



Newmarket, NH

2024 Open Space Plan

Draft May 24, 2024

Land Acknowledgement

We are located on **N'dakinna**, which is the traditional ancestral homeland of the Abenaki, Pennacook, and Wabanaki Peoples, past and present. We acknowledge and honor with gratitude the land and waterways and the **alnobak** (people) who have stewarded **N'dakinna** throughout the generations. Today, we draw on the wisdom of the indigenous cultures and our current understanding of the ecology of place to care for and respect these lands and waters.

Cover Photo: View of the Lamprey River from Heron Point Sanctuary. Photo by Ellen Snyder.

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Introduction

This Open Space Plan (“OSP”) purpose is to serve as a guide for the Town of Newmarket (“Town”) to advance conservation and management strategies that promote resiliency, stewardship, and stability between the needs of the environment, wildlife, and the community. The decisions made today will affect the essence of the town for generations to come. Given this premise, it is vital that a network of distinct and multifunctional open spaces are secured and properly maintained to enhance the character and well-being of the community. The Town values the protection of its drinking water and fresh and saltwater wetlands; maintaining and restoring the natural shoreline along the Lamprey and Piscassic Rivers; sustaining critical natural habitats, healthy ecosystems, and connectivity for wildlife on land and in water; revitalizing the downtown riverfront; creating trail connectivity across Town and between our neighboring communities; and stewarding our conservation lands for people and nature.

The environmental and geographic attributes of this region of New Hampshire make it attractive for people to live, work, and enjoy. Demographic trends indicate that Rockingham and Strafford counties have some of the highest population growth rates in the state. As a result, development pressures are amplifying to accommodate this population influx to a degree that is exacerbating the features and functionality the region’s valuable natural resources and ecological systems. Nevertheless, the Town recognizes the necessity to develop a strategy to increase its housing supply and economic development opportunities in an environmentally sound manner. Accordingly, the goals and actions within this plan are intended to enrich our community, foster a healthy ecology, and advance a more economically sustainable Newmarket.

The development of the 2024 Newmarket OSP update was led by the Newmarket Conservation Commission, in partnership with the Strafford Regional Planning Commission (SRPC), and reviewed by the Master Plan Subcommittee and Planning Board. The OSP incorporated several community engagement activities to seek public input. Specifically, through the Fall of 2023, a community wide survey was conducted which focused on both housing and open space topics and received 429 responses. In March of 2024, a community workshop was held on the topics of housing and open space and garnered 48 participants. Visioning sessions were held at local board meetings in April of 2024 as a part of the larger update process for the Master Plan.

Residents vision for the community is diverse, friendly, green, and sustainable, embracing community, connectivity, and natural spaces. It is clear community members value their open spaces – more than half of survey respondents visit parks,

recreation, and conservation spaces at least weekly and 62% said it's extremely important to enhance the riverfront's natural environment. When asked to how residents prioritize open space and housing needs, foremost the consensus was to balance the two. However, more people prioritize open space protection over housing development. Ultimately, residents and community boards see Newmarket as a leader and a partner within the region to protect and enhance natural resources for the future.

The Newmarket Open Space Plan update was also supported by the [Connect to Protect Technical Assistance](#) program, where partners helped to develop a Land Acquisition Criteria Evaluation tool for the Conservation Commission to use in evaluating new conservation land opportunities. This is an update to the 2007 Newmarket Open Space Conservation Plan, which was adopted into the Town Master Plan in XXXX.

Newmarket's Natural Landscape

Situated in New Hampshire's coastal plain on the western shore of Great Bay, the Town of Newmarket boasts a rich diversity of natural habitats. The ecological importance of Newmarket is represented by the [NH Wildlife Action Plan](#) classification of Newmarket: 30% (2,714 acres) is identified as Highest Ranked Habitat in the State, 30% (2,721 acres) is considered Highest Ranked Habitat in this biological region of the State, and 16% is Supporting Landscape (Figure 1). Looking down from a small airplane at the broad sweep of Newmarket you would notice that the town is about 42% forested, 23% water and wetlands, 23% developed, and 12% grassland/farmland (Figure 2). In addition to hosting a rich biodiversity, this natural landscape provides open spaces that help people reduce stress and improve mental and physical health.

The Piscassic River winds through the central region of Town, reaching the confluence with the Wild & Scenic Lamprey River at the Town's Sliding Rock Conservation and Recreation Area. Natural floodplains along these two major rivers provide enormous benefits in controlling and slowing floodwaters and preventing erosion and runoff that can degrade water quality. Salt marsh along Great Bay and the large Tuttle Swamp/Ash Swamp wetlands system in the western region of Town provide myriad benefits to plants and animals. These waters and wetlands offer habitat for rare turtles, freshwater mussels, and plants; nesting and resting areas for migratory birds; safe movement corridors for wildlife, and much more.

Newmarket is relatively flat. However, if you explore the topography of the community, you will find rock outcrops, hilltops, rolling fields, undulating woods, and other subtle but interesting variations in the land. Elevations in Newmarket range from near sea level along the downtown and Great Bay waterfront to 276 feet atop Bald Hill in the southwest corner of Town. Other high points include Grapevine Hill (235'), Great Hill (222'), Long Hill (171'), and Jeff's Hill (138').

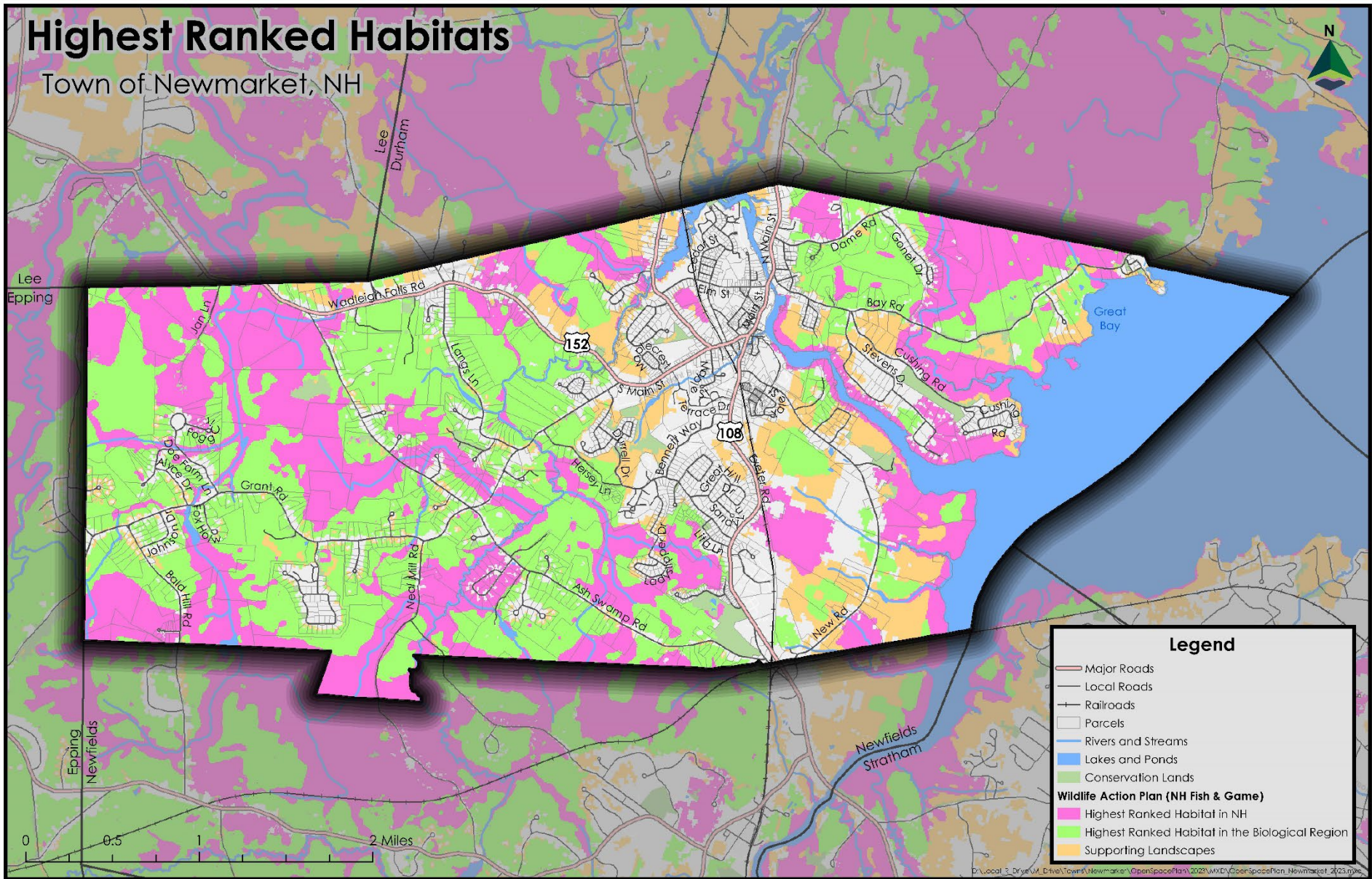


Figure 1: Highest Ranked Habitats

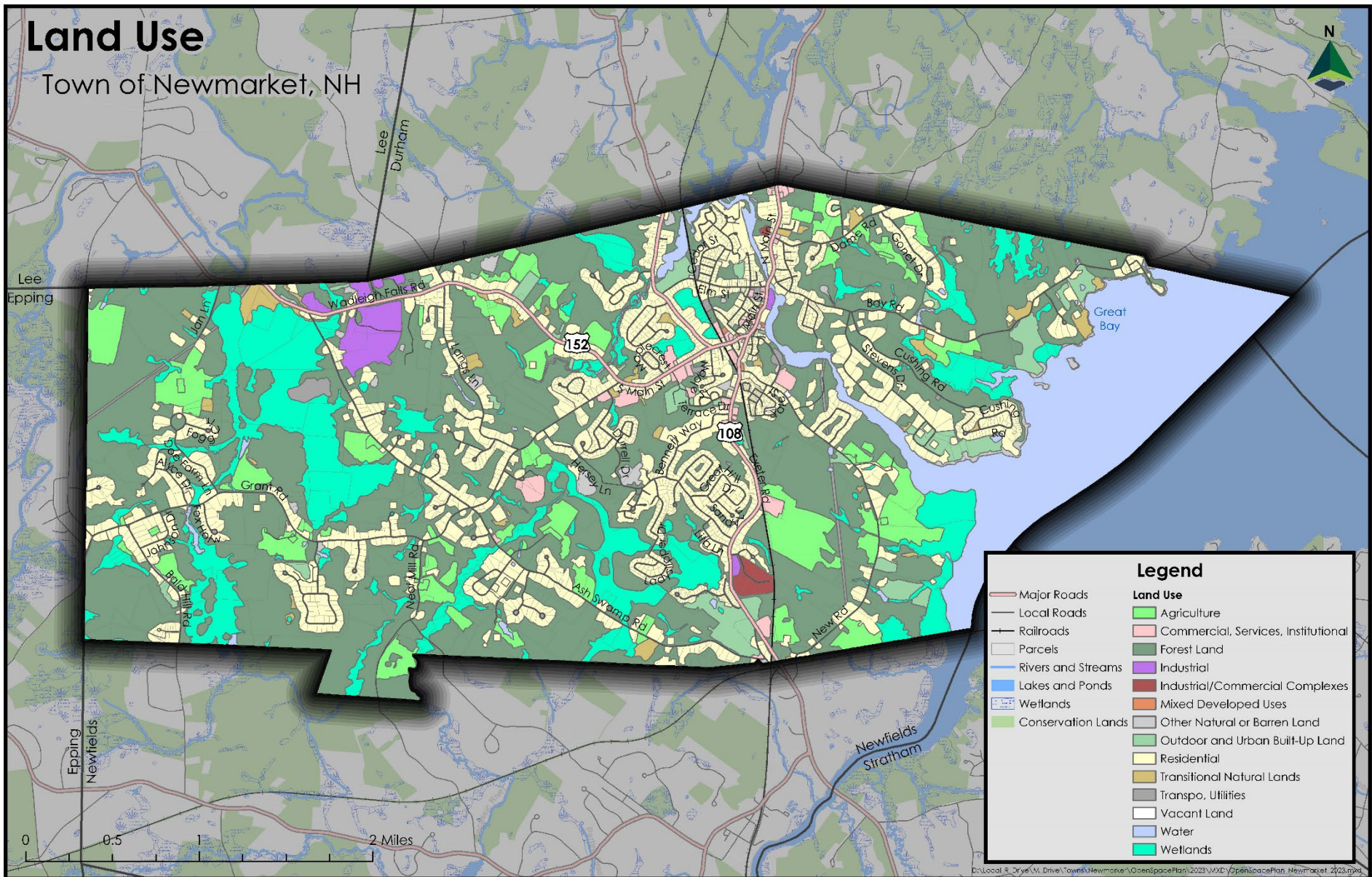


Figure 2: Existing Land Use, 2023

Our Watersheds

We all live in a watershed; actually, many watersheds at different scales. A watershed is an area of land bounded by mountains, hills, or ridges (the highest points of elevation), where all the surface water within drains into the same river, lake, or pond. Watersheds can be large or small; smaller watersheds, or sub-watersheds, are subsets of larger watersheds.

Newmarket lies within the 1,085 square mile coastal watershed (Figure 3). New Hampshire's coastal watershed encompasses many of the diverse and complex habitats that the New England region has to offer. Despite the rapid population growth and development pressures in this region, many areas of ecological significance remain within our community.

Watersheds connect us to our neighbors and to people living upstream and downstream. Protecting water quality, preventing erosion, and avoiding flooding is largely dependent on land use practices within the watershed. Activities on the land, such as malfunctioning septic systems, excessive fertilizers on lawns, or oils and other pollutants in stormwater runoff, can affect the health of groundwater and surface water. Keeping river corridors naturally vegetated within any watershed helps maintain a healthy land and water for people and nature.

All the surface water in Newmarket flows toward the Great Bay Estuary. The pathway of this flow falls within one of four coastal sub-watersheds or drainages: Lamprey River, Piscassic River, Squamscott River, and Great Bay drainage. The Piscassic River is a tributary to the Lamprey River: thus, most of Newmarket is within the larger Lamprey drainage. Only portions of the Bay Road area drain directly into Great Bay and lands mostly east of Route 108 south of downtown flow into the Squamscott River or Great Bay (Figure 4).

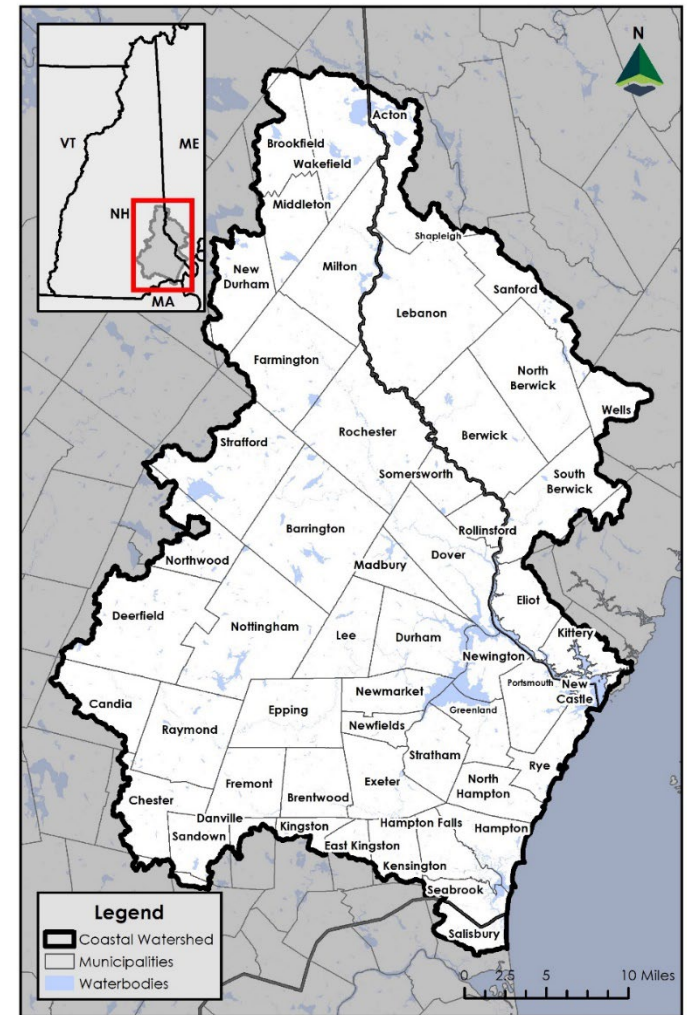


Figure 3: NH's Coastal Watershed

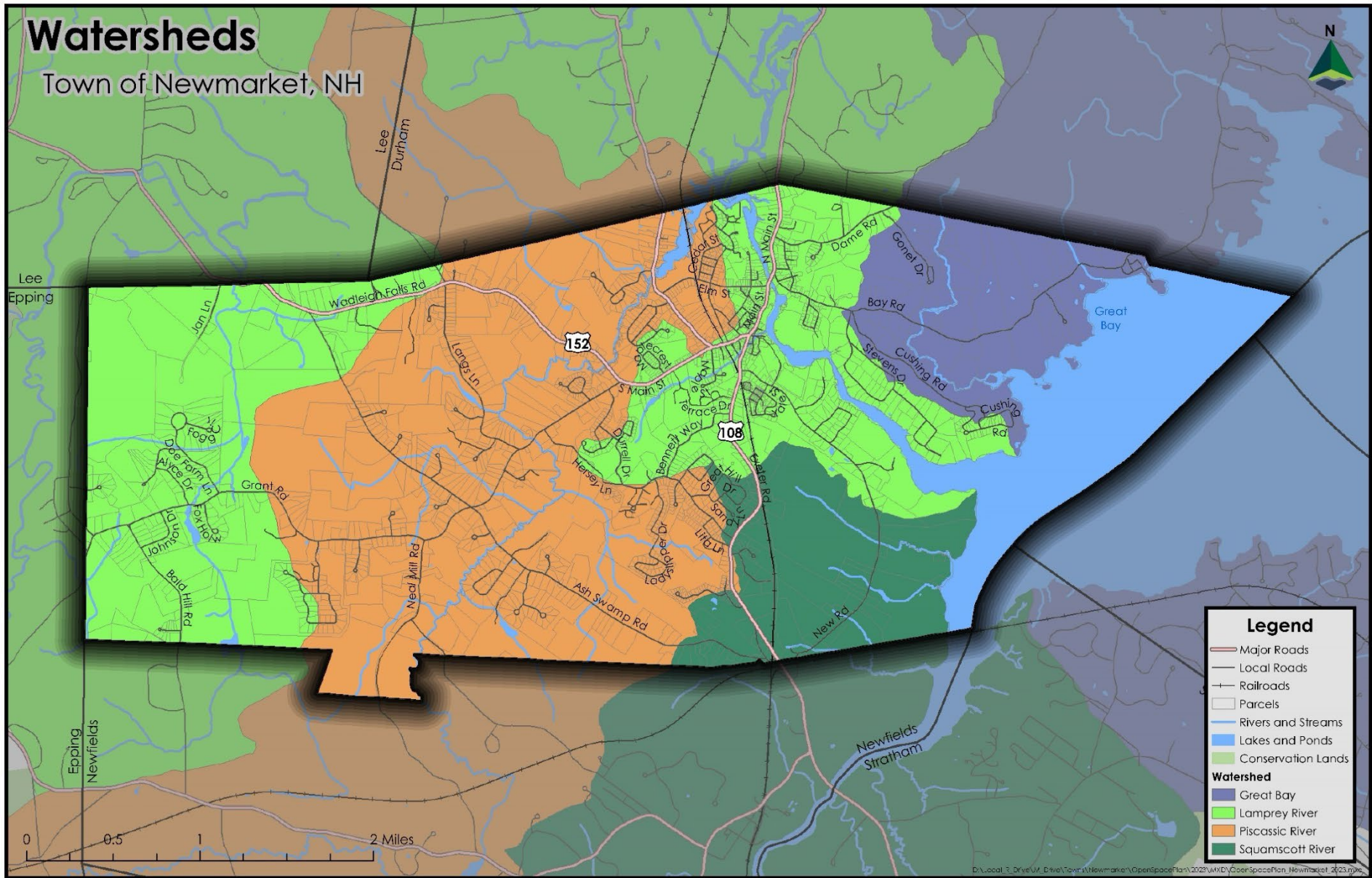


Figure 4: Sub-Watersheds within Newmarket, NH

Lamprey River Watershed

The Lamprey River begins in Northwood Meadows State Park and meanders 47 miles through seven towns before it reaches the Macallen Dam at the Mills in Newmarket (Figure 5). Below the dam, the Lamprey continues as a tidal river to Great Bay. From there, the waters flow down the Piscataqua River to the Gulf of Maine.

Of the eight rivers flowing to Great Bay, the Lamprey River watershed contributes the greatest volume of freshwater, playing a major role in maintaining the overall health of the economically and ecologically important Great Bay Estuary. This connectivity, between the fresh and salty parts of this coastal watershed, is exemplified by river herring, fish that are born in the freshwater reaches, migrate down to the estuary to feed, then out to the ocean to spend a few years, and then back again to breed and spawn. A remarkable journey that requires clean freshwater, estuarine habitats such as saltmarshes, eel grass beds and oyster reefs, and a healthy ocean.

Twenty-three miles of the Lamprey—from West Epping to the confluence with the Piscassic River—are designated as a National Wild & Scenic River to preserve the river’s “outstandingly remarkable values” including clean and abundant water; habitat for fish and wildlife; paddling, fishing, birding, and other outdoor recreation; history of people and place. The entire

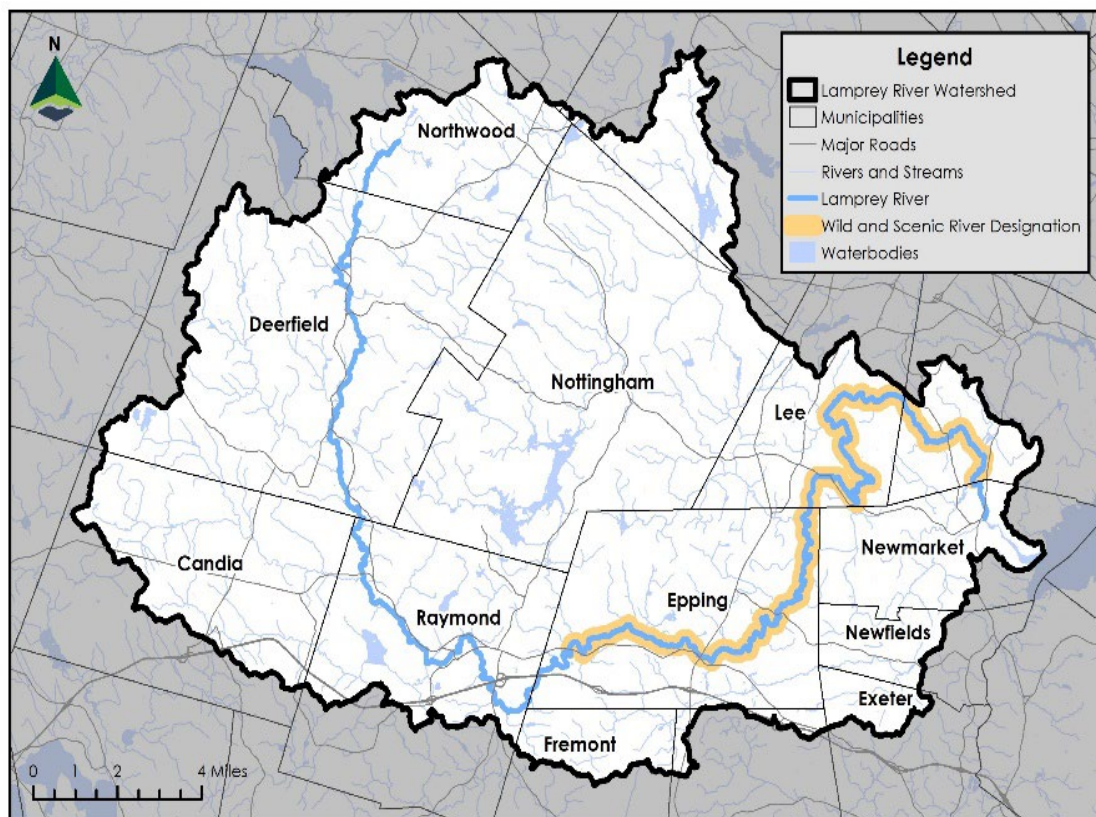


Figure 5: Lamprey River Wild and Scenic Designated Reaches

Lamprey River and its five major tributaries--Little, North, North Branch, Pawtuckaway, and Piscassic--are also recognized by the State of New Hampshire for outstanding natural and cultural values.

“Outstandingly Remarkable Values”

Historically the Lamprey River supported large populations of river herring, sea lamprey, American shad, American eel, and Atlantic salmon. Dams constructed for industrial and commercial purposes have long blocked or limited fish passage upstream. The McCallen Dam, site of the first natural falls on the Lamprey, separates the tidal portion of the river from the freshwater portion. A Denil fish ladder on this dam enables alewives, American eels, sea lamprey, and American shad to move upriver. Blueback herring do not use the ladder and have been seen spawning below the dam. Three and a half miles upstream of McCallen is the Wiswall Dam in Durham, originally constructed in 1835. This dam has no fish passage creating a barrier to fish movement farther upriver. A project to install a nature-like bypass channel around the dam has been proposed. A third dam at Wadleigh Falls in Lee has been breached, but under typical flow conditions, its remnants still constitute a barrier.

The Lamprey River was one of the first rivers designated into the New Hampshire Rivers Management and Protection Program in 1990, and the full river and five major tributaries were designated into the program in 2011 with unanimous support from the 14 corridor communities. The Lamprey River Advisory Committee (LRAC), with members from all 14 municipalities along the river corridor, has the principal responsibility for development and implementation of a long-range River Management Plan and reviews and comments on projects that could impact the river. The LRAC is working on a 2024 Management Plan update. You can learn much more about the Lamprey River at <https://www.lampreyriver.org/>.

Piscassic River Watershed

Piscassic is an Abenaki expression meaning “at the branch.” The Piscassic River is the largest “branch” or tributary to the Lamprey River. This river meanders 15 miles from its beginning in the northeast corner of Fremont, through Brentwood, Epping, Newfields, then Newmarket where it flows through the heart of Newmarket into the Lamprey River near the Newmarket/Durham town line.

Along the way, three smaller streams or tributaries join the Piscassic: Brown River in the headwaters, Fresh River above the ice pond in Newfields, Follet’s Brook near the confluence with the Lamprey River in Newmarket. Numerous other small unnamed streams flow into the Piscassic River. Together these waterways—year-round and seasonal flows-- encompass the Piscassic River Watershed.



Figure 6: The Piscassic River viewed from Old Lee Class A Trail in Newmarket.

The lower Piscassic River, below the dam at Packers Falls Road, is often thought to be part of the Lamprey River. However, the waters in this area are an extension of the impounded waters of the Lamprey behind the McCallen Dam. The Piscassic River is the only waterway within the entire Lamprey River watershed classified as Class A – the highest water quality standard in New Hampshire.

Water from the Piscassic River (below the dam) was used as a drinking water source until 2004, until the water treatment plant was shut down. Since then, the Town has relied solely on groundwater from four municipal wells, three of which are in the Piscassic River watershed.

Squamscott River Watershed

The Squamscott River is the downstream, tidally influenced portion of this river system and the Exeter River is the upstream, freshwater portion. The Squamscott River begins in the Town of Exeter and flows into Newmarket, where it drains into Great Bay. In Newmarket, this watershed includes several unnamed tributaries that flow into the Bay, east of Route 108 and New Road. This area harbors some of the best ecologically important salt marsh in the Town.

Great Bay Watershed

The northeast corner of Newmarket's land area flows directly into Great Bay. This area includes The Nature Conservancy's 400-acre Lubberland Creek Preserve that features a unique salt marsh, a rich upland forest community hosting vernal pools, wetlands, and rocky outcrops. The 4-mile [Sweet Trail](#) begins here and extends into Durham. Where Lubberland Creek flows under Bay Road is the site of a successful partnership with TNC and the Town of Newmarket to install a new open bottom box culvert, allowing unrestricted stream flow and aquatic passage for fish, and safe crossing for other wildlife. Indeed, one of the first images captured on a wildlife camera after the work was completed was of a bobcat using the new passage.

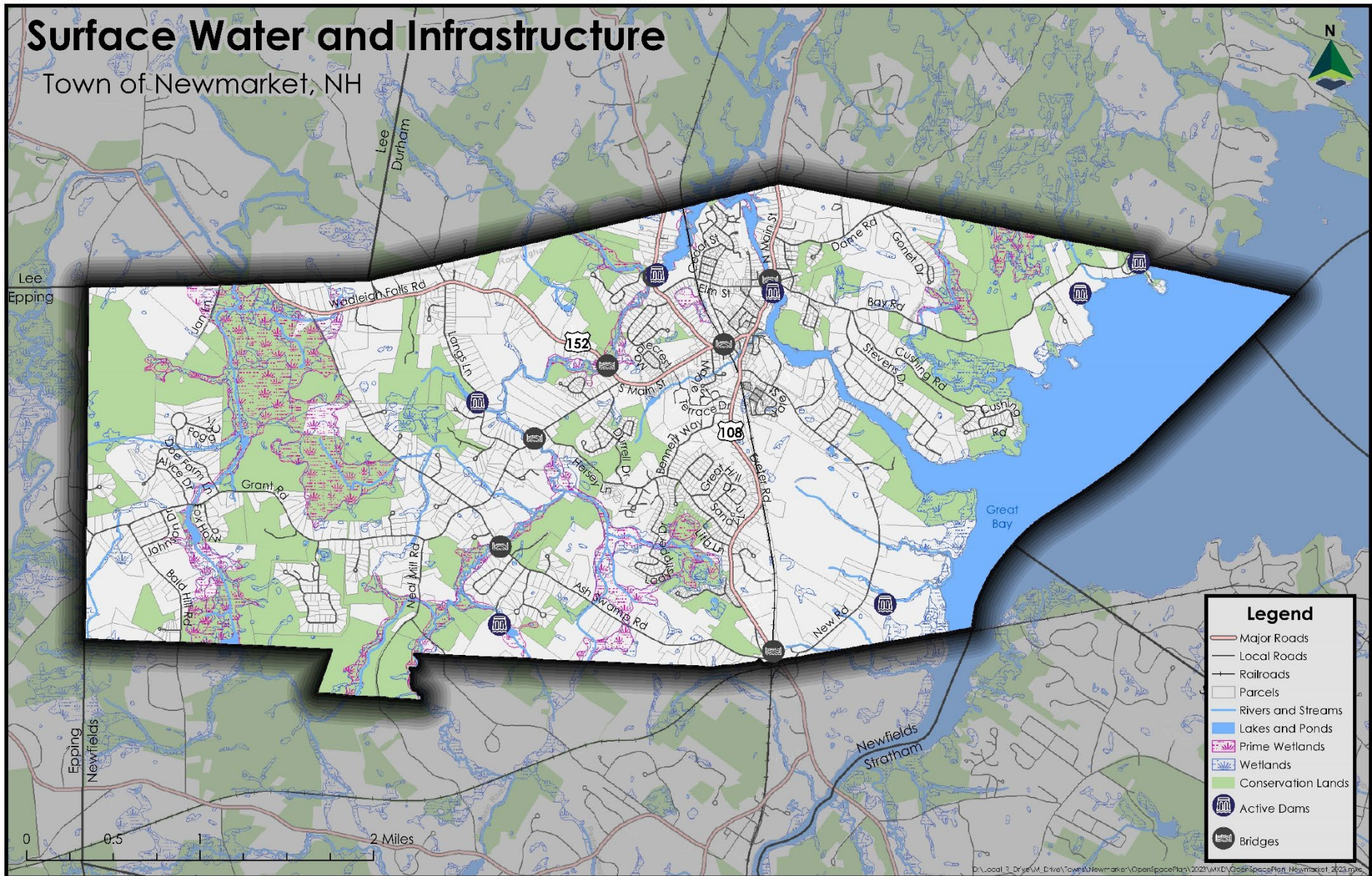


Figure 7: Surface Waters, Bridges and Active Dams

Water and Wetlands

The most significant body of open water in Newmarket is the 875 acres of Great Bay within the Town bounds (Figure 7). Although the Town has no other great ponds or lakes, there is significant water associated with waterways and wetlands. The [2020 Water Resources Chapter of the Master Plan](#) provides description of this topic; we provide a summary below of key elements.

Flowing Waters: Perennial and Intermittent Streams

The major rivers of Newmarket—Lamprey and Piscassic—were described earlier under their respective watersheds. Several smaller brooks and creeks are imbedded in these watersheds throughout Town, including Lubberland Creek and Follet’s Brook. We often recognize the importance of these large waterways; however, smaller streams are an integral and important part of the hydrology of a watershed. All along the length of a river, small streams gather water from higher up in a watershed and flow into what is called the main stem. These small headwater streams are often unnamed and unmapped and sometimes intermittent, drying up in summer. They may begin as trickles, seeps, small wetlands, or depressions in the hillside. The health of larger downstream rivers, streams, ponds, and bays—such as the Piscassic or Lamprey Rivers and Great Bay—are dependent on the health of these smaller streams farther up in the headwaters of a watershed.

The upper reaches of a watershed store water, recharge groundwater, and reduce the intensity and frequency of downstream flooding. Small streams are a critical link between land and water. Not only are they linked to upstream and downstream portions of the watershed, but water flowing from the land into the stream carries insects, leaves, branches, and other material that are the start of a food chain. This exchange between land and water occurs in a transition zone along the edges of stream channels, called a riparian area. Connectivity between stream channels, stream bottoms and banks, and the riparian area is important to protect water quality and aquatic habitats. Maintaining a natural stream channel and associated riparian habitat of tangled roots, fallen tree limbs, shrub, trees, and herbs is key to sustaining the health of these waters.

Wetlands

Wetlands are rich habitats with immense benefits for nature and people: absorb and slow floodwaters, filter sediments and pollutants; recharge groundwater; host myriad uncommon plants, animals, and aquatic life; serve as scenic backdrops and

sites for recreation and education. Wetlands come in a variety of types, but all have three things in common: soils that are saturated sometime during the growing season; most of the vegetation is adapted to these saturated soils; and the soils in the area are periodically or permanently inundated with water during the growing season.

Newmarket is 23 percent water or wetlands. In addition to the waters associated with Great Bay and the rivers and streams, the Town hosts several other wetland types of significance as described in the NH Wildlife Action Plan.

Marsh & Shrub Wetlands

These wetlands cover 430 acres or 4.7% of the Town and come in three flavors. *Wet meadows* are typically dominated by sedges and grasses and are found at the upper edges of a wetland or lower edges of fields. *Emergent Marshes* contain plants that grow out of water, but whose roots are wet, such as cattails, pickerelweed, and water lilies. Shrub wetlands are thickets of shrubs and young trees growing out of wet soils, including red maple, dogwoods, alders, viburnums, and highbush blueberry. The Tuttle Swamp/Ash Swamp wetlands complex in the western region in Newmarket contains the largest, best, and intact examples of marsh and shrub wetlands in Newmarket. Notable wildlife species living in this wetland ecosystem include five species of turtles, American woodcock, beaver, great-blue heron, yellow warbler, dragonflies, and hundreds of other aquatic and wetland-adapted species.

Beavers are key stewards of these lands, as they play a critical role in supporting the well-being of the marshlands while facilitating the creation of habitat that aids the rest of the wetland community. They are most active at night so you might not see them, but you can easily find their industrious tell-tale signs: a chewed stick; a gnawed tree; a lodge; or a dam. You might hear a loud slap of their tail, warning other beavers of your (or your dog) presence. A beaver-modified wetland will cycle through a series of changes over time from ponded water (marsh) to abandoned/drained when they run out of food (wet meadow), and re-growth (shrub wetland). The highest quality wetlands are those that are isolated from development, surrounded by intact vegetation, and in remote areas where beaver activity doesn't damage roads or other infrastructure—as represented best by Tuttle Swamp.

Wooded Wetlands

Floodplain forests, swamps, and vernal pools are all wooded wetlands, and occur on 336 acres or 3.7% of Newmarket. Floodplain forests occur primarily along the Lamprey and Piscassic Rivers. River floodplains are dynamic environments

affected by periodic, temporary flooding. As water levels rise during heavy rainfall, sediment is carried downstream, and deposited where water slows and spreads out across a floodplain next to the river channel. Silver maple is the best adapted tree for life in a floodplain. Depending on the periodicity and intensity of flood events other species are often common, such as red maple, American elm, musclewood, hornbeam, wild grapes, tall meadow-rue, cardinal flower, and ferns. A swamp white oak floodplain forest in Tuttle Swamp is the largest such example in the entire Lamprey River Watershed. Historically, floodplain forests were cleared for development due to their proximity to rivers and plowed for agriculture due to their rich and productive soils. The remaining Intact floodplain forests contain uncommon plants and animals and are important reservoirs of our biodiversity.

Swamps are distinguished from marshes, in part, due to the presences of trees, which marshes lack. Seasonal water fluctuation is typical in swamps, and they usually occur in stagnant basins with saturated, organic soils. Depending on the location and soils the following plants may be common: red maple, black gum, black ash, sphagnum moss, ferns, and a diversity of shrubs, including speckled alder, male berry, northern spicebush, winterberry, nannyberry, and highbush blueberry. Red-shouldered hawk, veery, Blanding's turtle, bats, four-toed salamander, and occasionally moose occur in the swamps of Newmarket.

Vernal pools are ephemeral (temporary) wetlands that fill in spring from rainfall, snowmelt, or rising groundwater. Some pools also fill in the fall after autumnal rains. These pools are typically small, ranging from less than 1/10th acre to more than 2 acres. Size, however, is not always an indicator of the importance of a vernal pool to the animals that live there. Most vernal pools completely dry out by the end of summer and therefore cannot support fish populations, which makes these pools safe for breeding amphibians.

These small wetlands typically harbor fairy shrimp, wood frogs, and spotted salamanders. Smaller organisms such as bacteria, fungi, zooplankton, caddisfly and other insect larvae, crustaceans, and insects are all food for the larger animals. Wood frogs and spotted salamanders travel to vernal pools in the spring to breed, and then spend the rest of the year (11+ months) in the uplands, typically within 1,000 feet of the pool. Canopy shade, deep leaf litter, and fallen trees and stumps are used by frogs and salamanders as cover and therefore are important habitat features in the upland surrounding a vernal pool. Spotted and Blanding's turtles, great blue herons, raccoons, and predatory insects travel to vernal pools to feed on amphibian eggs, tadpoles, insects and crustaceans in the pools.

Some sunnier vernal pools may contain sphagnum moss, sedges, ferns, and shrubs such as high-bush blueberry or buttonbush. Red maple and eastern hemlock commonly grow on the edges of vernal pools, although pools may be found in many different forest types. Given their small size, vernal pools are easy to overlook. They are best observed and mapped when they are filled with water. Dry vernal pools can sometimes be identified by the presence of dark, matted leaves within a depression in the ground. Newmarket has not mapped vernal pools. Scouting for vernal pools before commencing work using heavy machinery, will help protect these valuable wetlands. Ruts, roads, and similar disturbance can change the hydrology and ability of the pool to hold water.

Peatlands

Peatlands cover 242 acres or 2.6% of Newmarket, most of which is in one large complex in the Tuttle Swamp/Ash Swamp wetland complex. The water in peatlands has low nutrient content and typically high acidity caused by limited groundwater input and surface runoff. These environmental conditions are such that plant and animal material take a very long time to decompose. This organic material contains carbon and other nutrients, storing it away and slowly releasing it into the atmosphere, providing an important place for carbon sequestration.

The vegetation in a peatland—more specifically called a bog or fen--depends on site conditions, although Sphagnum and other mosses are typically present. Newmarket's peatlands would benefit from a more detailed assessment of the animal and plant community.

Salt Marsh

Salt marshes are intertidal wetlands typically located in low energy environments such as estuaries. They exist both as expansive meadow marshes and as narrow fringing marshes along shorelines. Salt marshes are considered one of the most productive ecosystems in the world due to high rates of plant growth. They provide important ecological functions,

including shoreline stabilization, wildlife habitat, and nutrient cycling, and serve as important breeding, refuge, and forage habitats for many species of crustaceans and other invertebrates, and fish.

Salt marshes are a scarce habitat type, occupying only about 0.1% of the land area of New Hampshire (Figure 8). Rising sea levels will likely have the greatest impacts on current salt marsh habitats; however, many scientists believe these systems can keep pace with sea level rise by migrating landward if there is an adequate supply of sediment or peat build up and no natural, or human-made, barriers present. Future sea level rise scenarios predict that, if not able to migrate, much of today's low marsh will be mostly submerged and transformed into mudflats or sub-tidal bays. According to the Sea-Level Affecting Marsh Migration (SLAMM) model, Newmarket is a community within the coastal watershed where current conditions allow for potential salt marsh growth as sea levels rise. In fact, upwards of 170.7 acres of potential salt marsh will have the opportunity to migrate into surrounding upland areas as sea levels rise, but the Town may, lose some salt marsh habitat due to coastal inundation.

Prime Wetlands

Under NH State Statute, municipalities may elect to designate wetlands as “prime-wetlands” if, after thorough analysis, it is determined that high-quality wetlands are present. Typically, a wetland receives this designation because of its large size, unspoiled character, and ability to sustain populations of rare or threatened plant and animal species. In 2000, the Newmarket Conservation Commission spearheaded such an analysis. West Environmental Inc. completed a final list and map of these high value wetlands following extensive field research and other data collection, wherein 16 wetlands (totaling 908.94 acres) were identified as prime wetlands. These prime wetlands are afforded additional protection within the Newmarket Zoning Ordinance. The Conservation Commission and Planning Department received a grant in 2024 from the Piscataqua Region Estuaries Project (PREP) to update the prime wetlands

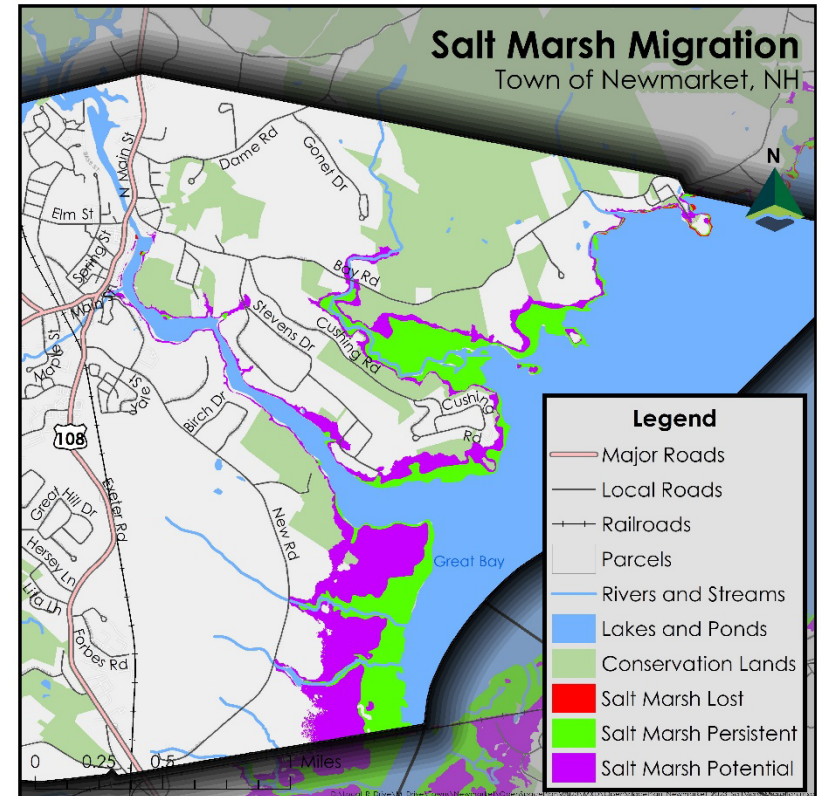


Figure 8 Lost, Persistent, and Potential Salt Marshes

maps, utilizing more accurate mapping tools now available as well as to reflect changes in hydrology. Our goal is to ensure maximum protection of the prime wetlands and to ensure that they are mapping accurately in fairness to property owners.

The Forests of Newmarket



New Hampshire is the most heavily forested state after Maine; Newmarket is about 43% forested. Two broad upland forest types occur in Town: Appalachian oak-pine (A-O-P). hemlock-hardwood-pine (H-H-P).

Most of Newmarket is the Appalachian oak-pine forest type (Figure 9), which is found primarily in central and Appalachian states, only extending into southern and coastal New Hampshire. The dominant trees are a mix of red, black, and white oaks, shagbark hickory, and white pine. Historically, Appalachian oak-pine forests were influenced by frequent fires, which periodically modified the age structure of the forest. The diverse age and structure of the forest helps to promote wildlife diversity. In the absence of fire, more fire-intolerant species increase, such as red maple, American beech, and birches.

Figure 9: Appalachian Oak-Pine Forest

The abundance of nut-bearing oaks and hickories provides a high-protein, carb, and fat source for wildlife, such as squirrels, chipmunks, mice, black bear, white-tailed deer, wild turkey, ruffed grouse, blue jay, and wood duck. In turn, fishers, bobcats, great-horned owls, and raptors prey on the abundance of small mammals and birds. Tall white pines in the oak-pine forests, especially near water, offer nest and perch sites for bald eagles, ospreys, and great blue herons.

Intense development pressure particularly in southeast New Hampshire has dramatically reduced naturally occurring fires and increased fragmentation of this forest type. Land conservation is critical to protecting large forest blocks (>500 acres) of Appalachian oak-pine habitat. These large forest blocks are rare and are critical to protect wide-ranging species such as bobcat, black bear, and moose.

Hemlock-hardwood-pine forest is the most widespread habitat in New Hampshire but is found in only a few small patches in Newmarket. White pine and eastern hemlock are the dominant trees. On sites where this forest type was historically

subjected to pasturing or timber harvesting, the dominant early and mid-successional species are red oak, white pine, red maple, black birch, and paper birch. Hemlock and American beech typically increase in dominance as the forest ages. Mostly pure hemlock stands occur in ravines and steep, rocky north-facing slopes. Hemlock is shade-tolerant and blocks out light for any other species, creating a mostly barren understory. The ground cover and understory are slightly richer in the mixed forest of oak, beech, and pine, but not greatly so. The presence of Hemlock Woolly Adelgid and other non-native insects may affect the trajectory of plant succession in these forests.

There is life in dead trees and cavities are good.

Dead or partially dead trees (“snags”) and live and decaying trees with cavities and dens are an essential part of our forests and provide essential habitat to more than 40 birds and mammals. Tree cavities serve as a nest, den, and roost site, providing protection from harsh weather and temperature extremes and safety from predators. Tree dens are used by raccoon, porcupine, gray fox, fisher, and black bear. Bats and brown creeper (a bird) roost or nest under loose or shaggy bark. Dead and dying trees are often full of bark- and wood-boring beetles, carpenter ants, and other native insects, which are important food sources for woodpeckers and other birds that glean food from the tree bark. Rotting wood helps recycle nutrients, serves as nurse logs for tree seedlings, and provides habitat. Leaving fallen trees, branches, and overturned roots in the woods is good for wildlife and the health of a forest.

Agriculture and Grasslands

Farming is part of New Hampshire’s scenic landscape and cultural heritage. For more than 300 years New Hampshire’s agricultural community has adapted to changing landscape conditions and markets. The agricultural sector in the State remains vibrant and diverse and shows growth in small-scale farms based on retail markets. In Newmarket, approximately 648 acres, or 7% of Newmarket is considered potential for agriculture—land that is currently field, pasture, or cropped. Some active farms remain and are already conserved including the Clarke Farm on Camp Lee Road and Nostrom Farm on Doe Farm Lane. Other landowners retain fields as pasture or other uses.

The 2020 NH Wildlife Action Plan identified 1,046 acres of grassland habitat in Newmarket. Some of those acres are included in the potential agricultural land above; however, many of these “fields” are conserved as habitat for rare plants

and animals. For example, the 15-acre meadow at Wiggin Farm Conservation Area was conserved, in part, with grant funds from NH Fish and Game and the Land and Community Heritage Investment Program (LCHIP) to protect grassland and shrub nesting birds, such as bobolinks and American woodcock, nesting turtles, insect pollinators, and other wildlife. The Nature Conservancy maintains natural grasslands as habitat at their Lubberland Creek Preserve.

Whether active farmland or grassland habitat, these openings in our largely forested community also provide scenic backdrops along roads and trails.

Sand and Gravel and other “Barren” Lands

Newmarket has 77 acres or less than 1% of the Town in sand and gravel operations. While these areas are often considered ecologically “barren,” they can provide some remarkably interesting habitat once the sites are closed. Sand and gravel excavation areas are usually dry and lack the soil organic layers needed to regrow vegetation, and thus plant succession is slow. They often have brushy edges, bare ground, few tall trees, leftover boulder piles, and are nutrient poor, thus requiring little effort to maintain.

Reclamation of closed “pits” typically involves adding topsoil and leveling slopes, but this can diminish its value as unique wildlife habitat. But if left mostly as is when closed (except for safety procedures), these areas can offer habitat: bare ground for nesting common nighthawks and rare turtles, steep sand banks for nesting bank swallows, basking areas for snakes, exposed sandy areas for tiger beetles and other ground insects, shrub habitats for New England cottontails and songbirds. NH Audubon’s Smith Sisters Sanctuary off Route 152 has a great example of this transition from active sand and gravel pit to habitat.

Wildlife Corridors

Wildlife need to move, to find food and shelter, to find mates, to migrate seasonally, to disperse to new territories. A [wildlife corridor](#) of suitable habitat allows wildlife to move safely from one area to another. A corridor can be through an intact forest, along rivers or streams, or even along a field edge. As our landscape becomes more fragmented by roads and other development, maintaining a network of connected habitats is important to allow safe passage for individual animals and

gene flow between populations. Protecting wildlife corridors provides other benefits too, such as healthy forests and clean water and air. Most of Newmarket's important wildlife corridors are through intact forests, wetlands, and along watercourses.

Road Crossings

Many of the roads in Newmarket have been here for a long time; the network of streams and wetlands even longer. The two are often intertwined. Wherever a road crosses a stream, a bridge or culvert makes that crossing possible. That road crossing can sever the natural pathway or corridor for fish, turtles, and other wildlife or in some cases cause excessive road mortality, such as for turtles. Incorrectly sized, poorly placed, or damaged bridges and culverts prevent fish and wildlife from moving up and downstream to find food, breeding areas, and other habitats.

Degraded crossings also cause excessive flooding, road washouts, and expensive maintenance, and they can be a safety hazard.

Culverts that are undersized relative to the natural width and depth of a stream tend to cause higher velocity stream flows. These high flows cause scouring immediately downstream of the culvert, which leads to "perching," where the culvert ends up higher than the streambed, preventing passage by many fish and wildlife. Fortunately, new designs for stream crossings are available that are safe, stable, reduce expensive erosion and washouts, and are fish and wildlife friendly. The ideal stream crossings are bridges and open-bottomed arches rather than pipe culverts.

A significant upgrade to the Bay Road crossing over Lubberland Creek in Newmarket has greatly improved safe aquatic and upland wildlife passage as well as minimized maintenance issues and flooding hazards. The Town has identified several other such road crossings that would benefit from improved crossings. One site is the Ash Road crossing over a significant wetland drainage where rare and common turtles are killed on the road annually. The Conservation Commission, along with Planning, Engineering, and Public Works Staff are working with NH Fish and Game to find and fund a sustainable option for this location. Other sites that may need road crossing improvements are shown on the [NH Aquatic Restoration Mapper](#). Encouraging drivers to slow down using signage and traffic calming techniques is also being explored.

INSERT photo of the Lubberland Creek culvert

Newmarket's Conservation Areas

Conserved Lands

Newmarket's 9,080 acres support a population of 9,430 residents (2020 Census), with most of the population concentrated in the downtown region. In 1998, 516 acres or 6 percent of Newmarket was in permanent conservation. By 2023, 2,792 acres (or 31%) of the Town was conserved in some form (Figure 10). See Appendix B for details on each parcel under conservation in each of the categories listed in Table 1.

Table 1: Conserved Lands Summary

| Conservation Land Type | Acres | % of Conservation Lands |
|--|--------------|-------------------------------|
| Town-Owned Conservation Land | 416 | 15% |
| Town-Held Conservation Easement | 368 | 13% |
| Town-Held Executory Interest | 232 | 8% |
| Subdivision Open Space | 511 | 18% |
| Other Public or Private Conservation Lands | 1,265 | 45% |
| Total | 2,792 | 31% of Total Town Area |

The community has benefited from a strong partnership with public and private conservation entities, including NH Fish and Game, Land and Community Heritage Investment Program, NH DES Drinking Water Protection Program, Great Bay Resource Protection Partnership, The Nature Conservancy, NH Audubon, and the Southeast Land Trust. In addition, the Town of Newmarket has contributed to land conservation projects through the Conservation Fund, Drinking Water Fund, and Open Space Bond. Also, many private individuals have contributed funds or land value. A few properties were conveyed to the Town as part of a subdivision project and others via tax liens. From 2003 to 2022, the Town of Newmarket assisted with the conservation of 1,016 acres in which the Town holds some interest in the land: fee ownership (416 acres), conservation easement (368 acres), and executory interest (232 acres). The costs of these conservation projects totaled

more than \$4.4 million with Town leveraging its contribution of \$2.1 million with more than \$2.5 million in grants and funds from conservation partners.

Trails

One of the benefits of open spaces is the opportunity for people of all ages to use nature trails that wander through forests and fields or across boardwalks. Several conservation areas in Town have trails: Wiggin Farm, Piscassic River-Loiselle (with connectivity to NH Audubon Sanctuary), Heron Point Sanctuary, and Sliding Rock (Piscassic Boat Launch) (Figure 11). You can learn more about these and other conservation areas on the [Conservation Commission website](#).

We are fortunate to also have several other trails in Newmarket and nearby towns. These include the Sweet Trail from Newmarket to Durham. The SELT's Piscassic Greenway trail network accessible from Newmarket, Newfields, and Lee. Both Newmarket and Newfields reclassified their respective sections of Old Lee and Neal Mill/Halls Mill Class VI Roads as Class A Trails. This heightens the value of these pathways for public recreation and enables the communities to invest in their upkeep.

Newmarket continues to seek ways to enhance the trail network to connect town conservation areas and parks, provide safe pathways from downtown to other regions of town, and connectivity between towns. As development continues to consume more land and the remaining areas are often wet or rocky, the opportunities to create new pathways becomes more of a challenge. We will look for creative ways and partnerships to find ways to achieve this vision.

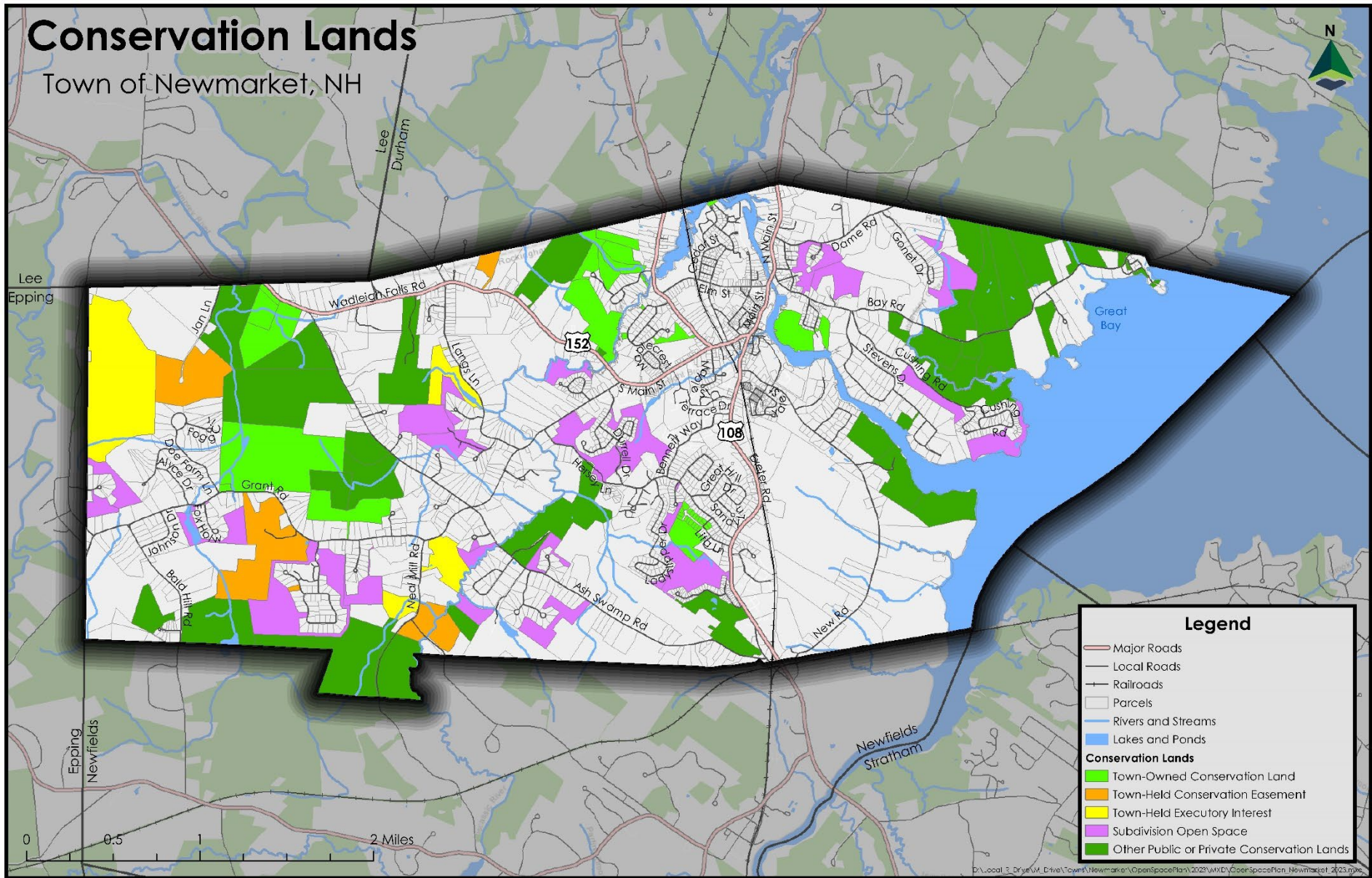


Figure 10: Conservation Lands by Ownership Type

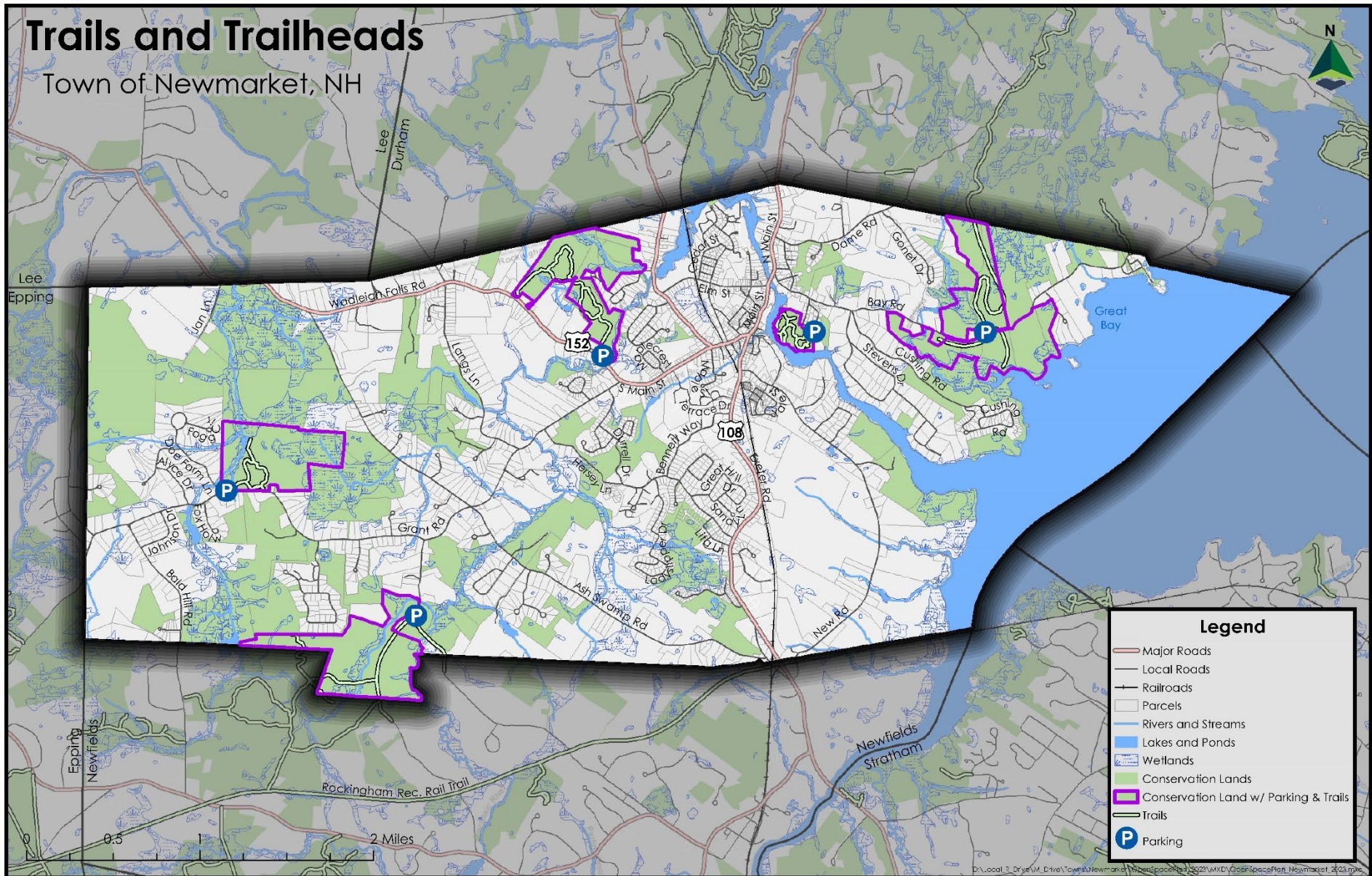


Figure 11: Trails, Trailheads, and Parking Locations within Newmarket's Conservation Areas

Town Funding Sources

The Conservation Fund

The Conservation Fund is a specific fund authorized by RSA 36-A; it is non-lapsing and can accumulate from year to year. This enables the Conservation Commission to plan for projects such as the acquisition of land, building of trails and associated infrastructure, educational programs, and other stewardship-related projects. For most expenditures, the Conservation Commission spends the money by a majority vote of the Commission at its public meetings. Prior to using these funds for the purchase of any interest in real property, the Conservation Commission must hold a public hearing and the Town Council must approve the acquisition. The Conservation Fund can hold public and private funds from different sources. The primary source of funding since its approval in 1989 has been 50% of the Land Use Change Tax (LUCT). This is money paid to the municipality when land that was enrolled in the Current Use assessment program is removed from current use to be developed. From 2003 to 2023, \$405,562 was deposited into the Conservation Fund from the LUCT. With less land in current use, the amount of LUCT deposited into the Conservation Fund in the next 10 years will be much less than in past decades.

Richard Schanda Park Fund

In 2020, the Masonic Lodge contributed \$4,000 to the Richard Schanda Fund, which the Conservation Commission uses to help steward Schanda Park, located near the boat landing on the Lamprey River.

General Fund Allocation

The Conservation Commission receives an annual appropriation from the General Fund that is included in the annual town budget, which is approved at the March Town Meeting. These funds are used for operating expenses such as part-time salary for the recording secretary, annual dues to the NH Association of Conservation Commissions, contracts for easement monitoring, and miscellaneous supplies. In recent years, the annual appropriation has been approximately \$4,500.

At the 2009 Newmarket Town Meeting, voters passed a warrant article that "...adopts the provisions of RSA 36-A: 4-a, I (b) allowing the Conservation Commission to expend funds for contributions to qualified organizations (such as land trusts) for the purchase of property interests, or facilitating transactions related to thereto, where the property interest is to be held by

the qualified organization and the town will retain no interest in the property.” At the same town meeting, voters did not approve provisions related to RSA 36-A: 4-a, I (a), which would have authorized the Conservation Commission to expend funds to purchase interest in land outside the boundaries of Newmarket.

In 2002, the residents of Newmarket passed a \$2 million Land Acquisition Bond, which has been used to protect several significant parcels in Town, including the Wiggin Farm, Nostrom Farm, Piscassic River-Loiselle, Hilton Tree Farm, among others.

Drinking Water Protection Fund

Newmarket voters, through warrant article, initially established this as an Aquifer Protection Easement Fund in 1999, approving allocations to this fund in 1999, 2000 and 2001. In 2003 voters approved enhancing the purpose of the aquifer fund to include fee simple acquisitions as well as easements and to include potential surface water sources. Most of this fund was expanded for conservation easement along the Piscassic River (a potential drinking water source), although additional allocations could be made to this fund through future warrant articles.

Conservation Tools

Municipalities have a range of tools and options available to conserve important open spaces. These include voluntary tools such as land protection and education, and regulatory measures such as overlay districts in the zoning ordinance that protect key features such as wetlands and floodplains. Some of these measures (e.g., land acquisition) depend on funding, whereas others require no financial outlays by the community. Most importantly, towns (and landowners) have access to many conservation partners to assist with all options, including state and federal funding sources, technical assistance, educational programs, and more.

We describe a suite of such tools that have been used successfully in Newmarket, in the areas of land conservation, land use planning, education, and land stewardship.

Land Conservation

Fee Ownership

Newmarket has a diversity of town-owned conservation areas that range in size from small pocket parks (less than 1 acre) near downtown to the 160-acre Wiggin Farm Conservation Area on the west side of town. The Town of Newmarket has full ownership of these lands (called “fee simple” ownership). These lands were acquired through a variety of methods that include town bond and conservation funds (land use change tax), state and federal grants, conservation partner contributions, tax liens, and other sources. Each offers different opportunities for public use based on size, location, natural features, purpose, and source of conservation funds. Some areas were acquired to protect specific resources such as drinking water or wetlands and some were acquired to provide public access to Great Bay or the Lamprey River. The Town owns these lands, and the Conservation Commission is responsible for overseeing their stewardship and managing of public uses, in partnership with Town Department of Public Works. See Appendix B for details about these fee-owned parcels.

The town holds many other special places that are while are not conservation areas, they are valued open spaces for residents and visitors to enjoy. The new Willey House Central Park is a new arts centric pocket park created by the Newmarket Arts, Culture and Tourism Commission with funds from the town, local organizations and a grant from the State Arts Council. The park will feature a “Welcome to Newmarket” mural and celebrate its location on the Lamprey River and mill history. Schoppmeyer Memorial Park, on the banks of the Lamprey River provides 3 acres of green space, a boat launch, and on-site kayak rentals from the Newmarket Recreation Department. The park was purchased with funding from the Lamprey River Advisory Committee (LRAC). The Newmarket Community Garden received a small grant from the Grass Roots Fund in 2009 to improve garden infrastructure and its 33 plots.

These unique and cherished locations across Newmarket also the Riverwalk and Town Landing, Riverside Cemetery, Piscassic and Lamprey Rivers, Piscassic Boat Launch and surroundings, Great Hill Trails, Elm Street playground, Aqua Land Splash Pad, benches along Main Street, and many ballfields and trails. Explore Newmarket’s recreation sites through the SRPC [Promoting Outdoor Play](#) interactive viewer.

Conservation Easements

A landowner has a bundle of rights to use and modify the property that they own. A conservation easement is a legal agreement between a landowner and a conservation organization, agency, or municipality that transfers some of these rights (typically the “development rights”) to the organization that holds the easement. Typically, a conservation easement is granted in perpetuity and therefore the development rights are extinguished forever, preserving the land as open space. The easement conveyed through a deed, applies to the land regardless of who may own it in the future.

Land under easement is still privately owned and managed in accordance with the terms of the easement. (Some publicly owned lands also have easements held by another entity.) Each easement is crafted to fit the features of the property to be protected, the needs of the landowners, and the goals of the entity accepting the easement. Easements are used to provide permanent protection from subdivision or other development or uses that could degrade or destroy ecological, scenic, or other natural resources. Easements often provide for continued farming, forestry, wildlife management, and recreation. Easements don’t always require public access; although often landowners allow this access, and some grant sources require public access as part of funding a conservation easement project.

A landowner who conveys a conservation easement is the grantor and the recipient organization is the grantee. Easements can be donated or sold for full or partial value. The easement document outlines the procedures for enforcing the easement, which typically lie with the grantee. In some transactions, another organization is given “back-up” or Executory Interest in the easement in case the grantee is unable to carry out its easement responsibilities. A Third Party Right of Enforcement is another instrument that can be used to provide some level of “interest” in the land being put into conservation. In addition to these conservation easements, some landowners and developers of subdivisions convey easements to the Town that provide some protection to natural features on the property. The provisions in these easements are usually driven more by the landowner’s interests than those of the grantee (e.g., Town or conservation organization).

The Conservation Commission helps oversee the annual monitoring of seven Conservation Easements held by the Town. The State of New Hampshire monitors two Town conservation areas over which they hold easements: Wiggin Farm and Dearborn Conservation Areas. The Town of Newmarket also holds Executory Interests on four conservation properties. See Appendix B for details about properties with conservation easements or executory interests.

Zoning Ordinance Protections

There are a variety of land use planning tools that can be used to both acquire and protect natural resources. These typically are designed as zoning overlay districts that may apply town wide or to select areas. A zoning overlay district is a zone that imposes additional restrictions to the underlying district. Newmarket has chosen to apply overlay zones in specific areas that need additional protection to protect the public health and welfare as well as town resources. The following overlay districts and open space subdivision ordinance have been established to protect our natural resources.

Open Space Subdivisions

The Newmarket Zoning Ordinance includes [Article 6: Residential Open Space Design Development by Special Use Permit](#). The intent of this provision is to allow an alternative residential development option that preserves larger areas of open space than conventional subdivisions. The open space design subdivisions are currently allowed in zoning districts R1, R2, and M-4 and require a special use permit. The open space must be designated as such on the approved and recorded subdivision plan. More than 510 acres have been designated as open space associated with these subdivisions. Most of these lands are owned by a homeowner's association and are only open to the residents of that subdivision. See Appendix B for details about the existing subdivisions with open space.

Aquifer Protection Overlay District

The [Aquifer Protection Overlay District](#) adds a layer of protection for groundwater supplies and recharge areas critical to drinking water supplies. The ordinance operates by restricting uses and the intensity of development that could introduce harmful contaminants into groundwater supplies. While the overlay district does not create or set aside open space land, it does ensure natural resources are protected for public benefit. The aquifer protection area includes all land identified as stratified drift aquifer near Newmarket Plains (along NH Route 152, Lee Hook Road, Langs Lane, and Ash Swamp Road) as well as designated wellhead protection areas.

Shoreland Protection Overlay District

The companion to the Aquifer Protection Overlay District, the [Shoreland Protection Overlay District](#), aims to conserve and protect surface water quality. Newmarket, home to the Great Bay, Lamprey and Piscassic Rivers, and other water bodies,

adopted this overlay district to reduce pollution, prevent degradation, and protect fisheries, among other water resource protection goals. It also aims to ensure the surrounding land uses are complementary to the water's health, by maintaining and improving adjacent forests, habitat, and buffers. The ordinance applies to all tidal waters of Great Bay, the Lamprey River and Lubberland Creek, the non-tidal portion of the Lamprey River, the impoundment above the Macallen Dam, and the Piscassic River. To create these protections, primary structures must be at least 125' away from the shoreline and uses such as salt storage sheds, junkyards, and hazardous waste facilities, and chemicals are prohibited within 250' of the shoreline.

Wetland Protection Overlay District

Wetlands provide a host of ecological and water resource benefits, natural beauty, and recreation opportunities for the community. They help to filter contaminants before they reach water supplies, retain water during floods, and prevent shoreline erosion from stormwater. The [Wetland Protection Overlay District](#) sets no-disturbance buffers around wetlands and poorly drained soils with a goal of protecting their many functions and qualities. These buffers range from 25 to 100 feet for buildings and an additional distance for septic systems.

Class A Watershed Protection Overlay District

This [overlay district](#) originally adopted in 1996 and last updated in 2017, requires septic systems to be set back 150 feet from the Piscassic River and Follett's Brook, protecting these Class A surface waters.

Steep Slope Protection Overlay District

The [Steep Slope Protection Overlay District](#) requires additional protections be put in place prior to construction where slopes are equal to or in excess of 25 percent to minimize erosion and runoff that could be exacerbated by disturbance. Construction of new roads is also discouraged on steep slopes.

Floodplain Protection Overlay District

The [Floodplain Protection Overlay District](#), safeguards floodplains from development that could "aggravate flooding," residents from building in high risk areas that could require emergency rescue during a flood, and maintains wildlife habitats.

Newmarket's ordinance exceeds the minimum requirements of the National Flood Insurance Program. Throughout most all of Newmarket, new buildings or expansions to existing buildings may not occur within the floodplain, protecting these valuable lands. The exception is within the M-1 or M-2 zoning districts, the mills and downtown, where construction must be "floodproofed" and approved by the town's building official.

Transfer Development Rights

This innovative zoning tool can be used to generate conservation funds, protect natural resources and balance the need for conservation and development. A Transfer of Development Rights (TDR) Ordinance works by selling development rights in a "sending zone" or area designated for protection to a "receiving zone" where development is preferred. Locally, Dover, NH has a TDR that could serve as a model for Newmarket. Dover has designated zones where development is better suited and those where there are sensitive natural resources ideal for conservation. Developers can either directly conserve land in these "sending zones" or they may purchase credits in exchange for increased density allowances in the "receiving zones." This latter option is used as a funding mechanism for the Conservation Commission to make strategic land purchases in support of their open space goals.

Subdivision and Site Plan Review Standards

In addition to Zoning Ordinances provisions and Transfer of Development Rights, municipalities have a third land use tool to encourage private development of recreation and open space. State Statute, RSA 674:36 provides the framework for subdivision regulations. Through this mechanism planning boards can adopt regulations that call for open spaces, parks, and playgrounds that fit within a larger development proposal. RSA 674:44 that governs site plan review regulations is not as specific and therefore planning boards are limited to providing open spaces that meet needs for the health, safety, convenience, and prosperity of the community.

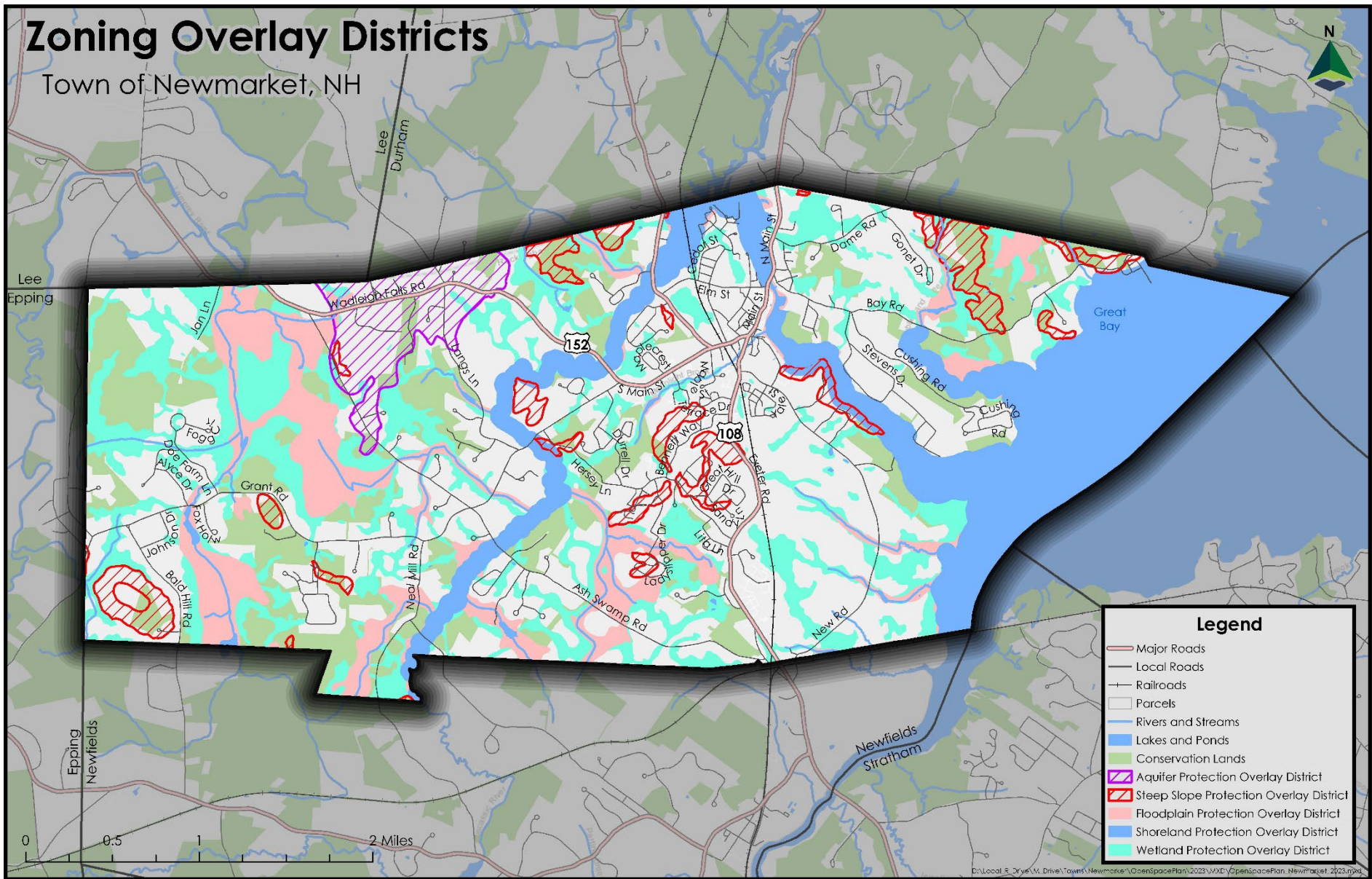


Figure 12: Aquifer, Steep Slopes, Floodplain, Shoreland, and Wetland Protection Zoning Overlay Districts

Education

Educational programs on conservation and environmental topics are important and helpful in sharing information, building support, receiving input, and engaging volunteers in Newmarket's open space conservation goals. Most people support conservation and might be interested in volunteering their time or doing things differently if they knew what to do. Inviting residents to learn about the natural features, conservation lands, public trails, and other conservation efforts is important in building an ecologically and economically sustainable community.

Newmarket is fortunate in having multiple ways for people to learn about our open spaces and conservation. All monthly meetings of town boards and commissions are broadcast live and can be viewed later. A weekly electronic newsletter offers space to highlight events, news, and other helpful tips and information about current issues and activities. We host workshops and field trips and invite guest speakers to monthly meetings. Larger community events—such as the Backyard Bash and OysterFest—provide opportunities to reach people of all ages. The Conservation Commission webpages include information on town conservation areas, trails, and other open space and related environmental information.

Land Stewardship

The Newmarket Conservation Commission and Department of Public Lands steward the town conservation areas with the help of volunteers. This includes managing habitats (e.g., mowing fields, controlling invasive plants), maintaining trails, installing welcome kiosks, creating interpretive signage, caring for parking areas, and other maintenance. We encourage people to access and enjoy Town conservation areas. As more people seek to get outside, it is important to care for these lands for the benefit of nature, to keep them safe and accessible for visitors.

Newmarket continues to benefit from volunteers and conservation partners. Local Scout Troops have helped build and re-route trails and install signs, benches, and other infrastructure. Residents from Newmarket and neighboring towns have participated in volunteer stewardship workdays to clean up trails, parking areas, and roadsides, repair bridges, and related projects. Recently we've partnered with the Newmarket High School as part of Newmarket Cares Day to spend a morning fixing up town conservation areas. The UNH Nature Groupie program has provided summer interns, an online calendar for posting volunteer workdays, and a stewardship toolshed where we can borrow hand tools for our volunteer workdays. Newmarket DPW and the Conservation Commission work closely on stewardship-related tasks as needed.

Newmarket's Conservation Fund, Schanda Park Fund, and General Fund have been used to fund various land stewardship projects on town lands. We have also benefited greatly from a partnership with the Lamprey River Advisory Committee (LRAC), which has funded several projects including kiosks and interpretive signs at Schanda Park, Heron Point Sanctuary, Sliding Rock, and Wiggin Farm. The NH Fish and Game Small Grants Program has helped with stewardship on the Wiggin Farm Conservation Area.

Conservation Focus Areas -- 2024

Coastal Watershed Conservation Plan

The [2021 Coastal Watershed Conservation Plan](#) produced by The Nature Conservancy, identified priority conservation focus areas for all the towns in the coastal watershed. The Plan utilized several spatial datasets from existing state and regional plans, representing the following categories: wildlife and habitat, water resources, climate adaptation, and agricultural resources. Thus, the resulting recommendations represent a comprehensive regional vision for a balanced network of conservation focus areas that seeks to protect natural systems and create resilient communities, recognizing that a coordinated regional approach is necessary to protect ecosystems and associated habitats that cross political boundaries. The Plan also considered the need for economic development and growth across the watershed, integrating this delicate balance into its results. Figure 14 shows the Coastal Conservation Plan Focus Areas for Newmarket.



Figure 13: Conservation Commission members work with volunteers to improve trail access at Wiggin Farm

Photo by Ellen Snyder

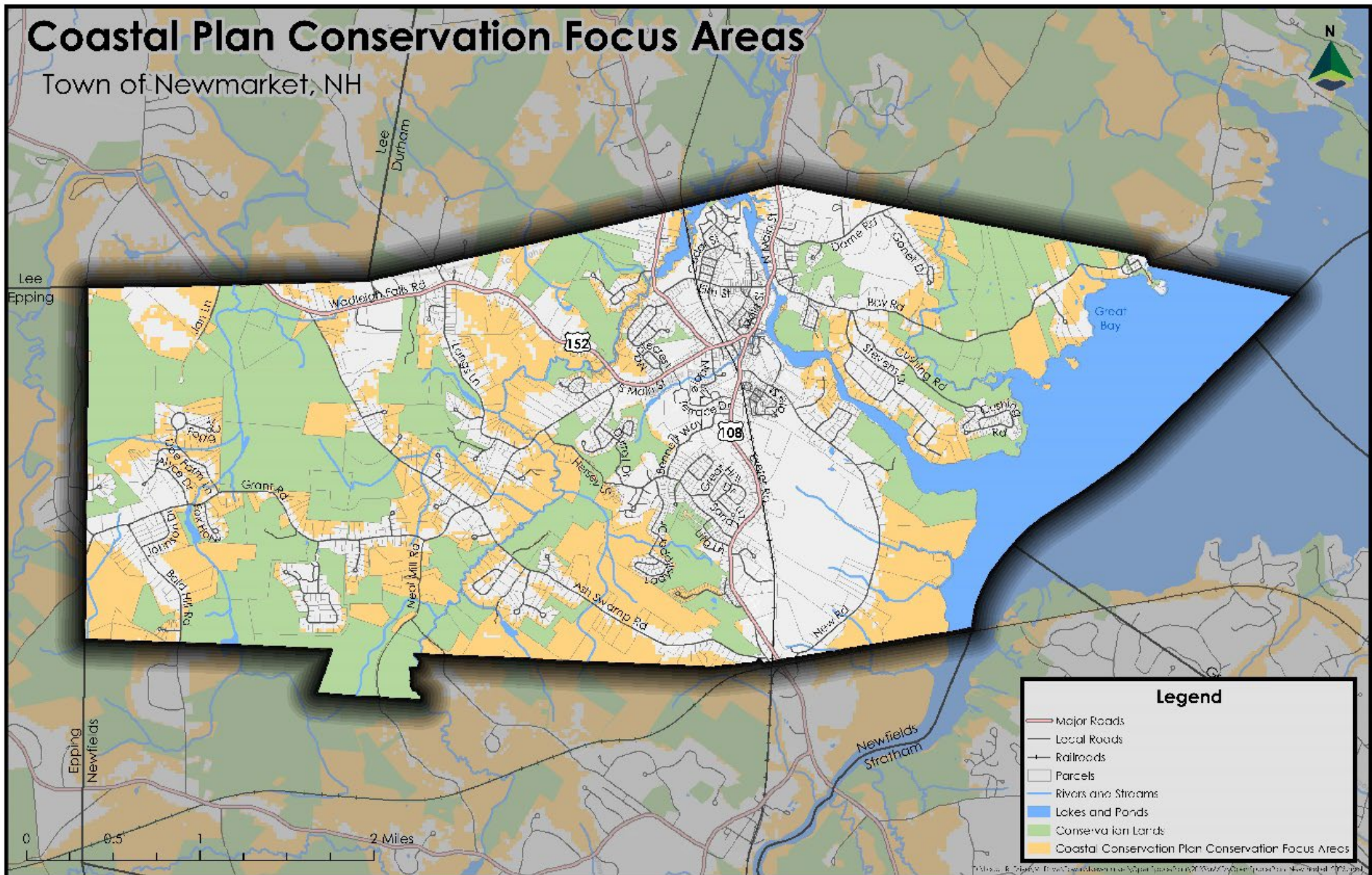


Figure 14: Conservation Focus Areas, NH's 2021 Coastal Conservation Plan, The Nature Conservancy

Cooccurrence Mapping

Similar to the Watershed Conservation Plan, the co-occurrence mapping analysis identified locations where several natural resources were present. In the following maps, the darker the color gradients indicate resource rich areas. Two different analyses were prepared to help identify high value natural resource (Figure 15) and drinking water areas. Each incorporates the following resources:

Land Resources

- Agricultural Lands
- Forest Lands
- Conservation Lands
- Conservation Focus Areas
- Farmland Soils
- Flood Zones
- Poorly Drained Soils
- Wetlands
- Prime Wetlands
- Prioritized Habitat Blocks
- Wildlife Corridors
- Rivers and Streams
- Waterbodies
- Unfragmented Lands
- Wildlife Action Plan Habitat Tiers

Water Resources

- Rivers and Streams
- Waterbodies
- Wetlands
- Prime Wetlands
- Designated Rivers
- Groundwater Reclassified Areas
- Source Water Protection Areas
- Stratified Drift Aquifers
- Wellhead Protection Areas
- Flood Zones
- Shoreland Protection Areas

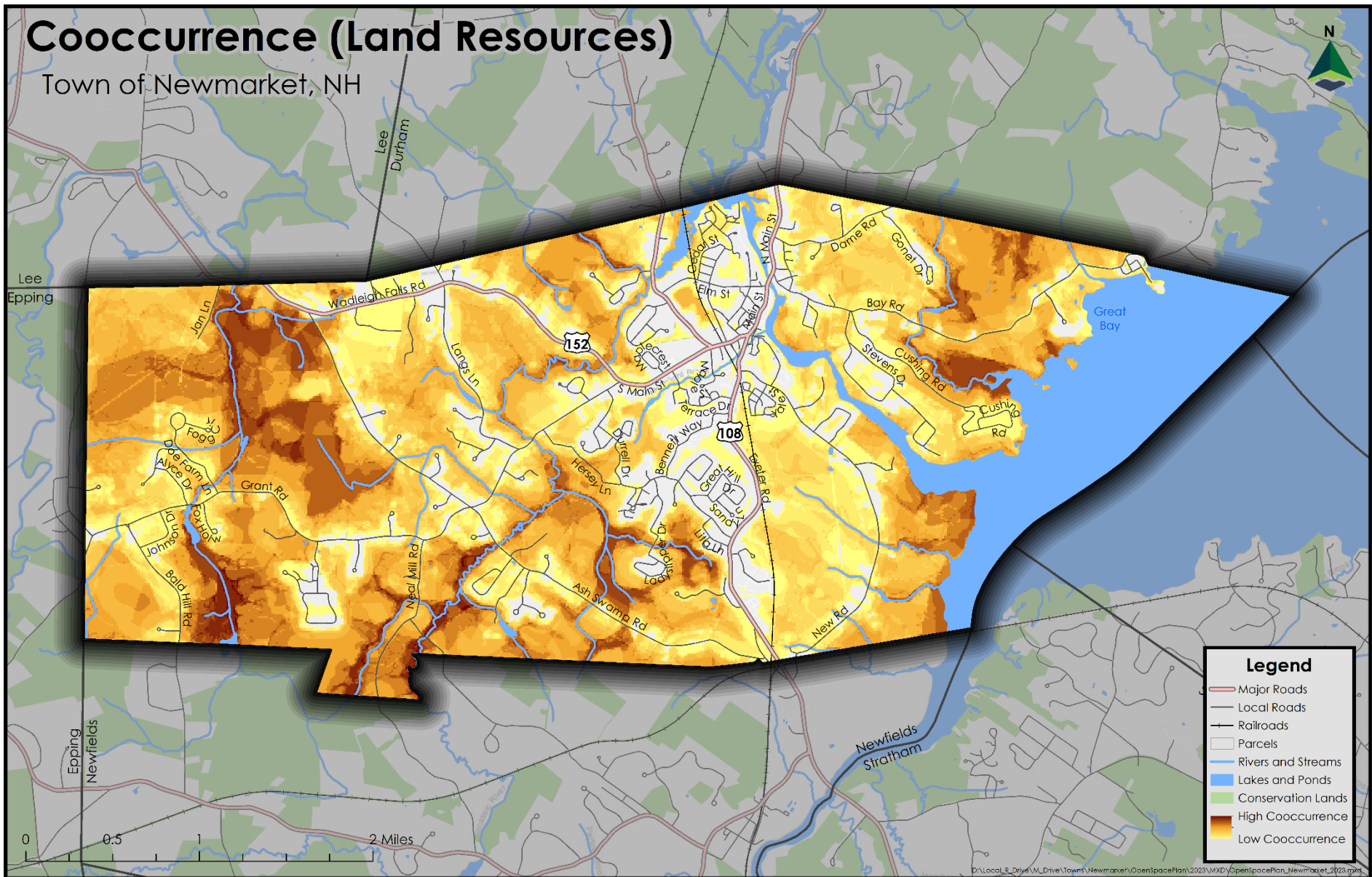


Figure 15: Cooccurrence of Natural Resources

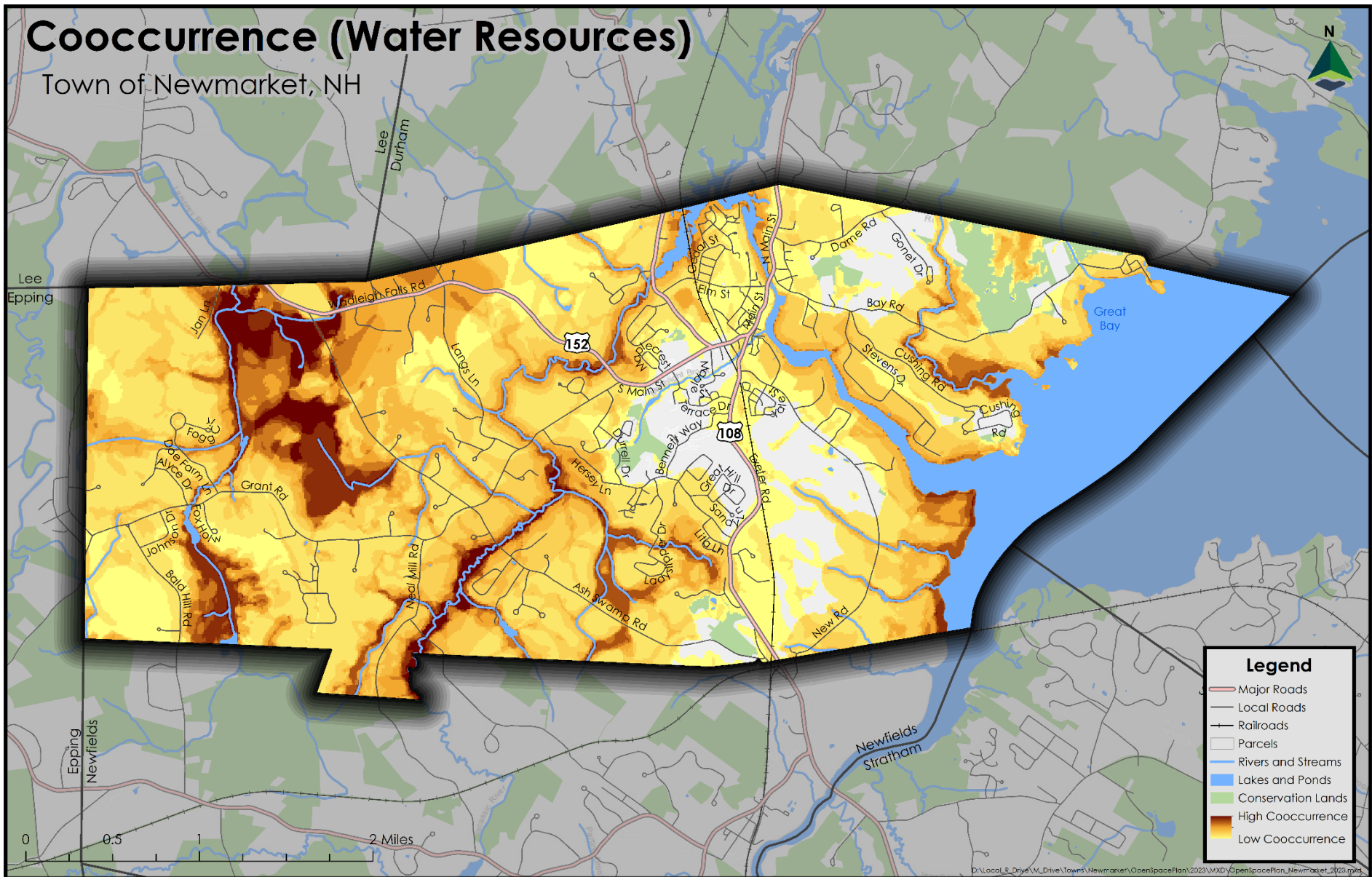


Figure 16: Cooccurrence of Water Resources

The Benefits of Open Space

There are many reasons for our community to continue to work with interested landowners and conservation partners to protect important natural places. These include:

- **Recreation and Health:** Exposure to nature reduces stress, anxiety, and depression. Spending time in the outdoors—hiking, birding, snowshoeing, running, dog-walking, or other ways to enjoy natural places—improves our mental and physical health. Conserved lands such as Wiggin Farm offer places for respite and relaxation. Public and private conservation lands in Newmarket offer trails for outdoor enthusiasts including the Sweet Trail, Piscassic Greenway, Follet's Brook, Wiggin Farm.
- **Clean Drinking Water:** Every resident in Newmarket depends on groundwater for their drinking water supply. The Town maintains four municipal wells serving approximately 50 percent of Newmarket's residents. Spanning approximately 410 acres, the Town's most productive groundwater resource and primary drinking water source is a stratified drift aquifer known as the Newmarket Plains Aquifer. The remainder of the town relies on private wells or small community wells. Land uses on the surface impacts our ability to protect the quality and safety of our drinking water. Conserving land around the municipal wells and over aquifers throughout town is still one of the best strategies for protecting current and future water supplies.
- **Flood Control and Storage:** Maintaining natural areas, especially wetlands and floodplains, helps absorb flood waters and slow the release of water to minimize excessive runoff. Several conservation areas, with frontage along rivers or encompassing large wetlands, are especially critical for flood storage: Piscassic River-Loiselle Conservation Area and the Silverman-Schneer Conservation Easements along the Piscassic River and the Wiggin Farm Conservation Area at Tuttle Swamp.
- **Minimizes Impervious Surfaces:** Development increases the amount of impervious surfaces (rooftops, sidewalks, roads, and parking lots), contributing to higher volumes and rates of stormwater runoff. Currently, Newmarket has 599.95 acres or 6.61% of the Town covered by impervious surfaces; natural systems begin to degrade at 10% impervious. The increased flows from impervious surfaces can carry excess nutrients, heavy metals, oils, and other pollutants into our waterways. Increased runoff also exacerbates sedimentation and erosion. Green spaces--

including natural riverfronts, in-town parks and gardens, and larger conservation areas—integrated into developed spaces, helps minimize the impact of developed spaces.

- **Habitat and Connectivity for Plants and Animals:** Large tracts of habitat, unbroken by roads, houses, or other development, are becoming increasingly rare in southeastern New Hampshire. In the larger blocks with a diversity of interconnected woods and wetlands provides secure travel corridors for wide-ranging wildlife such as bobcat, fisher, bear, and moose. Songbirds, small mammals, and other wildlife are less susceptible to mid-sized predators that do well in human landscapes, including fox, raccoon, skunk, and domestic cats. Fewer fragmenting roads also means fewer road-killed snakes, turtles, small mammals, and deer. Newmarket’s remaining large tracts still harbor some rare plants and unusual plant communities.
- **Healthy Forests:** Forests offer shade and cooler temperatures for people in the heat of summer, [combating the urban heat island effect](#), and provide similar benefits to aquatic life. Forests provide lumber, firewood, and other products; offer watershed protection by purifying air and water and preventing erosion; serve as carbon sinks, critical in efforts to confront the impacts of anthropogenic climate change.
- **Local Food:** People are interested in buying or growing fresh, local foods. Farmstands, community gardens, community-supported agriculture (CSAs), and farmers markets all depend on local or regional open space. Conserving lands with good farm soils and farming opportunities provides many of the other benefits listed here.
- **Coastal Resilience:** Relative sea level (RSL) is rising in coastal New Hampshire. Tide gauges off the coast indicate relative sea level in southern New Hampshire rose 8 inches from 1912 to 2018, and this trend is expected to continue. Coastal and inland impacts from storm surge will increase with relative sea level rise. As extreme weather events increase in frequency and intensity, storm surge will also increase, causing rising groundwater levels and the potential for saltwater intrusion. Protecting our salt marshes along Great Bay, as well as the ability for salt marsh migration, builds coastal resiliency in our community.

Our Priority Conservation Areas

As presented in the NH Coastal Watershed Conservation Plan Focus Area Map for Newmarket (Figure 14), many areas of ecological significance remain unprotected from future development or other land use changes. This is a testament to both the biologically rich Newmarket landscape and water supplies, and that many landowners have continued to steward their land as open space. As development pressure continues apace, the Conservation Commission identified five focus areas that warrant dedicated efforts to ensure that they continue to provide the benefits critical to Newmarket's sustainability and economic and environmental health. These five regions encompass areas identified in the Coastal Plan and all support significant wildlife habitat values as shown in the NH Wildlife Action Plan Map (Figure 1) and vital drinking water resources. Of paramount importance in seeking opportunities to conserve additional lands within these focus areas, is the willingness and interest among landowners within these areas in partnering on conservation options.

Bald Hill Region

Bald Hill, at 276 feet, is the highest point in Newmarket. Located in the southwest corner of Town, the Bald Hill region hosts upland forests, hayfields, large wetlands that flow toward Tuttle Swamp, important wildlife corridors, connectivity to other conserved lands, and habitat for hundreds of rare and common animals and plants. Successful land conservation projects have been completed—with more ongoing—through partnerships with landowners, the Southeast Land Trust, NH Fish and Game, and the Town of Newmarket, among other funding entities. Bald Hill Road is one of the most scenic drives in this area and it is popular with runners, cyclists, dog-walkers, and others that enjoy the scenic backdrop of forests and fields.

Ash Swamp Road East

A large wetland system and tributary to the Piscassic River is located on either side of Ash Swamp Road between Grant Road and Route 108. This ecologically significant area extends into Newfields. It supports populations of rare and common turtles, among other wildlife. The connectivity along this tributary is severed by Ash Swamp Road, leading to significant mortality of turtles annually. The Newmarket Conservation Commission, Public Works and Engineering, and Planning Department are collaborating with NH Fish and Game to implement an improvement aquatic passage that would provide a safer crossing for wildlife, including the turtles. Conserving the lands and waters in this region with interested landowners would complement the efforts to create a better road/wetland interface.

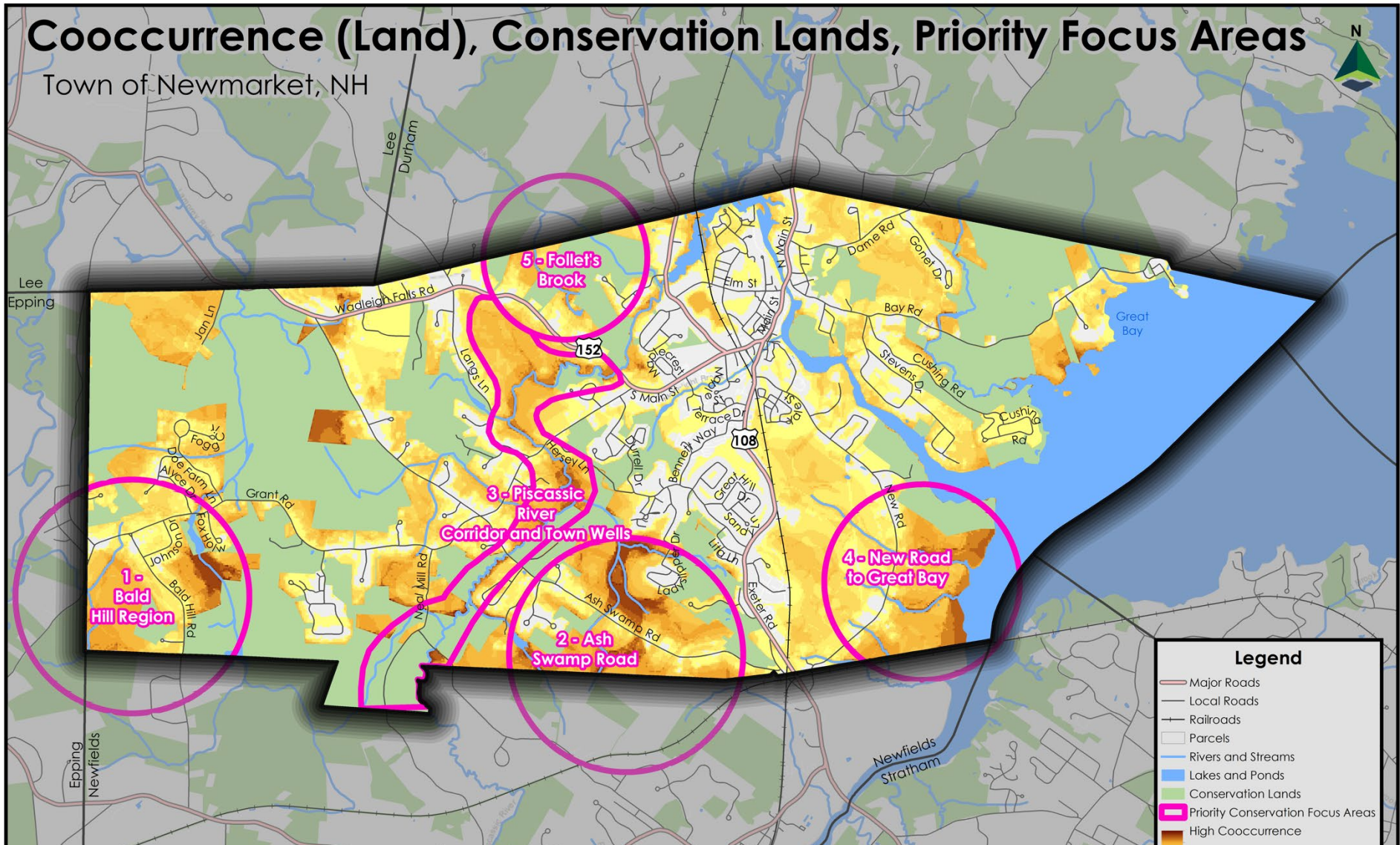


Figure 17: Priority Areas, Land Resources Cooccurrence Conservation Land

New Road to Great Bay

The Great Bay Estuary is nationally recognized and designated as the Great Bay National Estuarine Research Reserve. The region of Newmarket between New Road and the Bay is still one of the largest blocks of undeveloped land in Town and on the Bay. It also harbors the largest contiguous stretch of salt marsh in Newmarket and offers opportunities for salt marsh migration landward as sea levels rise. This area connects ecologically with conserved lands located across the Squamscott River and Great Bay in Stratham. Several unnamed tributaries flow under New Road and into the Bay, highlighting the importance of protecting the ecological health of these small streams to protect the health of the Bay.

Piscassic River Corridor and Town Wells

The Piscassic River is the largest tributary that flows into the Lamprey River and the lower portion of the watershed is entirely within Newmarket except at the point where it flows into the Lamprey in Durham. The Southeast Land Trust and the Town of Newmarket have protected significant Piscassic River frontage and associated riparian areas and floodplains in the Neal Mill Road region of Newmarket. The entire river corridor is important for protecting water quality, easing floodwaters, preventing runoff and erosion, maintaining wildlife connectivity, maintaining water temperatures and habitat for aquatic life. The river corridor and intersecting large blocks of undeveloped land also help protect Newmarket municipal wells.

Follett's Brook

Follett's Brook flows southeasterly from Durham and joins up with the Piscassic River just above the Packers Falls Road dam. The lower third of Follett's Brook watershed is within Newmarket. Prior to 1990, this brook was the principal municipal water supply source with treatment provided at the Packers Falls Road Water Treatment Plant. In the 1990s, Newmarket ceased withdrawing from Follett's Brook and now relies entirely on groundwater wells for public drinking water. Follett's Brook remains a largely intact waterway with significant natural buffers and much of the watershed in Durham and Newmarket is conserved. Several critical parcels, if conserved, would provide additional protection to the water and wildlife in this watershed. Additionally, the Conservation Commission is evaluating opportunities to create trail connectivity between Newmarket and Durham through this region.

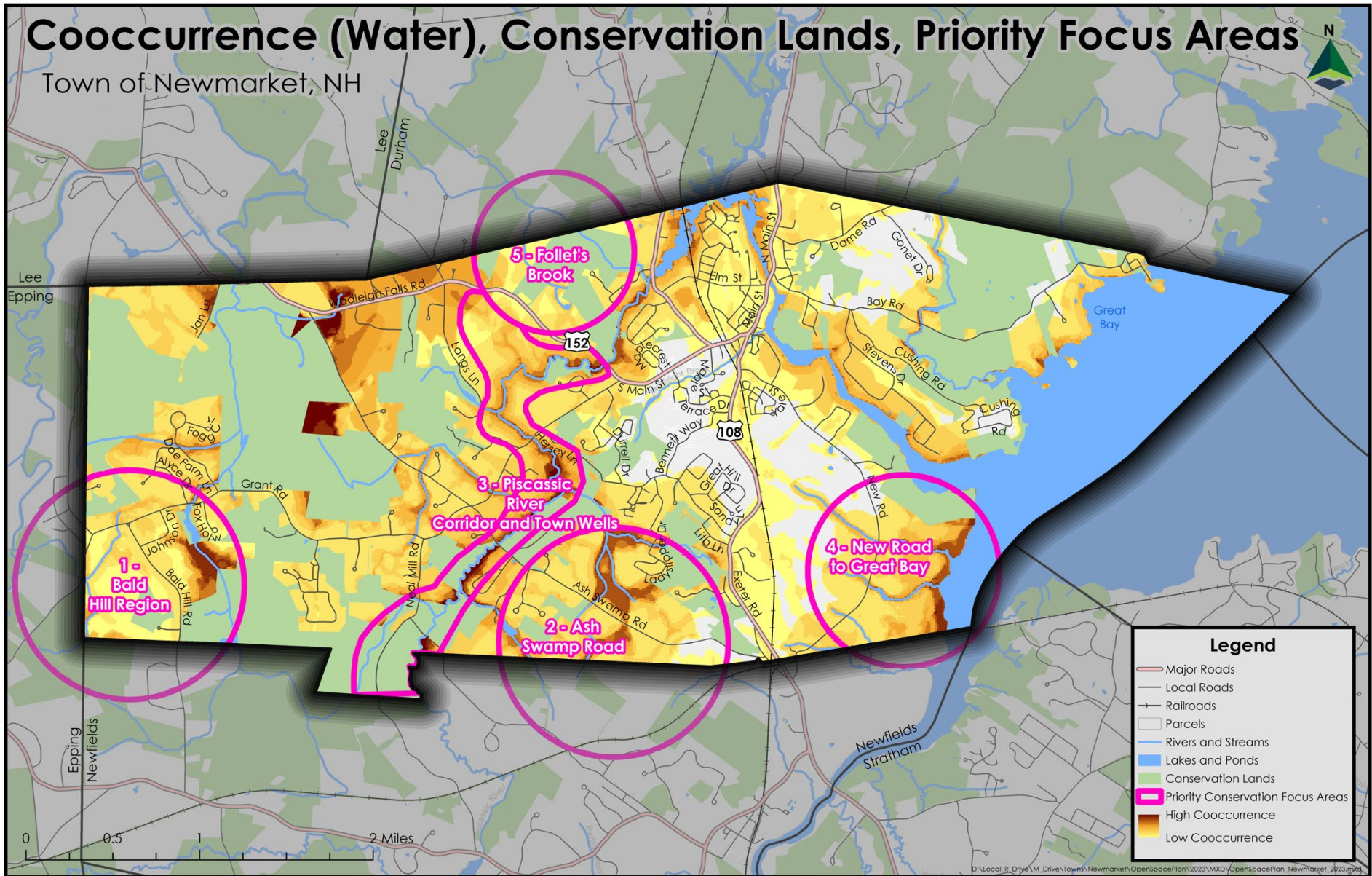


Figure 18: Priority Areas, Water Resources Cooccurrence Conservation Land

Newmarket Plains Aquifer

One area of Town not included in one of the five focus areas above is the Newmarket Plains Aquifer. This area includes the Municipal Bennett Well and the Sand and Gravel Operations in the Route 152 northwest region of Newmarket. This is a major gateway to Town and although town sewer and water don't currently reach that far, this area will likely be a prime development area in the future. Given its location over Newmarket's largest aquifer and proximity to the ecologically significant Tuttle Swamp ecosystem and the Lamprey River, this area will require careful and creative development. The Aquifer Overlay District affords some protections to this sensitive area. Additional attention to incorporating green space, trail connectivity, water quality protection, and other measures is warranted for this area.

Land and Water Conservation Goals and Actions

Key components in this Open Space Plan will be incorporated into the Land and Water Conservation Chapter as part of the Master Plan Update. The Master Plan includes an Implementation Guide that describes goals, actions, timeline, responsible party, partners, and potential funding sources as needed. The goals and actions related to land and water conservation are summarized below and relate to the information presented in the above sections.

Protect Drinking Water

- Educate community members on ways to protect drinking water sources and source water protection areas from harmful land uses and contamination.
- Utilize innovative use planning and conservation tools to provide additional protection to the Aquifer Overlay District and Wellhead Protection Areas.

Protect Surface Waters and Wetlands

- Restore the water quality and natural conditions (where feasible) of Moonlight Brook. Utilize living shoreline and other green infrastructure to the maximum extent practicable.
- Maintain, and restore where needed, natural buffer areas along the Lamprey and Piscassic Rivers, Follett's Brook, Lumberland Creek, and other unnamed tributaries.
- Protect freshwater wetlands including buffers and floodplains using land use planning tools such as the Wetlands and Floodplain Overlay Districts and educational materials and outreach.
- Update Newmarket's prime wetlands maps and maintain a higher degree of protection on prime wetlands.
- Protect salt marsh along Great Bay and explore opportunities for salt marsh migration amid sea-level rise.
- Maintain involvement in committees related to the Wild & Scenic Lamprey River and its Watershed.
- Work with surrounding towns to update maps of vernal pools.

Restore Aquatic Passage and Stream Connectivity

- Building on the success of the Lubberland Creek culvert upgrade on Bay Road, collaborate among Town Departments and Boards and conservation partners, to improve stream crossings and restore aquatic connectivity where needed throughout Newmarket.
- Use the NH Aquatic Restoration Mapper to assess all road crossings/culverts and town roads. Set priorities for restoring/upgrading aquatic passage.
- Create safe turtle crossings by improving stream flow and passage at Ash Swamp Road by replacing existing culverts, adding fencing, and other infrastructure including highway speed slowing techniques.

Protect and Connect Priority Lands

- Dedicate 100% of the Land Use Change Tax (LUCT) to the Conservation Fund.
- Work with interested landowners and conservation partners to conserve the lands and waters within the Newmarket Priority Conservation Focus Areas.
- Protect habitat corridors and enhance connectivity of open spaces and priority lands across Newmarket and abutting municipalities.
- Utilize innovative use planning, education, and conservation tools to protect lands and waters within the NH Coastal Watershed Conservation Focus Areas.
- Dedicate tax lien properties abutting existing conservation lands or within conservation focus areas as conservation areas to enhance existing network of conservation land.

Steward Town Conservation Lands

- Implement (and update as needed) Management Plans for Town conservation areas, including Wiggin Farm Conservation Area, Piscassic River-Loiselle, Heron Point Sanctuary.
- Maintain accurate records of all town-owned conservation areas, town-held conservation easements and town-held executory interests.

- Monitor town-held conservation easements annually and participate in annual monitoring by State of NH of Wiggan Farm and Dearborn Conservation Areas.
- Update the NH GRANIT conservation lands layer as needed; ensure that new subdivision open space is similarly updated when created.
- Maintain property and educational information on the Newmarket Conservation Commission webpages.
- Maintain infrastructure at town conservation areas including parking areas, entrance signs, information kiosks, interpretive signage, and related features.
- Review the Town Ordinances and Resolutions that pertain to use of conservation lands to ensure that the ordinances are consistent with the purposes for which the land was conserved.
- For town conservation areas with multiple tax parcels, work with the Planning Department to merge lots to create one tax parcel. This includes Tuttle Swamp Conservation Area, Lita Lane, and Follet's Brook.
- Work with the Riverbend and Mastin Road neighborhoods to identify ways to manage the pocket parks in these neighborhoods and evaluate opportunities for trail connectivity.
- Conduct a Natural Resource Inventory of the Town's Follett's Brook properties to assess ecological significance and opportunities for expanded trail network. Partner with NH Audubon and their Follett's Brook sanctuaries.

Promote Sustainable Land Use

- Promote Pollinator-Friendly Habitats, especially native plants, and notably such habitat improvements that can be made to public spaces such as schoolyards, traffic islands, and pocket parks.
- Incorporate lists of recommended and prohibited plant species into Newmarket's Site Plan & Subdivision regulations.
- Implement all feasible stormwater management practices to prevent and minimize runoff that contains contaminants and causes erosion.
- Require open space design development for residential subdivisions.
- Continue to support a balance between affordable housing needs and conservation priorities. Support housing in-fill and other locations that are not ecologically significant or within Conservation Focus Areas. Encourage inclusion of sidewalks, green pathways, pocket parks as part of new developments or redevelopments.
- Consider adopting a roadside Japanese knotweed control plan, to reduce the environmental and safety issues with this invasive plant.

Revitalize Downtown Riverfront

- Enhance Newmarket's waterfront. Evaluate ways to improve the Newmarket riverfront for people, restore a living shoreline to prevent further erosion, and restore the health of Moonlight Brook as it flows into the Lamprey River at Schanda Park.
- Maintain safe and accessible boat access to the Piscassic and Lamprey Rivers while maintaining scenic quality.
- Educate residents and visitors on best practices along riverfront, such as not feeding wildlife, respecting private property, etc.

Create Trail Networks

- Create safe routes and connectivity, where feasible, for hiking, biking, horseback riders, and other trail users, within Newmarket and between neighboring communities.
- Develop policy that requires integration of trails and green spaces into new developments and ensures maintenance of existing and proposed natural amenities.
- Explore opportunities to develop trail connectivity among Follet's Brook properties, connecting Newmarket and Durham.
- Explore ways to create safe pathways for pedestrians and cyclists from downtown to conservation areas such as Heron Point Sanctuary and Piscassic River-Loiselle Conservation Area.
- Utilize Strafford Regional Planning Commission's (SRPC) pedestrian counters and traffic counters to monitor usage of trails and town parks and conservation areas.

Appendix A: Land Acquisition Criteria Evaluation

(follows)



Town of Newmarket Conservation Commission Land Acquisition Criteria Evaluation (LACE)

Tax Map and Lot: _____ Parcel Size: _____

Property Owner: _____

Property Address: _____

- Financial Considerations:
- Parcel or Conservation Easement (CE) to be donated by owner
 - Significant bargain sale
 - Owner needs full appraised value

Purpose: The Newmarket Conservation Commission has adopted the following evaluation criteria for protecting and preserving important parcels of land for the future benefit of the residents of Newmarket.

| Potential Benefit | | Reference | Condition |
|---|---|--|--|
| 1. | Abuts existing Conservation Land | Newmarket GIS; Open Space Plan Map 2 | <input type="checkbox"/> Directly abuts existing Conservation Land |
| | | | <input type="checkbox"/> Does not abut existing Conservation Land |
| 2. | Conservation Focus Areas (CFA) | Open Space Plan Map 1 | <input type="checkbox"/> Includes land identified as a CFA |
| | | | <input type="checkbox"/> Does not include land identified as a CFA |
| 3. | Agricultural Resources | NH Coastal Watershed Conservation Plan | <input type="checkbox"/> Includes a Priority Agricultural Resource (PAR) |
| | | | <input type="checkbox"/> Adjacent to a PAR |
| | | | <input type="checkbox"/> Meets none of the above |
| | | Discussion with Property Owner | <input type="checkbox"/> Currently a working farm |
| 4. | Drinking Water Protection (groundwater) | Newmarket GIS; NHDES; Open Space Plan Map 3 & 6 | <input type="checkbox"/> Parcel within Aquifer Protection Overlay |
| | | | <input type="checkbox"/> Parcel within Source Water Protection Area |
| | | | <input type="checkbox"/> Parcel within Wellhead Protection Area |
| | | | <input type="checkbox"/> Meets none of the above |
| 5. | Surface Water Quality | Newmarket GIS; NH Coastal Watershed Conservation Plan; Open Space Plan Map 6 | <input type="checkbox"/> Area has river frontage |
| | | | <input type="checkbox"/> Area has surface water or wetland present |
| | | | <input type="checkbox"/> Area has vernal pools present |
| | | | <input type="checkbox"/> Area has Prime Wetland present |
| | | | <input type="checkbox"/> Area has salt marsh present |
| | | | <input type="checkbox"/> Area has salt marsh migration potential |
| <input type="checkbox"/> Area is within 100 year floodplain | | | |

| Potential Benefit | Reference | Condition |
|-------------------|---|---|
| | | <input type="checkbox"/> Project does not have surface waters |
| 6. | Wildlife Habitat Quality | Wildlife Action Plan; Open Space Plan Map 4 <input type="checkbox"/> Area contains Highest Ranked Habitat in NH <input type="checkbox"/> Area contains Highest Ranked Habitat in Region <input type="checkbox"/> Area contains Supporting landscape <input type="checkbox"/> None |
| 7. | Wildlife Corridor | Connect the Coast <input type="checkbox"/> Area contains a Wildlife Corridor <input type="checkbox"/> Area close to a Wildlife Corridor <input type="checkbox"/> No Wildlife Corridor identified |
| 8. | Public Access | Discussion with Stakeholders <input type="checkbox"/> Unlimited public access to project area <input type="checkbox"/> Gain of public access to project area <input type="checkbox"/> Improvement to trail connectivity <input type="checkbox"/> No public access to project area |
| 9. | Scenic Views (visible from public roadways, public trails or waterways) | Site Walk <input type="checkbox"/> Parcel features extensive Scenic Views <input type="checkbox"/> Parcel exhibits some Scenic Views <input type="checkbox"/> No Scenic Views |
| 10. | Unique Ecological & Cultural Features | (vernal pools, exemplary natural communities) <input type="checkbox"/> Unique ecological features present <input type="checkbox"/> Area has New Hampshire Heritage Bureau rare species present <input type="checkbox"/> Unique cultural features present <input type="checkbox"/> Unique historical features or values present <input type="checkbox"/> No unique features |
| 11. | Funding Leverage | Discussion with Stakeholders <input type="checkbox"/> Funding leverage associated with project <input type="checkbox"/> Potential funding leverage with project <input type="checkbox"/> Donation associated with project <input type="checkbox"/> No funding leverage with project |
| 12. | Development Threat | Discussion with Stakeholders <input type="checkbox"/> Project under immediate development threat <input type="checkbox"/> Project under potential development threat <input type="checkbox"/> Project not under immediate development threat |
| 13. | Property Size | Newmarket GIS <input type="checkbox"/> Conservation value would not be diminished if adjacent properties are developed. |

| Potential Benefit | | Reference | Condition |
|-------------------|---|--|--|
| | | | <input type="checkbox"/> Conservation values would be diminished if adjacent properties are developed. |
| 14. | Aligns with Open Space or Master Plan Goals | Open Space Plan; Land & Water Conservation Master Plan | <input type="checkbox"/> Project aligns with goals or does not conflict with Plans |
| | | | <input type="checkbox"/> Project does not align with goals |
| 15. | Stewardship | Discussion with Stakeholders | <input type="checkbox"/> Project does not present stewardship or land management challenges |
| | | | <input type="checkbox"/> Project presents stewardship or land management challenges |

Appendix B: Conservation and Open Space Lands

Table 2: Town Owned Conservation Land

| Conservation Area | Size (Acres) | Date Acquired | Tax Map Lot # | Location | Recorded Deeds | Recorded Plans (Surveys) |
|---|--------------|---------------|-------------------------------|----------------------|---|---|
| Dearborn | 38.09 | 2016-11-14 | R6, Lot 27 | 206 Grant Rd | Quitclaim Deed Dearborn to Town: BK 5772 PG 2831 (11/14/2016) CE Deed Dearborn to NHFG: BK 3466 PG 378 (4/10/2000) Driveway ROW Deed Newmarket to Hyland: BK 6492 PG 1355 (7/3/2023) | D-27921 (3/22/2000) |
| Follet's Brook-Leary | 10 | 2004-05-14 | U1, Lot 17-1 | 57 Packers Falls Rd | Warranty Deed Leary to Town: BK 4291 PG 2483 (5/14/2004) | D-31597 (4/1/2004) |
| Follet's Brook-Rousseau | 9.4 | 2005-02-03 | U1, Lot 20 | 67R Packers Falls Rd | Warranty Deed Rousseau to Town: BK 4433 PG 1818 (2/3/2005) Warranty Deed Town to Casella, Lot 20-1 BK 4633 PG 2614 (3/27/2006) | D-33023 (9/8/2005) |
| Follet's Brook-Szacik | 0 | 2005-12-16 | originally part of U1, Lot 21 | Packers Falls Rd | Warranty Deed Szacik to Town: BK 4596 PG 0242 (12/16/2005) | D-33023 (12/16/2005) |
| Follet's Brook - Trotter Park | 0.63 | 1990-02-01 | U1, Lot 88 | 0 Mastin Drive | Warranty Deed VMJ Enterprises to Town: BK 2825 PG 1418 (2/1/1990) | D-16753 (7/30/1987) |
| Follet's Brook - Trotter Park (Carolyn Drive) | 8.49 | 1993-04-15 | U1, Lot 96 | 12 Carolyn Dr | Warranty Deed VMJ to Town: BK 2977 PG 0372 (4/15/1993) | D-20528 (6/1/1989) D-20287 (12/1/1988) |
| Follet's Brook - Waterworks | 9 | 1915-11-10 | U1, Lot 97 | 2 Carolyn Drive | Deed Green to Newmarket Water Works: BK 700 PG 32 (1915-11-10) | D-16753 (7/30/1987) |
| Follet's Brook - Waterworks | 14 | 1894 to 1938 | U1, Lot 16 | Follet's Brook | Deed Mathes to Newmarket Water Works: BK 940 PG 87 (1938-02-12) Deed Knight to Newmarket Water Works: BK 719 PG 224 (1918-01-30) Deed Wiggin to Newmarket Water Works: BK 636 PG 382 (1908-02-26) Deed Green to Newmarket Water Works: BK 700 PG 32 (1915-11-10) Deed Wiggin to Newmarket Water Works: BK 543 PG 272 (1894-09-01) | Oct 1946 Plan by Weston and Sampson Engineers |

| Conservation Area | Size (Acres) | Date Acquired | Tax Map Lot # | Location | Recorded Deeds | Recorded Plans (Surveys) |
|---|--------------|---------------|---|------------------------------------|---|---|
| Piscassic River-Loiselle Conservation Area | 45.3 | 2003-07-28 | R5, Lot 91-2 | 270 Wadleigh Falls Rd | Warranty Deed Loiselle to Town: BK 4100 PG 2110 and BK 4100 PG 2114 (7/28/2003) LCHIP Executory Interest Deed: BK 4100 PG 2123 (7/28/2003) | D-30811 (7/1/2003) |
| Heron Point Sanctuary | 32 | 1996-12-31 | R2, Lot 119 | 14 Heron Point Dr | Quitclaim Deed and Conservation Restrictions Klein and Parker to Town: BK 3193 PG 1697; Town merged lot lines: BK 3289 PG 2637 (5/5/1998) | D-19531 (7/1/1989) |
| Lita Lane | 19.5 | 1984-01-23 | R3, Lot 30-47 | 1 Pembroke Drive | Confirmatory Warranty Deed from Gouchberg to Town: BK 2477 PG 20 (1/23/1984) | D-7938 (5/1/1978) and D-7939 (9/1/1977) |
| Lita Lane | ~8.5 | 1999-11-04 | R3, Lots 30-9, 30-10, 30-19 through 30-36 | Pembroke Dr, Brandon Dr, Lita Lane | Tax Collector Deed from Gouchberg to Town: BK 3435 PG 1587 (11/4/1991) | D-7938 (5/1/1978) and D-7939 (9/1/1977) |
| Riverbend | 5.46 | 1988-03-29 | U1, Lot 1-1P | 7 Packers Falls Rd | Deed from American Land Development Corp to Town: BK 2732 PG 2207 (3/29/1988) Deed from American Land Development Corp to Town: BK 2684 PG 1722 (6/8/1987) | D-10912 (11/1/1981) |
| Riverbend | 19,602 sq ft | 1988-03-29 | U1, Lot 1-4P | Riverbend Rd | Deed from American Land Development Corp to Town: BK 2732 PG 2206 (3/29/1988) | D-10912 |
| Riverbend | 1.12 | Unknown | U1, Lot 1-46 | 24 Riverbend Rd | Unknown | D-10912 |
| Schanda Park | 15,246 sq ft | 1954-01-18 | U3, Lots 5, 6, 7 | 8, 10, and 12 Water Street | Tax forfeiture Deed Doucette of U3, Lot 5 to Town: BK 1306 PG 117 (1/18/1954) Deed Gallant of U3, Lot 7 to Town: BK 2518 PG 1332 (11/1/1984) | D-10736 (2/1/1982) |
| Sliding Rock Recreation and Conservation Area | 2.5 | 1975-09-10 | U2, Lot 124 | 32 Piscassic Street | Warranty Deed from Cheney to Town: BK 2243 PG 784 (9/1/1975) | Plan of Lots, Sliding Rock, House Lots and Apt Complex, Newmarket, NH for Walter Cheney, Inc Jan 1973 |
| Tuttle Swamp | 42 | 1990-06-11 | R6, Lot 38 | 481 Wadleigh Falls Rd | Quit Claim Deed Growth Mortgage Co, Inc to Town: Book 2840 Page 2061 (6/11/1990) | no boundary survey |
| Tuttle Swamp | 2.8 | 1996-04-18 | R6, Lot 39 | 471 Wadleigh Falls Rd | Warranty Deed Currier to Town: Book 3150 Page 0661 (4/18/1996) | no boundary survey |

| Conservation Area | Size (Acres) | Date Acquired | Tax Map Lot # | Location | Recorded Deeds | Recorded Plans (Surveys) |
|-------------------|--------------|---------------|---------------|-----------------------|--|--------------------------|
| Tuttle Swamp | 14 | 1996-04-18 | R6, Lot 40 | 479 Wadleigh Falls Rd | Warranty Deed from Currier and Walker to Town: Book 3150 Page 0663 (4/18/1996) | no boundary survey |
| Wiggin Farm | 160 | 2003-09-05 | R6, Lot 21 | 280 Grant Road | Warranty Deed Falzone to Town: BK 4142 PG 1801 (9/5/2003) Acquired by Town as conservation land; NHFG Easement: BK 4142 PG 1825 (9/5/2003) LCHIP Executory Interest: BK 4142 PG 1813 (9/5/2003) | D-32876 (5/1/2004) |
| Wiggin Farm | 2 | 2003-06-01 | R6, Lot 21-1 | 290 Grant Road | Creation of 2-acre lot for parking area | D-30810 (6/1/2003) |

Table 3: Easements Held by the Town of Newmarket

| Site Name | Current Landowner | Easement Monitoring | Executory Interest | Size (acres) | Date Acquired | Tax Map Lot# | Location | Recorded Documents |
|-------------------------|---------------------|-----------------------------------|--------------------|--------------|---------------|---------------|-----------------------|---|
| Bald Hill Reservation | SELT | Newmarket Conservation Commission | none | 21 | 2015-11-18 | R7, Lot 24-21 | Hayden Place | Warranty Deed and Conservation Restrictions from Chinburg Developers to SELT and Town of Newmarket, respectively: BK 5671 PG 496 (11/18/2015) Plan D-38917 (6/1/2015) |
| Hilton | George "Win" Hilton | Town contracted with SELT | none | 96 | 2004-08-30 | R7, Lot 15 | 233 Grant Road | Conservation Easement Deed Hilton to Town: BK 4354 PG 448 (8/30/2004) Easement monitoring MOA with SELT: BK 4354 PG 470 (8/30/2004) Plan D-31934 (8/1/2004) |
| Smith Sisters Sanctuary | NH Audubon | Newmarket Conservation Commission | none | 115 | 2008-12-18 | R5, Lot 78-1 | 356 Wadleigh Falls Rd | Conservation Easement Deed from The Nature Conservancy to Town: BK 4968 PG 1330 (12/18/2008); Plan D-35746 (9/1/2008) Warranty Deed Smith Sisters to TNC: BK 4968 PG 1322, Deed TNC to NH Audubon: BK 5102 PG 380 (4/9/2010) |

| Site Name | Current Landowner | Easement Monitoring | Executory Interest | Size (acres) | Date Acquired | Tax Map Lot# | Location | Recorded Documents |
|------------------------------------|-----------------------|-----------------------------------|---------------------|--------------|---------------|----------------------|-------------------|--|
| Nostrom Farm | Jeff Cantara | Town contracted with SELT | none | 65.6 | 2006-02-24 | R6, Lot 42 | 31 Doe Farm Lane | Conservation Easement Deed from Nostrom to Town: BK 4621 PG 2589 (2/24/2006) Grant Agreement Town to USFWS: BK 4621 PG 2622 (2/24/2006) Plan D-33538 (2/1/2006) |
| Piscassic Greenway - Gaziano Tract | SELT | Newmarket Conservation Commission | LCHIP (State of NH) | 32 | 2022-06-15 | R7, Lot 1 | 75 Neal Mill Rd | Warranty Deed from Gaziano to SELT: BK 2105 PG 5159 (8/30/2021) Conservation Restriction Deed from SELT to Town, LCHIP, State: BK 6416 PG 561 (6/15/2022) |
| Schneer | Jean Silverman Estate | Newmarket Conservation Commission | none | 5.6 | 2006-03-03 | R4, Lot 55 | 55 Neal Mill Road | Conservation Easement Deed from Schneer to Town: BK 4625 PG 1116 (3/3/2006) Plan D-33470 (1/1/2006) |
| Silverman | Joffree Barnett | Newmarket Conservation Commission | none | 32.8 | 2006-03-03 | R4, Lots 51, 53, 55A | 41 Neal Mill Road | Conservation Easement Deed from Silverman to Town: BK 4625 PG 1131 (3/3/2006) Grant Agreement Town to USFWS: BK 4609 PG 2518 (1/23/2006) Plan D-33470 (1/1/2006) Affidavit for corrected survey error: BK 4625 PG 1113 (3/3/2006) |

Table 4: Easements on Town Land Held by Other Entities

| Site Name | Easement Holder | Easement Monitoring | Executory Interest | Size (acres) | Date Acquired | Tax Map Lot# | Location | Recorded Documents |
|-----------|--------------------|--|--------------------|--------------|---------------|--------------|--------------|---|
| Dearborn | NHFG (State of NH) | NH Conservation Land Stewardship Program | none | 38.1 | 2016-11-14 | R6, Lot 27 | 206 Grant Rd | Quitclaim Deed Dearborn to Town: BK 5772 PG 2831 (11/14/2016) CE Deed Dearborn to NHFG: BK 3466 PG 378 (4/10/2000) Plan D-27921 (3/22/2000) Driveway ROW Easement to abutter: BK 6492 PG 1355(7/3/2023) |

| Site Name | Easement Holder | Easement Monitoring | Executory Interest | Size (acres) | Date Acquired | Tax Map Lot# | Location | Recorded Documents |
|--|--------------------|--|---------------------|--------------|---------------|--------------|-----------------------|---|
| Piscassic River-Loiselle Conservation Area | None | Newmarket Conservation Commission | LCHIP (State of NH) | 45.3 | 2003-07-28 | R5, Lot 91-2 | 270 Wadleigh Falls Rd | Warranty Deed Loiselle to Town: BK 4100 PG 2110 and BK 4100 PG 2114 (7/28/2003) Plan D-30811 (7/1/2003) LCHIP Eexecutory Interest Deed: BK 4100 PG 2123 (7/28/200#) |
| Wiggin Farm | NHFG (State of NH) | NH Conservation Land Stewardship Program | LCHIP (State of NH) | 160 | 2003-09-05 | R6, Lot 21 | 280 Grant Rd | Warranty Deed Falzone to Town: BK 4142 PG 1801 (9/5/2003) NHFG Easement: BK 4142 PG 1825 (9/5/2003) LCHIP Executory Interest: BK 4142 PG 1813 (9/5/2003) Plan D-32876 (5/1/2004) |

Table 5: Town Held Executory Interests

| Conservation Area | Size (acres) | Date Acquired | Tax Map Lot# | Location | Current Landowner | Easement Holder | Recorded Documents |
|----------------------------------|--------------|---------------|--------------------------|-----------------------------|-------------------|-----------------|---|
| Richmond | 26 | 2003-10-10 | R5, Lot 50 | Lang's Lane | Amanda Richmond | SELT | Conservation Easement Deed from Richmond to SELT: BK 4170 PG 1050 (10/10/2003) Plan D-31045 (10/1/2003) |
| Dodds | 30.5 | 2008-04-18 | R4, Lot 47 | 151 Grant Road | Dodds | SELT | Conservation Easement Deed from Dodds to SELT and Executory Interest to Town of Newmarket: BK 4908 PG 1017; Plan D-21057 (3/1/1991) |
| Clarke Farm | 175 | 2021-05-04 | R6, Lot 43 | 134 Camp Lee Rd | Linda Clarke | SELT | Conservation Easement Deed from Clarke to SELT: BK 6274 PG 673 (5/4/2021) Plan D-42735 (4/26/2021) |
| Piscassic Greenway -Tucker Tract | 15 and 1 | 2020-05-08 | R7, Lot 4-5 R4 Lot 52 | Neal Mill Rd and Old Lee Rd | SELT | USDA NRCS WRE | Warranty Easement Deed from Tucker to USDA: BK 6111 PG 2953 (5/8/2020) Fiduciary Deed from Tucker to SELT: BK 6111 PG 2969 (5/8/2020) Plan D-42110 (5/8/2020) Plan D-41270 (1/16/2019) |

* No easement monitoring required by Conservation Commission

Table 6: Subdivision Open Space

| Name | Tax Map Lot # |
|---|--------------------------------|
| Blackhawk (Schultz Place) | R2-19-3 |
| Briallia Circle (Piscassic River Village) | R5-37-40 |
| Boulder Subdivision | U2-297 |
| Channing Way | R4-43-3 and OPEN SPACE |
| Durrell Woods | R5-40 and R5-130 |
| Fox Hollow | R7-17 |
| Gonet Drive (Bayfields) | OPEN SPACE LOT A AND LOT B |
| Hamel Farm | R4-42-22 |
| Harvest Way | OPEN SPACE |
| Harvest Way | R6-14-17 |
| Hilton Drive | R7-10 |
| Ladyslipper Drive | R4-134 |
| Madison | R4-40-11 |
| Mockingbird Lane | OPEN SPACE and OPEN SPACE B |
| Moody Point | R2-36-4 and R2-36-11 |
| Norton Woods | portions of R6-13 and R5-47-10 |
| Rockingham Green | R3-23-54 |
| Schanda Farm | R7-14 |
| Stonewall Way | R4-25 |
| Winslow Drive | R5-49-13 |

Table 7: Other Public and Private Conservation Lands

| Name | Tax Map Lot # |
|-----------------------------------|---|
| Bald Hill Forest (SELT) | R7-24-21 |
| Follett's Brook (NHAudubon-Kwaks) | R5-84 |
| Great Bay WMA | R3-36-1, R3-36-3, R1-6, R1-7, R1-17, R1-22, R1-24, R1-28, R1-29, R1-31, R1-32, R1-33, U3-51 |
| Lubberland Creek (TNC) | R2-29-5, R2-28-1, R2-28-2, R2-25, R2-10, R2-26, R2-27, R2-36-13 and R1-38-8 |
| Piscassic Greenway SELT) | R7-31 and R7-1 |
| Piscassic River WMA (NHFG) | R7-23 |
| Tuttle Swamp WMA (NHFG) | R6-41-1, R6-37, R6-31-1 and R6-32 |
| Conservation Easements | R2-50, R6-1, R3-36, R4-24, R1-1, R1-5, R1-4-1, R6-31 |
| Bennett Well | |
| Sewall Well | R5-91-1 |
| Tucker Well | R4-50-1 |
| Landfill/Transfer Station | R6-36 |

Appendix C: Implementation Matrix

| Goals & Actions | Feasibility | Timeline | Responsible Parties | Partners | Potential Funding Sources |
|---|-------------|----------|---------------------|----------|---------------------------|
| GOAL 1: Protect Drinking Water | | | | | |
| Educate community members on ways to protect drinking water sources and source water protection areas from harmful land uses and contamination. | | | | | |
| Utilize innovative use planning and conservation tools to provide additional protection to the Aquifer Overlay District and Wellhead Protection Areas. | | | | | |
| GOAL 2: Protect Surface Waters and Wetlands | | | | | |
| Restore the water quality and natural conditions (where feasible) of Moonlight Brook. Utilize living shoreline and other green infrastructure to the maximum extent practicable. | | | | | |
| Maintain, and restore where needed, natural buffer areas along the Lamprey and Piscassic Rivers, Follett's Brook, Lubberland Creek, and other unnamed tributaries. | | | | | |
| Protect freshwater wetlands including buffers and floodplains using land use planning tools such as the Wetlands and Floodplain Overlay Districts and educational materials and outreach. | | | | | |
| Update Newmarket's prime wetlands maps and maintain a higher degree of protection on prime wetlands. | | | | | |

| | | | | | |
|---|--|--|--|--|--|
| Protect salt marsh along Great Bay and explore opportunities for salt marsh migration amid sea-level rise. | | | | | |
| Maintain involvement in committees related to the Wild & Scenic Lamprey River and its Watershed. | | | | | |
| Work with surrounding towns to update maps of vernal pools. | | | | | |
| Implement all feasible stormwater management practices to prevent and minimize runoff that contains contaminants and causes erosion. | | | | | |
| GOAL 3: Restore Aquatic Passage and Stream Connectivity | | | | | |
| Building on the success of the Building on the success of the Lubberland Creek culvert upgrade on Bay Road , collaborate among Town Departments and Boards and conservation partners, to improve stream crossings and restore aquatic connectivity where needed throughout Newmarket. | | | | | |
| Create safe turtle crossings by improving stream flow and passage at Ash Swamp Road by replacing existing culverts, adding fencing, and other infrastructure and highway traffic speed slowing techniques. | | | | | |
| Use the NH Aquatic Restoration Mapper to assess all road crossings/culverts and town roads. Set priorities for restoring/upgrading aquatic passage. | | | | | |
| GOAL 4: Protect and Connect Priority Lands and Waters | | | | | |
| Dedicate 100% of the Land Use Change Tax to the Conservation Fund. | | | | | |

| | | | | | |
|---|--|--|--|--|--|
| Work with interested landowners, conservation partners, and grant programs to conserve the lands and waters within the Newmarket Priority Conservation Focus Areas. | | | | | |
| Protect habitat corridors and enhance connectivity of open spaces and priority lands across Newmarket and abutting municipalities. | | | | | |
| Utilize innovative use planning, education, and conservation tools to protect lands and waters within the NH Coastal Watershed Conservation Focus Areas, including active farms and prime farm soils. | | | | | |
| Dedicate tax lien properties abutting existing conservation lands or within conservation focus areas as conservation areas to enhance existing network of conservation land. | | | | | |
| GOAL 5: Steward Town Conservation Lands | | | | | |
| Implement (and update as needed) Management Plans for Town conservation areas, including Wiggins Farm Conservation Area, Piscassic River-Loiselle, Heron Point Sanctuary. | | | | | |
| Maintain accurate records of all town-owned conservation areas, town-held conservation easements and town-held executory interests. | | | | | |
| Monitor town-held conservation easements annually and participate in annual monitoring by State of NH of Wiggins Farm and Dearborn Conservation Areas. | | | | | |
| Update the NH GRANIT conservation lands layer as needed; ensure that new subdivision open space is similarly updated when created. | | | | | |

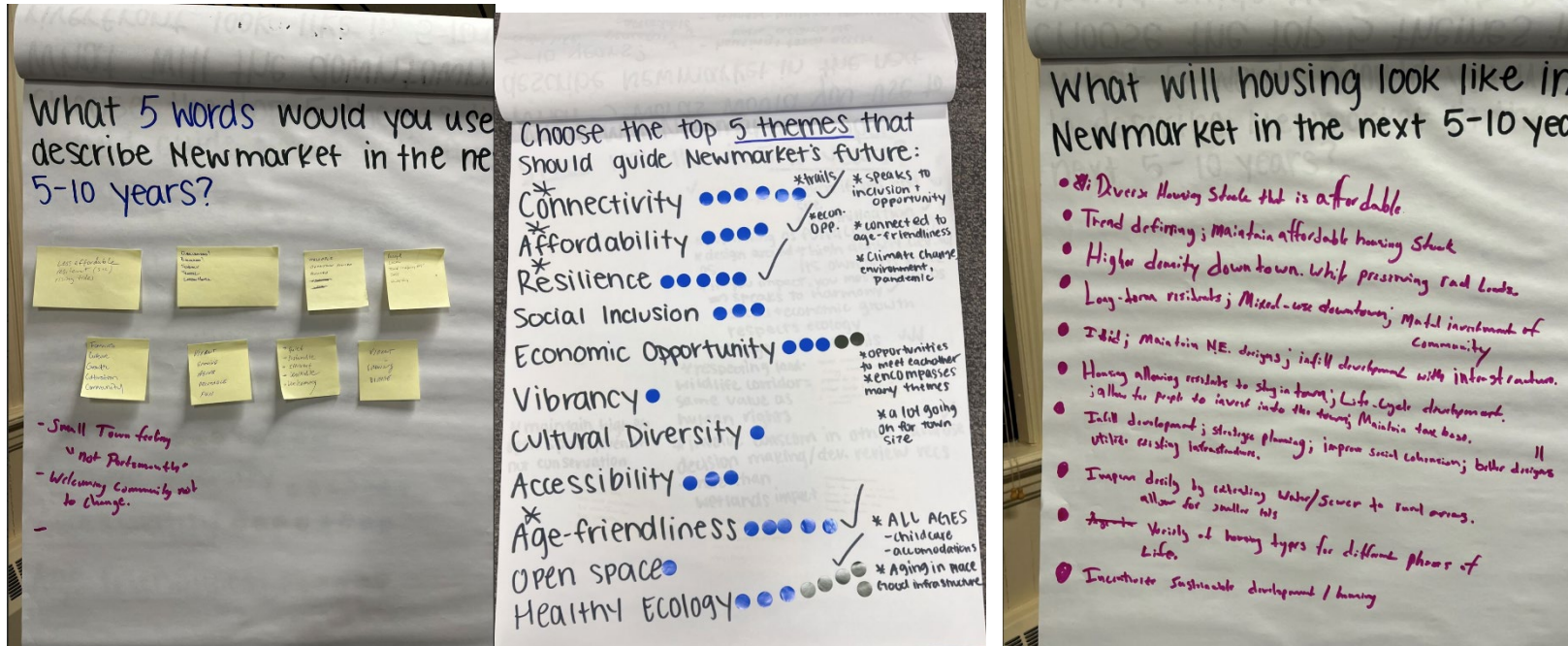
| | | | | | |
|--|--|--|--|--|--|
| Maintain property and educational information on the Newmarket Conservation Commission webpages. | | | | | |
| Maintain infrastructure at town conservation areas including parking areas, entrance signs, information kiosks, interpretive signage, and related features. | | | | | |
| Review the Town Ordinances and Resolutions that pertain to use of conservation lands to ensure that the ordinances are consistent with the purposes for which the land was conserved. | | | | | |
| For town conservation areas with multiple tax parcels, work with the Planning Department to merge lots to create one tax parcel. This includes Tuttle Swamp Conservation Area, Lita Lane, and Follet's Brook. | | | | | |
| Work with the Riverbend and Mastin Road neighborhoods to identify ways to manage the pocket parks in these neighborhoods and evaluate opportunities for trail connectivity. | | | | | |
| Conduct a Natural Resource Inventory of the Town's Follett's Brook properties to assess ecological significance and opportunities for expanded trail network. Partner with NH Audubon and their Follett's Brook sanctuaries. | | | | | |
| GOAL 6: Promote Sustainable Land Use | | | | | |
| Promote Pollinator-Friendly Habitats, especially native plants, and notably such habitat improvements that can be made to public spaces such as schoolyards, traffic islands, and pocket parks. | | | | | |

| | | | | | |
|---|--|--|--|--|--|
| Incorporate lists of recommended and prohibited plant species into Newmarket's Site Plan & Subdivision regulations. | | | | | |
| Implement all feasible stormwater management practices to prevent and minimize runoff that contains contaminants and causes erosion. | | | | | |
| Require open space design development for residential subdivisions. | | | | | |
| Continue to support a balance between affordable housing needs and conservation priorities. Support housing in-fill and other locations that are not ecologically significant or within Conservation Focus Areas. Encourage inclusion of sidewalks, green pathways, pocket parks as part of new developments or redevelopments. | | | | | |
| Consider adopting a roadside Japanese knotweed control plan, to reduce the environmental and safety issues with this invasive plant. | | | | | |
| GOAL 7: Revitalize Downtown Riverfront | | | | | |
| Enhance Newmarket's waterfront. Evaluate ways to improve the Newmarket riverfront for people, restore a living shoreline to prevent further erosion, and restore the health of Moonlight Brook as it flows into the Lamprey River at Schanda Park. | | | | | |
| Maintain safe and accessible boat access to the Piscassic and Lamprey Rivers while maintaining scenic quality. | | | | | |

| | | | | | |
|---|--|--|--|--|--|
| Educate residents and visitors on best practices along riverfront, such as not feeding wildlife and respecting private property. | | | | | |
| GOAL 8: Create Trail Networks | | | | | |
| Create safe routes and connectivity, where feasible, for hiking, biking, horseback riders, and other trail users, within Newmarket and between neighboring communities. | | | | | |
| Develop policy that encourages integration of trails and green spaces into new developments and ensures maintenance of existing and proposed natural amenities. | | | | | |
| Explore opportunities to develop trail connectivity among Follet's Brook properties, connecting Newmarket and Durham. | | | | | |
| Explore ways to create safe pathways for pedestrians and cyclists from downtown to conservation areas such as Heron Point Sanctuary and Piscassic River-Loiselle Conservation Area. | | | | | |
| Seek to provide on trails seating areas at intervals appropriate for users living with mobility challenges. | | | | | |
| Utilize Strafford Regional Planning Commission's (SRPC) pedestrian counters and traffic counters to monitor usage of trails and town parks and conservation areas. | | | | | |

Appendix D: Outreach Summaries

Visioning Week



SRPC and the Town of Newmarket conducted a visioning week on April 8th -11th, 2024 with the Riverfront Committee, Planning Board, Master Plan Steering Committee, and the Conservation Commission. The sessions were centered on the answering three questions that aimed to identify an overall vision for Newmarket as well as for individual master plan chapter. The Conservation Commission focused on the Open Space Plan, which was only a portion of what the other boards and committees discussed. The following summarizes Open Space visioning predominantly from that Conservation Commission meeting and supplemented with feedback from the other three boards and committees.

Question 1: What 5 words would you use to describe Newmarket in the next 10 years?

- A great place to live
- Aesthetically attractive
- Balanced
- Caring
- Coastal
- Connected
- Conservation connections
- Culture
- **Diverse (4)**
- Efficient
- **Evolving (2)**
- **Friendly (2)**
- **Growing (4)**
- **Historical (3)**
- Interesting
- Less growth
- **Natural (2)**
- **Pedestrian friendly (3)**
- Proud
- Recreational
- Rising Tides
- Small-town feel
- Town “Mayberry RFD”
- United
- **Welcoming (5)**
- Accessible
- **Affordable (4)**
- Beautiful
- Charm
- **Community (3)**
- Connected trails
- Cultivation
- Desirable
- **Downtown focused (2)**
- Energy efficient
- Experience
- Fun
- Happy
- Housing
- Leading
- Local
- Original
- Planned
- Quaint
- **Regional leader (2)**
- Rural Character
- **Sustainable (3)**
- Traffic
- **Vibrant (7)**
- Well-planned
- Accessible trails
- Aging
- Carbon neutral
- Clean/better water
- Community involvement
- **Connectivity (2)**
- Cultural Development
- Destination
- Dynamic
- Envied
- Families
- **Green (2)**
- Heritage
- Innovative
- Less Affordable
- Multi-Generational
- **Peaceful (2)**
- Progressive
- Quiet
- **Resilient (4)**
- Safe
- Thriving
- Transit
- **Walkable (3)**

Question 2: What 5 themes that should guide Newmarket's future?

- Connectivity (12)
 - Newmarket cannot do everything by itself. Newmarket needs to be connected with other communities in the region such as Durham and Newfields and those communities that share access to The Lamprey River.
 - Tied to regional communities including economic opportunity and education systems
 - In terms of infrastructure and resources, trail connectivity is important
 - Connectivity also speaks to inclusion and opportunity
- Vibrancy (11)
 - encompass accessibility, age friendliness, cultural diversity, economic opportunities
 - parks and recreation areas
 - accessibility for all to enjoy these amenities
 - Riverfront is a gathering place and an enhancement
- Healthy Ecology (8)
- Accessibility (8)
- Affordability (7)
- Vibrancy (6)
- Resilience, Economic Opportunity, Accessibility and Age-Friendliness (5)
 - Opportunities to meet each other, connect
 - Consider needs of all ages
 - Ensure community needs are met such as child care and ability to age in place
 - Good infrastructure
- Social Inclusion (3)
 - All races, ages and economic tiers are included
 - Riverfront brings the riverfront together
 - Is related to connectivity

Question 3: what will Newmarket's open space look like in 5-10 years?

Resilient connected healthy ecology where the town is prepared for the effects of climate change and extreme weather and our biodiversity is prioritized and protected. **Restored aquatic passages, clean water for people, connected and protected open spaces, trail connectivity, wildlife- friendly flora and fauna** level of respect on par with economic and social growth.

- Respect land and wildlife corridor as we value as human rights
- Involve the Conservation Commission in other land use decision making beyond wetlands impacts

An **environmentally healthy riverfront** is the first and most important to achieve and would have the most immediate impact. This includes:

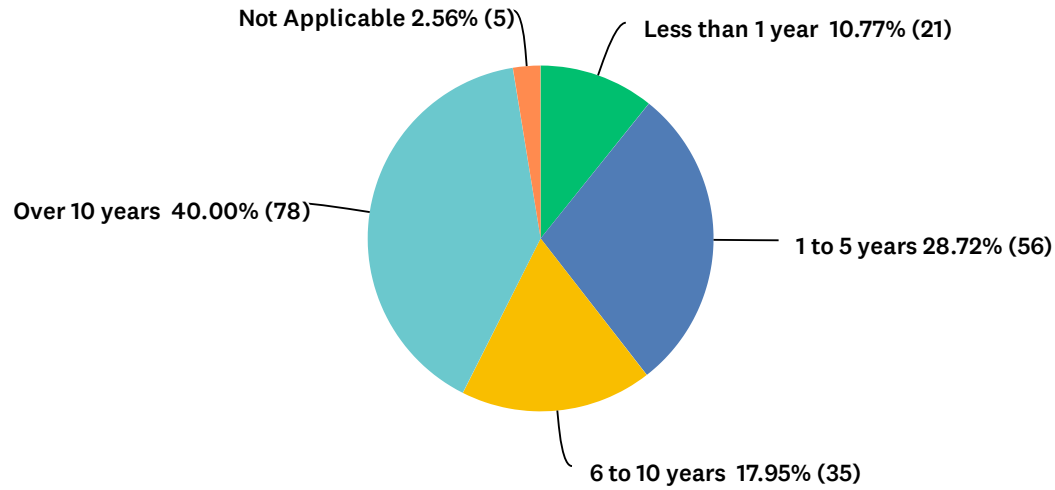
- Undertake needed maintenance
- Address contamination of Moonlight Brook
- Make sure residents know about the importance of a healthy riverfront/river, including create opportunities for education

Survey Results

The following pages include Open Space related questions from the Housing and Open Space survey conducted in the fall of 2023.

Q4 How long have you lived in Newmarket?

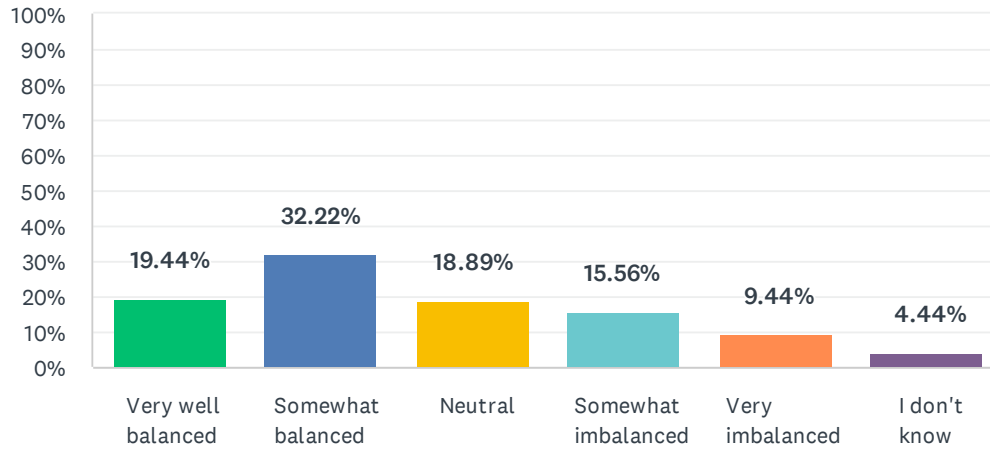
Answered: 195 Skipped: 1



| ANSWER CHOICES | RESPONSES | |
|------------------|-----------|------------|
| Less than 1 year | 10.77% | 21 |
| 1 to 5 years | 28.72% | 56 |
| 6 to 10 years | 17.95% | 35 |
| Over 10 years | 40.00% | 78 |
| Not Applicable | 2.56% | 5 |
| TOTAL | | 195 |

Q14 How well do you think the balance between housing development and open space conservation is currently being maintained in our community?

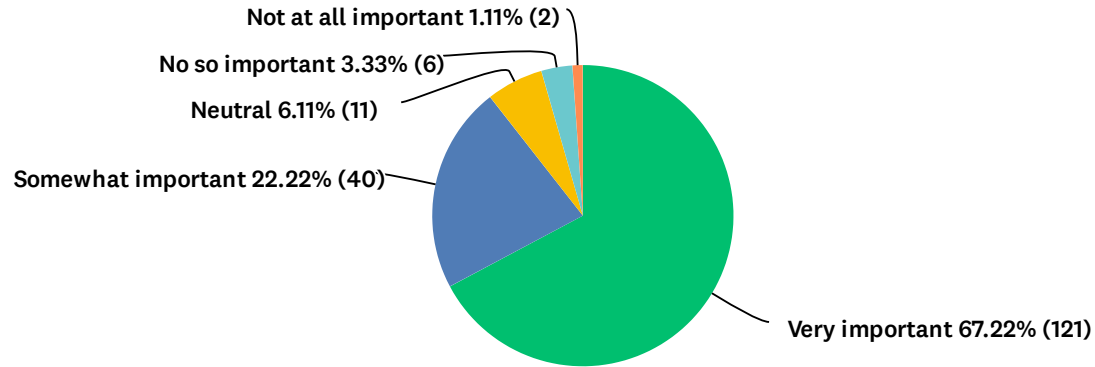
Answered: 180 Skipped: 16



| ANSWER CHOICES | RESPONSES | |
|---------------------|-----------|------------|
| Very well balanced | 19.44% | 35 |
| Somewhat balanced | 32.22% | 58 |
| Neutral | 18.89% | 34 |
| Somewhat imbalanced | 15.56% | 28 |
| Very imbalanced | 9.44% | 17 |
| I don't know | 4.44% | 8 |
| TOTAL | | 180 |

Q15 How important is it for new housing developments to incorporate sustainable design practices?

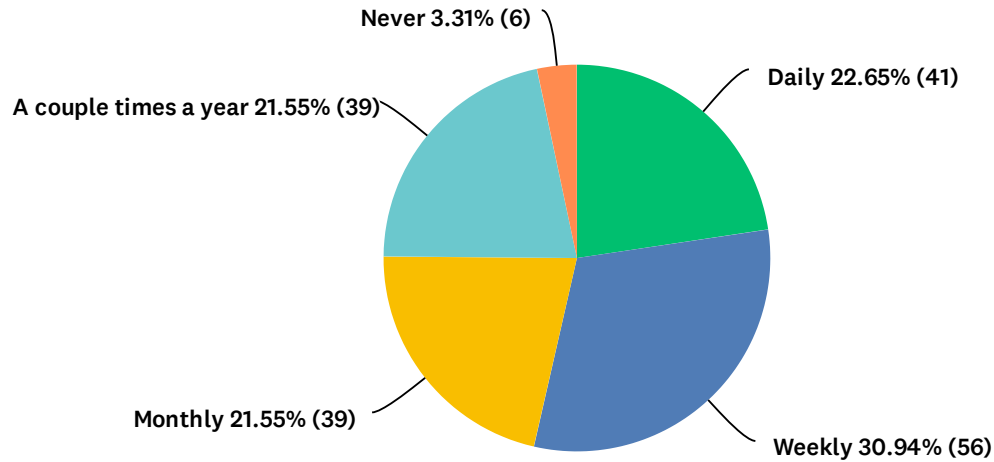
Answered: 180 Skipped: 16



| ANSWER CHOICES | RESPONSES | |
|----------------------|-----------|------------|
| Very important | 67.22% | 121 |
| Somewhat important | 22.22% | 40 |
| Neutral | 6.11% | 11 |
| No so important | 3.33% | 6 |
| Not at all important | 1.11% | 2 |
| TOTAL | | 180 |

Q16 How frequently do you and your family utilize local parks, recreational areas, or conservation land for outdoor activities?

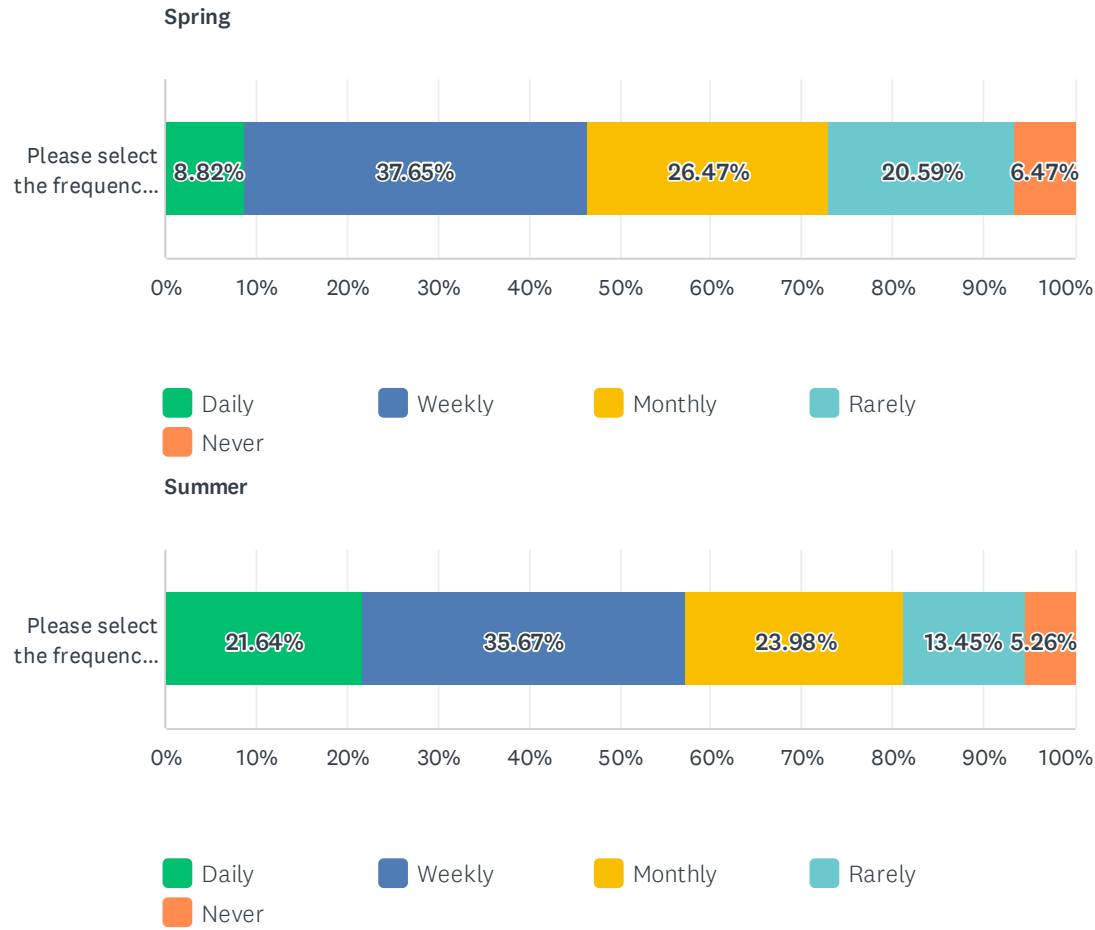
Answered: 181 Skipped: 15



| ANSWER CHOICES | RESPONSES | |
|-----------------------|-----------|------------|
| Daily | 22.65% | 41 |
| Weekly | 30.94% | 56 |
| Monthly | 21.55% | 39 |
| A couple times a year | 21.55% | 39 |
| Never | 3.31% | 6 |
| TOTAL | | 181 |

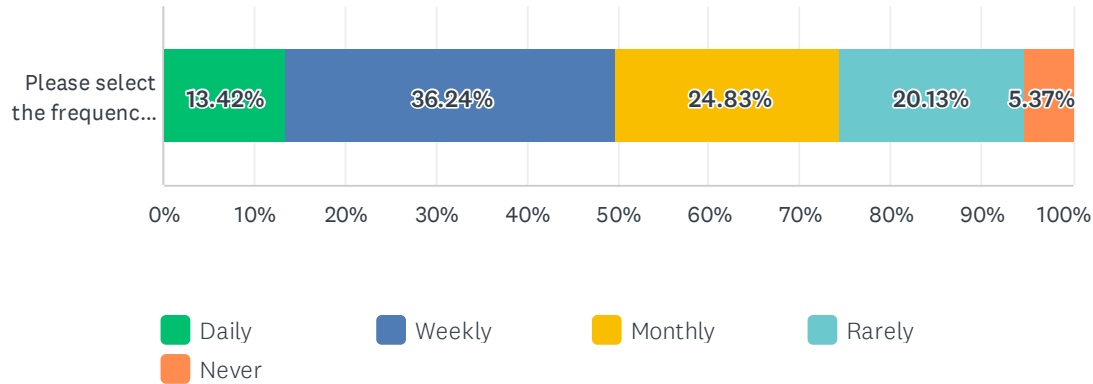
Q17 How often do you visit the downtown riverfront area (including Heron Point)?

Answered: 172 Skipped: 24

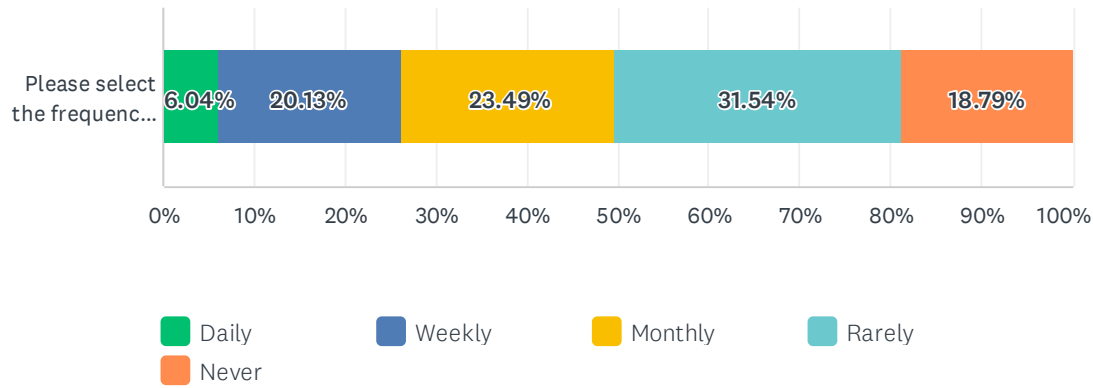


Newmarket Master Plan Update: Housing and Open Space Chapters

Fall



Winter



| Spring | | | | | | |
|---|-----------|------------|-------------|------------|--------------------|-------|
| | DAILY (1) | WEEKLY (2) | MONTHLY (3) | RARELY (4) | NEVER (5) | TOTAL |
| Please select the frequency for each season | 8.82% | 37.65% | 26.47% | 20.59% | 6.47% | |
| | 15 | 64 | 45 | 35 | 11 | 170 |
| BASIC STATISTICS | | | | | | |
| | MINIMUM | MAXIMUM | MEDIAN | MEAN | STANDARD DEVIATION | |
| Please select the frequency for each season | 1.00 | 5.00 | 3.00 | 2.78 | 1.07 | |

Newmarket Master Plan Update: Housing and Open Space Chapters

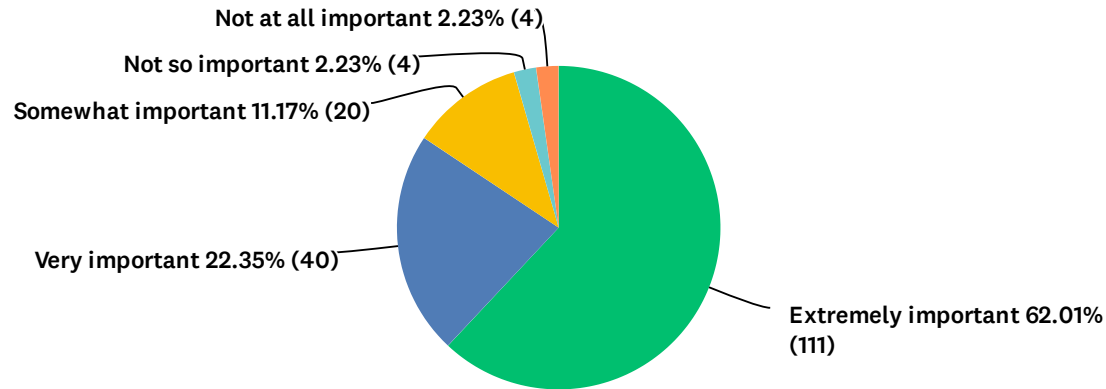
| Summer | | | | | | |
|---|--------------|--------------|--------------|--------------|--------------------|-------|
| | DAILY (1) | WEEKLY (2) | MONTHLY (3) | RARELY (4) | NEVER (5) | TOTAL |
| Please select the frequency for each season | 21.64% 37 | 35.67% 61 | 23.98% 41 | 13.45% 23 | 5.26% 9 | 171 |
| BASIC STATISTICS | MINIMUM | MAXIMUM | MEDIAN | MEAN | STANDARD DEVIATION | |
| Please select the frequency for each season | 1.00 | 5.00 | 2.00 | 2.45 | | 1.12 |

| Fall | | | | | | |
|---|--------------|--------------|--------------|--------------|--------------------|-------|
| | DAILY (1) | WEEKLY (2) | MONTHLY (3) | RARELY (4) | NEVER (5) | TOTAL |
| Please select the frequency for each season | 13.42% 20 | 36.24% 54 | 24.83% 37 | 20.13% 30 | 5.37% 8 | 149 |
| BASIC STATISTICS | MINIMUM | MAXIMUM | MEDIAN | MEAN | STANDARD DEVIATION | |
| Please select the frequency for each season | 1.00 | 5.00 | 3.00 | 2.68 | | 1.10 |

| Winter | | | | | | |
|---|------------|--------------|--------------|--------------|--------------------|-------|
| | DAILY (1) | WEEKLY (2) | MONTHLY (3) | RARELY (4) | NEVER (5) | TOTAL |
| Please select the frequency for each season | 6.04% 9 | 20.13% 30 | 23.49% 35 | 31.54% 47 | 18.79% 28 | 149 |
| BASIC STATISTICS | MINIMUM | MAXIMUM | MEDIAN | MEAN | STANDARD DEVIATION | |
| Please select the frequency for each season | 1.00 | 5.00 | 4.00 | 3.37 | | 1.17 |

Q18 How important is preserving and enhancing the natural environment of the riverfront to you?
 Please feel free to add why this is or is not important to you in the comments section.

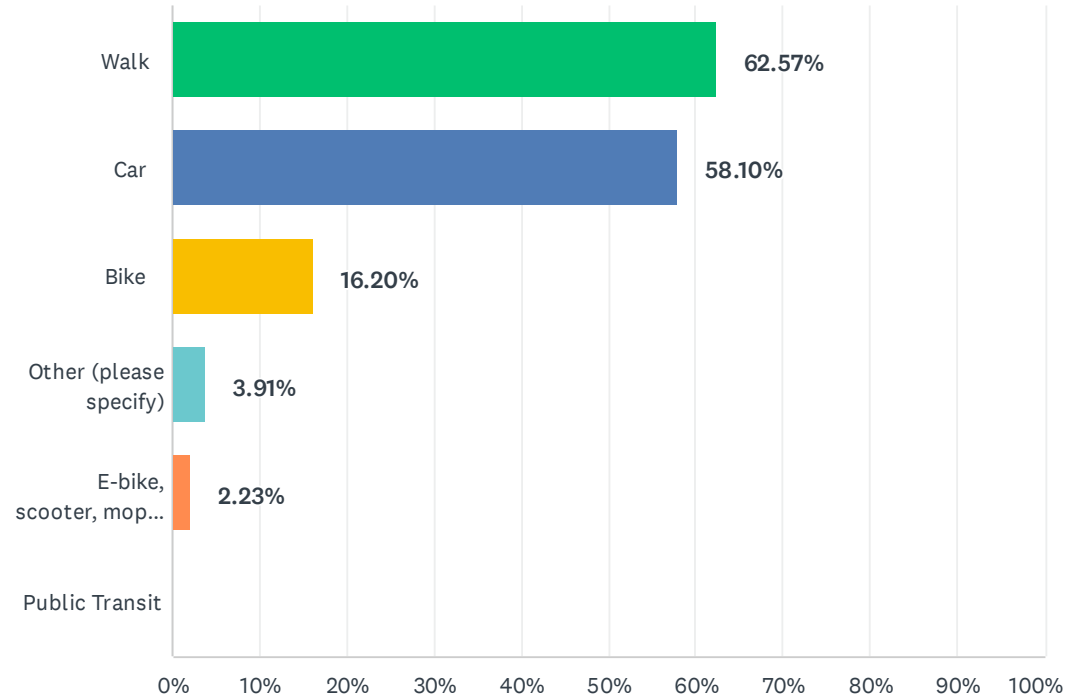
Answered: 179 Skipped: 17



| ANSWER CHOICES | RESPONSES | |
|----------------------|-----------|------------|
| Extremely important | 62.01% | 111 |
| Very important | 22.35% | 40 |
| Somewhat important | 11.17% | 20 |
| Not so important | 2.23% | 4 |
| Not at all important | 2.23% | 4 |
| TOTAL | | 179 |

Q19 How do you currently commute to the downtown riverfront?

Answered: 179 Skipped: 17

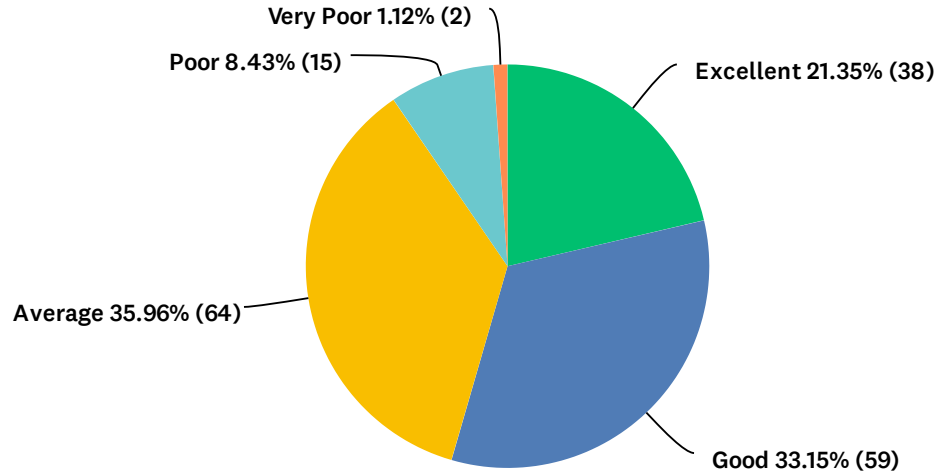


Newmarket Master Plan Update: Housing and Open Space Chapters

| ANSWER CHOICES | RESPONSES | |
|------------------------------|-----------|-----|
| Walk | 62.57% | 112 |
| Car | 58.10% | 104 |
| Bike | 16.20% | 29 |
| Other (please specify) | 3.91% | 7 |
| E-bike, scooter, moped, etc. | 2.23% | 4 |
| Public Transit | 0.00% | 0 |
| Total Respondents: 179 | | |

Q20 How would you rate the accessibility of the downtown riverfront for pedestrians and cyclists?

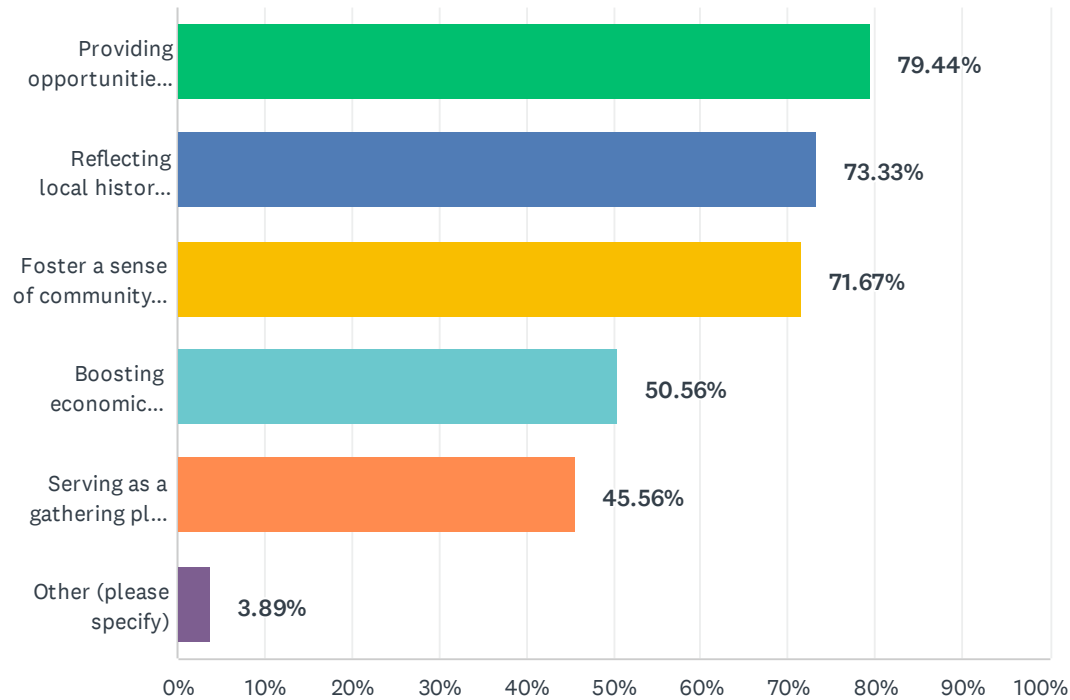
Answered: 178 Skipped: 18



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|------------|
| Excellent | 21.35% | 38 |
| Good | 33.15% | 59 |
| Average | 35.96% | 64 |
| Poor | 8.43% | 15 |
| Very Poor | 1.12% | 2 |
| TOTAL | | 178 |

Q21 How do you envision the downtown riverfront contributing to the overall identity and character of the community? Check all that apply.

Answered: 180 Skipped: 16

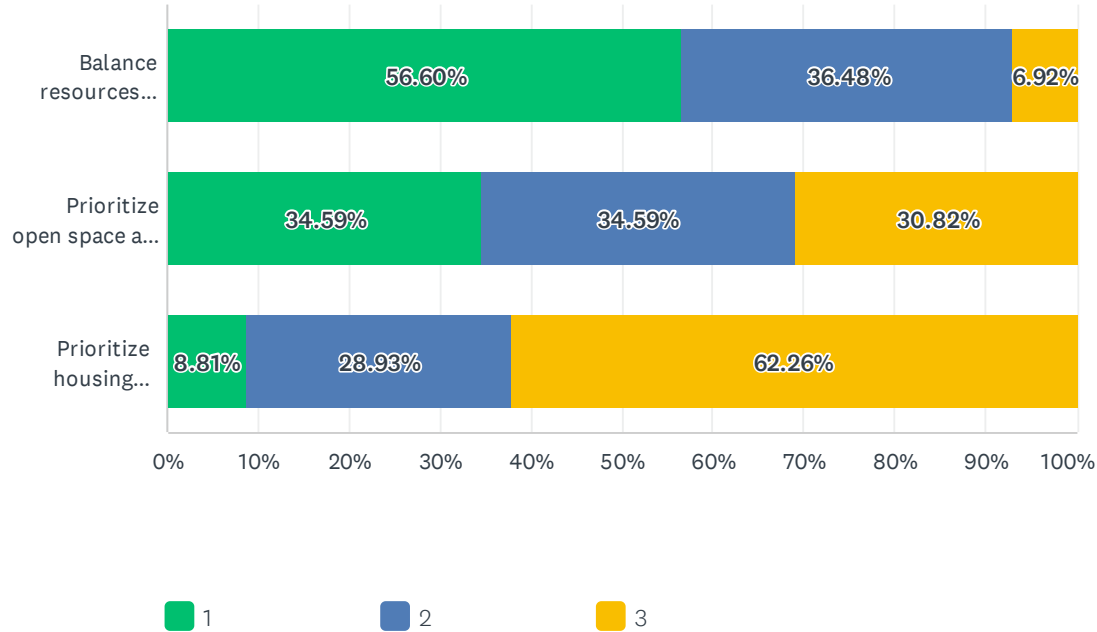


Newmarket Master Plan Update: Housing and Open Space Chapters

| ANSWER CHOICES | RESPONSES | |
|---|-----------|-----|
| Providing opportunities to observe the natural environment (views of the river, wildlife observation areas, etc.) | 79.44% | 143 |
| Reflecting local history and culture | 73.33% | 132 |
| Foster a sense of community pride | 71.67% | 129 |
| Boosting economic vitality | 50.56% | 91 |
| Serving as a gathering place for diverse groups | 45.56% | 82 |
| Other (please specify) | 3.89% | 7 |
| Total Respondents: 180 | | |

Q22 How would you prioritize allocating community resources between housing development, and open space conservation and water resource protection initiatives? Please rank these 1 through 3, with 1 being the top priority.

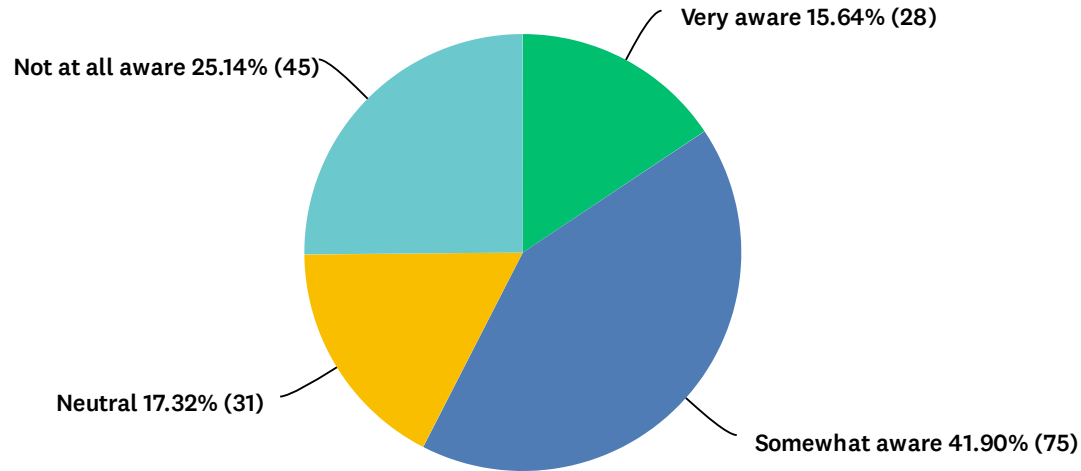
Answered: 159 Skipped: 37



| | 1 | 2 | 3 | TOTAL | SCORE |
|--|--------------|--------------|--------------|-------|-------|
| Balance resources equally among housing, open space conservation and water resource protection | 56.60% 90 | 36.48% 58 | 6.92% 11 | 159 | 2.50 |
| Prioritize open space and water resource protection | 34.59% 55 | 34.59% 55 | 30.82% 49 | 159 | 2.04 |
| Prioritize housing development | 8.81% 14 | 28.93% 46 | 62.26% 99 | 159 | 1.47 |

Q23 How aware are you of educational programs or information about Newmarket’s conservation areas and water resources (e.g., drinking water, wetlands, rivers)?

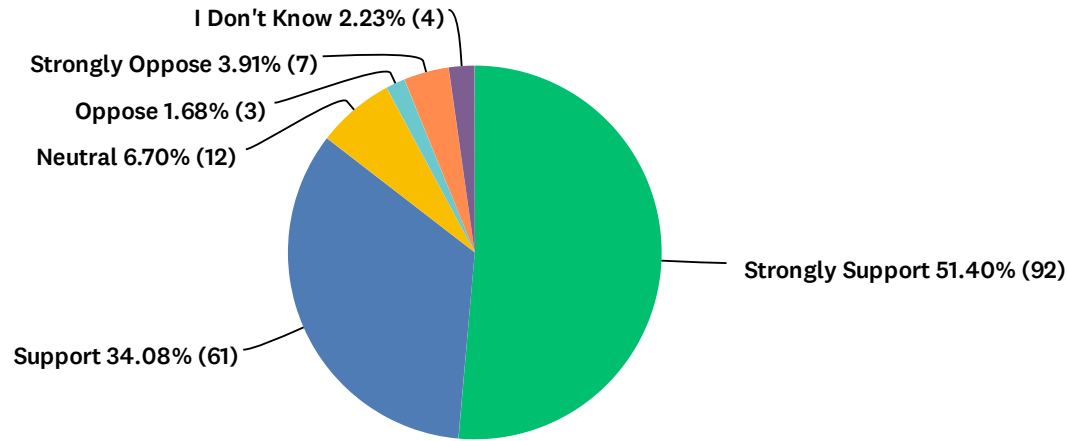
Answered: 179 Skipped: 17



| ANSWER CHOICES | RESPONSES | |
|------------------|-----------|------------|
| Very aware | 15.64% | 28 |
| Somewhat aware | 41.90% | 75 |
| Neutral | 17.32% | 31 |
| Not at all aware | 25.14% | 45 |
| TOTAL | | 179 |

Q24 Would you support protecting our water resources from potential contamination through additional local regulations?

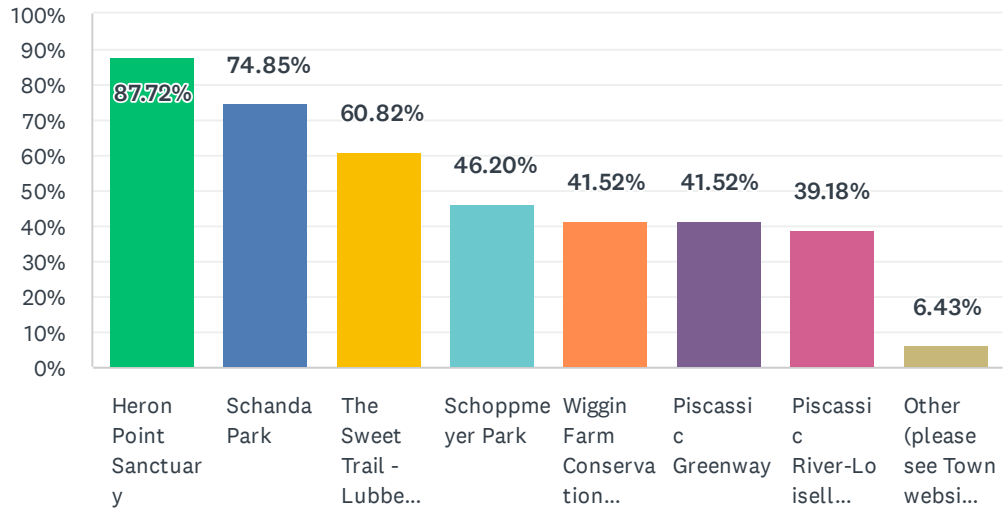
Answered: 179 Skipped: 17



| ANSWER CHOICES | RESPONSES | |
|------------------|-----------|------------|
| Strongly Support | 51.40% | 92 |
| Support | 34.08% | 61 |
| Neutral | 6.70% | 12 |
| Oppose | 1.68% | 3 |
| Strongly Oppose | 3.91% | 7 |
| I Don't Know | 2.23% | 4 |
| TOTAL | | 179 |

Q25 Which of the following conservation areas and parks are you aware of and/or visit?

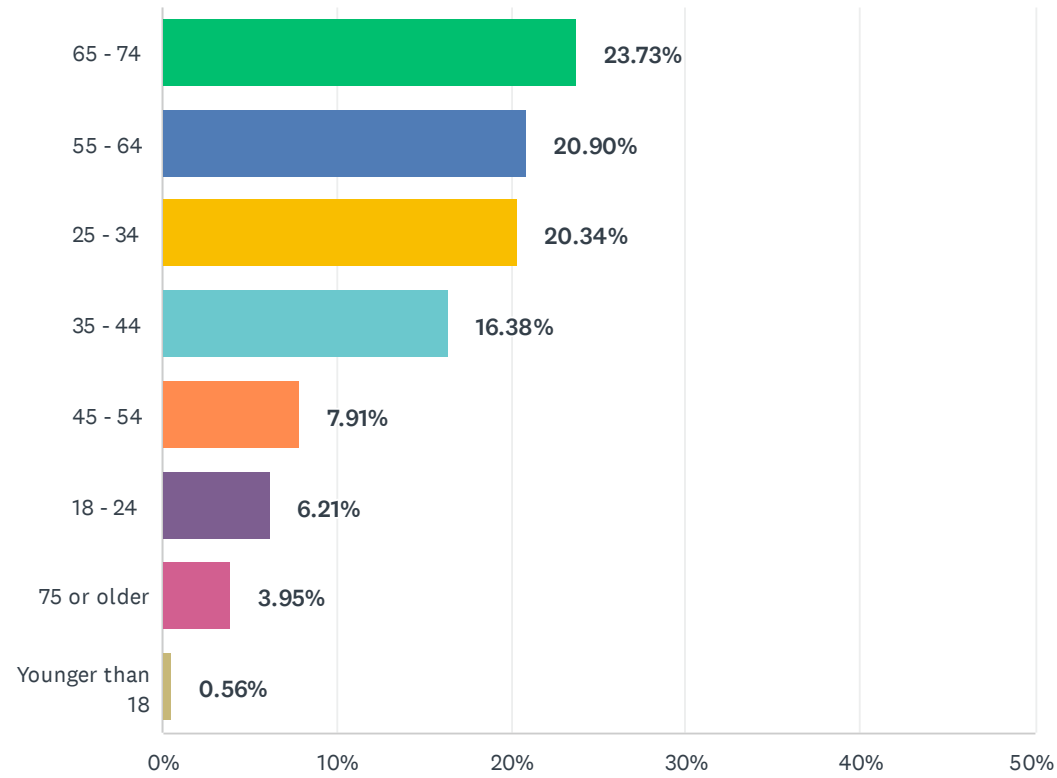
Answered: 171 Skipped: 25



| ANSWER CHOICES | RESPONSES | |
|--|-----------|-----|
| Heron Point Sanctuary | 87.72% | 150 |
| Schanda Park | 74.85% | 128 |
| The Sweet Trail - Lubberland Creek Preserve | 60.82% | 104 |
| Schoppmeyer Park | 46.20% | 79 |
| Wiggin Farm Conservation Area | 41.52% | 71 |
| Piscassic Greenway | 41.52% | 71 |
| Piscassic River-Loiselle Conservation Area | 39.18% | 67 |
| Other (please see Town website with other choices: https://www.newmarketnh.gov/conservation-commission/pages/conservation-areas-and-parks) | 6.43% | 11 |
| Total Respondents: 171 | | |

Q26 Please select your age.

Answered: 177 Skipped: 19



Newmarket Master Plan Update: Housing and Open Space Chapters

| ANSWER CHOICES | RESPONSES | |
|-----------------|-----------|-----|
| 65 - 74 | 23.73% | 42 |
| 55 - 64 | 20.90% | 37 |
| 25 - 34 | 20.34% | 36 |
| 35 - 44 | 16.38% | 29 |
| 45 - 54 | 7.91% | 14 |
| 18 - 24 | 6.21% | 11 |
| 75 or older | 3.95% | 7 |
| Younger than 18 | 0.56% | 1 |
| TOTAL | | 177 |