

Atkinson, New Hampshire

Natural Resources

KEY FINDINGS:

- Currently, 10% of Atkinson's land area has been permanently conserved, and this conservation land is town owned and managed.
- An additional 9.9% of Atkinson is protected open space land associated with Cluster Developments, but not all of these parcels are accessible to the public.
- 36% of Atkinson's Tier 1 Habitat - the highest ranked habitat in the state - is conserved. Ranked habitats show where habitats in the best ecological condition in the state are located, based on biodiversity, arrangement of habitat types on the landscape, and lack of human impacts.
- According to the State's Wildlife Connectivity Model, there are four identified blocks in Atkinson that are identified as priority habitat.
- Rare habitats in Atkinson include grasslands, peatlands, temperate swamps, wet meadows/shrublands. Grasslands cover 388 acres in Atkinson which is 5% of the total land area, and 12% of all grasslands are conserved. Considering only 8% of grasslands in New Hampshire are currently under conservation easements, Atkinson is ahead in the conservation of this rare habitat.
- Appalachian oak-pine forests are the most common forest type in Atkinson covering 43% of the town, of which one quarter (25%) are protected. This data was derived from the State of NH Wildlife Action Plan data without regard to property ownership and much of this forested land in Atkinson consists of trees growing on homeowners' properties.

DATA SOURCES:

- NH GRANIT, Conservation/Public Lands
- NH Wildlife Action Plan
- 2022 Atkinson Land Conservation Plan
- 2011 Atkinson Natural Resource Inventory
- Atkinson Conservation Commission
- Atkinson Water Committee
- 2020 Atkinson Hazard Mitigation Plan
- 2021 PFAs Focused Site Investigation Work Plan
- Shoreland Water Quality Protection Act (SWQPA) Summary
- NHDES's Guide to Groundwater Reclassification
- NHDES's Guide to Groundwater Protection
- NHDES's Groundwater Resources in New Hampshire: Stratified-Drift Aquifers
- Hampstead Area Water Company
- NHDES's Assessments of Public Water Supply Sources – Atkinson
- NHDES's Drinking Water Source Assessment Program (DWSAP) Plan
- Regulated MS in New Hampshire Communities
- Atkinson's MS4 Webpage
- Assessments of Public Water Sources
 - Merrimack River-Shawsheen River to East Meadow River Watershed: Lake Assessments and River Assessments
 - Little River Watershed: Lake Assessments and River Assessments
 - Lower Spickett River Watershed: Lake Assessments and River Assessments

- Atkinson is fortunate enough to have 10 Town Forests that total about 580 acres as of December 2022.
- Atkinson sits at a higher elevation relative to the Spickett River Watershed and the Powwow River – Merrimack River Watershed. This indicates that the quality of most of the water begins in Atkinson. Therefore, it is the responsibility of Atkinson to consider the downstream impacts of the various land uses in the community.
- The Spickett River Watershed accounts for 62% of the town's area, and the Powwow River – Merrimack River Watershed accounts for 38%.
- As identified in the 2022 Land Conservation Plan, Atkinson has eight Prime Wetlands: Hall Farm Pond, Hog Hill Brook, Hovey Meadow Wetland, Steward Pond Farm, Sawmill Swamp East, Sawmill Swamp West, Wright Farm Pond, Bryant Brook.
- Atkinson has limited stratified drift aquifers with only 7% of the town containing these aquifers. 15 acres in Atkinson are considered high yielding stratified drift aquifers.
- Atkinson's potential contamination sites are mostly located in the northwest part of town in the industrial zone and near NH 111.

INTRODUCTION

One of the many challenges communities face is the need to balance development pressures with available open space and natural resources. In Atkinson's case, the town has demonstrated a devotion to the protection of its natural resources. Rivers, streams, grasslands, soils, aquifers, watersheds, and nearly all natural resources have their own demarcation methods that do not apply to jurisdictional boundaries, and there is value in exploring what is happening both within Atkinson's boundaries and beyond into neighboring towns. This Natural Resource Profile coincides with the recently released 2022 Atkinson Land Conservation Plan and provides supplemental information that will inform the Master Plan.

LAND COVER – FORESTED LAND

This section is based on the 2019 National Land Cover Database (NLCD) and helps explain the amount of forested land in Atkinson.

Towns	Total Acreage in Town	Acreage of Forested Land	% of Town	Protected Forested Acres	% Forested Land Protected
Atkinson	7,258	3,811	53%	828	22%
Derry	23,226	12,168	52%	1,723	14%
Hampstead	9,014	4,518	50%	1,723	24%
Plaistow	6,790	2,736	40%	650	24%
Salem	16,569	4,047	24%	629	16%

Although the NLCD resolution is 30m x 30m, it can provide a helpful overview at the municipal scale. Atkinson is 53% forested, which is a combination of deciduous, evergreen, and mixed forests. Atkinson has a total of 3,811 acres of forested land of which 828 acres or 22% is protected. According to the 2011 Natural Resource Inventory, Atkinson had 4,127 acres of

forested lands at that time, which was 56.7% of the town. This represents a 3.7% decrease in forested land cover since 2011. Table 1 compares the percentage of forested land in surrounding communities. As shown in Table 1, Atkinson has the highest percentage of forested land at 53%. Though Atkinson's percentage of protected forested land is not the highest when compared to neighboring towns, Atkinson is not far behind at 22% of protected forest land.

WILDLIFE ACTION PLAN – HABITAT TYPES & RANKED HABITATS

The NH Fish & Game Department, along with many partners across the state, updated the Wildlife Action Plan (WAP) in 2020. The WAP includes two sets of data:

1. Habitat land cover – shows where the different types of wildlife habitat are located throughout the state; and
2. Highest ranked habitat by ecological condition – shows where habitats in the best ecological condition in the state are located, based on biodiversity, arrangement of habitat types on the landscape, and lack of human impacts.

The Wildlife Action Plan details relative to Atkinson can be found in the 2022 Land Conservation Plan identified on Map 9 also shown at the end of this profile.

Habitat Types

Appalachian oak-pine is the most common habitat type in Atkinson as it makes up nearly half of the town at 43%. 25% of the Appalachian oak-pine habitat is protected in Atkinson. This data was derived from the State of NH Wildlife Action Plan data without regard to property ownership and much of this forested land in Atkinson consists of trees growing on homeowners' properties. This habitat type is common below 900-foot elevation in the southern part of the state and is known for a diverse age and vegetative structure promoting wildlife diversity. Because of their expansiveness, many large wildlife species depend on this habitat for part or all their life cycle including black bears.

The second largest habitat type in Atkinson is Hemlock-Hardwood-Pine which covers 6% of the town and 16% is protected. The Hemlock-Hardwood-Pine species is the most common forest type in New Hampshire covering nearly 50% of the state. These forests are dominated by hemlock, white pine, beech, and oak trees and have a highly variable composition considering their ability to occur on different elevations, soil types, and topography. When conservation of Hemlock-Hardwood-Pine is done in large unfragmented blocks, it can provide important habitat for some of New Hampshire's largest fauna such as black bears and bobcats.

Grasslands cover 388 acres or 5% of the total land area of Atkinson, and 12% of grasslands are protected. Considering only 8% of grasslands in New Hampshire are currently under conservation easements (<https://www.wildlife.state.nh.us/habitat/types.html>), Atkinson is ahead in the protection of this rare habitat. Comprised of grasses, sedges, and wildflowers, grassland communities provide ideal habitat for state endangered and threatened species of wildlife.

There are several other rare habitat types found in Atkinson which include:

Peatlands, which the state has determined are of extreme importance for carbon sequestration and vital to many rare plants and wildlife species that depend on them. Though there are only 22 acres (0.03%) in town. It is important to note that this is an extremely rare habitat in New Hampshire and 50% of this peatland habitat in Atkinson is protected.

Temperate Swamps, contain four Atlantic white cedar communities in New Hampshire and pitch pine-heath swamps, which are rare and typically associated with Pine Barrens. Additionally, hemlock is common in temperate swamps throughout New Hampshire. In Atkinson, there are 212 acres of these swamps in town that make up 3% of the town. Almost half (44%) of the temperate swamps in Atkinson are protected.

Wet Meadows/Shrublands, which are often grouped into three broad habitat categories: wet meadows, emergent marshes, and scrub-shrub wetlands. These habitats are important for flood management, are typically controlled by groundwater, and are vital food sources for many threatened and endangered wildlife species. In Atkinson, there are 254 acres or 4% of the town designated as wet meadows/shrublands and 53% have been protected.

Peatlands, temperate swamps and wet meadows/shrublands are rare habitat types in New Hampshire and together account for a total of 12% of Atkinson's land area. Of those habitats, a little over one-third (33%) have been protected.

Ranked Habitats

As mentioned, the above-described habitat types are identified as rare habitat types in the NH Wildlife Action Plan. If the town wants to focus conservation efforts on these habitats, Atkinson could utilize the Prioritized Habitat sections described below identify the largest unfragmented areas where these habitat types are

Table 2: Wildlife Action Plan – Total Priority Habitat for all 3 Tiers				
WAP Tier	Acres in Town	Percent of Town	Protected Acres	Percent Protected
Tier 1: Highest Ranked Habitat in State	156	2%	56	36%
Tier 2: Highest Ranked Habitat in Biological Region	58	1%	55	95%
Tier 3: Supporting Landscapes	519	7%	204	39%

found. This helps determine the high priority areas relative to the town's conservation interests. In fact, these priority areas are also identified in the 2022 Land Conservation Plan, and the corresponding habitat tiers are identified on Map 9 completed by Rockingham Planning Commission and included at the end of this profile. As identified in Table 2, Tier 1 habitats (those that are ranked the highest ranked habitat in the state) account for 2% of Atkinson's total

land area as classified in the NH Wildlife Action Plan and 36% are protected. For Tier 2 habitats (lands that are highest ranked in the biological region) Atkinson has 58 acres in total, which is only 1% of the land area. Tier 2 is Atkinson's highest percentage of protected lands at 95% protected. Tier 3 habitats, also known as supporting landscapes, total 519 acres accounting for 7% of the town's land area and 39% are protected. These wildlife tiers can be found on the Land Conservation Plan's Map 9: Wildlife Habitat Features at the end of this profile.

GENERAL AND AGRICULTURAL SOILS

The 2011 Atkinson Natural Resource Inventory explains soils as *"a principal determinant of the land's development capability, particularly in areas that rely on subsurface waste disposal (conventional septic systems)"*. The depth to the water table and bedrock, and susceptibility to flooding, both affect the suitability of a site for roads, buildings and septic systems. The 2022 Land Conservation Plan and 2011 Natural Resource Inventory identify that Atkinson has five soil types in town that are listed and described in Table 3 below.

Table 3: General Soil Types in Atkinson	
Soil Type	Description
Canton-Chatfield-Hollis	Well drained and somewhat excessively drained, very deep to shallow, mineral and loamy soils that are gently sloping to steep; form mountains, hills and ridges that have many basins and narrow drainageways
Hinckley-Windsor-Canton	Very deep excessively drained soils derived from glacial outwash; form eskers, kames, terraces, deltas and outwash plains
Canton-Montauk-Paxton	Well drained, loamy soils that are gently sloping to steep; form broad hills, and found in wide areas between hills, and in many narrow
Paxton-Woodbridge-Hollis	Well drained and somewhat excessively drained soils that formed in (compact) glacial till; form hills and ridges
Canton-Scituate-Montauk	Very deep, moderately well drained soils formed in compact glacial till

Agricultural Soils

Atkinson was once considered a major farming community, though agriculture activity has declined throughout the southern New Hampshire region over the decades. Despite there not being many farms left in town, Atkinson has a significant amount of state and locally identified important agricultural soils. It should be noted that of the state and locally identified important

agricultural soils in Atkinson, there are some parcels with agricultural soils that are developed on, and some are forested.

The 2011 Natural Resource Inventory identified that Atkinson’s agricultural soil lands can be classified in three groups based on the character of the soils and their suitability for crop production.

Prime Farmland – is land which has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods. Atkinson has a total of 2,118 acres of Prime Farmland soils or 29% of the town’s total land area of which 12% or 262 acres is protected.

Farmland Soils of Statewide Importance – According to the USDA-Soil Conservation Service, Land Inventory and Monitoring (LIM) System, Farmlands of State Importance are rated as being of statewide importance for the production of food, feed, fiber, forage, and oilseed crops. They can be farmed by greater input of fertilizer and erosion control practices and will produce fair to good crop yields when managed properly. Atkinson has a total of 1,387 acres of Farmland of Statewide Importance soils or 19% of the town of which 14% (198 acres) is protected.

Farmland Soils of Local Importance – Farmland of Local Importance is either currently producing crops, has the capability of production, or is used for the production of confined livestock. Farmland of Local Importance is land other than Prime Farmland or Farmland of Statewide Importance. This land may be important to the local economy due to its productivity or value. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.

TOPOGRAPHY AND SLOPE

The 2011 Natural Resource Inventory includes comprehensive information about the geologic landscape of Atkinson. These features have not changed significantly since 2011, but this important information is summarized and compiled below.

The topography of Atkinson differs throughout town with scattering hills separated by steams, brooks, and large wetland complexes. Elevations range from a high of 426 feet to 295 feet from above sea level. Table 4 is from the 2011 Natural Resource Inventory and identifies major topographic features and their corresponding elevations in Atkinson.

Table 4: Major Topographic Features and Elevations in Atkinson	
Topographic Feature	Elevation (feet)
Hog Hill	426.5
Providence Hill	337.9
Pine Knoll	377.3
Bragg Hill	308.4
Poor’s Hill	295.3

Slope

Slope is the relative steepness or pitch of a piece of land and can be measured in the form of percentages calculated by dividing the difference in elevation of two points by the distance between those two points. Slopes from 0% to 3% are usually associated with wetlands, and are not well drained. Areas with slopes from 3% to 8% and favorable soils are generally ideal for development. Construction on slopes from 8% to 15% will require extra care to provide proper drainage and soil stabilization. As described in the 2011 Natural Resource Inventory (NRI), *“for the purposes of zoning and regulation, most communities define steep slopes in the range of 15 and 20%.”* Development on steep slopes requires greater land disturbances to construct roads and buildings, as well as more infrastructure to manage runoff and prevent erosion. The NRI identifies goals for limiting and/or regulating land-based activities on steep slopes.

WATER RESOURCES

Atkinson’s water resources play a significant role in the services, health, and quality of life within the town. It is important to analyze this critical resource further to identify the existing water supply, water quality, and related potential or existing water-related concerns in town. High quality groundwater, surface waterbodies, wetlands, streams, and other water sources provide many services that benefit community members and the shared natural environment. These resources also help to define the rural character of the town.

Watersheds

The following section describes the watersheds that Atkinson lies within, as well as provides an important understanding of how Atkinson’s geographical location within these watersheds influence the surface waters within and beyond the town’s jurisdictional boundaries. The entirety of Atkinson lies within the Merrimack River Watershed. This large watershed has a classification of a HUC8. The smaller the HUC number, the larger the watershed is. The Merrimack River Watershed is made up of several smaller sub watersheds (fourteen HUC10 watersheds) however, the Town of Atkinson lies within two of these HUC10 sub watersheds: the Spickett River Watershed and the Powwow River-Merrimack River Watershed. All streams within the Merrimack River Watershed flow into the Merrimack River, so all streams that originate in Atkinson, or are flowing into and through Atkinson, end up in the Merrimack River. It is important to recognize Atkinson’s location within these watersheds to understand how the water flows into Atkinson from other communities and out of Atkinson into neighboring communities further downstream.

A total of 8 miles of the Merrimack River Watershed streams flow into Atkinson from upstream waters such as the Spickett River Watershed. No additional streams flow into Atkinson when going from the HUC10 watershed to the larger HUC8 watershed. Therefore, this indicates that the primary upstream surface water source into Atkinson is by the flow of water from the Hog Hill Brook from Hampstead. To clarify, this shows that Atkinson doesn’t have many upstream

surface water considerations because of the location of the town. Atkinson sits at a higher elevation within the Spickett River Watershed and the Powwow River-Merrimack River Watershed and therefore only 8 miles of the Hog Hill Brook flows into Atkinson from Hampstead. Due to Atkinson's location sitting at a higher elevation within these two HUC10 watersheds, this means that most of the water in Atkinson originates in town. The town's location also indicates that Atkinson has a high responsibility to ensure positive surface water quality measures because the town's runoff ends up in downstream towns.

The Spickett River Watershed accounts for 62% of Atkinson whereas the Powwow-River – Merrimack River Watershed accounts for 38% of town. These two watersheds are on average 53% forested. This indicates that there is a significant amount of opportunity for future conservation efforts of forested lands within these watersheds should the town chose to consider. The two watersheds in Atkinson have an average of 22% of conserved forested land. It should be noted that this conserved land is in reference to both protected and conserved lands including open space lands. This shows that the Town of Atkinson has done a fairly good job of conserving forested land across the watersheds in town. This also shows that Atkinson is concerned about water quality in Atkinson as well as the quality of water that flows out of Atkinson to other communities downstream.

SURFACE WATER

This surface water section provides information on the existing rivers, streams, wetlands, and other waterbodies in Atkinson; as well as provides insight on the importance of

waterbody buffers and describes Atkinson's land area containing surface waters. Atkinson has approximately 21 miles of streams and rivers accounting for only seven named tributaries (brooks) within its boundaries, ranging in stream order classification from first order to third order. For stream order classifications, the larger the number, the larger the stream or river size. As shown in Table 5, 63% of all streams in Atkinson are first order streams which are typically smaller streams. A visual of the location of the streams in Atkinson by stream order can be found on the Atkinson Ordered Streams Map on the following page.

Table 5: Atkinson Stream Orders			
Stream orders	Description	Miles	Percent of streams
1	Connect smaller wetland complexes and form headwater drainages from nearby hills	12.9	63%
2	Typically connect large wetlands	4.5	22%
3	Complexes located in wide valleys between hills	3.2	16%
Total		20.6	100%

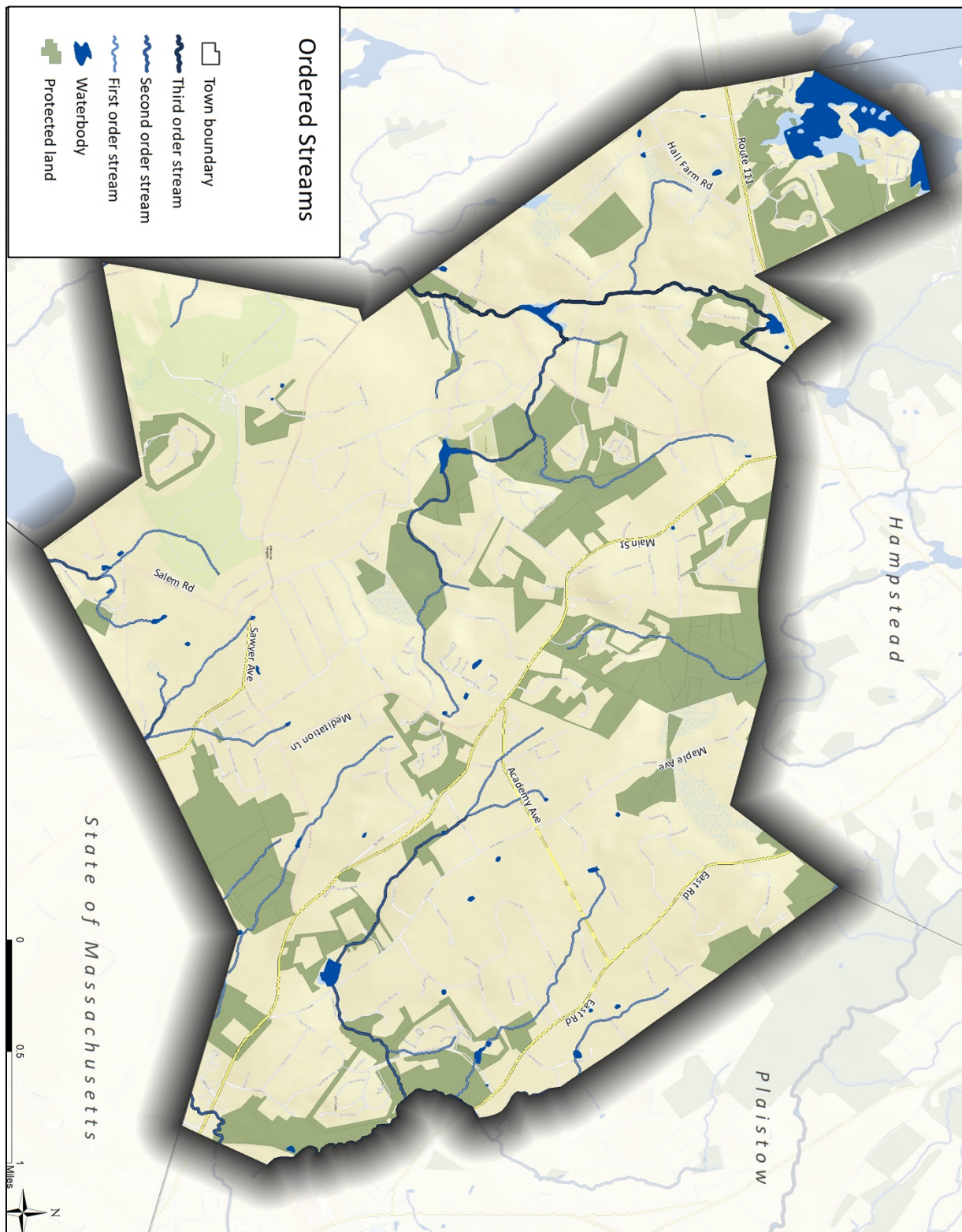


Table 6 identifies a list of the rivers and streams in Atkinson, the corresponding New Hampshire Department of Environmental Services (NHDES) waterbody identification number, what watershed the stream/river is located in, as well as its geographical location within town. The geographic location descriptions depicted in Table 6 can also be found in the 2011 Atkinson Natural Resource Inventory (NRI).

Table 6: Rivers and Streams in Atkinson			
NHDES Waterbody ID #	NHDES Stream Name	Watershed	NRI Geographical Location
NHRIV700061102-04 & 05 & 06	Hog Hill Brook- Unnamed brook	Lower Spickett River	Headwaters in the northwest corner; drains south to Salem
NHRIV700061102-08	Hog Hill Brook - Providence Hill Brook	Lower Spickett River	Tributary of Hog Hill Brook; drains west to Salem
NHRIV700061401-06 & 07	Foote Brook	Little River	Headwaters in southern area; small impoundment at mid-point; drains south to Haverhill, MA
NHRIV700061102-01	Unnamed Brook – To Johnson Pond	Lower Spickett River	-
NHRIV700061401-05	Unnamed to Blunts Pond	Little River	-
NHRIV700061401-11	Unnamed Brook	Little River	-
NHRIV700061102-07	Unnamed Trib. To Captain Pond	Lower Spickett River	-
NHRIV700061402-01	Creek Brook	Merrimack River- Shawsheen River To East Meadow River	Headwaters in extreme southern area; joins unnamed tributary at town/state border; drains south to Haverhill, MA
NHRIV700061402-02	Unnamed Brook	Merrimack River- Shawsheen River To East Meadow River	
NHRIV700061401-10	Camp Brook	Little River	Headwaters in extreme southern

			area; drains to Haverhill, MA
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Wetlands

The National Wetlands Inventory, managed by the US Fish & Wildlife Service, is the most comprehensive dataset on wetland abundance, distribution, and detailed characteristics. This dataset identifies permanently flooded areas like lakes and ponds as well as other wetland types. Atkinson only has 93 acres of permanently flooded waterbodies accounting for 1% of the town's area. Seasonally flooded/saturated wetlands account for 475 acres or 7% of town of which 47% are protected. Other wetland types exist in Atkinson to a limited degree, this includes semi-permanently flooded and temporarily flooded wetlands. Almost half (49%) of Atkinson's wetlands (excluding permanent waterbodies) have been protected; 42% of all wetlands in Atkinson have been protected.

In Atkinson, 1,137 acres or 16% of the town's total land area is composed of hydric soils of which 33% are protected. Hydric Soils, as identified by NHDES, are soils that are saturated or flooded during the growing season sufficient to produce anaerobic conditions in the upper soil layers. As identified in Atkinson's 2022 Land Conservation Plan, Atkinson has eight identified prime wetlands: Hall Farm Pond, Hog Hill Brook, Hovey Meadow Wetland, Steward Pond Farm, Sawmill Swamp East, Sawmill Swamp West, Wright Farm Pond, Bryant Brook.

Atkinson's hydric soils and prime wetlands are shown on Map 7 – Wetlands of the 2022 Land Conservation Plan (included as an addendum to this Existing Conditions Report). For more information on Atkinson's prime wetlands, refer to Section 4 of the Land Conservation Plan.

THE SHORELAND WATER QUALITY PROTECTION ACT (SWQPA)

The Shoreland Water Quality Protection Act (SWQPA) includes all lands within 250 feet of the following waterbodies:

- All lakes and ponds greater than 10 acres.
- All 4th order and greater streams and rivers and most designated rivers, including sections less than 4th order.
- All waters subject to the ebb and flow of the tide.

There is only one pond in Atkinson that is greater than 10 acres and fits the requirements for SWQPA which is Big Island Pond. Big Island Pond is in the extreme northwest corner of Atkinson, with a large portion of the lake located in the Town of Hampstead to the north and east and Derry to the west. Approximately 218 acres of Big Island Pond is located within Atkinson. A list of Atkinson's ponds and major streams can be found in Table 7. More than one quarter (28%) of the SWQPA area is protected. For more information on the SWQPA refer to Atkinson's 2011 Natural Resource Inventory.

WATER QUALITY ASSESSMENT

This following water quality assessment is based on data collected from the New Hampshire Department of Environmental Services (NHDES), and the programs and tools NHDES uses to evaluate Atkinson's water quality. The Surface Water Quality Assessment Program from the NHDES provides a thorough report card of water quality assessments every two years for many of the state's rivers, lakes, and beaches. Each waterbody is assessed on (1) aquatic life integrity, (2) fish consumption, (3) potential drinking water supply, (4) primary contact recreation, (5) secondary contact recreation, and (6) wildlife. Figure 1 describes these rankings.

In a cursory exploration of the NHDES 2020/2022 Consolidated Assessment and Listing Methodology (CALM), which provides a full understanding of how the Surface Water Quality Standards are translated into assessments, there was no discussion of the impact from agricultural pollution/runoff. For Atkinson to better understand the role of agricultural pollution/runoff, the Town could contact NHDES for more information.

Table 7 shows the overall assessment for the ponds and streams in Atkinson. All waterbodies received a poor grade for fish consumption because of mercury, and although many of the waterbodies do not have data, all of them received a good assessment for potential public drinking water supply. Based on data from NHDES shown in Table 7, there appears to be concerns for Island Pond for Primary Contact Recreation as it was ranked as poor by the state. The town may consider mitigating efforts to address this rating.

Figure 1:		Severe	Poor	Likely Bad	No Data	Likely Good	Marginal	Good
		Not Supporting, Severe	Not Supporting, Marginal	Insufficient Information – Potentially Not Supporting	No Data	Insufficient Information – Potentially Full Supporting	Full Support, Marginal	Full Support, Good
CATEGORY	Description							
Category 2	Meets standards						2-M or 2-OBS	2-G
Category 3	Insufficient Information			3-PNS	3-ND	3-PAS		
Category 4	Does not Meet Standards;							
4A	TMDL* Completed	4A-P	4A-M or 4A-T					
4B	Other enforceable measure will correct the issue.	4B-P	4B-M or 4B-T					
4C	Non-pollutant (i.e. exotic weeds)	4C-P	4C-M					
Category 5	TMDL* Needed	5-P	5-M or 5-T					

* [TMDL](#) stands for Total Maximum Daily Load studies

Table 7: Ponds and Major Streams in Atkinson								
Waterbody ID #	Waterbody Name	Aquatic Life Integrity	Fish Consumption	Public Drinking Water Supply	Primary Contact Recreation	Secondary Contact Recreation	Wildlife	Assess. Unit Category
NHLAK700061101-01-01	Island Pond	5-M	4A-M	2-G	5-M	2-G	3-ND	5-M
NHIMP700061102-04	Country Club Pond	3-ND	4A-M	2-G	3-ND	3-ND	3-ND	3-ND
NHIMP700061401-05	Wildlife Pond	3-ND	4A-M	2-G	3-ND	3-ND	3-ND	3-ND
NHIMP700061401-03	Foote Brook – Private Swimming Pool	3-ND	4A-M	2-G	3-ND	3-ND	3-ND	3-ND
NHIMP700061102-01	Hog Hill Brook	3-ND	4A-M	2-G	3-ND	3-ND	3-ND	3-ND

For detailed assessments of each stretch of river/stream/waterbody, refer to the Watershed River Assessments referenced on page 1 under Data Sources. An interactive web map, the 2020/2022 Surface Water Quality Assessment Viewer, can be found there. This tool allows users to identify particular lakes, rivers, and waterbodies and their associated assessment every two years dating back to 2008.

There are three ponds considered impaired based on the NHDES assessments. They are listed in Table 8. These "*impaired surface waters*" don't have much impact on Atkinson and only represent a small percentage of town. This is because Captain Pond is located within Salem, NH and the Kelly Brook – Seaver Brook is located within Plaistow, NH though their wetland buffers extend slightly into Atkinson

Table 8: Surface Waters with Impairments			
Waterbody name	Acres in Town	Percent of Town	Impairment
Island Pond	281	4%	Chlorophyll-a, Cyanobacteria hepatotoxic microcystins, Phosphorus (total)
Captain Pond	48	1%	Chlorophyll-a, Dissolved oxygen saturation, Phosphorus (total)
Kelly Brook - Seaver Brook	34	0.5%	Benthic-Macroinvertebrate Bioassessments (streams), Dissolved oxygen saturation, Escherichia coli, Dissolved Oxygen (mg/L)
Total	363	5%	-

which accounts for their small percentage in town. Although not included by NHDES as surface waters with impairments, there are local concerns for Blunt's Pond as well because of the large amount of eutrophication that is caused by nutrients, (mostly lawn fertilizers) that flow into it.

GROUNDWATER

This groundwater section provides information on Atkinson's groundwater resources such as the types of aquifers in Atkinson and their relative percentage of development or forested land cover based on the 2019 National Land Cover Database. The types of aquifers are classified based on their ability to percolate water through subsurface material (ground). An aquifer's ability to pass water through the ground to recharge the groundwater is known as

transmissivity. The “Groundwater-Resources in New Hampshire: Stratified Drift Aquifers” document describes stratified-drift aquifers as primarily layers of sand and gravel deposited by glacial meltwater from retreating glaciers. Only 7% of Atkinson’s land area is over stratified drift aquifers. The document “Ground-Water Resources in New Hampshire: Stratified Drift Aquifers” further explains the complex concept of transmissivity:

“...the higher the value of hydraulic conductivity, the more readily water can flow through the aquifer material. Aquifers that have a large, saturated thickness, and are composed of material with high hydraulic conductivity, will have a high transmissivity and can readily transmit water to wells”.

More than one third (35%) of all land on top of aquifers has been protected. However, 39% of low producing aquifers have been developed and 35% are still forested. 56% of land above moderate producing aquifers has been developed and contains no forested land. Moderate producing aquifers are classified as the less than 1,000 square feet per day and 1,000-2,000 square feet per day transmissivity. There are many variables that determine the impact of development over aquifers including specific pollution compounds, upstream contaminants, soil type, and others. Atkinson’s stratified drift aquifers are in the extreme west part of town along the Salem, NH town line and are also located in the extreme east and southeast of Atkinson along the Plaistow, NH, and Haverhill, MA, town lines. A map of Atkinson’s aquifers can be found on Map 6 – Groundwater, Aquifers (USGS 1992) in the 2022 Land Conservation Plan and has been included at the end of this profile.

If the town identifies groundwater resources as a high natural resource priority, there are many measures the town can explore. Municipalities are authorized to develop local groundwater protection programs, a result of New Hampshire’s Groundwater Protection Act from 1991. The groundwater classifications for GA2 are “*potentially valuable stratified drift aquifers defined by USGS, no land use prohibitions, and no active management*” as identified in the NHDES Groundwater Reclassification Document. Only a small area (15 acres) in Atkinson is considered a GA2 area. This area is located in the western side of Atkinson at the Salem town line. For approaches to groundwater protection refer to the NH Department of Environmental Services Guide to Groundwater Protection and to understand the process to reclassify groundwater to GAA or GA1, refer to the NH Department of Environmental Services A Guide to Groundwater Reclassification.

WATER SUPPLY

This section highlights Atkinson’s existing water supply and issues related to water quantity in town. As identified in the Town Facilities and Services Profile of this Existing Conditions Report, Hampstead Area Water Company (HAWC) services 1,426 connections in Atkinson or about 3,565 people. This means that about half (49%) of the town’s population is tied into the HAWC system. The other approximately 51% of Atkinson’s population are on private wells. There are a total of forty-three public water systems in Atkinson in which eighteen are active. It should be noted that most Atkinson’s active public water supply wells are bedrock wells and there is only

one active gravel-packed well in town. New Hampshire Department of Environmental Services only releases public water supply data as public information, therefore data on private wells and private water supplies in Atkinson is limited.

According to a NHDES 2021 Environmental Factsheet, *“Most bedrock wells for household use are 200 to 500 feet deep; some are over 1,000 feet. The median depth of bedrock wells in New Hampshire is approximately 400 feet. The median yield is 15 gallons per minute (gpm)”*. In Atkinson, there are five bedrock wells that are over 500 feet but the overall average well depth of the active public wells in Atkinson is about 400 feet which corresponds with the states average well depth. There are six active bedrock public water supply wells in Atkinson that have a yield lower than the state’s median which is 15 gpm. This indicates that Atkinson’s wells supply less gallons per minute (gpm) than that of the state’s average. Approximately 39% of Atkinson’s active public wells have a below average yield per minute.

Expansion of Regional Water Supply Infrastructure

The State of New Hampshire’s (NHDES) largest regional water distribution system interconnection project was conducted in the Southern New Hampshire communities of Derry, Windham, Plaistow, Salem, and with the Hampstead Area Water Company (HAWC) which serves the towns of Atkinson and Hampstead. This project was implemented because of water supply issues in these communities due to a reduction in supply capacity from contamination of local wells, and because of the region’s growing population. Phase one of this project began in 2016 by creating a regional water pipeline from Manchester Water Works (Lake Massabesic water supply) to Derry, Windham, Salem, HAWC (Atkinson and Hampstead), and Plaistow. Phase 2 involved sending 7.15 million gallons of water per day to the Hookset pump station of which 3.1 million gallons of water per day gets sent down to southern New Hampshire through Derry. Since 2020, HAWC (Atkinson & Hampstead) have been tied into this regional pipeline water supply. Hampstead Area Water Company receives 250,000 gallons of water per day from this pipeline to supply Atkinson and Hampstead.

POTENTIAL CONTAMINATION

The following section discusses NHDES identified potential contamination sites in Atkinson and the importance of monitoring these locations in order to prevent contamination in Atkinson and downstream of the town. The Watershed Section of this profile identified Atkinson’s location in relation to surrounding towns within the larger watersheds. This information helps identify Atkinson’s potential downstream impacts to water resources. The town contains higher elevation lands within each of the smaller sub-watersheds it falls within. This indicates that the quality of most of the water begins in Atkinson. Therefore, it is the responsibility of Atkinson to consider the downstream impacts of the various land uses in the community.

There are a total of nine active potential contamination sites within the 250-foot SWQA buffer. Table 9 and 10 identify that eleven percent (10 total) of the active potential contamination sites in Atkinson are underground storage tanks. Table 9 shows the total potential contamination

sites in Atkinson. However, Table 10 compares the number of active potential contamination sites in Atkinson with those that are within the 250-foot SWQPA buffer – these numbers look very different.

Table 9: Atkinson – Total Potential Contamination Sites					
Site type	Number active	Number inactive	Number declassified	Other	Total number
Aboveground Storage Tank	13				13
Nonsecure Environmental Monitoring Sites	15				15
Hazardous Waste Generators	5	17	2		24
Local Potential Contamination Sources	19				19
Remediation Sites	25	22		10	57
Solid Waste Facilities	2	2			4
Underground Storage Tank	10				10
Total	89				142

Table 10: Atkinson SWQPA - Potential Contamination Sites within the SWQPA						
Site type	Number active	Number inactive	Number declassified	Applied for	Other	Total number
Aboveground Storage Tank	2					2
Nonsecure Environmental Monitoring Sites	5					5
Hazardous Waste Generators		4				4
Local Potential Contamination Sources						0
Remediation Sites	1	3			1	5
Solid Waste Facilities	1					1
Total	9					17

NHDES has identified these local potential contamination sites/sources in town. These potential contamination sites/sources are mostly concentrated in the northwest part of town. Not coincidentally, these potential contamination sites are also located in Atkinson's Industrial Zone along Industrial Way and off NH 111. Additionally, other potential contamination sites are located in the center of town near the Atkinson Fire Department, as well as downstream of Main Street (NH 121). This indicates that there should be some concern about Atkinson's land

use development in relation to the community's impacts on water resources. A visual of where these potential contamination sites in Atkinson can be found is provided on Map 6 – Groundwater, Aquifers from the Land Conservation Plan. This map is also included at the end of this profile. This map also shows the Wellhead Protection Areas that are described later on in this section.

PFAs (Per- and Polyfluorinated Substances)

According to New Hampshire Department of Environmental Services, PFAs are a group of chemicals that have been increasingly found in our environment and throughout the state. *“Some PFAS do not break down easily and can move through soil, get into groundwater, and be carried through air. Because they are stable chemicals and move so easily in the environment, some PFAS have been found far away from where they were made or used”*. In March 2021, the NHDES Waste Management Division completed a PFAs Focused Site Investigation Work Plan in Atkinson. Between December 2019 and March 2020, NHDES sampled six private wells for 26 PFAs on Academy Avenue. Each location was sampled once, and one of the locations was sampled twice. Academy Avenue is the detected source of PFAs contaminants due to the cleaning of fire trucks at the Atkinson Fire Department and the associated runoff. The results of these samplings showed that at two locations, two PFAS were detected at concentrations exceeding their respective Ambient Groundwater Quality Standards (AGQS) (up to 19 times higher). These PFAs are perfluorooctanoic acid (PFOA) and perfluorohexane sulfonic acid (PFHxS). Regulated PFAS were detected at three other locations below their respective AGQS. Regulated PFAS were not detected at one location. Ambient Groundwater Quality Standards (AGQSS) are groundwater standards established by the State of New Hampshire that are intended to be protective of groundwater as a source of drinking water.

WELLHEAD PROTECTION AREAS

Using data from the NHDES identified potential contamination sites in Atkinson, this section describes the identified types of potential contamination sites that fall within wellhead protection areas. About half of the properties in town utilize private wells as their primary water source. The wellhead protection areas can be seen on Map 6 – Groundwater, Aquifers Map found at the end of this profile. While there are potential contamination sites scattered around the wellhead protection areas, there are two main pockets. (1) near the intersection of Main Street and Academy Avenue, and (2) in the northwest corner near NH 111. Table 11 identifies that there are a total of 86 potential contamination sites located within wellhead protection areas in Atkinson. However, there are a total of 52 active potential contamination sites within these wellhead protection areas. Wellhead protection areas account for 55% or 3,965 acres of Atkinson.

Table 11: Atkinson - Potential Contamination Sites WITHIN Wellhead Protection Area (WPA)					
Site type	Number active in WPA	Number inactive	Number declassified	Other	Total number
Aboveground Storage Tank	7				7
Nonsecure Environmental Monitoring Sites	6				6
Hazardous Waste Generators	4	8	1		13
Local Potential Contamination Sources	10				10
Remediation Sites	16	15		8	39
Solid Waste Facilities	2	2			4
Underground Storage Tank	7				7
Total	52	25	1	8	86

WATER QUALITY AND QUANTITY CHALLENGES IN ATKINSON

In order to address the water quality and quantity concerns in Atkinson, it is important to first identify what the water issues in town are and what areas of town these are most present in. In terms of water supply, in 2018, about 30 private wells went dry near Kent Farm. Residents in this area either had to drill new wells as they were dealing with dry wells, or their wells had issues with contamination and residents had to install filtration systems. The wells near this neighborhood are bedrock wells which typically replenish themselves with water running through seams in the rock. This left many residents of this area reliant on bottled water for their drinking water supply. This neighborhood begins along Main Steet in Hampstead but includes a portion of Atkinson as well.

Due to the operations of Johnson and Johnson Company in the 1980's, located on NH 111, there have been 1-4 Dioxane contaminants discharged to Atkinson's groundwater. Many Atkinson residents' water supplies have been contaminated as a result, and in order to address these and other contamination issues the Southern New Hampshire Regional Pipeline expansion was implemented.

WATER RESOURCE COMMITTEE

The Atkinson Water Resource Committee was formed by the Board of Selectmen in 2021. The Committee consists of six members two of which act as a liaison to the Conservation Commission and the Board of Selectmen. The four remaining members are appointed for three-year terms. The Atkinson Water Resource Committee was formed to serve as an advisory and educational resource to the Town of Atkinson and its residents on issues concerning environmental sustainability, with a focus on water access, quality, conservation, economics,

education, and regulation. The Committee also serves as the primary advisor to the Select Board on all issues pertaining to water resources. The Committee's duties are:

1. To monitor via the NH DES OneStop website the Registered Water User (RWU) water usage in the town and report the usage to the Select Board;
2. To first bring to the Atkinson Select Board all water related issues which may affect the town or neighboring towns;
3. Track and report on relevant water issues at the state level, specifically legislative initiatives, DES and PUC actions which may affect Atkinson and neighboring towns;
4. Apply for grants that will enhance the future of water resources in our community.

STORMWATER MANAGEMENT

The Town of Atkinson participates in a Stormwater Management Program and maintains and manages a Municipal Separate Storm Sewer System (MS4). Below is a description of the program and MS4 system.

“Local drainage systems, whether natural or constructed, are important features that generally carry stormwater runoff away from developed areas to undeveloped areas, waterbodies, and wetlands. Although these drainage systems help to manage stormwater in our built environment, they are also a primary source of untreated pollutants in receiving waters including bacteria, nutrients oil, trash, and many other pollutants. These untreated pollutants in stormwater runoff are defined by the U.S. Environmental Protection Agency (EPA) as “nonpoint source pollution”, meaning that the source of the pollution is not directly attributable to a single spatial point or polluter. Stormwater runoff from streets, parking lots, and lawns picks up and carries contaminants as it moves across the ground surface before entering into local drainage systems.

A municipal separate storm sewer system (MS4) includes the stormwater collection, conveyance, and outfall structures within a city or town. These structures include (but are not limited to) catch basins, drain manholes, culverts, stormwater basins, and swales. As with approximately sixty other municipalities in NH, the Town of Amherst MS4 is regulated under the EPA Clean Water Act (CWA) and requires a permit for discharges to the environment”.

The 2021 Atkinson Stormwater Management Plan was updated in 2022. For more information on the Atkinson MS4 program visit: <https://www.town-atkinsonnh.com/town-administration/ms4>

PROTECTED LANDS

For the purposes of this section, protected lands include both conserved lands and open space lands. Conserved can be defined as acres that are mostly undeveloped and are protected from development. Atkinson has a total of 1,313 acres of protected land in which accounts for 18% of the town's total land area. As described in the 2022 Land Conservation Plan, *"to date, the town has protected more than 580 acres by purchasing and owning protected land, which represents roughly 8.7% of the buildable land in Atkinson"*. As shown in Table 12, in comparison with surrounding towns, Atkinson is one of the top two leading towns with the most acres protected.

Table 13 provides a list of protected lands by primary management in Atkinson. This table indicates the manager of these lands rather than the owner because it is common in Atkinson for the land to be owned by one entity and managed by another entity through

conservation easements, set aside areas (Open Space Cluster Developments), deed restrictions, or to be fee owned. Of the total 1,313 acres of protected land in Atkinson, the majority is managed and/or owned by the Town of Atkinson. The remaining lands are owned by qualified third party organizations, and or is under private ownership. This indicates that Atkinson is active in the conservation of the town and its residents are willing to invest in natural resource protection.

The 2022 Land Conservation Plan, prepared by the Rockingham Planning Commission (RPC) in collaboration with the Atkinson Conservation Commission, identified several locations in Atkinson for priority conservation. These priority areas for conservation were identified by creating a Co-Occurrence Map, which identifies areas in town that have multiple critical natural resource types ("co-occurring" in an area). After the analysis of Atkinson's existing conserved land, an inventory of natural resources, and identified conservation priorities, the Co-Occurrence Map was created in order to identify Atkinson's major natural resource priority locations. In addition to this map, the Land Conservation Plan (Section 5) presents a corresponding table and map (Table 5.1 and Map 5.3) that identify conservation attributes located within selected areas of Atkinson. For more information on how this co-occurrence map was created, and how conservation attribute locations in Atkinson were chosen, as well as what conservation attribute locations were chosen, visit Section 5 of the Land Conservation Plan.

Table 12: Protected Lands in Abutting Towns

Town	Total Acreage	Protected Acres	Percent Protected
Hampstead	9,014	1,676	19%
Atkinson	7,258	1,313	18%
Plaistow	6,790	834	12%
Derry	23,226	2,623	11%
Salem	16,569	1,597	10%

Table 13: Protected Lands in Atkinson by Manager

Manager	Acres	Percent of Protected Lands in Atkinson
Town of Atkinson	1,265	96%
Town of Hampstead	2	0.2%
Rockingham County Conservation District	19	1.4%
Society for the Protection of NH Forests	7	0.5%
Southeast Land Trust	2	0.2%
Other	18	1%
Total	1,313	100%

TOWN FORESTS

Atkinson is fortunate enough to have 10 Town Forests that total about 580 acres as of December 2022. The Town Forest properties are also registered tree farms and are overseen by the Conservation Commission. The town also routinely consults with professional foresters to maintain the health and viability of the Town Forest properties through implementation of forest best management practices. As identified in the 2022 Land Conservation Plan, since 1985, the Conservation Commission has worked with a consulting forester to update the management plans for the Town Forest properties to keep them productive and aesthetically maintained. The management plans for the Town Forests in Atkinson can be found on the Atkinson Town website under the Conservation Commission. Table 14 lists the Town Forests in Atkinson and its total acreage. For more information on the town forests see the 2022 Land Conservation Plan.

Table 14: Atkinson Town Forests	
Site Name	Acreage
Chambers – Fila Town Forest	48.83
Caroline Orr Town Forest	61.19
Ruth McPherson Town Forest	28.46
Sawyer Town Forest	146.55
Chadwick Town Forest	50.67
Slade Town Forest	18.8
Judge Marshall Town Forest	32.04
Sawmill Town Forest	102.35
Stickney Town Forest	34.44
Ruth Marshall Town Forest	57.1

Some recent projects within the town forests that the Conservation Commission is working on as of December 2022 include:

- Stickney Town Forest selectively logged in order to provide new growth forest for wildlife.
- The town is in the process of acquiring a 15-acre parcel at the end of Knightland Road (adjacent to Sawmill Ridge Development open space). This parcel is already surrounded by conserved land and will extend the North Sawmill Swamp Town Forest.

PRIORITIZED HABITAT AND CORRIDORS

The NH Fish and Game Department, along with many other partners across the state created the NH Wildlife Connectivity Model using information derived from the state's Wildlife Action Plan. The NH Wildlife Connectivity Model is *"a basic, GIS-based, landscape permeability model that predicts broad-scale wildlife connectivity zones across the state"*. The analysis of this model indicates areas that are key for both land protection efforts and strategic locations for restoring connectivity in currently fragmented landscapes. The model is also based on the NH Wildlife Action Plan's identified rare habitat types, identified habitat corridors, and land cover types. The NH Wildlife Corridors map shows potential corridors that connect core areas of wildlife habitat that are over 50 acres in size and identified as a priority in the NH Wildlife Action Plan (Highest Ranked Habitat in NH and/or Highest Ranked Habitat in Biological Regions).

The NH Wildlife Connectivity Model was created to assist municipalities across the state identify where priority habitat is located within their communities. The NH Wildlife Corridors Map helps communities identify the key surrounding areas of these identified priority habitats which may

also have development pressures. Together, these resources can help drive community land use and policy decisions based on the character and vision of the community. The identified priority wildlife areas in Atkinson, that were identified by the state, are identified as Priority Habitat Blocks based on acreage. The subsections of this profile below present these specific Priority Habitat Blocks, and a corresponding table breaks down the districts based on the type of habitat that is located within that block and the amount of habitat that is currently protected in town. A visual of the priority habitat blocks and state identified habitat corridors can be found on the Atkinson, NH Prioritized Habitats Blocks and Corridors Map at the end of this profile.

Priority Habitat Blocks

The 2022 Atkinson Land Conservation Plan indicates conservation priorities for Atkinson as identified by the Conservation Commission. The Atkinson Conservation Commission identified that *“the Wildlife Action Plan conducted by NH Fish and Game paints a more realistic picture of the important wildlife areas in Atkinson, so ... those areas are included in the prioritization process”*. Other related conservation priorities identified in the Land Conservation Plan include the continuity of protected open space, as well as unfragmented blocks, and wildlife corridors and blocks. The discussion of priority habitat blocks as described below provides supplemental context to the Land Conservation Plan while following the Conservation Commission’s key priorities, and sheds light on the amount of already protected land due the Conservation Commissions previous land protection efforts.

The State has identified four blocks in Atkinson as priority habitat areas. Prioritized Habitat Blocks show core areas of wildlife habitat (areas over 50 acres in size that are a priority in the New Hampshire Wildlife Action Plan). The larger block numbers correspond with the higher acreages of these areas of prioritized habitat. The corresponding Prioritized Areas and Habitats Map located at the end of this profile provides a visual representation of where these blocks exist in town and corresponds with the Prioritized Habitat Block subsections.

Block 1

As shown in Table 15, three-quarters of Block 1 is Appalachian oak-pine habitat, which is a common habitat in southern New Hampshire. The entirety of Block 1 is protected.

Table 15: Prioritized Habitat Block 1				
Block Number	Total Block Acres	Habitat Type	Acres	Percent of Total Block
Block 1	42	Appalachian oak-pine	32	76%
		Hemlock-hardwood-pine	10	24%

Block 2

Identified in Table 16, 71% of Block 2 is Appalachian oak-pine habitat and 16% is composed of Hemlock-hardwood-pine habitat. Though both of these habitat types are common in the

state, these types of habitats still provide valuable homes and resources to wildlife and the town. The entirety of Block 2 is also protected.

Table 16: Prioritized Habitat Block 2				
Block Number	Total Block Acres	Habitat Type	Acres	Percent of Block
Block 2	55	Appalachian oak-pine	39	71%
		Developed impervious	1	2%
		Developed or barren land	3	5%
		Hemlock-hardwood-pine	9	16%
		Open water	1	2%
		Peatland	1	2%
		Wet meadow/shrub wetland	2	4%

Block 3

Table 17 identifies that nearly the entirety of Block 3 is grassland habitat which is classified as a rare habitat in the State of New Hampshire. In Atkinson, none of this identified priority habitat block is protected. This could be a focus of future conservation efforts if the town chooses.

Table 17: Priority Habitat Block 3				
Block Number	Total Block Acres	Habitat Type	Acres	Percent of Block
Block 3	74	Appalachian oak-pine	1	1%
		Developed impervious	1	1%
		Grassland	70	95%
		Open water	1	1%
		Temperate swamp	1	1%

Block 4

This Block accounts for a total of 113 acres, the largest acreage of the state identified habitat blocks in Atkinson. More than half of Block 4 is composed of wet meadow/shrub wetland which is a State classified rare habitat. 81% of Block 4 or 92 acres is protected.

Table 18: Priority Habitat Block 4				
Block Number	Total Block Acres	Habitat Type	Acres	Percent of Block
Block 4	113	Appalachian oak-pine	47	42%
		Hemlock-hardwood-pine	1	1%
		Peatland	1	1%
		Temperate swamp	1	1%
		Wet meadow/shrub wetland	63	56%

CONSERVATION TAKEAWAYS

Although there are only a few state-identified priority habitat blocks in Atkinson, much of those identified habitats that exist in Atkinson are already protected. If the town wants to add to its conservation priorities, the town could consider conserving/protecting rare habitats such as wet meadows/shrub wetland habitat found in Habitat Priority Block 4.

WILDLIFE CORRIDORS

Wildlife corridors connect these habitats so that wildlife can move between areas without significant fragmentation from developed land. As identified in the NH Wildlife Corridors 2018 Report, the NH Fish and Game Department (NHFG) partnered with the NH Department of Transportation (NHDOT) and NH Department of Environmental Services (NHDES) to research wildlife corridors in New Hampshire to address the following research topics:

1. Existing and needed wildlife corridors,
2. Voluntary mechanisms that affect wildlife corridors, and
3. Any existing statutes, rules, and regulations that affect wildlife corridors.

This research was then simulated within the NH Wildlife Connectivity Model. Atkinson's identified wildlife corridors surround the priority habitat areas so the town may wish to consider future conservation and protection of these wildlife corridors as it establishes its priorities for future conservation efforts. Additionally, as shown on Map 14: Connecting the Coast which is included in the Land Conservation Plan, the Conservation Commission identified Connecting the Coast Wildlife Habitats and Prioritized Blocks. For more information on Connecting the Coast prioritized habitat corridors and blocks in Atkinson, visit the Land Conservation Plan. The Conservation Commission included the Connecting the Coast wildlife corridors and prioritized habitat blocks in the Land Conservation Plan in order to help protect the surface waters and their immediate areas from development.

ATKINSON CONSERVATION COMMISSION

The Atkinson Conservation Commission is a volunteer organization empowered by state law to protect Atkinson's rural character by *"managing the existing conservation lands and educating the public on the benefits of protecting natural resources"*.

OPEN SPACE IN ATKINSON

Atkinson's open spaces play a vital role in the health and quality of life in town. Open space as identified in the Atkinson 2011 Natural Resource Inventory includes *"any lands that remain in a natural and undeveloped condition that contribute ecological, scenic or recreational value. The definition of open space may be expanded to include working lands (forests, agriculture, field corners, fence rows and abandoned pastures) and managed green space such as golf ranges, parks, and recreation areas"*. The 2022 Land Conservation Plan identifies that there are many

benefits to the community for preserving open space lands. Some of these benefits include Wildlife and Habitat Protection, water quality, drinking water and local groundwater aquifer protection, scenic and aesthetic values, historic landscape and resource preservation, agricultural uses and farmland production, air quality protection, flood impact prevention, and recreational uses and educational opportunities.

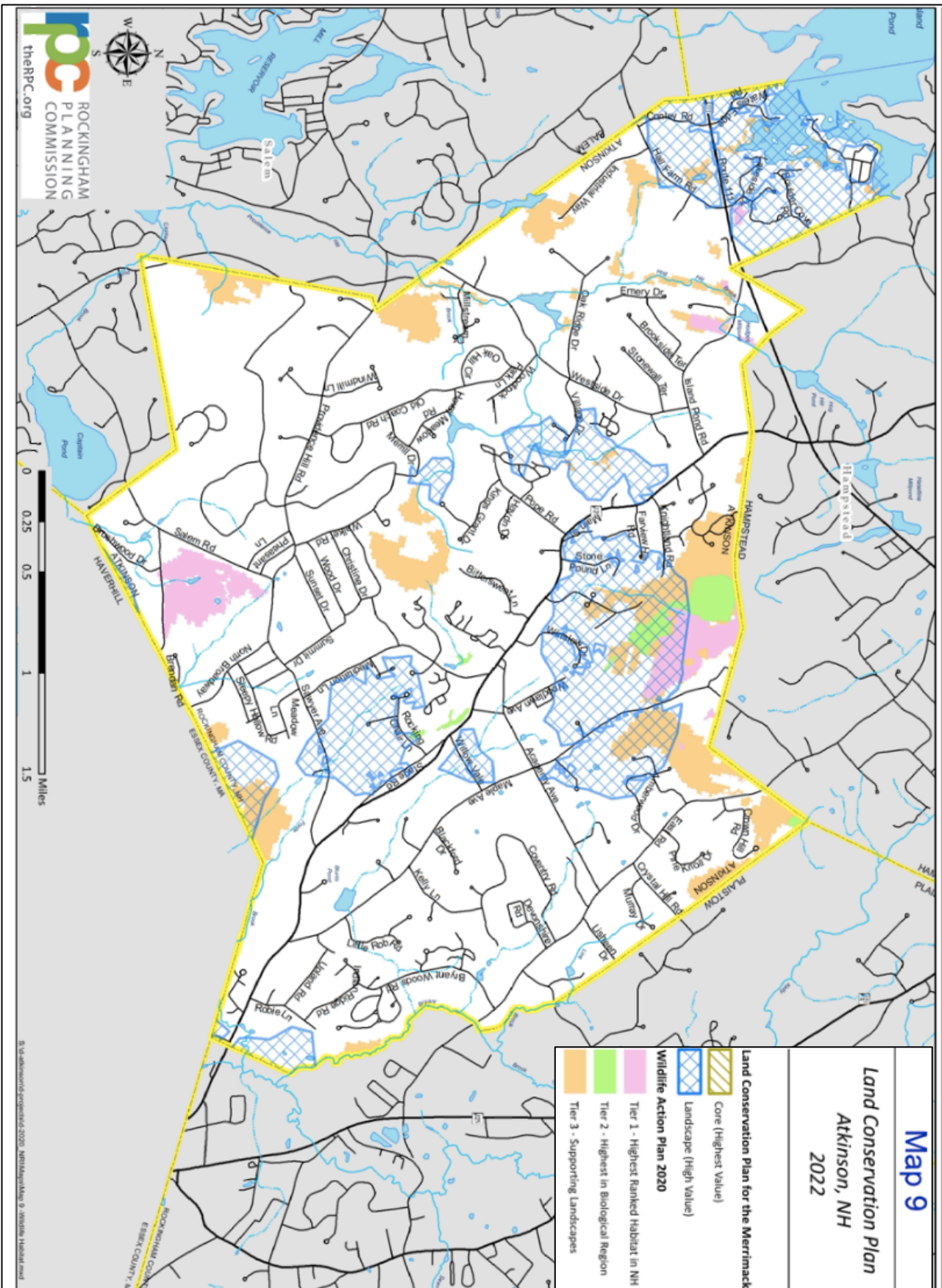
The Atkinson 2022 Land Conservation Plan's Map 8 – Open Space, found at the end of this profile, shows the parcels of land in Atkinson that are conserved, town forests, municipal land, other RSA 36-4:A conservation land, and parcels that have a conservation easement or conservation deed restriction on them owned by either the town or privately as well as development parcels that are associated with open space. For more information on the open space lands in Atkinson, visit the 2022 Land Conservation Plan.

Cluster Development Open Space

Atkinson is unique in terms of the amount of dedicated open space that has been set aside through cluster developments. Although this set aside open space is not deemed “conserved” due to the absence of a conservation easement on many of these parcels, about 661 acres of set aside open space is undevelopable due to zoning restrictions. This set aside open space is identified by the developer to meet the Rural Cluster Residential Development provisions. The Town of Atkinson currently has 20 cluster developments that account for about 1,313 acres of the town. A list of the cluster developments, their entire development acreage, and their open space acreage can be found in the Land Conservation Plan Appendix B Table and Map B.

Although these open spaces created through cluster developments benefit the town by preserving the rural character, many of these set aside open space parcels act as a thin buffer to the development. This can be shown on the Cluster Development Open Space Map found at the end of this profile. These thin strips of lands do not contribute to the health and safety of wildlife by providing adequate space of wildlife habitat, and many do not provide public access. Additionally, the Town of Atkinson only holds a conservation easement on a few of these cluster development open spaces deeming these parcels to be in permanent conservation.

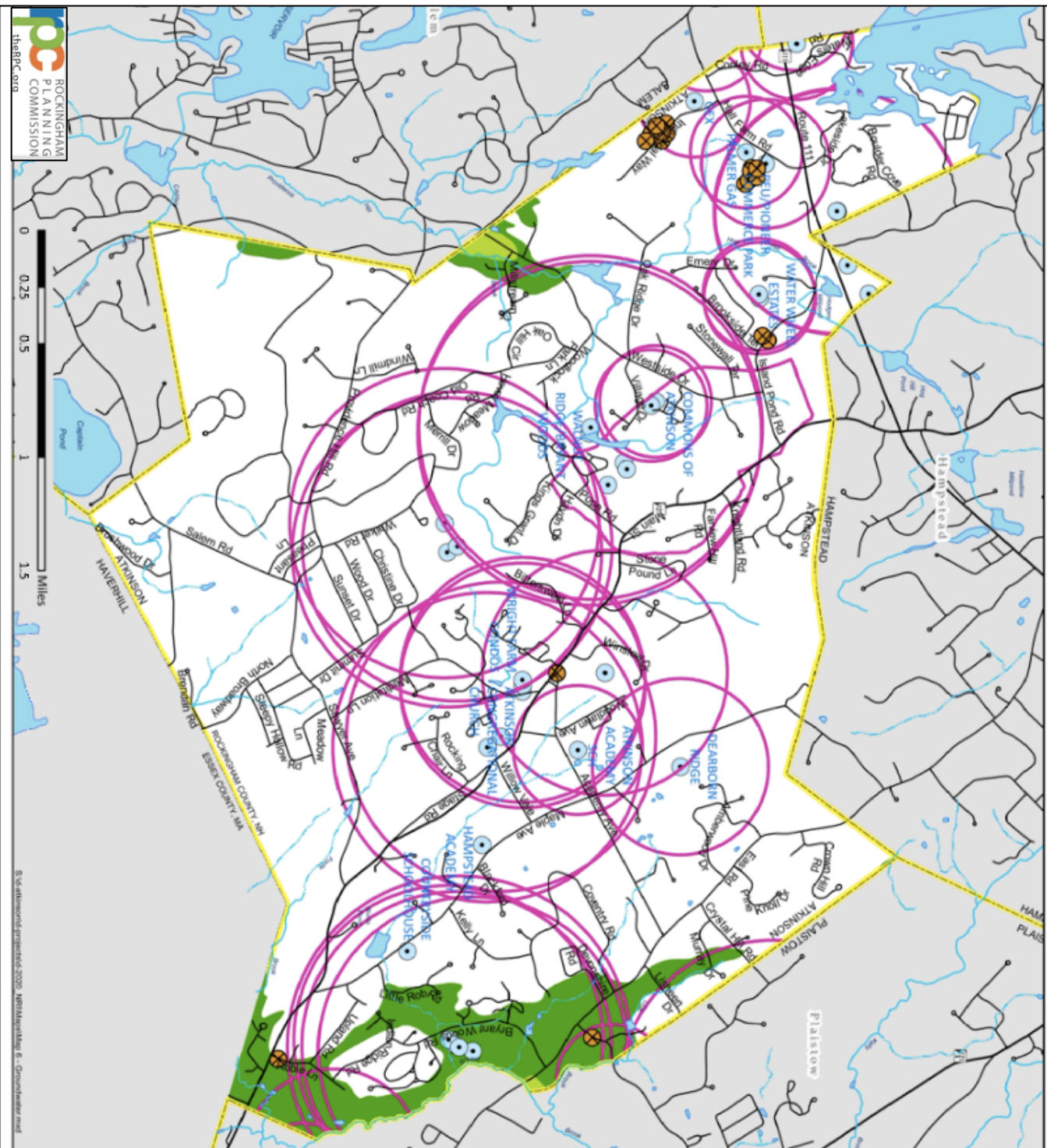
Land Conservation Plan
Atkinson, NH
2022



Map 6 - Groundwater, Aquifers (USGS 1992)

Map 6

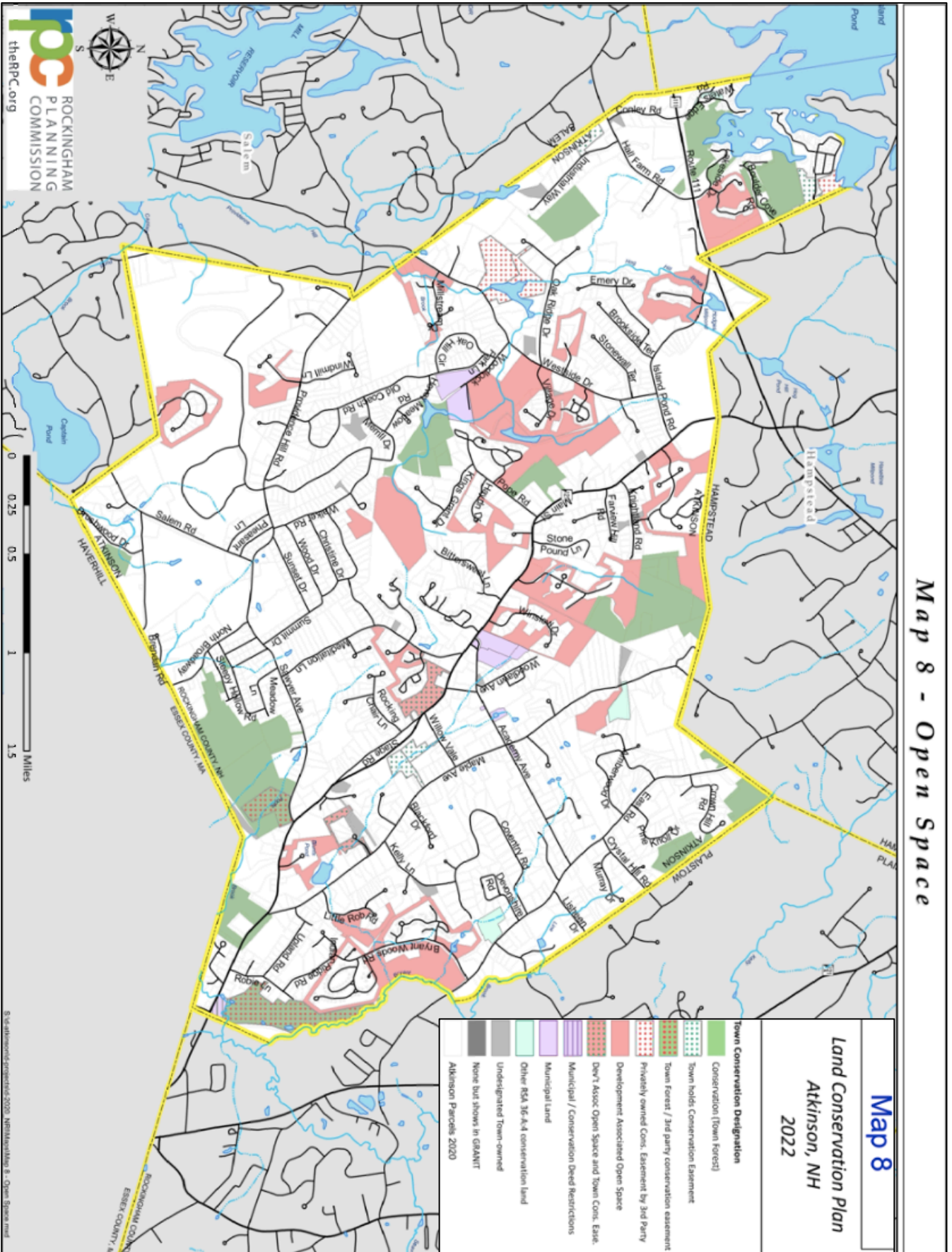
Land Conservation Plan
Atkinson, NH
2022



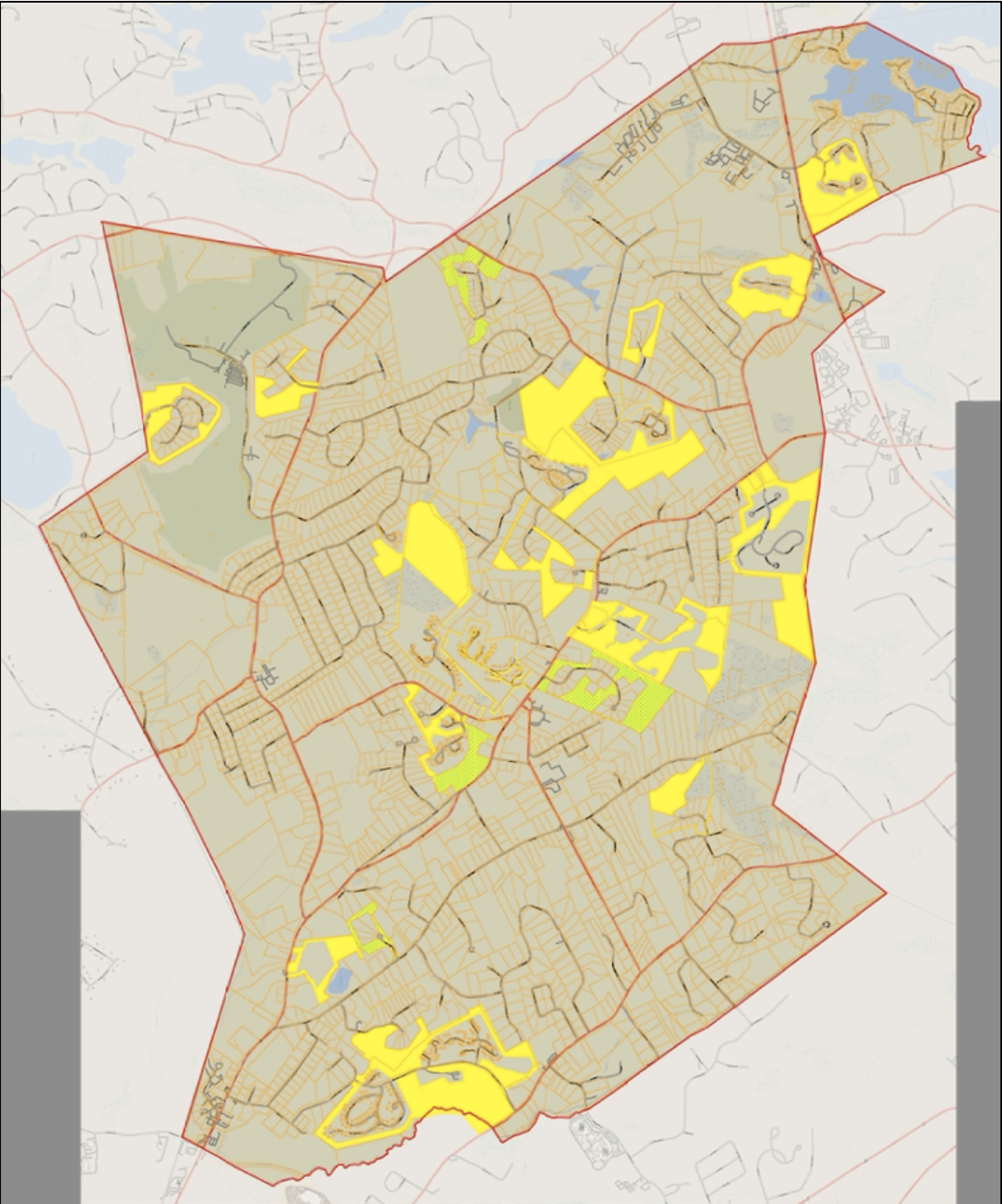
Base Features (transportation, political and hydrographic) were automated from the USGS Digital Line Graph data, 1:24,000, and archived in the GDAINT database at Complex Systems Research Center, Institute for the Study of Earth, Oceans and Space, University of New Hampshire, Durham, NH; 1992-1998. The roads have been updated by Rockingham Planning Commission and by NH Dept. of Transportation through ongoing efforts.

Digital Data in NH GDAINT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of State Planning (OSP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. OSP, CSRC, and the cooperating agencies make no claim as to the validity or reliability or to any implied uses of these data.

Map 8 - Open Space



Cluster Development Open Space



Prepared by the
Atkinson Conservation Commission
with funding from a
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