Stormwater Management Plan

2019

EPA NPDES Permit ID#: MAR041246, Town of Adams

Community Development Department

Town of Adams

Adams, Massachusetts

Stormwater Management Program

EPA NPDES Permit ID #: MAR041246, Town of Adams

June 2019

CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: _____

Signature: _____ Date: _____

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1. INTRODUCTION

1.1 OBJECTIVE

To preserve, protect, and improve water resources from polluted stormwater runoff, the United States Environmental Protection Agency (EPA) created the National Pollutant Discharge Elimination System (NPDES) permit program. This program, commonly referred to as the NPDES Program, is authorized by the Clean Water Act federal legislation. The nation-wide NPDES Program controls water pollution by regulating sources that discharge pollutants into water bodies. The Stormwater Phase II Final Rule, commonly referred to as NPDES Phase II, requires small urbanized areas and small construction sites to implement programs and practices to control polluted stormwater runoff to the maximum extent practicable.

Municipalities covered by the Phase II Rule are required to develop and implement a Stormwater Management Program that reduces the discharge of pollutants. This Stormwater Management Program must include the following areas: public education and outreach; public participation and involvement; illicit discharge detection and elimination; construction site runoff control; stormwater management in new development and redevelopment; and good housekeeping and pollution prevention for permitee owned operations. Each of the six areas of work should list appropriate Best Management Practices (BMPs), identify who will do the work, and specify when the work will be done.

Larger construction projects in Adams and elsewhere must also be in compliance with certain provisions of Phase II. In 2005, the Town of Adams proactively prepared a Stormwater Management Strategic Plan rather than waiting until required to do so. This has allowed the Town to address stormwater management in its own way and at its own pace. This Plan was prepared to comply with all NPDES Phase II requirements at that time. This Plan adapts the 2005 Stormwater Management Strategic Plan into a written Stormwater Management Program that meets all of the requirements of the 2016 Massachusetts Small MS4 General Permit.

1.2 DEFINITIONS

Municipal Separate Storm Sewer System (MS4) also referred to as a Municipal Separate Stormwater System: "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law)…including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States.

(ii) Designed or used for collecting or conveying storm water;

(iii) Which is not a combined sewer; and
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2."

Non Point Pollution means pollution that occurs when water runs over land or through the ground and picks up natural and human-made pollutants, and discharges them in surface waters or introduces them into groundwater.

Pollutants of Concern include biochemical oxygen demand (BOD), sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation), pathogens, oil and grease, and any pollutant that has been identified as a cause of impairment in any water body to which the MS4 discharges.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Pollutant means any element or property of sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent, or other matter in whatever form, and whether originating at a point or nonpoint source, that is or may be discharged, drained or otherwise introduced into any sewage system, treatment works or waters of the Commonwealth.

Small SM4 means all separate storm sewers that are: (i) Owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States. (ii) Not defined as ''large'' or ''medium'' municipal separate storm sewer systems pursuant to paragraphs (b)(4) and (b)(7) of this section, or designated under paragraph (a)(1)(v) of this section….

Stormwater means storm water runoff, snow melt runoff, and surface runoff and drainage.

Small Construction Activities means Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one acre and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one and less than five acres.

Total Maximum Daily Load (TMDL): "The sum of the individual [Wasteload Allocations (WLA)] for point sources and [Load Allocations (LA)] for nonpoint sources and natural background. If receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments.

TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measures. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs."

Urbanized Area: A land area comprising one or more places – central place(s) – and the adjacent densely settled surrounding area – urban fringe – that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile.

1.3 BACKGROUND

Falling rain or snow soaks into the ground to become groundwater, evaporates, or flows over the land surface. The overland flow is called runoff or stormwater and is the primary water source for water bodies, such as streams, rivers, lakes, ponds, wetlands and water-supply reservoirs. Stormwater washes along or dissolves some of the materials in its path. Vegetative surfaces slow the flow, filter out sediments, and can break down or trap pollutants in the root zone. In contrast, buildings, roads, parking areas, and exposed bedrock (also called impervious surfaces) increase the volume and speed of stormwater runoff since none can soak in, and the hard surfaces present little resistance to flow. To prevent flooding and protect property in developed areas, stormwater drainage systems collect stormwater runoff and carry it away from roadways and structures to a discharge point. Most discharges are into natural waters. Stormwater drainage systems consist of curbs, gutters, storm drains, channels, ditches, pipes, and culverts and generally do not treat the stormwater.

Stormwater becomes a transportation system for pollutants. Soil that erodes from a construction site, cigarette butts and other litter from parking lots, pet and animal waste, antifreeze and oil dripped from cars, fertilizers and pesticides from turf management, and grit and salt left from de-icing operations on roadways can be deposited untreated into water bodies. Water can contain and transport sediments, metals (copper, cadmium, chromium, lead, and zinc), nutrients (nitrates, phosphates, and ammonia), salt, petroleum products and coliform bacteria among other materials. This is why stormwater is such a significant contributor to water pollution.

In Massachusetts, polluted stormwater runoff and discharges in urbanized areas cause serious water quality problems. Polluted runoff affects aquatic plant and animal life in streams and lakes, reduces recreational activities such as boating and swimming, and increases existing flooding conditions caused by natural events.

1.4 SMALL MS4 AUTHORIZATION

The NOI was submitted on September 18, 2018. The NOI can be found at the following: https://www3.epa.gov/region1/npdes/stormwater/ma/tms4noi/adams.pdf.

Authorization to Discharge was granted on December 14, 2018. The Authorization Letter can be found at https://www3.epa.gov/region1/npdes/stormwater/ma/tms4noi/adams-auth.pdf.

1.5 AREA SUBJECT TO THE PLAN

The Phase II Final Rule covers all small municipal separate storm sewer systems (MS4s) located within an "urbanized area" (UA). UA calculations delineate boundaries around these dense areas of settlement and, in doing so, identify the areas of concentrated development.

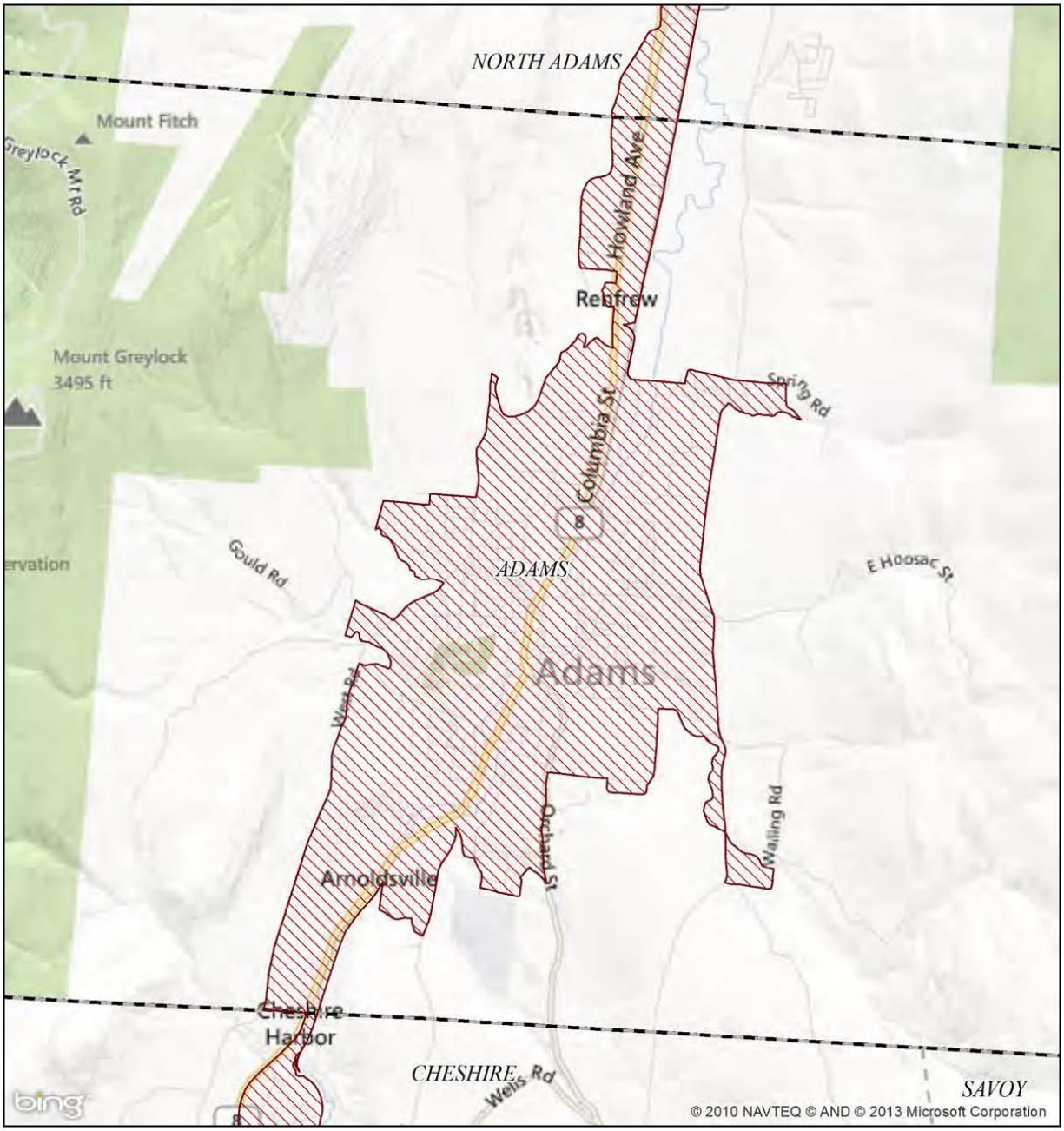
An urbanized area (UA) is a densely settled core of census tracts and/or census blocks that have population of at least 50,000, along with adjacent territory containing non-residential urban land uses as well as territory with low population density included to link outlying densely settled territory with the densely settled core. It is a calculation used by the Bureau of the Census to determine the geographic boundaries of the most heavily developed and dense urban areas.

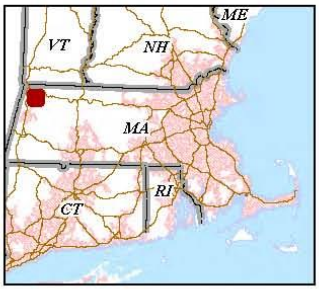
The Bureau of the Census determines UAs by applying a detailed set of published UA criteria (see 55 FR 42592, October 22, 1990) to the latest decennial census data. Although the full UA definition is complex, the Bureau of the Census' general definition of a UA, based on population and population density, is provided below.

The basic unit for delineating the UA boundary is the census block. Census blocks are based on visible physical boundaries, such as the city block, when possible, or on invisible political boundaries, when not. An urbanized area can comprise places, counties, Federal Indian Reservations, and minor civil divisions (MCDs - towns and townships).

Any and all operators of small MS4s located within the boundaries of the UA are covered under the Phase II Final Rule, regardless of political boundaries. Operators of small MS4s located outside of the UA are subject to potential designation into the Phase II MS4 program by the NPDES permitting authority. EPA and the Massachusetts Department of Environmental Protection (DEP) have compiled a list of municipalities to be covered under the Phase II Rule, but the urbanized area boundaries are important in determining the specific area within a municipality's boundaries that is covered (i.e., municipalities included in Phase II might only be required to implement their program for the urbanized area of the county). Any additional automatic designations of small MS4s based on subsequent census years is governed by the Bureau of the Census' definition of a UA in effect for that year and the UA boundaries determined as a results of the definition. Once a small MS4 is designated into the program based on the UA boundaries, it cannot be waived from the program if in a subsequent UA calculation the small MS4 is no longer within the UA boundaries. An automatically designated small MS4 remains regulated unless, or until, it meets the criteria for a waiver.

AREA SUBJECT TO THE PLAN





NPDES Phase II Stormwater Program
Automatically Designated MS4 Areas

Adams MA

Regulated Area:

UA Based on 2000 Census	UA Based on 2010 Census

0 1 2 Kilometers

0 1 2 Miles

Town Population: **8485**

Regulated Population: **7565**

(Populations estimated from 2010 Census)

N W E S

EPA

Urbanized Areas, Town Boundaries:
US Census (2000, 2010)
Base map © 2013 Microsoft Corporation
and its data suppliers

US EPA Region 1 GIS Center Map #8824, 8/9/2013

2. TOWN CHARACTERISTICS & CONTACT INFORMATION[1]

Characteristics of the Town of Adams provide important base line information needed to develop a Stormwater Management Plan that is tailored to the specific needs of the community. The Town characteristics are presented below.

2.1 COMMUNITY INFORMATION & DEMOGRAPHICS

The Town of Adams is located in northwestern Massachusetts, bordered by the City of North Adams to the north, Cheshire to the south, Savoy and Florida on the east, and Williamstown and New Ashford to the west. It is situated 15 miles northeast of Pittsfield, 60 miles east of Albany, 138 miles west of Boston and 158 miles north of New York City.

The Town is located in the valley of the South Branch of the Hoosic River. Adams has Mount Greylock on its western edge and the Hoosac Range on its eastern side. The Hoosic River flows northward through the center of town. State Rt. 8 is the major transportation corridor leading south to Cheshire, a rural-residential community and north to North Adams. Route 8 parallels the Hoosic River. Both the river and the road are the main development corridors in town.

The Town's economy was historically driven by industry. As with many towns in Massachusetts, Adams has close ties with the river that runs through it. At the onset of the industrial revolution, Adams drew upon the power and resources of the Hoosic River to grow and thrive as a mill town. The power of the river was harnessed to allow the early development of industry. The industrial economy was initially driven by textile and paper mills and mining operations. The building of the railroad further accelerated the Town's expansion with the population peaking in 1925. The connection with the Hoosic River was double edged – it was the resource that powered the mills, but its uncontained power also threatened the town itself. Between 1901 and 1938, four major floods destroyed much of the Town and the businesses that relied on the river. To reduce the possibility of the type of devastation experienced by the 1938 flood, in the 1950s the Army Corps of Engineers built the concrete flood control channel that now exists along the downtown stretches of the Hoosic River.

Economic recovery from this confluence of circumstance has been slow and only fractional. The Town's manufacturing base has declined dramatically over the last several decades, as has been typical of the entire Berkshire region. Though a significant amount of manufacturing still occurs in Adams, the Town is transitioning to a service based economy and is trying to capture a portion of the Berkshire tourism and recreation market. The Town is home to an abundance of significant natural, historical and recreational assets, such as Mount Greylock State Reservation, the Hoosic River, numerous historic sites and buildings, and the Ashuwillticook Rail Trail which currently extends southward to Lanesborough from downtown Adams with plans currently underway to extend it northward to North Adams, and eventually Williamstown. An aggressive revitalization process has also been underway in the downtown area. The Town has concentrated on

[1] **Editor's Note:** Portions of this section were taken from the *2005 Adams Stormwater Management Plan* and do not necessarily reflect the most current information available.

façade and signage repairs through implementation of the Downtown Façade & Signage Improvement Program, with numerous businesses and building owners participating. Rehabilitation of the housing stock in Adams has been a priority as well through the Town's on-going Housing Rehabilitation Program. Adams is also implementing a complete renovation of Russell Field, an important regional recreational resource near the downtown area, and the Town Common.

The following community information is provided to gain a general sense of the size, community and budget of Adams. This information is useful for the development of a Plan.

- Total Area = 20.4 square miles *(source: www.city-data.com)*
- 2010 Population = 8,485 *(source: U.S. Census Bureau, Census 2010)*
- Miles of Roads = 57 miles *(DPW, 2004)*
- Total Stormwater Outfalls = *284 (source: Town of Adams GIS)*
- Miles of Drain Pipes = *~30.7 (source: Town of Adams GIS)*
- Total Catch Basins and Drainage Manholes = *1,927(source: Town of Adams GIS)*
- 2017 Median Family Income = $48,313 *(source: U.S. Census Bureau, American Community Survey 2013-1017)*
- FY19 Residential Tax Rate = $21.39, Commercial Tax Rate = $25.40 *(source: Assessors Office)*
- Town Operating Budget = $ 15,607,967 *(source: Town of Adams)*

Town demographics indicate how public involvement and education about stormwater management and Phase II compliance may best be approached. For instance, the majority of Adams households are owner occupied. Therefore, fliers inserted in utility bills may reach the majority of the population. However, there is still a significant portion of households (40 %) that are renter occupied. An alternative means of reaching this segment of the community will be needed. Based on Census information, fliers and other outreach materials could be printed in English only as this is the predominant language spoken in Adams' households.

2.2 LAND USE & ZONING

Adams has a mix of zoning districts and regulations, especially along the Route 8 corridor and in the downtown area. Zoning districts are shown on Table 2-2. The Town has a dense "downtown core" mixed-use area as well as suburban areas and rural landscapes. There are four residential districts in Adams (R-1, R-2, R-3, and R-4). Much of the built-up neighborhoods generally around the downtown area are in the R-3 and R-4 zones. These districts have a minimum 12,000 and 10,000 square foot lot area dimensional requirement, respectively, with 90 and 70 feet of frontage required, respectively. Lots in the R-2, R-3, or R-4 zoning districts that are not connected to public sewer must conform to larger lot dimensions (1 acre) and setbacks.

Adams has an Open Space Zoning district that is mostly occupied by state parks. The Zoning Bylaw allows for Cluster Development for parcels in excess of five times the minimum lot size in several

residential zones. To be approved under this provision, development must be superior to conventional development in preserving open space and utilizing natural features of the land. Cluster development allows for a density bonus of 20% over the number of dwelling units permitted under standard residential development. The cluster provisions have not been widely used. Planned Development is allowed, with the provision that not less than 20% of the land be preserved for recreation or open space. Adams also has a Planned Unit Resort Development provision, which outlines very specific site development guidelines.

Table 2-1 Adams Zoning Districts

Residential Districts		Business Districts	
R-1	Rural Residential	B-1	General Business
R-2	Low Density Residential	B-2	Extensive Business
R-3	Medium Density Residential	B-3	Forest Recreation
R-4	High Density Residential		
Industrial Districts		**Open Space Districts**	
I	Industrial	OS	Open Space
IP	Industrial Park		

Source: Town of Adams Zoning Bylaw

Current Land Use

Adams exhibits a compact development pattern with a densely developed downtown area and a mix of commercial and industrial uses, surrounded by a core of high-density residential development. Less dense residential development can be found in the more outlying areas. Topography plays a dominant feature in the land use pattern of the Town, with the east and west parts of Adams defined by the Hoosac Range and Mount Greylock, respectively. In addition to presenting natural barriers to development, much of the land in these outlying areas is protected open space.

Buildable Land Analysis

An assessment of buildable land, also commonly referred to as a buildout analysis, was conducted to predict where future development might occur in Adams. Such an analysis is an important tool for the Town to allow proactive planning to accommodate and better manage that development. The buildout analysis was conducted at the parcel level. Parcel data was combined and compared with land use data. The area of existing developed land and the area of protected open space were removed from the parcels. Remaining areas were then examined to determine if individual parcels were large enough to be subdivided into a second parcel. If a parcel was not large enough to be subdivided, it was removed from consideration for future development. Parcels suitable to be subdivided were then analyzed for environmental constraints. These remaining parcels had the area of wetlands, river protection areas, floodplains, and slopes greater than 25% removed from consideration for future development. The parcels that were left were reviewed again to ensure that there were no small polygons that were not buildable. The remaining area was considered buildable for future development.

Buildable Land and Stormwater Management

The Table below contains a brief analysis of the relationship between the remaining buildable land in Adams and the existing stormwater infrastructure. This analysis will allow the Town to better plan for future development including planning for infrastructure expansion or other non-structural Best Management Practices, such as enhanced regulations.

Table 2-2. Buildable Land and Stormwater Management

Zone	Consideration for Stormwater Management
B-1	Only 0.12 acres on B-1 are buildable for new development. There are no future stormwater considerations.
B-2	The remaining buildable land in the B-2 zone is off Grove Street and has full access to an existing stormwater infrastructure.
B-3	The buildable area is located in the area known as the Greylock Glen. It currently does not have a stormwater collection system. A stormwater collection system will need to be part of the future development plan for the site.
I	Most of the Industrial Zone is comprised by Specialty Minerals, Inc. property. Most of the buildable land would have access to stormwater infrastructure along Howland Avenue. There are portions of the Industrial Zone off Line Street and East Road. This smaller area would need to have the system upgraded.
IP	The IP zone has full access to stormwater infrastructure.
OS	The small portion of OS that is buildable is off West Road and has no access to the stormwater infrastructure.
R-1	Most of the remaining buildable land in the R-1 zone does not have access to the stormwater infrastructure. Land off of East Hoosac Street has some access.
R-2	The remaining buildable land in the R-2 zone has partial access to the stormwater infrastructure. The portions that are closer to the downtown and are abutting a street tend to have the needed infrastructure while those areas that are farther away from the downtown core do not.
R-3	The remaining buildable land in the R-3 zone has good access to the stormwater infrastructure. Most of the buildable land is in the southern portion of Town close to roads that already have developed infrastructure.
R-4	The remaining buildable land in the R-4 zone has good access to existing stormwater infrastructure. The buildable land is scattered around the downtown area and in the northern section of Town.

Potential Growth Areas

Several locations in Adams have been identified that could accommodate future growth. They are:

- Northern Area – off East Road and Spring Road
- Southern Area 1 – East Orchard Terrace
- Southern Area 2 – off West Road
- Western Area – Greylock Glen (off Gould Road)

A brief description of each area and implications for stormwater management is contained below.

• Northern Area – off East Road and Spring Road
The storm drain system in this area consists of a few catch basins that drain the water across East Road and Spring Road. The area is generally undeveloped consisting mostly of forest and farmland where stormwater can infiltrate into the ground. The terrain slopes towards East Road. If developed, the stormwater system would have to be upgraded to handle the stormwater flow that would be flowing off the developed land.

• Southern Area 1 – East Orchard Terrace
East Orchard Terrace has an existing storm drain system established that flows down towards Orchard Street. Future development of this area would most likely tie into this existing system. Portions of East Orchard Terrace are already developed, while the remaining area is comprised of forest and farmland. The terrain generally slopes towards the northwest. Stormwater not captured on East Orchard Terrace can flow northwest towards existing systems on Orchard Street and East Street.

• Southern Area 2 – Off West Road
There is no stormwater collection system on West Road. This area is characterized by several small hills and the stormwater flows in several directions throughout the area. The area is mostly wooded; however, there are a number of residences already on West Road. Stormwater infrastructure would need to be built to accommodate future development.

• Western Area – Greylock Glen (off Gould Road)
There is no stormwater infrastructure to service the planned development of the Greylock Glen. Stormwater infrastructure is part of the planning process for the site and the Town is actively pursuing funding through grants or other means.

2.3 HISTORIC PROPERTIES

Adams has numerous culturally and historically significant properties. Nationally significant are those that are listed on the National Park Service's National Register of Historic Places either as individual property listings or as Historic Districts. The National Register is the nation's official list of buildings, sites, structures, and objects important in American history, culture, architecture, or archaeology. A listing on the National Register must be associated with a historically significant event or person, must embody a distinct aspect of the built environment or must contain the likelihood of yielding information about recent history or pre-history.

Table 2-3. National Register of Historic Places Individual Property Listings

Listing Name	Location
Susan B. Anthony Birthplace	67 East Road

The Armory Block	39-45 Park Stret
P.J. Barrett Block	70-76 Park Street
Berkshire Mill #1	1 Berkshire Square
Hoosac Street School	20 Hoosac Street
Jones Block	49-53 Park Street
Maple Street Cemetery	Maple Street
Mausert Block	19-27 Park Street
Adams Firehouse	47 Park Street
Phillips Woolen Mills	71 Grove Street
Pittsfield & North Adams Passenger Station and Baggage & Express House	10 Pleasant Street
Quaker Meeting House	Maple Street Cemetery
Simmons Block	86-90 Park Street

National Register of Historic Places: Historic Districts

In addition to individual property listings, there are two nationally significant historic districts in Adams.

- Summer Street National Register Historic District: This district along Crandall, Center, East, Liberty, Orchard and Summer Street is about 350 acres and contains 75 properties. This residential area contains a number of unique and architecturally distinctive private homes dating from the 1890s; the majority of these are in excellent condition.

- Mount Greylock Summit National Register Historic District: Five buildings, 10 structures and about 1,200 acres of the summit of the State Reservation make up this district. The designation is based on historic events at the site and the architecture of Bascom Lodge.

Locally Significant Historic Properties

The Town has recognized numerous historically and culturally significant properties in addition to nationally significant properties or areas. The following items were listed in the Town of Adams 2019 *Open Space and Recreation Plan*.

Proposed Local Historic Districts

o Park Street Historic District
o McKinley Square Historic District
o Summer Street Historic District (Commercial)
o Renfrew Historic District
o Thunderbolt Ski Trail

Locally Significant Historic Properties

o Joshua Lapham House Marker, Crandall Street
o Hale-Parker House, 100 Orchard Street
o Eleazer Browne House, 135 Orchard Street
o Edmund Jenks House, Orchard Street
o Jeremiah Bucklin House, Bucklin Road

o Burlingame House, Walling Road
o Captain Philip Mason House, East Road
o Staples Houses, East Lime and Lime Street
o Daniel MacFarlane House, 238 Columbia Street
o Town Meeting House, Old Columbia Street
o Abraham Howland Mansion, 378 Old Columbia Street
o Benjamin Lapham House, 91 Friend Street
o The Upton Houses, 140 Friend Street and the corner of Friend and Cross Streets
o Zacheus Hathaway House, 62 Notch Road
o The Isaac Killey House, 11 West Road
o Joseph Shove House, 12 West Road
o The Dean Grist Mill and Cotton Batting Factory, West Road
o Israel Cole Homestead and Underground Railroad Graves, West Road
o Bob's Hill, west of Park Street and just north of the Hoosac River

Churches
o First Baptist Church, 13 Commercial Street
o First Congregational Church, 42 Park Street
o St. Mark's Episcopal Church, Commercial and River Streets
o Notre Dame Roman Catholic Church, Columbia and Maple Streets
o St. Stanislaus Kostka Roman Catholic Church, Hoosac and Summer Streets
o St. Thomas Aquinas Roman Catholic Church, 2 Columbia Street

Cemeteries
o St. Stanislaus Kostka Cemetery and Grotto
o Bellevue Cemetery
o Cole Family Cemetery
o East Road Cemetery
o Daniel's Court Cemetery
o Orchard Street Burial Ground
o East Mountain Road Cemetery
o Maple Street Cemetery

Historic Resources and Stormwater Management

Due to the large number of properties and size of the districts, an individual site assessment was not conducted for historic properties to determine if they are being affected by stormwater problems. Such an individual site assessment should be conducted.

Most of the historic properties are located in the densely developed downtown area. The downtown area is characterized by a large impervious surfaces. It has been identified as a priority area for improved stormwater management. Historic property interests will need to be integrated into the implementation of stormwater management BMPs.

The residents of Adams have a strong interest in historic preservation. There is an opportunity to employ "soft" BMPs to manage stormwater that appropriately fit into the historic nature of the property better than more "hard" engineered solutions.

2.4 PERSONNEL, ORGANIZATIONS, AND INTEREST GROUPS

Town of Adams

Stormwater management and control is intricately linked to land use management and development. Being within a "Home Rule" state, a number of municipal boards and departments are involved in local land use (and correspondingly, stormwater) management and regulation. Key Town departments and boards that will be involved with the implementation and success of the Stormwater Management Plan are:

- Planning Board
    - Mass. General Laws c. 41, § 81A establishes Planning Boards. Planning Boards are responsible for the development and adoption of a Master Plan and an official map of the town. Mass. General Laws c. 41, § 81K—81GG, the Subdivision Control Act, delegates municipal powers chiefly to the Planning Board. The board adopts subdivision rules for the town. The Planning Board is the primary review board which reviews definitive subdivision plans. Mass. GeneraL Laws c. 40A, the Zoning Act, places the Planning Board in several key roles that may affect stormwater management. The Planning Board is authorized to draft and submit zoning amendments for consideration by the town. When a zoning amendment has been put forward, the Planning Board holds the public hearing and may report its recommendations to the local legislature. An unfavorable report by the Planning Board about a proposed zoning amendment means that proposed zoning amendment cannot be re-considered for Town Meeting vote should it fail at an initial Town Meeting. Planning Boards' other diverse roles in zoning include:
        - serving as the special permit granting authority;
        - are always a "party in interest" in administrative appeals,
        - special permit applications, and variance petitions within the town and in adjacent cities and towns;
        - must consent whenever a repetitive petition is considered within two years after initial rejection; and
        - the Planning Board usually serves as site plan review authority, where applicable.

- Board of Health (BOH)
    - BOH are established by Mass. General Laws c. 111, § 26 and Mass. General Laws c. 41, § 1. The Board of Health has a wide range of responsibilities but two main functions in the land use /stormwater management area. First, the BOH has a role in the review of definitive subdivision plans pursuant to Mass. General Laws c. 41, § 81U. Case law has

established that the BOH is chiefly concerned in this capacity with the on-site disposal of wastewater and drainage of the site.

  - A BOH has broad powers, pursuant to Mass. General Laws c. 111, § 31, to enact reasonable regulations for the public welfare. This authority includes the power to abate or suppress activities that constitute a nuisance and to address other aspects of the development of land likely to raise a health concern. In many towns, BOHs are often asked to provide advisory reviews in zoning applications.

- Board of Selectmen
  - The Board of Selectmen may play a role in land use regulations. The Zoning Act empowers Boards of Selectmen to serve as special permit granting authorities. The Board may serve as licensing authority for various land use activities, from sale of used cars to earth removal.

- Building Inspector
  - Mass. General Laws c. 143, § 3 established the municipal post of Building Inspector. The Inspector takes a front-line position in zoning matters, overseeing the construction and safety of buildings. Mass. General Laws c. 40A, § 7 designates the building inspector as zoning enforcement agent. The building inspector issues or withholds permits, reviews enforcement requests, ensures compliance with municipal regulations, and administers the State Building Code.

  - The building inspector, or building commissioner, must possess certain minimum qualifications, as described by 780 CMR 107.3. Because of 1992 Mass. Acts 168, § 1, every building inspector shall be certified by the board of building regulations and standards. The Building Inspector acts in an advisory role to the Planning Board over site plan approval.

- Conservation Commission
  - Mass. General Laws c. 40, § 8C established Conservation Commissions. The Conservation Commission's chief responsibility is the local administration of the Massachusetts Wetlands Protection Act, Mass. General Laws. c. 131, § 40. Many Conservation Commissions have been delegated parallel authority under municipal ordinances or bylaws to protect wetlands. Adams does not have a local wetland protection bylaw. Typically, these rules are adopted pursuant to Mass. General Laws c. 40, § 21(1) and the Home Rule Amendment.

  - The Conservation Commission wears other important hats. In zoning matters, it may serve as an advisory board in the review of a special permit application. The Commission is responsible for town forests.

- Department of Community Development

- The Department of Community Development is the primary planning and development department responsible for environmental and community planning, and economic development. It provides technical assistance to the Board of Health, Zoning Board of Appeals, Planning Board, Conservation Commission, Historical Commission, and the Board of Selectmen.

- Department of Public Works
  - The Department of Public Works (DPW) oversees highways; DPW equipment and maintenance; parks and grounds (including the cemetery), and wastewater treatment. The DPW maintains town streets, sewers, parks, and flood control chutes. The DPW has many opportunities to improve the quality and impact of stormwater runoff.

Organizations and Interest Groups

Water is a regional resource that affects and is affected by others in the larger area. Other organizations or agencies are available to assist the Town to carry out a comprehensive stormwater management plan.

- Berkshire Conservation District
  - The Berkshire Conservation District, BCD, is one of Massachusetts' sixteen (16) conservation districts. BCD works in partnership with a number of federal, state, and local agencies and organizations to address soil erosion, water quality protection, and other natural resource and land management concerns.

- Berkshire Regional Planning Commission
  - The Berkshire Regional Planning Commission (BRPC) is a public body corporate established under Massachusetts General Laws Chapter 40B, Regional Planning Law, and is the official area-wide planning agency in Berkshire County with comprehensive responsibilities which include, land use, environmental management, economic development, and transportation. BRPC provides technical planning services, including stormwater management. BRPC provides a stormwater education program, NEMO (Nonpoint Education for Municipal Officials), that could be used by the Town.

- Hoosic River Watershed Association
  - The Hoosic River Watershed Association (HooRWA) is an advocacy group, working to promote the natural resources of the Hoosic River waterways, protect and improve water quality, and increase the recreational opportunities for local residents. Since its creation in 1986, HooRWA has consistently challenged municipalities, industries, and farm operations to employ BMP's on their properties and minimize the impacts of their activities on the river. HooRWA works closely with other organizations and the Town of Adams on proposing management options for the future use of the Hoosic River. HooRWA has an active educational and outreach component and has established volunteer monitoring programs with local schools. They have also established Stream Teams to investigate and monitor distinct sections of the Hoosic River. These teams were involved in data collection

for the Adams Stormwater Management Strategic Plan. They organize public activities such as Riverfest, an annual festival designed to improve awareness of the river.

- Trout Unlimited
    - Trout Unlimited (TU) is a national organization, made up of small local chapters. The main objective of TU is to promote and protect clean waterways that will support recreational fishing. TU works closely in water quality monitoring efforts with HooRWA.

State Agencies

- Executive Office of Energy and Environmental Affairs (EOEEA)
    - EOEA is a state executive agency whose mission is to "protect and conserve natural resources in Massachusetts". EOEA is the parent organization of Department of Environmental Protection, Massachusetts Environmental Policy Act (MEPA), Department of Conservation and Recreation (DCR), and Department of Fish and Game (DFG), among others. EOEA has an important role in setting overall state policy related to stormwater.

- Department of Environmental Protection (DEP)
    - DEP is the main environmental agency in the state responsible for administering laws concerning natural resources, waste, and hazardous materials. DEP has several sets of regulations that address the impact of stormwater discharges and was instrumental in developing the *Stormwater Management Policy Handbook*.

    - DEP is also a major funding source of conservation, pollution abatement, and mitigation programs, including holding BMP workshops for members of the regulated community. Funding programs include Section 319 Nonpoint Source Pollution Grants and 604(b) Water Quality Management & Planning Grants, under which this assessment project was funded.

- Department of Conservation and Recreation (DCR)
    - The Department of Conservation and Recreation (DCR) is responsible for managing 4,016.8 acres in Adams. DCR's focus is on conducting educational programs, protecting environmental quality, maintaining park facilities, and prioritizing improvement projects. DCR administers the Massachusetts Forest Cutting Practices Act that affects stormwater runoff related to land clearing.

- Department of Fish and Game
    - The Department of Fish and Game (DFG) is a regulatory agency responsible for administering state fish and game laws.

- Massachusetts Department of Transportation (MassDOT)
    - MHD is the leading transportation agency in the state. MHD has responsibility for construction and maintenance of state highways. Roadways that parallel waterways and the management and maintenance practices that accompany them, such as

Route 8 adjacent to the Hoosic River, impact water quality. In addition, MassDOT is also very important in setting policies for local DPWs.

Federal Agencies

- Environmental Protection Agency (EPA)
    - EPA is the regulatory agency responsible for administering federal environmental regulations. The Hoosic River Watershed is located in EPA Region I, administered from Boston. EPA introduced Phase I and Phase II stormwater programs under the Clean Water Act (CWA) to preserve, protect and improve the quality of the Nation's rivers. EPA has oversight of National Pollutant Discharge and Elimination System (NPDES) permits.

- Natural Resources Conservation Service (NRCS)
    - NRCS provides technical support to farmers who request help on farming and conservation issues. The NRCS has the opportunity to play a role in mitigating nonpoint source (NPS) pollution in the Hoosic River related to agriculture. NRCS is the agency through which USDA conservation programs are channeled and funded in Berkshire County.
    -
- United States Army Corps of Engineers (USACE)
    - The USACE is responsible for the construction of the concrete flood structure in Adams. Adams is responsible for maintenance of the structures according to an Operations and Maintenance Manual. Final jurisdiction for any possible modifications to the structure rests with the USACE. Any pollution mitigation efforts that alter the physical configuration of the structure or its function must be approved by USACE.

SWMP Team Coordinator

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3. MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)[2]

3.1 CHARACTERISTICS OF STORMWATER COLLECTION SYSTEM

Natural and man-made flow conveyance systems can have significant impact on water quality. Topography, soil types and vegetation all play a role in the volume and rate of runoff that reaches a water body. Development also plays a large role in flow characteristics, since more runoff is generated and conveyed through man-made structures directly into surface waters. This section discusses the characteristics of the natural and man-made flow conveyance systems in Adams, how they impact water quality, and the general condition of existing infrastructure.

3.2 LOCATION OF URBANIZED AREA

Based on the 2010 U.S. Census Bureau defined urbanized area, the City of Pittsfield's Urbanized Area encompasses the majority of the City of Pittsfield while also extending south into the towns of Richmond and Lenox, east into the towns of Dalton and Hinsdale, and north to the towns of Lanesborough, Cheshire, and Adams crossing into the City of North Adams.

The Urbanized Area of Pittsfield extends from the north through the Towns of Lanesborough and Cheshire into the Town of Adams. It includes the entire length of the Rt. 8 corridor within the Town of Adams along with the areas immediately to the east of west of Rt. 8. (See map on page 5).

3.3 RECEIVING WATERBODIES AND NATURAL FLOW CONDITIONS

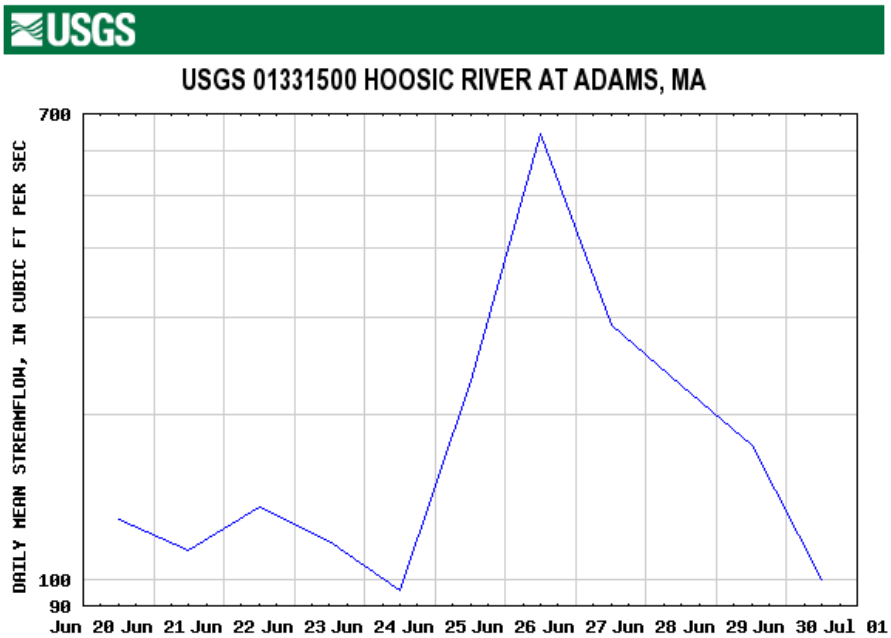
The Town of Adams is situated between Mount Greylock to the west and the Hoosac range to the east. Till and bedrock dominate soils in the area. The Hoosic River is located in a valley traversing the length of the Town, which is fed through a network of streams that originate in the steep slopes characterizing the Town's east and west sides. There are seven major tributary streams that flow into the Hoosic River in Adams.[3] These are listed below:

Dry Brook	*Tophet Brook*	*Reed Brook*	
Miller Brook	*Pecks Brook*	*Hoxie Brook*	*Southwick Brook*

Together, these tributaries and the Hoosic River comprise roughly 100 miles of streams and rivers (source: MA GIS). These stream networks have large drainage areas or sub-watersheds that drain from the steep hillsides of the Hoosac Range and Mount Greylock into the valley and the Hoosic River..

[2] **Editor's Note:** Portions of this section were taken from the 2005 Adams Stormwater Management Plan and do not necessarily reflect the most current information.
[3] Bassett Brook is located in Adams and flows into the Hoosic River in Cheshire.

The upper reaches of drainage areas within Adams are mostly forested with commingled agricultural areas and grassy meadows from historical agricultural practices.[4] There are few significant wetland impoundments (approximately 0.3% of the land area in town or 54 acres, source: MAGIS) and lowland floodplains are limited. The steep slopes, hard soils, and limited natural floodplain storage result in quick, flashy flows to the Hoosic River. This "quick draining" effect is quite unique to Adams due to its hydrographic setting and causes large flow fluctuations in the Hoosic River. As shown below, in June 2000 the flow of the Hoosic River in Adams changes drastically during a rain event, when compared to normal base flow.



**Data source: weatherunderground.com, daily history, North Adams weather station, June 25, 2000.*

Listing of all discharges identified pursuant to the 2016 MA Small MS4 Final Permit part 2.1.1 and description of response. The permittee shall reduce the discharge of pollutants such that the discharges from the MS4 do not cause or contribute to an exceedance of water quality standards.

- Hoosic River
- Southwick Brook
- Hoxie Brook
- Miller Brook
- Reed Brook
- Pecks Brook
- Tophet Brook

[4] Agriculture was a dominant feature of the Adams landscape and economy in the early 1900s (approximately 40 farms) and continued to support the major expansion of industry in Town until the late 1950s when supermarkets became the cornerstone for food supply. Farm lands were settled with single-family houses and some land eventually became forested land, changing the Adams landscape. Source: In This Valley, A Concise History of Adams, Massachusetts. Eugene F. Michalenko. September 2000, rev. July 2002.

- Dry Brook

3.3.1 Discharges to Certain Impaired Waters

The 2016 MA Small MS4 Final Permit requires that all MS4 discharges shall be identified in the SWMP and Annual Reports, including both outfalls and interconnections to other MS4s or other separate storm sewer systems, that:

1. Are subject to Total Maximum Daily Load (TMDL) related requirements as identified in the 2016 MA Small MS4 Final Permit part 2.2.1.
2. Are subject to additional requirements to protect water quality as identified in the 2016 MA Small MS4 Final Permit part 2.2.2.

The discharge location from an interconnection shall be determined based on the receiving water of the outfall from the interconnected system.

3.3.1.1 Discharges Subject to Requirements Related to an Approved TMDL

The Town of Adams does not have any discharges subject to requirements related to an approved TMDL. The Town of Adams is specified as discharging to waters, or tributaries of waters, that have been identified in an adjacent state's approved TMDL as being impaired due, in part, to MS4 stormwater discharges in Massachusetts. The Town is listed in the 2016 MA Small MS4 Final Permit part 2.2.1 among the towns located in the watershed of the Long Island Sound, which has an approved TMDL for nitrogen (Total Nitrogen). However, the Town of Adams is not located within the watershed of the Long Island Sound. Instead, the Town of Adams is located entirely within the Hoosic River watershed which is located within the Hudson River watershed. Therefore, the Town is not subject to the requirements of Appendix F, part B.

3.3.1.2 Category 4b & Category 5 Waters

There are no discharges from the MS4 to a waterbody (or its tributaries) that is water quality limited due to nutrients (Total Nitrogen or Total Phosphorus), metals (Cadmium, Copper, Iron, Lead or Zinc), solids (TSS or Turbidity), chloride (Chloride) or oil and grease (Petroleum Hydrocarbons or Oil and Grease) and the Town is not listed in part 2.2.2.a.-b. of the 2016 MA Small MS4 Permit.

Water Body	Segment	Description	Size	Units	Impairment(s)
Hoosic River	MA11-03	Headwaters, outlet Cheshire Reservoir, Cheshire to Adams WWTP discharge (NPDES: MA0100315), Adams.	8.8	Miles	(Alteration in stream-side or littoral vegetative covers*)
					(Other anthropogenic substrate alterations*)
					(Other flow regime alterations*)
					Ambient Bioassays -- Chronic Aquatic Toxicity
					Escherichia coli
					Fecal Coliform

There are 110 discharges to the Hoosic River (MA11-03 and MA11-04), which is impaired by bacteria/pathogens (Fecal Coliform). There will be no increased discharges, including increased pollutant loading(s) from the MS4 to impaired waters listed in categories 5 or 4b on the most recent Massachusetts Integrated Report of waters listed pursuant to Clean Water Act section 303(d) and 305(b) unless demonstrated that there is no net increase in loading from the MS4 to the impaired water of the pollutant(s) for which the waterbody is impaired. The Town has demonstrated compliance with this provision by documenting that the total load of the pollutant(s) of concern from the MS4 to any impaired portion of the receiving water will not increase as a result of the activity and retaining documentation of this finding in the SWMP. Unless otherwise determined by the Town, USEPA or by MassDEP that additional demonstration is necessary, compliance with the requirements of part 2.2.2 and part 2.3.6 of the Permit, including all reporting and documentation requirements, will be considered as demonstrating no net increase.

3.4 MAN-MADE STORMWATER INFRASTRUCTURE CONDITIONS

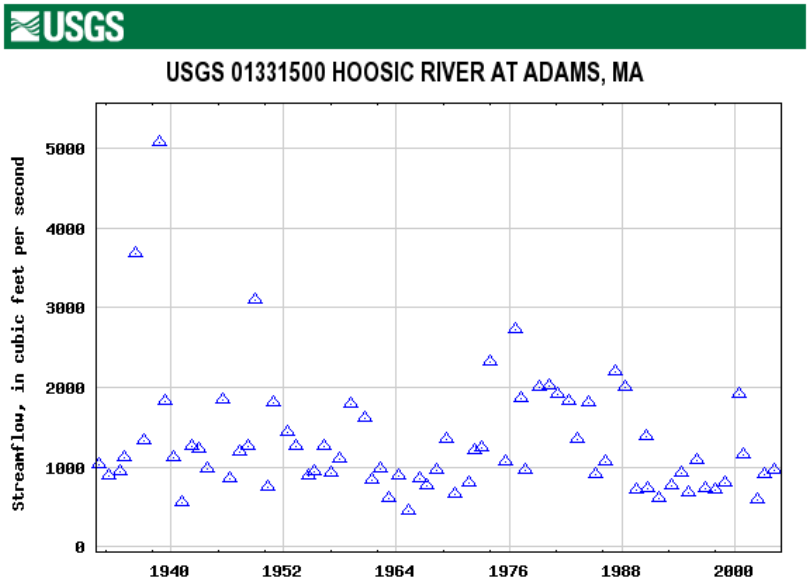
Development in Adams focused along the Hoosic River Valley, leaving the upper reaches of the river's drainage area in relatively virgin conditions. Stormwater infrastructure, consisting of flood control chutes and engineered conveyance systems to quickly divert flows from developed areas to streams and the river, was built to manage stormwater flows and alleviate flooding conditions. Perhaps the most dominant stormwater feature in the urban landscape of Adams is the Hoosic River's flood control chutes.

Flood Control Chutes

Originally built in the early 1950s by the U.S. Army Corps of Engineers, the flood control chutes were designed to protect property and lives due to the devastating floods of 1901, 1927, 1936, 1938 and 1948. The Army Corps project confined the Hoosic River in a concrete channel for 2.2 miles of its 5.7 mile stretch through Adams. The lower portion of Tophet Brook is similarly confined.

The Hoosic River flood control chutes are designed to provide protection against a flood discharge about 50% greater than the maximum flood of record (5,500 cfs), which occurred in September 1938

(1959 Operation & Maintenance Manual, U.S. Army Corps of Engineers, New York). Since construction of the flood control chutes, Adams has not experienced a major flood event comparable to the Town's history. The annual peak flows for the Hoosic River in Adams are illustrated below.



The flood control chutes comprise the most significant infrastructure, with more than 175 major drainage-related structures that consist of stormwater outfalls, dikes, levees, stilling basins, weirs, diversion channels, and sluice gates. A schematic layout of the flood control chutes is provided in the Appendinx illustrating these structures and the extensive infrastructure in Adams. Prior to the construction of the Hoosic River flood control chutes, the Hoosic River was heavily used by local industry, resulting in numerous diversions and detention ponds for process and cooling waters. An illustration of how the Hoosic River has changed since 1876 in contrast to today's conditions is included in the Appendix. These historic maps illustrate the overall infrastructure development in Adams associated with the Hoosic River and surrounding storm drain systems over the last century.

Stormwater Collection System

The majority of rainfall and runoff from urban areas in Adams is handled using standard stormwater collection systems such as catch basins, drainage manholes, and concrete pipes. In most cases, these pipes discharge directly to waterways and the Hoosic River. Stormwater is also conveyed by drainage swales and ditches along roads, some of which have been paved or lined with concrete due to high stormwater velocities and steep drainage areas. An example of a swale that is partially lined with concrete is provided below.

This site is a drainage swale along Glenn Street that is partially lined with concrete before it enters a 32" pipe that eventually discharges to the Hoosic River.

Some basic characteristics of the Town's stormwater collection system are:

• 284 storm drain outfalls
• 1,596 catch basins
• 331 drainage manholes
• 161,885 linear feet (~30.7 miles) of drain pipe

A Town-wide Drainage System Map showing these characteristics is provided in the Appendix. The condition of some drainage structures were inspected as part of this Plan's initial investigations of potential illicit discharges and evaluation of BMP sites. The analysis was not a comprehensive drainage system inspection, rather a field screening effort to assess the overall condition of the drainage system, identify significant problem areas, and evaluate how these conditions affect water quality.

The results of field efforts are outlined below, many of which are discussed further in subsequent sections of this report:

• Stormwater pollutants from roadways, parking lots, and buildings in the downtown area discharge to these drainage systems and enter the Hoosic River and its tributaries with little treatment.

• Catch basins in Town have sumps to collect solids (sediment, sand, debris) that settle out of the stormwater flow. However, many of these sumps are relatively shallow and only allow minimal settling of solids before the structure becomes full and sediments are re-suspended or washed downstream into waterways.

• Additionally, due to the steep slopes and the large contributing drainage areas, stormwater quickly flows through the drainage system and sediments are re-suspended from the last storm and transported downstream. Examples of sediment transport through the drainage system are shown below shortly after a thunderstorm and during normal flow conditions. Stormwater infiltration systems are minimal and consist primarily of leaching brick/concrete block manholes or open bottom catch basins.

Turbid water in Hoxie Brook shortly after a thunderstorm in the downtown area. To the right is the same location during normal "non-storm" conditions.

The effects of upstream erosion and sediment transport observed at a stormwater discharge to the Hoosic River at Spring Street.

• The exact age of most stormwater structures is not well known. The majority of drainage structures along the Hoosic River are approximately 50 years old since they were built at the time of flood chute construction. Drainage structures upstream of the Hoosic River are likely much older (75-100 years old) and may be as old as the streets where they are located. However, drainage systems have changed over the years and there are no records that succinctly and accurately show these changes. Historically, sewer and drainage pipes were most likely one of the same that discharged directly to waterways, but there systems were disconnected and upgraded in the early 1900s up until the construction of the flood control chutes.

• The storm drainage system in Adams appears to be in relatively good physical condition based on field screening at stormwater inlets and outlets. Some storm drain structures, such as brick manholes, deteriorate over time and are repaired or replaced as needed. Pre-cast structures are used for new construction projects.

• The U.S. Army Corps of Engineers indicated that the flood control chutes and drainage system along the Hoosic River are in good condition and are functioning as designed. The Army Corps inspects the flood control chutes on an annual basis and submits an inspection report to the Town of Adams. The most common inspection issues are the growth of woody vegetation and the buildup of sediment that may damage concrete structures and restrict flows, thus decreasing the chute's flood capacity. The Adams DPW is responsible for following up on these recommendations and maintaining the flood control chutes, which also includes some land adjacent to the river and grassy levees.

• The results of outfall inspections conducted during the November 18, 2004 illicit discharge investigations indicated that most outfalls appear to be in good condition; however, some cracked, corroded and damaged pipes were observed. These conditions do not pose a threat to water quality but some structures require repair, such as outfall HO-P2, where the box culvert appears to be partially collapsed or the drainage system was previously abandoned at this location. This outfall is a 48" discharge to the Hoosic River from the west, immediately upstream of Park Street. Additional information is provided in Section 4.5 with field inspection sheets and maps in Appendix 4D.

• Many stormwater outfalls do not have outlet protection to prevent scouring and erosion downstream. In many cases, the discharge point for outfalls is a stream bed, bank, or a concrete chute and these direct stormwater discharges result in flashy stream flows. An example of significant bank erosion due to a combination of flashy stream flows and stormwater discharges is located on Hoxie Brook at the Gilead Street crossing. Bank erosion is occurring at this location and the culvert structure (stone arch concrete wing wall) is damaged. Additional areas of concern are discussed in the Perennial Stream Assessment (Section 4.1, *Adams Stormwater Management Plan 2005)*), Hot Spot Analysis (Section 4.3, *Id.*) and Warm Spot evaluation (Stormwater QAPP, Technical Appendix, *Id.*).

• The most common condition observed at stormwater structures throughout Town is accumulated sediment and/or debris (see also Section 6.2 for storm drain maintenance, *Id.*). In some cases there are no structures to trap and collect any sediment before it is discharged from streets to waterways. For example, some catch basins in the downtown area along Park Street and Maple Street are located directly on top of the culvert that carries Hoxie Brook underground.

• The 1987 Infiltration/Inflow (I/I) Study of the sanitary sewer system identified numerous sources of infiltration and inflow due to direct catch basins connected to the sanitary sewer system, cracked and damaged pipes, damaged and leaking manholes, groundwater surcharging, potential inflow from streams, etc. A significant portion of the sanitary sewer system in Adams is constructed with vitrified clay pipe with some sections as much as 100 years old. A Sanitary Sewer System Map is provided in Appendix 3A (*Id.).* The Adams DPW indicates that many of the inflow sources were removed; however, not all of the I/I findings were addressed. Based on recent illicit discharge investigations and the results of the stormwater sampling program, it appears that direct and indirect cross connections between the drainage system and sanitary sewer system are present and are significantly impacting water quality. Surcharging of the sanitary sewer system and backflow may be entering the drainage system and waterways in Adams. This information is discussed further in Sections 4.4 and 4.5 (*Id.)* with recommendations and additional information from the 1987 I/I Study provided in Appendix 4C (*Id.*).

• The stormwater collection system in Adams is designed to convey large stormwater flows with little consideration for water quality. Past practice for stormwater management was putting it in a pipe and sending it downstream and, if needed, making the pipe bigger to handle more stormwater from more developed areas. Average annual rainfall in Adams is about 38.26 inches (last 30 years) and results in an estimated 790 million gallons of runoff from urban areas in Adams (see runoff calculations – QAPP, Technical Appendix, *Id.*). Figure 3-6 illustrates the large impervious surfaces in the downtown area that generate runoff with discharge to the Hoosic River (*Id.*). These large impervious surfaces also result in significant temperature increases for runoff that can affect local waterways and fish habitat.

3.5 INCREASED DISCHARGES

Any increased discharge, including increased pollutant loading(s) through the MS4 to waters of the United States is subject to the antidegradation regulations of the Massachusetts Surface Water Quality Standards at 314 CMR 4.04. The Town will comply with the provisions of 314 CMR 4.04 including information submittal requirements and obtaining authorization for increased discharges where appropriate. Any authorization of an increased discharge by MassDEP will be incorporated into this SWMP.

3.6 ADDITIONAL REQUIREMENTS FOR DISCHARGES TO SURFACE DRINKING WATER SUPPLIES AND THEIR TRIBUTARIES

The Town will take appropriate measures to avoid or minimize impacts to surface public drinking water supply sources. The Town does not discharge to public surface drinking water supply sources (Class A and Class B surface waters used for drinking water) or their tributaries. The Town will notify public water supplies in the event of an emergency including the Massachusetts Department of Environmental Protection, Bureau of Resource Protection, Drinking Water Program, One Winter Street, Boston, MA 02108 – phone (617) 292-5770.

3.7 SANITARY SEWER OVERFLOW (SSO) INVENTORY

In accordance with the 2016 MA Small MS4 Permit, the Town must identify all known locations where SSOs have discharged to the MS4 within the previous five (5) years. There are no SSOs within the Town of Adams. This includes SSOs resulting, during dry or wet weather, from inadequate conveyance capacities, or where interconnectivity of the storm and sanitary sewer infrastructure allows for communication of flow between the systems.

As there are no SSOs within the Town, this section of the SWMP is intended to fulfill the requirement to maintain an inventory as a part of the SWMP and update the inventory annually. If in the future an SSO is identified as a result of inadequate conveyances the Town will update the SWMP to include the following information consistent with part 2.3.4.4.b.1-7 of the Permit:

1. Location (approximate street crossing/address and receiving water, if any);
2. A clear statement of whether the discharge entered a surface water directly or entered the MS4;
3. Date(s) and time(s) of each known SSO occurrence (i.e., beginning and end of any known discharge);
4. Estimated volume(s) of the occurrence;
5. Description of the occurrence indicating known or suspected cause(s);
6. Mitigation and corrective measures completed with dates implemented; and
7. Mitigation and corrective measures planned with implementation schedules.

3.8 ELIGIBILITY CRITERIA

3.8.1 Documentation Regarding Endangered Species

The Town of Adams lies within Berkshire County. The Northern Long-eared Bat (Myotis septentrionalis) is listed as a threatened species within the County. However, the U.S. Fish and Wildlife Service has indicated "no critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area." The Adams MS4 is therefore eligible for coverage under the General Permit as determined by eligibility Criteria C. A copy of the U.S. Fish and Wildlife determination is included as Appendix C. The proper consultations and updates to the SWMP will be conducted for construction projects where separate Construction General Permit (CGP) coverage is not being obtained.

3.8.2 Documentation Regarding Historic Properties

The Town certifies eligibility regarding historic properties under eligibility criteria A. The Town's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities will not have an effect on a property that is listed or eligible for listing on the National Register of Historic Properties (NRHP). Based upon review of sites in Adams shown on the MassGIS datalayer for National Register and State Register sites and analysis of those sites in relation to known outfall locations no such historic sites are anticipated to be negatively impacted by stormwater. The Town will coordinate any review with MHC as necessary as we move forward with construction of various stormwater management projects.

3.9 RECOMMENDATIONS

A summary of key recommendations is provided below based on existing information for the drainage system and field observations. This information is also incorporated into the Recommendations and Implementation Plan in Section 8.0 (*Adams Stormwater Management Plan,* 2005).

- Inspect stormwater outfalls for structural conditions and illicit discharges in accordance with the proposed Adams Illicit Discharge Detection and Elimination (IDDE) Plan (see alsoTechnical Appendix) to develop a comprehensive database of outfall conditions to address maintenance needs. This should include more detailed reviews of the upgradient drainage network in areas that appear to be deteriorated or damaged due to age or excessive stormwater flows.

- Incorporate BMPs into the repair and upgrade of drainage systems (see also Section 4.6.3 for BMPs with redevelopment, *Id.*). Deep sump catch basins or leaching structures should be used if a drainage manhole has to be repaired or replaced. Vegetated swales or rip rap swales are preferred to the use of a concrete swale or pipe to convey runoff. BMPs for urban runoff should be incorporated into Town redevelopment projects and developers should be encouraged to incorporate BMPs into new projects.

- Evaluate the feasibility for maintenance dredging of flood control chute structures to maintain flow capacity and provide additional storage for future stormwater treatment and sediment removal. The U.S. Army Corps of Engineers inspects the condition of the flood control chutes annually and reports that vegetative and sediment maintenance are needed. The following areas require further evaluation for maintenance dredging/sediment removal and project coordination with the U.S. Army Corps (refer to Figure 3-3 (*Id.*) for locations):

    - Drop structure and stilling basin west of the Miller Street Bridge on Tophet Brook, just before its confluence with the Hoosic River, where a large sand/gravel bar has formed.

    - Pumping station and storage basin adjacent to Hoosac Street and to the west of the Hoosic River that is laden with sediment. The pumping station and basin were originally designed to provide water storage for fire protection at the nearby mills and are no longer in service. A conceptual stormwater BMP was designed to include this area (refer to Section 4.6.2, *Hoxie Brook Downtown –Stream Restoration & Urban Runoff BMPs, Id.*).

    - Other structures worth noting: weir upstream of Commercial Street; stilling basin on Hoosic River upstream of Tophet Brook; and stilling basin on Hoosic River west of North Summer Street, downstream of Crotteau Street and Adams DPW Yard.

- The 1959 Operation and Maintenance (O&M) Manual for the Hoosic River flood control chutes is designed to maintain the integrity of the flood control chutes and history demonstrates its effectiveness; however, there is little consideration for water quality. The O&M Manual should be evaluated in relation to water quality and current maintenance practices/requirements to determine if any modifications are warranted or possible. This will require coordination with the U.S. Army Corps of Engineers to adequately address topics such as maintenance dredging and future improvements, if any. As an example, the manual currently calls for cutting woody vegetation along the flood control chutes and levees. Modifications to allow woody vegetation along designated portions of the flood control chutes would provide some shade, resulting in lower water temperatures for aquatic life.

4. MINIMUM CONTROL MEASURES

The following sections of the SWMP include the description of practices to achieve compliance with part 2.3 (MEP requirements) of the Permit identified in the Town of Adam's NOI and any updates to those BMPs within the first year.

Each permit condition in part 2.3 includes information identifying the person(s) or department responsible for the measure, the BMPs for the control measure or permit requirement; and the measurable goal(s) for each BMP. Each measurable goal includes milestones and timeframes for its implementation and have a quantity or quality associated with its endpoint. Each goal has a measure of assessment associated with it.

Public education is crucial to the success of a stormwater management program because it creates greater support for the program. Support increases compliance with management practices contained in the program. Broad public support improves the likelihood of approval of future local funding requests to implement BMPs contained in the program.

In addition, municipalities are required to involve the public in the stormwater management program. Towns are encouraged to involve the public in the development, implementation and review of their stormwater management programs and practices. The goal is to involve a diverse cross-section of people who could offer a variety of concerns, ideas, and connections during program development and implementation. This plan outlines the Town of Adams's approach to a public education program that meets the requirements of Phase II. The plan includes a diverse array of educational outreach and participation programs in an attempt to reach as wide an audience as possible.

Table 4-1 (a,b,c) shows the summarized educational plan. The Education Plan is directed at three target audiences, the general public, businesses and institutions and municipal officials. This is due to the different impacts each audience has on stormwater runoff and the different strategies needed to inform and involve them.

The Education Plan (Table 4-1 (a,b,c), is broken down into three sections for each target audience: 1) proposed education topics; 2) proposed outreach activities; and 3) proposed participation and involvement activities. The education topic column describes various problems and aspects related to pollutant transport in Adams. The educational program will cover these topics. The outreach column lists the specific activities recommended through this program to deliver the educational message to the target audience. The participation and involvement column lists ways for Adams to involve the target audience in an activity designed to improve stormwater management. Specific educational material and outreach activities can be further tailored to different population groups, to different types of businesses such as garden centers and vehicle repair shops. The various parts of the Education Plan are described in greater detail in the narrative following Table 7-1(a,b,c). Section 8, the Best Management Practices Plan, identifies specific recommendations.

The education program may begin small due to time, personnel and financial constraints. This program can grow as greater interest is generated and more people and groups become involved, taking on some of the responsibilities of education and outreach. Volunteers, students, retirees, and interested organizations can help and/or direct education programs reducing the workload to the town.

Table 4-1a. Adams Stormwater Education Program Summary

Proposed Topics	Target Audience	
Better Site Design for New Development	✓	✓
Catch Basins		✓
Hazardous Materials	✓	✓
Household Waste Reduction/Recycling	✓	
Housekeeping Practices		✓
Illegal Dumping	✓	
Illicit Discharges		✓
Lawns & Gardens	✓	
Motor Vehicles	✓	✓
Pet Waste	✓	
Septic Systems	✓	
Stormwater BMPs		✓

✓ Residents ✓ Businesses

Table 4-1b. Adams Stormwater Education Activities Summary

Proposed Topics	Target Audience	
Displays at local events	✓	
Displays at Town Hall	✓	
Fact sheets	✓	✓
Information workshops/public meetings	✓	✓
Local cable broadcasts	✓	
Mailings (with tax bills/census)	✓	✓

Pet waste brochure/signage	👤	
Press releases	👤	
Promotional items		🤝
Stormwater material displays	👤	
Website content/postings	👤	🤝

👤 Residents 🤝 Businesses

Table 4-1c. Adams Stormwater Participation Activities Summary

Proposed Topics	Target Audience	
Adopt-A-Stream		🤝
Bike tours along Rail Trail	👤	
Classroom education/school field trips	👤	
"Clean Stream" participation incentives		🤝
Employee Training		🤝
Implement Stormwater BMPs		🤝
Pet waste bags in Downtown area	👤	
Riparian tree/shrub planting	👤	
River clean-ups	👤	
River walks	👤	
Storm drain marking/stenciling	👤	🤝
Stream team assessments	👤	
Volunteer water quality monitoring	👤	
Watershed Association activities	👤	

👤 Residents 🤝 Businesses

4.1 GENERAL PUBLIC

The general public is the largest target audience and has the most to gain from reducing the impacts of stormwater runoff. Cleaner water allows greater potential for use of water resources for recreational activities such as fishing, swimming, and nature observation. Actions taken by residents can also decrease community costs associated with the use and maintenance of expensive stormwater treatment facilities and treating degraded water quality and stream banks. This section describes the proposed education topics for the general public, recommended activities to educate the general public and proposed ways to actively involve the public in stormwater management.

Proposed Education Topics for the General Public

The following is a list of topics that will be included in the public education program for the Town of Adams. Education materials will generally inform residents of the impacts these topic areas can have, and describe actions that residents can take to reduce those impacts.

Educational material is readily available from a wide variety of sources, including many over the World Wide Web. Adams will use these sources and adapt them for the town's use.

- Pet Waste - Pet waste contains harmful pathogens that can be washed into nearby water bodies degrading water quality. Pet waste is especially problematic in the downtown area that gets extensive use from "dog walkers." In addition to a water quality problem, pet waste, especially dog feces, is a nuisance and contributes to the overall sense of degradation of an area. Adams is making strong efforts to re-vitalize the downtown. Pet waste takes away from those efforts. Section 14-5 of the General Code for the Town of Adams requires animal handlers to remove animal feces on public property, punishable by a fine of $50 for each offense. The educational material will address proper handling of pet waste.

- Lawns and Gardens – Residents in the Town of Adams generally take pride in the appearance of their yards and properties, which are generally neat, tidy and well kept. However, many aspects of lawn and garden maintenance can degrade water quality including disposal of yard debris, erosion control measures, and fertilizer, pesticide and herbicide use and application. The educational material will cover proper yard maintenance.
    - *Yard Debris:* Improper disposal of yard waste can clog storm drains, causing local flooding. In addition, decaying yard waste can allow bacteria, oxygen-consuming materials, phosphorus and nitrogen to be released into local streams and rivers. A river or stream bank is a convenient location to dispose of yard waste. "Just dump it over the bank," is a common attitude. The stream team assessment identified numerous locations where yard waste was improperly disposed.

    - *Erosion control measures:* Sediment from erosion can cloud the water in a river or stream and "smother" habitat areas for aquatic plants and wildlife. Erosion can fill-in flood storage areas, increasing the likelihood of downstream flooding. Erosion can clog culverts, leading to high maintenance costs. Inappropriate erosion controls, as well as abandoned vehicles, tires, and appliances are problems. The stream team

assessment identified numerous erosion sites and inappropriate erosion control measures.

- *Fertilizers:* Fertilizers contain large amounts of phosphorus and nitrogen that can promote excessive aquatic vegetation and algal blooms that can deplete the oxygen in the water for fish and other wildlife.

- *Pesticide and herbicides:* Stormwater runoff can pick-up and convey pesticides to streams and rivers. These pesticides can be harmful to wildlife. In strong enough concentrations pesticides can be harmful to humans as well, especially children who are generally more susceptible to lower concentrations than adults are. Stormwater runoff can pick-up and convey fertilizers and pesticides to nearby water bodies.

- Motor Vehicles – Many aspects of motor vehicles can create water quality impacts, including improper maintenance practices, an improperly maintained vehicle, leaky vehicles, improper washing and cleaning and improper storage. The educational material will cover proper motor vehicle maintenance and storage to minimize water quality impacts.
    - *Properly maintained vehicles:* Proper vehicle maintenance includes good maintenance practices while working on vehicles so that spills from such items as cleaning solvents do not end up in stormwater. Properly maintained vehicles also have cleaner emissions. Emission residuals, even in tiny amounts, can enter stormwater.

    - *Leak Prevention:* Vehicle fluids such as engine oil, gasoline, hydraulic fluid, transmission fluid, brake fluid and engine coolant can leak on to road surfaces and wash into storm drains leading into nearby surface waters during storm events. These fluids can directly kill plant and wildlife, deplete oxygen levels, and block sunlight.

    - *Washing and Cleaning:* Soap, scum, and oily grit from vehicle washing enters storm drains and then rivers and streams. Soap contains phosphates, which can cause excess algae to grow using up oxygen in the water.

    - *Proper Vehicle Storage:* Vehicles stored outdoors for long periods can leak and corrode, with these materials washed into storm drains and ending up in nearby streams.

- Septic Systems – A municipal sanitary sewer system serves much of the Town of Adams. Some locations in town, however, are not in the sanitary system service area. These locations rely on individual onsite septic systems. These areas are in the outskirts of town and generally in areas where headwater stream tributaries are located. Improperly maintained septic systems can seep untreated septic wastes, including pathogens (bacteria and viruses) and nutrients into nearby streams. Proper use and maintenance of septic systems will be conveyed in education materials.

- Illicit Discharges/Connections - An illicit discharge is a non-stormwater discharge due to illegal connections to the storm drain system. These occur when a drainpipe is improperly connected to the storm drain system producing a discharge of some type of inappropriate flow into the storm drainpipe. Because of these illicit connections, waste enters into storm drains or directly into local waters. Illicit discharges from residences can be the result of a failing septic system or illegal dumping practices. An illicitly connected floor or garage shop drain connected to the storm drain system is an example as well. Other indirect discharges that might create water pollution are dumping, irrigation overflows, swimming pool discharges, and car washing. Illicit discharges, as well as indirect discharges will be included in the educational material.

- Household Waste Reduction and Recycling – Appropriate solid waste management practices and recycling are important ways to prevent pollution from occurring. The "four R's" of solid waste management form the basis of an effective solid waste management program:
    1. Reduce the amount of trash discarded;
    2. Reuse containers and products;
    3. Recycle used materials, and compost; and
    4. Respond to the solid waste dilemma by reconsidering other options.

  For the nine years from 1995-2003, Adams has averaged about a 12% recycling rate (according to DEP statistics; Massachusetts Municipal Recycling Rates FY 1995-2001 and FY 2002-2003.) This is substantially lower than other Berkshire County municipalities (Dalton: ~34%; Great Barrington: ~30%; North Adams: ~ 30%; Pittsfield: ~ 20%.). Solid waste management practices and recycling will be included in educational material.

- Illegal Dumping – Debris from illegal dumping, in addition to creating an eyesore that all residents must endure, can contain toxic waste that can leak into rivers and streams. Debris items, such as six-pack rings and plastic bags can choke, suffocate or disable aquatic life such as fish and ducks. The stream team assessment identified numerous illegal dumping sites.

- Household Hazardous Material – Many commonly used household products such as cleaning products, car maintenance items, and home improvement items, such as paint, strippers, and brush cleaners contain toxic material that if not properly stored, used and disposed of can end up in rivers and streams, either by being transported over the land surface or direct dumping into storm drains. Proper handling, use and disposal practices, including appropriate disposal methods and locations, will be addressed in education materials.

- Better Site Design for New Development – Numerous practices are available to minimize water quality impacts from new development. Design practices can limit the amount of impervious surface (e.g., using wooden decks, brick paths, rock gardens) employ vegetated strips (using native vegetation which generally requires less fertilizer, less pesticide, and less irrigation) as components of landscape design, minimize cutting and clearing of natural vegetation, and keeping development away from ecologically sensitive areas. Educational

material will be prepared for perspective homebuilders to use to make their new home more "water friendly."

Proposed Education and Outreach Activities for the General Public

Once the public education materials have been collected and adapted to the Town of Adams, it will be distributed or presented to residents. The following outreach methods will be used in the Town of Adams to educate residents about the potential impacts of stormwater runoff.

- Pet Waste Signage and Other Outreach - Adams installed pet waste bags in the downtown area in September 2002. Adams took this approach because the volume of dog waste on downtown sidewalks was increasing. It was the town's hope that residents would use the pet waste bags, rather than receive a fine. Pet waste signs and poles were also installed. Pet waste signage will continue and will be used in conjunction with other educational material about pet waste management. The Town has also developed an educational brochure to inform dog owners of the potential threat posed to water by pet waste. The Town plans to send a copy to all licensed dog owners via the Town Clerk's Office as licensing deadlines approach.

- Mailings - Mailings in the form of fact sheets, brochures, fliers, and newsletters will be periodically distributed to the public relevant to the topic areas previously identified. This educational material will be included in regular mailings to town residents, such as in tax bills. Mailings reach a wide audience of residents, especially when they are a part of a regular, periodic mailing.

- Press Releases - Local newspapers will be used as a medium for press releases to educate residents and inform them of upcoming events. Newspapers can reach a wide audience. Future releases will be coordinated with other educational efforts, such as mailings, meetings or events.

- Web Site - Adams has a well-developed website. A section has been devoted to stormwater management. This section will include the Adams Stormwater Management Strategic Plan, copies of educational material and fact sheets, and information about upcoming events, such as river clean-ups, and river walks. The website provides easy accessibility for residents to obtain education material and information about upcoming events. Residents will be made aware of the web page section through mailings.

- Stormwater Material Displays – A display that includes posters, brochures, fact sheets, Executive Summaries of the Stormwater Management Strategic Plan, event announcements, and other material for residents to view or take will be prepared. This display will be periodically set up in areas where residents frequently pass, such as main entranceways and voting areas. It will be periodically updated to include information about progress towards specific items and to recognize achievements of groups or individuals such as stream team assessments, clean ups, and "Clean Stream" and Adopt-A-Stream business and institution participants. Space will be made available at public places such as the library and schools to

exhibit the display. In schools, it will be displayed in conjunction with stormwater educational programs whenever possible. "Clean Stream" and Adopt-A-Stream participants will be given the opportunity to exhibit this display at their business or institution.

- Displays at Town Hall – The main entryway in the Town Hall receives a relatively large volume of resident foot traffic. Various displays are regularly exhibited at that location. The stormwater display should be exhibited in this location at least once a year to show basic information about stormwater management (to coincide with mailed material) and activities, accomplished and planned, related to stormwater management.

- Displays at Local Events – The Susan B. Anthony Celebration is a popular summer event in Adams. The stormwater display should be exhibited at this event. In addition, someone who can explain the Stormwater Management Strategic Plan and good stormwater management practices and solicit volunteers should staff it.

- Informational Workshops, Public Meetings and Presentations to Civic Groups – Adams has numerous Civic Organizations and Clubs such as the Lions Club, Elks Lodge, Maple Grove Civic Club, Adams Garden Club, and Polish American Club that have regular meetings and are frequently looking for speakers and presentations. This is a good venue to get the word out about stormwater management because it offers the opportunity for a question and answer format. This same format should be used for at least one public meeting per year about stormwater management as well. An introductory workshop will be prepared and initially delivered at these venues. Update workshops (one per year) will be prepared and delivered to announce the prior year's accomplishments and events and activities upcoming in the next year.

- Local Cable Broadcasts – Meetings of the Adams Board of Selectmen are regularly covered by the local cable channel and viewed by a relatively large number of Adams' residents. This is a good vehicle to get the word out about stormwater management activities. Presentations about stormwater management will be made at Board of Selectmen meetings on a regular basis. An initial presentation will be made about the Stormwater Management Strategic Plan. Subsequent, more succinct, presentations will be given on an as-needed basis to announce significant accomplishments and announce upcoming events and activities.

Proposed Participation and Involvement Activities for the General Public

Broad based engagement of the public is the best way to obtain a long lasting, effective stormwater management program. The following measures will be used to increase community involvement in stormwater management.

- Pet Waste Bags in the Downtown Area – Pet waste bags are available in two locations in the downtown area:
  1. Park Street next to the Ashuwillticook Trail; and
  2. On Hoosac Street next to the *Discover the Berkshires* Adams Visitor Center.

The DPW provides funds for this program. The DPW periodically inspects the dispensers and refills them as necessary. To make this program more effective it should be coordinated with other outreach efforts such as mailings. Once adequate public outreach has been provided, strict enforcement of the town's current law requiring the cleanup of animal feces by the handler should occur.

- Storm Drain Marking/Stenciling - Storm drain stencils or marking programs create public awareness about the connection of water quality and storm drains. Storm drain marking projects also create opportunities for various groups of volunteers to participate in preventing degradation of water quality in town. Installing semi-permanent buttons or stenciling storm drains with words and symbols is an effective way of reducing the dumping of pollutants into drains. HooRWA has an interest in developing a storm drain stenciling program with the Town of Adams. A potential way to combine this activity with a school program is to have some type of "design contest" in the schools, whereby students could design the "stencil." If it is not feasible to mark all storm drains in town because of time and money constraints, stenciling should begin in the highest priority sub-basins and proceed to lower priority sub-basins.

- River Clean-Up - A river clean-up program is a great way for people to literally get their hands dirty and get fast results from their efforts. Trash in a river can degrade water quality, harm wildlife and people, and is an eyesore in a community. Participants volunteer to walk or paddle an identified length of a river or stream collecting and removing trash and recording the types of garbage that has been removed. Working within a river can give people a greater appreciation of this complex ecosystem. The Steam Team Assessment identified numerous locations where trash was located. These sites should be prioritized, with the worst ones cleaned first. Photographs taken before and after cleanup activities can be used to document the results of these efforts. This program may involve the use of boats and other equipment depending on the scope of involvement and available resources. The town can be involved by allowing the use of town equipment to remove large or heavy items and by hauling and disposing of collected trash. Enhancements to a basic clean-up program may include an onsite expert to teach people about river ecology.

- Classroom Education and School Field Trips - A classroom education program can consist of a relatively simple one-day presentation or can be fully integrated into a school curriculum. A program can focus on one grade level or many depending on the resources available and the schools willingness to participate. Organizations such as *Project Wet* ("an international, interdisciplinary, water science and education program for formal and non-formal educators of kindergarten to grade 12 students") and *Green Teacher* ("a magazine by and for educators to enhance environmental and global education across the curriculum at all grade levels") can aid in preparing an education program. HooRWA has a strong interest in developing and delivering an educational program. In the summer of 2005, HooRWA is enhancing its web site as a teacher resource. In the 2005 – 2006 school year, HooRWA is planning teacher workshops about how to use existing river education resources, and school field trips to visit river sites.

- Stream Team Assessments – A stream team assessment is a useful way to assess and evaluate the condition of rivers and streams in a town. Water quality related problems such as bank erosion areas, discharges, and illegal dumping areas can be identified. Water related opportunities, such as enhanced recreational access, can be identified as well. Data gathered during a stream team assessment can help identify sites for such activities as water quality monitoring, river clean-ups, installation of Best Management Practices, and river access. Another important aspect of a stream team assessment is the use of volunteers. Engaging volunteers is a way to increase public awareness about and management involvement in a town's stream network. Stream team assessments are not meant to be static events. They are meant to provide an ongoing presence, as "watchers" or "keepers" of river segments. Stream teams can be leaders to implement items identified in the assessments, such as correcting problems or developing enhancements. Stream team assessments have been conducted for the Hoosic River (at least twice) and its tributaries. These assessments, however, have not led to an ongoing presence by active Adams residents. To be more effective, such an active presence should be developed. HooRWA was the primary sponsor of the previous assessments and would be a strong candidate to coordinate and conduct an ongoing stream team assessment program.

- River Walks – River walks provide a low investment – high return opportunity to raise overall awareness of water related issues. Walks can include a variety of subject areas, such as plant identification, habitat discovery, or land use "investigation." Such walks can be tailored to a wide variety of constituent groups that might have differing capabilities. The Hoosic River is the pre-eminent river in northern Berkshire County. However, the flood control project has contributed to a lessoning of awareness by town residents of its important ecological significance. River walks are ways to have residents re-connect with the river. HooRWA would be a strong candidate to coordinate or conduct these walks.

- Volunteer Water Quality Monitoring – Volunteer monitoring programs encourage residents to learn about water resources. Taking samples of perennial streams is a great way to monitor water quality and identify potential problems areas that may have otherwise gone unnoticed. High levels of bacteria, phosphorus, road salt, and sediment can all be attributed to stormwater runoff and can have adverse impacts on stream ecology. HooRWA has conducted a successful water quality monitoring program for several years. HooRWA has conducted this program according to a DEP/EPA approved Quality Assurance Project Plan. HooRWA's program has not made extensive use of Adams volunteers. Greater involvement by Adams' residents would allow expansion of the program. Another important component of a volunteer monitoring program is to document improvements to water quality. Improvement to water quality is an important way to generate continued enthusiasm and support for the stormwater management program.

- Participation at Hoosic River Watershed Association Events – The Hoosic River Watershed Association (HooRWA) has several events and activities that bring attention to and awareness of the Hoosic River, related tributaries and surrounding watershed. HooRWA hosts regularly

scheduled activities like canoe rides and nature walks. In addition, Riverfest (traditionally Memorial Day Weekend) and the State of the River Conference (generally in late winter/early spring) are two regularly scheduled events, that provide a celebration and an in-depth review of the current condition of the river. In prior years, outreach to Adams residents and participation by Adams residents regarding these events has been limited. Increased participation by Adams residents at these events would provide a two-way opportunity. It would allow Adams residents the opportunity to learn about other activities occurring in the larger watershed. In addition, it would provide non-Adams residents an opportunity to learn about Adams' proactive stormwater program. This exchange of information would build mutual support between the two interests.

- Riparian Tree/Shrub Planting Program – Re-establishing forested or shaded buffers along the banks of a watercourse is an important way to restore a river's natural ecosystem and reduce the impacts from stormwater. Vegetation along stream banks can stabilize the bank, thereby preventing sedimentation, and can trap and filter pollutants. Plants intercept rainfall, absorbing and transpiring moisture, and thereby reduce runoff and flood potential. Plants also provide shade, which reduces runoff temperatures. Shade along stream banks can provide safe havens for fish from the hot summer sun. This is especially important along the flood control chutes. Water quality data has shown that the main chute through the downtown area dramatically increases water temperature (by as much as 7 degrees from one end to the other in the summer.) This elevated water temperature puts an extreme stress on fish (especially trout, which is a cold-water fish) and other species. In addition, trees and shrubs can enhance neighborhood aesthetics. The Town is currently working with the United States Army Corps of Engineers to examine the potential to restore the flood control project to a more natural setting. One option being considered is reestablishing vegetation along the banks of the project to provide shade. This option is being considered for both the concrete channel and the rip-rap areas downstream of the concrete channel. Recent and ongoing efforts at downtown re-vitalization have identified the Hoosic River as a cornerstone for the success of those efforts. Previous public "Design Charettes" have identified the desire for a more natural setting adjacent to the river. Bank re-vegetation efforts are important components to those efforts. This program can be coordinated either by the Town or by volunteers and/or interested organizations such as a garden club.

- Bike Tours along the Ashuwillticook Rail Trail – The Ashuwillticook Rail Trail is a popular recreational asset used by many town residents. The Rail Trail loosely parallels the course of the Hoosic River. Fun bike tours with educational stops could raise overall awareness of the river and riverine ecosystem. Part of HooRWA's mission is to advance environmental awareness. HooRWA would be a strong candidate to coordinate or conduct these tours. These could initially be conducted in conjunction with other events or activities such as the Susan B. Anthony Days celebration or the Adams Agricultural Fair.

4.2 BUSINESSES AND INSTITUTIONS

Many business and institution activities can contribute to stormwater pollution. For instance, poor housekeeping practices and large impervious parking lots can affect water quality in a community. Large expensive stormwater treatment facilities, such as detention ponds, frequently are built to handle runoff from business and institution sites. These systems can be eyesores in a community. If they are not properly maintained, which is often the case, they do not treat stormwater as they were designed. Encouraging good stormwater management practices and providing incentives can be an effective way for towns to approach businesses and institutions. Participation in municipal stormwater management programs can provide good publicity to a business or institution. Treating stormwater on site can also help minimize or decrease municipal costs associated with the use and maintenance of expensive stormwater treatment facilities. In turn this can help a municipality keep taxes low. This section describes the proposed education topics for businesses and institutions, recommended activities to educate businesses and institutions and proposed ways to involve businesses and institutions in stormwater management.

Proposed Education Topics for Businesses and Institutions

The following is a list of topics that will be included in the public education outreach and participation efforts to businesses and institutions of the Town of Adams. Educational material will inform businesses and institutions of the impacts related to these topic areas, and describe ways to reduce them. These elements can be stand-alone items. However, this educational program would be more effective if it were integrated into other items such as an employee training program, "Clean Stream" initiative, or Adopt-A-Stream program.

- Housekeeping Practices – Good housekeeping practices for businesses and institutions are important because of their overall size and scale. Typically, these are large properties, have large impervious surface areas, use relatively large amounts of hazardous materials, have numerous employees, and result in a large amount of solid waste. Keeping a property clean from trash and debris, properly storing materials, and properly conducting site maintenance (landscaping, snow removal, impervious surface sweeping) are all ways to reduce the impacts of stormwater runoff. These practices help keep debris, litter and unwanted contaminants from being picked up by stormwater and entering nearby surface waters. Educational material will focus on a range of good housekeeping practices for businesses and institutions.

- Catch Basins - Businesses and institutions may be unaware of catch basins located on their property and of their responsibility to clean them. Unmaintained catch basins can fill up with sediment and debris. When they do, they no longer function as intended and contribute to stormwater pollution. Educational material will be distributed to businesses and institutions about identifying and locating catch basins on their property, water quality functions of catch basins, the importance of pollution prevention (i.e. dumping,) and maintenance practices and schedules.

- Motor Vehicles – Water quality issues related to motor vehicles are generally the same for businesses and institutions as they are for homeowners: proper maintenance; leak prevention; washing and cleaning; and proper storage. The difference with businesses and institutions is a

matter of scale. Whereas a homeowner may maintain one or two vehicles, a business or institution may have a fleet, thereby magnifying the potential threat. In addition, these vehicles may be large sized vehicles, with greater storage capacity for vehicular fluids and are highly used, warranting more frequent maintenance and cleaning. Educational material will be prepared and distributed to businesses and institutions about maintaining their fleet.

- Hazardous Materials: Storage, Use, Disposal – Businesses and institutions frequently deal with large volumes of hazardous material, such as cleaners and solvents, car maintenance items, and petroleum products. If not properly stored, used and disposed of these can end up in rivers and streams, either by being transported over the land surface or direct dumping into storm drains. Protocols need to be clearly developed and available to a potentially large number of employees who may be exposed to these items. Proper handling, use and disposal practices including appropriate disposal methods and locations will be addressed in educational materials.

- Stormwater BMPs – Stormwater BMP effectiveness is directly related to their long-term maintenance and management. Businesses and institutions may have inherited a stormwater BMP from a previous owner and are unaware of its operation, water quality treatment function and its maintenance schedule. Educational material will be provided to businesses and institutions about the typical stormwater BMPs that may be on their property, how that BMP functions as a water treatment device and proper maintenance practices.

- Illicit Discharges - An illicit discharge is a non-stormwater discharge due to illegal connections to the storm drain system. Because of these illicit connections, contaminated wastewater enters into storm drains or directly into local waters. Illicit connections may be intentional (i.e., illegal dumping activities) or may be unknown to the business owner or institution manager and often are due to the connection of floor drains to the storm sewer system. Educational material will be prepared and distributed to businesses and institutions about conducting a field survey to identify outfalls on their property, preparing a map, conducting a dry-weather survey, conducting water quality sampling, tracing the source of the discharge and removing the source of that discharge.

- Better Site Design for New Development and Re-development – Businesses and institutions can benefit from low impact development (LID) practices that emphasize on-site stormwater collection and treatment. Businesses and institutions can use numerous LID measures, such as increased green space, vegetated infiltration islands, Bioretention Cells, Bioretention Swales, Permeable Pavement Blocks, Infiltration Trenches, Level Spreaders, Grass Filter Strips, and Storm Water Wetlands. LID still allows land to be developed, but in a cost-effective manner that helps mitigate potential environmental impacts. Incorporating low impact development into development or re-development practices helps to systematically balance environmental and cost issues. These measures can reduce long-term management and maintenance costs to property owners as well. Information will be provided about LID measures that businesses and institutions can use in their next development or redevelopment project.

Proposed Education and Outreach Activities for Businesses and Institutions

Once the public education materials have been collected/developed, they will be distributed and conveyed to businesses and institutions. The following outreach methods will be used in the Town of Adams to educate businesses and institutions.

- Mailings - Mailings of fact sheets, brochures, fliers, and newsletters will be distributed to businesses and institutions. This will be done by inclusion of the educational material with regular tax bills.

- Fact Sheets – Topic-specific fact sheets will be developed and distributed in conjunction with the "Clean Stream" and Adopt-A-Stream programs and will cover the topics identified previously.

- Informational Workshops, Public Meetings, Presentations to Civic Groups and Organizations - An introductory workshop will be prepared about the Stormwater Management Strategic Plan and stormwater management practices. This will initially be presented at a meeting of the Downtown Development Committee. A list of the informational topics described previously will be distributed. Businesses and institutions will be solicited to determine their interest in workshops about other topics. Topic specific workshops for businesses and institutions will be prepared and delivered as interest warrants.

- Website - A subsection of the Town's stormwater education link will be tailored to the impacts of stormwater from businesses and institutions with links to fact sheets relevant to the topic areas. Businesses and institutions will be made aware of the webpage section by mailings. "Clean Stream" and Adopt-A-Stream participants will be posted on the web site.

- Promotional Items – Stormwater management promotional items, such as door hangers, bookmarks, refrigerator magnets, key chains are effective ways to raise constant awareness of stormwater issues while at the same time giving a business the opportunity for increased advertising. A program for promotional items will be developed and made available to interested businesses.

Proposed Participation and Involvement Activities for Businesses and Institutions

- Storm Drain Marking/Stenciling – Businesses and institutions can actively participate in a storm drain marking programs in numerous ways, including identifying and marking storm drains on their property, allowing and encouraging employees to participate in storm drain marking programs on company time, and providing funding for program coordination or supplies. Businesses and institutions could also initiate onsite employee trainings about storm drains. Business and institution participation in storm drain marking could be part of the "Clean Stream" program described below.

- "Clean Stream" Participation Incentives - A "Clean Stream" Program is a way to recognize businesses and institutions for good stormwater practices. Through this program specific Stormwater Best Management Practices would be identified. These would include such items as employee training, landscaping practices, treatment of hazardous materials, vehicle maintenance and operation, and impervious surfaces management. Parameters could be established relating to stormwater runoff reduction, as well as implementing low impact development practices. Site evaluations would be conducted. Those businesses and institutions meeting specified standards on the established parameters would be recognized as "Clean Stream" participants. These participants would be formally recognized through award presentations at public meetings, such as a Town Meeting or Selectmen's meeting and meetings of civic organizations. Participants would also be posted on the website and listed in local newspapers on a regular basis. This Program could be used in conjunction with an Adopt-A-Stream Program.

- Employee Training - A training program can be encouraged at businesses and institutions to educate employees about practices that can reduce the impacts of stormwater runoff. Topics would include those identified previously, such as good housekeeping, catch basins, motor vehicles, hazardous materials, illicit discharges, better site design and a general primer about stormwater BMPs. The program would be coordinated with distribution of the fact sheets. It would also be coordinated with the informational workshops presented to the general public except that in this instance the trainer would go to specific businesses and institutions instead of civic groups. In some instances, a professional trainer may be warranted to explain a highly technical topic. An employee training program could be a component of a larger "Clean Stream" effort.

- Adopt-A-Stream – An Adopt-A-Stream program is an effort where participants become the primary caretakers of an identified stretch of a river or stream. Businesses and institutions could have their employees "adopt" a section of a stream or sponsor and provide funding for another organization, such as a youth organization or school group, to do so. Responsibilities for "adopting" a river or stream section could include stream clean-ups, stream bank assessments, monitoring water quality and assisting with enhancement projects, such as plantings and erosion control. Signs could be posted indicating which business or institution adopted a stream section. This program, in addition to providing environmental benefits, provides good advertising for a business or institution.

- Implement Stormwater BMPs at Business and Institution Sites – Business and institution sites typically have not been developed to be "stormwater friendly." Frequently large areas of impervious surfaces, vehicles storage and maintenance, hazardous material use and storage are associated with these sites. Businesses and institutions could be encouraged and solicited to implement stormwater low impact development BMPs, using practices such as infiltration islands, perimeter vegetated swales, or a small wetland retention system. Incentives could include complete or partial funding of the project through state and local resources, publicity,

and tax relief. The Massachusetts Department of Environmental Protections 319 Nonpoint Source Pollution Grant is one such program that might provide funding.

4.3 MUNICPAL OFFICIALS

Municipal officials, including Planning Board members, Conservation Commission members and the Building Inspector review and approve new developments and re-development projects. These individuals are on the "front-lines" of stormwater management. In addition to the necessary local regulatory framework, as described in Section 5, thorough knowledge and understanding of stormwater management practices is needed by Board members to fully implement an effective stormwater management program. The Town of Adams, with assistance from BRPC or its consultant, should develop a municipal training program for water quality protection in accordance with the Phase II requirements. The program should include the following key elements, which can be tailored specifically to town operations.

- Stormwater Management Strategy & Program Overview
- Town Department Responsibilities
- Town Drainage System, Water Supply and Water Quality
- Spill Prevention and Response
- Good Housekeeping
- Material Management Practices
- Maintenance of Town-Owned Lands
- Stormwater Inspections
- Illicit Discharge Detection
- Construction Sites and Development

Training should be conducted annually and may be minimized after the first year to include refresher topics.

4.4 EDUCATION PROGRAM TIMELINE

The Town will implement an education program that includes educational goals based on stormwater issues of significance within the MS4 area. The ultimate objective of a public education program is to increase knowledge and change behavior of the public so that pollutants in stormwater are reduced.

Target Audience	Educational Goal(s)	Responsible Party	Year of Implementation
Residential	Reduce pollution through improved behaviors	Office of Community Development	2019
Developers and Construction		Building Inspector	2020
Residential		Office of Community Development	2020
Business/		Office of Community	2021

Commercial/ Institutional	Reduce pollution through improved behaviors	Development	
Industrial		Office of Community Development	2022

4.5 PUBLIC PARTICIPATION AND INVOLVEMENT

Objective: The permittee shall provide opportunities to engage the public to participate in the review and implementation of the permittee's SWMP.

a. All public involvement activities conducted by the Town of Adams will comply with state public notice requirements (MGL Chapter 30A, Sections 18 – 25 – effective 7/10/2010). The SWMP and all annual reports will be available to the public at the Town Hall, Public Library, and through the Town's website.
b. The Town of Adams will provide the public with an opportunity to participate in the annual review and implementation of the SWMP. Public participation opportunities may include, but are not limited to, websites; clean-up teams; monitoring teams; or an advisory committee.
c. The Town of Adams will report on the activities undertaken to provide public participation opportunities annually including compliance with a & b above.

BMP Name:	*SWMP Review*
Description:	Stormwater Management Plan review
Responsible Department/Party:	Board of Selectmen
Completion Date:	
Measurable Goals:	Allow annual review of stormwater management plan and posting of stormwater management plan on website
BMP Name:	*Public Participation*
Description:	Public Meeting - Stormwater
Responsible Department/Party:	Board of Selectmen
Completion Date:	
Measurable Goals:	Allow public to comment on stormwater management plan annually
BMP Name:	*Public Participation*
Description:	Household hazardous waste/used oil collection
Completion Date:	
Responsible Department/Party:	Northern Berkshire Solid Waste District
Measurable Goals:	Reduce pollution through proper disposal
BMP Name:	*Public Participation*
Description:	Partnership - Advocacy Groups
Completion Date:	
Responsible Department/Party:	Hoosic River Watershed Association
Measurable Goals:	Increase awareness, advocacy and stewardship
BMP Name:	*Public Participation*
Description:	Cleanups – Roadside/General

Completion Date:	
Responsible Department/Party:	Berkshire County Sheriff's Office
Measurable Goals:	Bi-annual roadside and general cleanups
BMP Name:	*Public Participation*
Description:	Catch Basin Stenciling/Markers
Completion Date:	
Responsible Department/Party:	Community Development Department & Berkshire Arts and Technology Charter School
Measurable Goals:	Collaboration between the Town & BART to educate students and increase public awareness

4.6 ILLICIT DISCHARGE DETECTION AND ELIMINATION

Objective: The Town of Adams shall implement an IDDE program to systematically find and eliminate sources of non-stormwater discharges to its municipal separate storm sewer system and implement procedures to prevent such discharges.

The IDDE program shall include adequate legal authority to:: prohibit illicit discharges; investigate suspected illicit discharges; eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system; and implement appropriate enforcement procedures and actions. Adequate legal authority consists of a currently effective ordinance, by-law, or other regulatory mechanism. The by-law or other regulatory mechanism shall be in place within 3 years of the permit effective date.

BMP Name:	*IDDE Legal Authority*
Completed:	
Link or Reference:	
Enforcement Authority:	Board of Health
BMP Name:	*Sanitary Sewer Overflow (SSO) Inventory*
Description:	Develop SSO inventory in accordance of permit conditions
Completion Date:	
Responsible Department/Party:	DPW Operations
Measurable Goals:	Annually track and report the following SSO information: the location; a clear statement of whether the discharge entered a surface water directly or entered the MS4; date(s) and time(s) of each known SSO occurrence; estimated volume(s) of the occurrence; description of the occurrence indicating known or suspected cause(s); mitigation and corrective measures completed with dates implemented; and mitigation and corrective measures planned with implementation schedules. Update inventory as needed.
BMP Name:	*Map of Storm Sewer System*
Description:	Create map and update during IDDE program completion
Completion Date:	
Responsible Department/Party:	Berkshire Regional Planning Commission

Measurable Goals:	Map 100% of outfalls and receiving waters, open channel conveyances, interconnections with other MS4s and other storm sewer systems, municipally-owned stormwater treatment structures, waterbodies identified by name and indication of all use impairments, and initial catchment delineations within 5 years of the permit's effective date. Map 100% of outfall spatial locations, pipes, manholes, catch basins, refined catchment delineations, municipal sanitary sewer system (if available), and municipal combined sewer system (if applicable) within 10 years of the permit's effective date.
BMP Name:	*IDDE Program*
Description:	Create written IDDE program
Completion Date:	
Responsible Department/Party:	External Contractor
Implement IDDE Program:	Implement catchment investigations according to program and permit conditions. The outfall/interconnection inventory and initial ranking and the dry weather outfall and interconnection screening and sampling results can be found at a location to be determined.
Measurable Goals:	Conduct 100% of outfall screening on High and Low Priority Outfalls within 4 years of the permit's effective date. Complete catchment investigations for 100% of the Problem Outfalls within 7 years of the permit's effective date. Complete 100% of all catchment investigations within 10 years of the permit's effective date.
BMP Name:	*Employee Training*
Description:	Train employees on IDDE implementation
Completion Date:	
Responsible Department/Party:	DPW Operations
Measurable Goals:	Train annually
BMP Name:	*Conduct dry weather screening*
Description:	Conduct in accordance with outfall screening procedure and permit conditions
Completion Date:	
Responsible Department/Party:	Massachusetts College of Liberal Arts & Hoosic River Watershed Association
Measurable Goals:	Complete 6 years after effective date of permit
BMP Name:	*Conduct wet weather screening*
Description:	Conduct in accordance with outfall screening procedure
Completion Date:	
Responsible Department/Party:	Massachusetts College of Liberal Arts & Hoosic River Watershed Association
Measurable Goals:	Complete 10 years after effective date of permit
BMP Name:	*Ongoing screening*
Description:	Conduct dry weather and wet weather screening (as necessary)

Completion Date:	
Responsible Department/Party:	Massachusetts College of Liberal Arts & Hoosic River Watershed Association
Measurable Goals:	Complete ongoing outfall screening upon completion of IDDE program

4.7 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

Objective: The objective of an effective construction stormwater runoff control program is to minimize or eliminate erosion and maintain sediment on site so that it is not transported in stormwater and allowed to discharge to a water of the U.S through the permittee's MS4. The construction site stormwater runoff control program required by the Town is a separate and distinct program from EPA's stormwater construction permit program. (http://cfpub1.epa.gov/npdes/stormwater/cgp.cfm)

a. The Town shall implement and enforce a program to reduce pollutants in any stormwater runoff discharged to the MS4 from all construction activities that result in a land disturbance of greater than or equal to one acre within the regulated area. The Town's program shall include disturbances less than one acre if that disturbance is part of a larger common plan of development or sale that would disturb one or more acres.

b. The Town's construction program requirements shall not apply to projects that receive a waiver from EPA under the provisions of 40 CFR § 122.26(b) (15) (i).

c. The Town shall develop and implement a construction site runoff control program that includes the elements following:

   i. An ordinance or regulatory mechanism that requires the use of sediment and erosion control practices at construction sites. In addition to addressing sediment and erosion control, the ordinance must include controls for other wastes on constructions sites such as demolition debris, litter and sanitary wastes.

   ii. Written (hardcopy or electronic) procedures for site inspections and enforcement of sediment and erosion control measures. These procedures shall be completed within three (3) years from the effective date of the Final 2016 MA Small MS4 Permit. The procedures shall clearly define who is responsible for site inspections as well as who has authority to implement enforcement procedures. The program shall provide that the Town may, to the extent authorized by law, impose sanctions to ensure compliance with the local program. The SWMP shall be updated to include documentation of these procedures and regulatory authorities.

   iii. The Town shall establish requirements for construction site operators performing land disturbance activities within the MS4 jurisdiction that result in stormwater discharges to the MS4 to implement a sediment and erosion control program that includes BMPs appropriate for the conditions at the construction site. The program may include references to BMP design standards in state manuals, such as the Massachusetts Stormwater Handbook, or

design standards developed by the MS4. It is anticipated that local requirements will include sediment and erosion control measures for construction sites to:

1. Minimize the amount of disturbed area and protect natural resources;
2. Stabilize sites when projects are complete or operations have temporarily ceased;
3. Protect slopes on the construction site;
4. Protect all storm drain inlets and armor all newly constructed outlets;
5. Use perimeter controls at the site;
6. Stabilize construction site entrances and exits to prevent off-site tracking;
7. Inspect stormwater controls at consistent intervals.

iv. The Town shall implement requirements for construction site operators within the MS4 jurisdiction to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes. These wastes may not be discharged to the MS4.

v. The Town shall develop written procedures for site plan review and inspection and enforcement. The procedures for site plan review and inspection and enforcement shall be completed within three (3) years from the effective date of the Final 2016 MA Small MS4 Permit. The site plan review procedure shall include a pre-construction review of the site design by the Planning Board, the planned operations at the construction site, planned BMPs during the construction phase, and the planned BMPs to be used to manage runoff created after development. The review procedure shall incorporate procedures for the consideration of potential water quality impacts, and procedures for the receipt and consideration of information submitted by the public. The site plan review procedure shall also include evaluation of opportunities for use of low impact design and green infrastructure. When the opportunity exists, the Planning Board shall encourage project proponents to incorporate these practices into the site design. The procedures for site inspections conducted by the Planning Board shall include the requirement that inspections occur during construction of BMPs as well as after construction of BMPs to ensure they are working as described in the approved plans, clearly defined procedures for inspections including qualifications necessary to perform the inspections, the use of mandated inspection forms if appropriate, and procedure for tracking the number of site reviews, inspections, and enforcement actions. This tracking information shall be included as part of each annual report.

BMP Name:	*Sediment and Erosion Control Ordinance*
Description:	Adoption of requirements for construction operators to implement a sediment and erosion control program
Completed:	
Link or Reference:	

Enforcement Authority:	Planning Board
Measurable Goals:	Complete within 3 years of the effective date of permit
BMP Name:	*Site Plan Review Procedures*
Description:	Complete written procedures of site plan review and begin implementation
Completion Date:	
Responsible Department/Party:	Planning Board
Measurable Goals:	Conduct site plan review of 100% of projects according to the procedures outlined above.
BMP Name:	*Site Inspections and Enforcement of Sediment and Erosion Control Measures Procedures*
Description:	Complete written procedures of site inspections and enforcement procedures
Completion Date:	
Responsible Department/Party:	Planning Board
Measurable Goals:	Inspect 100% of construction sites as outlined in the above document and take enforcement actions as needed.
BMP Name:	*Waste Control*
Description:	Adoption of requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes
Completion Date:	
Responsible Department/Party:	Planning Board
Measurable Goals:	Complete within 3 years of the effective date of permit

4.8 POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

Objective: The objective of this control measure is to reduce the discharge of pollutants found in stormwater through the retention or treatment of stormwater after construction on new or redeveloped sites. For the purposes of the Stormwater Management Program, the following definitions apply:

Site is defined as the area extent of construction activities, including but not limited to the creation of new impervious cover and improvement of existing impervious cover.

New development is defined as any construction activities or land alteration resulting in total earth disturbances equal to or greater than 1 acre (or activities that are part of a larger common plan of development disturbing greater than 1 acre) on an area that has not previously been developed to include impervious cover.

Redevelopment is defined as any construction, land alteration or improvement of impervious surfaces resulting in total earth disturbances equal to or greater than 1 acre (or activities that are part of a larger common plan of development disturbing greater than 1 acre) that does not meet the definition of new development (see above).

BMP Name:	*As-built plans for on-site stormwater control*
Description:	The procedures to require submission of as-built drawings and ensure long term operation and maintenance will be a part of the SWMP
Completed:	
Link or Reference:	
Enforcement Authority:	Planning Board
BMP Name:	*Target properties to reduce impervious areas*
Description:	Identify at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually
Completion Date:	
Responsible Department/Party:	DPW Construction
Measurable Goals:	Complete 6 years after effective date of permit and report annually on retrofitted properties
BMP Name:	*Allow green infrastructure*
Description:	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist
Completion Date:	
Responsible Department/Party:	Planning Board
Measurable Goals:	Complete within 6 years after effective date of permit and implement recommendations of report
BMP Name:	*Street design and parking lot guidelines*
Description:	Develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options.
Completion Date:	
Responsible Department/Party:	Planning Board
Measurable Goals:	Complete within 6 years after effective date of permit and implement recommendations of report
BMP Name:	*Ensure any stormwater controls or management practices for new development and redevelopment meet the retention or treatment requirements of the permit and all applicable requirements of the Massachusetts Stormwater Handbook*
Description:	Adoption, amendment, or modification of a regulatory mechanism to meet permit requirements
Completion Date:	
Responsible Department/Party:	Planning Board
Measurable Goals:	Complete no later than 2 years after effective date of permit

4.9 MUNICIPAL GOOD HOUSEKEEPING AND POLLUTION PREVENTION

Objective: The Town of Adams shall implement an operations and maintenance program for permittee-owned operations that has a goal of preventing or reducing pollutant runoff and protecting water quality from all permittee-owned operations.

BMP Name:	*O&M procedures*
Description:	Create written O&M procedures including all requirements contained in 2.3.7.a.ii for parks and open spaces, buildings and facilities, and vehicles and equipment
Completion Date:	
Responsible Department/Party:	DPW Operations
Measurable Goals:	Complete and implement within 4 years after effective date of permit
BMP Name:	*Inventory all permittee-owned parks and open spaces, buildings and facilities, and vehicles and equipment*
Description:	Create inventory
Completion Date:	
Responsible Department/Party:	DPW Operations
Measurable Goals:	Complete within 4 years after effective date of permit and implement annually
BMP Name:	*Infrastructure O&M*
Description:	Establish and implement program for repair and rehabilitation of MS4 infrastructure
Completion Date:	
Responsible Department/Party:	DPW Operations
Measurable Goals:	Complete within 4 years after effective date of permit
BMP Name:	*Stormwater Pollution Prevention Plan (SWPPP)*
Description:	Create SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities
Completion Date:	
Responsible Department/Party:	DPW Operations
Measurable Goals:	Complete and implement within 4 years after effective date of permit
BMP Name:	*Catch basin cleaning*
Description:	Establish schedule for catch basin cleaning such that each catch basin is no more than 50% full and clean catch basins on that schedule
Completion Date:	
Responsible Department/Party:	DPW Operations
Measurable Goals:	Clean catch basins on established schedule and report number of catch basins cleaned and volume of material moved annually
BMP Name:	*Street sweeping program*
Description:	Sweep all streets and permitee-owned parking lots in accordance with permit conditions
Completion Date:	
Responsible Department/Party:	DPW Operations
Measurable Goals:	Sweep all streets and permitee-owned parking lots once per year in the spring
BMP Name:	*Road salt use optimization program*

Description:	Establish and implement a program to minimize the use of road salt
Completion Date:	
Responsible Department/Party:	DPW Operations
Measurable Goals:	Implement salt use optimization during deicing season
BMP Name:	*Inspections and maintenance of stormwater treatment structures*
Description:	Establish and implement inspection and maintenance procedures and frequencies
Completion Date:	
Responsible Department/Party:	DPW Operations
Measurable Goals:	Inspect and maintain treatment structures at least annually

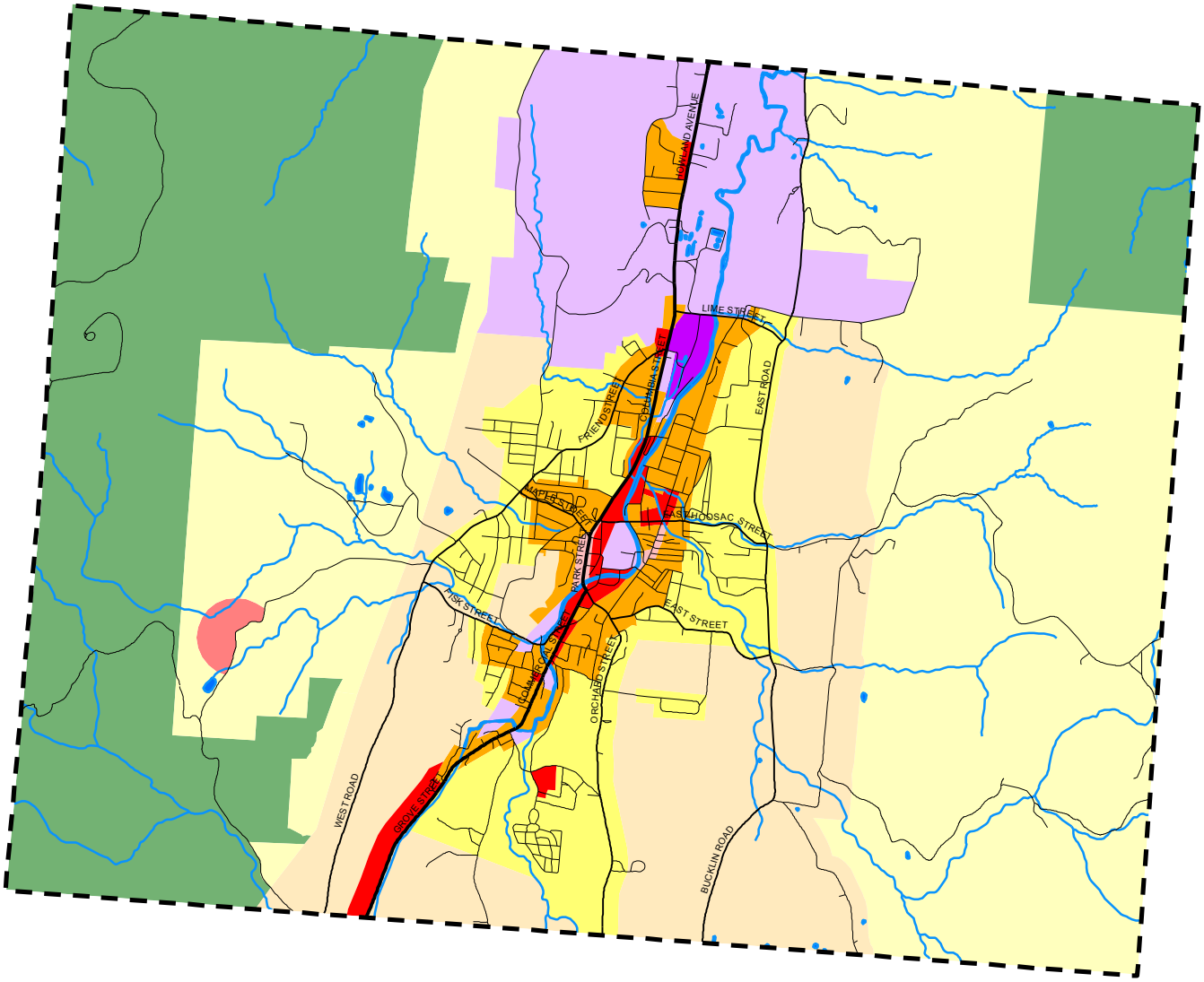
5. IMPLEMENTATION SCHEDULE

6. ANNUAL STATUS REPORTING

Program Evaluation

The permittee shall annually self-evaluate its compliance with the terms and conditions of this permit and submit each self-evaluation in the Annual Report. The permittee shall also maintain the annual evaluation documentation as part of theSWMP.

APPENDIX 1 MAPS



Zoning

- B-1
- B-2
- B-3
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- R-1
- R-2
- R-3
- R-4

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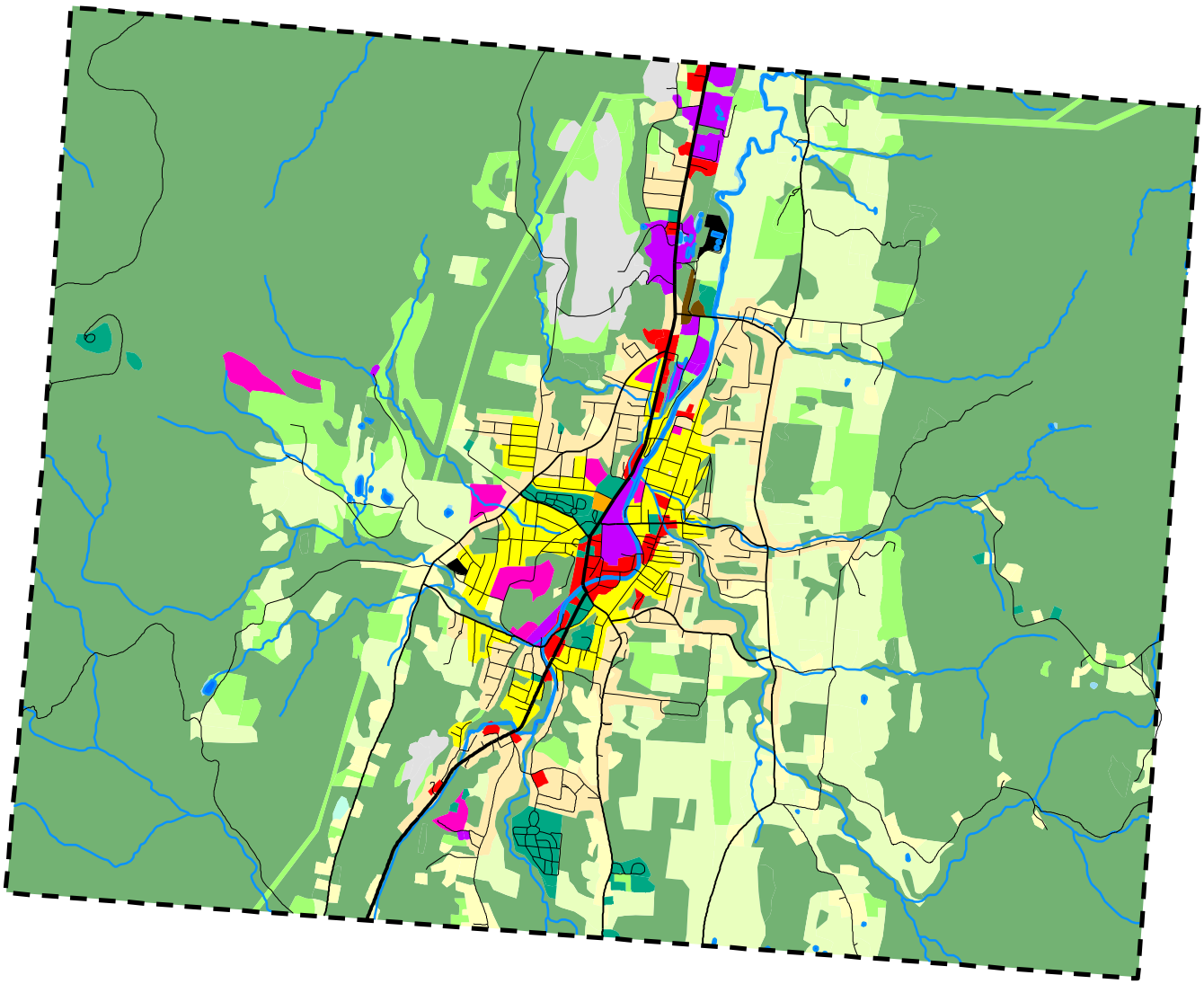
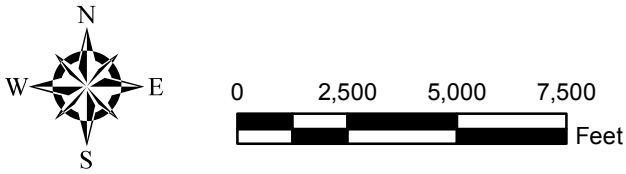
Data Sources: Town of Adams, MassGIS

Figure 2-1

Zoning

Adams, Massachusetts





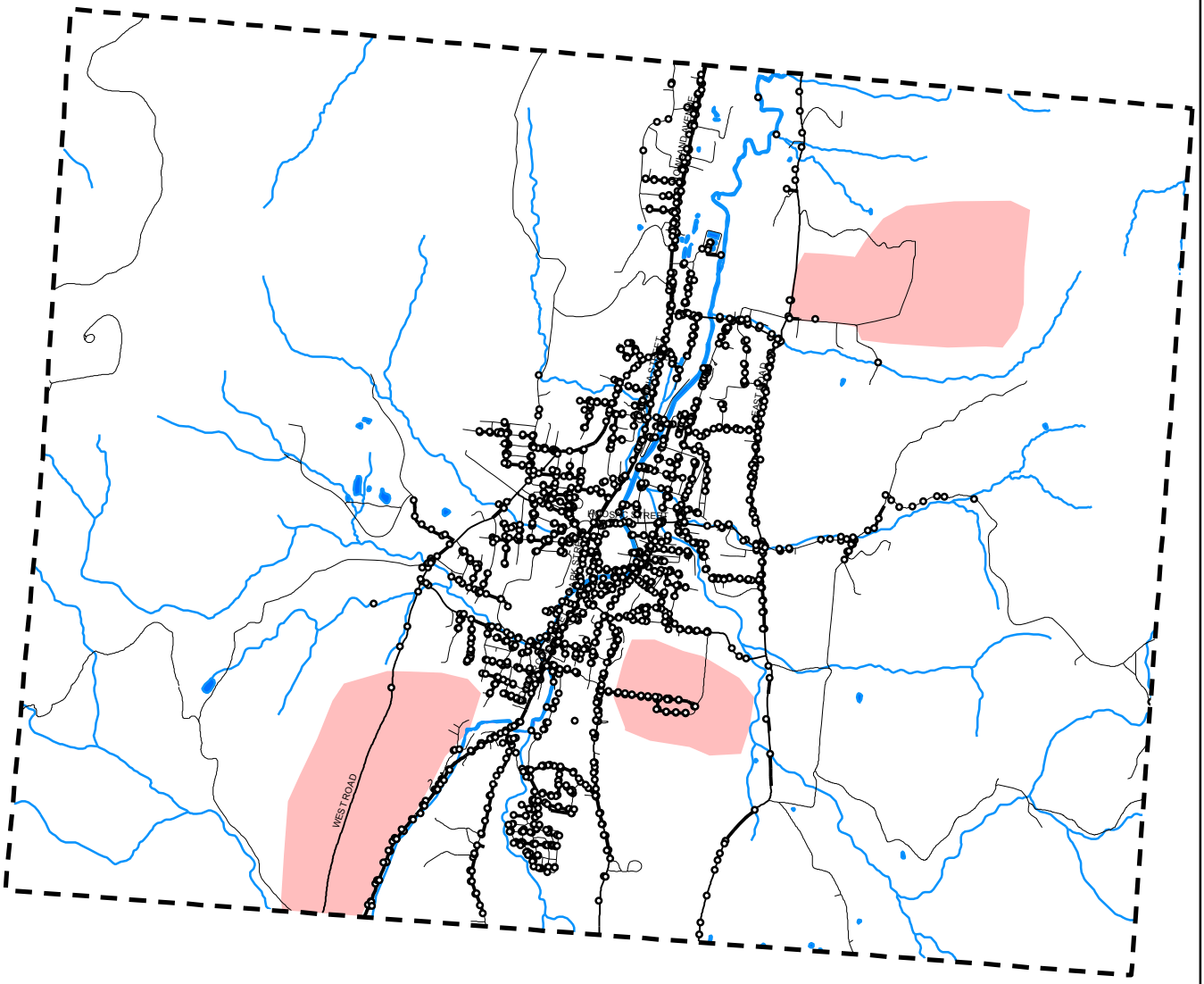
- Crop Land
- Forest
- Wetland
- Mining
- Open Land
- Participation Recreation
- Multi-Family Residential
- Residential less then 1/4 acre lots
- Residential between 1/4 and 1/2 acre lots
- Residential greater then 1/2 acre lots
- Commercial
- Industrial
- Urban Open
- Transportation
- Waste Disposal
- Water
- Stream, Brook
- Lake, Pond

Data Sources: MassGIS

Figure 2-2

Land Use

Adams, Massachusetts



Catch Basin
Storm Drain
GrowthAreas

Data Sources: Town of Adams, MassGIS

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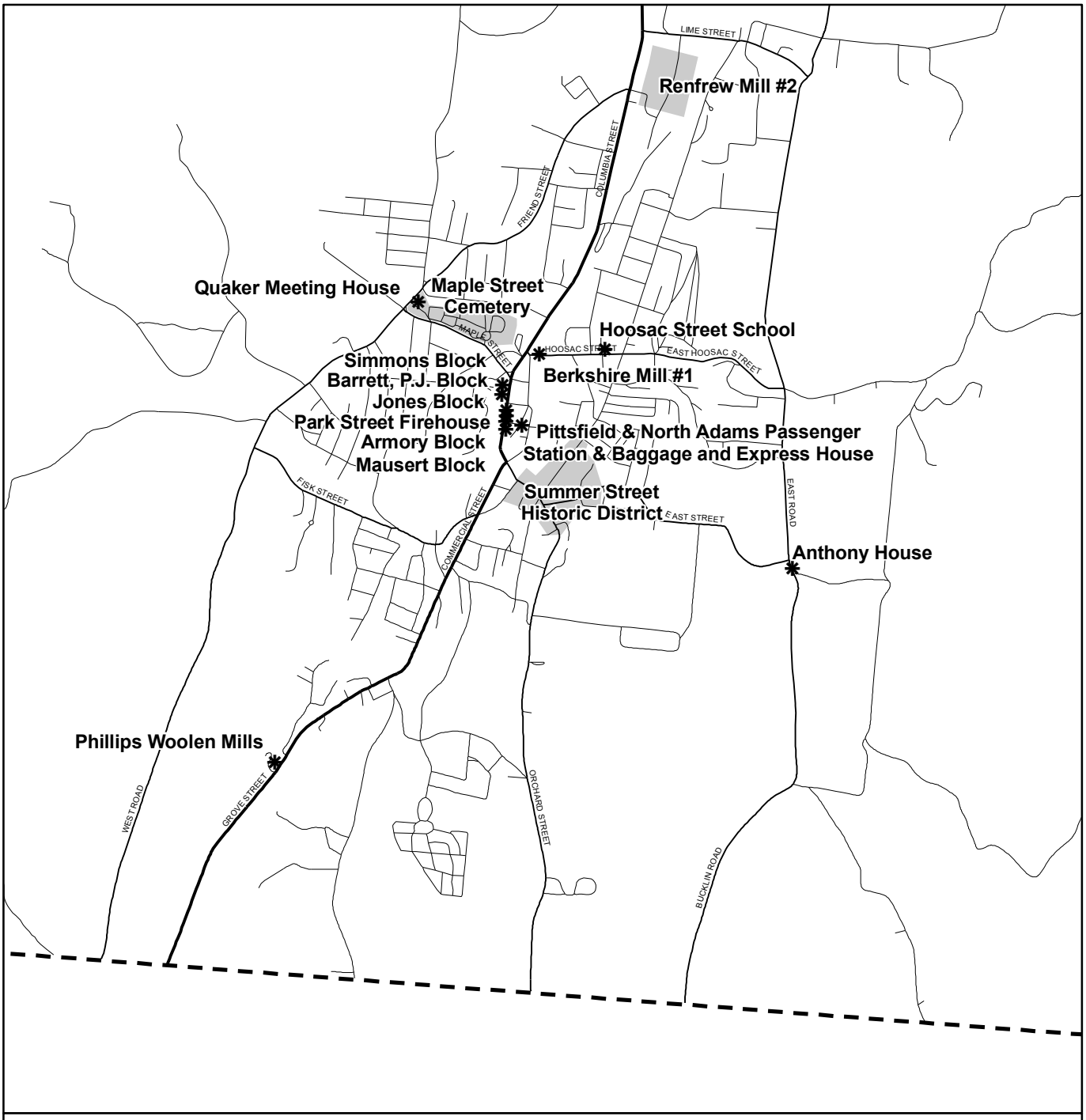
Figure 2-3

Potential Growth Areas

Adams, Massachusetts



Historic Properties

Historic Properties

Data Sources: MassGIS

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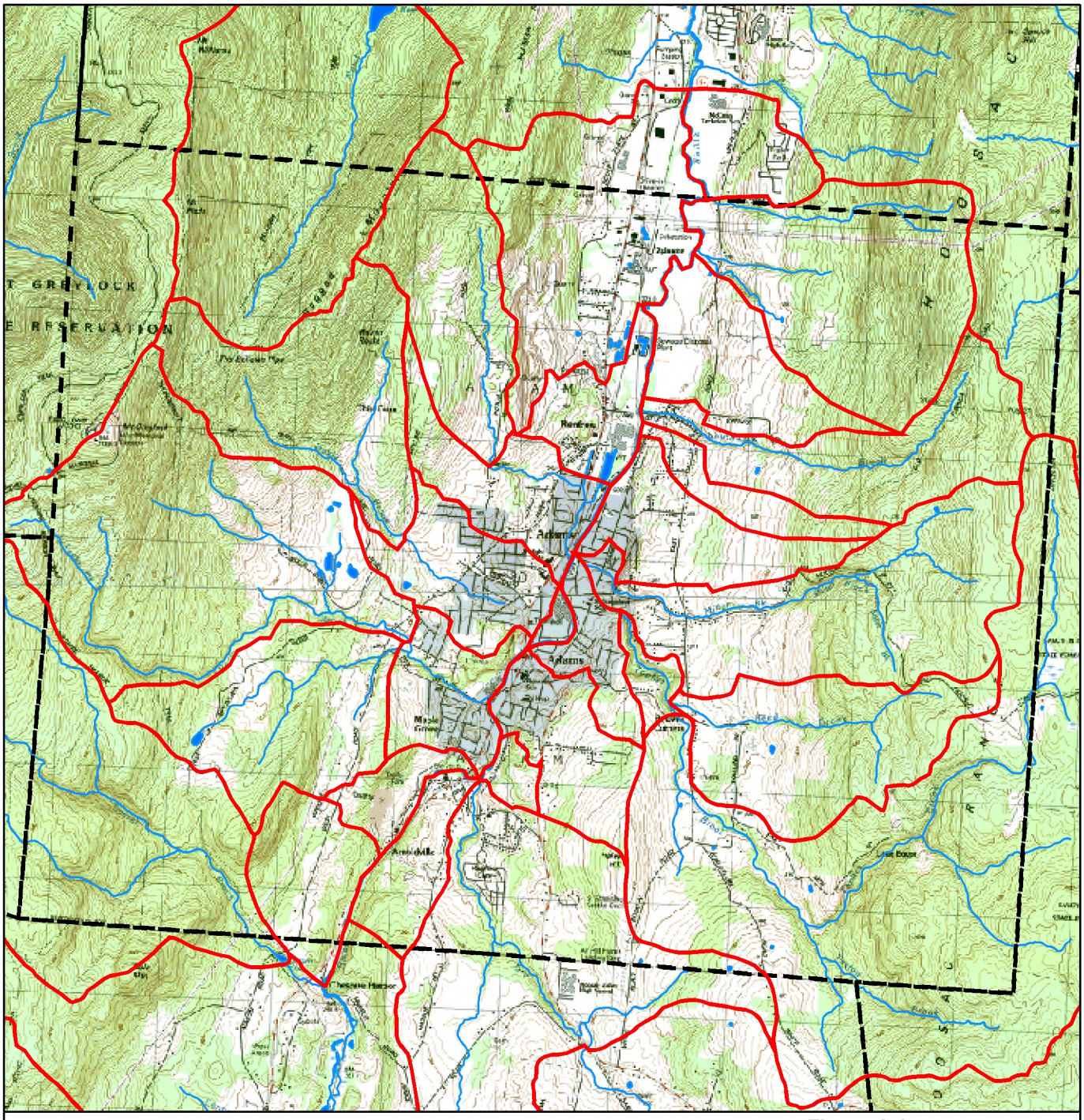
Figure 2-4

Historic Properties

Adams, Massachusetts



Drainage Subwatershed
Stream, Brook
Lake, Pond
Town Boundary

Data Sources: MassGIS, USGS

0 2,500 5,000 7,500 Feet

N W E S

Figure 3-1

USGS Quadrangle with Subwatershed Boundaries

Adams, Massachusetts

Comprehensive Environmental Inc.

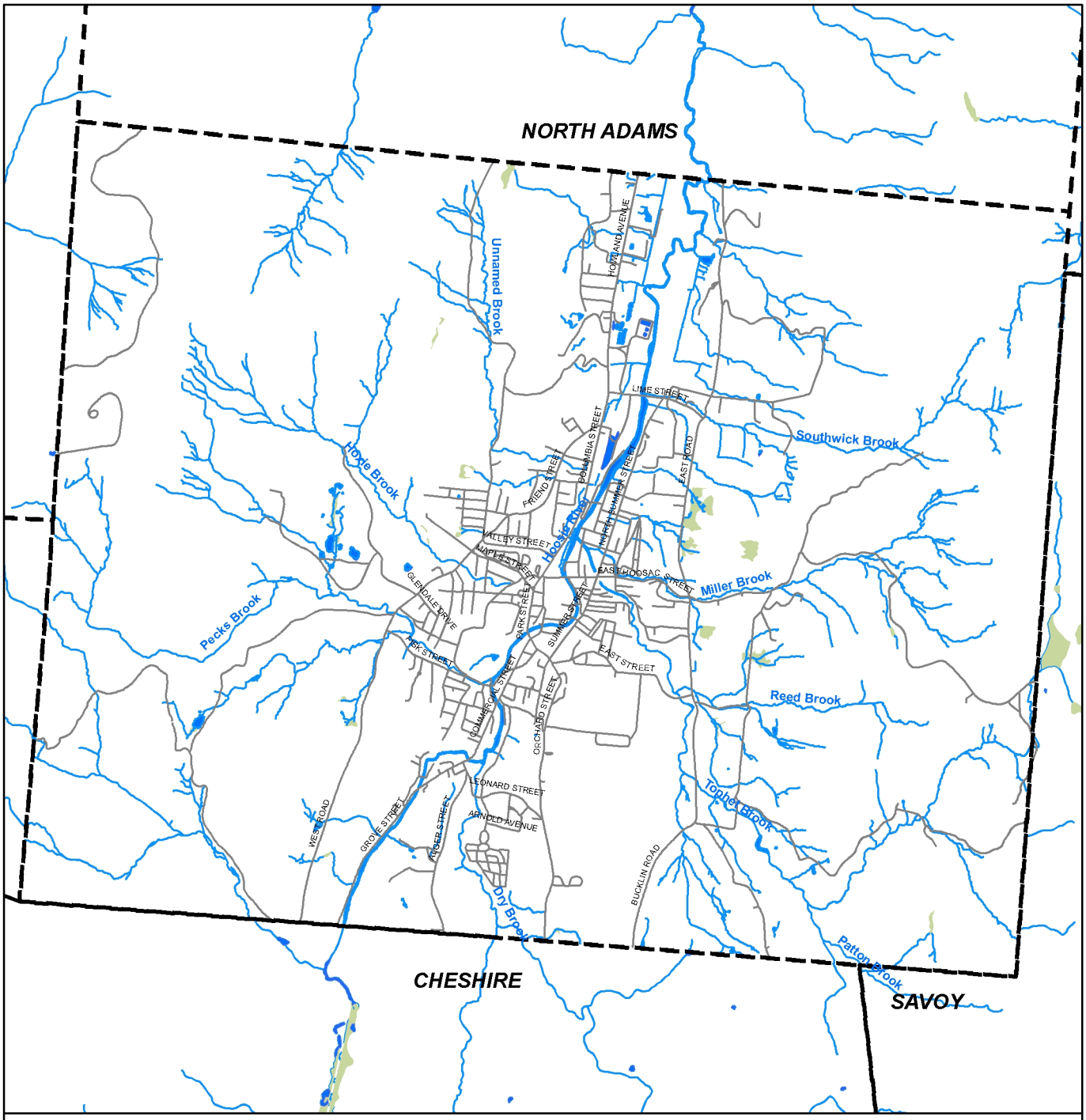


Figure 3-2

Hydrographic Characteristics

Adams, Massachusetts

Stream, Brook
Lake, Pond
Wetland

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Data Sources: MassGIS, USGS

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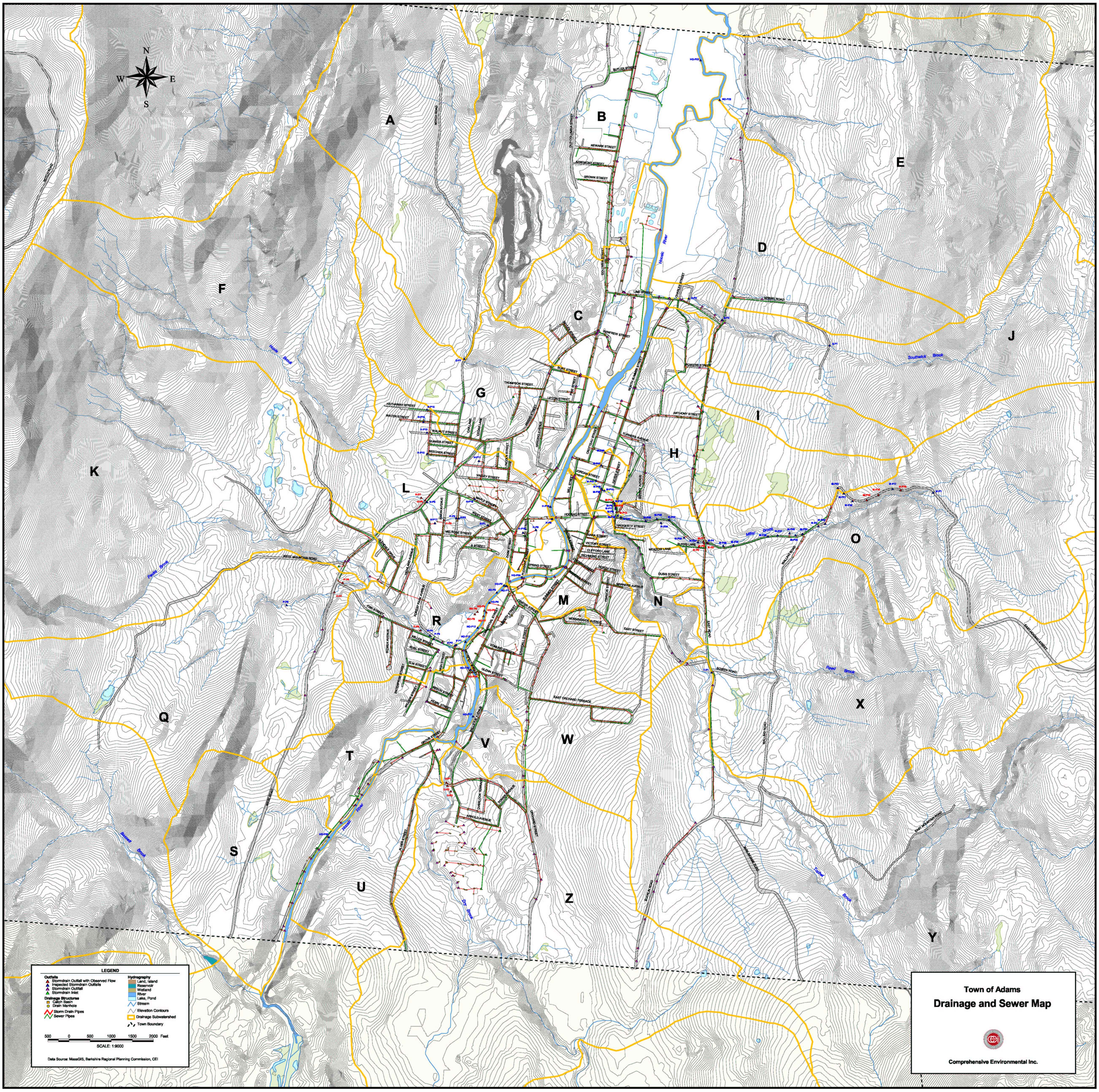
Comprehensive Environmental Inc.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Y
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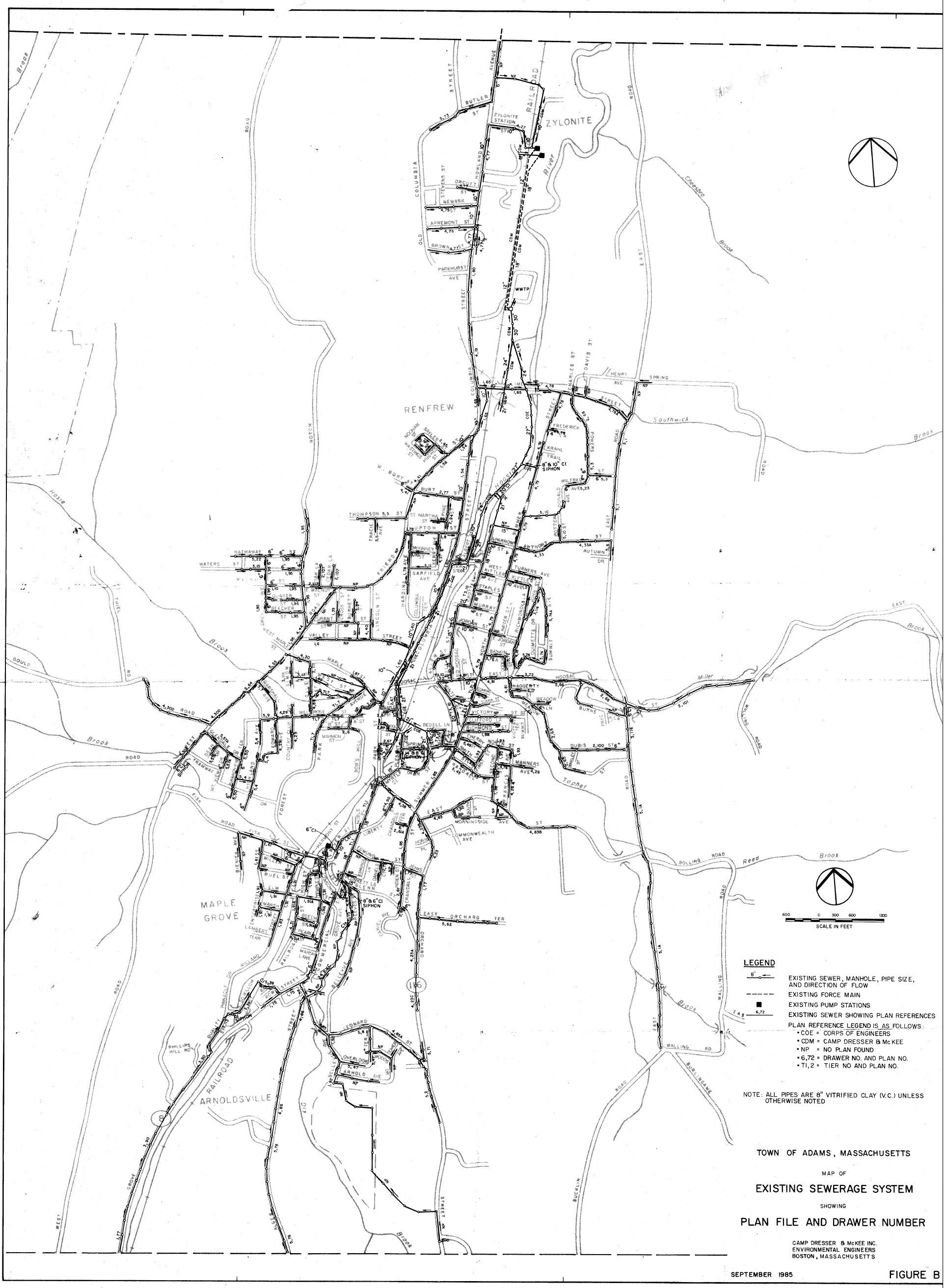
Hoosic River
Southwick Brook
Hoosic River
Dry Brook
Tophet Brook
Bassett Brook
Pease Brook
Miller Brook
Sand Brook
LEGEND
Outfalls
Stormdrain Outfall with Observed Flow
Inspected Stormdrain Outfalls
Stormdrain Outfall
Stormdrain Inlet
Drainage Structures
Catch Basin
Drain Manhole
Storm Drain Pipes
Sewer Pipes
Hydrography
Land, Island
Reservoir
Wetland
River
Lake, Pond
Stream
Elevation Contours
Drainage Subwatershed
Town Boundary
500 0 500 1000 1500 2000 Feet
SCALE: 1:9000
Data Source: MassGIS, Berkshire Regional Planning Commission, CEI
Town of Adams
Drainage and Sewer Map
Comprehensive Environmental Inc.



DR. 5
PL. 100A

General Notes

1. This map has not been modified from its original version and has been provided in support of the Adams Stormwater Mangement Strategic Plan, June 2003.

DATA SOURCES:

1. This map was generated from a scanned image of the original "Town of Adams, Massachusetts Map of Existing Sewerage System Showing Plan File and Drawer Number" by Camp Dresser & McKee Inc., September 1985. The scanned image was provided to CEI by the Town of Adams Department of Public Works.

No.	Revision/Issue	Date

COMPREHENSIVE ENVIRONMENTAL INCORPORATED
64 DILLA STREET
MILFORD, MA 01757

TOWN- WIDE SEWER MAP

ADAMS, MASSACHUSETTS

Project: 184-1	Sheet: 1 of 1
DRAWN BY: CHECKED BY:	Scale: As Shown
Date: 6-5-03	

APPENDIX 2 US FISH & WILDLIFE DETERMINATION

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To: September 18, 2018
Consultation Code: 05E1NE00-2017-SLI-1776
Event Code: 05E1NE00-2018-E-07339
Project Name: Adams MS4 NOI

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2017-SLI-1776

Event Code: 05E1NE00-2018-E-07339

Project Name: Adams MS4 NOI

Project Type: Guidance

Project Description: Compliance with EPA MA Small MS4 General Permit

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.62700349174704N73.11908199921993W

Counties: Berkshire, MA

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

APPENDIX 3 NATIONAL HISTORIC PRESERVATION ACT DETERMINATION

Town of Adams, MA
National Historic Preservation Act Compliance Determinization

Background

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of Federal "undertakings" on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. The term federal "undertaking" is defined in the NHPA regulations to include a project, activity, or program of a federal agency including those carried out by or on behalf of a federal agency, those carried out with federal financial assistance, and those requiring a federal permit, license or approval. See 36 CFR 800.16(y). Historic properties are defined in the NHPA regulations to include prehistoric or historic districts, sites, buildings, structures, or objects that are included in, or are eligible for inclusion in, the National Register of Historic Places. This term includes artifacts, records, and remains that are related to and located within such properties. See 36 CFR 800.16(1).

EPA's issuance of a National Pollutant Discharge Elimination System (NPDES) General Permit is a federal undertaking within the meaning of the NHPA regulations and EPA has determined that the activities to be carried out under the general permit require review and consideration, in order to be in compliance with the federal historic preservation laws and regulations. Although individual submissions for authorization under the general permit do not constitute separate federal undertakings, the screening processes provides an appropriate site-specific means of addressing historic property issues in connection with EPA's issuance of the permit. To address any issues relating to historic properties in connection with the issuance of this permit, EPA has included a screening process for applicants to identify whether properties listed or eligible for listing on the National Register of Historic Places are within the path of their discharges or discharge-related activities (including treatment systems or any BMPs relating to the discharge or treatment process) covered by this permit.

Applicants seeking authorization under this general permit must comply with applicable, State, Tribal, and local laws concerning the protection of historic properties and places and may be required to coordinate with the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer (THPO) and others regarding effects of their discharges on historic properties.

Activities with No Potential to Have an Effect on Historic Properties

A determination that a federal undertaking has no potential to have an effect on historic properties fulfills an agency's obligations under NHPA. EPA has reason to believe that the vast majority of activities authorized under this general permit will have no potential effects on historic properties.

This permit typically authorizes discharges from existing facilities and requires control of the pollutants discharged from the facility. EPA does not anticipate effects on historic properties from the pollutants in

the authorized discharges. Thus, to the extent EPA's issuance of this general permit authorizes discharges of such constituents, confined to existing channels, outfalls or natural drainage areas, the permitting action does not have the potential to cause effects on historical properties.

Certification

Upon completion of this screening process the Town of Adams certifies eligibility for this permit under Criterion A: The discharges do not have the potential to cause effects on historic properties.

The Town has followed the appropriate procedures to assist EPA in compliance with 36 CFR 800. The Town of Adams is a new facility under the Small MS4 General Permit and is not undertaking any activity involving subsurface land disturbance less than an acre.

The Town of Adams has certified eligibility for the permit using Criterion A on their Notice of Intent (NOI) for permit coverage and does not need to contact the state Historic Commission. The Town of Adams has certified this fact in writing within the NOI and filed the statement with the EPA. This certification will be maintained as part of the records associated with the permit both within the NOI and as an appendix to the Town's written stormwater management program. EPA will document that the project has "no potential to cause effects" (36 CFR 800.3(a)(1)).

APPENDIX 4 NOTICE OF INTENT

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part I: General Conditions

General Information

Name of Municipality or Organization: Adams State: MA

EPA NPDES Permit Number (if applicable):

Primary MS4 Program Manager Contact Information

Name: Donna E. Cesan Title: Interim Town Administrator

Street Address Line 1: 8 Park Street

Street Address Line 2:

City: Adams State: MA Zip Code: 01220

Email: dcesan@town.adams.ma.us Phone Number: (413) 743-8300

Fax Number: (413) 743-8309

Other Information

Stormwater Management Program (SWMP) Location
(web address or physical location, if already completed):

Eligibility Determination

Endangered Species Act (ESA) Determination Complete? Yes

Eligibility Criteria (check all that apply): ☐ A ☐ B ☒ C

National Historic Preservation Act (NHPA) Determination Complete? Yes

Eligibility Criteria (check all that apply): ☒ A ☐ B ☐ C

☐ Check the box if your municipality or organization was covered under the 2003 MS4 General Permit

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part II: Summary of Receiving Waters

Please list the waterbodies to which your MS4 discharges. For each waterbody, please report the number of outfalls discharging into it and, if applicable, the segment ID and any impairments.

Massachusetts list of impaired waters: Massachusetts 2014 List of Impaired Waters- http://www.mass.gov/eea/docs/dep/water/resources/07v5/14list2.pdf

Waterbody that receives flow from the MS4 and segment ID if applicable	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/ DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Hoosic River (MA11-03)	101	☐	☐	☐	☐	☐	☐	☐	☐	☐	Alteration in stream-side or littoral vegetative covers Other flow regime alterations Physical substrate habitat alterations Ambient Bioassays -- Chronic Aquatic Toxicity Fecal Coliform Temperature
Hoosic River (MA11-04)	9	☐	☐	☐	☐	☐	☐	☐	☐	☐	Alteration in stream-side or littoral vegetative covers Other flow regime alterations Fecal Coliform
Southwick Brook	16	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Hoxie Brook	3	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Miller Brook	29	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Pecks Brook (MA11-18)	15	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Tophet Brook (MA11-19)	11	☐	☐	☐	☐	☐	☐	☐	☐	☐	Alteration in stream-side or littoral vegetative covers Other flow regime alterations
Dry Brook (MA11-13)	8	☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
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Click to lengthen table

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary

Identify the Best Management Practices (BMPs) that will be employed to address each of the six Minimum Control Measures (MCMs). For municipalities/organizations whose MS4 discharges into a receiving water with an approved Total Maximum Daily Load (TMDL) and an applicable waste load allocation (WLA), identify any additional BMPs employed to specifically support the achievement of the WLA in the TMDL section at the end of part III.

For each MCM, list each existing or proposed BMP by category and provide a brief description, responsible parties/departments, measurable goals, and the year the BMP will be employed (public education and outreach BMPs also requires a target audience). **Use the drop-down menus in each table or enter your own text to override the drop down menu.**

MCM 1: Public Education and Outreach

BMP Media/Category (enter your own text to override the drop down menu)	**BMP Description**	**Targeted Audience**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal**	**Beginning Year of BMP Imple-mentation**
Brochures/Pamphlets	Insert in tax bill mailing	Residents	Tax Collector	Reduce pollution through improved behaviors	2019
Newspaper Articles/Press Releases	Newspaper articles and/or press releases to increase awareness of impacts to stormwater from businesses, institutions and commercial facilities	Businesses, Institutions and Commercial Facilities	Office of Community Development	Increase awareness	2021
Brochures/Pamphlets	Distribute brochures through building inspector	Developers (construction)	Building Inspector	Reduce pollution through improved construction practices	2020
Web Page	Resources for industrial facilities available through the Town's website	Industrial Facilities	Office of Community Development	Reduce pollution through improved industrial practices	2022
Displays/Posters/Kiosks	Display at Town Hall	Residents	Office of Community Development	Foster change and increase awareness	2020

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 2: Public Involvement and Participation

BMP Categorization	Brief BMP Description (enter your own text to override the drop down menu)	Responsible Department/Parties (enter your own text to override the drop down menu)	Additional Description/ Measurable Goal	Beginning Year of BMP Imple-mentation
Public Review	SWMP Review	Board of Selectmen	Allow annual review of stormwater management plan and posting of stormwater management plan on website	2019
Public Participation	Public Meeting - Stormwater	Board of Selectmen	Allow public to comment on stormwater management plan annually	2020
Public Participation	Household haz. waste/used oil collection	Northern Berkshire Solid Waste District	Household hazardous waste collection	2020
Public Participation	Partnership - Advocacy Groups	Hoosic River Watershed Association	Ongoing partnership with the Hoosic River Watershed Association	2019
Public Participation	Cleanups - Roadside/General	Berkshire County Sheriff's Office	Bi-annual roadside and general cleanups	2020
Public Participation	Catch Basin Stenciling/Markers	Community Development and Berkshire Arts & Technology Charter School	Collaboration between the Town & BART to educate students and increase public awareness	2021

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 3: Illicit Discharge Detection and Elimination (IDDE)

BMP Categorization (enter your own text to override the drop down menu)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal** (all text can be overwritten)	**Beginning Year of BMP Imple-mentation**
SSO inventory	Develop SSO inventory in accordance of permit conditions	DPW Operations	Complete within 4 years of effective date of permit	2019
Storm sewer system map	Create map and update during IDDE program completion	External Contractor	Create map within 5 years of effective date of permit and complete full system map 10 years after effective date of permit	2018
Written IDDE program	Create written IDDE program	External Contractor	Complete within 4 years of the effective date of permit and update as required	2020
Implement IDDE program	Implement catchment investigations according to program and permit conditions	Health Department	Complete 10 years after effective date of permit	2022
Employee training	Train employees on IDDE implementation	DPW Operations	Train annually	2019
Conduct dry weather screening	Conduct in accordance with outfall screening procedure and permit conditions	Massachusetts College of Liberal Arts and/or Hoosic River Watershed Ass	Complete 6 years after effective date of permit	2022
Conduct wet weather screening	Conduct in accordance with outfall screening procedure	Massachusetts College of Liberal Arts and/or Hoosic River Watershed Ass	Complete 10 years after effective date of permit	2022
Ongoing screening	Conduct dry weather and wet weather screening (as necessary)	Massachusetts College of Liberal Arts and/or Hoosic River Watershed Ass	Complete ongoing outfall screening upon completion of IDDE program	2023

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 4: Construction Site Stormwater Runoff Control

BMP Categorization (enter your own text to override the drop down menu or entered text)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal** (all text can be overwritten)	**Beginning Year of BMP Imple-mentation**
Site inspection and enforcement of Erosion and Sediment Control (ESC) measures	Complete written procedures of site inspections and enforcement procedures	Planning Board	Complete within 3 years of the effective date of permit	2019
Site plan review	Complete written procedures of site plan review and begin implementation	Planning Board	Complete within 3 years of the effective date of permit	2019
Erosion and Sediment Control	Adoption of requirements for construction operators to implement a sediment and erosion control program	Planning Board	Complete within 3 years of the effective date of permit	2019
Waste Control	Adoption of requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes	Planning Board	Complete within 3 years of the effective date of permit	2020

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP Categorization (enter your own text to override the drop down menu or entered text)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal** (all text can be overwritten)	**Beginning Year of BMP Imple-mentation**
As-built plans for on-site stormwater control	The procedures to require submission of as-built drawings and ensure long term operation and maintenance will be a part of the SWMP	Planning Board	Require submission of as-built plans for completed projects	2020
Target properties to reduce impervious areas	Identify at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually	DPW Construction	Complete within 6 years after effective date of permit and report annually on retrofitted properties	2021
Allow green infrastructure	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist	Planning Board	Complete within 6 years after effective date of permit and implement recommendations of report	2021
Street design and parking lot guidelines	Develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options.	Planning Board	Complete within 6 years after effective date of permit and implement recommendations of report	2023

Ensure any stormwater controls or management practices for new development and redevelopment meet the retention or treatment requirements of the permit and all applicable requirements of the Massachusetts Stormwater Handbook	Adoption, amendment, or modification of a regulatory mechanism to meet permit requirements	Planning Board	Complete no later than 3 years after effective date of permit	2019

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 6: Municipal Good Housekeeping and Pollution Prevention

BMP Categorization (enter your own text to override the drop down menu or entered text)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal** (all text can be overwritten)	**Beginning Year of BMP Imple-mentation**
O&M procedures	Create written O&M procedures including all requirements contained in 2.3.7.a.ii for parks and open spaces, buildings and facilities, and vehicles and equipment	DPW Operations	Complete and implement within 4 years after effective date of permit	2020
Inventory all permittee-owned parks and open spaces, buildings and facilities, and vehicles and equipment	Create inventory	DPW Operations	Complete within 4 years after effective date of permit and implement annually	2019
Infrastructure O&M	Establish and implement program for repair and rehabilitation of MS4 infrastructure	DPW Operations	Complete within 4 years after effective date of permit	2020
Stormwater Pollution Prevention Plan (SWPPP)	Create SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities	DPW Operations	Complete and implement within 4 years after effective date of permit	2019
Catch basin cleaning	Establish schedule for catch basin cleaning such that each catch basin is no more than 50% full and clean catch basins on that schedule	DPW Operations	Clean catch basins on established schedule and report number of catch basins cleaned and volume of material moved annually	2019
Street sweeping program	Sweep all streets and permitee-owned parking lots in accordance with permit conditions	DPW Operations	Sweep all streets and permitee-owned parking lots once per year in the spring	2019
Road salt use optimization program	Establish and implement a program to minimize the use of road salt	DPW Operations	Implement salt use optimization during deicing season	2019

Inspections and maitenance of stormwater treatment structures	Establish and implement inspection and maitenance procedures and frequencies	DPW Operations	Inspect and maintain treatment structures at least annually	2019

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

Actions for Meeting Total Maximum Daily Load (TMDL) Requirements

Use the drop-down menus to select the applicable TMDL, action description to meet the TMDL requirements, and the responsible department/parties. If no options are applicable, or more than one, **enter your own text to override drop-down menus.**

Applicable TMDL	Action Description	Responsible Department/Parties (enter your own text to override the drop down menu)

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

Actions for Meeting Requirements Related to Water Quality Limited Waters

Use the drop-down menus to select the pollutant causing the water quality limitation and enter the waterbody ID(s) experiencing excursions above water quality standards for that pollutant. In addition, if you are subject to additional requirements due to a downstream nutrient impairment (see Part 2.2.2 of the permit) select the pollutant of concern and indicate applicable waterbody IDs or write "all waterbodies" if applicable. Choose the action description from the dropdown menu and indicate the responsible party. If no options are applicable, or more than one, **enter your own text to override drop-down menus.**

Pollutant	Waterbody ID(s)	Action Description	Responsible Department/Parties (enter your own text to override the drop down menu)
Fecal Coliform	Hoosic River MA11-03	Adhere to requirements in part III of Appendix H	Office of Community Development, Tax Collector, DPW, and Health Dep
Fecal Coliform	Hoosic River MA11-04	Adhere to requirements in part III of Appendix H	Office of Community Development, Tax Collector, DPW, and Health Dep

Part IV: Notes and additional information

Use the space below to indicate the part(s) of 2.2.1and 2.2.2 that you have identified as not applicable to your MS4 because you do not discharge to the impaired water body or a tributary to an impaired water body due to nitrogen or phosphorus. Provide all supporting documentation below or attach additional documents if necessary.
Also, provide any additional information about your MS4 program below.

The Town of Adams does not have any discharges subject to requirements related to an approved TMDL. The Town of Adams is specified as discharging to waters, or tributaries of waters, that have been identified in an adjacent state's approved TMDL as being impaired due, in part, to MS4 stormwater discharges in Massachusetts. The Town is listed among the towns located in the watershed of Long Island Sound, which has an approved TMDL for nitrogen (Total Nitrogen).

The Town of Adams is not located within the watershed of the Long Island Sound. Instead, the Town of Adams is located entirely within the Hoosic River watershed which is located within the Hudson River watershed. Therefore, the Town is not subject to the requirements of Appendix F, part B.

The Town of Adams completed an Endangered Species Act (ESA) review and determined that the Town only contains the Northern Long Eared Bat. The Town of Adams certifies compliance with the Endangered Species Act under Criterion C. The Town's planned actions under the permit will have no effect on the Northern Long Eared Bat and the Town will consult with US Fish and Wildlife as needed during the permit term on any future BMPs.

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part V: Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Donna E. Cesan

Title: Interim Town Administrator

Signature: Donna E. Cesan Digitally signed by Donna E. Cesan Date: 2018.09.18 17:09:27 -04'00'

Date: 09/18/18

[To be signed according to Appendix B, Subparagraph B.11, Standard Conditions]

Note: When prompted during signing, save the document under a new file name

NOI Submission

Please submit the form electronically via email using the "Submit by Email" button below or send in a CD with your completed NOI. You may also print and submit via mail using the address below if you choose not to submit electronically. The outfall map required in Part I of the NOI (if applicable) can be submitted electronically as an email attachment OR as a paper copy.
Permittees that choose to submit their NOI electronically by email or by mailing a CD with the completed NOI form to EPA, will be able to download a partially filled Year 1 Annual Report at a later date from EPA. (40 CFR 122.22)

Submit by Email

Submit by email using this button. Or, send an email with attachments to: stormwater.reports@epa.gov

Save

Save NOI for your records

EPA Submittal Address:

United States Environmental Protection Agency
5 Post Office Square - Suite 100
Mail Code - OEP06-1
Boston, Massachusetts 02109-3912
ATTN: Newton Tedder

State Submittal Address:

Massachusetts Department of Environmental Protection
One Winter Street - 5th Floor
Boston, MA 02108
ATTN: Fred Civian

APPENDIX 5 TRANSMITTAL FORM

Please wait...

If this message is not eventually replaced by the proper contents of the document, your PDF viewer may not be able to display this type of document.

You can upgrade to the latest version of Adobe Reader for Windows®, Mac, or Linux® by visiting http://www.adobe.com/go/reader_download.

For more assistance with Adobe Reader visit http://www.adobe.com/go/acrreader.

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