick Formation is considered to be a reliable source of small to moderate levels of groundwater with an average yield of wells in the aquifer at 60 gallons per minute. However, in some locations, wells have yielded more than 100 gallons per minute.
- **Lockatong Lithofacies:** Occurring in several narrow bands, this geologic formation has a limited capacity to store and transmit water. Groundwater within this formation flows through widely spaced fractures and joints that are poorly interconnected, therefore, recharge to this formation is low and the supply within this formation is limited. In the aquifer, wells average 7 gallons per minute.
- **Wisconsin:** The flat plain along the Delaware River is the source of the largest and most reliable groundwater in Bucks County. This formation consists of unconsolidated sand, gravel, and clay deposits in river terraces and floodplains. Wells yield between 10 to 1,050 gallons per minute, but average 300 gallons per minute. Water is usually soft, low in dissolved solids, and moderately acidic in this formation.

<sup>1</sup> *Hydrogeology and Ground-Water Quality of Northern Bucks County, Pennsylvania* – U.S. Geological Survey, Water-Resources Investigations Report 94-4109 <https://pubs.usgs.gov/wri/1994/4109/report.pdf>

In terms of future land use planning, geology is a significant factor affecting groundwater supply and yield for a community. Bridgeton Township does not have a public water service; the area relies on individual on-lot wells for the community's supply of water. The value of the groundwater supply and recharge is significant to any municipality. If development exceeds the carrying capacity of the groundwater supplies, or if development is insensitive to prime aquifer recharge areas, the township may ultimately be forced to address availability and water supply shortages.

### **Bridgeton-Nockamixon-Tinicum Groundwater Management Committee**

Managing an adequate and safe water supply is a planning issue that transcends municipal boundaries. The Bridgeton-Nockamixon-Tinicum Groundwater Management Committee (BNTGMC) was created as a joint venture of Bridgeton, Nockamixon, and Tinicum Townships by an ordinance adopted in September of 2000. The BNTGMC is an inter-municipal committee comprised of representatives from all three townships responsible for working with the governments of those townships to study and advise them on decisions affecting the quantity and quality of the township's groundwater.

The BNTGMC proposes and conducts scientific studies, regulatory reviews, and provides educational programs. As member municipalities that have interrelated watersheds, recharge areas, and aquifers, it also works to facilitate coordination of related municipal programs that ensure a safe, reliable and adequate water supply to support intended uses within the capacity of available groundwater resources.

As of the adoption of this comprehensive plan, the BNTGMC proposed a Groundwater Withdrawal Ordinance amending current regulations to protect the quality and quantity of water resources by placing restrictions on the construction of new wells and modifications of existing wells. The purpose of this ordinance is to ensure reliable, safe, and adequate water supplies to support the intended land uses within the capacity of available water resources in these three municipalities. Applications for subdivisions, land developments, conditional use, variances, special exceptions, and curative amendments will be subject to the requirements of this ordinance.

## **SOILS**

Soils are one of the most important natural features to consider when making planning decisions because the type of soil influences the vegetative land cover, which in turn affects the quality and quantity of groundwater, wildlife diversity, erosion rates, and the overall aesthetic nature of the landscape. The suitability of soils for on-site septic systems, basements, and foundations is particularly important to understand in planning for the future development and preservation of the township. The limited groundwater yields and soil wetness have in the past been a deterrent to extensive development in the township.

Forty different soil types cover the township and most of Bridgeton has very stony silt loam soils. These soils tend to have high water tables, shallow depth to bedrock, and slow permeability. The majority of the township consists of soils that are generally suitable for conventional on-lot sewage disposal systems, such as septic systems, sand mounds, and spray irrigation systems. Due to wet conditions, flood-prone soils, steep slopes, extensive stoniness and limited percolation, a portion of Bridgeton is unsuitable for on-site sewage systems. Soil testing will need to be conducted to verify the suitability for on-lot sewage disposal systems.

### Hydric Soils

Hydric soils are poorly drained, seasonal wet soils that are found in stream valleys, forested wetlands, and other low-lying areas and depressions. They are formed under anaerobic conditions, and because of their ability to support wetland vegetation, are often used as initial indicators of wetlands. Hydric soils are highly sensitive to land disturbances and unsuitable for most development purposes as they are not generally suitable for supporting structures.

### Floodplain Soils

Floodplain soils are alluvial soils found in low-lying areas that are subject to periodic flooding. These soils closely correspond to existing creeks, tributaries, and drainage ways. These soils are considered unsuitable for most development purposes because of flooding potential. In some cases, well-drained floodplain soils may be suitable for agricultural, recreational, park, or open space uses.

The township's zoning ordinance site capacity calculations establish an open space ratio of 1.00 for floodplain soil areas within the floodway and an open space ratio of 0.75 for floodplain soil areas in the established flood fringe. The site capacity calculations are only required for developments proposing townhouses, low-rise apartments, or manufactured home parks.

Section 202 of the township's zoning ordinance does not define Floodplain Soils. However, these are defined in the subdivision and land development ordinance (SALDO). The zoning ordinance should be revised to provide for this definition, which is consistent with the SALDO, for the protection of waterways which have not been studied by FEMA.

Map 4. Soils, displays the floodplain and hydric soils in the township, as well as the soil suitability of sewage disposal systems.

## FLOODPLAINS, WATERWAYS, AND WETLANDS

### Floodplains

Floodplains are relatively flat or low-lying areas adjacent to surface waters where flooding has occurred in the past and will likely occur in the future. During periods of heavy rains and high stream flow, floodplains provide temporary storage for floodwaters, reducing flooding threats to adjacent areas and providing a slower, more consistent flow of water. The *Bucks County Natural Resources Plan* (1999) notes that floodplains that support natural vegetation help trap sediment from upland surface runoff, stabilize stream banks for erosion control, and provide shelter for wildlife and proper stream conditions for aquatic life.

Floodplains in the township are identified on Map 5. Floodplains & Wetlands.

According to the Federal Emergency Management Agency (FEMA), the 1-percent annual chance flood is also referred to as the base flood or 100-year flood. In the 1960s, the United States government decided to use the 1-percent Annual Exceedance Probability (AEP) flood as the basis for the National Flood Insurance Program (NFIP). The 1-percent AEP flood was thought to be a fair balance between protecting the public and overly stringent regulation. Because the 1-percent AEP flood has a 1 in 100 chance of being equaled or exceeded in any 1 year, and it has an average recurrence interval of 100 years, it often is referred to as the "100-year flood." The "500-year flood" corresponds to an AEP of 0.2 percent, which means a flood of that size or greater has a 0.2-percent chance (or 1 in 500 chance) of occurring in a given

year. One hundred-year and five hundred-year floodplains cover the narrow area between the Delaware River and the Palisades. A 100-year floodplain also exists along the 2.7-mile High Falls Creek that flows through the center of the township.

The Pennsylvania Floodplain Management Act (Act 166 of 1978) requires municipalities identified as having flood prone areas to participate in the National Flood Insurance Program (NFIP). Under the administration of the Pennsylvania Emergency Management Agency (PEMA), flood prone municipalities are required to adopt ordinances that meet NFIP standards for regulating development in the floodplain. Disturbance of floodplains for development purposes increases the dangers of floods, destroys vegetation, reduces the opportunity for groundwater recharge, disrupts wildlife habitats, and adversely impacts other environmental benefits of this natural resource.

Bridgeton Township's Floodplain Ordinance prohibits the encroachment, alterations, or improvement of any kind to any watercourse until all adjacent municipalities that are affected have been notified, and until all required permits or approvals have been obtained from the Department of Environmental Protection (DEP). The ordinance also prohibits the construction, development, use, activity, or encroachment within any Floodway Area, that would cause an increase in the 100-year flood height, unless a permit is obtained from the DEP. Additionally, no new construction or development shall be located within the area measured 50 feet from the top bank of any watercourse in the General Floodplain Area, unless a permit is obtained from the DEP.

The township has observed an increase in the frequency of flood intensity and mitigation remains crucial for resident quality of life. Mitigation actions are discussed in the Hazard Mitigation portion of this plan.

### Wetlands

According to the *Corps of Engineers Wetlands Delineation Manual*, U.S. Army Corps of Engineers, wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency and duration to support under normal conditions a prevalence of vegetation typically adapted for life under saturated soil conditions. Wetlands can moderate flooding by storing large volumes of water, and they maintain water quality by collecting and filtering sediments and pollutants.

Wetland ecosystems support flora and fauna, especially reptiles and amphibians that are particularly sensitive to degradation of water quality including changes in oxygenation, pollutants, sediments, or thermal changes. Wetlands in the township are identified on Map 5. Floodplains & Wetlands.

Wetlands are incompatible with development and the on-lot disposal of sewage. However, development on wetlands is possible only if the wetlands are drained and filled. Such action is not recommended as it will destroy the local ecology and alter the environment of the area. The *Bucks County Natural Resource Plan* (1999) recommends no intrusion into wetlands be allowed and specifies a buffer of 100 feet upland of the wetland vegetation or to the limit of wet soils, whichever is shorter, to minimize hydrologic modifications and the potential for pollution. The county's plan recommends that at least 80 percent of this buffer be kept in natural cover.

In addition to local protection standards, wetlands are regulated by the U.S. Army Corps of Engineers and the Pennsylvania Department of Environmental Protection under the guidance of the Federal Clean Water Act and various state laws. The Corps requires a permit to disturb wetlands greater than one acre in size. State and federal agencies that permit wetlands disturbance may require that the loss of wetlands be mitigated by the creation of wetland areas elsewhere. The Pennsylvania Department of Environmental

Protection also regulates wetlands under Chapter 105 Rules and Regulations administered by the Bureau of Waterways Engineering and Wetlands.

Section 503 of the township's zoning ordinance states that the applicant is responsible to determine if land areas proposed for development meet state or federal definitions of "wetland" before any official submission is permitted. All buildings are also required to have a setback of a minimum of 50 feet from all wetlands.

Bridgeton Township's Subdivision and Land Development Ordinance (SALDO), defines wetlands as: areas that are saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs and similar areas. The term also includes but is not limited to wetland areas listed in the State Water Plan, the United States Fish and Wildlife Service Wetlands Inventory of Pennsylvania, the Pennsylvania Coastal Zone Management Plan, and a wetland area designated by a river basin commission.

The *Wetlands Study Results for Tinicum Creek Watershed in Bridgeton, Nockamixon, and Tinicum Townships, Bucks County, Pennsylvania*<sup>2</sup>, was prepared by URS Corporation under contract with the BNTGMC. The objectives of the study were to develop a wetlands inventory for the Bridgeton-Nockamixon-Tinicum region, and to develop recharge potential quantifications for the wetlands inventory. Results of this study are appropriate for use as planning tools by the respective townships.

### Surface Waters

The township's surface water resources include the Delaware River, the Delaware Canal, and the wetlands at the Bridgeton Preserve. These water resources are important because they provide significant environmental, recreational, and economical benefits to the township and the Upper Bucks region. These resources accommodate stormwater runoff, provide for groundwater recharge and wildlife habitat, and contribute to the array of scenic resources.

The manmade Delaware Canal parallels the Delaware River along with the many creeks in the township are all part of Bridgeton's significant network of waterways. Wildcat Hollow Creek forms the boundary between Bridgeton and Nockamixon Townships. Falls Creek, High Falls Creek, and Beaver Creek are all significant waterways in the township. Mine Spring Creek and Hillport Hollow Creek are two smaller streams located in the township.

High Falls Creek moves laterally through most of the largely forested township. As High Falls Creek flows down Bridgeton's steep slopes to the Delaware Canal and Delaware River, this forestry serves as a natural buffer to filter pollutants. The township should monitor High Falls Creek to protect the quality of water, minimize erosion and sedimentation, and conserve sensitive wildlife and aquatic habitats.

The Delaware River is the township's most valuable natural resource because of its recreational and scenic qualities and for the wildlife habitat that it provides. The *Natural Areas Inventory of Bucks County* speaks to the significance of the river. The river and its banks function not only as natural resources worthy of continued protection, but also serve as recreational resources, providing for a variety of recreational opportunities. The incorporation of riverfront activities, trails, and other recreational opportunities is

<sup>2</sup> [Wetlands Study Results for Tinicum Creek Watershed Bridgeton, Nockamixon & Tinicum Townships, Bucks County, Pennsylvania, EPA Project 66-461 Jan 24, 2003](#)

consistent with the objectives of the *Delaware River Heritage Trail Study* (2003) and the *Wild & Scenic Lower Delaware River Management Committee Action Plan* (2011).

The Delaware Canal, constructed between 1827 and 1832 to transport coal from the Upper Lehigh Valley to Philadelphia, New York, and other eastern seaboard destinations, is a recreational and historic resource. Delaware Canal State Park, which stretches between Easton and Bristol, is heavily used and is valued for its scenic character. The towpath of the canal is used as a multi-recreational trail and has been designated a National Heritage Hiking Trail. The entire Delaware Canal is also a registered National Historic Landmark and is registered on the National Register of Historic Places.

A watershed consists of all the land and waterways that drain into the same main body of water. Smaller watersheds join with other watersheds to drain into larger watersheds; hundreds of watersheds, including those that cover Bridgeton Township, ultimately drain into the Delaware River. The drainage of water resources through a watershed includes groundwater as well as surface water. The entirety of the township is within the Delaware River (North) watershed.

Maintaining high water quality in the township's waterways is a continuous challenge. Many factors can affect the creek's water quality: contaminated surface water runoff, sewage, and sedimentation. The effects of stream degradation are not only felt within the affected stream corridor in the township, but within the waterways to which the stream is tributary: the Delaware Canal, Beaver Creek, High Falls Creek, and the Delaware River, which supplies over 13 million people with water for drinking, agricultural, and industrial uses.

To maintain Pennsylvania Water Quality Standards, as mandated by the Federal Clean Streams Law and Federal Clean Water Act, the Commonwealth has developed a Special Protection Waters Program. This program establishes a three-tiered antidegradation policy consistent with federal minimum requirements for state water standards.

All streams in Bridgeton Township are classified as a Trout Stocking Fishery (TSF), except Beaver Creek, which is considered an Exception Value Water (EV). "Trout Stocking Fishery" is defined as designated waters intended for the protected use for the maintenance and propagation of stocked trout and other fish species, as well as additional flora and fauna indigenous to warm water habitats.

"Exceptional Value Water" is defined as High Quality Water that is also either judged to be a surface water of exceptional ecological significance, or meets any of the following criteria:

- Located in a National Wildlife area or refuge, or State Game and Protection area
- Located in a State Park or State Forest Natural Area, or National Natural Landmark
- Recognized as an outstanding National, State, regional or local resource water
- Provides a surface water of exceptional recreational significance; scores at least 92 percent for criteria in chemistry as given for High Quality Water
- Designated as a "Wilderness Trout Stream" by the Fish and Boat Commission

Exceptional Value Waters are to be protected at their existing water quality, and no lowering of water quality is to be allowed. Beaver Creek should be monitored to maintain Exceptional Water Value Designation.

The zoning ordinance requires setbacks from surface waters, including the Delaware Canal, to protect the quality of water, minimize erosion and sedimentation, and conserve sensitive wildlife and aquatic habitats.

### Riparian Buffers

Riparian buffers are vegetated lands, ideally forested, that border streams, rivers, reservoirs, ponds, lakes, wetlands and other water bodies. The benefits to these buffers include protection of water quality, stabilizing stream banks and minimizing erosion, reducing flooding, providing shade and habitats for aquatic life, and protecting wetlands and waterways.

Development and activities that remove vegetation from riverbanks and stream sides create a variety of negative consequences on watercourses. Without the vegetative buffer, runoff from adjacent areas more quickly enters the watercourse, exacerbating erosion, increasing floodwaters during the flood cycle, and destroying nature habitats. In addition, pesticides and herbicides used in lawn care, sediment from construction activities, and oils, salts and other contaminants from streets are able to flow directly into the watercourse when it rains.

An effective zoning technique for reducing these impacts is to establish riparian buffer zones. The intent of a riparian buffer overlay zone is to conserve, protect, and restore natural riparian resources. These regulations can ensure proper riparian buffer delineation, restrict which uses are allowed in this zone, and outline buffer restoration and planting requirements in order to properly protect vital watercourse throughout the township.

Bridgeton Township currently does not have any riparian buffer regulation in its zoning ordinance. The Pennsylvania Land Trust Association published a Model Riparian Buffer Protection Overlay District<sup>3</sup> so that Pennsylvania municipalities may ensure the protection and restoration of riparian buffers.

In the beginning of 2022, Bridgeton Township received a grant from the Lower Delaware Wild & Scenic River Management Council. The grant received was for the installation of native plantings along River Road in order to aid with the riverbank erosion.

### STEEP SLOPES

Topography can have a profound influence on development capacity, stormwater runoff, and site erodibility. The grade and soils present on moderate and steep slopes are a result of the vegetation, underlying geology, and precipitation levels. Maintaining the right balance through proper vegetative cover and minimizing development reduces the danger to public health and safety posed by unstable hillsides. Development on steep slopes accelerates erosion by removing or disturbing the established groundcover and topsoil. Removal of the vegetation destroys the groundcover that absorbs rainwater, anchors soil, and buffers or dissipates the impact of rainfall on topsoil. Erosion produces sediment that pollutes surface water. Over time, accumulated sediments narrow stream channels and fill ponds. This process restricts the capacity of waterways to handle flood flows and increases the incidence and severity of flooding.

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<sup>3</sup> [https://conservationtools-production.s3.amazonaws.com/library\\_item\\_files/1261/1378/ModelRiparianOrdinance2nd\\_160311.pdf?AWSAccessKeyId=AKIAIQFJLILYGVD4AMQ&Expires=1671130812&Signature=8Sg6FvD1%2Fdkh2vPZ8ePAzaNqek%3D](https://conservationtools-production.s3.amazonaws.com/library_item_files/1261/1378/ModelRiparianOrdinance2nd_160311.pdf?AWSAccessKeyId=AKIAIQFJLILYGVD4AMQ&Expires=1671130812&Signature=8Sg6FvD1%2Fdkh2vPZ8ePAzaNqek%3D)

Map 6. Topography and Steep Slopes, displays steep slopes in the township. Bridgeton's steep slopes are concentrated in the Palisades area, a narrow band of cliffs and hillsides that parallels the Delaware River on the west side of Route 32, at the Nockamixon Township border. The Palisades, a distinctive feature of Bridgeton's natural environment, provide dramatic views of the Delaware River and New Jersey and are a scenic resource themselves. Most of the remainder of the township consists of rolling hills and generally flat areas.

Generally, slopes under 8 percent do not present limitations to development, but as slopes become steeper, land is subject to higher rates of erosion and stormwater runoff. Even relatively slight removal of ground cover on steep slopes can lead to erosion, runoff, and environmental damage. Installation of impervious surface on steep slopes will speed up flow of runoff to streams, causing excessive erosion and higher flood peaks.

Section 505 of the zoning ordinance contains steep slope regulations for development; the minimum lot size increases as the slope percentage increase. Development on slopes greater than 35 percent is prohibited. The zoning ordinance also requires that a steep slope site plan be provided to the zoning officer for proposals involving the construction of buildings, streets, driveways, or nonagricultural grading. The requirements state that the applicant is strongly encouraged to reduce the land area within the principal building envelope to not intrude into steeply sloped areas. Site capacity calculations in the zoning ordinance require an open space ratio for steep slopes to proposed townhomes, low-rise apartments, and mobile or manufactured home parks.

To protect steep slopes susceptible to erosion and degradation from development, contributing to the potential sedimentation of area waterways, township officials should consider adopting additional steep slope encroachment regulations in the zoning ordinance.

The Pennsylvania Land Trust Association published a Steep Slope Ordinance<sup>4</sup> for municipalities to use zoning regulations to limit disturbance of steep slopes in order to prevent erosion, reduce the risk of landslides, and preserve scenic hillsides.

## WOODLANDS

The trees and woodlands of Bridgeton Township play an important role in the ecological balance and wellbeing of the environment by reducing erosion from runoff, stabilizing stream banks, providing wildlife habitats, creating buffers between the built environment, providing recreational opportunities, reducing greenhouse gases by absorbing carbon dioxide, and aesthetically enhancing the environment.

Vegetative cover also enhances groundwater recharge by reducing the volume and rate of runoff. When woodlands are located in environmentally sensitive areas, such as steep slope areas, along tributaries and wetlands, even minor disturbances can lead to serious environmental degradation.

Map 7. Woodlands displays the woodlands that cover nearly 70 percent of the township.

The zoning ordinance contains provisions for the preservation of trees and forests. It states that the cutting down or removing healthy trees with a trunk diameter of 6 inches or more shall be held to an

<sup>4</sup> [https://conservationtools-production.s3.amazonaws.com/library\\_item\\_files/970/2054/CT\\_Steep\\_Slope\\_190319.pdf?AWSAccessKeyId=AKIAIQFJLILYGVD R4AMQ&Expires=1673468128&Signature=YfQCRHWEJRU0vhB3PAzMTEjzvzo%3D](https://conservationtools-production.s3.amazonaws.com/library_item_files/970/2054/CT_Steep_Slope_190319.pdf?AWSAccessKeyId=AKIAIQFJLILYGVD R4AMQ&Expires=1673468128&Signature=YfQCRHWEJRU0vhB3PAzMTEjzvzo%3D)

absolute minimum. The zoning ordinance also contains provisions for the protection of trees during construction, the preservation of trees within buffer areas, and the protection of wooded areas in any subdivision or land development.

The township allows Forestry by conditional use in all zoning districts. The zoning ordinance defines Forestry as the managing and using for human benefit forest land and natural resources that occur on and in association with forested lands. It includes, but is not limited to, the planting, cultivating, harvesting, transporting, and selling of trees for commercial purposes.

A zoning permit is required for all forestry or logging activities. However, an individual property owner does not need to obtain a permit to cut down trees as part of their normal home maintenance.

No forestry or logging is permitted within areas exceeding a slope of 25 percent, and a limited logging buffer zone shall be maintained per the zoning ordinance. All forestry operations and plans shall comply with the requirements of all applicable state laws and regulations. The township's zoning ordinance details open space standards which prohibit the use of the land for commercial forestry within open space designated lands.

## **BOARHEAD FARMS SUPERFUND SITE**

Contaminated sites exist due to improperly managed hazardous materials. These toxic waste dumps received national attention due to public and environmental health concerns. In response, Congress established the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)<sup>5</sup> of 1980, informally called Superfund, which allows the Environmental Protection Agency (EPA) to clean up these contaminated sites.

The Boarhead Farms Superfund Site is located on a residentially zoned property in Bridgeton Township. In 1969, the Boarhead Cooperation purchased this property and began storing and conducting activities which led to the release of hazardous substances. A fish kill in 1970 was traced back to contaminated waters from the site and the Bucks County Health Department investigated disturbed soils, which were indicators of buried waste.

By September 1976, 34 residents were evacuated due to the presence of sulfuric acid vapors. The Bucks County Court of Commons Pleas ordered Boarhead Farms to remove all waste from the site and prohibited the transport of hazardous substances to the site. The EPA began conducting site inspections in 1984 and the site was officially added to the Superfund program's National Priorities List in 1989.

Three main removal actions were conducted in the 1990s:

- Excavation and off-site shipment of buried drums and impacted soils containing hazardous waste (1992-1993 by the EPA).
- Off-site shipment of buried drums containing radioactive hazardous waste (1993 by a potentially responsible party under EPA oversight).
- Construction of a groundwater extraction and treatment system (1995-1997 by the U.S. Army Corps of Engineers).

<sup>5</sup> <https://www.epa.gov/superfund/what-superfund#:~:text=Superfund's%20goals%20are%20to%3A,in%20the%20Superfund%20process%3B%20and>

The EPA requested the assistance of the U.S. Geological Survey (USGS) to support a remedial investigation and feasibility study. A groundwater study<sup>6</sup> was completed in 1996 to characterize the framework of the diabase aquifer underlying the site.

In 2009, the EPA initiated a fourth removal action to address high concentrations of trichloroethene (TCE) in indoor air at the single-family residence on the site. Measures taken between 2009 and 2014 significantly reduced the concentrations of TCE in indoor air of the residence, but a potential risk may still exist for women of child-bearing years in certain conditions. In January 2019, the EPA completed upgrades to basement sumps and an air exhaust system that successfully mitigated TCE concentrations in indoor air to acceptable risk levels.

The potentially responsible party (PRP) is performing operation and maintenance of the remedy through an agreement with the EPA. EPA conducts oversight of all PRP activities at the site. Maintenance of the groundwater extraction and treatment system is conducted on an on-going basis. Sampling of monitoring wells and some residential wells near the site occurs on a semi-annual basis. The PRPs also perform annual indoor air and sub-slab vapor sampling at two off-site residences.

In September 2020, the site reached the “Achieved Sitewide Ready for Anticipated Reuse” milestone but has not yet achieved being removed from the National Priorities List.

The EPA conducts five-year reviews; the most recent five-year review occurred in September 2022 and concluded that the remedy continues to be protective of human health and the environment in the short-term. The next five-year review is scheduled for 2027. The township should continue to monitor this Superfund site.

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<sup>6</sup> *Hydrogeologic Framework of The Diabase Aquifer At The Boarhead Farms Superfund Site*—U.S. Geological Survey, Water-Resources Investigations Report 96-4090 <https://pubs.usgs.gov/wri/1996/4090/wri19964090.pdf>

## CHAPTER SUMMARY

- Two significant natural areas in the township are identified as conservation landscapes—Coffman Hill and the Delaware River Conservation Landscapes.
- Bridgeton contains four geologic formations that influence the soils and hydrologic cycle. Diabase takes up the most area in the township and is the poorest aquifer in the county.
- Bridgeton works with Nockamixon and Tinicum to facilitate a multi-municipal coordination to ensure safe, reliable, and adequate drinking water.
- Forty different soil types cover the township and most of Bridgeton has very stony silt loam soils.
- The township is located in the Delaware River North Watershed and contains floodplains along the river. Many waterways stream through the township.
- Bridgeton's steep slopes are concentrated in the Palisades area, a narrow band of cliffs and hillsides that parallels the Delaware River on the west side of Route 32, at the Nockamixon Township border.
- The majority of the township has woodland coverage and forestry, and logging activities occur in the township.
- The EPA began conducting site inspections in 1984 and the Boarhead Farms site was officially added to the Superfund program's National Priorities List in 1989. In September 2020, the site reached the "Achieved Sitewide Ready for Anticipated Reuse" milestone but has not yet achieved being removed from the National Priorities List.

## Recommendations

- Follow recommendations from the *Natural Areas Inventory* to protect the parcels of land along the Delaware River owned by the Bridgeton Athletic Association, to maintain a continuous corridor of woodlands spanning from Ringing Rocks down to the river.
- Update the Bridgeton Township Zoning Ordinance to establish riparian buffer requirements.
- Update the Bridgeton Township Subdivision and Land Development Ordinance (SALDO) to use the natural cover of native plantings and trees wherever possible.
- Monitor Beaver Creek to maintain Exceptional Value Water designation from the state.
- Monitor High Falls Creek to protect the quality of water, minimize erosion and sedimentation, and conserve sensitive wildlife and aquatic habitats.
- Continue support for maintaining water supply in cooperation with neighboring communities in the watershed, through the work of the BNT Groundwater Management Committee, including the adoption of the proposed groundwater ordinance.
- Consider adopting additional steep slope encroachment regulations in the zoning ordinance.
- Update Section 202 Definitions of the zoning ordinance to define Floodplain Soils to be consistent with the SALDO.
- Consider providing additional floodplain regulations, including the provision of uses permitted by right or by special exception which is consistent with those allowable uses in the Bucks County Natural Resources Plan.
- Mitigate erosion with native plantings along River Road with the grant received by Lower Delaware Wild & Scenic River Management Council.
- Continue to monitor the Boarhead Farms Superfund Site in coordination with the EPA.

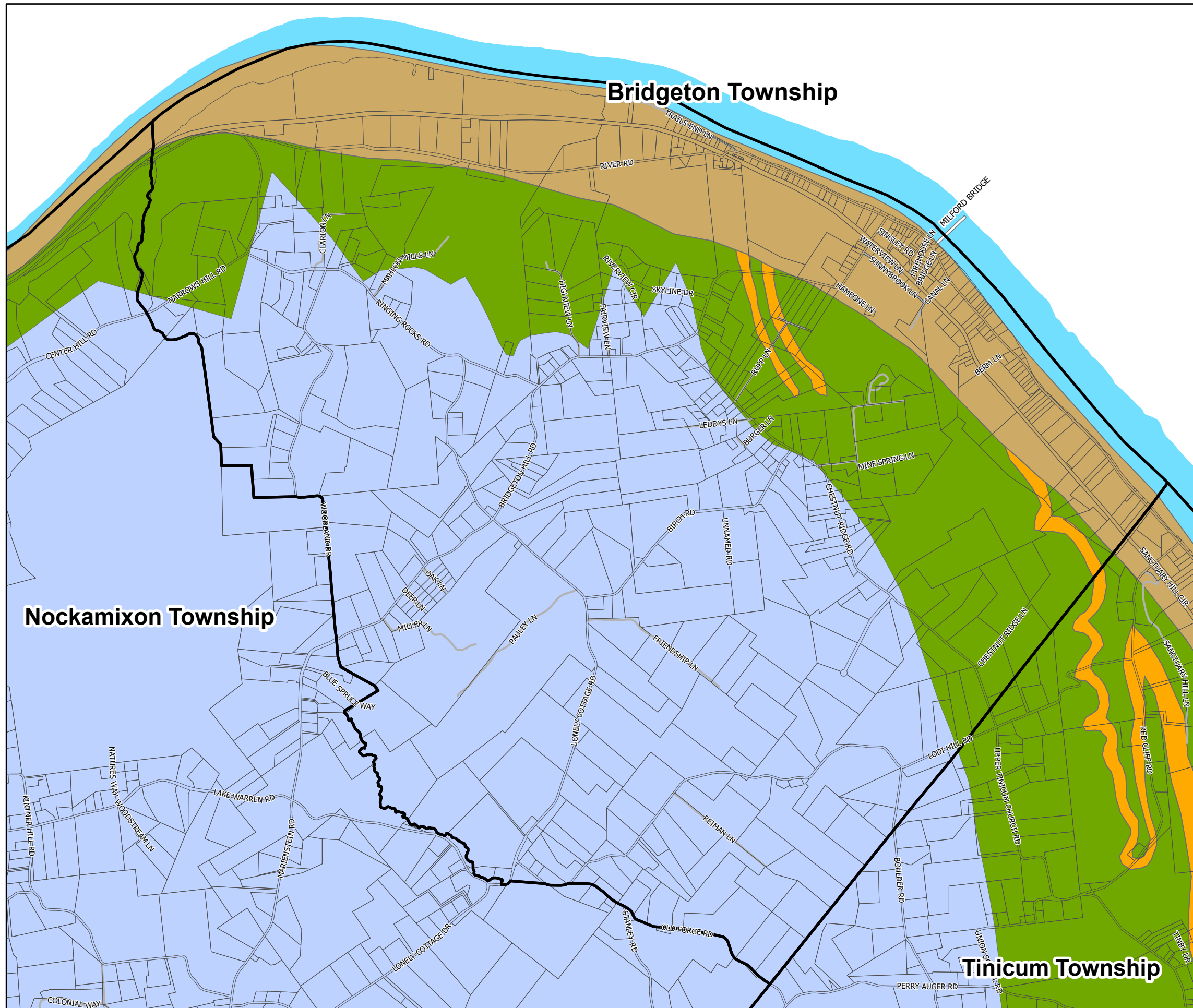


# Map 3. Geology

Bridgeton Township  
Comprehensive Plan Update

## Geologic Formations

- Diabase
- Brunswick Lithofacies
- Lockatong Lithofacies
- Wisconsin



# Map 4. Soils


Bridgeton Township  
Comprehensive Plan Update

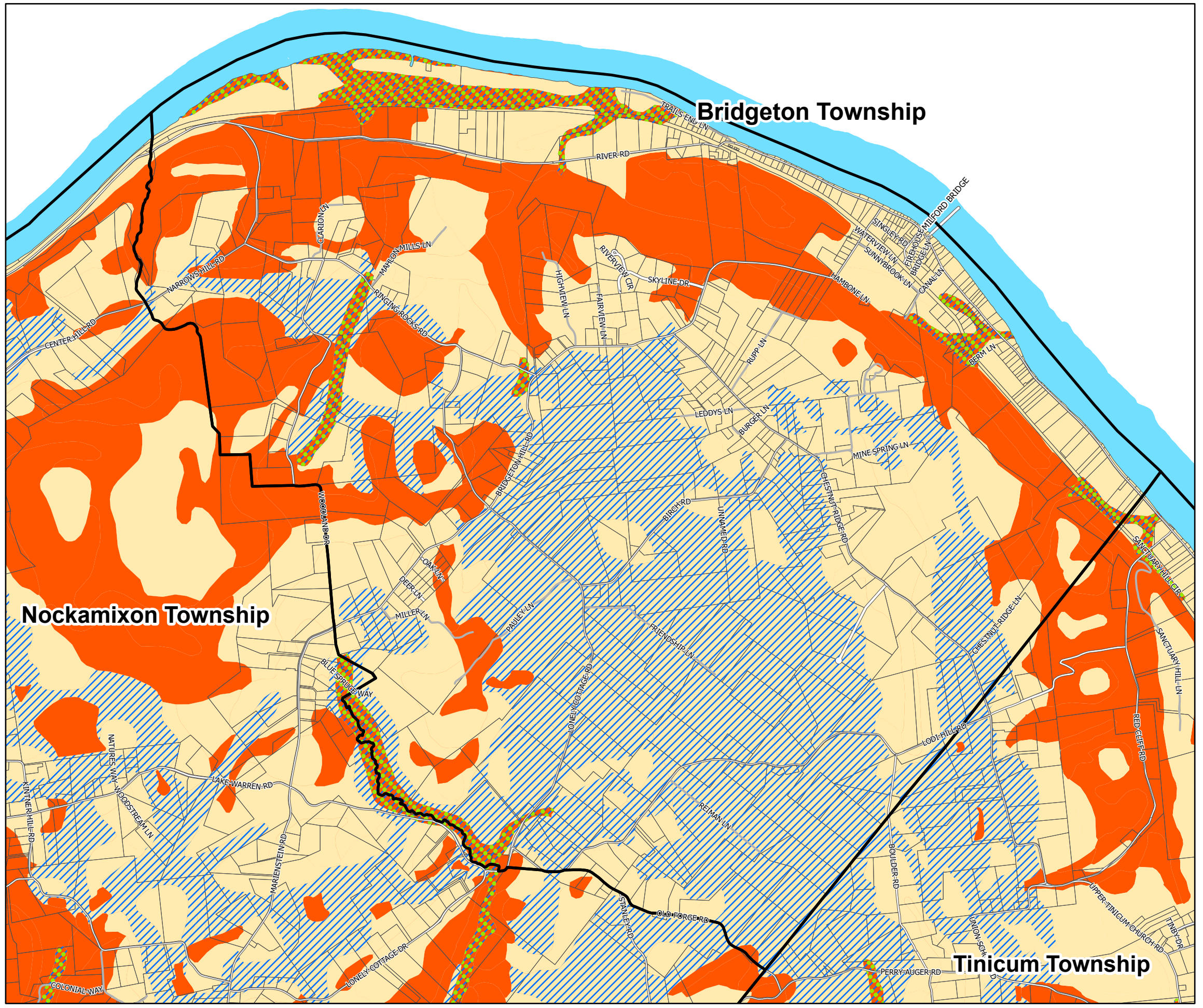
 Floodplain Soils

 Hydric Soils

Sewage Disposal Suitability

 Soils Suitable for Conventional Systems

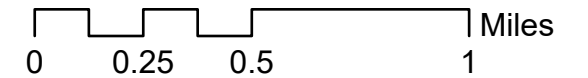
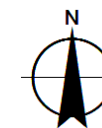
 Soils Not Suitable for On-Lot Systems



Bucks County

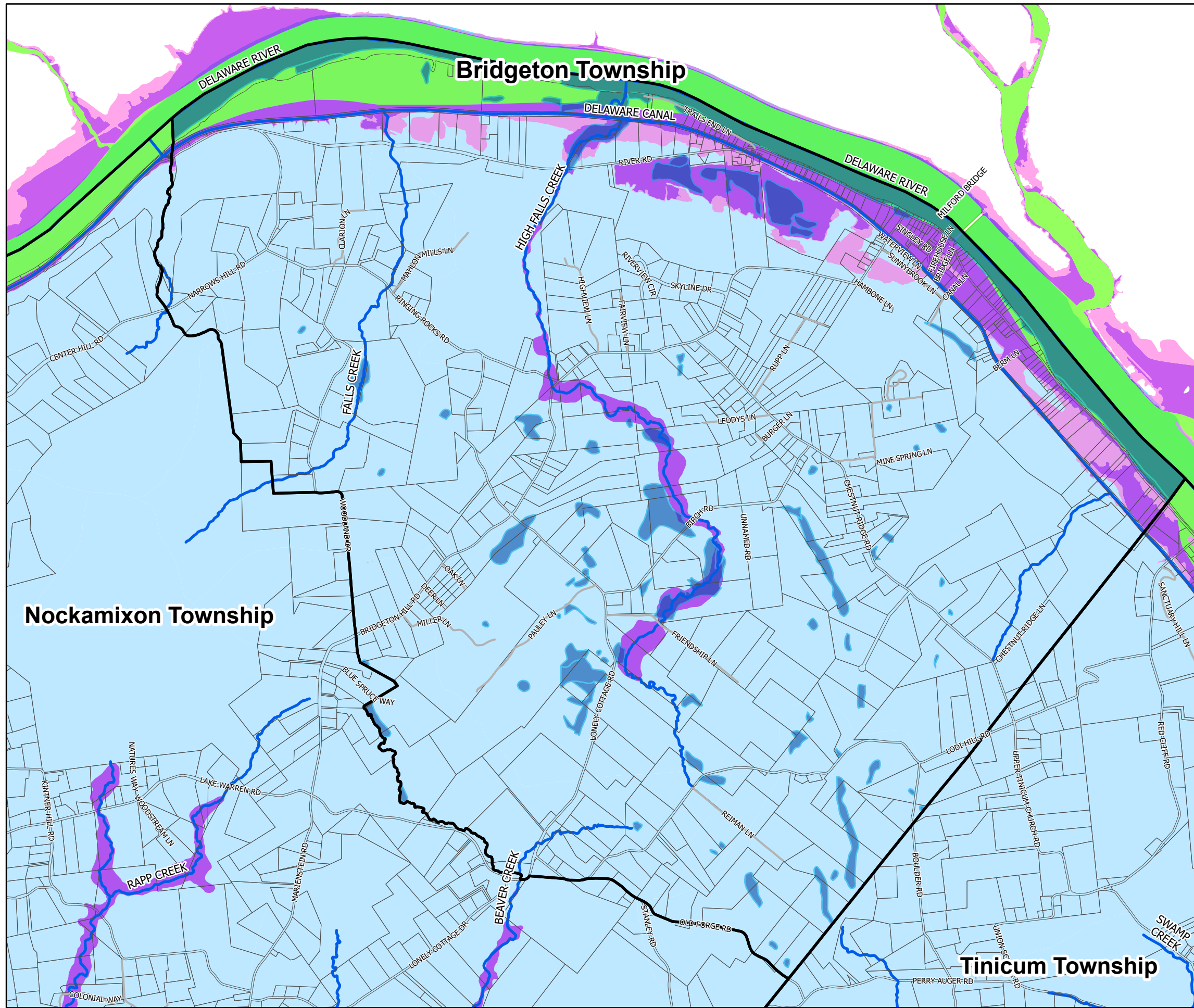


**BCPC**  
Bucks County Planning Commission




# Map 5. Floodplains & Wetlands


Bridgeton Township  
Comprehensive Plan Update



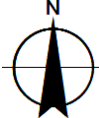
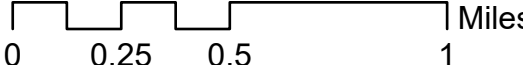
-  Waterways
-  Delaware River North Watershed
-  Wetlands
- Floodplains**
-  100-Year Floodplain
-  500-Year Floodplain
-  Regulatory Floodway



Bucks County



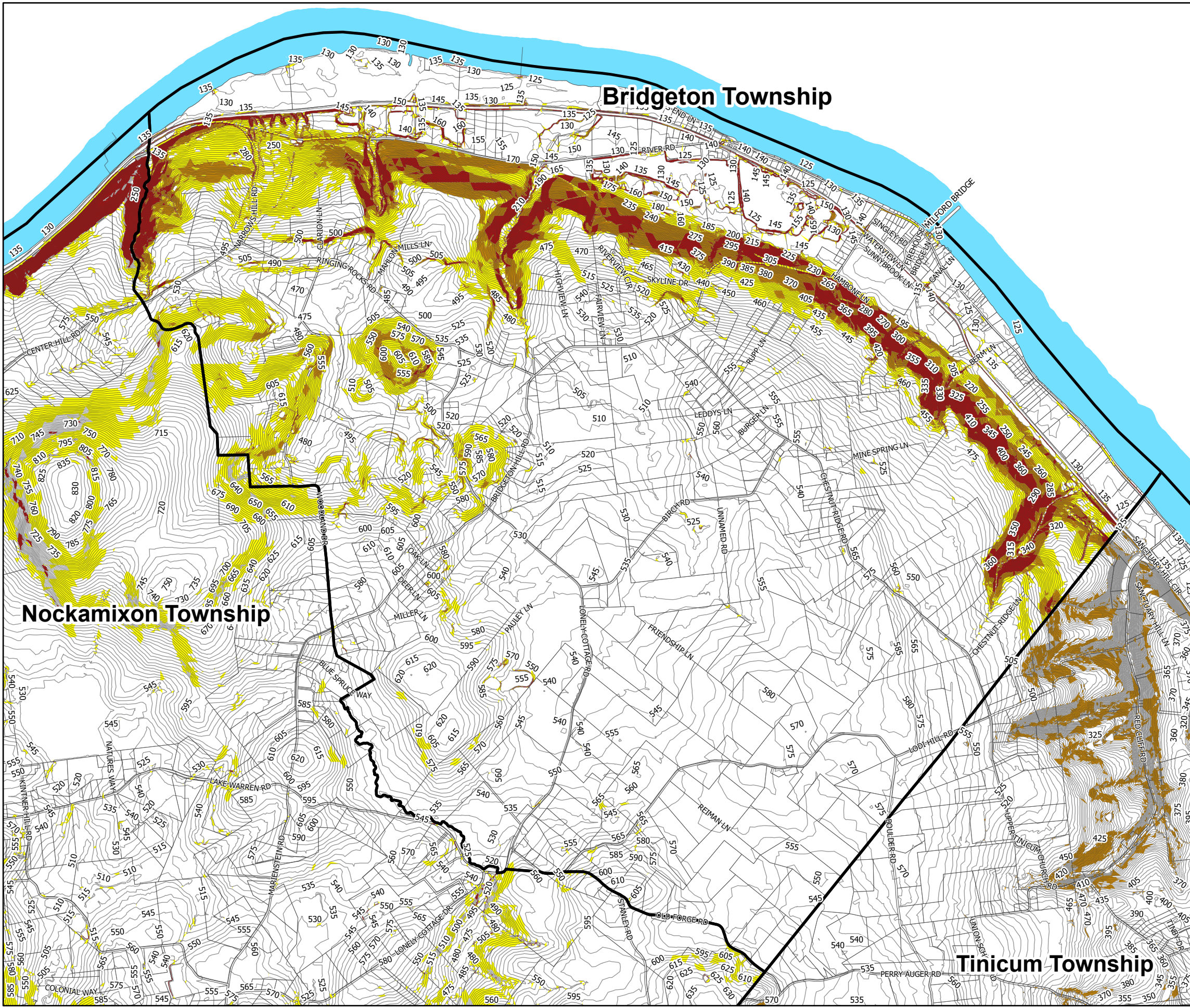
**BCPC**  
Bucks County Planning Commission

0 0.25 0.5 1 Miles

# Map 6. Topography & Steep Slopes

Bridgeton Township  
Comprehensive Plan Update



— Topography

Steep Slopes %

8-15

15-25

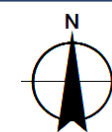
25+



Bucks County



**BCPC**  
Bucks County Planning Commission

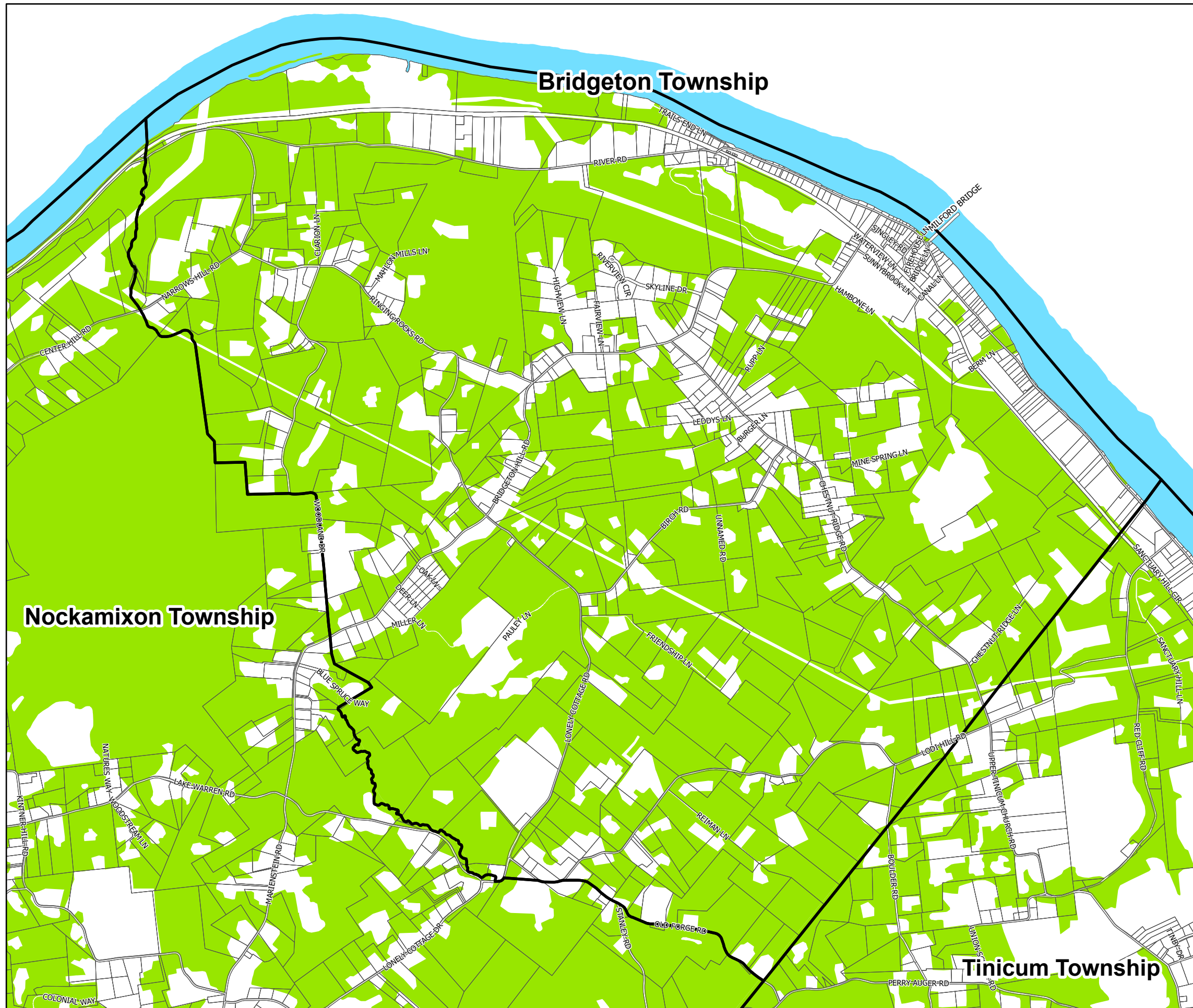


0 0.25 0.5 1 Miles

# Map 7. Woodlands

Bridgeton Township  
Comprehensive Plan Update

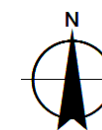
 Woodlands



Bucks County



**BCPC**  
Bucks County Planning Commission



0 0.25 0.5 1 Miles

**PRINCIPLE 2.**

**Preserve Historic and Cultural Heritage**





## Historic Resources



Through the preservation of historic resources, we are able to share the very spaces and environments in which the generations before us have lived. These resources provide a tangible connection to the past and are crucial in creating a sense of time and place by understanding settlement patterns and the heritage of a community. In addition to solidifying a community's past, preservation can boost the economy and quality of life, and it ensures that the history of a place remains intact for the enjoyment of future generations.

### HISTORIC PRESERVATION

Historic preservation is the process of preserving historically significant parts of a community, from individual buildings to whole neighborhoods, and archaeological resources. This involves identifying and celebrating a community's history to provide a better understanding of its past and to create context for future decision-making.

The Pennsylvania Historical and Museum Commission (PHMC) is the official history agency of the Commonwealth of Pennsylvania. The Pennsylvania State Historic Preservation Office (PA SHPO) is a bureau within the PHMC that uses its resources to educate, encourage, and enable Pennsylvanians to value and preserve the commonwealth's unique cultural and historic heritage. The role of the PA SHPO is to identify, promote, and protect the architectural and archaeological resources of Pennsylvania. The National Park Services defines historic resources as objects or sites eligible for listing or listed in the National Register of Historic Places. Municipalities may also identify historic resources by creating an inventory of resources that are locally significant.

### National Register of Historic Places

The National Register of Historic Places is the official list of the nation's historic resources, providing recognition that buildings or districts have historic, architectural, or archeological significance. This is part of a nationwide program to coordinate and support public and private efforts to identify and protect resources. The National Register of Historic Places was established by the National Historic Preservation Act of 1966 and is overseen by the National Park Service.

A historic resource worthy of preserving can be defined as a historic building, structure, district, site, or object. Buildings can include houses, barns, sheds, rail stations, and mills. Examples of structures are bridges, canals, railroads, walls, and fences. Sites may include archaeological sites, cemeteries, parks, and natural resources. Objects can include historic resources that are relatively small in size, such as statues, monuments, and fountains. Historic districts can also be listed on the National Register and may consist of geographically related historic resources such as a commercial Main Streets, residential neighborhoods, villages, or college campuses.

To be considered for listing on the National Register, a resource must be at least 50 years old and have significance to historic events, persons, architecture, or archaeology at the national, state, or local level. Its physical remains must also reflect the significance of the property. The resource should have integrity in location, design, setting, materials, feeling, workmanship, and association. Historic integrity is the concept that a historic resource must look similar today to how it looked when it was first constructed.

Being listed on the National Register does not require the historic property to be of national significance; the National Register honors historic properties that are significant at the national, state, and local level. State and federal historic preservation regulations require agencies to account for the effects of their projects on historic resources. Projects that use state or federal funds or require permits are subject to review and may require mitigation to account for adverse effects to historic properties.

The Pennsylvania State Historic Preservation Office (PA SHPO) manages the program and is the agency responsible for administering the National Register of Historic Places. Anyone can prepare a National Register nomination, however proper research and documentation is required.

A property cannot be listed on the National Register if the owner objects. Listing on the National Register does not require the property to be open to the public nor does it require the property owner to maintain or restore the property to any standards. National Register listing regulates potential alteration or demolition of historic resources when activities may impact historic properties when there is any federal or state government. Listing on the National Register does not limit the rights of private property owners to alter or demolish the building. National Register listing is honorary and owners of listed buildings can obtain, at their own expense, a plaque to display on the historic property.

Currently, there are about 98,000 historic resources listed on the National Register across the country, with 162 listed in Bucks County, and one being listed in Bridgeton Township, the Delaware Division of the Pennsylvania Canal.

### Historic Resources in Bridgeton Township

Bridgeton Township contains many historic resources, including buildings constructed from the late 18<sup>th</sup> to early 20<sup>th</sup> century. The only historic resource listed on the National Register in Bridgeton Township is the Delaware Division of the Pennsylvania Canal. Listed on October 29, 1974, this site is more commonly referred to as the Delaware Canal, which first opened in 1832 and still contains most of the original locks, aqueducts, and outlets. The canal runs for 60 miles from Bristol Borough up through Easton, PA, where it connects with the Lehigh Canal.

Prior to the construction of railroads, freight was moved exclusively by ships and boats on seas, rivers, and lakes. In areas where a means of water transport was not possible, due to a river not being easily navigated, canals were constructed. The primary purpose of the Delaware Canal was to transport anthracite coal from the northeastern Pennsylvania coal regions to Philadelphia. Coal was then transported by larger ships to locations along the eastern seaboard. In the most productive years just prior to the Civil War, over 3,000 mule-drawn boats traveled up and down the Delaware Canal, moving over one million tons of coal a year. Smaller quantities of goods such as lumber, building stone, lime and produce were also carried along this route. The canal also provided passenger transport. In Bridgeton Township, the canal resulted in increased development of the village of Upper Black Eddy.



*Delaware Division of the Pennsylvania Canal*

The *Bridgeton Township Comprehensive Plan* (1994) outlines a 1982 field investigation completed by the Bucks County Conservancy, now known as the Heritage Conservancy. The township hired the Bucks County Planning Commission in 2023 to update the 1982 survey and determine which properties in Bridgeton have potential for listing on the National Register. The *Bridgeton Township Historic Resources Survey Update* (2023) contains photographs and information for properties in the township constructed circa 1930 or earlier.

To determine the potential for listing on the National Register of Historic Places, the exterior, observable physical characteristics are key. Historic integrity is of primary importance for a building to be listed on the National Register of Historic Places. Historic integrity is defined as the qualities of a building by retaining its location, setting, materials, design, workmanship, feeling and association. The resource must look similar to how it looked when first constructed, or how it looked when the building achieved its historic significance. If the historic integrity has been compromised, the resource cannot be listed.

The following rating was applied to indicate the potential for listing to the National Register of Historic Places:

- 1 High Eligibility**—The resource appears to be eligible for listing.
- 2 Moderate Eligibility**—The resource may be eligible but there appears to be some loss of historic integrity.
- 3 Low Eligibility**—The resource is likely not eligible due to the loss of historic integrity.
- 4 Not Eligible**—The resource is not eligible for listing due to the loss of historic integrity.

The survey resulted in the identification of a potential National Register eligible historic district for the Village of Upper Black Eddy. The village’s current conditions were assessed, which resulted in an expansion of the boundary from the 1982 field survey.

The potential historic district and the properties with National Register eligibility are displayed on Map 8. Bridgeton Township Historic Resources Survey 2023. The survey is also available on the township’s website at: <https://bridgetontwp.org/2024/01/08/bridgeton-township-historic-resources-update/>.

The historic resources in Bridgeton give the township a unique physical and cultural character. The historic preservation process fosters civic pride and appreciation for historic values.

### National Historic Landmarks

A National Historic Landmark (NHL) is a building, district, site, object or structure that is important for its role in the nation’s history. This program was created by the Historic Sites Act of 1935 and is administered by the Secretary of the Interior. Applications for listing as an NHL are reviewed and processed by the National Park Service. NHL designation does not require that the property be open to the public, nor does it require that the property be maintained or restored to any standards. State and federal historic preservation regulations require that the agency account for the impacts of their projects if there are federal or state grants being used to do work that may affect the property; or if state or federal permits are needed to do work that may affect the property.

All properties that are designated National Historic Landmarks are automatically listed on the National Register, but only three percent of resources listed on the National Register are also recognized as a National Historic Landmark.

Currently, there are about 2,600 properties that hold National Historic Landmark designation across the country, with 12 designations in Bucks County, and one within Bridgeton Township—the Delaware Canal. The canal towpath has also been classified by the United States Secretary of the Interior as a National Recreation Trail, which is a designation given to existing trails that contribute to health conservation and recreation goals in the United States. The canal is also part of the Delaware and Lehigh National Heritage Corridor, which promotes heritage tourism along both the Delaware and Lehigh Canals.

## VILLAGE PLANNING

Bucks County, one of the three original counties in Pennsylvania, has a rich historical and cultural background. There are over 100 villages remaining in Bucks County; some beautifully preserved while others have been overshadowed by development. Three unique villages are an important part of Bridgeton’s heritage—Narrowsville, Rupletown, and Upper Black Eddy.

A village is defined as a relatively small, clustered settlement, often dominated by houses of a single historical period. Villages typically display the following characteristics: rural setting, typically located at a crossroads, small and compact development patterns, small or narrow lots, pre-twentieth century origin, or nuclear origin (containing a mill, store, tavern, extended family farmstead, etc.).

The earliest transportation routes in Bucks County follow Indian paths, which existed long before the first settlers arrived. These paths were eventually widened to accommodate the wagons and stagecoaches used to transport foods and people. Roads were frequently traveled due to the strategic location between villages and town.

From 1730 to 1830, taverns grew and prospered along these transportation routes, serving as stopping points for travelers, usually at a crossroad. Settlements often grew up around these taverns, which is why villages today are often found at crossroads.

Although it appears that most villages were established because of their proximity to major transportation routes, it is not true in every case. Village locations were common near streams which powered grist and sawmills, around extended family farms, along the Delaware River at the landing sites of ferries, along the Delaware Canal where canal workers often settled, and near iron ores and colonial mining.

As the early villages grew, they often became service centers for the surrounding rural community as well as providers of food and lodging for travelers. These settlements became the sites of general stores, post offices, and small industries.

However, as convenient and low-cost transportation became available, people began to travel to larger towns to take advantage of the diversity of goods and services offered there. With few exceptions today, villages are primarily residential in nature.

The villages of Bucks County can be group into three categories:

**Hamlets** are the smallest type of village, consisting of a few houses at a crossroads or in close proximity to each other. Hamlets generally have no commercial uses or services.

**Residential Villages** are settlements which are mostly residential but also contain community related services such as a post office, church, or a general store.

**Commercial Villages** are often the twentieth century or motorized form of a previously residential village; a settlement which is predominantly residential in use but is characterized by commercial uses or services that draw on a broader region for support.

### Narrowsville

The village of Narrowsville is located in a dramatic setting of steep cliffs and woodlands along the Delaware River. The cliffs which reach 500 feet above sea level are known as the Palisades or the Nockamixon Cliffs. This formation is considered one of the outstanding scenic and geologic features of Pennsylvania. The village is located at the base of the cliffs at the intersection of River Road and Narrowsville Road, and crosses the municipal boundary into Nockamixon Township.



*The Narrows (Nockamixon Township)*

There is only one house located in the village along River Road. The rest of the homes are scattered along Narrows Hill Road. The other historic building in the village dates back to 1812 and is a three-story hotel with a restaurant named The Narrows, which

is located on the border of Bridgeton in Nockamixon Township. Although the majority of Narrowsville is located in Nockamixon Township, the village once served Bridgeton Township residents.

### Rupletown



This village was home to many canal boatman and their families in the days when the Delaware Division Canal was still in operation. It is situated on the high plateau above the river and was also once referred to as “The Hills” or “The Hill District” by the residents of Upper Black Eddy and the river lowlands. The village was named after the Ruple family, who departed the village over 150 years ago.

Rupletown is located along Bridgeton Hill Road, in between the intersections of Chestnut Hill and Ringing Rocks Road. Due to many newer, spread out homes, it is difficult to determine the exact boundaries of the village.

The Bridgeton Athletic Association playing fields, the township municipal building, and the River Valley Waldorf School are all within the village. Several of the front yards along Bridgeton Hill Road contain large boulders scattered across the lawns. These boulders are part of the same diabase formation found in Ringing Rocks County Park, which is just north of the village. As this village is predominantly residential with a couple of community-related services, Rupletown may be considered a residential village.

### Upper Black Eddy

This village is the largest in the township and the most intact today, located in the area where River Road intersects with Bridgeton Hill Road, and with the Milford Bridge. Upper Black Eddy was formed along the longest eddy, which is a current moving contrary to the direction of the main current, along the Delaware River. Prior to the separation of Bridgeton Township from Nockamixon Township, the village known today as Upper Black Eddy was known as Bridgeton. The name of the village is derived from its location along the eddy, as well as from the Black family who inhabited the area in the 1700s and ran the local inn. The area in the river was referred to as Upper Black’s Eddy. The village of Lower Black’s Eddy was located further south on the Delaware River and is now known as the village of Point Pleasant in Plumstead and Tincum Townships.

Upper Black Eddy became a sizable village settlement due to its popularity as a harbor for the rafts used in the early lumbering industry. However, much of the village was founded around canal-related businesses, including a boat building yard, mule stables, and a general store. Eddies were also renowned amongst fishermen as good spots to catch perch and other fish along the Delaware. This included President Grover Cleveland, who vacationed in Upper Black Eddy during his presidency, specifically for the good fishing.

The village was once a summer resort for residents of Philadelphia and New York who were seeking temporary relief from the strains of city life. Today, Upper Black Eddy is the focal point of the township and is the first part of the township that visitors enter when crossing the bridge from Milford, New Jersey.

Today, the village consists of over 100 houses along quiet tree-lined streets that run perpendicular to River Road. The village contains a few businesses, such as a general store, a coffee roastery, two bed and breakfasts, an auto garage, a post office and the township fire company.



*Riverstone 1730*



*Bridgeton House Inn*

Bridgeton House was built along River Road in 1836 as a private residence and has since served the village as a general store, bakery, pool hall, real estate office, and apartments. It witnessed the flood of 1903 that washed away part of the wood covered bridge which connected the village to Milford, New Jersey. In 1981, the structure was purchased and remodeled into the bed and breakfast it is known as today.

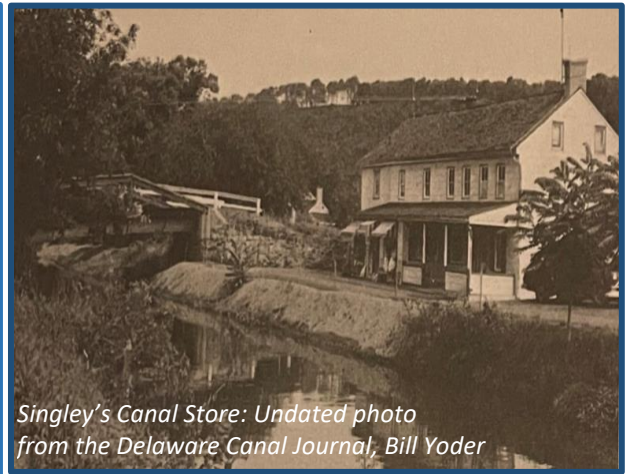
Riverstone 1730 is the other bed and breakfast in the village. This 19<sup>th</sup> century guest house is nestled along the Delaware River on River Road.

Homestead General Store is a popular gathering place for residents and visitors of the village, with its prime location between the canal and the river. The Homestead was previously a very important canal store that served those who worked on the Delaware Canal. It was operated originally by the Flemming's, followed by the McAntee's and then the Singley's. The Lewis family purchased the historic general store in 1980 and has owned and tended to it ever since.

It continues to be an important gathering place in the township. Physical copies of the community survey were placed here during the comprehensive planning process, due to the number of residents that frequent this establishment.



*Homestead General Store*



*Singley's Canal Store: Undated photo from the Delaware Canal Journal, Bill Yoder*

The character and quality of the township would be permanently diminished if small settlements were to disappear, becoming unidentifiable as new development and growth engulf them. While municipalities cannot prevent growth, they can alleviate the effects that development can have on villages through appropriate land use policies and regulations. Residents can also work together to maintain or improve the positive aspects of their village.

## PRESERVATION TOOLS

The following preservation tools take the form of historic district ordinances, zoning provisions, design guidelines, and other regulations that municipalities can enact to regulate and laws to preserve these historic resources. Listing on the National Register of Historic Places does not protect a historic resource from alteration or demolition.

### Historic Districts and Historical Architectural Review Board

One planning strategy for historic preservation is the adoption of ordinances that establish historic districts. The PHMC must approve historic districts before local regulations can be enforced. This planning strategy is most appropriate in those municipalities that have concentrations of historic structures or sites. A local historic district ordinance designates an area containing historic structures and protects it by (1) limiting the type of alterations that may be made to existing buildings, (2) regulating proposed demolitions, and (3) ensuring compatible design of new construction. Act 167, the state Historic District Act of 1961, provides authorization for Pennsylvania municipalities to designate historic districts and regulate the alteration of buildings within them based on the historic context. Historic districts created under the authority of Act 167 are not zoning districts, but rather a review process separate from zoning concerns.

The creation of historic districts has many benefits; historic buildings have a unique character and heritage, providing a source of pride to residents. The character of historic neighborhoods is valued as an attractive environment and some communities have capitalized on their historic character to promote economic development and tourism.

Communities creating historic districts must follow procedures outlined in Act 167 for regulating alterations to structures within the districts. A local historical architectural review board (HARB) must be

appointed, and the board must consist of an architect, a real estate broker, a building inspector, and at least two citizens with an interest in, or knowledge of historic preservation. The HARB reviews and advises the governing body who then makes the decision to approve or deny a certificate of appropriateness for the proposed alterations. In determining if a change is appropriate, the HARB and governing body may consider its visibility from the public right-of-way, and general design, arrangement, texture, material, and color of the building or structure and its relation to the historic character of the district. Many municipal governments with HARBs have illustrated design guidelines that provided details on how to appropriately alter and maintain historic buildings in the historic district. These design guidelines are typically prepared by an architect with considerable experience in historic preservation projects.

A local historic district ordinance provides a means for limiting the amount of change that can occur to historic structures.

### Zoning Requirements

Protecting a historic district using the state Historic District Act is a useful and effective method of protecting historic buildings, zoning provides another option.

The Pennsylvania Municipalities Planning Code (PA MPC) adopted in 1968, as revised, allows municipalities in Pennsylvania to adopt zoning ordinances. Sections 603, 604 and 605 of the PA MPC contain specific provisions allowing municipal governments to protect historic resources using zoning. Section 603(b)(2) states that zoning may permit, prohibit, regulate, restrict, and determine the erection, construction, repair, maintenance, alteration, razing, and removal of buildings and structures. In addition, Section 603(b)(5) states that zoning may be used to protect historic resources. Section 604(1) mandates that zoning ordinances be designed to protect historic values in the environment. Section 605(2)(vi) establishes that municipalities may use the concept of an overlay zone to regulate uses and structures at, along, or near places with historical, architectural, or patriotic interest or value. These provisions have resulted in a variety of provisions in municipal zoning ordinances to protect historic resources.

Municipalities can create an inventory of historic resources and map those properties as a historic resources overlay zone. A historical commission, or the township planning commission then advises the governing body about demolition or alteration of buildings within the historic resources overlay zone. Historic preservation overlay zoning can allow for additional uses within historic buildings, in order to encourage the continued use of a historic resource, rather than demolition. Some historic preservation ordinances allow additional commercial uses within historic buildings, which are permitted by special exception or conditional use. Specific standards for the approval of additional uses would have to be in the zoning ordinance.

Another option for municipalities to protect historic resources using zoning is to develop a historic preservation development use. The historic preservation development use could be applied at the option of the developer of a property with a historic building on it. The use would require the developer to protect the historic building in exchange for the developer being allowed to build at higher density than normally allowed in the zoning district. The developer would have to ensure that the historic building is adequately setback and buffered from the new development. The developer may sell the historic building; however, covenants would be put on the historic building to ensure that it is protected from demolition or inappropriate alterations in the future.

### Demolition Regulations

The regulation of demolition is an important part of a community's effort to preserve historic resources. Demolition by neglect is the destruction of a building through abandonment or lack of maintenance. Property owners may use this type of long-term neglect to avoid historic preservation demolition regulations. A municipality can use property maintenance codes to help prevent demolition by neglect. Enforcing laws that require buildings to be secure from vandalism and prevent blight can put pressure on owners to maintain their properties.

A demolition delay ordinance requires a waiting period after the submission of a request for a demolition permit. A delay provides time for research about the architectural or historical significance of the property and time to develop alternatives for preservation, or to document the property if demolition cannot be averted. The Bridgeton Township Zoning Ordinance requires a 90-day waiting period for demolition of a building on the township's registry of historic buildings.

In addition, the section allows additional optional uses, as a conditional use, for buildings on the historic registry. A property owner wishing to take advantage of the additional use for the historic building must show compliance with the Secretary of the Interior's Standards and Guidelines for Rehabilitation of Historic Properties evidenced by an architect's signature on a letter indicating compliance.

Additional uses allowed by conditional use for a historic property are bed and breakfast, restaurant, conversion to not more than four dwelling units, business office, and personal care center. Specific conditions include compliance with the design of signs and other conditions. Also, Section 309 of the Bridgeton Township zoning ordinance has recommended design guidelines for new construction and alterations of existing historic buildings. Another important provision regarding historic resources currently in the Bridgeton Township Zoning Ordinance is Section 504 which requires a 50-foot buffer from the center of the Delaware Canal for new construction. To further protect this resource, the setback should be increased to 50 feet from the edge of the canal, to better protect against the impact of new development.

### Design Guidelines

Design guidelines are another tool for preserving the appearance of historic buildings and neighborhoods. They consist of design options for alteration or rehabilitation of existing buildings and construction of new buildings, encompassing features like material, architectural style, and signs. Such guidelines, especially when illustrated, can help maintain the character of the community. Design guidelines are also useful when coordinated with the requirements of a historic district.

Adherence to design guidelines ensures that buildings fit within the context of the existing architecture of an area. Design guidelines make a strong statement about the importance of preservation to a community.

### Financial Incentives and Grant Programs

Local preservation ordinances and guidelines can be effective; however, they do not address the financial pressures that face owners of historic properties. To be more effective, preservation efforts should also address pressures that may conflict with historic preservation planning. Financial incentives and grant programs are ways local government and local financial institutions can encourage historic preservation. The provision of financial incentives encourages private property owners to become involved in

preservation efforts and invest in historic properties. These incentives are intended to eliminate many of the financial advantages of new construction compared with restoration or preservation projects.

Financial incentives primarily take the form of low-interest loan programs and tax incentives from governmental bodies. Revolving loans administered by a local bank or the township may also assist with the cost of preservation. Banks get involved in preservation loans because of the positive community relations and profit potential. Local governments may offer tax incentives such as property tax abatement freezes or credits. The availability of particular incentives depends on state enabling legislation.

The PA SHPO staff administers the Keystone Historic Preservation Grant Program. The grants available in two separate funding programs—one for planning grants and the other for construction grants. The grants are available to nonprofit organizations and local governments. The planning grant is for creating historic resource surveys, historic structure reports, feasibility studies, design guidelines, historic preservation plans, National Register nominations and similar studies. Planning grant awards are \$25,000 or less. Construction grants are for implementing actual work on a historic building, which may include for roof replacement, structural repairs, repointing masonry, and similar related projects. Construction grant awards are for \$100,000 or less. For construction grants, the historic building must be listed on, or eligible for listing on the National Register of Historic Places. For planning grants or construction grants, a 50/50 match is required. Additional requirements exist for these grants, details can be found at the PHMC website.

There are several grants administered by the National Park Service that local governments can apply to. Among these are the Save America's Treasures Grant which provides funding for the preservation of buildings, as well as for preservation of archival and artifacts collections of national significance. African American Civil Rights Grants are available to municipal governments for construction projects, historic resource surveys, documenting, and educating the public about the historic struggle for equality of African Americans in their community. Details about these grants and other National Park Service grants can be found on the Cultural Resources Grants website.

A somewhat overlooked source of funding for historic preservation funding are Community Development Block Grants (CDBG) administered by the U.S. Department of Housing and Urban Development (HUD). Historic preservation is a national priority for CDBG funding. Limitations on the funding is that the grant must be focused on census tracts where families have low to moderate incomes. Community Development Block Grants also could be used to convert vacant or underused historic buildings into affordable housing for families with low to moderate incomes.

The National Trust for Historic Preservation is a nationwide historic preservation nonprofit advocacy group that has some grants available for municipal governments. These grants are for historic preservation planning or for historic preservation education and outreach and are small grants of \$1,000 to \$15,000. Details are available at the National Trust for Historic Preservation website. The National Trust also provides advocacy for historic preservation issues and has programs such as the 11 Most Endangered List that highlights the most endangered historic properties in the United States.

Preservation Pennsylvania is a statewide nonprofit advocacy organization which provides technical assistance for municipal governments and other organizations which includes information about funding and applying for historic preservation grants. The organization also provides advocacy support and has programs such as Pennsylvania At-Risk which highlights endangered historic properties in Pennsylvania.

The organization also gives historic preservation awards to recognize various type of historic preservation projects and holds an annual historic preservation conference in conjunction with the PA SHPO.

### **Certified Local Government**

A local government that fulfills program standards administered by the PA SHPO, can receive designation as a Certified Local Government (CLG) under the provision of the National Historic Preservation Act of 1966. Membership in this program allows municipalities to apply for grants under the (CLG) Local Government Grant Program. Such grants can be used for cultural resource surveys, technical planning and assistance, educational and interpretive programs, and other preservation activities. To participate in this program, municipalities need to meet certain other criteria, including effective enforcement of an Act 167 historic district ordinance, and to comply with appointment, training, and reporting requirements. Consideration should be given to applying for CLG status should the township enact historic protection regulations in the future.

Once a municipality is accepted into the CLG program there are several advantages. The municipality gets additional points toward approval of Keystone Historic Preservation Grant applications, there are CLG grants for historic preservation planning projects, design services, and technical assistance. Certified Local Governments also participate in the National Register of Historic Places review process by commenting on National Register nominations in their community.

### **Federal and State Historic Preservation Tax Credits**

One of the more successful incentives to preserve historic resources is the federal historic preservation tax credit, which allows developers of historic rehabilitation projects to claim tax credits. The tax credit has been in effect since 1976 but has been modified over the years. Currently the tax credit is 20 percent of approved rehabilitation costs. In round numbers, if a developer spends \$100,000 in approved rehabilitation costs they receive a \$20,000 tax credit.

According to the 2021 Annual Report on Economic Impact of the Federal Historic Tax Credit, the federal tax credit program generated \$526,600,000 in total rehabilitation investment and created 8,560 jobs in Pennsylvania.

The federal historic preservation tax credit can be combined with the Low-Income Housing Tax Credit and the New Market Tax Credit, which is an incentive to invest in distressed communities.

Pennsylvania has its own historic preservation tax program that is substantially the same as the federal tax credit, except that the amount of state tax credit is 25 percent of rehabilitation costs which can be increased to 30 percent if the project results in development of affordable housing units. The total tax credit per taxpayer per year is capped at \$500,000 and no more than \$5,000,000 dollars in tax credits are available per year.

Both the federal and the state historic preservation tax credit have been proposed for revisions recently. The federal tax credit was being proposed to be increased to 30 percent but has not been approved. The state historic preservation tax credit has been successful and there will likely be improvements to the program in coming years.

### Historic Markers

Historic resources can be noted by plaques, street markers, or storyboards. This signage may describe the features itself and the reason it is significant. Historic trees can be noted with tree plaques. Historic resources can be commemorated with a marker through the Pennsylvania Historical Marker Program of the Pennsylvania Historical Museum Commission. Any individual or group may nominate a structure or site for such a marker, subject to approval through the PHMC. Bridgeton currently does not hold any historical markers in the township. Buildings listed on the National Register of Historic Places can be honored with a plaque.

### Historic Preservation Organizations

A historical society is an organization dedicated to researching, interpreting, and preserving historic resources in a community. The Upper Black Eddy Historic Preservation Society was established in 1990 but is no longer operating. The township should encourage the revitalization of this society, or create a Bridgeton Township Historic Commission to better address historic preservation issues and to advocate for the preservation of historic resources in the township.

The Friends of the Delaware Canal is an independent, non-profit organization working to restore, preserve, and improve the Delaware Canal. Their primary goals are to ensure that the canal is fully watered and that the towpath trail's entire length is usable. When the Delaware Canal was constructed between 1827 and 1832, the ditch often divided properties into two sections. As the builder of the canal, the Commonwealth had an obligation to property owners to reconnect the separated pieces with bridges. More than 100 bridges were constructed over the canal, most were known as camelback bridges, which were wooden truss bridges with a hump in the middle that allowed canal boats to easily pass underneath. Out of the six camelback bridges that remain along the Delaware Canal, one is located in Upper Black Eddy—Spahr's Bridge.

The Friends of the Delaware Canal are committed to the preservation of these six bridges; four of which have been restored using grants and contributions. As of the writing of this plan, the Friends of the Delaware Canal have spearheaded the historic restoration of Spahr's Bridge. The quest to restore and maintain this bridge began in 2002.



### HERITAGE TOURISM

Bridgeton Township is in a unique position geographically because the historic Delaware Canal runs through the township. The *Bridgeton Township Comprehensive Plan (1994)* mentions the newly formed Delaware and Lehigh Heritage Corridor. The heritage corridor has been a resounding success highlighting the canal and its attractiveness as a heritage tourism attraction. Heritage tourism is defined as tourism that specifically attracts those interested in learning about the history of a site and also enjoying the aesthetics and architectural features of historic areas.

The Delaware and Lehigh Heritage Corridor includes the linear corridor defined by the Lehigh Canal and the Delaware Canal. The Lehigh Canal begins near Jim Thorpe (formerly Mauch Chunk) and connects to Easton. The Delaware Canal runs from Easton to Bristol in Bucks County. The corridor offers recreational

activities such as biking and walking along the historic canals, as well as destination towns adjacent to the canals that offer museums, shopping, dining, and entertainment. The village of Upper Black Eddy in Bridgeton is one of the destination places along the heritage corridor.

## CHAPTER SUMMARY

- Bridgeton Township is in a unique position geographically because the historic Delaware Canal runs through the township.
- The Delaware Division of the Pennsylvania Canal is listed on the National Register of Historic Places and is a National Historic Landmark.
- The Bucks County Planning Commission updated the township’s historic resources survey in 2023.
- Bridgeton contains three historic villages, Upper Black Eddy being the largest and most recognizable today.
- Preservation tools take the form of historic district ordinances, zoning requirements, and design guidelines that municipalities can enact to regulate and laws to preserve these historic resources.
- The Upper Black Eddy Historic Preservation Society was established in 1990 but does not appear to be in effect today.
- The Friends of the Delaware Canal is committed to the restoration of Spahr’s Bridge in the township.
- Bridgeton does not have any historic markers in the township.





## Recommendations

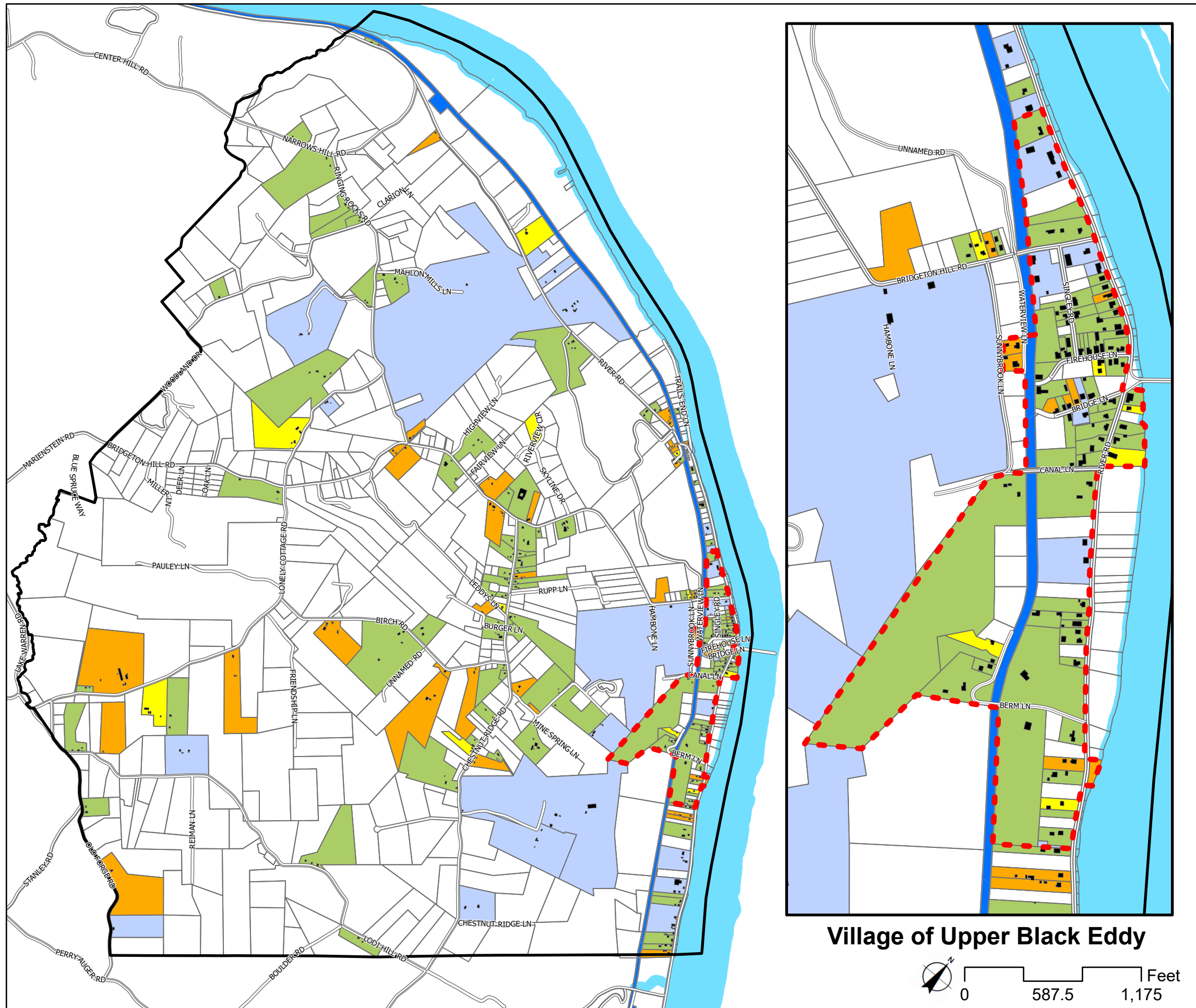
- Establish a Historical Architectural Review Board (HARB).
- Encourage the revitalization of the Upper Black Eddy Historic Preservation Society or create a Bridgeton Township Historic Commission to address historic preservation issues and to advocate for preservation of historic resources in the township.
- When the township meets the criteria to qualify, apply for status as a Certified Local Government (CLG).
- Apply for funding through the Keystone Historic Preservation grant programs to assist with a historic resource survey, to create a township historic preservation plan, develop design guidelines, adopt a historic preservation ordinance, or nominate resources to the National Register.
- Revise the Bridgeton Township zoning ordinance to include better protection of historic properties and consider the following:
  - A historic preservation cluster development district,
  - Making demolition of a historic building a special exception or conditional use,
  - Increase the set back from the Delaware Canal from 50 to the center of the canal to 50 feet to the edge of the canal property line to better protect against the impact of new development.
- Develop illustrated design guidelines for the village of Upper Black Eddy or for the township as a whole.
- Encourage the nomination of historic resources to the National Register of Historic Places.
- Support the efforts of the Friends of the Delaware Canal in restoring and maintain Spahr’s Bridge.

# Map 8. Bridgeton Township Historic Resources Survey (2023)

 Proposed UBE Historic District

Potential for National Register Rating

-  1 High Eligibility
-  2 Moderate Eligibility
-  3 Low Eligibility
-  4 Not Eligible



**Village of Upper Black Eddy**



Bucks County



**BCPC**  
Bucks County Planning Commission



**PRINCIPLE 3.**

**Manage Mobility**





## Transportation and Circulation



### CIRCULATION CHARACTERISTICS

Bridgeton's location within the regional transportation network allows convenient access to and from the surrounding areas. The township is linked to Milford Borough, New Jersey through the historic steel truss Milford Bridge. The Allentown-Bethlehem-Easton corridor is located 15 miles northwest of the township, Philadelphia is located 60 miles to the south, and New York City is 74 miles to the east.

Primary access to the township is provided from the north and south via Route 611 (Easton Road), Route 412 (Harrow Road/Durham Road), and State Route 32 (River Road), and from the east and west via Route 212/412 (Quakertown Road/Bethlehem Road/Hellertown Road), Route 563 (Mountain View Drive), and Route 113 (Bedminster Road). Bridgeton Township is dependent upon its system of roads and streets for its transportation needs, as there is no public transportation in the township.

River Road and Bridgeton Hill Road are the primary routes in the township that serve vehicles traveling through or to destinations within the township. These two critical roadways shape the character of the township as they directly serve most of its residents and points of interest. The township's other roads are intended to primarily distribute vehicles and provide access to abutting properties.

### Road Classification and Ownership

The Federal Highway Classification System is the method by which streets and highways are categorized into systems according to the type of service they provide. Roads should be classified according to the purpose they are intended to serve. New roads should be built to standards based upon their intended purpose. Additionally, existing roads should be improved to meet their intended purpose.

For example, rights-of-ways should be wider and front yard setbacks should be greater on roads that carry higher traffic volumes. Existing and anticipated traffic volumes, an area's character, and existing natural features must be carefully considered when designing and redesigning roads and bridges. Bridgeton's roads are classified by three types:

<b>Minor Arterials</b>	Roads that convey traffic between local population centers—River Road and Bridgeton Hill Road.
<b>Major Collectors</b>	Roads that collect and distribute traffic between minor arterials and smaller, local roads—Chestnut Ridge Road, Ringing Rocks Road, and Narrows Hill Road.
<b>Local Access</b>	Roads whose primary purpose is to provide access to abutting property—all other roads in Bridgeton Township not classified as either Minor Arterials or Major Collectors.

Results from the community survey indicate that residents are concerned with road conditions. Within the township, there are three types of road owners: roads owned by the state (PennDOT), roads owned by Bridgeton Township, and roads owned by private individuals or organizations. Roadway maintenance falls on the responsibility of the road owner. The township should work with these parties to ensure that roadway condition issues are documented, and that owners follow through with maintenance procedures. Map 9. Road Ownership depicts which roadways are owned by which type of organization.

## NETWORK CIRCULATION

As Bucks County has developed over the last 20 years, traffic and circulation patterns have shifted throughout the county. Despite these changes, traffic volumes along Bridgeton Hill and River Roads in Bridgeton have remained stable. Table 12. Average Annual Daily Traffic (AADT) displays the traffic counts from the years 2000 and 2021. In 2000, the AADT along River Road was 3,138 vehicles. In 2021, the AADT was 2,360 vehicles, showing a decrease of 33 percent over the last 21 years. The AADT for Bridgeton Hill Road in 2000 was 2,550 vehicles and in 2021 the AADT was 2,202 vehicles, showing a decrease of 15.8 percent.

**Table 12. Average Annual Daily Traffic (AADT) 2000 and 2021.**

Year	River Road AADT	Bridgeton Hill Road AADT
2000	3,138	2,550
2021	2,360	2,202
Percent Change	-33.0%	-15.8%

Source: PennDOT

The township's circulation network is currently well-positioned to handle its current level of vehicular volume. To maintain this level of circulation, as well as to properly plan for future traffic volume increases, the township should adopt an official highway classification map, indicating which roads fall into its highway classification categories. This map can then be referenced during the land development process to reinforce roadway and land development standards.

### Bridgeton Township Traffic Advisory Committee

The Bridgeton Township Traffic Advisory Committee was formed in 2021 by concerned township residents. The committee has worked in the township to address three major issues concerning transportation and circulation.

1. **Truck traffic:** How trucks can safely traverse Bridgeton Township has become an increasingly important topic. Specifically, truck traffic on Bridgeton Hill and River Roads is a key concern. The Milford Bridge crosses the Delaware River and connects Bridgeton Township with Milford, New Jersey. This bridge is toll-free and has no weight limit, which makes it an attractive option for trucks trying to reach warehouses in central New Jersey. There is an existing ban on trucks over 45 feet using these routes and the township has worked with PennDOT to post signs alerting trucks to this ban. Unfortunately, trucks over 45 feet continue to use these routes in spite of the clearly marked ban.
2. **Speeding:** Excessive vehicle speeds along River and Bridgeton Hill Roads has become a concern in the township. Since the township does not have its own police force, they must rely on state police to enforce speed limits in the township. The township also has three speed limit awareness radar signs which rotate to new locations every two weeks in order to educate residents and visitors on the speed limit. Resident safety is a concern as many residents are required to cross River Road in order to access their mailboxes.
3. **Noise:** Both the increase of truck traffic and speeding has become a quality of life issue to residents as it has increased noise along these roads. These issues run directly through Upper Black Eddy and detract from its village character.

The traffic committee is currently in the process of convening and developing ways to reduce these issues. The township should continue to monitor and evaluate traffic conditions along Bridgeton Hill and River Roads in conjunction with resident feedback to address traffic concerns.

### Traffic Calming Measures

The Institute of Transportation Engineers defines traffic calming as the combination of measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users. Traffic calming consists of physical design and other measures put in place on existing roads to reduce vehicle speeds and improve safety for pedestrians and cyclists.

The following physical measures are self-policing, with the intent that drivers will become aware of their environment and slow down in the absence of law enforcement:

**Gateways** are enhancements that provide an identity to a certain area in order to increase driver awareness. A gateway at the entrance to Upper Black Eddy would signal to motorists that they have entered a historical village to encourage drivers to maintain appropriate speeds.

**Curb extensions, crosswalks, and sidewalks** create safer and shorter crossings for pedestrians, while increasing the availability for streetscape improvements. These measures would allow pedestrians to cross River Road safely to access the Milford Bridge.

**Speed humps** are a raised surface on the roadway that create a gentle rocking motion to encourage motorists to slow down to a safe speed. This can be accompanied by signage and roadway markings to alert motorists of the change in roadway surface. Speed cushions are modified speed humps installed across the roadway with spaces between each cushion to permit wider axle emergency vehicles to pass without slowing down.

**Signage** is one of the most easily installed traffic calming technique. Flashing pedestrian signage can help signal to motorists of a pedestrian crossing. Speed feedback signs are portable, interactive signs that display a vehicle's current speed limits to remind the driver to slow down and obey the posted speed limit. The township should continue to display these signs to educate visitors and residents on the posted speed limit.

Traffic calming measures can be deployed throughout the township, depending on development opportunities from both the private and public sectors. However, the township should focus on the following locations to deploy these elements:

- Along River Road from Lodi Hill Road up to Trails End Lane
- Bridgeton Hill Road between Chestnut Ridge Road and Highview Lane
- The area of the D&L Ringing Rocks trailhead and River Road
- The top of Bridgeton Hill Road at the intersection of Bridgeton Hill Road and Skyline Drive

Municipalities that wish to place traffic control devices on any road in their jurisdiction must follow the procedures set forth in the Vehicle Code and Commonwealth regulations. Typically this procedure involves a study, an ordinance, and the implementation of traffic control devices, plus PennDOT approval if the measure will affect a state highway.

## SCENIC ROADS

Each municipality is defined by their unique settings and their collection of resources. One of Bridgeton's valuable resources is its rural roads that provide access to all areas of the township. Many municipalities have come to realize that roads are valuable assets that provide access to scenic areas or provide scenic views while driving. Some municipalities have identified these roads and are protecting them as scenic road networks to better help define the character of a community. Potential candidates for scenic road designation in Bridgeton are River Road and Bridgeton Hill Road. The township should consider identifying these scenic routes and adopting an official network of scenic roads, to be referenced on an official highway classification map.

The township should pursue a scenic designation from PennDOT with the Byways Program, a program that was recently relaunched. The goal of this program is to designate routes that have outstanding qualities. These qualities can be scenic, historic, recreational, cultural, archaeological, or having natural features that are considered unique, irreplaceable, or distinctly characteristic of an area. Designating a scenic road through PennDOT's Byways Program protects and preserves visual features and community character, promotes tourism and enhances economic development potential, and can help to avoid, minimize, or mitigate negative impacts along byway corridors.

To begin a byway designation, the township must fill out a form on the PennDOT website. Required materials within the form include road name, limits, bisected municipalities, the route's signature

qualities, and anticipated time frame. The township should consider coordinating with neighboring municipalities that may wish to partner in scenic road designation.

## BRIDGES

Bridge reconstruction has become a major priority statewide due to the serious consequences of bridge closures. In recent years, bridge collapses have made national news and reinforced the need for dedicated bridge funding. When bridges are required to be rehabilitated or reconstructed, state regulations dictate that PennDOT use American Association of State Highway and Transportation Officials (AASHTO) and Federal Highway Administration (FHWA) bridge design policies.

Bridgeton Township's unique geography means the 11 roadway bridges within the township are critical to maintaining the overall functionality of the township's circulation network. For example, if a bridge that carried 1,900 vehicles per day were to be closed for an extended period, it would greatly impact the township's circulation network. Continued maintenance and upkeep of bridges within the township is critical.

Introducing a modern element such as a wide bridge expanse with metal guard rails, into a rural area can degrade the scenic and open space value of the area. It is recommended that when changes to a bridge are contemplated, a context sensitive solution approach be used. This will ensure that any rehabilitation or reconstruction of the bridge is compatible with the rural qualities of the area and kept in character with the road it is serving.

In 2016, PennDOT launched a new outreach program called PennDOT Connects. The goal of PennDOT Connects is to increase the level of municipal, county, and other key stakeholders input at the start of PennDOT projects. As PennDOT addresses roadway and bridge issues, the township should anticipate communication from PennDOT at the beginning of the process. It is at this time in the PennDOT Connects process that the township should advocate for its preferred roadway and bridge design elements.

Maintenance and rehabilitation of existing roads and bridges will continue to be an important policy consideration in the coming years. Over the long run, maintaining existing infrastructure is more cost-effective to the government and its taxpayers. In addition, road closures due to unsafe road or bridge conditions or pending bridge replacement are both inconvenient to residents and costly to local businesses.

Table 13. Bridges, details all vehicular bridges in the township, along with their condition. Bridge 7148 on Bridgeton Hill Road, which crosses over High Falls Creek (Bridge #3 on Map 10. Transportation and Trails), is in poor condition. Bridge 6817 on River Road which crosses over Falls Creek (Bridge #4 on Map 10), and Bridge 7581 on Ringing Rocks Road which crosses over High Falls Creek (Bridge #10 on Map 10) are both in fair condition. The township should work with PennDOT and the county to add these three bridges to DVRPC's Regional Transportation Improvement Program (TIP), to receive funds and bring these bridges to a state of good repair.

The regional TIP is the agreed-upon list of priority transportation projects for the Greater Philadelphia area, which covers Bucks County and Bridgeton Township. The regional TIP is updated every two years, in coordination with PennDOT's Twelve Year Plan. The program is managed by the Delaware Valley Regional Planning Commission (DVRPC) with the input of 18 governing bodies, of which the Bucks County Government is a participating member. The program is multimodal, which includes federal- and state-

funded projects over a four-year period, as required by federal law. When a project is on the TIP, it represents an authorization to seek funding but does not guarantee a commitment for funding.

**Table 13. Bridges.**

Map #	Owner	Condition	Description	Average Daily Traffic	Penn Dot Bridge Key	Length (ft)	Deck Area (sq ft)	Number of Spans	Year Built
1	DCNR	N/A	Berm Lane over the PA Canal	N/A	N/A	60	843	1	1962
2	DCNR	N/A	Canal Lane over the PA Canal	N/A	N/A	50	630	1	1832
3	State	Poor	Bridgeton Hill Road over High Falls Creek	2,202	7148	24	432	1	1915
4	State	Fair	River Road over Falls Creek	2,586	6817	19	359	1	1913
5	State	Good	River Road over the PA Canal	2,586	6815	51	1,403	1	1932
6	State	Good	River Road over High Falls Creek	2,586	6816	20	860	1	1977
7	State	Good	Bridgeton Hill Road over PA Canal	1,988	47443	53	1,802	1	2013
8	Municipal	Good	Lonely Cottage Road over Beaver Creek	N/A	7624	22	484	1	1961
9	Municipal	N/A	Birch Road over High Falls Creek	N/A	N/A	N/A	N/A	1	N/A
10	County	Fair	Ringing Rocks Road over High Falls Creek	N/A	7581	28	549	1	1927
11	DRJTBC	Good	Frenchtown-Milford over Delaware River	3,225	N/A	700	14,000	1	1933

Source: PennDOT, DCNR



*River Road over the PA Canal*



*River Road over High Falls Creek*



*Bridgeton Hill Road over PA Canal*



*River Road over Falls Creek*



*Bridgeton Hill Road over High Falls Creek*



*Lonely Cottage Road over Beaver Creek*



*Ringing Rocks Road over High Falls Creek*



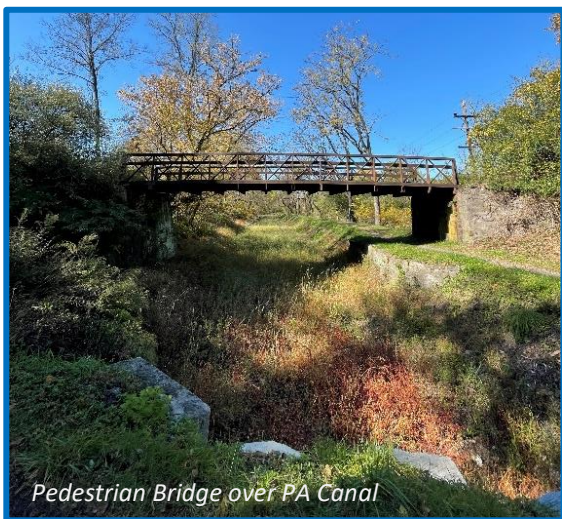
*Milford Bridge over Delaware River*



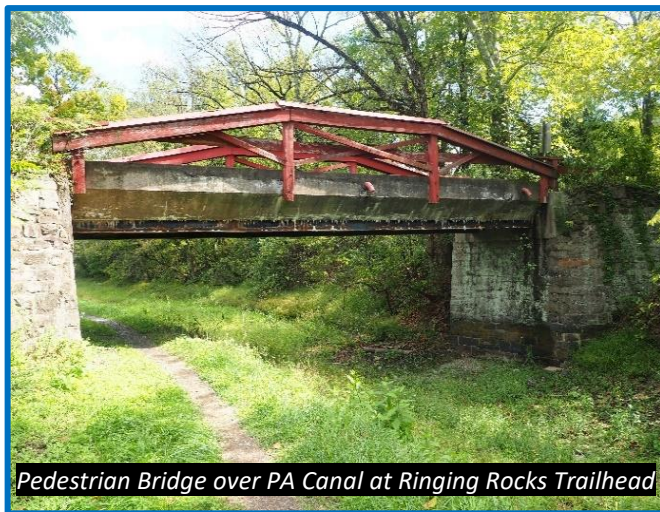
Canal Lane over PA Canal

The bridges on Berm and Canal Lanes link to a small cluster of dwellings across the canal and see minimal traffic volumes over the course of a year.

In addition to the 11 vehicular bridges throughout the township, Bridgeton has four pedestrian bridges that span the Delaware Canal Towpath (See Map 10. Transportation and Trails), which provide safe and reliable pedestrian connections over the canal. These bridges can be found in the following locations: Along River Road, approximately 900 feet west of its intersection with Narrows Hill Road on Bucks County preserved property. At the Ringing Rocks Trailhead on River Road, approximately 700 feet northwest of the trailhead parking. Approximately 2,000 feet east of the previous pedestrian bridge, adjacent to land owned by the Bridgetown Township Athletic Association.



Pedestrian Bridge over PA Canal



Pedestrian Bridge over PA Canal at Ringing Rocks Trailhead

Lastly, Spahr’s Bridge is located along the canal between Lodi Hill Road and Berm Lane. Spahr’s Bridge is one of six remaining historic camelback bridges along the canal, which is closed and undergoing rehabilitation under the efforts of the Friends of the Delaware Canal (See Historic Resources chapter).

**TRAILS**

Trails can be an important asset to enhance mobility and provide for recreation in a community. Trails have benefits such as property value enhancement, reduction of air pollution, and opportunities for active lifestyles. There are three existing trails and two proposed trail facilities within Bridgeton Township, which are displayed on Map 10. Transportation and Trails.

The township should consider adopting an official trails map, which would formally document the township’s desired trail network. This will guide future development of trail and bicycle facilities throughout the township.

### Delaware Canal Towpath Trail

This 60-mile-long towpath runs along the Delaware Canal from Easton in Northampton County, down to Bristol Borough in Bucks County. A path that was once used for mules pulling boats along the canal is used today by walkers, joggers, bicyclists, cross-country skiers, nature enthusiasts, bird watchers, and horseback riders.

Through the Pennsylvania Department of Conservation and Natural Resources (PA DCNR), the Pennsylvania Trails Advisory Committee named the Delaware Canal State Park Towpath the 2022 Trail of the Year. Spanning the entire length of the township's waterfront along the Delaware River, this trail serves as the township's connection into the county's trail network.

### Ringing Rocks Trail

The main hiking trail in Ringing Rocks starts at the entrance of the park and loops around the boulder field, passing the county's largest waterfall along the way. This trail extends out to River Road and provides the only connection from Ringing Rocks Park to the Delaware Canal Towpath trail.

### Pennsylvania Highlands Trail

The Highlands Trail in Pennsylvania is a 300-mile connected trail network that runs through 13 counties and connects three rivers—the Delaware, the Schuylkill, and the Susquehanna. The trail connects six state parks and connects or passes near several county parks. The Highlands Trail co-aligns with several existing trail networks, including the Ringing Rocks Trail in Bridgeton Township. This DCNR-designated statewide Major Greenway accommodates an array of uses, including biking, hiking, horseback riding, cross country skiing, and other forms of non-motorized recreation.

Trail planning and development of the Highlands Trail gaps is ongoing. Currently, there is a 9-mile gap between Nockamixon Township and Bridgeton Township. This proposed regional trail alignment, shown on Map 10. Transportation and Trails would provide trail amenities to connect the eastern side of Nockamixon State Park to Ringing Rocks County Park. This proposed trail would provide a connection from Bridgeton Township to Quakertown Borough and through to Montgomery County.

While the alignment is a combination of facility types, within Bridgeton Township the alignment comprises on-road bicycle facilities from the township's southern border, at the intersection of Old Forge Road and Stanley Road, to the entrance of Ringing Rocks Park. The on-road bicycle facilities would be placed along Old Forge, Lodi Hill, and Lonely Cottage Roads.

### Bridgeton Preserve Trail

The recently preserved abandoned quarry property, known currently by the township as the Bridgeton Preserve, contains a proposed nature trail for walking and hiking. This trail would run through woodlands and around the wetlands on the open space property. The Appalachian Mountain Club's Volunteer Trail Crew is planning to start work on the Bridgeton Preserve Trail in 2023. The vision is that this trail will eventually connect to Ringing Rocks State Park.

## CHAPTER SUMMARY

- Bridgeton’s location within the regional transportation network allows convenient access to and from the surrounding areas.
- There is no public transportation in the township.
- Traffic volumes along Bridgeton Hill Road and River Road have remained stable over the last 20 years.
- Due to the rising complaints and concerns regarding truck traffic, speeding, and noise, the township formed a Traffic Advisory Committee in 2022 to help advise the township on traffic calming strategies to improve roadway safety.
- Bridgeton Hill and River Roads are potential candidates for scenic road designation.
- Bridgeton Township’s unique geography means the 11 roadway bridges within the township are critical to maintaining the overall functionality of the township’s circulation network.
- There are three existing trails and two proposed trail facilities within Bridgeton Township. The PA Highlands Trail proposal will connect the township to Nockamixon Township’s trail network.


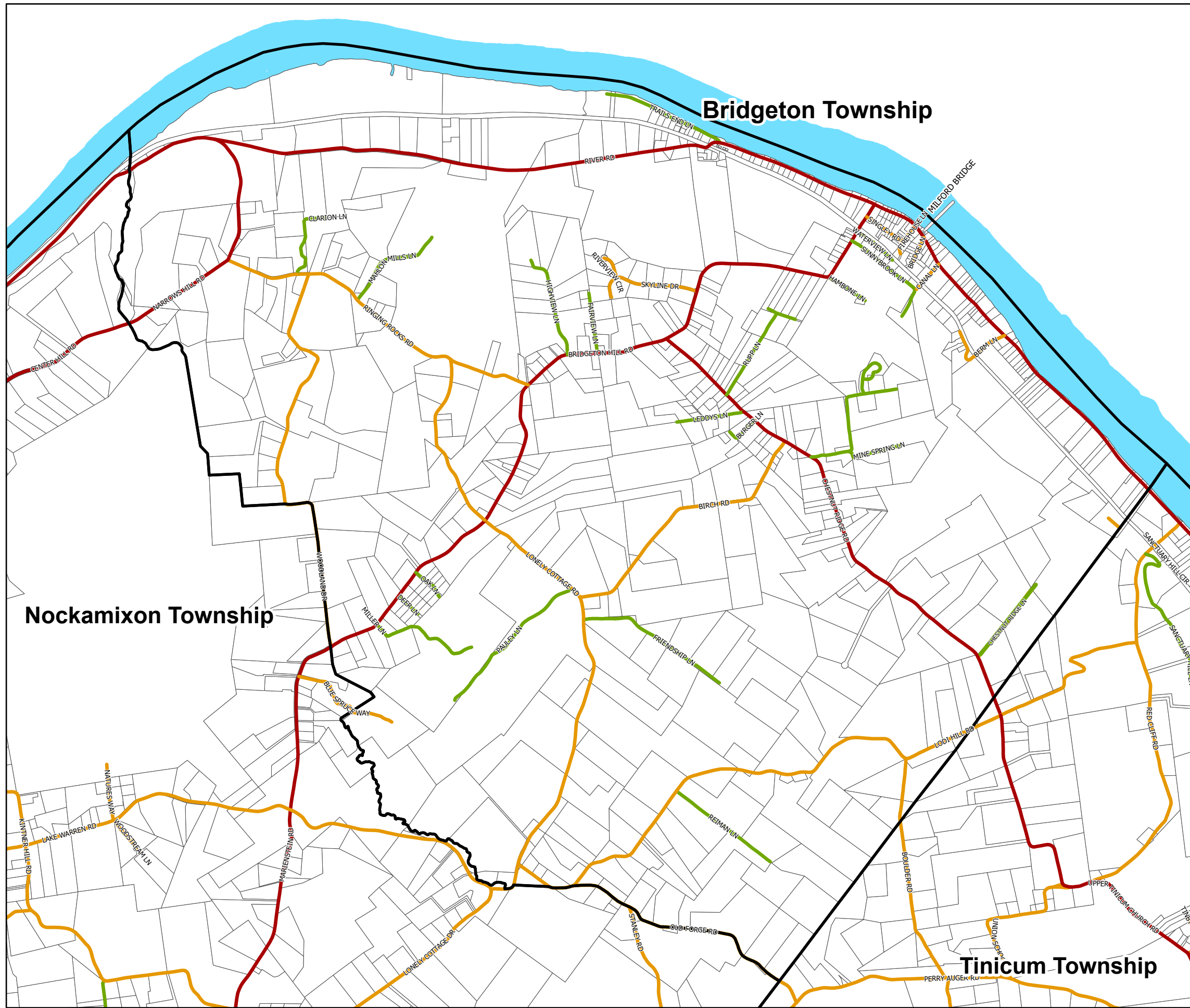
### Recommendations

- Create and adopt a highway classification map.
- Identify scenic routes within the township and include the routes on the highway classification map.
- Pursue a scenic roadway, or equivalent designation for River and Bridgeton Hill Roads through the PennDOT Byways Program.
- Work with the county and PennDOT to get Bridge 7148, Bridge 6817, and Bridge 7581 onto the region’s Transportation Improvement Program (TIP).
- Continue to work with the Bridgeton Township Traffic Advisory Committee on truck and roadway safety.
- Maintain and enhance current bicycle and pedestrian connections as needed.
- Support the development of the Pennsylvania Highlands Trail within the township to connect to Nockamixon Township.
- Support the development of the proposed Bridgeton Preserve Trail.
- Develop and adopt an official trails map.


**Map 9.**  
**Road Ownership**  
Bridgeton Township  
Comprehensive Plan Update

Road Ownership

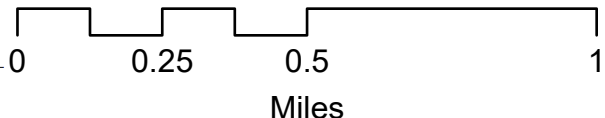

- State
- Private
- Township



Bucks County



**BCPC**  
Bucks County Planning Commission

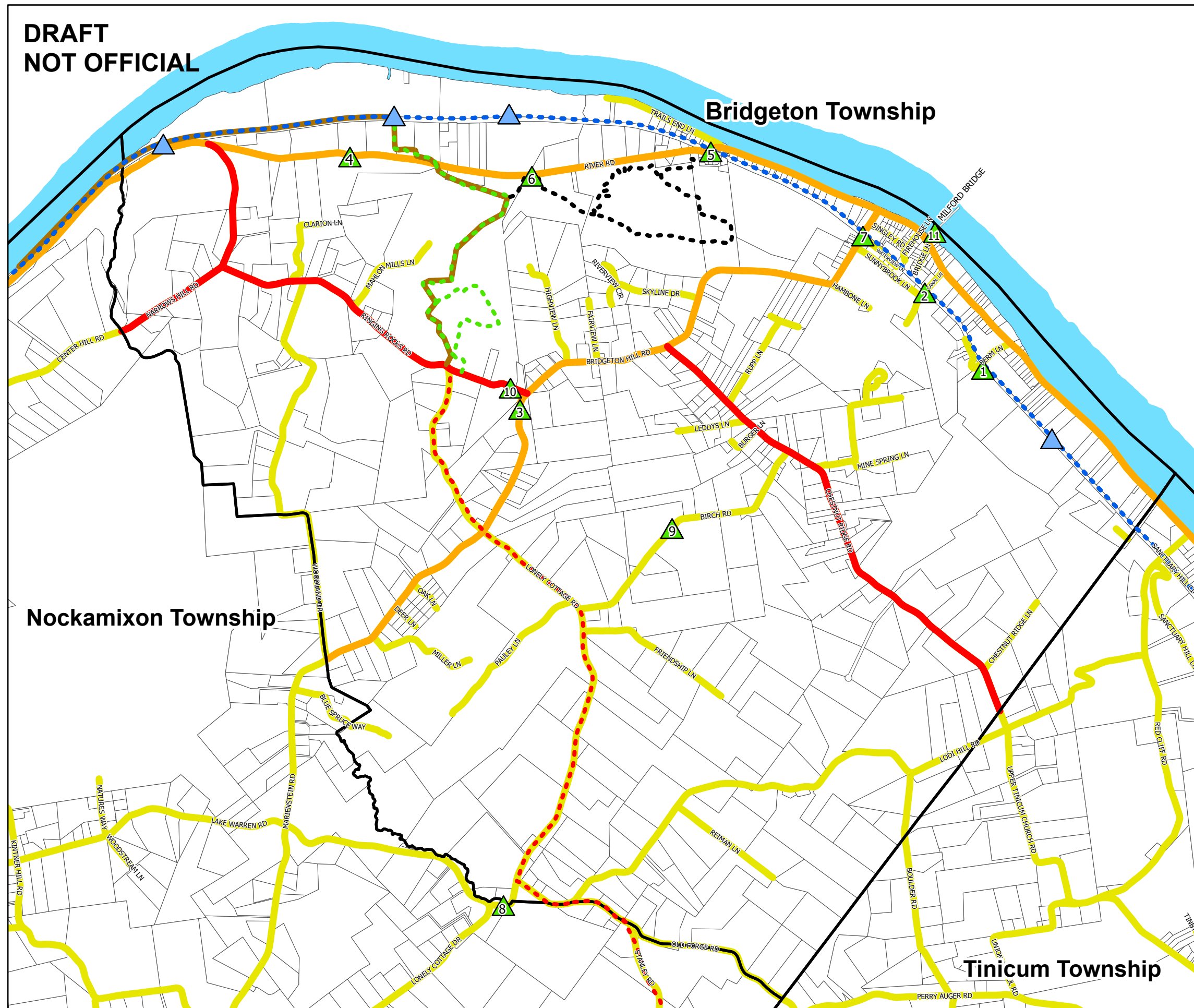


0 0.25 0.5 1  
Miles

**DRAFT  
NOT OFFICIAL**

# Map 10. Transportation & Trails

Bridgeton Township  
Comprehensive Plan Update



### Highway Classification

- Major Collectors
- Minor Arterials
- Local Access

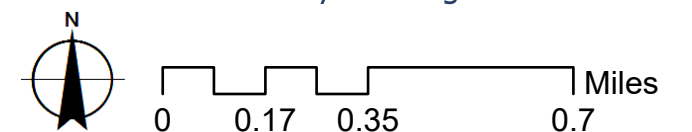
### Trails

- Ringing Rocks Trail
- Delaware Canal Trail
- Proposed Bridgeton Preserve Concept Trail
- PA Highlands Trail
- Existing
- Proposed

### Bridges

- Vehicular Bridges
- Pedestrian Bridges

\*See Figure 13. Bridges.



**PRINCIPLE 4.**

**Protect and Enhance  
Recreational Resources and  
Open Space**





## Parks, Recreation, and Protected Open Space



Park, recreation, and open space resources are an important part of the community’s identity and overall quality of life. Open space contributes to the township’s rural character, preserves the natural ecosystems upon which the community depends, and provides an attractive setting in which to live and work. Park and recreation facilities provide an avenue for residents to interact, explore, and create a sense of community.

Open space is a term that includes not only park and recreational areas, but more broadly includes all parcels of land and water that are dedicated or reserved for public or private use or enjoyment. It includes active and passive recreational parks, recreational facilities, greenways, trails, agricultural lands, natural areas, as well as historic and cultural resources.

Bridgeton possesses an immense array of open space resources including natural areas and recreational amenities that contribute to the quality of life that is valued by residents and visitors. These resources, including the Delaware River, municipal, county, and state parks and game lands, and the Delaware Canal all contribute to the network of open space that provide opportunities for recreation, contact with nature, and education.

About 20 percent of survey respondents reported that they frequent parks and open space in the township monthly. Another 43 percent of respondents visit these resources a few times per week, and 16 percent visit daily. The parks, recreation, and open space resources within the township are vital to residents and contribute to the community’s quality of life. Map 11. Parks, Recreation, and Protected Open Space, displays the properties discussed in this chapter.

## PRESERVED PROPERTIES

### State Gamelands

The township has a total of 108 acres of state gamelands, all of which are owned by the Pennsylvania Game Commission, the state agency responsible for wildlife conservation and management in Pennsylvania.

The township contains five separate areas that are designated as State Game Lands No. 56, where the primary activities include hunting, picnicking, and hiking, which can be seen on Map 11. Parks, Recreation, and Protected Open Space.

**Table 14. State Gamelands.**

TMP #	Property Name	Owner	Acres
03-002-008	State Gamelands 56	PA Game Commission	3.36
03-002-016	State Gamelands 56	PA Game Commission	25.13
03-002-029	State Gamelands 56	PA Game Commission	38.4
03-003-001	State Gamelands 56	PA Game Commission	23.95
03-003-006	State Gamelands 56	PA Game Commission	17.26



The state gamelands on TMPs #03-003-001 and #03-002-016 are connected to gamelands in Nockamixon Township. About 15 percent of survey respondents reported that they visit state gamelands in the township.

### State Parks and Open Space

Bridgeton Township has 40 acres of land dedicated to state parks and open space, all of which are owned by the Pennsylvania Department of Conservation and Natural Resources (DCNR). DCNR is the agency responsible for working to conserve and sustain Pennsylvania's natural resources for present and future generations' use and enjoyment.

Delaware Canal State Park extends from Easton to Bristol Borough, cutting through Bridgeton along the way. The canal and towpath encompass 32.10 acres of land in Bridgeton, stretching from the Nockamixon Township border down to the Tinicum Township border. Delaware Canal State Park received State Heritage Park designation in 1993.

The Pennsylvania Fish and Boat Commission owns a small 0.27-acre parcel along River Road in Upper Black Eddy, that is a designated boat access area to the Delaware River.

About 87 percent of survey respondents reported that they utilize the Delaware Canal State Park, and 24 percent reported to using the public boat launch.

**Table 15. State Parks and Open Space.**

TMP #	Property Name	Owner	Acres
03-003-148.001	Delaware Canal State Park	PA DCNR	2.11
03-003-192	Delaware Canal State Park	PA DCNR	20
03-005-014	Delaware Canal State Park	PA DCNR	5.27
03-008-051	Delaware Canal State Park	PA DCNR	0.27
03-010-045	Delaware Canal State Park	PA DCNR	4.86
03-010-048	Delaware Canal State Park	PA DCNR	7.58



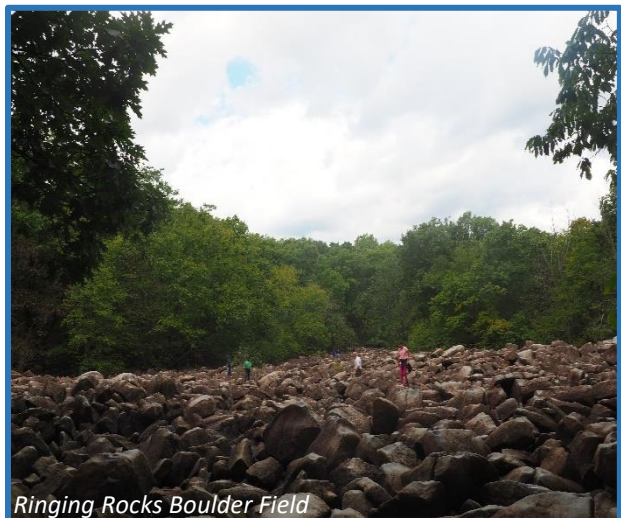
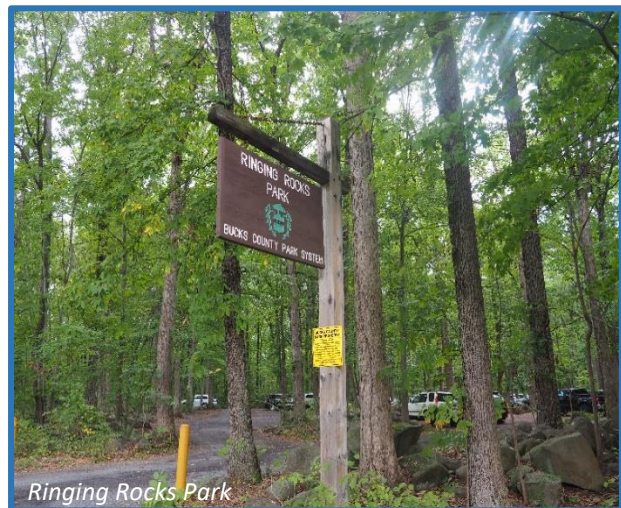
### Bucks County Parks and Open Space

Bridgeton Township has a total of 298 acres of land preserved under Bucks County Parks and Open Space. This includes open space that is owned by the county, located on both sides of the Delaware canal, along River Road and adjacent to the Delaware River. This is the location of the Ringing Rocks Trailhead parking on River Road, which allows access to the Delaware Canal State Park and Ringing Rocks Park via the Pennsylvania Highlands Trail.

The other area of this category is Ringing Rocks Park, which contains the largest diabase boulder field in the Eastern United States. Many visit the park with a hammer in hand, as the rocks create a ringing sound when struck. This site has been selected as one of Pennsylvania's outstanding scenic geologic features by the Pennsylvania Topographic and Geologic Survey in 2016. About 71 percent of survey respondents stated they visit Ringing Rocks.

**Table 16. Bucks County Parks and Open Space.**

TMP #	Type	Acres
03-001-019.001	County Open Space	0.18
03-001-020	County Open Space	8.11
03-001-022	County Open Space	26.10
03-001-023	County Open Space	59.32
03-003-103	County Parkland	4.66
03-003-133	County Parkland	165.29
03-003-191	County Open Space	6.91
03-003-191-001	County Open Space	9.26
03-003-191-002	County Open Space	6.23
03-003-191-003	County Open Space	6.90
03-003-191-004	County Open Space	4.50
03-003-193	County Open Space	0.41



### Municipal Open Space and Parkland

Bridgeton has 111 acres of municipal open space and parkland. In 1998, the township purchased a 0.55-acre parcel located along River Road at its intersection with the Milford Bridge. This land is used for passive recreation and is known as the Township Village Green Park, which contains the Bridgeton Veterans Memorial Monument, honoring those who have served in the armed forces. Not only does this parcel provide passive open space for the center of Upper Black Eddy, but it serves as a focal point for visitors traveling along River Road and for visitors entering the township from New Jersey. This park and memorial is the main gateway to the township from New Jersey, and is the first view visitors get when entering Bridgeton and the village of Upper Black Eddy. The township should explore creating a gateway to enhance this area.

Only 9 percent of survey respondents report that they visit the Township Village Green Park. The township may explore features to enhance this village greenspace, such as furnishings, landscaping, or signage.

**Table 17. Municipal Open Space and Parkland.**

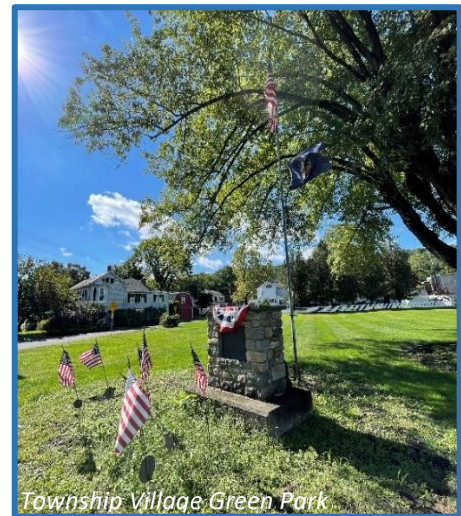
TMP #	Property Name	Owner	Acres
03-003-109	Bridgeton Preserve	Bridgeton Township	81.23
03-003-111	Bridgeton Preserve	Bridgeton Township	28.84
03-008-024	Township Village Green Park	Bridgeton Township	0.55

With the help of the Tincum Conservancy in April of 2019, Bridgeton Township completed the purchase of two parcels, totaling nearly 110 acres, formerly known as the Casillio property, which is located north of Bridgeton Hill Road and west of River Road. This quarry that has been abandoned for over 50 years was purchased and preserved by the township as municipal open space for the purpose of environmental conservation and recreation.

As of the writing of this plan, the township unofficially refers to this preserved land as the Bridgeton Preserve.

About 23 percent of survey respondents stated that they visit the Bridgeton Preserve, and some survey commenters were unaware of this newly preserved park. The township should continue to develop an official name which addresses the historical and natural elements of this preserved open space.

The Appalachian Mountain Club's Volunteer Trail Crew is planning to start work on the Bridgeton Preserve Trail for this property in 2023. The vision is that this trail will eventually connect to Ringing Rocks Park. The proposed trail can be seen in Map 10. Transportation and Trails.



### Bucks County Municipal Open Space Program

Bridgeton Township has 155 acres of privately protected open space preserved through the Bucks County Municipal Open Space Program.

**Table 18. Bucks County Municipal Open Space Program.**

TMP #	Property Type	Acres
03-001-006-001	Private	26.55
03-001-012	Private	22.77
03-001-014	Private	1.15
03-003-019	Private	29.38
03-003-148	Private	75.40

### Agricultural Preservation

Farmland is a natural resource that is disappearing rapidly; according to the American Farmland Trust, the U.S. is losing two acres of farmland every minute. In Bucks County, 71 percent of the county's farmland has been converted to non-agricultural uses over the last 50 years. Preserving farmland protects the environment, provides local food to the community, supports the local economy, and protects the area's heritage.

Bridgeton is the only township in Upper Bucks County that does not have any properties preserved through the county's agricultural preservation program.

However, there are 99 acres of Act 319 land in the township. The Pennsylvania Farmland and Forest Land Assessment Act, commonly known as "Clean and Green" or Act 319, provides for lower property tax assessments of land that is capable of producing wood products, agriculture land, and public open space land. The intent is to encourage property owners to retain their land in agricultural or forest land use, and to provide some tax relief to the owners. Both the landowner and the community benefits from this preservation program. Act 319 land in the township is displayed in Map 11. Parks, Recreation, and Protected Open Space.

### OTHER PRIVATE RECREATION

Other types of temporarily protected lands include private recreational areas, such as camps and campgrounds, association lands, and other private recreational facilities.

**Table 19. Other Private Recreational Amenities.**

Site	Acreage
Bridgeton Township Athletic Association	97.37
Dogwood Haven Campground	9.78
Bridgeton Township Sportsman’s Association	14.32
Ringing Rocks Campground	23.10

The Bridgeton Township Athletic Association is a community organization that offers recreational opportunities to the township. Located along Bridgeton Hill Road, the association has a picnic area and several ball fields. The Athletic Association also owns around 90 acres of land, on both sides of the Delaware Canal, along River Road and adjacent to the Delaware River. This land contains conservation easements held by the Heritage Conservancy.

There are two campgrounds in the township for recreation. Dogwood Haven Family Campground is located on the border of Tincum Township along Lodi Hill Road and offers wooded camping facilities. Ringing Rocks Campground is located along Woodland Drive and offers wooded camping facilities and other recreational amenities such as a pavilion, swimming pool, sports courts, and playgrounds.

The Bridgeton Township Sportman’s Association is located along Lonely Cottage Road and is membership based. The shooting range is private to members but also offers a clubhouse for event rentals.



*Sportsman’s Association*



*Bridgeton AA*

## OPEN SPACE COMMITTEE AND PLAN

The Bridgeton Township Open Space Committee was formed in June 1999 and developed the *Bridgeton Township Open Space Plan* (2001) to assist the board of supervisors in the preservation or acquisition of open space. The purpose of this plan was to determine the open space needs of the township, identify resources, and to qualify for funding for implementation. The 2001 plan serves as a foundation of the township's open space policies and priorities.

The major goal of the plan was to preserve and enhance the integrity of Bridgeton's open space by protecting its inherent natural, scenic, historic, and recreational resource values which collectively function to maintain the quality of life in the township, consistent with the county's commitment to open space. The following were the main objectives from the plan:

- Protect environmentally sensitive areas and natural features from adverse impacts and maintain an adequate supply and quality of groundwater.
- Provide adequate land and facilities for satisfying the existing and future recreational needs of residents.
- Continue and improve upon the concept of an open space link park network, which interconnects population centers to the various park and open space resources located within Bridgeton Township, as well as those located within adjacent municipalities.
- Protect scenic areas of the township, such as views to the Delaware River and views associated with the Delaware Palisades.
- Preserve and enhance historic, cultural, and scenic resources, which foster an important link to the heritage of the township.
- Promote intermunicipal cooperation for the planning and implementation of regional park and open space resources by municipalities within the Palisades Area.

The 2001 plan discussed the need to establish a municipal park and open space network. A park and open space network consists of interconnecting existing parks, open spaces, points of interest, and greenways to provide residents with convenient access and expanded recreational opportunities within the community and the region as a whole.

The Delaware Canal towpath traverses the entire length of the township and acts as the primary linkage for Bridgeton. Currently, residents can access Ringing Rocks from the Delaware Canal path, as well as the Bridgeton Preserve and the Township Village Green Park. There are other opportunities to expand park and recreation linkages and enhance the park and recreation network in the township, including:

- The Delaware Canal Towpath connects to Ringing Rocks Park via the PA Highlands Trail. This trail crosses River Road to get from the trailhead up to Ringing Rocks. A crosswalk and appropriate signage could enhance the safety of this connection.
- The Appalachian Mountain Club's Volunteer Trail Crew is planning to start work on the Bridgeton Preserve Trail in 2023. This proposed trail would connect to Ringing Rocks Park.
- The PA Highlands Trail proposes a connection from Ringing Rocks Park that would close a 9-mile gap and would connect to Nockamixon Township. The township should support this endeavor so Nockamixon State Park could successfully connect to the Delaware Canal.
- A linkage between the Township Village Green Park and the Public Boat Launch would allow residents and visitors to park at the township park and easily participate in river activities.

- There is currently a crosswalk that crosses River Road from the Milford Bridge, but no safe sidewalk connections are present in this area. A sidewalk or pathway would enhance the area of the Township Village Green Park for those crossing over on foot or bicycle to Bridgeton from New Jersey. Additionally, a connection from the Township Village Green Park to the Delaware Canal would also allow a connection from the canal towpath to New Jersey.

Following these recommendations would allow nearly every preserved park to be connected via another park or trail in the township. These linkages will also help to connect Bridgeton parks, recreation, and open space to recreational opportunities in neighboring municipalities.

### Plan Recommendations

The 2001 open space plan offers the following recommendations that are still relevant to the township:

- Consider the preparation of a Park and Recreation Plan through the Open Space Committee or an ad hoc committee.
- Adopt mandatory dedication/fees in lieu for all subdivisions and land development following the completion of the park and recreation plan.
- Continue to improve upon the concept of a linked open space park network to join population centers within the township and neighboring municipalities.

It is unclear whether the Open Space Committee is still active within the township. Bridgeton should revitalize this committee and work with the township on an update to the 2001 *Bridgeton Township Open Space Plan*.

## CHAPTER SUMMARY

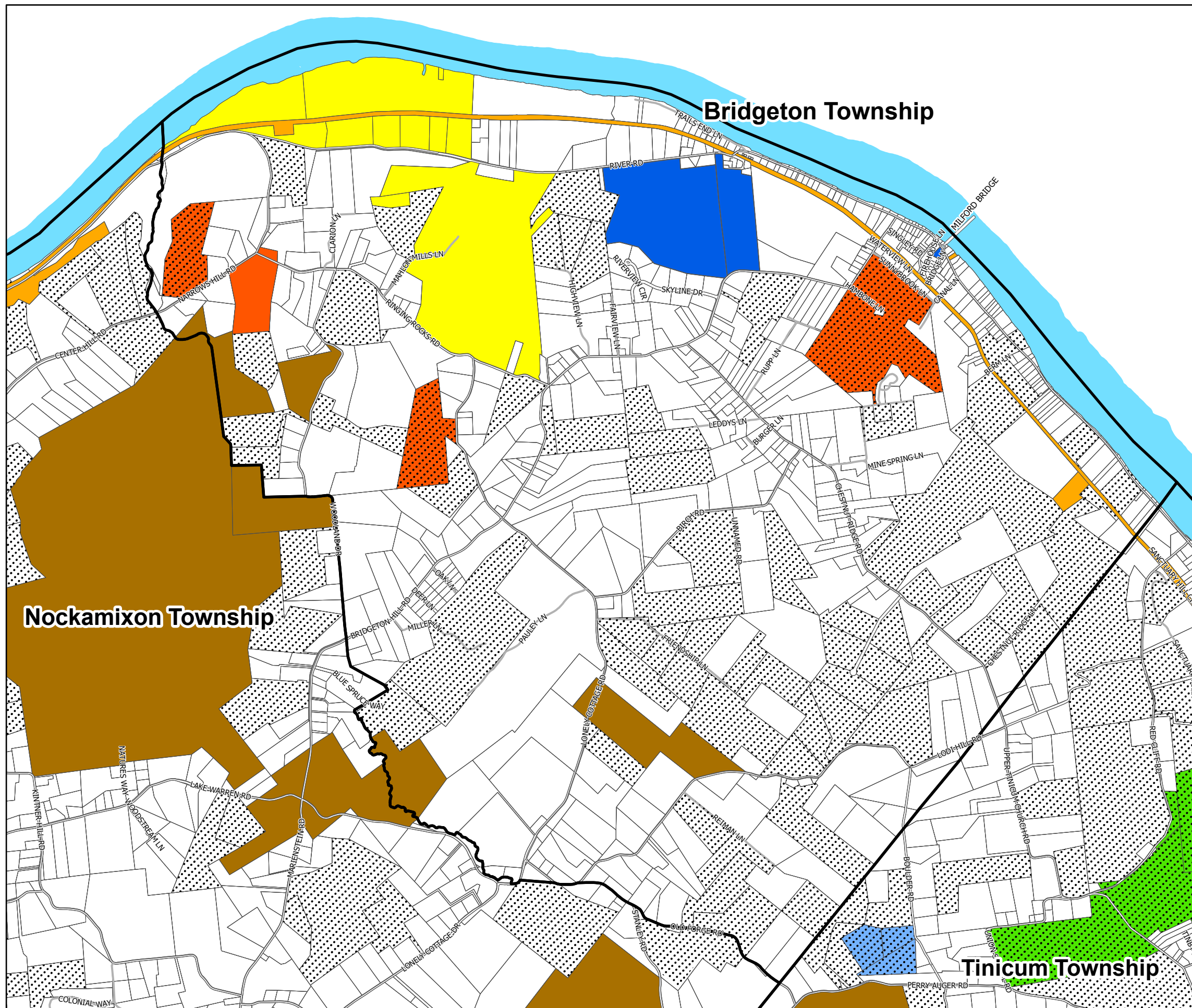
- Bridgeton possesses an immense array of open space resources including natural areas and recreational amenities that contribute to the quality of life that is valued by residents and visitors.
- The township has a total of 108 acres of state gamelands.
- Bridgeton Township has 40 acres of land dedicated to state parks and open space, all of which are owned by the Pennsylvania Department of Conservation and Natural Resources (PA DCNR).
- Bridgeton Township has a total of 298 acres of land preserved under Bucks County Parks and Open Space.
- Bridgeton has 111 acres of municipal open space and parkland, including the newly preserved old quarry property.
- Bridgeton Township has 155 acres of privately protected open space through the Bucks County Municipal Open Space Program.
- Bridgeton is the only township in Upper Bucks County that does not have land preserved by the Bucks County Agricultural Preservation Program, but there are 98.70 acres of Act 319 in the township.
- Bridgeton possesses other types of temporarily protected lands include private recreational areas, such as camps and campgrounds, association lands, and other private recreational facilities.
- The Bridgeton Township Open Space Committee was formed in June 1999 and developed the *Bridgeton Township Open Space Plan (2001)*.

## Recommendations


- Explore gateway options in Upper Black Eddy to enhance the Township Village Green Park.
- Encourage property owners to retain their Act 319 designation.
- Continue to develop an official name for the Bridgeton Preserve, which addresses the historical and natural elements of this preserved open space.
- Adopt mandatory dedication/fees in lieu for all subdivisions and land development following the completion of the park and recreation plan.
- Continue to improve the network of parks, recreation, open space, and trails to interconnect with population centers located in the township and neighboring municipalities.
  - Add a crosswalk and signage on River Road to connect the PA Highlands/Ringing Rocks Trail to the Ringing Rocks Trailhead parking area.
  - Support the Appalachian Mountain Club’s trail proposal for the Bridgeton Preserve and the PA Highlands trail proposal to connect to Nockamixon Township.
  - Link the Township Village Green Park to the Public Boat Launch via safe sidewalk or pathway connections.
  - Link the Delaware Canal towpath to the Milford Bridge.
- Revitalize the Bridgeton Township Open Space Committee or form an ad-hoc committee to update the 2001 Open Space Plan.
- Pursue strategic open space sites that are suitable for the future development of parks, recreation, or open space facilities.

# Map 11. Parks, Recreation, and Protected Open Space


Bridgeton Township  
Comprehensive Plan Update



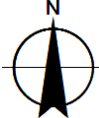
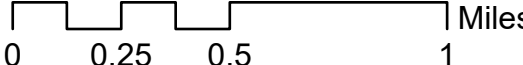
- Act 319
- State Gamelands
- State Parks & Open Space
- Bucks County Parks & Open Space
- Municipal Open Space and Parkland
- Bucks County Natural Areas Program
- Bucks County Municipal Open Space Program
- Bucks County Agricultural Preservation Program



Bucks County



**BCPC**  
Bucks County Planning Commission

**PRINCIPLE 5.**

**Foster a Sustainable and Resilient Community**





## Community Services and Facilities



Community services and facilities are necessary to maintain the public health, safety, and welfare in a community. Planning for community services and facilities should be coordinated, interrelated, and consistent with land use planning in the comprehensive plan.

### TOWNSHIP ADMINISTRATION

The township municipal complex, located at 1370 Bridgeton Hill Road, Upper Black Eddy, PA 18972, contains the township building with meeting rooms and offices, the township garage for vehicles, and the township salt shed for winter weather road salting. The township website ([www.bridgetontwp.com](http://www.bridgetontwp.com)) contains information about township government, the community, events, agendas, and meeting minutes.

The township government consists of the Secretary, Treasurer, Zoning Officer, Building Inspector, Floodplain Administrator, Road Master, Board of Supervisors, Township Solicitor, Planning Commission, Zoning Hearing Board, Tax Collector, Upper Black Eddy Fire Company 47, and the Bridgeton Emergency Management Coordinator.



*Bridgeton Township Municipal Offices*

The Bridgeton Township Board of Supervisors appoints the Township Secretary who is the clerk to the Board and is responsible for preparing and maintaining all township records in accordance with the Municipal Records Manual. The Board of Supervisors also appoints the Township Treasurer, who may also serve as the Secretary, and is responsible for the preparation and administration of the township's financials.

The Zoning Officer for the township also acts as the Building Inspector and Floodplain Administrator.

The Township Solicitor is an appointed officer of the township with responsibilities to all legal matters that pertain to the township.

The Bridgeton Township Tax Collector is elected by the residents of the township for a four-year term. Duties include collecting all county, township, school, institution district and other taxes levied within townships by authorities authorized all tax inquiries.



*Bridgeton Township Municipal Garages*

The Bridgeton Township Board of Supervisors consists of elected officials serving staggered six-year terms. The board primarily performs legislative functions including setting policy, enacting ordinances and resolutions, adopting budgets, and levying taxes.

The Bridgeton Township Planning Commission consists of five resident volunteers appointed by the Board of Supervisors for staggered terms of three years. The Planning Commission works toward providing for the coordinated development of the township and general welfare of its people. The Planning Commission functions to review subdivisions and land development plans, conditional use applications, lot line changes, and make recommendations regarding those to the Board of Supervisors.

The Zoning Hearing Board is a quasi-judicial body appointed by the Board of Supervisors and has the responsibility of granting or denying special exceptions and variances.

## **EMERGENCY SERVICES**

The Upper Bucks Regional Emergency Medical Services, Inc. is a non-profit agency that provides emergency medical care to the residents and visitors of Upper Bucks County. The response area encompasses approximately 185 square-miles over nine municipalities in Upper Bucks County. Upper Bucks EMS maintains two ambulance stations: Station 141 in Springfield Township, and Station 142 in Nockamixon Township which serves Bridgeton Township. Both stations work to ensure a timely response to residents in the event of a medical emergency. The stations are staffed with paramedics 24 hours a day, 365 days a year.

All 911 calls in Bucks County reach a county dispatcher in the Bucks County Emergency Management Center in Ivyland, who then contacts the closest emergency service provider for response. The local police department, fire companies and ambulance squads participate in this service.

The Bridgeton Township Emergency Management Coordinator and the Deputy Emergency Management Coordinator update the township on emergency management issues. The Emergency Management Agency of Bridgeton Township has an official website with updates, and social media pages consisting of Facebook and Twitter. Residents can also get updates sent directly to their email or phone. The agency's website has not been updated since 2020.

Emergency alert messages are available for residents who wish to receive critical information regarding a variety of emergency situations by signing up at Ready Bucks.

## SCHOOLS

Palisades School District in the northeastern corner of Bucks County is the public school district that serves Bridgeton Township, along with Durham Township, Tinicum Township, Nockamixon Township, Springfield Township, and Riegelsville Borough. Residents of Bridgeton Township attend Durham Nockamixon Elementary School, Palisades Middle School, and Palisades High School.

Bridgeton Elementary School was the elementary school within the township for residents until its closure in 1997. Residents of Bridgeton Township now attend Durham Nockamixon Elementary School, which was constructed in 1981. The enrollment was 211 students in 2021. In 2022, the elementary school received a new playground, which was the culmination of a five-year effort that involved the school's parent-teacher organization, district administrators, teachers, students, and more than 60 local business sponsors.

Palisades Middle School was established in 1991 and in 2021 had an enrollment of 325 students. Palisades High School was formed in 1950 and had an enrollment of 496 students in 2021.

The River Valley Waldorf School on Bridgeton Hill Road is a private school located in the township and had an enrollment of 138 students in 2021.

## HEALTH CARE

Health care is provided by individual physicians in private offices, hospitals, and long-term care facilities. Hospitals serve the immediate health care needs of a community by providing inpatient and outpatient medical and health care services. Long-term care facilities serve elderly patients who can no longer function independently or who have a condition and require skilled nursing care. There are currently no hospitals, urgent care, or trauma centers located within Bridgeton Township borders.

Eight general hospitals in the area are available to serve the health care needs of the residents of Bridgeton Township. The closest hospital to the township is St. Luke's Hospital, Warren Campus, located 15 miles north of the township in Phillipsburg, New Jersey.

St. Luke's Hospital, Anderson Campus in Easton is located 20 miles north of the township. Doylestown Hospital is located 22 miles southwest of the township. St. Luke's Hospital, Upper Bucks Campus, in Quakertown, is located 22 miles west of the township. Grandview Hospital in Sellersville is located 21 miles west of the township. Hunterdon Medical Center is located 19 miles southeast of the township in Flemington, New Jersey. Easton Hospital is located 16 miles north of the township in Easton. Lehigh Valley Hospital, Muhlenberg, is located 26 miles northwest of the township in Bethlehem.

The closest trauma centers are St. Luke’s Hospital, Bethlehem Campus, located 20 miles northwest of the township, and Lehigh Valley Hospital Cedar Crest, located 27 miles northwest of the township.

Long-term health care for the elderly is available at the skilled nursing facilities at Grand View Hospital in Sellersville, the Lutheran Home in Telford, Rockhill Mennonite Community in West Rockhill Township, Lifequest Nursing Center in Quakertown, and Valley View Healthcare Center in Frenchtown, New Jersey.

Bridgeton Township has the second oldest population in Bucks County, with a median age of 59.2 years. The age of Bridgeton Township continues to increase, and the aging of the baby boom generation will be a factor in the need for long-term health care for years to come. The longer life span and greater longevity of this group may affect the health care system and needs for older persons.

The Eastern Upper Bucks Senior Center (EUBSC) in Nockamixon Township is utilized by members of Bridgeton Township. EUBSC is a private non-profit 501(c)3 organization that offers vital information and services to the eastern Upper Bucks County senior community. The purpose of the senior center is to encourage seniors to participate in new activities with the aim to empower members, to enhance their dignity, support their independence, and to encourage community involvement.

Although an increase in the elderly population is projected, the need for long-term care may be addressed through less costly and more appropriate alternative care methods to meet the medical and personal needs of many members of this population and the disabled. These alternatives include adult day care, personal care facilities, continuing life care facilities, and in-home services.

The township should remain aware of the health care needs of township residents.

## PARKS

There are several public parks in the township that provide access to recreation, open space, and leisure activities. These parklands are further discussed in the Parks, Recreation, and Protected Open Space chapter.

## POLICE PROTECTION

Bridgeton Township does not have its own local police force. The township is patrolled by the Pennsylvania State Police Troop M from the Dublin barracks. The department is staffed by four full-time officers who provide protection to township residents, comprised of a commanding officer, patrol section commander, criminal investigation section commander, and a staff services section commander. The township has no plans to establish a local police force to serve the community.

## FIRE PROTECTION

The Upper Black Eddy Fire Company 47 consists solely of volunteers that help to protect the township. As of the writing of this plan, the company has 25 active firefighters, and a Ladies Auxiliary Support Group. Located on Firehouse



Lane, this volunteer fire company works to protect Bridgeton Township 24 hours a day, 365 days a year. The Upper Black Eddy Volunteer Fire Company answers calls and responds to emergencies including structure fires, auto accidents, animal rescues, river marine rescues, and medical calls. The UBE Fire Company serves Bridgeton, Tinicum, and Nockamixon Townships, and offers assistance to surrounding fire companies. The fire company holds several training events to ensure the volunteers are ready for any situation. The UBE Fire Company is involved in many community events throughout the year and the firehouse is a staple in the Bridgeton community.

## TELECOMMUNICATIONS

Telecommunications is the transmission of voice, video, or data, which primarily involves cable, fiberoptic, satellite, or wireless (cellular) phone technologies. Wireless phones have become almost a necessity of modern life, and these devices require a vast network of modern equipment in order to function properly. Wireless communications antennae are needed to receive and transmit data in all directions, and these antennae generally need to be located in higher areas, such as a tower, in order to provide the greatest range of coverage. Each wireless carrier (e.g., Verizon, Sprint, AT&T) provides their own antennae in locations that best suit the needs of their network facilities.

As the telecommunications environment matures and technology changes and service needs increase, more antennae and cables may be needed to meet resident and business demand. Distributed Antenna System (DAS) networks are considered to be public utilities so the township has limited authority to regulate their location, whether collocating on existing structures or within public rights-of-way or on municipal land. State legislation is pending that seeks a compromise between allowing access to public rights-of-way for the new technologies and providing municipal regulation of the installation of new facilities. The township should update its telecommunications regulations in the zoning ordinance, in accordance with state and federal law, and continue to be proactive in oversight of emerging technologies and legislation.

## WASTEWATER FACILITIES

The goal of wastewater facilities planning is to provide for the adequate treatment and disposal of wastewater, while protecting the public's health and minimizing harm to the environment. Development opportunities are limited in the township due to natural resource restrictions, such as slopes, floodplains, and restrictive soils with poor drainage characteristics. Bridgeton is served by individual on-lot wastewater treatment and disposal systems, and there are no municipal or community wastewater facilities in the township.

The purpose of the Pennsylvania Department of Environmental Protection's (PADEP) sewage facilities program is to implement the Pennsylvania Sewage Facilities Act (Act 537) to address existing sewage disposal needs and to help prevent future problems through proper planning, permitting, and design of all types of sewage facilities. Proposed facilities must be consistent with the municipality's sewage facilities plan for PADEP to be able to issue permits for facilities. Planning module components, along with other required documentation, must be submitted to the municipality with jurisdiction over the project site for review and approval. Reviewing agencies are required to provide comments within 60 days of receipt of the planning module package. Because PADEP is required to consider a municipality's zoning and comprehensive plan in the evaluation of private requests to change a community's official sewage facilities plan, it is important that the township comprehensive plan, zoning ordinance and municipal sewage facilities plan be well coordinated.

Bridgeton is one of eight municipalities that participated in the preparation of the *Palisades Area Wastewater Facilities Plan* (1980). This is the township's official Act 537 plan, which identifies wastewater needs, alternative sewage treatment, and policies for implementing the most feasible sewage treatment. Updates to a municipality's Act 537 plan are required when problems arise due to failures of on-lot sewage disposal systems, or if factors increase the demand for sewage disposal, such as an increase in population growth, density, or development, or a drastic change in land use. While the township's current plan is 43 years old and considered outdated per PADEP standards, none of these situations have occurred that would require the township to update their plan. The premise of the plan, which is the reliance of on-lot sewage disposal systems to serve the needs of the township, remains valid and there is currently no other alternative to provide sewage disposal to the township.

An important provision of an Act 537 plan is regulating the operation and maintenance of on-lot sewage disposal systems, which has increased in importance due to the need to educate property owners on necessary steps to ensure their on-lot sewage facilities remain viable for long-term use. The township adopted a Sewage Management Ordinance in 2007, which contains requirements for various on-lot sewage systems, such as Individual Residential Spray Irrigation Systems (IRSIS), Small Flow Treatment Facilities (SFTF), and other alternative and experimental systems. The main purpose of this ordinance is to ensure these systems are maintained properly by property owners through an Operation and Maintenance Agreement with the township. The township should consider updating the Sewage Management Ordinance to ensure the Operation and Maintenance Agreement is consistent with PADEP standards.

## WATER SUPPLY

All residents and businesses in Bridgeton Township are served by individual on-site water supply systems. There are no municipal or community water supply systems in the township. Private individual residence water systems that are not part of public water supply systems are largely unregulated other than their initial construction. Private water supplies are owned and maintained by individual property owners so the protection and maintenance is largely the responsibility of the individual homeowner.

Managing an adequate and safe water supply is a planning issue that transcends municipal boundaries. The Bridgeton-Nockamixon-Tinicum Groundwater Management Committee (BNTGMC) is further discussed in the Natural Resources chapter.

## STORMWATER MANAGEMENT

Stormwater runoff is the term for rainwater that moves over the ground during and immediately following a rainfall event. The area of land through which stormwater runoff drains is referred to as a watershed. As development increases in a watershed, so do the problems of dealing with greater quantities of stormwater runoff. Failure to properly manage this runoff can result in more flooding; greater stream channel erosion; siltation and sedimentation; and a reduction in groundwater recharge.

Recognizing the need to address this serious and growing problem, the Pennsylvania General Assembly enacted the Pennsylvania Stormwater Management Act. Act 167 requires PaDEP to designate watersheds and establish guidelines for the preparation of stormwater management plans for these watersheds. Counties are responsible for preparing the plans and developing ordinance language that municipalities must adopt to manage the volume and rate of stormwater runoff and the impact on water quality. Bridgeton Township is located in the Delaware River North watershed. The Delaware River North Stormwater Plan was prepared in 2002.

### **Best Management Practices**

The Bucks County Planning Commission, in partnership with the Bucks County Conservation District, prepared the *Innovative Stormwater Management Best Management Practices*<sup>1</sup> document. The goal of this document is to provide municipal and elected officials, board and committee members, planners, engineers, planning commission members, students, and the general public with information that will enable them to preserve water resources and better manage stormwater runoff within their community. The township should consult this manual for stormwater BMPs.

### **Bridgeton Township Stormwater Management Ordinance**

The Bridgeton Township Stormwater Management Ordinance was adopted in 2002 with the purpose of promoting the health, safety, and welfare within the township by enhancing best stormwater management practices. All regulated activities in the township which do not fall under the exemption criteria must submit a stormwater management plan that is consistent with the stormwater management ordinance for review by the township.

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<sup>1</sup> <https://www.buckscounty.gov/DocumentCenter/View/1803/Stormwater-Management-Best-Practices-PDF>

## CHAPTER SUMMARY

- The township government is comprised of the Secretary, Treasurer, Zoning Officer, Building Inspector, Floodplain Administrator, Road Master, Board of Supervisors, Township Solicitor, Planning Commission, Zoning Hearing Board, Tax Collector, Upper Black Eddy Fire Company 47, and the Bridgeton Emergency Management Coordinator.
- The Upper Bucks Regional Emergency Medical Services, Inc. is a non-profit agency that provides emergency medical care to the residents and visitors of Bridgeton.
- Residents of the township attend Palisades School District for public school. There is a private school facility located within the township.
- There are no hospitals, trauma centers, or urgent care facilities located in the township, but several facilities are located close by in Upper Bucks, New Jersey, and the Lehigh Valley.
- Bridgeton does not have its own police force and relies on the state police that function out of the Dublin Barracks.
- Upper Black Eddy Fire Company 47 is the volunteer fire company located in the township.
- *Palisades Area Wastewater Facilities Plan (1980)* is the township's official Act 537 plan.
- Bridgeton Township is served by individual on-lot wastewater treatment and disposal systems.
- All residents and businesses in Bridgeton Township are served by individual on-site water supply systems.
- Bridgeton Township falls under the Delaware River North Watershed.

## Recommendations

- Continue to timely update the Bridgeton Township Emergency Management website on local emergencies.
- Ensure consistency between the policies of the comprehensive plan and the provisions of zoning ordinance and Act 537 plan.
- Update the Sewage Management Ordinance to ensure the Operation and Maintenance Agreement is consistent with PADEP standards.
- Consider a management program for on-lot disposal systems to educate residents on the important of maintaining their system.
- Update telecommunications regulations in the zoning ordinance, in accordance with state and federal law, and continue to be proactive in oversight of emerging technologies and legislation.
- Continue support for maintaining water supply in cooperation with neighboring communities in the watershed, through the work of the BNT Groundwater Management Committee, including the adoption of the proposed groundwater ordinance.

## Hazard Mitigation



### WHAT IS HAZARD MITIGATION?

Hazard mitigation is sustained actions taken to prevent or minimize long-term risks to life and property from natural and human-made hazards. These actions are taken in advance of a hazard event and are essential to breaking the disaster cycle of damage, reconstruction, and repeated impairment. With careful selection, mitigation actions can be long-term, cost-effective means of reducing the risk of loss.

In 2018, FEMA estimated that in riverine areas, for every one dollar spent on mitigation, seven dollars was saved. Stakeholders such as emergency management personnel, elected officials, businesses, institutions, local historical and environmental organizations collaborate to support these proactive efforts.

In Pennsylvania and many other states, county governments have taken the lead in developing hazard mitigation plans to fulfill the federal mandate. In 2006, Bucks County and its constituent municipalities completed a hazard mitigation plan. Since then, to meet the 5-year update requirement, the plan was updated and readopted in 2011, 2016, and most recently in 2021.

The Hazard Mitigation Plan Update (HMPU) is a pre-disaster plan that guides the county towards comprehensive multi-hazard mitigation, while respecting the needs and character of municipal communities. It is a blueprint for reducing property damage and saving lives from future disasters and enhancing community resiliency following an event. Furthermore, the approved plan qualifies Bucks County and its municipalities for pre- and post-disaster grant funding.

The *Disaster Mitigation Act of 2000* requires that local governments, as a condition of receiving federal disaster mitigation funds (both pre- and post-disaster), have a mitigation plan that describes the process for identifying hazards, creating a risk assessment and vulnerability analysis, identifying and prioritizing mitigation strategies, and developing an implementation schedule.

The Bridgeton Township Board of Supervisors adopted the HMPU on November 10, 2021.

### How Does Hazard Mitigation Relate to the Comprehensive Plan?

The comprehensive plan provides policy for land use and future development, transportation, housing, economic development, public facilities and infrastructure, natural resource protection, historic properties, and cultural resources. Integrating hazard mitigation into the local comprehensive plan establishes resilience as an overarching value of a community and provides the opportunity to continuously manage development in a way that does not lead to increased hazard vulnerability.

## COMMUNITY RISK ASSESSMENT

Hazards are identified and defined in terms of location and extent, magnitude of impact, previous events, and likelihood of future occurrence. The HMPU identifies 21 hazards, both natural and human-made. The methodology for assessing risk factors assigns a weighted value for probability, impact, spatial extent, warning time, and duration. In Pennsylvania, Bucks County, and Bridgeton Township, the most common hazard category is flood, flash flood, ice jam. Other common hazards are winter storms and hurricane, tropical storm, and nor'easters. The plan also indicates that Bridgeton is more susceptible than the county as a whole to wildfire, landslide, and radon exposure risks.

**Table 20. Bucks County Hazards.**

Natural Hazards	Human-Made Hazards
Drought	Dam Failure
Earthquake	Hazardous Materials Releases
Extreme Temperature	Gas and Liquid Pipelines
Flood, Flash Flood, Ice Jam	Terrorism
Hailstorm	Transportation Incidents
Hurricane, Tropical Storm, Nor'easter	Urban Fire and Explosion
Landslide	Utility Interruption
Lightning Strike	
Pandemic and Infectious Disease	
Radon Exposure	
Subsidence, Sinkhole	
Tornado, Windstorm	
Wildfire	
Winter Storm	

Source: Bucks County 2021 Hazard Mitigation Plan Update

## Floodplain Management

Of the listed Natural Hazards, Bridgeton Township is most likely to be affected by weather-related events, particularly winter storms, nor'easter, hurricane, tropical storm, lightning strike, and windstorm. Flooding from these events will likely cause most of the damage and disruption of services.

To reduce the community's risk of flooding, Bridgeton Township is a participant in the National Flood Insurance Program (NFIP) with local floodplain management regulations. The NFIP recognizes the one percent-annual-chance flood, also known as the base flood, as the standard for identifying properties subject to federal flood insurance purchase requirements. The boundary of the one percent annual flood event is regulated within the local floodplain management ordinance as the Special Flood Hazard Area (SFHA).

The township should obtain information for all structures in the one percent-annual-chance floodplain to determine the best property protection methods to promote with individual property owners. FEMA's Flood Mitigation Assistance is a competitive grant program that provides funding to local communities to reduce the risk of repetitive flood damage to buildings insured by the NFIP. The township should proceed with grant applications to suitably protect these properties.

The township's floodplain ordinance was updated in 2015 with further amendments made in 2017. The ordinance contains provisions for the protection of floodplain areas that comply with the National Flood Insurance Program and the Pennsylvania Floodplain Management Act. The ordinance contains specifications that limit development within the township unless a permit has been obtained by the Floodplain Administrator. This includes strict limits on location of development, utilities installation, elevation, and flood proofing requirements. The floodplain ordinance should be reviewed and updates should be considered on an annual basis.

Within the SFHA are 217 structures, representing 30 percent of the township's population. Of these structures, 56 are considered repetitive and severe repetitive loss properties in the township. These properties have received flood damage multiple times and are the largest draw on the National Flood Insurance Fund. Repetitive losses increase NFIP's annual losses and drain funds needed to prepare for future catastrophic events.

## CRITICAL FACILITIES

The Bucks County HMPU also evaluates the vulnerability of the township’s critical facilities. For the purposes of the plan, critical facilities are those entities that are essential to the health and welfare of the community, transportation infrastructure, and facilities related to the care of children. This includes law enforcement, emergency response, medical services, wastewater plants, correctional facilities, airports, rail stations, municipal buildings, day cares, and schools. The list of critical facilities was developed based on information available from the Bucks County Emergency Management Agency (EMA), the Bucks County Geographic Information Systems (GIS) Department, PEMA, and FEMA.

Critical facilities identified within the township include the Upper Black Eddy Fire Company 47 on Firehouse Lane and the township municipal building located on Bridgeton Hill Road. The fire department is located within the SFHA.

## MITIGATION ACTIONS

As background to specific actions for Bridgeton Township, it is important to look at the six categories of mitigation actions that can be taken—Prevention, Property Protection, Public Education and Awareness, Natural Resource Protection, Structural Project Implementation, and Emergency Services.

### Prevention

Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning, zoning, building codes, code enforcement, subdivision regulations, hazard specific regulations (such as floodplain regulations), capital improvement programs, and open-space preservation and stormwater regulations. Adopting and enforcing higher floodplain management standards than NFIP minimum requirements can prevent the onset of flooding hazards.

### Property Protection

Actions that involve modifying or removing existing buildings or infrastructure to protect them from a hazard. Examples include the acquisition, elevation and relocation of structures, structural retrofits, flood-proofing, storm shutters, and shatter-resistant glass. Most of these property protection techniques are considered to involve “sticks and bricks;” however, this category also includes insurance.

### Public Education and Awareness

Actions to inform and educate citizens, elected officials, and property owners about potential risks from hazards and potential ways to mitigate them. Such actions include hazard mapping, signage indicating flood prone areas, outreach projects, library materials dissemination, real estate disclosures, the creation of hazard information centers, and school age/adult education programs. The township should promote the purchase of flood insurance amongst the community.

### Natural Resource Protection

Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, forest and vegetation management, wetlands restoration or preservation, slope stabilization, and historic property and archeological site preservation.

### Structural Project Implementation

Mitigation projects intended to lessen the impact of a hazard by using structures to modify the environment. Structures include stormwater controls (culverts), dams, dikes, levees, and safe rooms. The township should encourage these responsible building practices and mitigation projects.

### Emergency Services

Actions that typically are not considered mitigation techniques but reduce the impacts of a hazard event on people and property. These actions are often taken prior to, during, or in response to an emergency or disaster. Examples include warning systems, evacuation planning and management, emergency response training and exercises, and emergency flood protection procedures.

The HMPU is a living document, and it requires continuous monitoring. Like all the municipalities in Bucks County, Bridgeton Township should have a designated representative from the community, such as the local emergency management coordinator, to regularly review mitigation activities and hazard events. This person will be integral to the future planning process when the HMPU is again updated in 2026. The Bucks County Planning Commission began that process in 2022, collaborating with municipal representatives and the Bucks County Emergency Management Agency by holding an annual meeting to discuss hazard mitigation planning.

## CHAPTER SUMMARY

- Hazard mitigation is recognized as sustained actions taken to prevent or minimize long-term risks to life and property from natural and human-made hazards.
- The Board of Supervisors adopted the Hazard Mitigation Plan Update on November 10, 2021.
- Bridgeton Township is most likely to be affected by weather-related events.
- Bridgeton Township is a participant in the National Flood Insurance Program (NFIP).
- Critical facilities in the township are the fire department and the municipal building.
- There are six main categories of mitigation actions: Prevention, Property Protection, Public Education and Awareness, Natural Resource Protection, Structural Project Implementation, and Emergency Services.

## Recommendations

The *Bucks County HMPU* recommends specific municipal actions based on the priorities of hazards. Given that flooding is the most probable hazard to affect the township the municipal actions are related to floodplain management:

- Proceed with grant applications to suitably protect repetitive-loss properties in the one percent annual chance floodplain (for owners interested in FEMA mitigation funding).
- Evaluate, implement, and perform mitigation projects identified in the *Bucks County HMPU* and other planning mechanisms, including acquisition, elevation, foundation and building stabilization, reconstruction, securing access to generator power and other mitigation methods.
- Obtain information for all remaining structures in the one percent annual chance floodplain to determine the best property protection methods to promote with individual property owners. Techniques for gathering information over time should include developing and implementing a program for integrated information “capture” at key points in normal township operations.
- Review and consider updates to the floodplain ordinance on an annual basis.

Additionally, communities can become stronger and more resilient by following these best practices related to floodplain management:

- Adopting and enforcing higher floodplain management standards than NFIP minimum requirements (e.g., higher freeboard, lower substantial damage ratios).
- Maintaining rigorous enforcement of zoning, building code, and floodplain regulations.
- Promoting open space through property buyouts and community planning.
- Encouraging responsible building practices.
- Promoting the purchase of flood insurance.

## Future Land Use: A Plan for Bridgeton



The *Bridgeton Township Comprehensive Plan Update* serves as a policy guide to decision making in the community. It is an explicit statement of the township's goals, with a future vision to direct the community over the years to come. The planning elements of this document serve as a foundation for assessing the current state of the township and include summaries and recommendations for how to move forward while preserving Bridgeton's distinct character.

At the core of a comprehensive plan are the values of the community and a vision of a better future. Comprehensive plans should articulate and express these ideas so that future policy choices are clear and consensus driven. The resident survey was announced in September 2022 and gave community members a chance to have their voices heard in regards to updating the township's comprehensive plan. In this survey, residents ranked issues that were important to them, rated their quality of life in Bridgeton, and identified the township's major assets and concerns. From the survey results, it was clear that respondents rated their quality of life highly and that the majority of respondents enjoy living in the township and plan to retire here. The inventory of the current state of the township, along with the input from the people who live here, gives a great insight on how to proceed as a community for sound planning.

Future Land Use: A Plan for Bridgeton Township provides a framework for planning for future land use. The plan is based on the township's existing development patterns and zoning districts, transportation network, and its base of natural, historic, scenic, recreational, and open space resources. Future Land Use ties together the recommended actions seen throughout the plan and sets forth land use policy for Bridgeton Township in accordance with the Plan Principles.

## PLAN PRINCIPLES

The Bridgeton Township Comprehensive Plan Update puts forth a set of principles that will guide the plan's directions and recommendations. The five plan principles were developed based on responses from the resident survey, public discussions with the township planning commission, and findings of the plan.

**Protect Natural Resources:** Bridgeton's natural resources maintain the character of the township and enhance the quality of life in the community. This principle examines the township's geology, soils, topography and steep slopes, floodplains and wetlands, groundwater, and woodlands. Understanding the importance of Bridgeton's natural resources and providing protection measures is crucial for helping guide future land use planning.

**Preserve Historic and Cultural Heritage:** Identifying and preserving a community's history provides a better understanding of its past and creates context for future decision-making. This section of the plan reviews the history of Bridgeton where historic resources are discussed, and protection measures and tools are examined. Preserving Bridgeton's historic and cultural heritage will set standards and goals for the future.

**Manage Mobility:** Bridgeton's location within the regional transportation network allows convenient access to and from the surrounding areas. This principle reviews the township's circulation network and the different challenges which encompass Bridgeton's circulation characteristics, scenic and rural roads, bridges, and existing and proposed trail facilities. Managing the township's mobility will help guide Bridgeton's future land use planning.

**Protect and Enhance Recreation Resources and Open Space:** Park, recreation, and protected open space resources are an important part of a community's identity and overall quality of life. This section of the plan provides a current inventory of the township's parks, recreation, and open space resources. Evaluating these resources and protection measures will enhance them for future use and aid in local decision making.

**Foster a Sustainable and Resilient Community:** Bridgeton Township will foster a sustainable and resilient community that recognizes the limits of its resources, anticipates risks, and builds capacity to create a viable future for its residents. Examining the community facilities and services, focusing on hazard mitigation, and developing a plan for the future will help in Bridgeton's future choices.

Each of the five plan principles guide the plan elements of this comprehensive update and serve as a lens through which the future land use vision and plan recommendations should be viewed.

## FUTURE LAND USE PLAN

The main purpose of a comprehensive plan is to set out a vision of the community's future and provide a physical plan for realizing this vision. The Future Land Use Plan for Bridgeton Township (See Map 12. Future Land Use) provides a framework for planning for the future. The plan is based on the township's existing zoning districts and land use patterns, and its base of historic, recreational, natural, and circulation resources. Future Land Use brings together recommended actions and sets forth land use policy for Bridgeton Township in keeping with the values and principles of the *Bridgeton Township Comprehensive Plan Update*.

Bridgeton's current growth management scheme is compatible for the proportions and expected population growth for the township. Map 13. Zoning displays the township's current zoning districts. Village residential and commercial areas are concentrated in the village area of Upper Black Eddy. Intensity in development lessens to medium density, low density, and lowest density as it moves further out into the township's rural areas. Environmental conservation areas are zoned along the river where natural resources are sensitive. However, with recent zoning issues concerning future development and the sensitivity of important natural resources, this plan offers the following recommendations to ensure a viable future for the township:

### Rezone the CC Commercial Zoning District and Bridgeton Preserve Property as EC Environmental Conservation

The CC Commercial District currently only consists of two parcels: TMP #03-003-148-002 and TMP #03-003-148, which is a split-zoned parcel between the CC Commercial District and the R-1 Medium Density Residential Zoning District. This split-zoned parcel is also preserved under the Bucks County Municipal Open Space Program and would fit under the EC Environmental Conservation District, whose purpose is to maintain the natural, scenic, and historic character of the Delaware Canal, Delaware River, and River Road corridor.

Rezoning this district to EC Environmental Conservation would result in the removal of the CC Commercial District from the township all together. By removing the CC Commercial District, the township should ensure that the VC Village Commercial District appropriately allows for all commercial uses to ensure the township is providing for its "fair share" of land uses as required by case law as handed down by the Pennsylvania Supreme Court.

With the help of the Tinicum Conservancy in April of 2019, Bridgeton Township completed the purchase of two parcels, totaling nearly 110 acres, known as the Casillio property, which is located north of Bridgeton Hill Road and west of River Road. This quarry that has been abandoned for over 50 years was purchased and preserved by the township as municipal open space for the purpose of environmental conservation and recreation. TMP #03-003-111 is currently preserved by the township, but is still zoned as Industrial. This site should be re-zoned as Environmental Conservation, as this district recognizes areas with significant amounts of sensitive natural resources and seeks to permit uses that will protect these resources.

### Remove the Townhouse use from the R-1 Residential Zoning District

The township should take into consideration the surrounding conditions and potential impacts resulting from new developments, including traffic and road conditions and impervious surface. Townhomes are typically permitted in a municipality's higher density district, where services and density are present. Bridgeton Township does not have any public sewer, and this would require the townhome development site to be capable of supporting private or community sewage disposal. The natural resource restrictions related to this higher intensity development should also be considered.

Removing the possibility of townhomes from this zoning district would help ensure the protection of natural resources, keep this zoning district at a medium density level, and restrict this higher density development to the village residential and commercial zoning districts. The zoning ordinance would still permit this use by conditional use in the VR Village Residential and VC Village Commercial Zoning Districts.

### Recognize the Delaware Canal Enhancement Area

The nearly 4-mile long section of the Delaware Canal State Park throughout Bridgeton Township represents a significant historic, scenic, recreational, and natural resource. New land uses and changes to existing land uses within the canal viewshed should be sensitive to the visual quality of the canal corridor. Bridgeton should increase the setback from the Delaware Canal from 50 feet to the center of the canal, to 50 feet to the edge of the canal property, to better protect against the impact of new development. Any change within the corridor should enhance the Delaware Canal, not detract from it.

The Delaware Canal Enhancement Area is highlighted in Map 12 Future Land Use. This concept was endorsed in the *Delaware Canal Master Plan (1987)* and recognizes the importance of the area adjacent to the canal and the importance of providing for consistent environmental protection and land use regulations within the canal viewshed. The Friends of the Delaware Canal is currently in the process of drafting the *2032 Plan for the Delaware Canal*. In coordination with the Delaware Canal State Park and the Pennsylvania Department of Conservation & Natural Resources (DCNR), the Friends are working to identify project opportunities and improvements to be implemented over the next ten years, just in time for the Delaware Canal's bicentennial celebration. An improvement project is currently taking place in Bridgeton Township—the rehabilitation of the historic camelback Spahr's Bridge. The township should continue to support the efforts of the Friends of the Delaware Canal, as they work to restore, preserve, and improve one of Bridgeton's most valuable resources.

### **Implement Measures to Further Protect Bridgeton’s Natural Resources**

Bridgeton’s rural atmosphere, scenery, quality of life, natural amenities, and waterways were the top five assets listed by respondents of the community survey. These assets can be attributed to the natural resources that serve to help maintain the character of Bridgeton.

An effective zoning technique for reducing negative impacts to vegetated lands that border streams, rivers, reservoirs, ponds, lakes, wetlands, and other water bodies, is to establish riparian buffer zones. The intent of a riparian buffer overlay zone is to conserve, protect, and restore natural riparian resources to protect vital watercourses throughout the township. The township should update the zoning ordinance to establish riparian buffer requirements.

The township should also update the Subdivision and Land Development Ordinance (SALDO) to ensure native plantings are given a priority over non-native species. In 2022, the township received a grant from the Lower Delaware Wild & Scenic River Management Council for the purpose of buying and planting native vegetation to mitigate riverbank erosion. We recommend the township employ a strategy for mitigating riverbank erosion in areas of concern along River Road to include the use of native vegetation.

The Bridgeton-Nockamixon-Tinicum Groundwater Management Committee (BNTGMC) is an inter-municipal committee comprised of representatives from all three townships responsible for working with the governments of those townships to study and advise them on decisions affecting the quantity and quality of the township’s groundwater. The BNTGMC proposed a Groundwater Withdrawal Ordinance amending current regulations to protect the quality and quantity of water resources by placing restrictions on the construction of new wells and modifications of existing wells. The purpose of this ordinance is to ensure reliable, safe, and adequate water supplies to support the intended land uses within the capacity of available water resources in these three municipalities. Applications for subdivisions, land developments, conditional use, variances, special exceptions, and curative amendments will be subject to the requirements of this ordinance. The township should adopt this proposed ordinance to help protect the township’s groundwater resources.

### **Continue to Recognize Bridgeton’s Villages**

Map 12. Future Land Use highlights the village areas in the township. Bucks County, one of the three original counties in Pennsylvania, has a rich historical and cultural background. There are over 100 villages remaining in Bucks County; some beautifully preserved while others have been overshadowed by development. Three unique villages are an important part of Bridgeton’s heritage—Narrowsville, Rupletown, and Upper Black Eddy. Bridgeton should continue to recognize these villages and consider the appropriate use of preservation tools outlined in this plan.

### **Establish Gateways in Upper Black Eddy**

Upper Black Eddy is the largest and most intact village in Bridgeton Township today, located in the area where River Road intersects with Bridgeton Hill Road and with the Milford Bridge. The character and quality of the township would be permanently diminished if small settlements were to disappear, becoming unidentifiable as new development and growth engulf them. While municipalities cannot prevent growth, they can alleviate the effects that development can have on villages.

With rising concerns of truck traffic, congestion, speeding, and noise along River Road, the unique character of Upper Black Eddy is on the precipice of being diminished. To help combat this issue, traffic calming measures are recommended. One measure in particular that would benefit Upper Black Eddy are gateways. A well-designed gateway can help to create a sense of arrival and welcome, convey the history and cultural heritage of the community, and provide a visual connection between the community and its surroundings. A gateway can also serve as a landmark and a source of pride for the community, promoting a sense of belonging and a positive image of the community. Gateways at the entrances to Upper Black Eddy (See Map 12. Future Land Use) would signal to motorists that they have entered a historical village and encourage drivers to maintain appropriate speeds. The Future Land Use Map displays suggested locations for the village gateways.

### **Adopt an Official Highway Classification Map**

The township's circulation network is well-positioned to handle its current level of vehicular volume. To maintain this level of circulation, as well as to properly plan for future traffic volume increases, the township should adopt an official highway classification map, indicating which roads fall into its highway classification categories. This map can then be referenced during the land development process to reinforce roadway and land development standards.

One of Bridgeton's most valuable resources are its rural roads that provide access to all areas of the township and county. Designating a scenic road through PennDOT's Byways Program protects and preserves visual features and community character, promotes tourism and enhances economic development potential, and can help to avoid, minimize, or mitigate negative impacts along byway corridors. Potential candidates for scenic road designation in Bridgeton are River Road and Bridgeton Hill Road. Two of the major concerns from the community survey were the protection of River Road and Bridgeton Hill Road and preserving the rural quality of the township. Designating these routes will protect the community's character and promote the unique qualities of Bridgeton. The township should consider identifying these scenic routes and adopting an official network of scenic roads, to be referenced on an official highway classification map.

### Adopt an Official Trails Map

Trails are an important asset to enhance mobility and provide for recreation in a community. These facilities have benefits such as property value enhancement and opportunities for active lifestyles. Adopting an official trails map will formally document the township's trail network and will guide future development of trail and bicycle facilities throughout the township.

There are three existing trails, and two proposed trails within Bridgeton Township. The Delaware Canal Towpath trail traverses the entire length of the township and acts as the primary linkage for Bridgeton. Currently, residents can access Ringing Rocks from the Delaware Canal path, as well as the Bridgeton Preserve and the Township Village Green Park. See the Parks, Recreation, and Protected Open Space Chapter of the plan to see other park expansion and trail linkage opportunities in the township.

The Ringing Rocks trail starts at the entrance of the park and loops around the boulder field, passing the county's largest waterfall along the way. The trail extends out to River Road via the PA Highlands Trail, which provides a trail connection to the Delaware Canal Towpath trail. These three trails, along with the following two proposed concept trails should be added to the official trails map:

**The Highlands Trail** in Pennsylvania is a 300-mile connected trail network that runs through 13 counties and connects three rivers—the Delaware, Schuylkill, and the Susquehanna. The trail connects six state parks and connects or passes near several county parks. Trail planning and development of the Highlands Trail gaps is ongoing. This proposed regional trail alignment would provide trail amenities to connect the eastern side of Nockamixon State Park to Ringing Rocks County Park. This proposed trail would also provide a connection from Bridgeton Township to Quakertown Borough and through to Montgomery County.

**The Bridgeton Preserve** is the recently preserved abandoned quarry property in the township. This site contains a proposed nature trail for walking and hiking. This trail would run through woodlands and around the wetlands on the open space property, with a connection to Ringing Rocks State Park. The Appalachian Mountain Club has surveyed the site and plans to start work on the trail in 2023. The Future Land Use Map shows all the trails in the township if the current proposed conceptual facilities are accepted and created.

### Protect Open Space to Maintain Rural Character

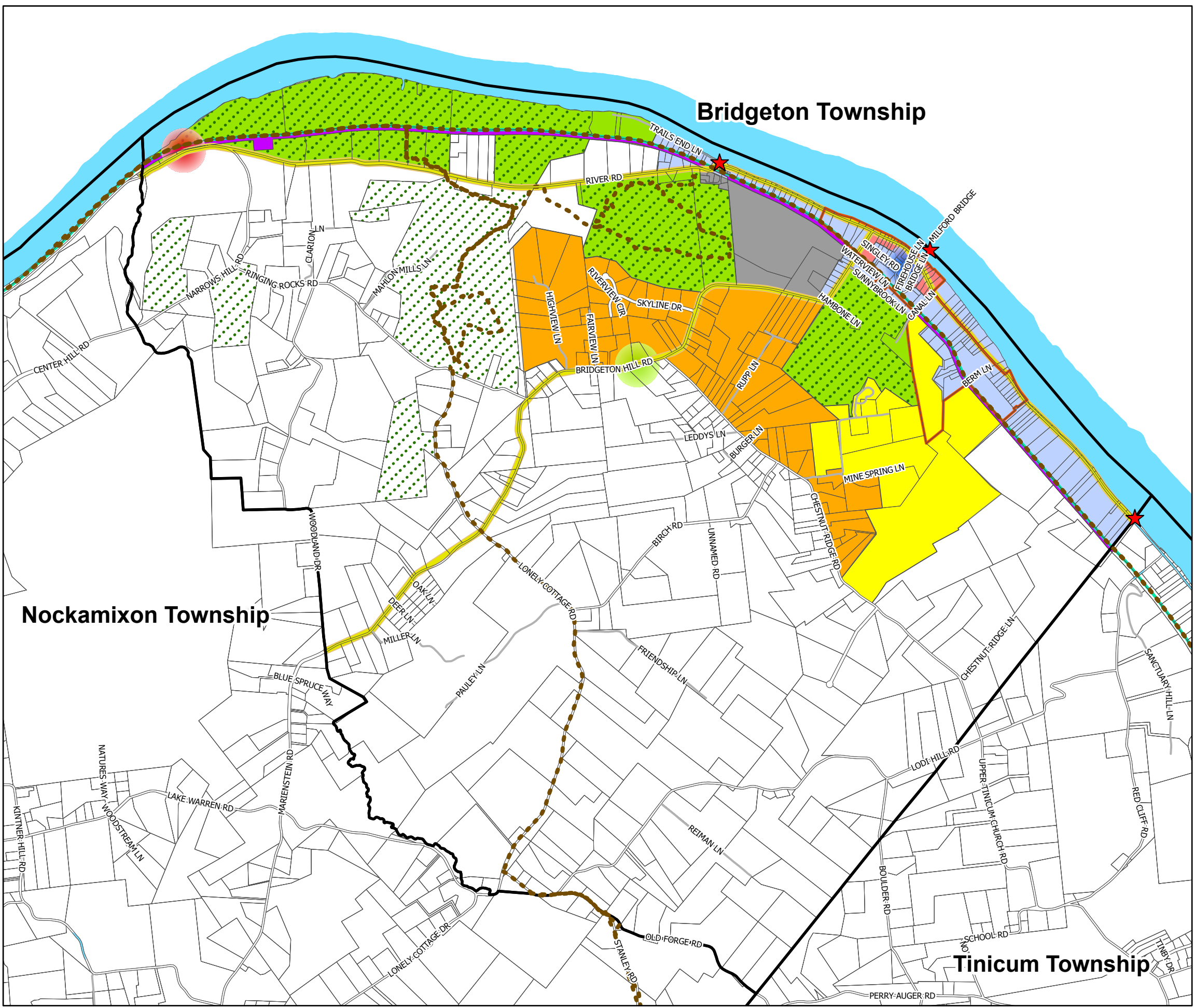
The Bridgeton Township Open Space Committee was formed in June 1999 and developed the *Bridgeton Township Open Space Plan* (2001) to assist the board of supervisors in the preservation or acquisition of open space. The plan discussed the need to establish a municipal park and open space network. A park and open space network consists of interconnecting existing parks, open spaces, points of interest, and greenways to provide residents with convenient access and expanded recreational opportunities within the community and the region as a whole.

One of the recommendations from *Bucks County, Pennsylvania Natural Areas Inventory Update* mentioned in the Natural Resources section of this plan, is connectivity and land protection priorities. There are currently 90 acres of contiguous forested land between Ringing Rocks County Park and the Delaware River. These parcels (TMP #03-003-194 and TMP #03-003-187) are under ownership of the Bridgeton Township Athletic Association. It is recommended that this area be protected open space, to protect these parcels of land and the existing native forest cover in order to maintain a continuous corridor of woodlands spanning from Ringing Rocks down to the river. These parcels are adjacent to properties protected by Bucks County Parks & Open Space and would continue the townships network of parks and open space.

It is unclear whether the Open Space Committee is still active within the township. Bridgeton should revitalize this committee and work with the township on an update to the 2001 *Bridgeton Township Open Space Plan*.

# Map 12. Future Land Use

Bridgeton Township  
Comprehensive Plan Update



- Upper Black Eddy Gateways
- Trails
- Scenic Roads
- Delaware Canal
- State Parks & Open Space
- Open Space and Recreation
- Upper Black Eddy Historic District
- Environmental Conservation
- Industrial/Shopping Center
- Medium Density Residential
- Low Density Residential
- Lowest Density Residential
- Village Commercial
- Village Residential

### Villages

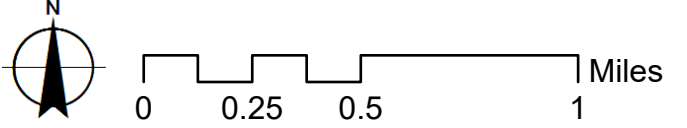
- Rupletown
- Narrowsville
- Upper Black Eddy



Bucks County



**BCPC**  
Bucks County Planning Commission



## COMPATABILITY WITH ADJACENT MUNICIPALITIES

The Pennsylvania Municipalities Planning Code (PaMPC) requires that comprehensive plans take into account the planning efforts in the surrounding areas, county, and region. Development impacts and resource protection does not stop at municipal boundary lines, but rather transcends a region. The purpose of the following discussion is to ensure that policies developed for Bridgeton do not create conflicts with adjoining lands but encourage a regional approach to address planning problems and issues. Bridgeton Township sits adjacent to four municipal entities, two in Bucks County, and two across the Delaware River in New Jersey. In Bucks County, Nockamixon Township borders the northern and western part of Bridgeton, and Tincum Township borders Bridgeton’s southern border. Across the Milford Bridge is Milford Borough and Holland Township in Hunterdon County, New Jersey. Each of these bordering municipalities has land use and zoning plans to examine to ensure the compatibility of this comprehensive plan.

### Nockamixon Township

Three zoning districts within Nockamixon Township directly meet the municipal border with Bridgeton Township—the RP Resource Protection Zoning District, the OSM Open Space Management Zoning District, and the R Residential Zoning District. All three of these zoning districts are compatible with Bridgeton’s R-3 Lowest Density Residential Zoning District and Bridgeton’s ECA Environmental Conservation-A Zoning District.

### Tincum Township

Two of Tincum’s zoning districts directly meet the municipal border with Bridgeton Township—the RC Residential Conservation Zoning District and the RA Residential Agricultural Zoning District. These zoning districts are compatible with Bridgeton’s R-3 Lowest Density Residential Zoning District and the VR Village Residential Zoning District.

### Holland Township

Given the width of the river between Bridgeton Township and the neighboring municipality of Holland Township in Hunterdon County, New Jersey, there are no significant impacts from land use activities between the two communities. The area across the river from Bridgeton is zoned primarily residential. Additionally, the open space area known as the Milford Bluffs acts as a scenic viewshed for Bridgeton. Township officials should monitor any land use initiatives along Holland Township’s waterfront to ensure they are conducted in a manner that has a positive influence.

### Milford Borough

The historic Milford Bridge connects Milford Borough to the village of Upper Black Eddy in Bridgeton Township. The borough proclaims to be an eco-tourism destination located along the banks of the Delaware River. With its many commercial amenities and community activities, residents of Bridgeton Township have even referred to the borough as their “Main Street”. Milford Borough is easily accessible on foot, by bicycle, or by car via the Milford Bridge, and township officials should continue to monitor any land use initiatives along Milford’s waterfront to ensure they are conducted in a positive manner.

### Bucks County Comprehensive Plan

The *Bucks County Comprehensive Plan (2011)* seeks to coordinate and assist the county's municipalities, agencies, and general public in the planning, development, and management of its natural and built environment. The plan reaffirms the county's long-term goals of sustainability and good stewardship. The following principles identify priorities of the plan and serve to guide future decisions:

- Protect natural, historic, and scenic resources
- Promote energy conservation and efficiency
- Protect water resources and reduce waste
- Mitigate hazards to life and property
- Provide adequate community facilities and services
- Enhance transportation mobility
- Promote economic opportunity, housing diversity and efficient use of land

The Future Land Use Plan map provides a countywide vision to implement the principles of Smart Growth. Smart Growth is a land use planning strategy which seeks to focus development on existing developed areas, preserve open space and natural resources, and link transportation and land use planning efforts. This map is meant to assist in the coordination and implementation of local and regional planning efforts. On the Future Land Use Map in the County Plan, the township falls within the Natural Resource and Conservation Area. This area includes greenway corridors, recreation areas, and significant natural areas. These areas in the county remain largely undeveloped due to the presence of natural resources.

Bridgeton Township complies with the *Bucks County Comprehensive Plan (2011)* by addressing the plan's principles. This plan addresses existing conditions and trends and contains plans for housing, land use, natural resources, community services and facilities, parks, recreation, and protected open space, transportation and circulation, hazard mitigation, and a future land use plan. The Future Land Use Plan of Bridgeton Township Comprehensive Plan Update is in accordance with the county's future land use designation as a Natural Resource and Conservation Area.



## IMPLEMENTATION

Successful implementation of this comprehensive plan update requires that the following recommendations be taken in a timely and efficient manner. The following provides a summary of the plan's recommended actions by chapter. Measuring progress is important for determining the effectiveness of the plan and for ensuring that the township is meeting the plan's goals and promoting its policies. The "Record of Action" column can assist the township with tracking the progress of meeting the plan's recommendations.

Natural Resources Recommended Actions	Record of Action
Follow recommendations from the <i>Natural Areas Inventory</i> to protect the parcels of land along the Delaware River owned by the Bridgeton Athletic Association, to maintain a continuous corridor of woodlands spanning from Ringing Rocks down to the river.	
Update the Bridgeton Township Zoning Ordinance to establish riparian buffer requirements.	
Update the Bridgeton Township Subdivision and Land Development Ordinance (SALDO) to use the natural cover of native plantings and trees wherever possible.	
Monitor Beaver Creek to maintain Exceptional Value Water designation from the state.	
Monitor High Falls Creek to protect the quality of water, minimize erosion and sedimentation, and conserve sensitive wildlife and aquatic habitats.	
Continue support for maintaining water supply in cooperation with neighboring communities in the watershed, through the work of the BNT Groundwater Management Committee, including the adoption of the proposed groundwater ordinance.	
Consider adopting steep slope encroachment regulations in the zoning ordinance.	
Update Section 202 Definitions of the zoning ordinance to define Floodplain Soils to be consistent with the SALDO.	
Consider providing additional floodplain regulations, including the provision of uses permitted by right or by special exception which is consistent with those allowable uses in the <i>Bucks County Natural Resources Plan</i> .	
Mitigate erosion with native plantings along River Road with the grant receive by Lower Delaware Wild & Scenic River Management Council.	
Continue to monitor the Boarhead Farms Superfund Site in coordination with the EPA.	

Historic Resources Recommended Actions	Record of Action
Establish a Historical Architectural Review Board (HARB).	
Encourage the revitalization of the Upper Black Eddy Historic Preservation Society, or create a Bridgeton Township Historic Commission to address historic preservation issues and to advocate for preservation of historic resources in the township.	
When the township meets the criteria to qualify, apply for status as a Certified Local Government (CLG).	
Apply for funding through the Keystone Historic Preservation grant programs to assist with a historic resource survey, to create a township historic preservation plan, develop design guidelines, adopt a historic preservation ordinance, or nominate resources to the National Register.	
<p>Revise the Bridgeton Township Zoning Ordinance to include better protection of historic properties and consider the following:</p> <ul style="list-style-type: none"> <li>• A historic preservation cluster development district,</li> <li>• Making demolition of a historic building a special exception or conditional use,</li> <li>• Increase the set back from the Delaware Canal from 50 feet to the center of the canal, to 50 feet to the edge of the canal property, to better protect against the impact of new development.</li> </ul>	
Developed illustrated design guidelines for the village of Upper Black Eddy or for the township as a whole.	
Encourage the nomination of historic resources to the National Register of Historic Places.	
Support the efforts of the Friends of the Delaware Canal in restoring and maintain Spahr’s Bridge.	

Transportation and Circulation Recommended Actions	Record of Action
Create and adopt a highway classification map.	
Identify scenic routes within the township and include route on the highway classification map.	
Pursue a scenic roadway, or equivalent designation for River and Bridgeton Hill Roads through the PennDOT Byways Program.	
Work with the county and PennDOT to get Bridge 7148, Bridge 6817, and Bridge 7581 onto the region’s Transportation Improvement Program (TIP).	
Continue to work with the Bridgeton Township Traffic Advisory Committee on truck and roadway safety.	
Maintain and enhance current bicycle and pedestrian connections as needed.	
Support the development of the Pennsylvania Highlands Trail within the township to connect to Nockamixon Township.	
Support the development of the proposed Bridgeton Preserve trail.	
Develop and adopt an official trails map.	

Parks, Recreation, and Protected Open Space Recommended Actions	Record of Action
Explore gateway options to enhance the Township Village Green Park.	
Encourage property owners to retain their Act 319 designation.	
Continue to develop an official name for the Bridgeton Preserve, which addresses the historical and natural elements of this preserved open space.	
Adopt mandatory dedication/fees in lieu for all subdivisions and land development following the completion of the park and recreation plan.	
<p>Continue to improve upon the concept of an open space network to interconnect population centers to various park and open space resources located in the township and neighboring municipalities.</p> <ul style="list-style-type: none"> <li>• Add a crosswalk and signage on River Road to connect the PA Highlands/Ringing Rocks Trail to the Ringing Rocks Trailhead parking area.</li> <li>• Support the Appalachian Mountain Club’s trail proposal for the Bridgeton Preserve and the PA Highlands trail proposal to connect to Nockamixon Township.</li> <li>• Link the Township Village Green Park to the Public Boat Launch via safe sidewalk or pathway connections.</li> <li>• Link the Delaware Canal towpath to the Milford Bridge.</li> </ul>	
Revitalize the Bridgeton Township Open Space Committee or form an ad-hoc committee and update the 2001 Open Space Plan.	
Pursue strategic open space sites that are suitable for the future development of parks, recreation, or open space facilities.	

Community Services and Facilities Recommended Actions	Record of Action
Continue to timely update the Bridgeton Township Emergency Management website on local emergencies.	
Ensure consistency between the policies of the comprehensive plan and the provisions of zoning ordinance and Act 537 plan.	
Update the Sewage Management Ordinance to ensure the Operation and Maintenance Agreement is consistent with PADEP standards.	
Consider a management program for on-lot disposal systems to educate residents on the important of maintaining their system.	
Update telecommunications regulations in the zoning ordinance, in accordance with state and federal law, and continue to be proactive in oversight of emerging technologies and legislation.	
Continue support for maintaining water supply in cooperation with neighboring communities in the watershed, through the work of the BNT Groundwater Management Committee, including the adoption of the proposed groundwater ordinance.	

Hazard Mitigation Recommended Actions	Record of Action
Proceed with grant applications to suitably protect repetitive-loss properties in the one annual chance floodplain (for owners interested in FEMA mitigation funding).	
Evaluate, implement, and perform mitigation projects identified in the <i>Bucks County HMPU</i> and other planning mechanisms, including acquisition, elevation, foundation and building stabilization, reconstruction, securing access to generator power and other mitigation methods.	
Obtain information for all remaining structures in the one percent annual chance floodplain to determine the best property protection methods to promote with individual property owners. Techniques for gathering information over time should include developing and implementing a program for integrated information “capture” at key points in normal township operations.	
Review and consider updates to the floodplain ordinance on an annual basis.	
Adopt and enforce higher floodplain management standards than NFIP minimum requirements (e.g., higher freeboard, lower substantial damage ratios).	
Maintain rigorous enforcement of zoning, building code, and floodplain regulations.	
Promote open space through property buyouts and community planning.	
Encourage responsible building practices.	
Promote the purchase of flood insurance.	

# Appendix A: Community Survey Results

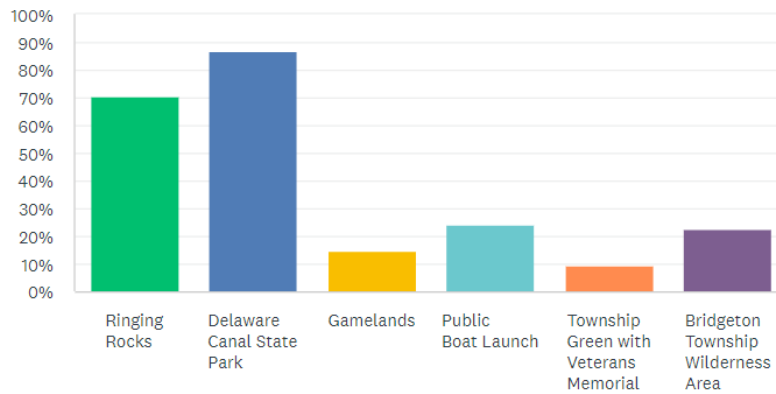
How would you rate the quality of life in Bridgeton Township?

3.9★  
average rating



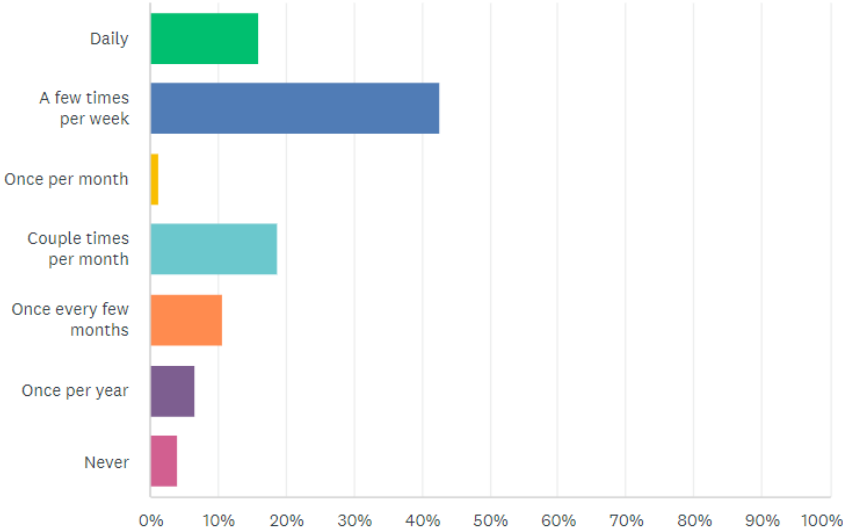
	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT	TOTAL	WEIGHTED AVERAGE
★	0.00%	6.33%	22.78%	50.63%	20.25%	79	3.85
	0	5	18	40	16		

Which parks do you frequent in the township? (Choose all that apply).



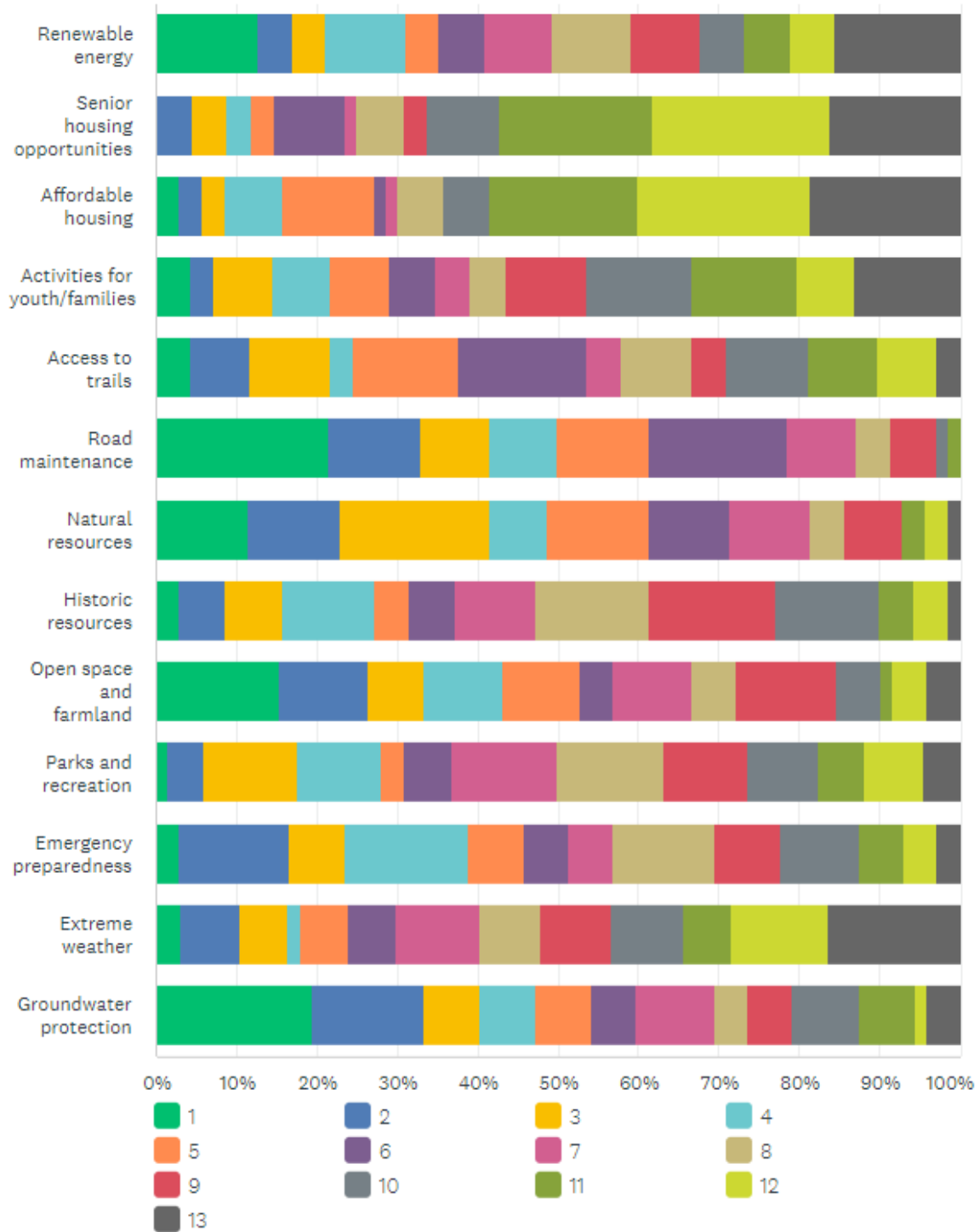
ANSWER CHOICES	RESPONSES
Ringin Rocks	70.67% 53
Delaware Canal State Park	86.67% 65
Gamelands	14.67% 11
Public Boat Launch	24.00% 18
Township Green with Veterans Memorial	9.33% 7
Bridgeton Township Wilderness Area	22.67% 17
<b>Total Respondents: 75</b>	

### How often do you frequent these parks?

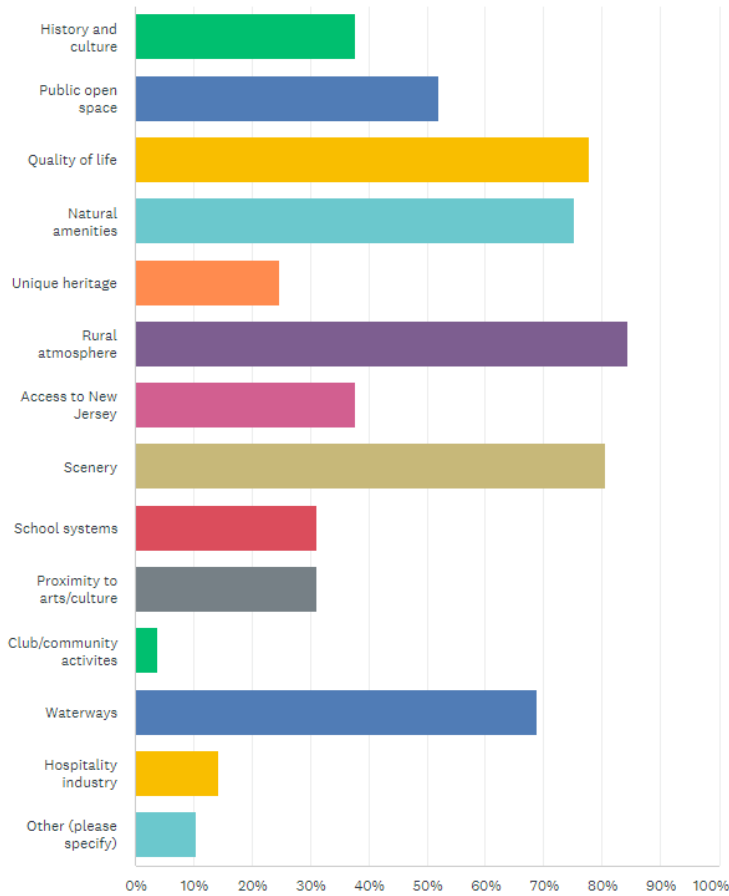


ANSWER CHOICES	RESPONSES
▼ Daily	16.00% 12
▼ A few times per week	42.67% 32
▼ Once per month	1.33% 1
▼ Couple times per month	18.67% 14
▼ Once every few months	10.67% 8
▼ Once per year	6.67% 5
▼ Never	4.00% 3
<b>TOTAL</b>	<b>75</b>

Rank the following issues (1 being the most important, 13 being the least important):

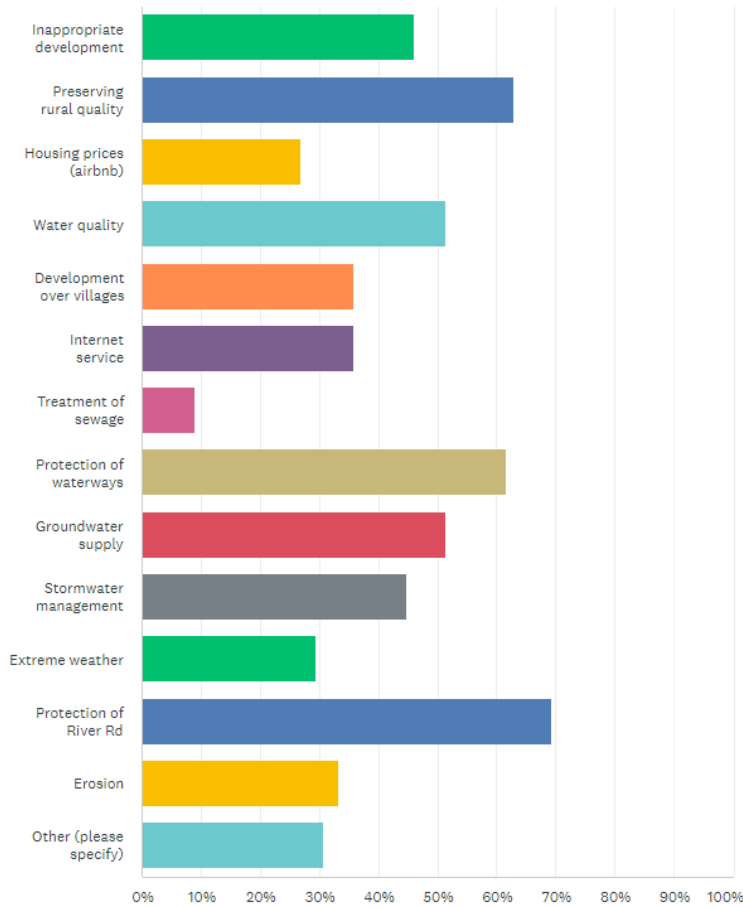


### What do you think are Bridgeton’s best assets?



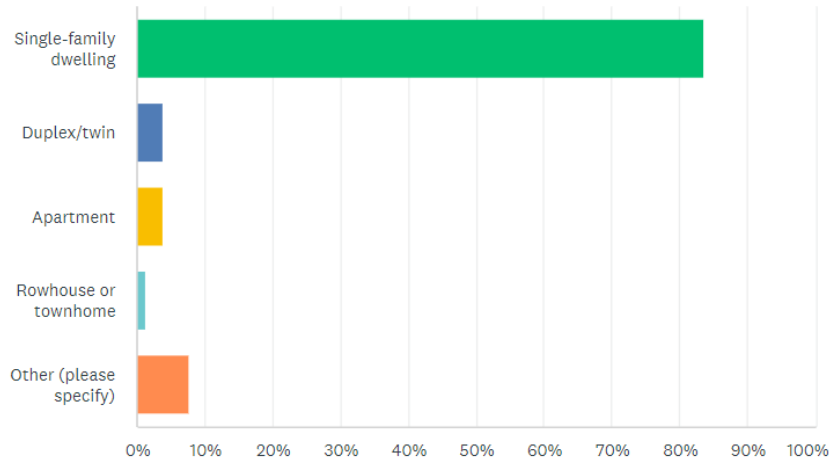
ANSWER CHOICES	RESPONSES
History and culture	37.66% 29
Public open space	51.95% 40
Quality of life	77.92% 60
Natural amenities	75.32% 58
Unique heritage	24.68% 19
Rural atmosphere	84.42% 65
Access to New Jersey	37.66% 29
Scenery	80.52% 62
School systems	31.17% 24
Proximity to arts/culture	31.17% 24
Club/community activities	3.90% 3
Waterways	68.83% 53
Hospitality industry	14.29% 11
Other (please specify)	Responses 10.39% 8
<b>Total Respondents: 77</b>	

### What concerns do you have regarding the township?



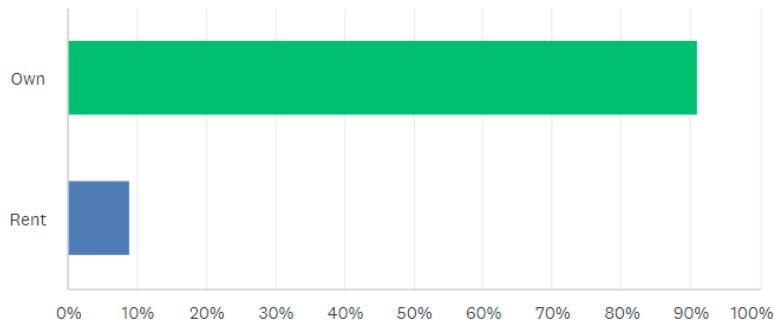
ANSWER CHOICES	RESPONSES
▼ Inappropriate development	46.15% 36
▼ Preserving rural quality	62.82% 49
▼ Housing prices (airbnb)	26.92% 21
▼ Water quality	51.28% 40
▼ Development over villages	35.90% 28
▼ Internet service	35.90% 28
▼ Treatment of sewage	8.97% 7
▼ Protection of waterways	61.54% 48
▼ Groundwater supply	51.28% 40
▼ Stormwater management	44.87% 35
▼ Extreme weather	29.49% 23
▼ Protection of River Rd	69.23% 54
▼ Erosion	33.33% 26
▼ Other (please specify)	Responses 30.77% 24
<b>Total Respondents: 78</b>	

### How would you describe your home?



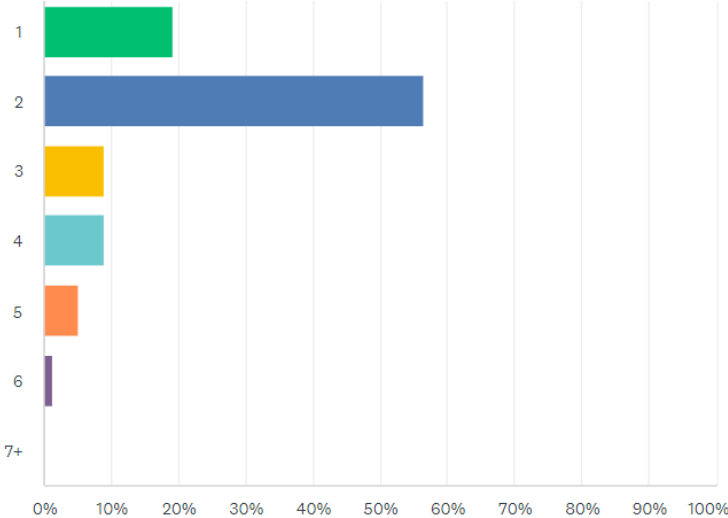
ANSWER CHOICES	RESPONSES
Single-family dwelling	83.54% 66
Duplex/twin	3.80% 3
Apartment	3.80% 3
Rowhouse or townhome	1.27% 1
Other (please specify)	Responses 7.59% 6
<b>TOTAL</b>	<b>79</b>

### Do you own or rent your home?



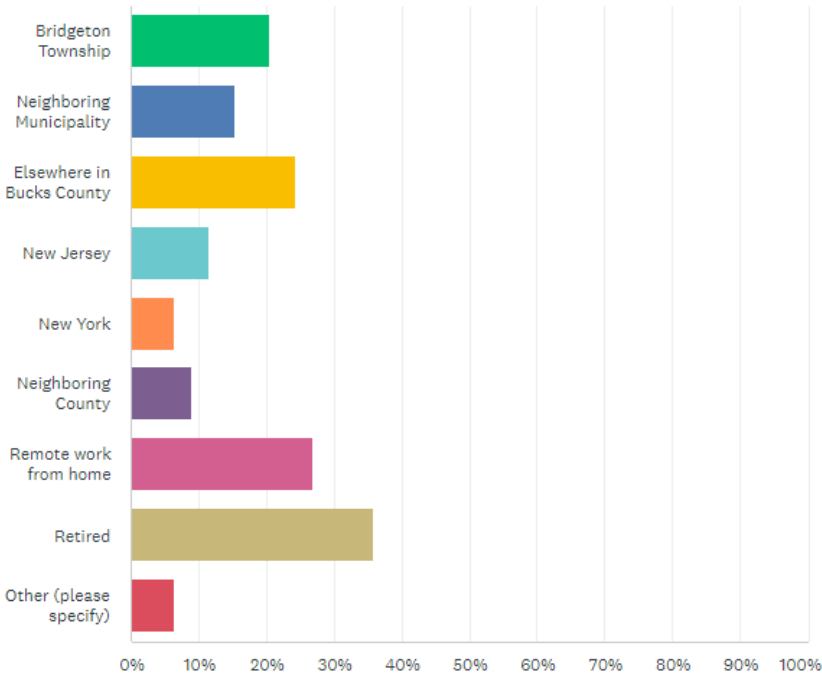
ANSWER CHOICES	RESPONSES
Own	91.14% 72
Rent	8.86% 7
<b>TOTAL</b>	<b>79</b>

### How many residents are in your household?



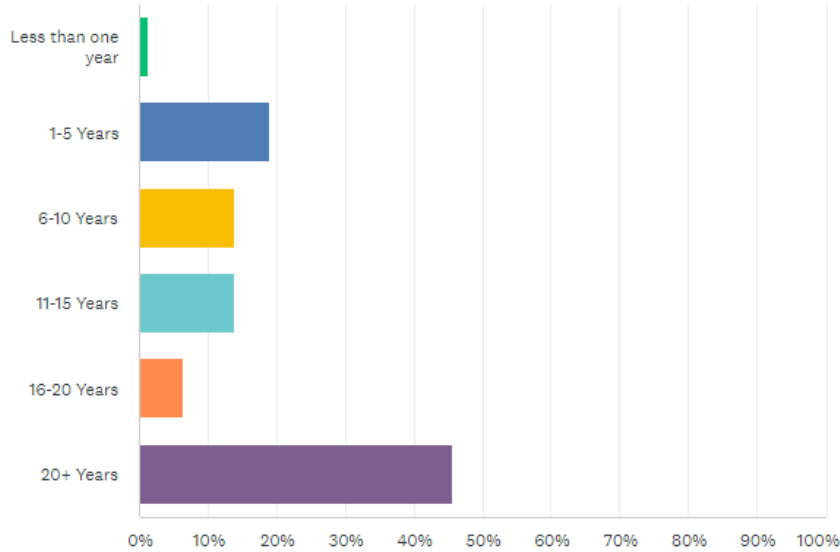
ANSWER CHOICES	RESPONSES
▼ 1	19.23% 15
▼ 2	56.41% 44
▼ 3	8.97% 7
▼ 4	8.97% 7
▼ 5	5.13% 4
▼ 6	1.28% 1
▼ 7+	0.00% 0
<b>TOTAL</b>	<b>78</b>

### Where do members of your household work?



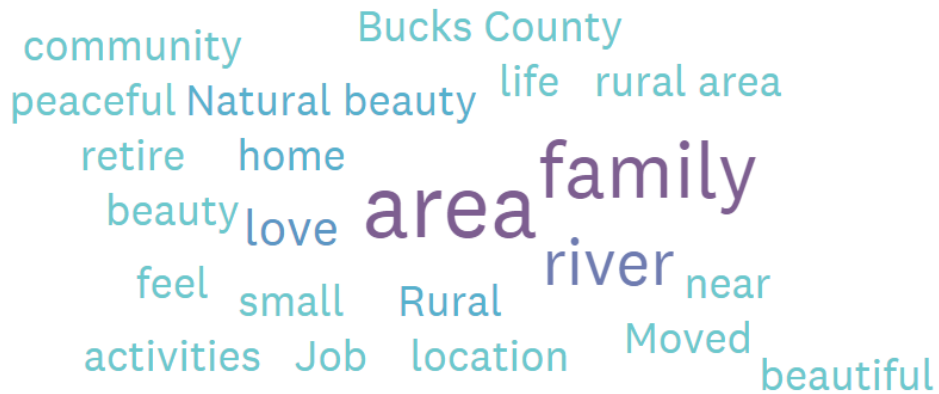
ANSWER CHOICES	RESPONSES
▼ Bridgeton Township	20.51% 16
▼ Neighboring Municipality	15.38% 12
▼ Elsewhere in Bucks County	24.36% 19
▼ New Jersey	11.54% 9
▼ New York	6.41% 5
▼ Neighboring County	8.97% 7
▼ Remote work from home	26.92% 21
▼ Retired	35.90% 28
▼ Other (please specify)	Responses 6.41% 5
<b>Total Respondents: 78</b>	

### How long have you lived in Bridgeton?

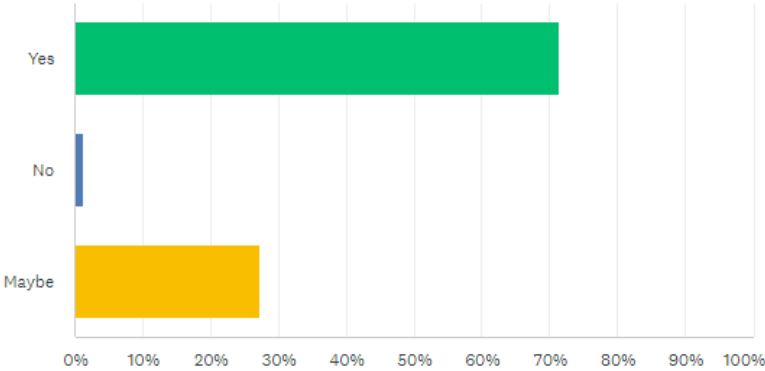


ANSWER CHOICES	RESPONSES
Less than one year	1.27% 1
1-5 Years	18.99% 15
6-10 Years	13.92% 11
11-15 Years	13.92% 11
16-20 Years	6.33% 5
20+ Years	45.57% 36
<b>TOTAL</b>	<b>79</b>

### Why did you move here?

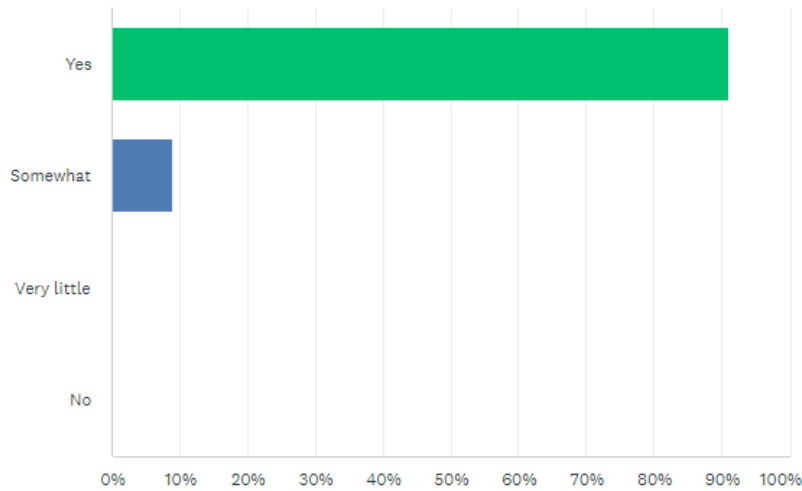


### Do you plan on retiring in Bridgeton?



ANSWER CHOICES	RESPONSES
Yes	71.43% 55
No	1.30% 1
Maybe	27.27% 21
<b>TOTAL</b>	<b>77</b>

### Do you enjoy living in Bridgeton?

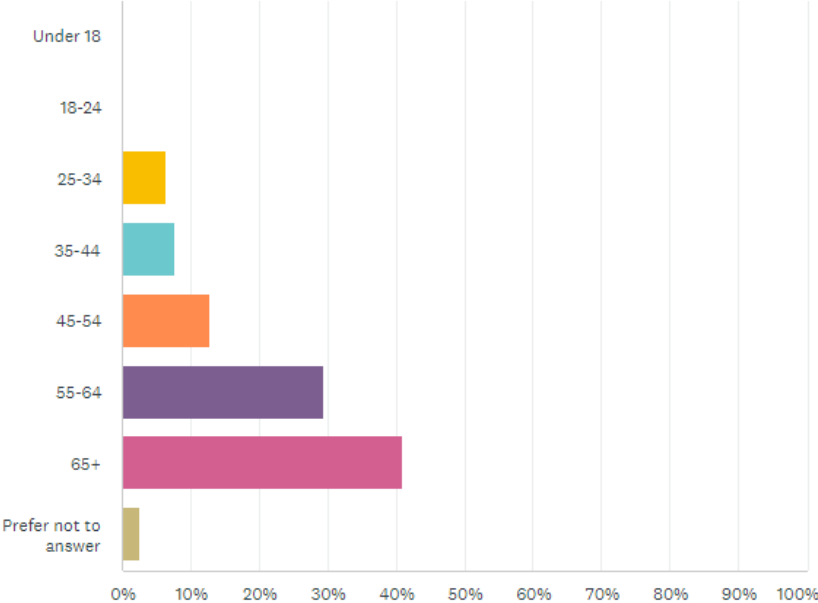


ANSWER CHOICES	RESPONSES
Yes	91.03% 71
Somewhat	8.97% 7
Very little	0.00% 0
No	0.00% 0
<b>TOTAL</b>	<b>78</b>

### Why or why not?



### What is your age?



ANSWER CHOICES	RESPONSES
Under 18	0.00% 0
18-24	0.00% 0
25-34	6.41% 5
35-44	7.69% 6
45-54	12.82% 10
55-64	29.49% 23
65+	41.03% 32
Prefer not to answer	2.56% 2
<b>TOTAL</b>	<b>78</b>