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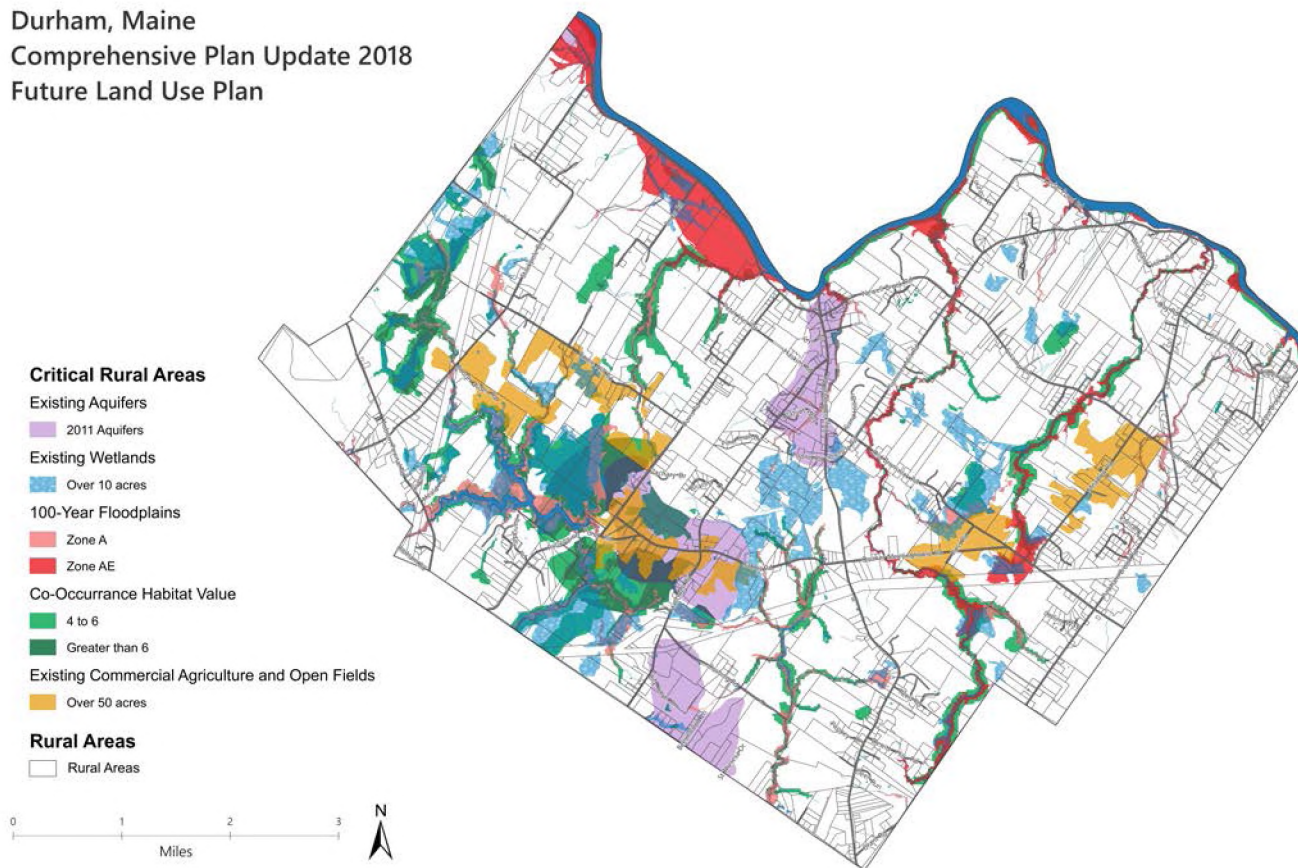
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2018 Durham Comprehensive Plan — Volume II

Supporting Data & Administrative Sections

Durham, Maine
Comprehensive Plan Update 2018
Future Land Use Plan



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SECTION 3

INVENTORY & ANALYSIS

Historic and Archaeological Resources

Community History

Durham lies within the broad charter granted in 1620 by James I to the Council of Plymouth, a group of forty noblemen and gentlemen. It in turn sold the land to various men whose holdings were further enlarged by a deed from six of the American Indian chiefs: Warumbee, Darumkine, Wihikermet, Domhegon, Heonogasset, and Numbenemet. Later, a group of gentlemen and Boston financiers known as the Pejeboscot Proprietors gained a patent for the vast lands along the Androscoggin River, including what is now Harpswell, all the way through Brunswick and up to Auburn. Much of this was uninhabited until the British victory in 1759.

In 1766 Jonathan Bagley and Moses Little were appointed by the Pejeboscot Proprietors to lay out a road and build a log house for the settlement; the proprietors often made such improvements to

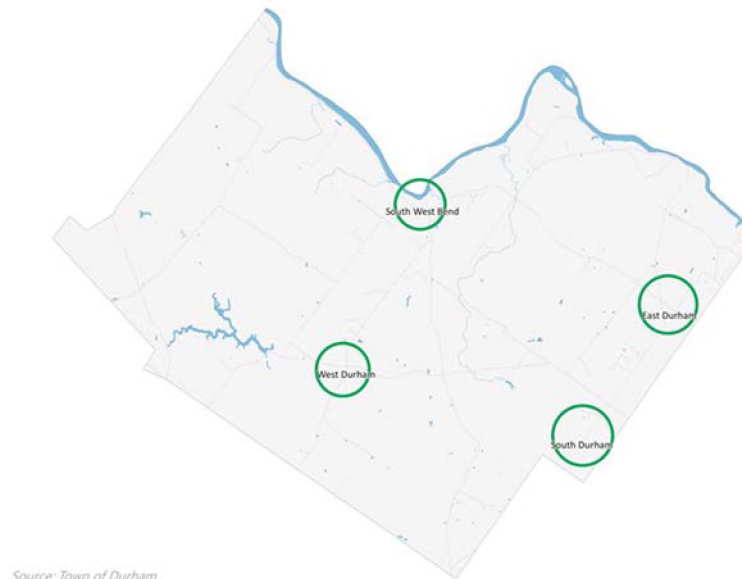
persuade settlers to purchase lots. In 1767 the proprietors established a plantation named Royalsborough to be surveyed into 96 lots. In 1768 the proprietors appointed Jonathan Bagley, Moses Little and Belcher Noyes as a committee to attract settlers. The first ten deeds were granted in 1770, and 25 settlers were occupying their own lots by 1776.

Durham's population grew slowly. Its early people came from, or were the children of, families from Essex County and Cape Cod, or from southern New Hampshire. Durham had four settlements—South West Bend, East Durham, West Durham and South Durham. Communication was built up with neighboring towns before roads linked the four villages. Before the town began, in 1781, the River Road to what is now Auburn was laid out, and later in part moved west back over the hill. Another early road led to Harriseeket (now Freeport) for dragging trees to Mast Landing. Over time some roads were improved, others

were abandoned and can barely be traced today.

The Androscoggin River provided both a waterway to Lewiston and a barrier to towns east of the river. Although small mills were set up on Chandler's stream and Meadow Brook, the settle-

DURHAM HISTORIC SETTLEMENTS



Source: Town of Durham

ment lacked the waterpower that later powered mills in bordering towns. Potash was manufactured early, extracting potassium compounds from wood ashes. Trees were milled into lumber, but saw mills had low capacity. Oak bark was used in tanneries to turn cow hides into leather, and that leather was made into harness and shoes. Shoemaking was a substantial cottage industry as early as 1820; men and women worked on patterns and lasts provided out of Lynn factories. At the height of the shoe industry, more than 300 men and women were employed in small shops of usually 5 or 6 workers. Farms provided milk and vegetables to families in other towns. The town's economic problem remained the scarcity of cash from the sale of exportable goods. Town obligations such as roads and schools therefore were often met by citizens' labor in lieu of money tax payments.

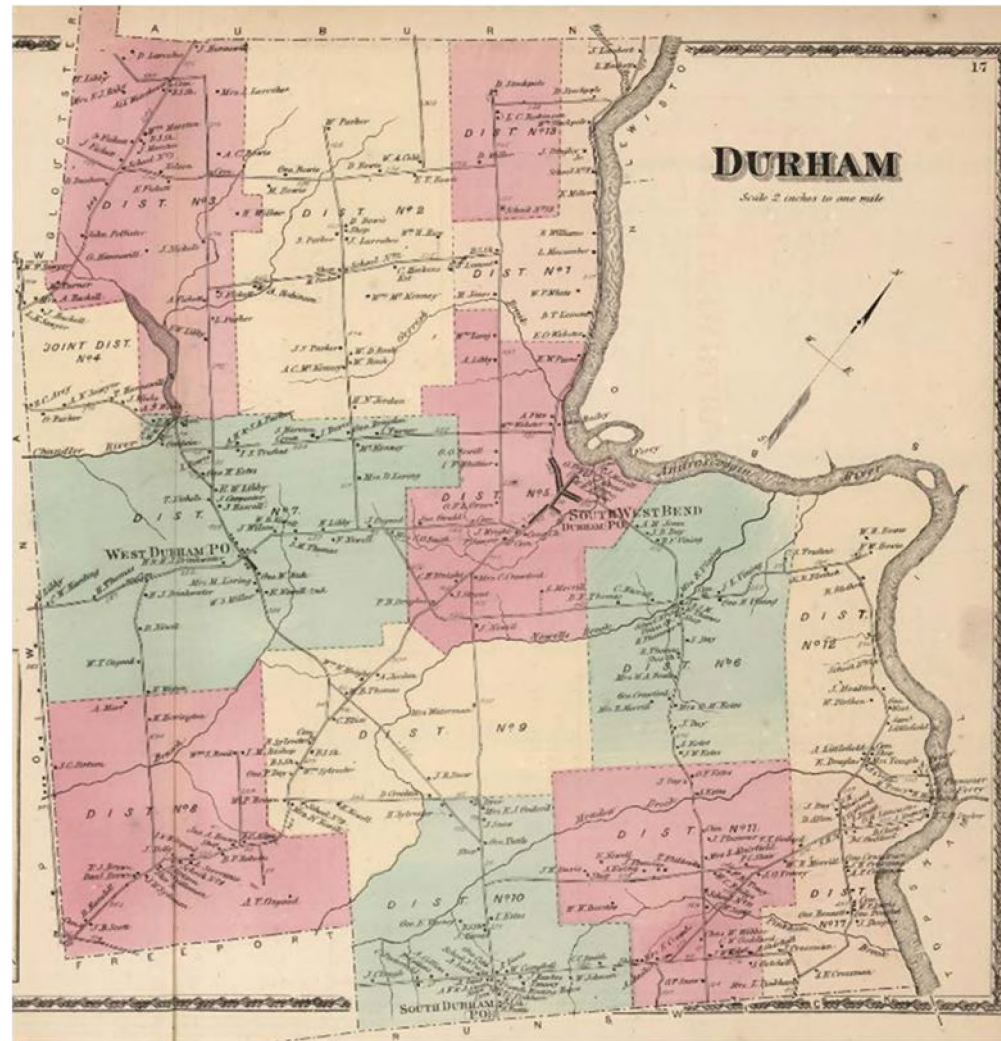
Before the Civil War, the River Road/South Bend vicinity became a trading center for a region stretching 20 miles or more northward at a time when Lewiston

and Auburn had no industrial or commercial importance. Each section of town had its general store; O. Israel Bagley opened the first one in 1770, just south of where the Bagley Inn stands today. These

general stores were community gathering spots, where gossip, political argument and exchanges of work were shared. At Durham's height as a commercial center, stores around the South Bend also included a milliner's shop, a bakery, a hotel, a tavern, and an apothecary.

Maine's climate turned less hospitable to cash crops such as wheat, and with the opening of the Erie Canal in 1825, families headed west in search of more productive farmlands. After the Civil War the construction of the railroads led to a mass migration from rural areas into more prosperous urban areas. For most of the nineteenth century, Maine's principal export

was its people, who took their talents to the plains, forests and



Durham in 1873 (Sanford Everts & Co, 1873)

thriving towns beyond the Appalachians. By 1900 Durham's population had grown only to 1,230.

Soon after, the "Sanfordites," followers of Frank Sanford, located their headquarters at Shiloh Temple in Durham, and brought many followers of their Church of the Holy Ghost and Us, an evangelical sect, to the town. Running its own schools and industries, its burgeoning settlement brought many newcomers, and the town's population grew to 1,625 by 1910.

The cult's leader was eventually discredited, and though the church remains active to this day, by 1920 Durham shrank to 1,144 people, and then to 806 in 1930. The Great Depression brought ruin to many in the 1930s, so that Durham had only 784 residents in 1940. Many were still involved in agriculture; others were independently employed at home-based small businesses, such as blacksmithing, lumber sales, or music-teaching.

In the general economic boom that followed World War II, Durham grew to 1,050 residents. The automobile made it possible to work in the busy cities and yet return home each day. The same rural flavor that had led many to leave for urban opportunities now became the atmosphere people wanted for their homes. The addition of these commuters pressed population upward—to 1,280 in 1970, 2,074 in 1980, 2,475 in 1990, and 3,381 by 2000. Like many small towns in southern and central Maine, the historic patterns of settlement are still partially evident, but new development is occurring lot-by-lot across the town, making the historic village-based pattern less prominent.

Prehistoric Sites

According to the Maine Historic Preservation Commission

(MHPC), the central state repository for all prehistoric archaeological information, there are two primary locations in Durham where prehistorical archaeological sites have been documented or have a high probability of being found. There are seven known archaeological campsites located along the Androscoggin River. MHPC requests that any proposed ground-disturbing activity within 75 feet of the river bank should be checked by an archaeologist. The second location where prehistoric sites may be found is a hill overlooking Runaround Pond, in the southwest section of Durham, near the Central Maine Power transmission line.

The MHPC states that even though there is no archaeological mapping information available at this time, professional archaeological surveys have been completed along the Androscoggin River bank along Route 136 in the northern portion of Durham and along powerline/pipeline corridors. Completing these surveys would help in identifying any remaining prehistoric sites in Durham.

Historic Archaeological Sites

As of 2016 six historic archaeological sites have been documented by MHPC for the town. No professional surveys for historic archaeological sites have been conducted to date in Durham. Future archaeological surveys could focus on the identification of potentially significant resources associated with the town's agricultural, residential, and industrial heritage, particularly those associated with the earliest Euro-American settlement of the town in the 18th and 19th centuries.

Historic Structures

National Register of Historic Places

Shiloh Chapel

The Shiloh Chapel is located on Shiloh Road, off of Route 125. The first cornerstones were laid on July 4, 1896, and by September 30 of that year, a 27-room structure with a tower rising seven stories was ready for winter. To this day, Shiloh continues to function as a community church.

Nathanial Osgood Home

In 1789, Nathaniel Osgood, a farmer and businessman, moved to Royalsborough and settled at the present location on Route 136 near the Freeport town line.

Bagley House

Built in 1770, this was O. Israel Bagley's home and is considered one of the Town's oldest structures. It was Durham's first public inn, first place of worship and first school. In 1797, the house was sold to the Bliss Family, and they owned it until 1982. Israel Bagley was Durham's first storekeeper; his store, which operated from 1770 to 1789, was located on the County Road, just below the house. The Bagley House is located at 1290 Royalsborough Road, south of Quaker Meeting House Road.

Methodist Church

The church, located on Runaround Pond Road, was built in 1804 and improved in 1867. The Methodist Church is currently vacant and owned by the Town and urgently needs restoration work to prevent it from falling down.

Union Church

The Union Church, located at 744 Royalsborough Road, was built in 1835, and the building was deeded to the Town in 1922. It was used as Durham's Town Hall from 1924 until 1986, when the current Town Office was completed. The bell in the church's bell

tower was made by Paul Revere's son. This property is in need of a formal upkeep plan.

Locally Significant Historic Sites

The following additional historic structures and places are known to be of local significance:

Friends Meeting House

The Friends moved to Durham as early as 1770, and in 1794 a meeting house was built. The current meeting house, built in 1829, is the third on the site, at the intersection of Route 125 and Quaker Meeting House Road.

Eureka Grange

Built as a private residence sometime prior to 1850, the structure was purchased, enlarged and renamed Eureka Grange around 1910. The Town of Durham purchased the property in 1990, and townspeople have been conducting extensive renovation on what now is known as the Durham Eureka Community Center. The upstairs has yet to be renovated and the Town is considering conducting a study to determine how to best use this space.

Old Chandler Mill Site

In 1777, the first sawmill was built at Runaround Pond by Judah Chandler. A second sawmill was built in 1797. The present mill site was built by a "Richardson" of Brunswick.

Cattle Pound

The Cattle Pound, built in 1821, was used to keep stray animals; a fee was charged for holding them until claimed. It is located on Pound Road, off of Route 136.

Dyers Ferry

Before bridges were built, Dyers Ferry was used (from the

early 1800s to the early 1900s) to cross the Androscoggin River. It is at the foot of Ferry Road, at Southwest Bend.

Gerrish's Mill

This mill was first noted to have existed in February 16, 1775. It was located near what now is Plummers Mill Road and Route 9.

Samuel Robinson House

Samuel Robinson settled in Durham in 1794 on Lot 94, and the Robinson Family lived there until 1873. The house on Stackpole Road still stands and, with the exception of the chimneys, is mostly original.

Roger Hunnewell Home

Located on the Auburn-Pownal Road and built in 1690, it may be Durham's oldest structure.

Collins-Johnson House

This house, located on Route 125, was built in 1777 on Lot 4.

A. W. Gerrish House

Built sometime prior to 1839, this house is located on Ferry Road.

Gilman House

Built between 1884 and 1887, this house is located on Route 9 at Southwest Bend.

S. Jordan House

Built prior to 1846, this house is located on Route 136 near the old Town Hall.

Historic Preservation

Threats to Historic Resources

The primary threats to historic resources in Durham are neglect and inadequate financial resources to maintain and restore historic structures. For example, there are several historic structures in Durham that are in dire need of repairs or restoration to keep the buildings from falling down, and the town is currently researching potential funding sources to address those problems. Furthermore, the lack of adequate prehistoric or historic archaeological surveys in Durham means that there may be significant historic and archaeological resources that may be disturbed by new development before than can be properly identified and protected.

Historic District

Durham has an Historic District ordinance that was first adopted in 2002 to prevent inappropriate alterations to buildings of historic or architectural value, to prevent the demolition or removal of designated sites, landmarks, and significant historic structures, to preserve the essential character of a designated Historic District, and to assure that new construction in Historic District is compatible with the historic character of the district. This ordinance established a Historic District Commission, consisting of five members and two alternates appointed by Town Selectmen, to review all proposed additions, reconstruction, alteration, construction, or demolition of any Contributing Resource located within a designated Historic District and serve in an advisory role to Town government officials regarding local historical and cultural resources. The Commission also may recommend to the Selectmen that additional Historic Districts be established in the future.

Currently, the Southwest Bend Historical Overlay District is the only established historical district in Durham. The Southwest Bend District is located in the north central region of Durham adja-

cent to the southwest bend in the Androscoggin River. The Union Church is the most significant historic structure located in this district. The 1873 Atlas of Androscoggin County shows the Southwest Bend neighborhood was a major center for the surrounding community, featuring a cooper shop, a hotel, a grocery store, post office, and a shoe store.

Land Use Ordinance

The Durham land use ordinance has a set of performance standards that apply to historic resources. The ordinance prohibits removing stone walls, granite posts, abutments, or markers older than 100 years from the property they are located on. The ordinance also prohibits disturbing cemeteries or grave markers, disturbing any archaeological site identified by the MHPC, or demolishing or altering the façade of any structure listed on the NRHP or any churches or school buildings older than 100 years, except to restore the structure in accordance with the standards of the Secretary of the Interior. Furthermore, the ordinance requires any structure that is constructed in an historic district or

within 1500 feet of any structure, site, or other property that is listed on the NRHP or has been identified by the MHPC as being of national, statewide, or local historic significance shall be compatible with such historic properties in terms of mass, scale, design, building material, and height.

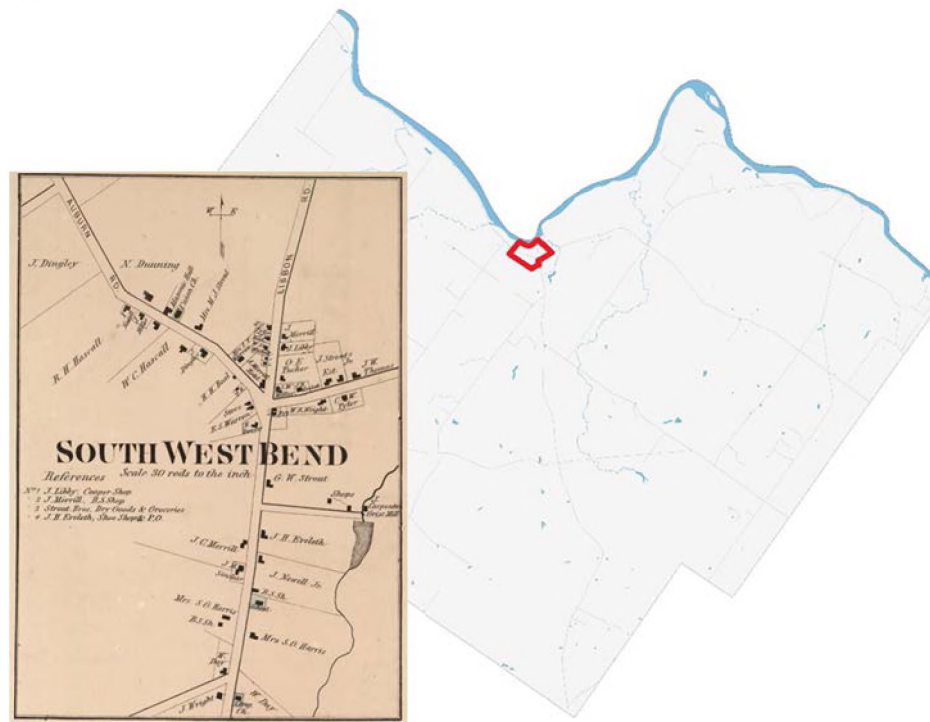
Additional Tools

In addition to the land use and Historic District ordinances, there are other tools for preserving Historic Resources, including grants, fundraisers, tax revenue, and historic tax credits (HTCs). The National Park Service (NPS) offers a 20% HTC for substantial renovations of properties listed on the NRHP or a 10% HTC for substantial renovations of non-historic properties built before 1935. In addition, properties that qualify for the NPS 20% HTC may also qualify for a 25% Maine HTC. Since municipalities do not pay State or Federal taxes, they will have to sell the his-

toric preservation tax credits on a secondary market or enter into a public-private partnership with a developer in order to capture the value of HTCs.

DURHAM HISTORIC DISTRICT

 Southwest Bend Historic Overlay District



Water Resources

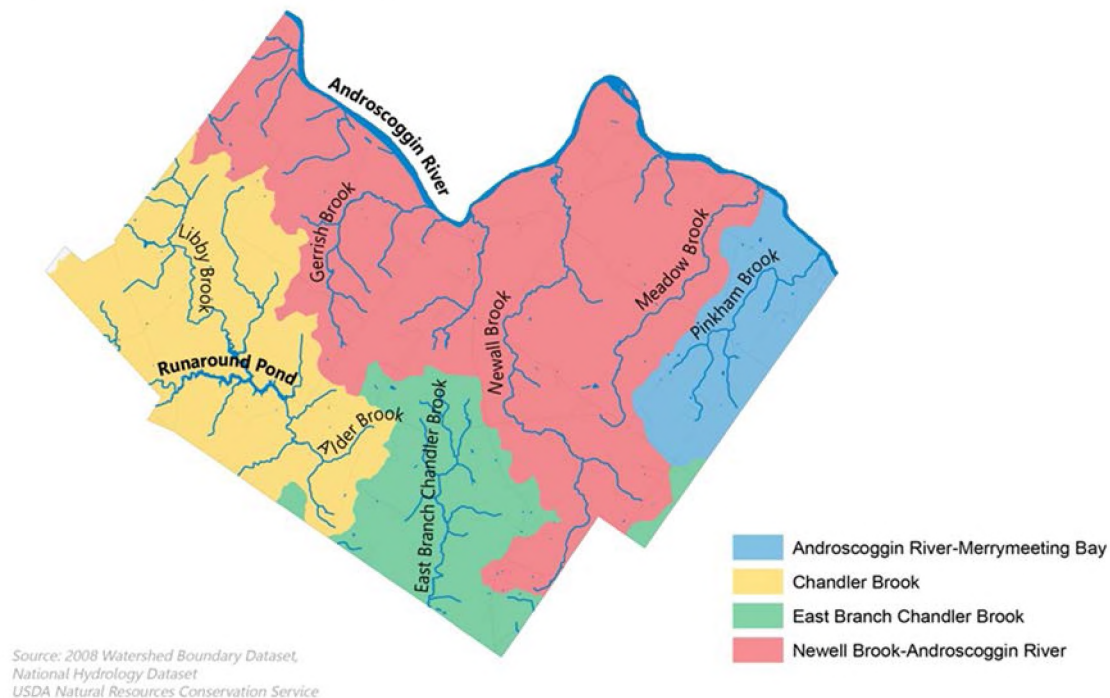
In Maine, water is generally considered an abundant and valued part of the State's identity, economy, and health. Reliable access to clean water is central to a community's wellbeing. In Durham, water resources include numerous streams and brooks and more than 3,500 acres of wetlands. However, a history of localized mill pollution and reliance on dug wells (there is no public water utility) does leave the community vulnerable.

The Maine Department of Environmental Protection tracks water table levels statewide. While there are no measurements in Durham, environmental similarities with nearby Brunswick and New Gloucester suggest a likely pattern applicable to Durham: prior to 2005, aquifers have maintained a relatively high water table well into the summer, with precipitation readily absorbed in the extensive silty-sandy soils and the dense forest cover allowing winter snow cover to remain late into the spring. However, drought lasting from 2005 to 2012 has resulted in dropping water tables, which have not recovered to pre-2005

levels as of late 2016. Porous soils in many areas make residents particularly vulnerable to drought and variations in climate. Water quantity and quality are highly dependent on the persistence of large undeveloped land areas, forest cover, and precipitation.

There are several opportunities for Durham to partner with local and regional advocacy groups focused on water resource protection. The Royal River Conservation Trust, the Androscoggin River Watershed Council, and Friends of Merry-meeting Bay are all dedicated to improving water quality and the natural environment in the region. Neighboring municipalities, such as Lewiston and Auburn, may also serve as valuable partners because they depend on many of the same waterbodies as Durham.

DURHAM WATERSHEDS & SURFACE WATER BODIES



Surface Water

Durham is separated into four principal watersheds, with the Newell Brook-Androscoggin River watershed covering more than half of the Town's land area. The Town has seven major streams, all of which flow to the Androscoggin River. The Chandler Brook water-

shed includes Runaround Pond and flows to the Royal River in North Yarmouth. Runaround Pond is the largest inclusive body of water in Durham, covering approximately 133 acres.

Runaround Pond’s water quality rating indicates that the pond is suitable for recreational purposes and for providing natural habitat for fish and other aquatic life. Current ratings by the DEP however identify Runaround Pond among water bodies most “at risk from new development,” particularly in terms of the potential for algal blooms as well as being subject to pollution from sources in the watershed. These sources of pollution may be non-point in origin, derived from stormwater runoff, failing septic systems, fertilizers leaching from lawns and fields, and a variety of other sources.

The Androscoggin River is Durham’s other major water feature. The river’s water quality has seen marked improvement over the past several decades. As past pollutants held in the river sediment continue to dissipate, the impact of statutory discharge restrictions will be seen to an ever greater extent. However, the Androscoggin River receives a C for its water quality and is thus not

suitable for drinking water.

Activities in Lewiston/Auburn affect water quality downstream. The Maine DEP has identified concerns regarding water quality including the periodic discharge of untreated sewage from the combined sewer/stormwater overflows in Lewiston/Auburn and

high levels of dioxin, which has led to fish consumption warnings. While mill discharge rates have declined significantly since 2004 as a result of State regulatory requirements, sedimentary buildup of pollutants has inhibited corresponding water quality improvements.

While a water quality class increase was proposed in 2009, a 2010 study prompted the State Board of Environmental Protection and the Legislature not to recommend the increase. Central Maine Power’s (CMP) hydroelectric project and impoundment at Gulf Island Pond threatens to reduce the amount of dissolved oxygen currently found in the Androscoggin River. Water that is impounded, or diverted from the falls for the power turbines, can reduce the amount of dissolved oxygen by 10 to 30 times. CMP works to maintain oxygen at

MAINE STATE STANDARDS FOR CLASSIFICATION OF FRESH SURFACE WATER QUALITY

	Dissolved Oxygen	Bacteria (E. coli)	Habitat	Aquatic Life (Biological)
Class AA	As naturally occurs	As naturally occurs	Free flowing and natural	No direct discharge of pollutants; as naturally occurs
Class A	7 ppm; 75% saturation	As naturally	Natural	As naturally occurs
Class B	7 ppm; 75% saturation	64/100 ml (g.m.*) or 427/100 ml (inst.*)	Unimpaired	Discharges shall not cause adverse impact to aquatic life in that the receiving waters shall be of sufficient quality to support all aquatic species indigenous to the receiving water without detrimental changes to the resident biological community.
Class C	5 ppm; 60% saturation	142/100 ml (g.m.*) or 949/100 ml (inst.*)	Habitat for fish and other aquatic life	Discharges may cause some changes to aquatic life, provided that the receiving waters shall be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community.

* "g.m." means geometric mean and "inst." means instantaneous level

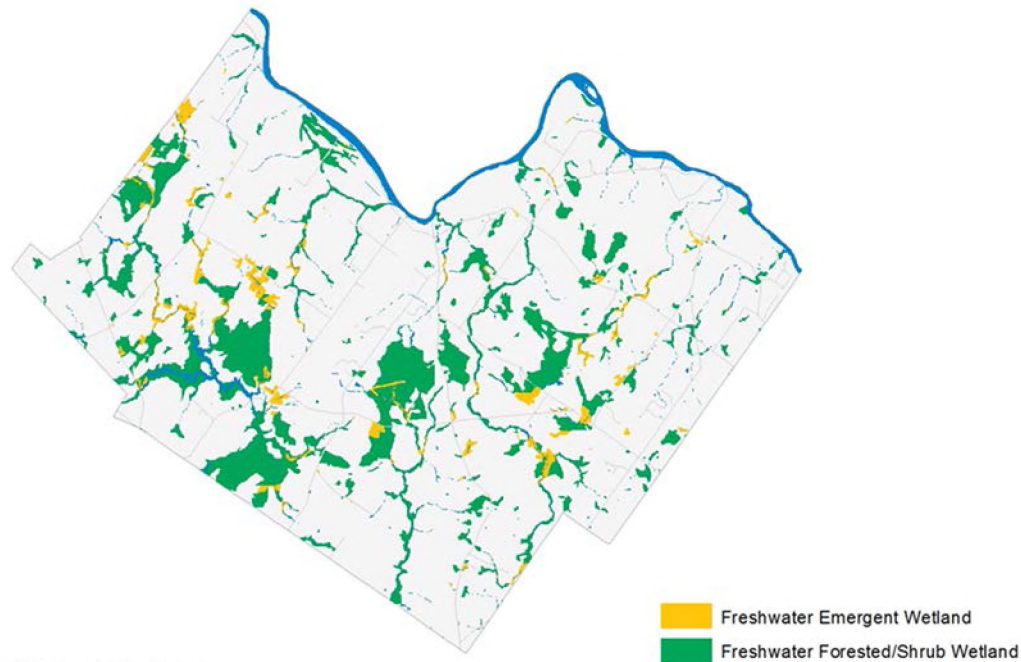
Source: Maine Legislature MRSTitle 38 §465

current levels by rerouting water through the Lewiston canal system when levels fall below defined minimums.

While the condition of the Androscoggin River has changed, as noted by the Maine DEP, from a “a river that was once a flowing open sewer to one that will support marginal aquatic environment,” the Androscoggin River still does not support a population of an indigenous fish, the American Shad, as required by state statute to qualify for a B water quality rating. However, according to findings of the Androscoggin River 2016 Data Report, conducted by the Androscoggin River Watershed Council, it appears likely that this section of the Androscoggin River would be eligible for an increase to a B water quality rating if proposed for reconsideration today.

Durham’s surface water resources also include many wetlands scattered throughout the community that are associated primarily with the headwaters of numerous streams and brooks. The three largest wetland areas in Durham can be found along Meadow Brook and adjacent to Runaround Pond. Wetland protection in Durham is regulated federally under the Clean Water Act (CWA)

DURHAM WETLANDS



*Source: 2017 National Wetlands Inventory,
U.S. Fish & Wildlife Service*

and in Maine by the State Natural Resources Protection Act (NRPA). Given that growth in Durham has been modest and its population has only grown by around 15% since 2000, recent development has not significantly increased non-point source pollution and erosion in Town.

Groundwater

More than 1,550 acres of aquifers have been mapped in Durham by the Maine Geological Survey. These areas, glacial in origin, contain deposits of coarse grained surface material that allows easy infiltration of water, which means both that the availability of water from the aquifers tends to respond quickly to both wet and dry periods, and that pollutants pass quickly into drinking water sources and bodies of water. Since aquifers represent most of the

Town’s water supplies, activities including the use, storage, or disposal of hazardous wastes or materials are particularly harmful in these areas.

Activities within Durham’s Aquifer Overlay District currently are regulated through the Town’s Groundwater Protection Ordinance. However, the Aquifer Overlay District no longer conforms to

the aquifers as mapped. According to the Town's land use ordinance the Aquifer Overlay District is based off of the 1982 Maine Geological Survey aquifer mapping, but these maps were most recently updated in 1999. As a result, the ordinance provides only partial groundwater protection.

In order to receive a building permit, the Planning Board must find that groundwater supplies are adequate to meet the projected needs of all residents in terms of residential or business use and fire suppression, and that the expected water use will not impact water quality for others drawing from the same aquifer.

Water Quality Threats

There are a number of prominent threats to water quality in Durham, some more easily pinpointed than others. For example, the Town's salt storage shed is located on Route 9 near the West Durham area and overlies a mapped aquifer area, presenting a potential infiltration risk to one of the Town's primary drinking water sources. While the fuel storage tanks at the Durham Get & Go represent the largest

potential fuel oil spill risk, The Maine DEP has documented periodic smaller spills from residential fuel oil systems which have infiltrated into neighboring wells.

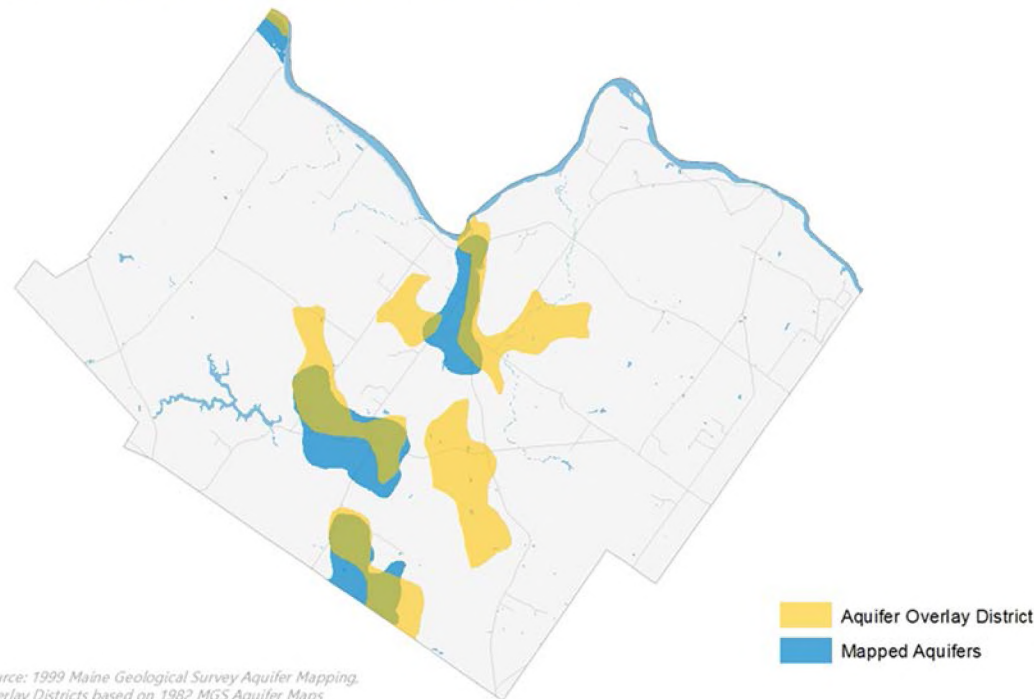
In addition to potential distinct point-sources of water contamination, there are a number of threats that are more diffuse. Vir-

tually all paved roads in Durham are subject to winter salt applications. Durham's public works crews and contractors do use best management practices to protect water resources in their daily operations, but salt contamination is still a risk. Sand from winter sanding operations (which also is heavily laden with road salt) is left to accumulate along roadsides year after year. Erosion and sedimentation of this material result in clogged culverts and ditches, silted streams and ac-

cumulation of eroded material in fields.

Just as every home and business in Durham is served by individual wells, each also has its own sub-surface waste disposal system. The extent of leach bed failures is not known. However, many older systems are believed to be inadequate, thus representing po-

DURHAM AQUIFERS AND AQUIFER OVERLAY DISTRICT



tential threats to surface water and groundwater quality.

Agricultural activities, although not a dominant land use in Durham, may contribute to the degradation of water quality from surface water run-off into bodies of water and filtration into subsurface aquifers. Active farms operate within the Newell Brook-Androscoggin River, Chandler Brook, and East Branch Chandler Brook watersheds, with at least two over the Town's largest aquifer. Agricultural operations currently are subject to state guidelines for manure spreading, including sludge application, which requires a permit from the Town's Planning Board.

Sand and gravel excavation, whether in active operation or inoperative, also can create the potential for contamination of water resources.

For example, if materials were extracted to a level that is too close to the water table, contaminants could rapidly and easily enter the water table. These operations also could lead to increased erosion and, consequently, surface water contamination where such waters are in close proximity. Three of the largest sand and gravel opera-

tions within the Town are located over portions of two of Durham's aquifers.

Future growth and further depletion of sand and gravel deposits may result in a serious shortfall of drinking water, particularly where extraction operations cover substantial portions of two of the

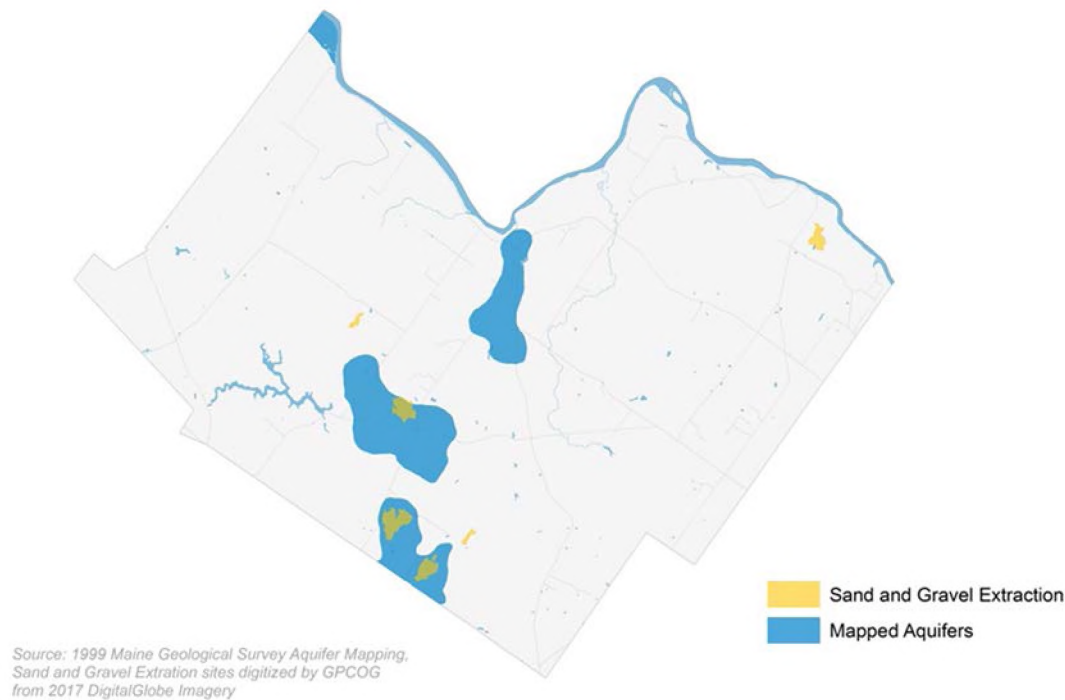
Town's aquifers. Water table levels in adjacent lowlands also are dependent on aquifer flows.

Though population growth has slowed and is only projected to rise by just over 300 people by 2034, the impact of development on the quality and quantity of the Town's water resources remains potential concern unless the permitted nature and location of that development is well defined and enforced.

Durham will continue to benefit from upstream

improvements to water quality on the Androscoggin River, but the Town does continue to face risks to surface water and aquifers that can be managed by implementing additional regulatory and non-regulatory measures.

DURHAM SAND & GRAVEL EXTRACTION SITES



NATURAL RESOURCES

A comprehensive understanding of Durham's natural environment is essential to understanding constraints and opportunities for future development and for making informed land use decisions. With knowledge of Durham's natural resources and the issues associated with them, the community can examine the costs and benefits of preserving and enhancing natural systems in ways that best serve the needs of the community.

Wildlife Habitats

Wildlife habitats are both a tenuous and resilient resource. A typical consequence of the growth of human settlement is the fragmentation or loss of wildlife habitats. The availability of high quality habitat for fish, wildlife, and plants is essential to maintaining an abundant and diverse population for both ecological and recreational purposes.

Aquatic habitats and the areas immediately adjacent are among the most sensitive to change and vulnerable to degradation. Wetlands, watercourses and woodlands provide important habitat for wildlife. In Durham, these areas are home to a variety of species, including beaver, coyote, deer, fisher cat, mink, moose, muskrat, otter, raccoon, red fox, porcupine, and skunk. Populations and overall densities vary widely and have not been documented.

In 2001, a cooperative effort of environmental organizations and government agencies introduced a program called "Beginning with Habitat, An Approach to Conserving Open Space." Today, BwH still provides periodically updated maps and data identifying valued habitats and rare species locations to municipalities. These maps

and tools help local decision-makers create a vision for their community and develop a plan that balances future development with conservation priorities.

Endangered Species

Maine's Endangered Species Act protects essential wildlife habitats, which are areas currently or historically providing physical or biological features essential to the conservation of an endangered or threatened species and which may require special management. Maine's Natural Resource Protection Act (NRPA), which became effective in 1988, was intended to prevent further degradation or destruction of certain natural resources of state significance. Within the act are certain provisions for protecting significant wildlife habitats. The Maine Natural Areas Program (MNAP), a program of the Maine Department of Conservation, maintains information on the status and location of rare and endangered habitats and species in Maine. The Blanding's Turtle, a species of turtle has been reported to live near the eastern shores of Runaround Pond, is the only recorded endangered species in Durham.

Species of Special Concern

The Bald Eagle was delisted from the Maine Endangered Species list, following federal delisting in 2007, joining the *Strophitus undulatus*, or Creeper, a freshwater mussel, on Maine's list of Species of Special Concern. Species of Special Concern meet some, but not all, of the criteria for listing as an endangered species, remain at risk of local or regional disappearance, and are protected through policy rather than legislation. Bald eagle nesting areas are located at several points in Durham along the Androscoggin River. Creeper can also be found at several locations along the Androscoggin River.

Essential Habitats

Essential Habitats are areas that currently provide or have historically provided physical or biological features essential to the conservation of an endangered or threatened species in Maine, and which may require special management considerations. Examples of areas that could qualify for this designation are nesting sites or important feeding areas. For some species, habitat protection is vital to preventing further decline or achieving recovery goals. This habitat protection tool is used only when habitat loss has been identified as a major factor limiting a species' recovery. Before an area can be designated as Essential Habitat, it must be identified and mapped by IF&W, and adopted through public rule making procedures. The essential wildlife habitats in Durham are as follows:

Protected Waterfowl Habitat

Inland and tidal waterfowl and wading bird habitats provide breeding, migration, and wintering grounds for a number of bird species. As of 2006, State of Maine regulations require that municipalities designate all Maine Department of Inland Fish and Wildlife (IF&W) designated inland waterfowl and wading bird habitats as resource protection areas.

Five zones in Durham have been identified as medium value inland waterfowl and wading bird habitat by the Maine Department of Inland Fisheries and Wildlife.

Vernal Pools

Vernal pools are wetlands that appear seasonally and provide important habitat to semi-aquatic woodland species such as wood frogs, spotted salamanders and a range of rare or endangered plants and animals. The Maine Department of Environmental

Protection (DEP) has established criteria to identify significant vernal pools, those with the highest value to wildlife, and development activity within 250 feet of significant vernal pools may require a permit from DEP. The permit review process helps assure that any activities in and around significant vernal pools are done in ways that avoid harm to both wildlife and habitat.

In Durham there are five documented vernal pools. Two of these pools, located near the outlet of Newell Brook into the Androscoggin River, are protected under NRPA as significant vernal pools, while the other three are recorded as potentially significant.

Deer Wintering Areas

Deep snow and frigid temperatures can put stress on the deer population. Deer wintering areas provide critical protection for deer herds during Maine's winters. They are usually located in evergreen forests, whose canopies reduce wind velocity, maintain warmer than average temperatures, and reduce snow depth by retaining snowfall above the forest floor.

In 2015 the Maine Department of Inland Fisheries and Wildlife reported six deer wintering areas within Durham totaling 1,099 acres, a decrease of 2914 acres since the 2002 report. Much of this decrease can likely be attributed to forestry operations conducted since 2010 in several of the Town's largest contiguous deer wintering areas. What had been the Town's largest contiguous area (1,359 acres), bounded by Swamp Road, Meadow Road, Old Brunswick Road and Route 136, was not listed in 2015 following nearly a decade of tree harvest impacting the viability of the area as a deer yard.

Brook Trout Habitat

Brook trout (*Salvelinus fontinalis*), commonly referred to as

squairetail, brookie, and speckled trout, are native to Maine. Maine is the last stronghold for brook trout in the eastern United States. Maine is also the only state with extensive intact lake and pond dwelling populations of wild brook trout. Brook trout are not afforded any special state or federal regulatory protection, but there are Best Management Practices recommended by the Maine Department of Inland Fisheries and Wildlife.

Newall Brook, Meadow Brook, Pinkham Brook, and East Branch Chandler Brook are all important habitats for brook trout in Durham.

Plant Habitats

Two rare and exemplary plant features have been identified in Durham by the Maine Natural Areas Program. Dry land sedge, considered threatened in Maine, has been seen along the river near the Auburn line. Michaux's blue-eyed grass has been spotted in the vicinity of Libby Hill between tributaries of Runaround Pond. Narrow-leaved arrowhead, a rare aquatic perennial, has been found in the shallows of the Androscoggin River in the

northeastern corner of the Town. Other rare features may exist in Durham but have not been identified.

Undeveloped Habitat Blocks and Connections

Unfragmented habitat blocks are large, contiguous area of natural woodland with little or no human disturbance, and they are essential to maintaining a diverse and healthy wildlife population.

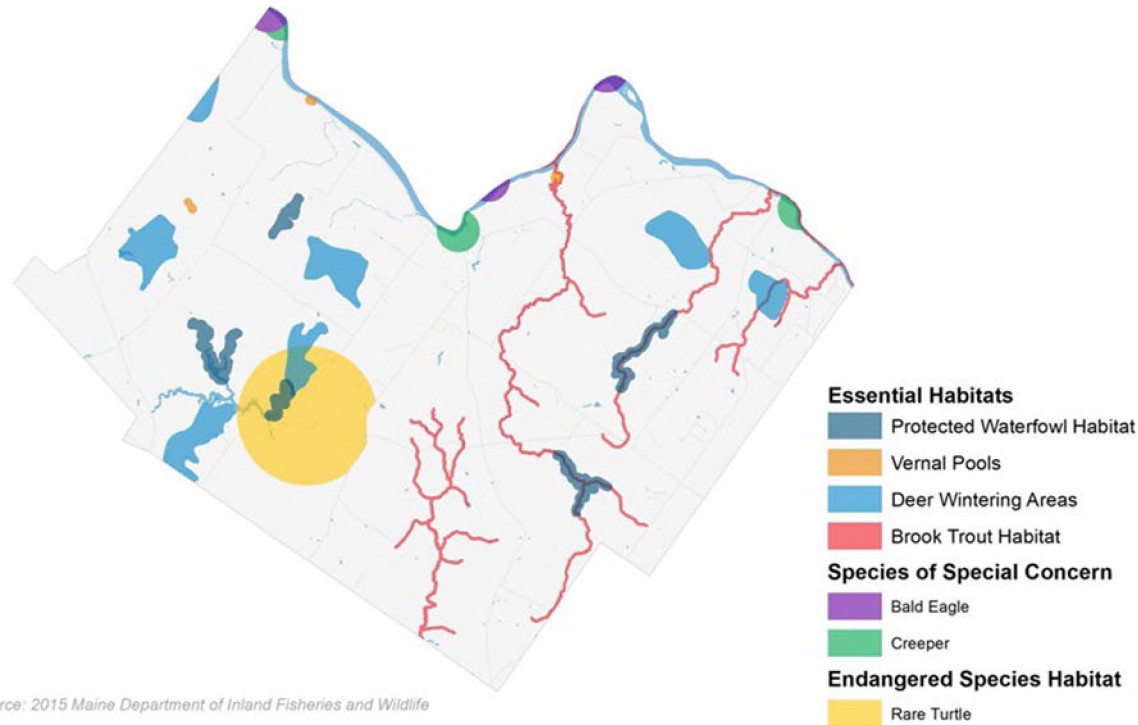
They are also popular areas for outdoor recreational activities, and reflect the community's rural character. The value of an unfragmented habitat block increases with its size because larger habitat blocks can support a greater diversity of animal and plant populations.

The Maine Natural Areas Program (MNAP) has identified many large unfragmented habitat blocks in Durham, the largest of which is 2053 acres surrounding Runaround Pond. There are six

other unfragmented habitat blocks in Town larger than 1000 acres each, and thirteen blocks ranging from 100 to 1000 acres.

Wildlife corridor connections link habitat blocks and allow for animal movement across roads and other barriers. By preserving

DURHAM WILDLIFE HABITATS



Source: 2015 Maine Department of Inland Fisheries and Wildlife

habitats and establishing these linkages, Durham can provide wildlife corridor connectivity through the community and into larger unfragmented habitat blocks in surrounding communities. Safe passage zones or protected crossings can be preserved or reestablished to improve connections between fragmented habitat areas.

Scenic Resources

There are several unique natural areas of local significance in the Town, including Lauraffe Ledge in southwestern Durham (also the Town's highest point of land), Runaround Pond (a complex of streams, pond, wetlands, and intervening woods of great ecological and open space value), Bowie Hill, Parker Hill, East Branch drainage, Meadow Road area and Chandler Brook. Other areas include the 10 miles of shoreline along the Androscoggin River, which affords wide views of the river.

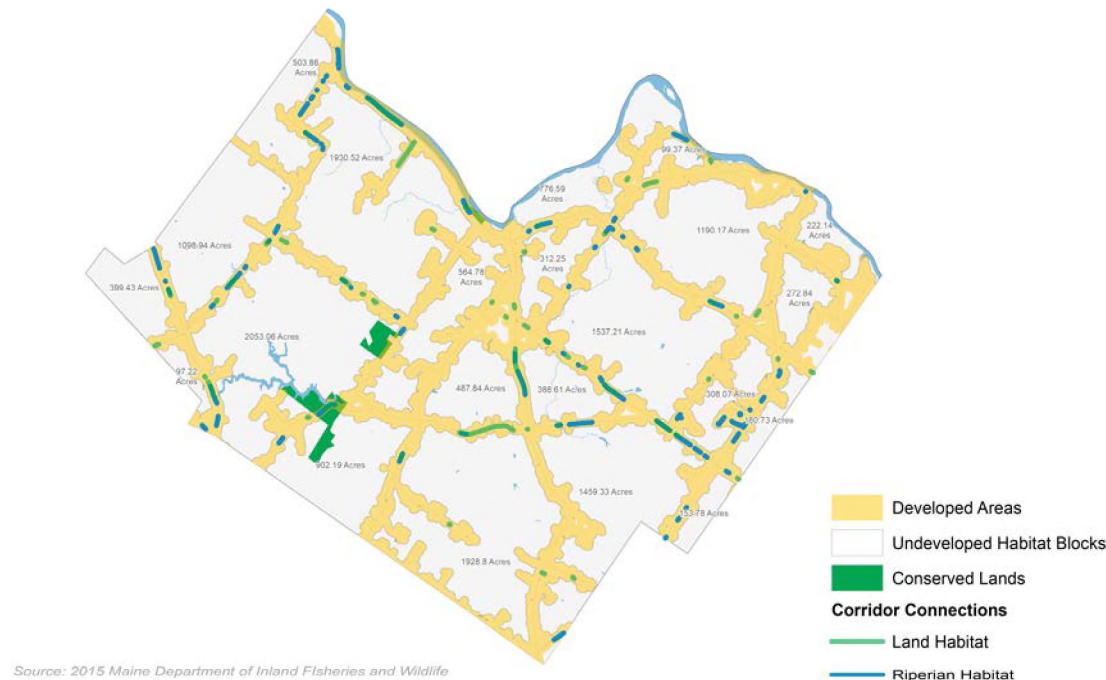
Policies and Practices

Durham has a wealth of natural, scenic and open space resources, including wetlands, aquifers, forests, wildlife and unique natural areas. Durham is subject to state and federal regulations

and has also adopted a number of local ordinances to protect these resources. However, implementing additional regulatory and non-regulatory measures in order to adequately protect these resources may need to be considered as the Town's population grows.

Residential development has impacts on habitat, forest and wetland health, and water quality, but the Town's population is projected to largely stabilize in coming years and the rate of housing development has already been declining for over a decade. Over the next decade, adverse impacts on natural resources are more likely to come from resource extraction. Of these, the impact of sand and gravel extraction on local water quality and the contribution of timber harvesting to local habitat fragmentation are likely the most significant.

DURHAM UNDEVELOPED HABITAT BLOCKS AND CONNECTIONS



Shoreland Zoning

In order to protect water and riparian resources, The State's Mandatory Shoreland Zoning Act (MSZA) requires municipalities to adopt, administer, and enforce local ordinances that regulate land use activities in the shoreland zone. The shoreland zone is comprised of all

land areas within 250 feet, horizontal distance, of the:

- ♦ Normal high-water line of any great pond or river;
- ♦ Upland edge of a coastal wetland, including all areas affected by tidal action, and
- ♦ Upland edge of defined freshwater wetlands; and
- ♦ All land areas within 75 feet, horizontal distance, of the normal high-water line of certain streams.

As of 1994, these provisions have been imposed upon the Town by the State, and incorporated into the Resource Protection District. The City of Auburn, boarding Durham along the Androscoggin River is in compliance with the State's Shoreland Zoning Act. While Durham is in compliance with the MSZA, they have not adopted the most recent 2015 Chapter 1000 Guidelines for Municipal Shoreland Zoning Ordinances.

Subdivision Regulations

In order to help minimize the impact of new residential development Title 30-A M.R.S.A §4404 states that subdivisions may not have an undue adverse effect on wildlife habitat:

Aesthetic, cultural and natural values: The proposed subdivision will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic and archaeological sites, significant wildlife habitat identified by the Department of Inland Fisheries and Wildlife or the municipality, or rare and irreplaceable natural areas or any public rights for physical or visual access to water bodies

Wildlife: Will not have an adverse impact on spawning grounds, fish, aquatic life, bird and other wildlife habitat.

While these regulations help address new subdivision development, there are few regulations that address lot-by-lot residential development, which is the dominant development pattern in Durham.

Conserved Land

Conserving land through outright ownership or private conservation easements ensures that open spaces and forested areas are preserved in perpetuity and not developed. These tools can help communities maintain unfragmented habitat blocks and corridors. Three conserved parcels are present in Durham today, one under agricultural-use easement and two maintained as public access parkland, one as State land leased to the Town for management as Runaround Pond Recreation Area and the other owned by the Town and protected by a conservation easement owned by the Androscoggin Land Trust.

Regional Partnerships

Numerous local and regional groups have long been working on natural resource issues in Durham and are potential partners in the protection and maintenance of the Town's natural resources. The Androscoggin Land Trust regularly collaborates with the Town on numerous conservation projects. The Nature Conservancy works on regional issues, while the Maine Volunteer Lake Monitoring Program, the Royal River Conservation Trust, Androscoggin River Watershed Council, Androscoggin Soil and Water Conservation District, and Friends of Merrymeeting Bay work on issues connected to environmental quality in areas in and around Durham. Additionally, the Greater Portland Council of Governments is a regional resource for Durham in helping the Town develop natural resource strategies and learn about possible tools and partnerships.

AGRICULTURE & FORESTRY RESOURCES

Forest Resources

Durham's forests have flourished since the decline of agriculture in the 1930s, and many areas have been logged one or more times over the past eighty years. Second-growth forests in Durham generally consist of a mixture of softwoods and hardwoods, including Balsam Fir, Red Spruce, White Pine, Red Pine, hemlock, ash, oak, birch, basswood, and Black Cherry. Old growth stands include White Pine, hemlock, Grey Birch, aspen, and Pin Cherry.

Timber harvesting is still a significant and relatively stable industry in Durham. There are also several active Christmas tree farm operations in the town, including Celebration Tree Farm and Rice Christmas Tree Farm. Given the low population and housing growth in Town over the past 15 years, close proximity of new homes has not had much of an impact on logging operations. However, many large tracts of forest land are not protected or conserved and could be sold for residential development at any time. Most of Durham's forest lands are commercially viable, although typical harvests have historically been relatively small-scale rather than industrial operations, larger commercial operations are becoming more common.

The State of Maine's Tree growth tax program is designed to encourage forest landowners to retain and improve their forestlands, promote better forest management, and support the overall forest products industry in Maine. This program reduces the landowner's proportionate tax burden and requires a mini-

mum of 10 forest acres are protected with a Forest Management and Harvest Plan. The GP is voluntary and considered permanent, although landowners do have the option to withdraw with payment of a penalty.

According to Durham's assessing database, as of 2017 there are 35 participating landowners and 48 land parcels in the Tree Growth tax program. This covers 2412 acres, but approximately 3670 acres are actively being used for timber harvesting. These areas and other areas that are in tree cover could benefit from professional management practices. The Town of Durham owns 8 parcels of land, totaling about 27 acres, none of which would be appropriate for forest management or other public woodlands management.

The Department of Agriculture, Conservation and Forestry compiles annual data from confidential year end landowner reports to the Maine Forest Service. This accounting indicates that since 2005 an annual average of 307 acres of land has been harvested.

Commercial viability is only one of the many values of forestlands. Forest land is important for soil and water conservation, as well as for wildlife habitat and recreation.

The rural character of the Town depends, in part, on the continued maintenance of this resource and the protection of large contiguous parcels of forest land. The primary threats to the Town's forest resources are unsustainable logging and resource extraction, and conversion to residential development, particularly when this serves to erode or fragment significant blocks of remaining forest lands.

Agricultural Resources

Farming, once a major economic pursuit in town, is now practiced on a

DURHAM TIMBER HARVESTING ACTIVITY

Year	Selection harvest <i>Acres</i>	Shelterwood harvest <i>Acres</i>	Clearcut harvest <i>Acres</i>	Total harvest <i>Acres</i>	Change of land use <i>Acres</i>	Active Notifications <i>#</i>
2005	327	10	0	337	0	16
2006	207	120	0	327	59	17
2007	325	21	0	346	3	21
2008	245	15	5	265	10	21
2009	193	0	20	213	6	16
2010	263	0	0	263	0	20
2011	465	0	0	465	34	28
2012	385	125	0	510	3	28
2013	542	10	0	552	10	33
2014	115	60	0	175	15	23
Total	3067	361	25	3453	140	223
Average	307	36	3	345	14	22

Source: Department of Agriculture, Conservation and Forestry - Maine Forest Service

relatively small percentage of the town's land area. Remaining farms, and associated agricultural activities, contribute to the town's rural character – both in keeping land in production and preserving open space. Several existing operations have benefitted from the “locally grown” movement, consistent with a recent statewide revival of small-scale farming.

The State's Farm-land Program provides tax incentives for landowners to keep land in active production. This program is voluntary, requires a minimum of 5 contiguous acres, and the landowner's proportionate tax burden is reduced. According to the Town's assessing database in 2017, 418 acres of land are enrolled in this program, with 5 landowners participating in the program.

The town has significant swaths of soils of prime or statewide agricultural significance. Some of most productive lands are those bordering the Androscoggin River, and several parcels along Route 136 remain in active production. Prime farmland soil is defined by the Natural Resources Conservation Service of the US Department of Agriculture as soil with a dependable supply of moisture, acceptable acidity and salt levels, good drainage and aeration, not frequently saturated, with gentle slope and low erodibility. Farmland of statewide importance is land that approaches but does not meet the criteria for classification as Prime Farmland, but can still produce comparable

crop yields when properly amended and managed.

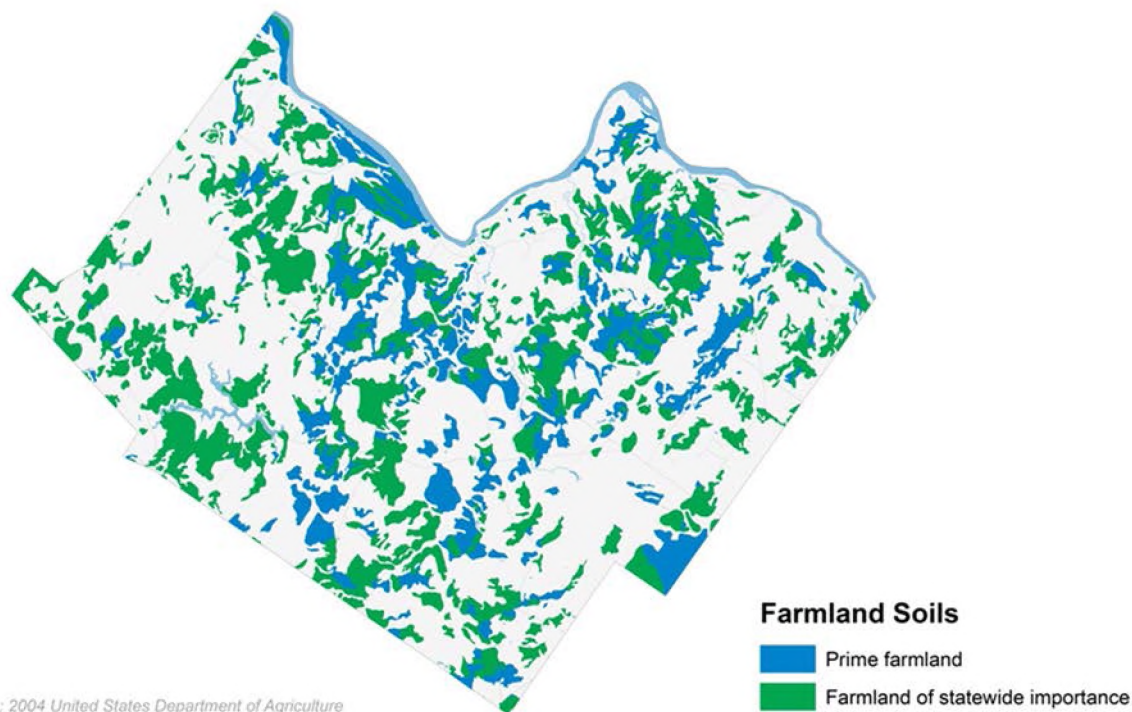
As with forest resources, a major threat to agricultural lands is encroaching residential development and unsustainable resource extraction. The same qualities that make soils excellent for agriculture make them attractive for development as well. At least in the short-term it is often more profitable for landown-

ers to sell undeveloped lands as house lots rather than pursue agricultural alternatives. House lot development can also lead to situations in which new owners view adjacent farm operations as nuisance activities.

Recent trends suggest a more favorable economic outlook for local farming, and an even stronger impetus for protecting potentially productive lands and supporting existing operations. Forming creative partnerships may help in further boosting this sector. A relatively new farming operation in Town, for example, involved purchase of development rights and permanent protection of grazing lands with support from Land for Maine's Future pro-

gram and a regional land trust. Other organizations such as Maine Farmland Trust, Royal River Conservation Trust, Androscoggin Land Trust and the Androscoggin Soil and Water Conservation District provide services that can lend support to existing and future farming-related activities.

DURHAM FARMLAND SOILS



POPULATION AND DEMOGRAPHICS

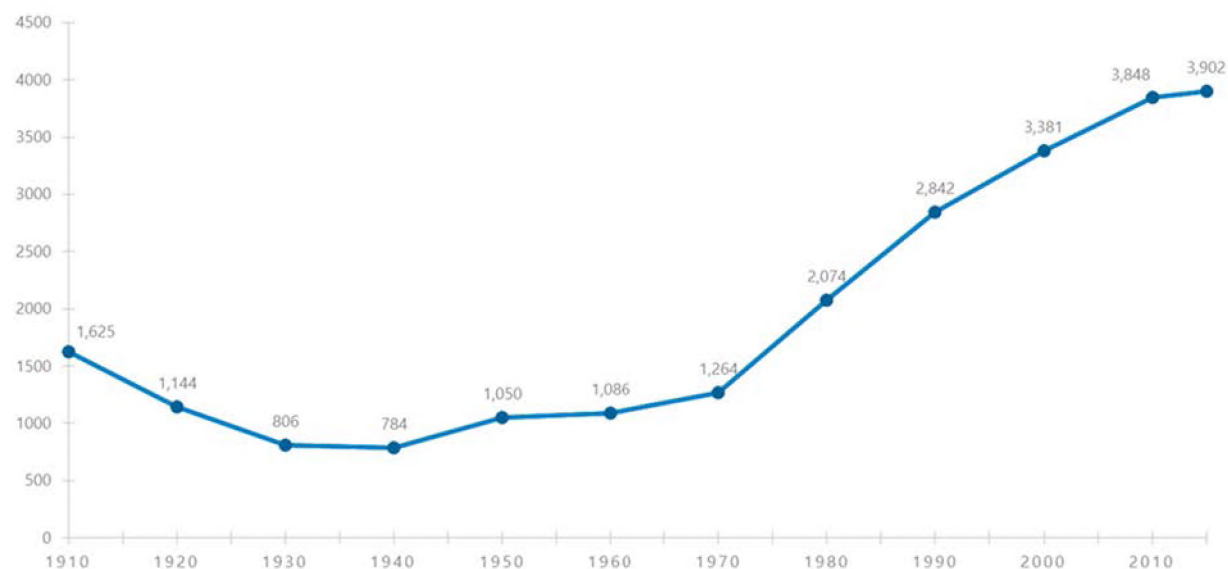
Population Growth

Understanding population growth and trends is essential to planning for the future and ensuring that the community has adequate services and resources. Population change is the result of two factors: natural increase (the difference between births and deaths) and net migration (the change in people moving to/from the community). As a nation, our population is growing slowly; however, there are often population waves such as the baby boomers and millennials where there is an especially large cohort. These age structure trends are often observed at the local level as well and have implications for community planning. Most population growth at the local level is from individuals and families moving to a community (in migration) for economic opportunity or quality of life reasons.

Over the past hundred years (from 1910 to 2010), the population of Durham has more than doubled from 1,625 to 3,848 resi-

dents. From 1910 to 1940, the population was slowly declining but started growing from 1940 to 1970. In fact, 379 fewer people lived in Town in 1970 than in 1910. From 1970 onward, the town has grown more rapidly (about 20% per decade). This growth was part of a country-wide trend in migration from urban to suburban/rural, influenced by Federal policy. Over the past five years, population growth has been less rapid. From 2010 to 2015, Durham added just 54 new residents.

DURHAM POPULATION GROWTH 1910-2015



Source: U.S. Census, American Community Survey 5-year estimate

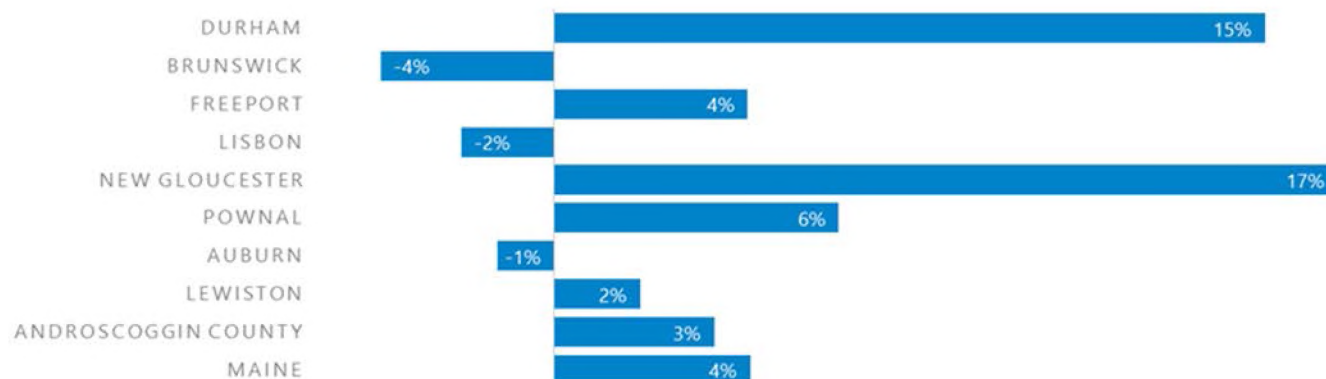
From 2000 to 2015, Durham's population grew by just over 15%. When comparing Durham to surrounding communities, it has one of the fastest growing populations. New Gloucester grew the most at 17%, while Brunswick's population declined by 4%. During this same time period Androscoggin County's population grew by 3%, from 103,793 to

107,393, and Maine's population grew by 4%. Durham accommodated about 14% of Androscoggin County's growth.

Age Distribution

Maine has the distinction of having the oldest population in the country. While the median age in the U.S. in 2015 was 37.2

COMPARATIVE POPULATION GROWTH 2000-2015



Source: U.S. Census, American Community Survey 5-year estimate

years, in Maine it was 43.8 years. As of 2015, Durham's median age was 42.7, slightly below the state average, but a little higher than Androscoggin County's median age of 40.6.

From 2000 to 2015, the share of the population in each age group under 45 remained relatively constant. However, the population between ages 45-to-64 increased by 56%, from 864 people in 2000 to 1,347 people in 2015. The cohort aged 65-to-79 also more than doubled. With the age of first marriage increasing, the 30-to-44 year old age group includes individuals most likely to start forming family households. In 2000, this group represented 30% of the total population, but by 2015 they have decreased by nearly 8% and only represented 23% of the community, which is still a larger share than in either the county or state.

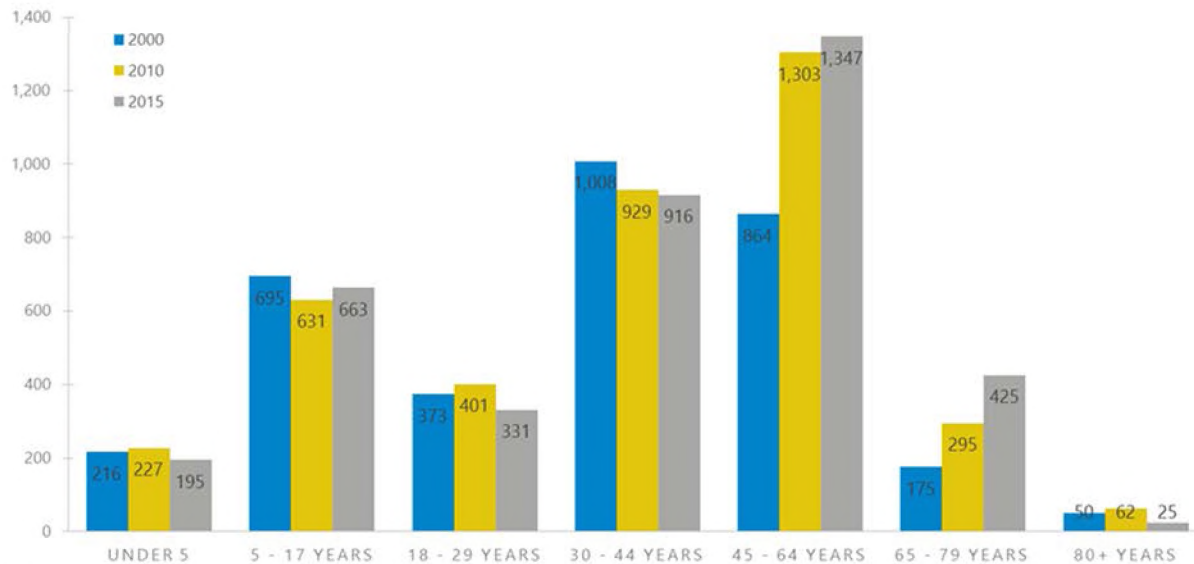
When considering these trends, school enrollment data is an important factor. The number of adults under the age of 45 is not

the only enrollment factor. There is a policy that allows students from Pownal and Freeport to attend Durham Community School, adding to the challenging nature of enrollment projections. The most extreme example of student enrollment change over the past ten years was an increase of 45 students from the 2014-15 to 2015-16 school years, largely due to the addition of Pre-K to the school. Overall,

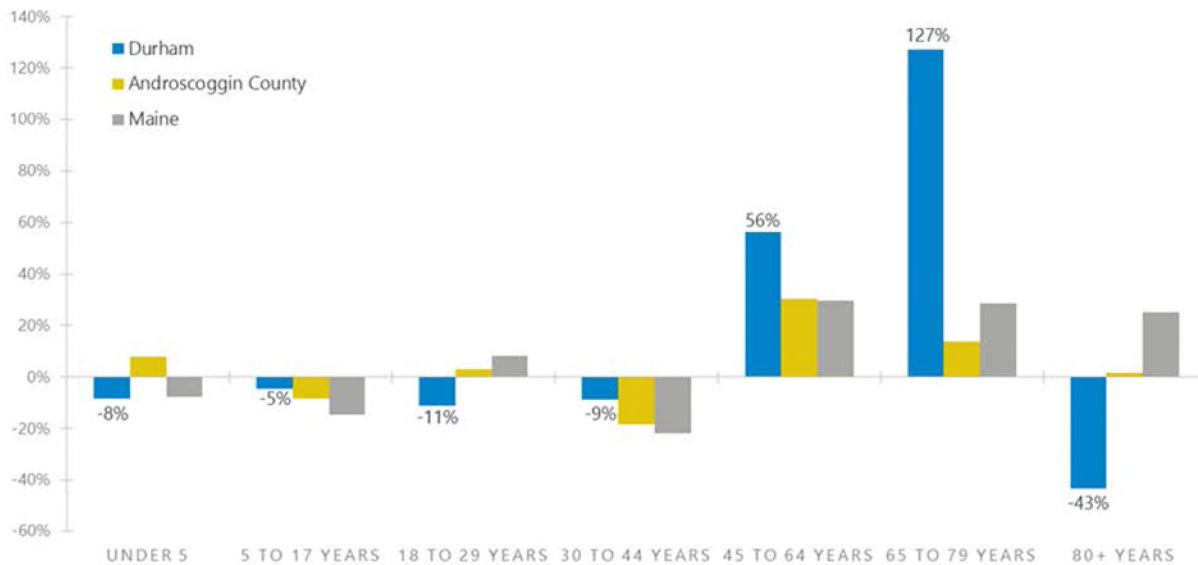
the past ten years of total enrollment has steadily increased. Total student enrollment is expected to continue this upward trend in the coming years.

Overall, Durham's change in population distribution between 2000 and 2015 follows national and regional trends, with a decline in school aged children and growth in the elderly population. Similar to statewide trends, Durham has experienced a moderate decline in the number of children under 5 years old, decreasing by 8% over 15 years. By comparison, the number of children under 5 countywide has actually increased by about 8%, mostly due to the resettlement of refugees in Lewiston and Auburn. At the opposite end of the spectrum, contrary to both county and state trends, Durham's population over 80 has declined sharply by nearly 45%. Between 2000 and 2015, Durham's population shrank in all age groups under 45, and grew in all age groups between 45-to-79.

DURHAM POPULATION BY AGE GROUP 2000-2015



COMPARATIVE CHANGE IN POPULATION BY AGE GROUP 2000-2015



Population Projections

Projections of future population depend on a solid understanding of historic growth trends in the Town of Durham, the region and the nation. The Maine Office of Policy and Management projected county-level population changes through 2034 using the widely-utilized cohort-component method. This methodology uses births, deaths and migrations to advance each age-sex cohort through the project period. The county level population growth was then allocated to individual towns proportional to the town's current share of county population. Based on this model, current growth trends in Durham are expected to continue. The population is projected to grow by about 4% per decade until 2034, an increase of just 322 people over 19 years.

Population Density

Durham is about half as dense as Androscoggin County, but more than twice as dense as the state as a whole. Of the compared nearby communities, population and housing density in Durham is most similar to the town of New Gloucester. Only Pownal is less dense, with 69 residents per square mile. Lewiston has the highest density, with 1,024 residents per square mile.

Seasonal Population

Tourism and seasonal residential land uses are still strong elements of the regional econo-

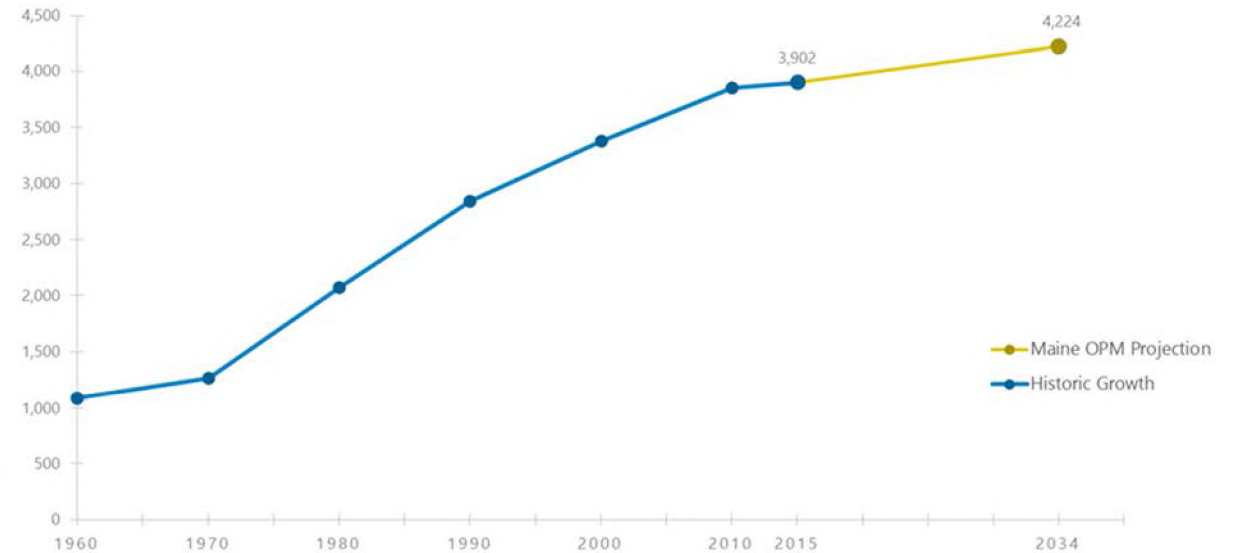
my. Seasonal units are defined by the U.S. Census Bureau as vacant housing units, including beach cottages and time-sharing condominiums that are used or intended for use only in certain seasons, for weekends, or other occasional use throughout the year. Owners of these units would have been counted by the U.S. Census Bureau in their usual place of residence as of 2000. In Durham, seasonal housing is not a very significant portion of the economy, with only 10 seasonal housing units in 2000 and 9 in 2010.

Household Composition

Across the country, average household sizes have continued to drop since the 1990s. This trend has also been seen locally, with average household sizes declining each decade across the state, and in Durham. In Durham, average household size is still larger than in the state and county, but it has been declining more quickly. In the 2000s, average household size in Durham declined by 6.5%, while the county declined by 1.6%. Still, in 2010 households were generally larger in Durham than across the region, with an average household size of 2.57, compared to 2.34 in Androscoggin County and 2.32 in Maine. This decline was caused by a variety of factors, including lower birth rates, increased longevity among the elderly, higher divorce rates, and more elderly and young people living on their own.

The decrease in household size over the past few decades has had a substantial impact on residential development across Maine. During the 2000s, the population in Androscoggin County

DURHAM POPULATION PROJECTIONS 2034 AND 2040



Source: U.S. Census, American Community Survey 5-year estimate, Maine Office of Policy and Management

COMPARATIVE POPULATION AND HOUSING DENSITY 2015

	POPULATION		HOUSING	
	Total residents	Residents per square mile	Total housing units	Housing units per square mile
Durham	3,902	100	1,679	43
Brunswick	20,378	431	9,441	200
Freeport	8,127	234	3,580	103
Lisbon	8,895	374	3,820	160
New Gloucester	5,619	118	2,337	49
Pownal	1,583	69	612	27
Auburn	22,916	349	10,696	163
Lewiston	36,356	1,024	17,110	482
Androscoggin County	107,393	216	49,164	99
Maine	1,329,100	41	726,227	22

grew by 3.8%, while the number of households increased by 5.4%, creating a demand for more housing units per capita. When calculating household size, the Census considers only individuals living in housing units, including homes, apartments and mobile homes. Those living in institutional settings such as nursing homes are counted as living in group quarters. Although there are no projections available for Durham specifically, the U.S. Census Bureau predicts this downward trend in average household sizes across the country will continue to moderate moving forward.

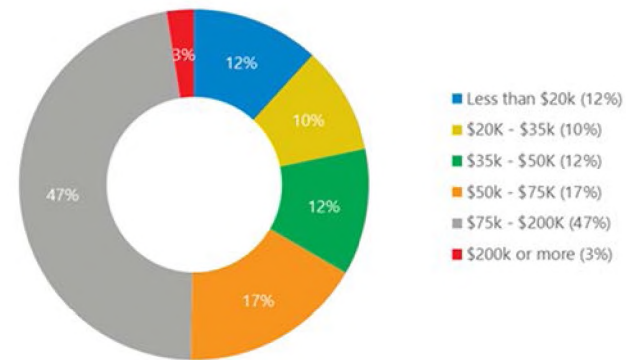
The U.S. Census Bureau defines a household as a group of people who occupy a housing unit as their primary place of residence. There are two types of households – nonfamily and family. Nonfamily households consist of people who live alone or who share their residence with unrelated individuals. Family households include at least two individuals related by birth, marriage, or adoption, but may also include other unrelated people.

The number of households in Durham has grown by 22%, adding 270 households between 2000 and 2010. Roughly three-quarters of the households in Durham are comprised of families (with and without school age children), representing a 5% decline in the share of family households since 2000. Non-family households have increased by more than 44%.

Household Income

In 2015 dollars, median household incomes across the region are about the same today as they were in 1999, decreasing as a result of the great recession in 2008, but climbing back by 2015. In 1999, median household income in Durham was \$76,461 (in 2015 dollars), significantly above the county's average of \$50,826. From 1999 to 2015, real median household income in Durham decreased slightly,

DURHAM HOUSEHOLD INCOME DISTRIBUTION 2015



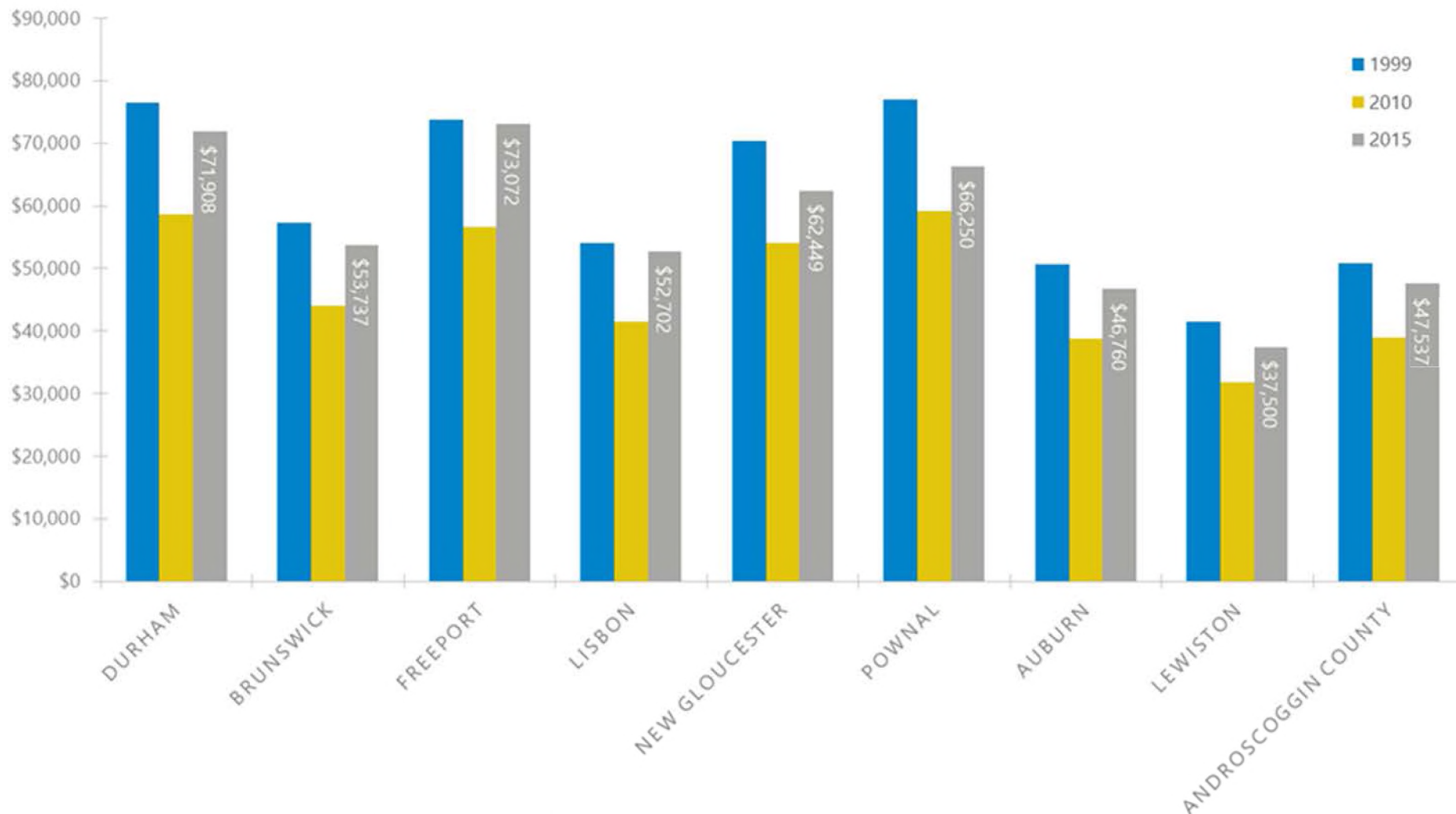
Source: American Community Survey 5-year estimate

DURHAM SNAPSHOT(2000 - 2010)

	2000	2010	Change
Total Population	3,381	3,848	13.8%
Female	1,689	1,900	12.5%
Male	1,692	1,948	15.1%
Median Age	37	41	11.1%
Female	37	42	12.7%
Male	37	41	9.4%
Total Housing Units	1,257	1,548	23.2%
Owner Occupied	1,087	1,346	23.8%
Renter Occupied	139	150	7.9%
Vacant	31	52	67.7%
Total Households	1,226	1,496	22.0%
Family Households	981	1,143	16.5%
Non-Family Households	245	353	44.1%
Average Household Size	2.75	2.57	-7%
Average Family Size	3.02	2.85	-6%
Median Household Income (2015 dollars)	\$76,461	\$58,692	-23%

Source: U.S.Census

COMPARATIVE MEDIAN HOUSEHOLD INCOME (2015 DOLLARS) 1999-2015



Source: U.S. Census, American Community Survey 5-year estimate

going down to \$71,908. This pattern holds true in all nearby municipalities and county-wide.

Compared to Androscoggin County and comparable communities, household incomes are moderately higher in Durham. About 50% of households in Durham make over \$75,000, while the across the county only 28% of households make as much. Conversely, about one in three Durham households earned less than \$35,000 per year, compared to more than half of the county households. According to the U.S. Census 2010-2015 American Community Survey, 8.4% of Durham residents fell below the poverty line in 2015, while 15.7% of county residents and 13.9% of state residents fell below the poverty line.

Education

Although Durham has a well-educated population, many surrounding communities have higher levels of high school and college graduates. More than 60% of adults are high school graduates, and nearly 29% are college graduates. By contrast, 73% of adults in Androscoggin County are high school graduates, and 43% of adults in Androscoggin County have earned a bachelor's degree or higher.

Race and Ethnicity

In addition to being the oldest state in the country, Maine is also among the least racially diverse states in the country. However, from 2000 to 2010 diversity has increased moderately for both the state and Durham, with a more significant increase in diversity for Androscoggin County as a whole due to the resettlement of refugees. The percentage of "white alone" residents has decreased while every other group has increased. The "white alone" population in Durham has decreased by about 1.2%, which is slightly less

RACE AND ETHNICITY OF RESIDENTS 2000-2010

	DURHAM		ANDROSCOGGIN COUNTY		MAINE	
	2000	2010	2000	2010	2000	2010
White alone	99.0%	97.8%	97.0%	92.8%	96.9%	95.2%
Black or African American alone	0.1%	0.3%	0.7%	3.6%	0.5%	1.2%
Asian alone	0.3%	0.5%	0.6%	0.7%	0.7%	1.0%
Other*	0.7%	1.3%	1.8%	2.8%	1.8%	2.6%

* Other includes Native American, Native Hawaiian, Some other race alone, or two or more races

Source: U.S. Census

than the state as a whole. Androscoggin County has increased its diversity a little bit more, with about 4% fewer residents identifying as "white alone". As the nation as a whole continues to diversify, this trend is expected to continue.

ECONOMY

Durham has historically been known as a small bedroom community. The Town's central location makes it relatively easy for residents to commute to Brunswick, Lewiston/Auburn, Augusta and Portland. Many residents find Durham appealing because it has a rural residential feel while still being easily accessible to several larger employment centers. As of 2014, more than 60% of residents in the labor force commuted out of town for work.

According to the Maine Department of Labor, in 2014 there were 66 employers in Durham, accounting for 189 jobs. Sixty-one of these employers had less than 10 employees.

While Durham's proximity to employment centers makes it attractive for residents employed in the area, which does not necessarily mean its location is desirable for many employers, primarily due to marginal access to Interstate highways. Route 136, Route 125 and Route 9, the major roads in the Town, offer acceptable transportation links for automobiles, but are not sufficient for large volumes of commercial traffic. Due to this and other factors, Durham will likely remain primarily residential and is not expected to become a business center for the region.

DURHAM LABOR FORCE OVERVIEW 2015

	DURHAM	ANDROSCOGGIN COUNTY	MAINE
Population 16+ years	3,089	86,100	1,098,075
In Labor Force	2,385	57,139	697,913
Labor Force Participation Rate	77.2%	66.4%	63.6%
Military Labor Force	-	60	1,729
Civilian Labor Force	2,385	57,079	696,184
Employed	2,323	52,961	648,687
Unemployed	62	4,118	47,497
Civilian Unemployment Rate	2.6%	7.2%	6.8%
Not in Labor Force	704	28,961	400,162

Source: American Community Survey 5-year estimate

Regional Economy

The regional economy has been undergoing a significant shift in the past two decades, with the loss of manufacturing jobs being the most visible change. Since Durham is primarily a residential community, the Town's economic future and pace of growth will largely depend on the larger economy. Economic growth in the region will put added pressure on the Town through population growth and increased demand for services, and an economic downturn could slow the demand for new housing.

However, Durham's central location relative to many different employment centers will likely have a stabilizing influence. For example, as a result of the strong economy in Portland, between 2002 and 2014, the number of residents commuting to Portland has increased by about 90 people. Conversely, fewer residents are commuting to Brunswick, Lewiston and Auburn. Another stabilizing force within Durham will likely be the relatively high number of small businesses located in Town.

Durham's Labor Force

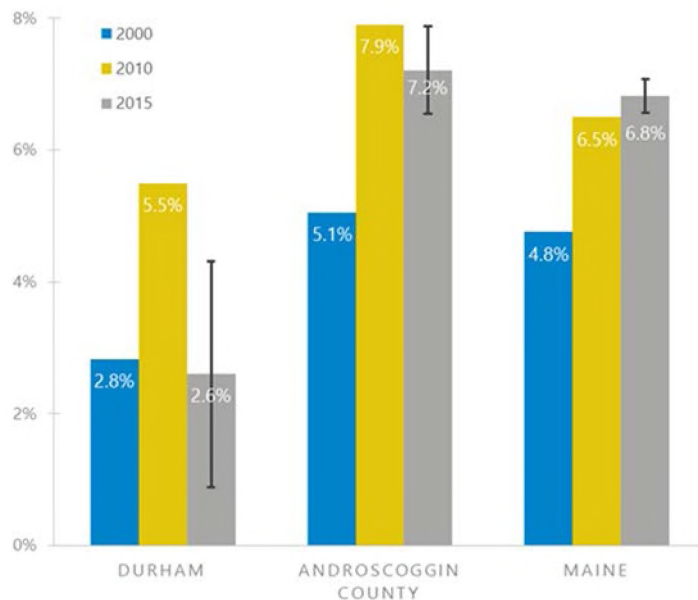
According to the U.S. Census Bureau, Durham's labor force includes Town residents aged 16 and over who are civilians and not institutionalized, including anyone who has a job or is actively look-

ing for one. All others, including those who neither have a job nor are looking for work, are not measured as a part of the labor force. In Durham in 2015, 77% of people aged 16 and over participate in the labor force, which is comprised of 2,385 residents. This rate is higher than the labor force participation rate in Androscoggin County (66.4%), and the state as a whole (63.6%).

Unemployment

Individuals in the labor force are classified as unemployed if they do not have a job, have actively looked for work in the past 4 weeks and are currently available to work. As part of the Greater

ANNUAL UNEMPLOYMENT RATE COMPARISON 2000-2015



Source: American Community Survey 5-year estimate

Portland Labor Market, the unemployment rate in Durham tracked closely with the State and the County in 2000 and 2010, with rates being lowest in Durham and highest countywide in both instances. Between 2010 and 2015 Durham's unemployment rate dropped from 5.5% to 2.6%. During this same five year period, the unemployment rate for the County also declined slightly while unemployment grew slightly (less than half a percent) statewide.

Commuting Patterns of Labor Force

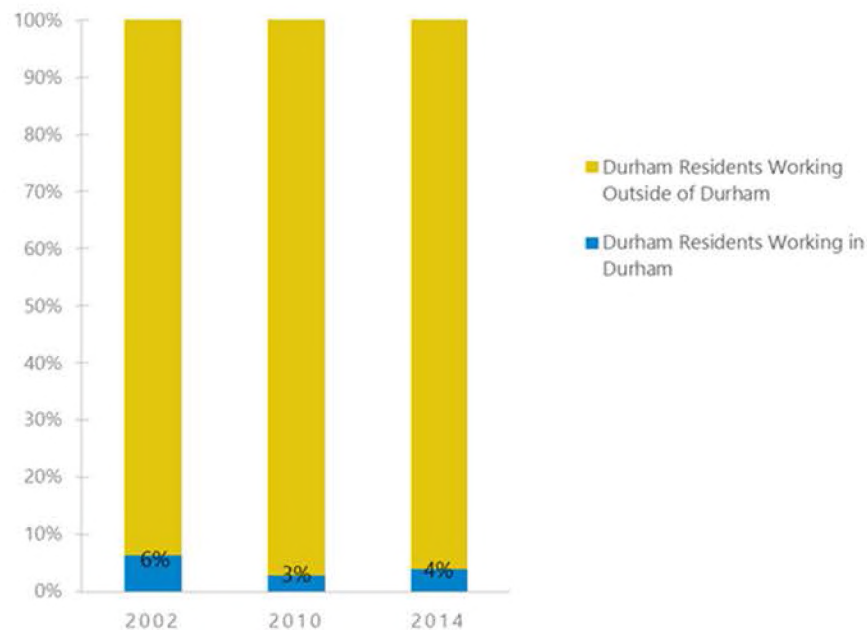
The majority of Durham residents in the labor force work outside of Durham, with 94% of the labor force commuting in 2002, and 96% in 2014. The most common place of employment for Durham residents is Lewiston, capturing 12% of the labor force in 2014. Brunswick and Auburn were the next most frequent, captur-

DURHAM LABOR FORCE COMMUTING PATTERNS 2002-2014

	2002		2010		2014	
	#	%	#	%	#	%
Lewiston	205	11%	203	11%	217	12%
Brunswick	158	9%	144	8%	135	7%
Auburn	128	7%	126	7%	115	6%
Bath	196	11%	158	9%	114	6%
Freeport	174	9%	122	7%	110	6%
Portland	1	0%	89	5%	90	5%
Augusta	32	2%	66	4%	70	4%
Yarmouth	67	4%	53	3%	55	3%
Lisbon Falls	50	3%	61	3%	54	3%
South Portland	49	3%	43	2%	46	3%
Topsham	36	2%	55	3%	37	2%

Source: U.S. Census On the Map

LOCATION OF EMPLOYMENT FOR DURHAM RESIDENTS



Source: U.S. Census On the Map

ing 7% and 6% respectively. From 2002 to 2014, the number of residents commuting to jobs in Brunswick, Auburn, Bath, and Freeport has declined, while more Durham residents are commuting to jobs in Portland and Augusta.

Occupational Profile of Labor Force

Durham's labor force has a significantly higher percentage of managerial and professional occupations than both Maine and Androscoggin County, and a lower percentage of sales, service, and natural resource and construction based occupations than both Androscoggin County and Maine. Durham has a slightly higher percentage of production and transportation occupations than the state as a whole, but a lower percentage of those occupations compared to the County.

OCCUPATIONAL PROFILE OF DURHAM RESIDENTS 2015

	DURHAM	ANDROSCOGGIN COUNTY	MAINE
Managerial and Professional	44%	32%	35%
Service	13%	19%	19%
Sales	23%	26%	24%
Natural Resource & Construction	8%	10%	11%
Production and Transportation	12%	14%	11%

Source: American Community Survey 5-year estimate

Industry Profile of Labor Force

Between 2000 and 2015, the total number of residents in Durham's labor force grew by over 20%, from 1,923 to 2,323 individuals. The professional and managerial, finance, insurance and real estate, education and healthcare, information, and natural resources segments of Durham's labor force have increased significantly (more than 30%), while the other services, transportation, and retail trade have increased moderately (19.6% to 12.9%). The manufacturing and construction segments have decreased moderately (8.5% to 27.5%), while public administration and wholesale trade have decreased by more than 60%. The largest labor force sector, education and health care, included 583 jobs in 2015 and grew by 63% from 2000.

The composition of Durham's labor force is similar to that of Androscoggin County and Maine in many sectors. However, Durham's labor force has about half as many people in the leisure and hospitality sector as the state and county, and only about 1% of the labor force from Durham works in the public administration sector, compared to about 4% in the state and county. The information, profes-

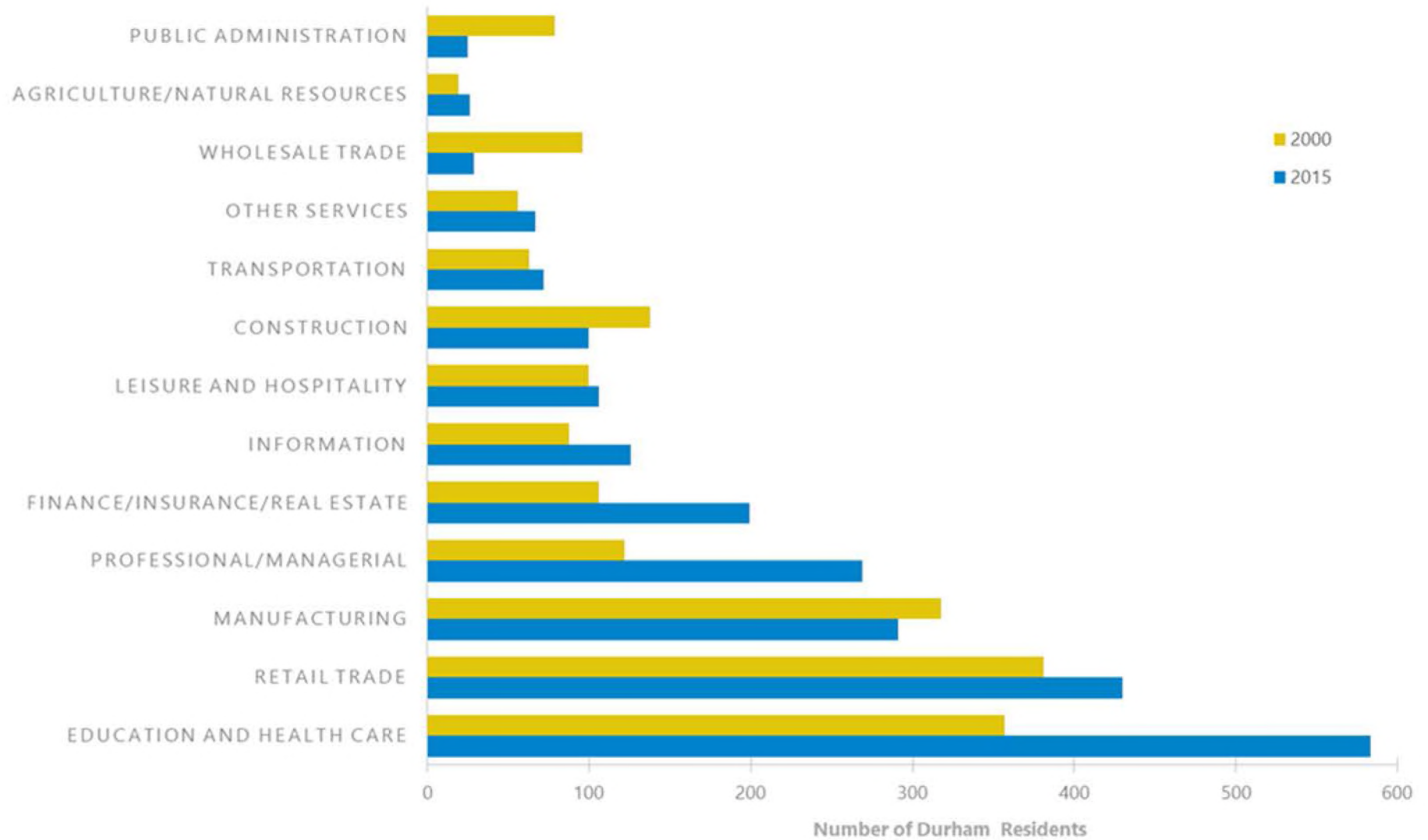
sional and managerial, finance, insurance and real estate, and retail sectors account for a moderately higher share of Durham's labor force compared to both the state and county. Education and health care is by far the largest sector across the state, county and Town, comprising just over 25% of Durham's labor force and approximately 27% of the labor force for both the state and county.

INDUSTRY PROFILE OF DURHAM'S LABOR FORCE 2000-2015

	2000	2015	2015 Share	Change (2000-2015)
Public Administration	79	25	1.1%	-68.4%
Agriculture/Natural Resources	19	26	1.1%	36.8%
Wholesale Trade	96	29	1.2%	-69.8%
Other Services	56	67	2.9%	19.6%
Transportation	63	72	3.1%	14.3%
Construction	138	100	4.3%	-27.5%
Leisure and Hospitality	100	106	4.6%	6.0%
Information	88	126	5.4%	43.2%
Finance/Insurance/Real Estate	106	199	8.6%	87.7%
Professional/Managerial	122	269	11.6%	120.5%
Manufacturing	318	291	12.5%	-8.5%
Retail Trade	381	430	18.5%	12.9%
Education and Health Care	357	583	25.1%	63.3%

Source: American Community Survey 5-year estimate

INDUSTRY PROFILE OF DURHAM'S LABOR FORCE 2000-2015



Source: American Community Survey 5-year estimate

Employment within Durham

Jobs are counted by their place of employment. Under a cooperative agreement, the Maine Department of Labor and the U.S. Department of Labor's Bureau of Labor Statistics collect information on nonfarm wage and salary employment from establishments who fall under the coverage of state and federal unemployment insurance programs and pay unemployment taxes on their workers. Excluded from these statistics are military personnel, pro-

prietors, self-employed, unpaid family leave workers, farm workers, and domestic workers in households. Statistics are compiled from quarterly tax reports submitted by employers subject to the Maine Employment Security Law. Jobs are classified according to the North American Industry Classification System (NAICS).

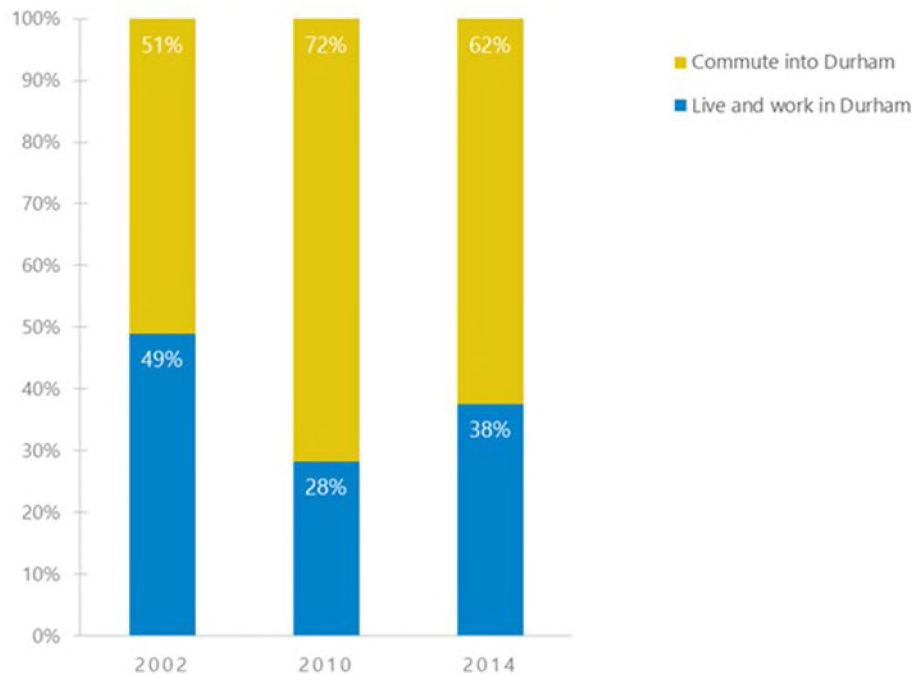
Commuting Patterns

Nearly 40% of employees working in Durham also live in Town. This percentage has fluctuated from 2002 to 2014, and even though the percentage of residents who live and work in Durham has increased since 2010, the long term trend is that more Durham residents are commuting to jobs in other places. Approximately 4% of Durham residents reported working from home in 2015 (compared to 3% in Androscoggin County, and 5% statewide), and this number has not changed significantly since 2000. However, given Durham's location, the community may have an opportunity to attract more home occupations through zoning and tax incentives, and infrastructure improvements, particularly high speed internet.

Job Growth

From 2002 to 2014, the number of jobs in Durham decreased by 21%. This is lower than the rate of job loss in Maine overall, but comparable to the surrounding communities of Lisbon and Auburn. Job growth increased in Lewiston and Brunswick, with 6% and 3% growth respectively. Overall the region surrounding Durham has not fared very well over the past decade, due to the closing of the Brunswick Naval Air Station and the economic down-

COMMUTERS AND DURHAM RESIDENTS WORKING IN DURHAM



Source: U.S. Census, American Community Survey 5-year estimate

NUMBER OF JOBS BY LOCATION COMPARISON 2002-2014

	2002	2010	2014	Change (2002-2014)
Durham	239	177	189	-21%
Lisbon	2,012	1,765	1,580	-21%
Auburn	20,703	15,911	16,523	-20%
Lewiston	24,473	25,748	25,951	6%
Brunswick	11,304	11,399	11,693	3%
Freeport	6,390	5,898	6,361	0%
Androscoggin County	161,517	166,235	174,888	8%
Maine	562,354	556,476	570,417	1%

Source: U.S. Census On the Map

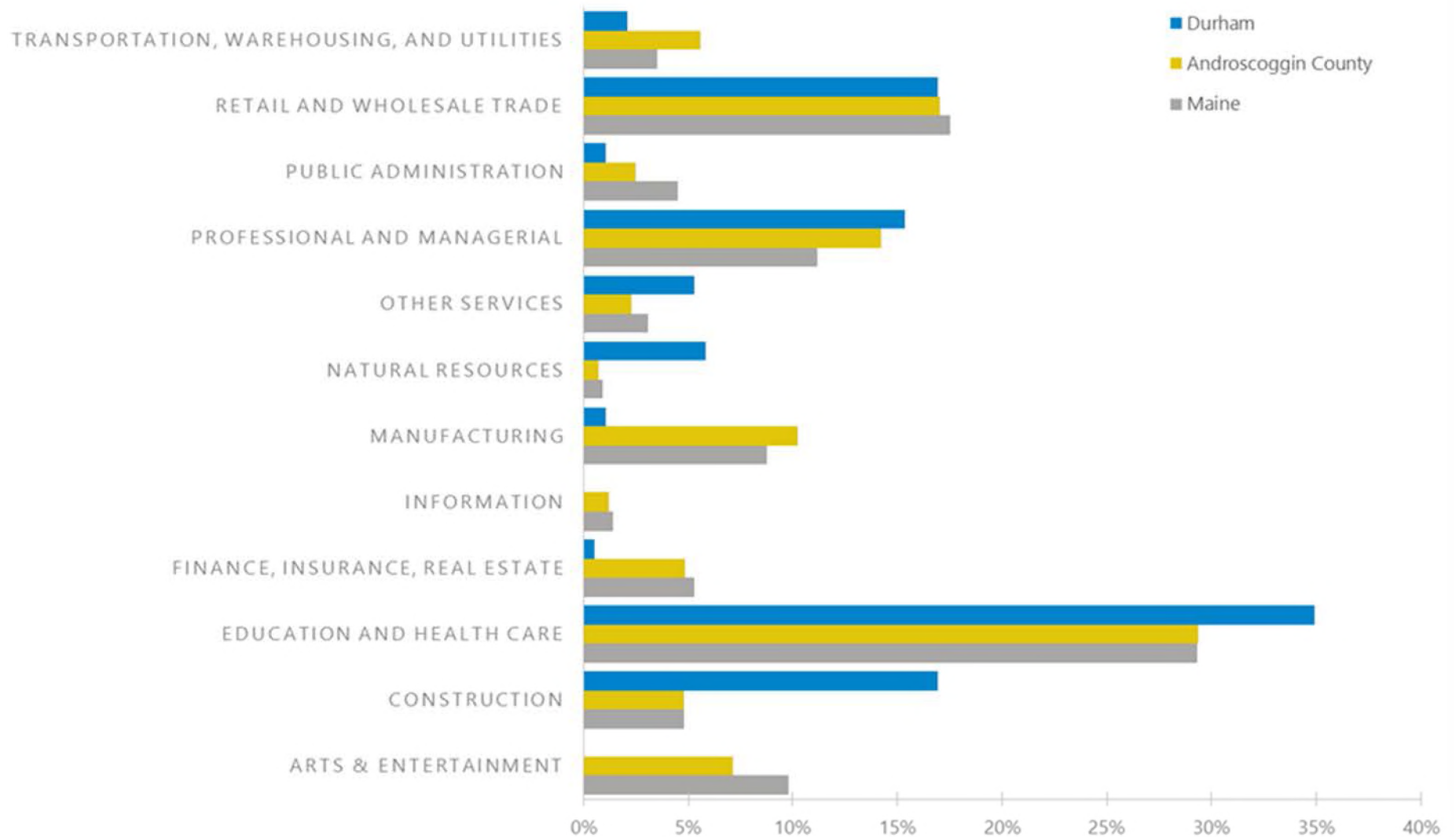
turn starting in 2007. Job growth has been much higher in suburban communities to the south, such as Cumberland and Falmouth, with 51% growth and 23% growth respectively since 2002.

Employment Sectors

The education and healthcare sector accounts for more than a third of all jobs in Durham in 2014. The second largest employment sectors in Durham are construction and retail / wholesale trade, which each account for 17% of jobs in Town. The construction and natural resources sectors in Durham both have a disproportionately higher

share of jobs compared to both Androscoggin County and the state. On the other hand, there were very few manufacturing jobs in Durham in 2014, where overall this sector accounted for nearly 9% of jobs statewide and more than 10% of jobs in the county. Also, there were significantly fewer arts and entertainment jobs in Durham, accounting for about 10% of jobs statewide, 7% of jobs countywide, but 0 jobs in Durham.

EMPLOYMENT BY SECTOR 2014



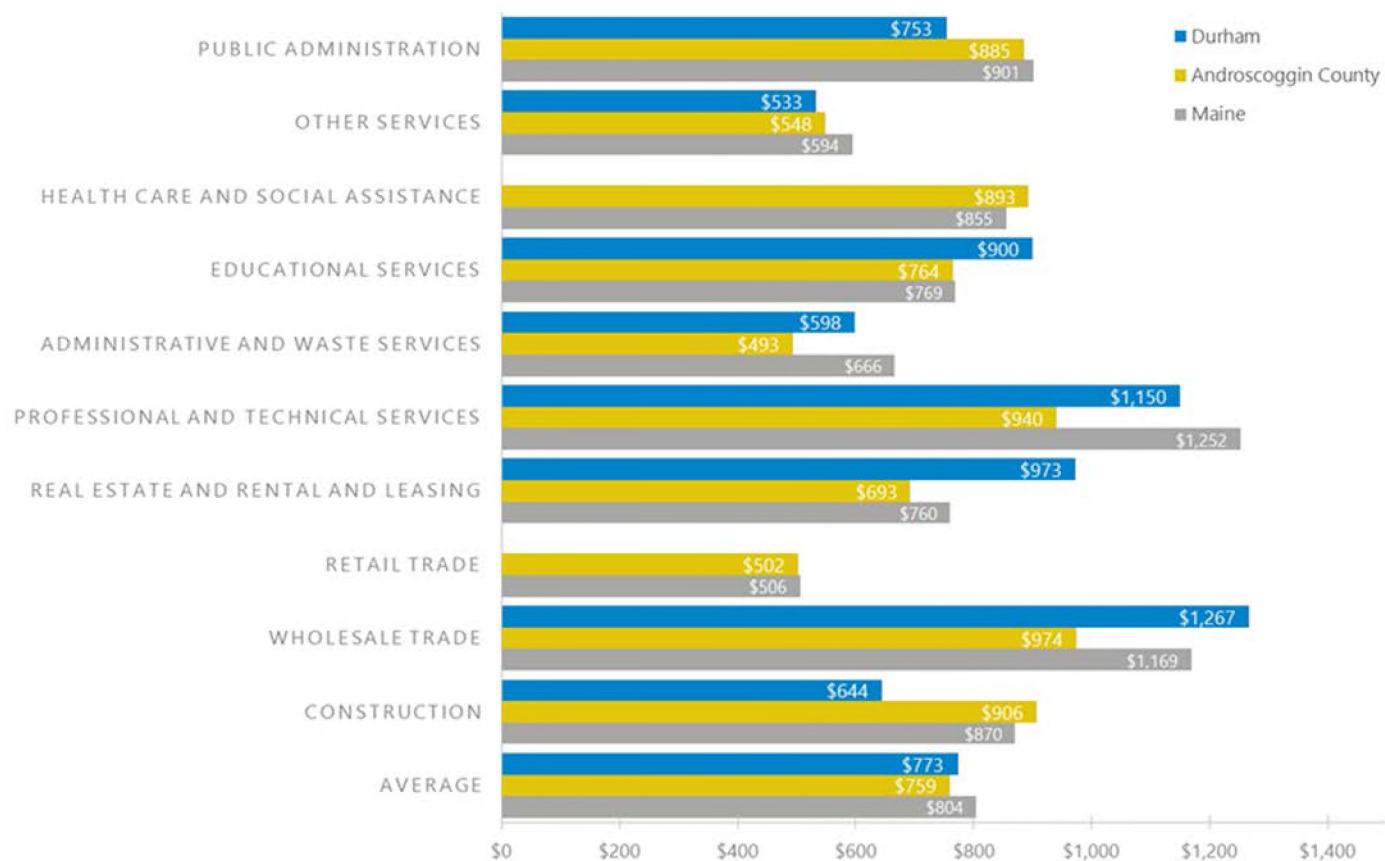
Source: U.S. Census On the Map

Wages

As of 2014, average weekly wages for jobs located in Durham was \$773, which was lower than the statewide average of \$804, but slightly higher than the county-wide average of \$759. For most employment sectors, wages in Durham are below the state and county averages, but below the county average. However,

er, jobs in educational services, real estate rental and leasing, and wholesale trade pay more in Durham than across the state or county, while jobs in professional and technical services and administrative and waste services pay more than the county average but less than the state average.

AVERAGE WEEKLY WAGES BY SECTOR 2014



Source: Maine Department of Labor

Retail Trade

The share of retail employment in Durham is roughly equal to the share of retail employment in Androscoggin County and the state as a whole. This implies that the Town is capturing about the level of retail sales that a town of its size could support with local demand alone.

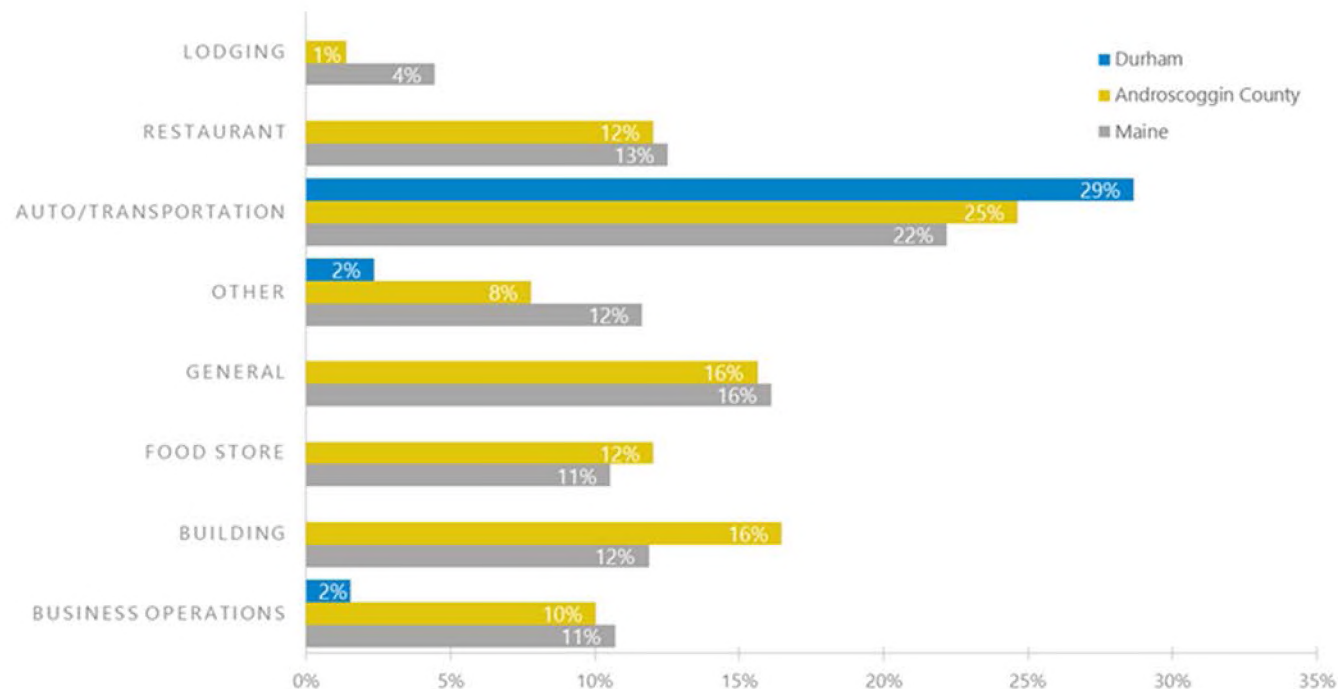
The Maine Office of Policy and Management tracks retail sales on a quarterly basis for towns and regions based on sales tax-

es paid by businesses to Maine Revenue Services. Between 2004 and 2016 consumer retail sales in Durham have increased by over 100%. By contrast, retail sales increased by 25% in Androscoggin County and 31% across Maine. Yet, despite this rapid growth, Durham only captured a very small share of total retail sales, about 0.02% of the State's and 0.38% of the county's in 2016.

About 29% of Durham's retail sales in 2016 came from automotive and transportation sales. This is higher than the percentages for both the county and state, which indicates that may be a key component of retail sales. However, due to the limited number of retail outlets in Durham, the data for many retail sales categories in Durham have been suppressed in order to protect the confidentiality of specific businesses.

The absence of restaurants and the limited number of lodging facilities in Durham indicates that tourism is not a significant part of the local economy. However, given all of the Town's natural and historic resources, including Runaround Pond and Shiloh Chapel, there is room for this sector of the economy to grow.

COMPONENTS OF RETAIL SALES 2016



Source: Maine Office of Policy and Management

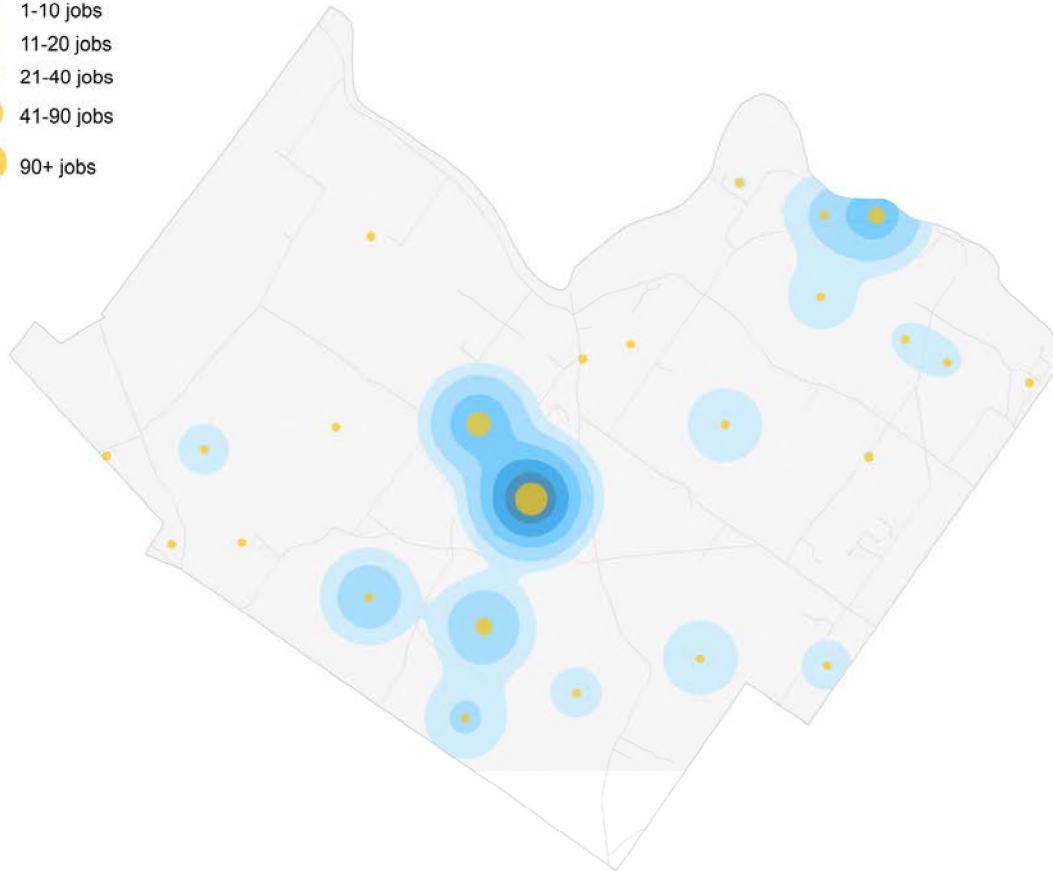
Employment Centers

Durham is not a major employment center, and does not have a traditional downtown or village center. According to the Maine Department of Labor as of 2014 there are no employers with 250 or more employees. The largest employers in the Town include Durham Elementary School and Pickard Transport. The majority of

employers in Town employ fewer than 10 employees. Employment across the Town is fairly well disbursed geographically, with the highest concentration of jobs near the geographic center of Durham. There is also a cluster of jobs in the northeast corner of Durham, on the border with Lisbon Falls.

DURHAM JOB DENSITY 2014

- 1-10 jobs
- 11-20 jobs
- 21-40 jobs
- 41-90 jobs
- 90+ jobs



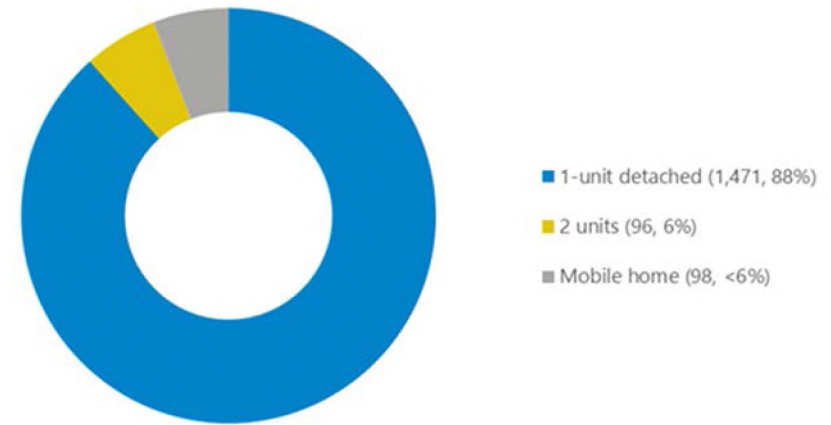
Source: U.S.Census

HOUSING

Housing Stock

According to US Census / ACS data, single family homes represent about 88% of all housing units in Durham. Two-family units and mobile homes are the next most common type of housing, each representing 6% of the Town's housing stock.

DURHAM HOUSING TYPES 2015



Source: U.S. Census, American Community Survey 2015 5-year estimate

Housing Starts

As of 2015, Durham has 1,679 housing units. From 2000 to 2015, the housing stock in Durham increased by 34%, or 422 units. Compared to similar neighboring communities, housing in Durham grew at a much higher rate.

REGIONAL HOUSING GROWTH 2000-2015

	2000	2015	Net Change	
			#	%
Durham	1,257	1,679	422	34%
Brunswick	8,720	9,441	721	8%
Freeport	3,276	3,580	304	9%
Lisbon	3,789	3,820	31	1%
New Gloucester	1,889	2,337	448	24%
Pownal	567	612	45	8%
Auburn	10,608	10,696	88	1%
Lewiston	16,470	17,110		
Androscoggin County	45,960	49,164	3,204	7%
Maine	651,901	726,227	74,326	11%

Source: US Census, 2011-2015 ACS 5-year estimate

Housing Occupancy

As of 2015, 94% of the housing units in Durham were occupied and the remaining 6% were vacant. Of the vacant housing units, less than 1% of these were occupied seasonally and the rest were temporarily vacant due to a transition between tenants or owners, renovations, or other factors. The American Community Survey (ACS) has a high margin of error due to the small sample size in Durham, which means these numbers may be inaccurate.

From 2000-2015, 422 new housing units were constructed in Durham. According to the ACS in 2015, nearly 90% of the total housing stock in Durham was owner occupied. The percentage of renter occupied units has remained at about 10% since the 2000s. The vacancy rate measures the percentage of vacant homes, excluding seasonally occupied units, and this rate has fluctuated between 2% and 6% since 2000.

Age of Housing Stock

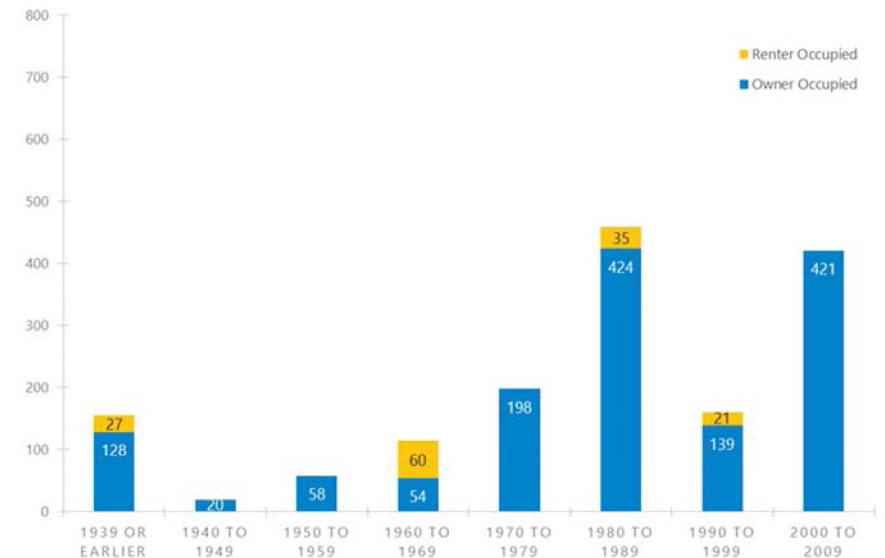
Most of the year-round housing stock in Durham is fairly new, with only one tenth of owner occupied housing built in 1949 or earlier. New home construction peaked in the 1980s with 424 units, followed by the 2000s, with 421 units. Given the large share of relatively new construction, the Town has not experienced widespread safety concerns regarding substandard housing. Additionally, many of the older housing units have been restored and very well maintained. A majority of the renter occupied housing units in Durham are also relatively new, with more than 80% built since 1960. The largest shares of rental housing were constructed in the 1960s (60 units) and in the 1980s (35 units).

DURHAM HOUSING OCCUPANCY 2000-2015

	2000		2010		2015	
	#	%	#	%	#	%
Total Housing Units	1,257		1,548		1,679	
Occupied	1,226	98%	1,496	97%	1,585	94%
Owner	1,087	86%	1,346	87%	1,442	86%
Renter	139	11%	150	10%	143	9%
Vacant	31	2%	52	3%	94	6%
Seasonal	10	1%	4	0.3%	0	0%
Vacancy Rate		2%		0%		6%

Source: U.S. Census, 2006-2010 ACS 5-year estimates

DURHAM AGE OF HOUSING BY TENURE



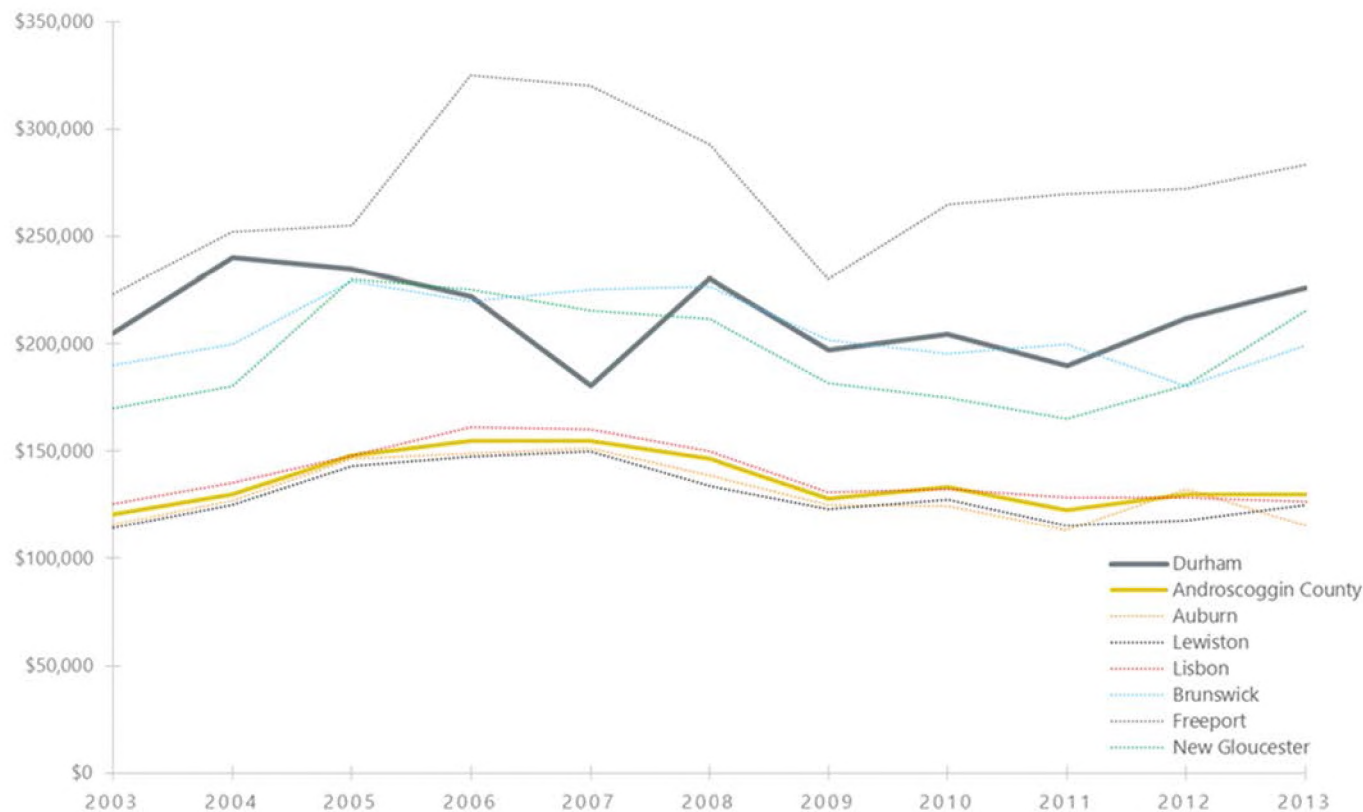
Source: US Census, 2011-2015 ACS 5-year estimate

Median Home Price

Between 2003 and 2013 the median home price in Durham increased by 10%, compared to 8% for Androscoggin County and 27% for Freeport and New Gloucester. In many other communities around Durham the median home price increased at similar rates to Durham and Androscoggin County or did not change significantly. Over the same period Durham home prices have remained, on av-

erage, 57% higher than Androscoggin County, while other nearby communities in the same county have had home prices remain close to or below the county average. Meanwhile, surrounding communities in Cumberland County, including New Gloucester, Brunswick, and Freeport, have median home prices that exceed the average for Androscoggin County by between 43% - 100%.

COMPARISON OF MEDIAN HOME PRICES 2003-2013



Source: Maine State Housing Authority

Many of the affluent communities in Southern Maine saw a significant dip in home prices in 2009 because of the recession. However, Freeport is the only community in the Durham region that exemplified this trend. Durham had a general decline in home prices between 2004 and 2007, followed by a rapid increase in home prices between 2007 and 2008, a general decline between 2008 and 2011, and finally returning to near pre-recession levels by 2013. Home prices in Brunswick and New Gloucester followed a similar trend, while most communities in Androscoggin County saw only moderate fluctuations over the same period.

Housing Affordability

One of the ten State Goals established in the Growth Management Law is to “encourage and promote affordable, decent housing opportunities for all Maine citizens.” Affordable housing is defined as a decent, safe and sanitary dwelling, apartment or other living accommodation for a household whose income does not exceed 80% of the median income for the region (Androscoggin County). The Rule requires that comprehensive planning policies strive to achieve that at least 10% of new units, or whatever greater percentage is necessary to meet the need, shall be affordable to households earning less than or equal to 80% of the area’s median household income.

According to the US Census and HUD, cost-burdened households are those paying more than 30% of their income for housing. For renters, housing costs are defined as rent plus basic utility and energy costs. For owners, housing costs are defined as mortgage principal and interest payments, mortgage insurance costs, homeowners’ insurance costs, real estate taxes, and basic utility and energy costs,

with monthly mortgage payments to be based on down payment rates and interest rates generally available to low and moderate-income households.

As of 2015, more than 40% of all renter households in Durham were cost-burdened and 21% of homeowner households were cost-burdened. Even though renters represent a much smaller proportion of households in Durham, they face a much higher cost burden than owners since most renter households earn less than \$20,000 per year and spend more than 20% of their income on housing. By comparison, the majority of owner households in Durham earn more than \$35,000 per year and spend less than 20% of their income on housing.

Current land use regulations require a minimum lot area of

DURHAM HOUSING COSTS RELATIVE TO HOUSEHOLD INCOME 2015

		HOUSEHOLD INCOME					
		Less than \$20,000	\$20,000 to \$34,999	\$35,000 to \$49,999	\$50,000 to \$74,999	\$75,000 or More	Total
RENTER HOUSEHOLDS							
Housing Costs as Percent of Household Income							
Less than 20%		0%	0%	8%	0%	13%	21%
20% to 29%		39%	0%	0%	0%	0%	39%
30% or More		41%	0%	0%	0%	0%	41%
OWNER HOUSEHOLDS							
Housing Costs as Percent of Household Income							
Less than 20%		1%	3%	4%	6%	42%	56%
20% to 29%		1%	1%	4%	8%	10%	23%
30% or More		4%	7%	4%	5%	2%	21%

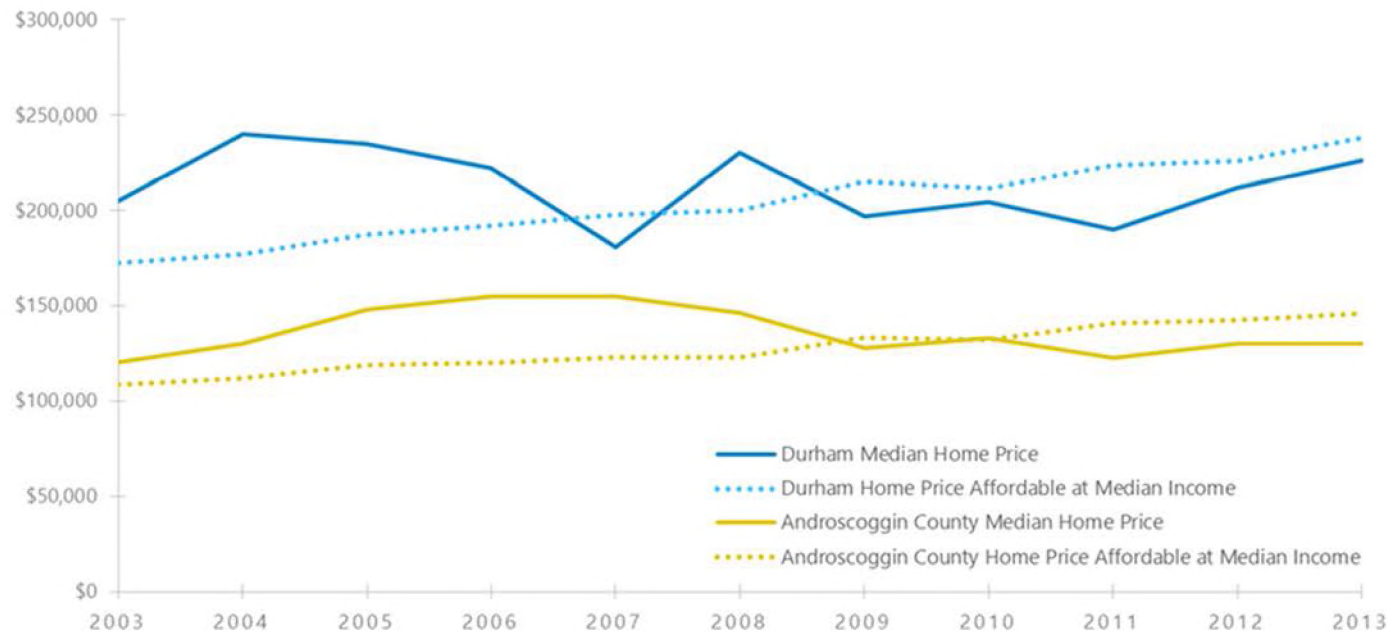
Source: 2011-2015 ACS 5-year estimate

either 45,000 or 90,000 square feet Town-wide. Single-family residential development is encouraged and is the only development that does not require approval from the Planning Board. These requirements do not encourage the development of affordable/workforce housing. The Southwest Bend/Growth District allows for a lower density of 20,000 square feet per dwelling unit, which may help encourage affordable housing development.

Owner-Occupied Housing Affordability

According to the Maine State Housing Authority, the affordable selling price represents the maximum purchase price that a household earning the median income can afford, assuming the household puts down 5%, qualifies for a 30-year mortgage at the prevailing interest rate, and does not spend more than 30% of their gross income on housing. Between 2003 and 2006 the median home price in Durham was higher than the home price that is affordable at the median income for Durham. Between 2007 and 2013 the median home price has fallen below the home price that is affordable

COMPARISON OF MEDIAN HOME PRICE AFFORDABLE AT MEDIAN INCOME 2003-2013



Source: Maine State Housing Authority

at the median income for Durham, because the median home price has generally fallen since the collapse of the housing market in 2007 while the median household income has generally increased relative to 2006. However, the current trend shows that the median home price in Durham is increasing and may soon reach the point where the typical home in Durham is unaffordable to households with the typical household income in Durham.

Even though home prices in Durham are generally affordable for the typical resident, they are still higher than the regional average and may be unaffordable for new residents who are considering moving to Durham. In 2013, the median home price in Durham was \$226,000 and a household earning the county-wide median income would only be able to afford a \$145,000 home. As of 2013, most Durham residents were able to afford the Town's median home price. On the other hand, in 2013 the average household in Durham could afford 183% of the purchase price of the average home in Androscoggin County.

When median home costs are compared to the affordable selling price, an affordability index can be constructed (affordable selling price divided by the median sales price). An affordability index

number of more than 1 is affordable, and an index of less than 1 is unaffordable. In 2003, the affordability index in Durham was 0.84. This means that a household earning the median income could afford only 84% of the purchase price of the median priced home in Durham. At the same time, the affordability index in Androscoggin County was 0.90. By 2010, the affordability index for the average household improved to 1.04 for Durham and 0.99 for Androscoggin County. Between 2010 and 2013 the housing affordability index has improved slightly for both Durham and Androscoggin County.

The affordable purchase price for households earning 80% of

HOUSING OWNERSHIP AFFORDABILITY COMPARISON 2010-2013

	DURHAM		ANDROSCOGGIN COUNTY	
	2010	2013	2010	2013
Median Home Sales Price	\$204,500	\$226,000	\$133,200	\$130,000
Median Household Income	\$ 71,009	\$ 68,616	\$ 45,634	\$ 42,680
Affordable Purchase Price	\$211,741	\$238,208	\$132,173	\$145,816
Affordability Index	1.04	1.05	0.99	1.12
80% Median Household Income	\$ 56,807	\$ 54,893	\$ 36,507	\$ 34,144
Affordable Purchase Price	\$169,393	\$190,566	\$105,738	\$116,653
Affordability Index	0.83	0.84	0.79	0.90

Source: Maine State Housing Authority

median income was calculated as 80% of the affordable purchase price for a household earning median income. However, given the nature of mortgages and insurance, home ownership is often more of a financial burden for those with lower incomes. Therefore, these numbers may over-estimate the affordability of home ownership for this group. For households earning 80% of median household income, home ownership has become more achievable in Durham with the affordability index increasing from 0.83 in 2010 to 0.84 in 2013. Over the same interval, the Androscoggin County affordability index for those earning 80% of median income increased from 0.79 to 0.90.

Renter-Occupied Housing Affordability

Although housing has become more affordable for homeowners in Durham, it is important to consider that renter households typically have lower incomes and face a higher housing cost burden. While US Census ACS data show that rental housing is becoming less affordable for renters in Durham, the numbers reported by the ACS for Durham are unreliable due to a very high margin of error. The Maine State Housing Authority periodically releases rental affordability data calculated for the entire Portland housing market, which includes Durham, Cumberland County, and Northeastern York County. These data show that between 2012 and 2016 rental housing in the Portland housing market has become generally less affordable due to declining rental

household incomes and rising rents across the region.

In 2012 the median income for renter households in the Portland housing market was \$35,387, which meant that a typical renter household could afford 91% of the typical monthly rent of \$970 in the Portland housing market, or 73% of the typical rent if the household made 80% of the median income for renter households. By 2016 the median income for renter households in the Portland housing market had declined to \$34,524, while the typical rent increased to \$1,025. As a result, the typical rental household could only afford 84% of the typical rent in the Portland housing market, or only 67% of the typical rent for households earning 80% of the median income for renter households. This compares to the

HOUSING RENTAL AFFORDABILITY COMPARISON 2012-2016

	PORTLAND HOUSING MARKET		ANDROSCOGGIN COUNTY		CUMBERLAND COUNTY	
	2012	2016	2012	2016	2012	2016
Average 2 BR Rent (with Utilities)	\$ 970	\$ 1,025	\$ 735	\$ 797	\$ 932	\$ 1,024
Income Needed to Afford Average 2 BR Rent	\$ 38,786	\$ 41,002	\$ 29,388	\$ 31,899	\$ 37,291	\$ 40,973
Renter Household Median Income	\$ 35,387	\$ 34,524	\$ 26,497	\$ 24,988	\$ 35,912	\$ 33,930
Affordable Monthly Rent	\$ 885	\$ 863	\$ 662	\$ 625	\$ 898	\$ 848
Affordability Index	0.91	0.84	0.90	0.78	0.96	0.83
80% Renter Household Median Income	\$ 28,310	\$ 27,619	\$ 21,198	\$ 19,990	\$ 28,730	\$ 27,144
Affordable Monthly Rent	\$ 708	\$ 690	\$ 530	\$ 500	\$ 718	\$ 678
Affordability Index	0.73	0.67	0.72	0.63	0.77	0.66

Sources: Maine State Housing Authority

typical renter household in Androscoggin County only being able to afford 78% of the typical rent in 2012, or 63% of the typical rent for households earning 80% of the median income for renter households in 2016.

Housing Subsidies

Housing rents can be subsidized through direct rent subsidies provided through HUD Section 8 vouchers and through government subsidy of the construction of rental units to keep those units available at below market rate. Non-project based or Section 8 vouchers are issued to income-qualified families, elderly people and disabled people who apply for them. These vouchers can be redeemed by the landlord for rental subsidies provided by MSHA to make up the difference between the rent paid by the tenant and the market rate rent for the unit. In 2008, there was just 1 voucher in use in Durham, and there are no records of any Section 8 vouchers being used in Durham since then.

Housing Projections

According to the Maine Office of Policy and Management, Durham's population is projected to grow by about 4% per decade until 2034, an increase of 322 people over 19 years. Given this and the fact that the average household size decline seen country-wide over the past two decades is predicted to moderate moving forward, housing growth in Durham most likely will be modest. Assuming the average household size in Durham declines by 7% per decade, as it did between 2000 and 2010, the Town will need to add about 140 units by 2035. This translates to an average of 70 units per decade, or 7 units per year.

Senior Housing

As the State and Town continue to age, providing housing for seniors is becoming increasingly important. With the largest population age group in Durham being those between 45 and 65, the Town will likely need to provide more and more housing appropriate for seniors. Some of this need can be met within Durham with more multifamily housing development, accessory dwelling units and aging in place programs. However, much of this need will likely need to be met at a regional level. Nearby cities including Lewiston and Portland may have more capacity to provide the necessary services and amenities for this population.

Affordable Housing

According to the Maine State Growth Management Law, comprehensive planning policies should strive to ensure at least 10% of new units, or whatever greater percentage is necessary to meet the need, are affordable to households earning 80% of the region's (Androscoggin County) median household income or less. Assuming 70 new housing units are built in Durham over the next decade, this means at least 7 of these units should be affordable to that demographic.

However, the demand for affordable housing is difficult to estimate. For anyone entering the market, such as first-time homebuyers, housing costs pose a severe challenge. For Durham to assess their fair share of the region's affordable housing and define their share of the solution, an extensive study of the region's needs would be required.

Recreation

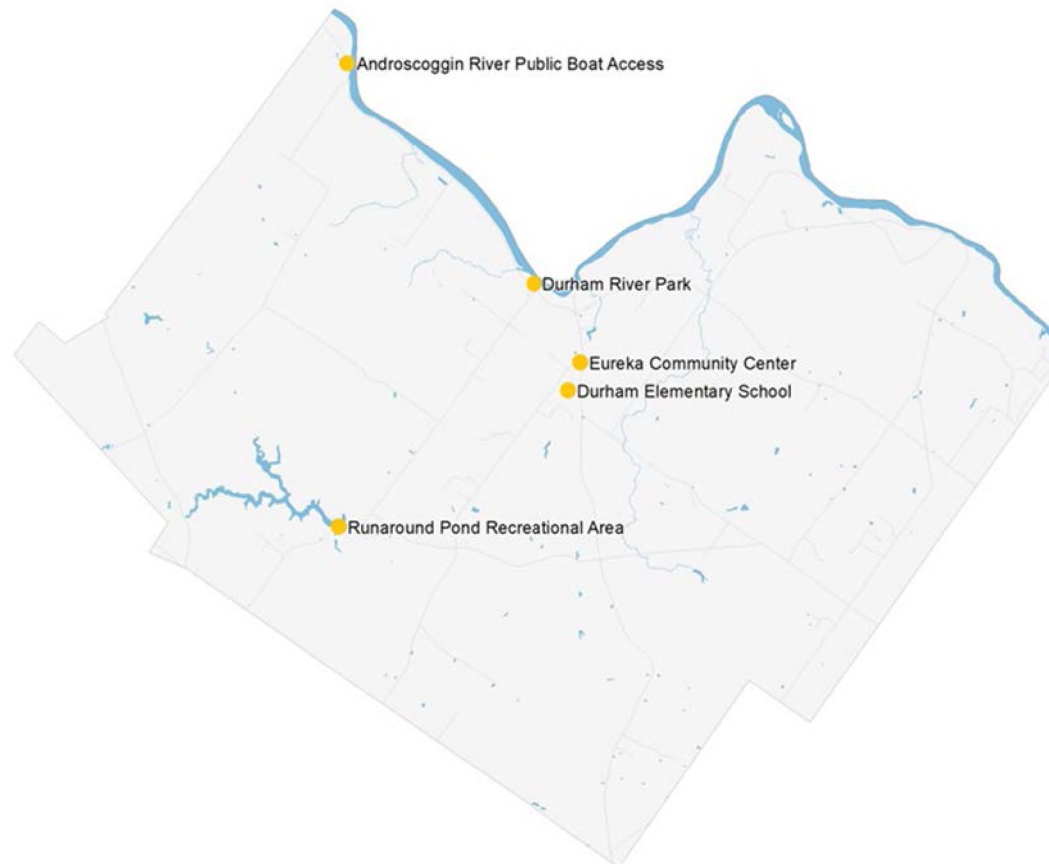
Public Recreational Facilities and Resources

The Town of Durham has extensive recreational facilities and programs. There is public access to both of the Town’s significant water bodies: Runaround Pond and the Androscoggin River. The public boat access on the Androscoggin River, on Route 136

just south of the Auburn town line, is owned by Central Maine Power.

There are also athletic fields, off-road trails, and public and private camping facilities. The Royal River Conservation Trust and Androscoggin Land Trust have provided considerable support to the Town on recreational and land conservation-related initiatives. Durham’s recreational resources and opportunities appear to meet

DURHAM RECREATIONAL FACILITIES



Source: Town of Durham

existing and future needs, especially in light of recent improvements and acquisitions that have been made over the past decade. The availability of recreational facilities and lands in nearby towns further enhances the community's recreational options.

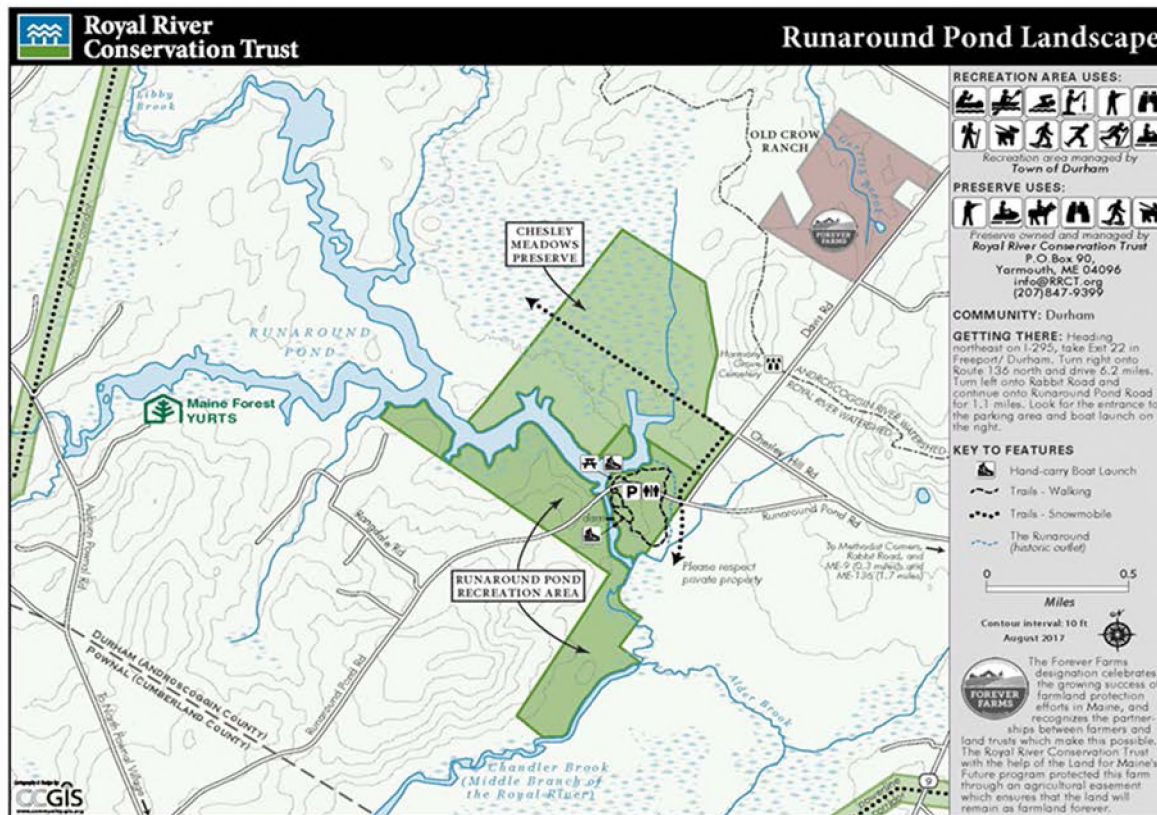
Runaround Pond Park and Recreational Area

The Runaround Pond Park and Recreation Area includes 133 acres managed by the Town. The park offers opportunities for paddling, fishing, skating, and snowmobiling. There is a hand-carry boat

launch, toilet facilities, and picnic tables. In addition, there is 180 acres of adjacent lands permanently protected as a result of conservation efforts made in conjunction with the Royal River Conservation Trust and private landowners.

In 2017, a number of upgrades were made to the park, including new signs, bridges, a handicapped accessible toilet, a kiosk, and a short hiking trail. The Town has considered expanding parking facilities to meet peak use demand, but road shoulder improvements along Runaround Pond Road have alleviated this need by providing overflow parking. As a popular local and regional resource, the site may require further enhancements over the next decade.

RUNAROUND POND RECREATIONAL AREA



Durham River Park

The Durham River Park contains 12 acres of public parkland and forest off Route 136 along the Androscoggin River. Amenities include an informational kiosk, picnic tables, a trail network, and hand-carry river access. The Town owns the park and it has historically been managed by the Durham Conservation Commission. However, the Commission has been inactive for several years.

Athletic Facilities

The Durham Elementary School has baseball and soccer fields, basketball courts and a gymnasium. Some of these facilities are used for local community events outside of school hours. The town ballfield is located off Route 136, behind the Eureka Community Center. These facilities appear

to meet the existing and expected needs for recreational users of all ages.

Private Recreational Facilities

Durham's extensive open space provides informal recreational opportunities for a variety of activities, including hiking, cycling, snowmobiling, cross-country skiing, horseback riding, and hunting. Small streams and ponds throughout Town and are also used by residents for fishing and ice skating.

The Tri-Town Penguins, a snowmobile club for Durham, Freeport, and Pownal residents, maintains an extensive trail network. In addition to snowmobiling, these trails also are used by residents for cross-country skiing and horseback riding.

Although recreational users benefit from the established tradition of many private landowners allowing public access for snowmobiling, hunting and other activities, residential development in rural areas can reduce these opportunities and block existing and potential trail linkages. Improved identification and mapping of existing trails and future linkages would aid in their preservation. Opportunities may exist for linkages to the nearby Bradbury Mountain trail system.

Additionally, the Town has several private businesses that provide camping opportunities for residents and visitors. Maine Forest Yurts offers wilderness lodging on a 100-acre parcel on the shores of Runaround Pond. There is also a KOA campground off Route 9 with camping sites and hookups.

Clubs and Organizations

Durham has a number of clubs and organizations that support and promote recreational activities. These clubs and organiza-

tions include: Durham Boosters Club; Durham Scholarship Fund; Durham Historical Society; Durham Farm League; Durham Rod & Gun Club; Durham Summer Softball; Girl Scouts/Daisy Scouts; Boy Scouts/Cub Scouts; Chemical Awareness Resource Team; American Red Cross; Tri County Chapter; Durham Senior Citizens; Durham Volunteer Fire Department and Auxiliary; Durham First Responders; Durham Conservation Commission; Durham Extension Club; Lincoln E. Clement Jr. Amvet Post 13 and Auxiliary; Durham Congregational Church; Durham Friends Meeting; and West Durham Methodist Church.

Regional Recreational Facilities

Several nearby recreational areas provide additional opportunities for Durham residents. Bradbury Mountain State Park with its extensive trail network, campground and connections to the Bradbury-Pineland corridor is located less than two miles from the Durham/Pownal town line. Freeport's Hunter Road recreational complex and Freeport High School athletic facilities, both indoor and outdoor, are also utilized by Durham students and their families. The Pineland Farms campus, with its diverse range of recreation trails and activities is also nearby.

Transportation

Road Network

The automobile represents the primary means of getting around in Durham. According to the Maine Department of Transportation (MaineDOT), there are 68 miles of public roads in

Durham. Functional classification is the process by which public streets and highways are grouped into classes according to the character of service they are intended to provide, ranging from land access to mobility management. Within Durham there are three types of roads: major/urban collectors, minor collectors, and local roads.

DURHAM ROAD FUNCTIONAL CLASS

- Local (46 mi)
- Minor collector (5 mi)
- Major/Urban Collector (17 mi)



Collector roads bring together traffic from local roads and connect smaller cities and towns. They are characterized by moderate speeds, with the purpose of providing better access to adjacent land. Major collectors in the Town of Durham include Routes 9 and 136, while Route 125 is a minor collector. All other public roads are classified as local roads. Feeding off collectors and arterials, local roads provide access to private properties or low volume public facilities with 100-500 vehicles per day. Private roads in Durham must have a maintenance agreement or escrow agreement approved by the Planning Board before they can be constructed.

The Maine Department of Transportation maintains roads that serve primarily regional or statewide needs. Roads that serve primarily local needs are Town's responsibility. Durham's Department of Public Works is responsible for summer maintenance on 46 miles of local roads and winter maintenance on all 68 miles of public roads. The Town's Road Commissioner is responsible for road maintenance, including plowing, scheduling, paving, and repaving Town roads.

Source: Maine DOT

Bridges

There are seven bridges located completely within Durham, which are either slab bridges or box culverts over small stream crossings. The State owns and maintains two of these bridges and the remainder are the responsibility of the Town. The MaineDOT rates bridges in terms of the condition of the deck, supports, and substrate. Most of the bridges in Durham that have been assessed range from good to fair condition, but three bridges (Plummer, Runaround, and Trask) only have a limited amount of assessment information available. The Tracy Brook Bridge, built in 1918, is the oldest bridge in Durham and has a poor rating for the condition of both the deck and supports. The 2017-2019 MaineDOT Biennial Work Plan includes improvements to this bridge, as well as a large

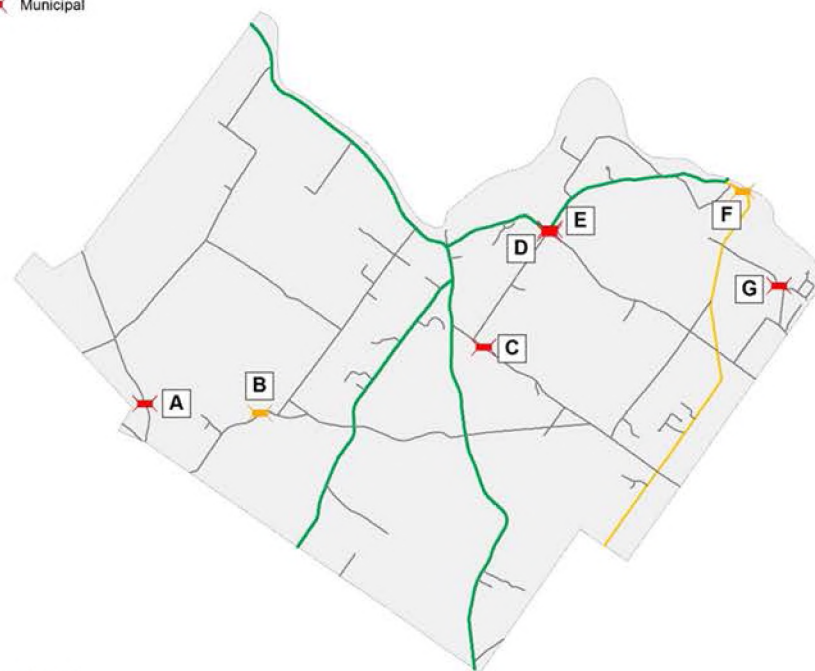
DURHAM BRIDGES

Map Label	Bridge Name	Waterbody	Street	Ownership	Year Built	Deck Rating	Support Rating	Substrate Rating
A	Allens	Allen Brook	Auburn Pownal Road	Durham	1930	Fair	Good	Fair
B	Runaround	Runaround Pond Outlet	Runaround Pond Road	MaineDOT	2010	NA	NA	NA
C	Trask	Newell Brook	Old Brunswick Road	Durham	1997	NA	NA	NA
D	Plummer	Newell Brook	Swamp Road	Durham	1993	NA	NA	NA
E	Newell Brook	Newell Brook	Newell Brook Road	Durham	1945	NA	Fair	Good
F	Tracy Brook	Meadow Brook	Pinkham Brook Road	MaineDOT	1918	Poor	Poor	Fair
G	Doughty's	Pinkham Brook	Shiloh Road	Durham	1920	Fair	Satisfactory	Poor

Source: Maine DOT

DURHAM BRIDGES

Maine DOT
Municipal



Source: Maine DOT

culvert replacement on Route 9 south of Newell Brook Road.

Road Design Standards

Durham's Land Use Ordinance requires a 50 feet minimum right-of-way for all roads, with at least 22 feet of pavement for public roads and 20 feet for private roads. There are no complete streets, street tree, or sidewalk requirements. While a 10 or 11 foot travel lane may be appropriate for some high volume roadways, this requirement does not support

the community's desired land use pattern. These road design standards encourage high traffic speeds on low volume residential streets, do not support bicycle and pedestrian transportation, and add significant maintenance costs to the Town and private homeowner associations.

Access Management

The Maine Department of Transportation has developed a set of access management rules to improve safety and preserve highway capacity by minimizing the number of curb cuts onto a roadway. Access management reduces the number of curb cuts by limiting the entrances for each parcel of land, encouraging shared curb cuts by adjacent parcels and replacing multiple driveways with a single access road. Durham has similar access management performance standards that apply to new driveway and commercial entrances on Town roads.

Traffic

Commuting Patterns

Just over 96% of Durham residents commute outside of the Town for work, with 61% driving to Lewiston, Brunswick, or Auburn. Although most of the traffic generated in Durham is residents commuting out of Town, 62% of people who work in Durham commute from other towns. As mentioned in the Economy chapter, employment across the Town is well disbursed geographically, with the highest concentration of jobs in the Southwest Bend area. There is also a cluster of jobs in the northeast corner of Durham, on the border with Lisbon Falls. The majority of employers in the Town employ fewer than 10 employees, and there are no employers with 250 or more employees in Durham.

According to the 2015 ACS 5-year sample, there were 2,205 Durham residents who commuted to work. Of this number, 85% drive to work alone, compared to 80% in 2000. Conversely, between 2000 and 2015 the percentage of people carpooling declined from 13% to 9% of all commuting trips. Additionally, average commute times have increased, from about 26 minutes in 2000 to 29 minutes in 2015.

Traffic Volumes

Traffic counts are collected annually by the Maine Department of Transportation. Annual Average Daily Traffic volumes are determined by placing an automatic traffic recorder at a specific location for 24 or 28 hours. The 24-hour totals are adjusted for seasonal variations based on data from recorders that run 365 days a year on similar types of roadways.

While traffic on selected collector roads increased significantly throughout the 1980s, traffic volumes moderated in the 1990s and have generally declined over the past 15 years. However, traffic on certain sections of Route 9 has continued to increase over this same timeframe.

Traffic Control Devices

There are no traffic stoplights in Durham. There is one overhead flashing intersection signal, located at Quaker Meeting House Road and Route 125, which is being changed to a four-way stop with a flashing red light in 2018. There is also one four-way stop sign, located at the intersection of Meadow Road and Soper/Swamp Road.

Congestion

The MaineDOT uses a customer-focused engineering measure, called Customer Service Level (CSL), to track highway safety, condition, and serviceability. These CSLs are graded similar to a report card, on a scale from A-F. One measure of serviceability is con-

gestion, which uses the ratio of peak traffic flows to highway capacity to arrive at an A-F score for travel delay. Peak summer months are specifically considered to capture impacts to Maine's tourism industry. The following map shows that all the collector roads in Durham have received an A for a CSL congestion grade.

DURHAM ROADWAY CONGESTION

Congestion Grade
— A



Source: Maine DOT

High Crash Locations

The Maine Department of Transportation has developed a system for rating crashes based on the ratio between actual crash rates and critical crash rates. Crashes documented with a Critical Rate Factor (CRF) of greater than one are a higher priority than those with a CRF of less than one. High Crash Locations (HCL) are certain areas where MaineDOT has documented eight or more crashes in a three-year period with a critical rate factor (CRF) great-

er than one.

There were two High Crash Locations in Durham for the three-year period 2013-2015: The intersection of Route 125 and Quaker Meetinghouse Road and Route 125 from Soper Road to Meadow Road. According to the MaineDOT 2017-2019 Biennial Work Plan, both locations are being upgraded with intersection and safety improvements. The 2014-2016 HCL listing does not include any locations in Durham.

DURHAM HCLs 2013 - 2015



Source: Maine DOT

Roadway Improvements

The Maine Department of Transportation has developed the Biennial Transportation Improvement Program list of projects within the Town that should be addressed within the next two years:

MAINE DOT 2017-2019 BIENNIAL CAPITAL WORK PROGRAM

Road	Year	Location	Project	Amount
Route 9	2017	Located 0.15 of a mile south of Apple Ridge Road	Guard Rail Installation and Replacement	\$ 23,000
Route 9	2017	Large culvert (No. 80968) located 0.03 of a mile south of Newell Brook Road	Large Culvert Replacement	\$ 125,000
Route 9	2017	Gray Area 2017 LCP: Route 121, Roller Rink Road, Route 9, Route 231, Litchfield Road	Light Capital Paving	\$ 955,000
Route 125	2017	Bridge Improvements Tracy Brook Bridge (No. 2852)	Maintenance	\$ 100,000
Route 125	2017	Located at the intersection of Route 125 and Quaker Meetinghouse Road	Safety Improvements	\$ 40,000
Route 125	2018/ 2019	Located at the intersection of Route 125 and Meadow Road.	Intersection Improvements W/O Signal	\$ 285,000

Source: Maine DOT

In addition to the work planned by MaineDOT, according to the 2016 Durham Town Report the Public Works Department completed paving, surfacing, shouldering, ditching, and reconstructing 7.57 miles of road in 2016. The Town budgeted \$426,925 for road maintenance and repairs in 2017, and voted at a Special Town Meeting in July of 2017 to appropriate \$100,000 from Public Works Capital Reserves to replace four five-foot diameter culverts on the

Auburn Pownal Road.

Public Transit

There is no bus service in Durham, but in June 2016 the Greater Portland Transit District (GPTD) launched the Metro Breeze bus service along the I-295 Corridor through Falmouth, Yarmouth, and Freeport. In March 2017 the GPTD announced expansion of the Metro Breeze to Brunswick. Additionally, in 2012 the Amtrak Downeaster expanded service on their Boston to Portland route further north to include stops in Freeport and Brunswick. The Northern New England Passenger Rail Authority (NNEPRA) is currently working on several upgrades to the Downeaster system to expand capacity and improve the speed and reliability of passenger service.

As these regional transportation programs continue to grow, they will likely provide more transportation alternatives to Durham residents. Currently, there is an informal Park & Ride at the Durham Congregational Church, as well as rideshare parking on Route 1 in Freeport and Yarmouth. Additionally, commuters working in Greater Portland may be able to use the Go Maine regional rideshare program.

Other Transportation Facilities

Durham has no public parking facilities, pedestrian ways, rail lines or port facilities. There are two nearby airports that provide flight service: Portland International Jetport, which has regularly scheduled flights to a number of out-of-state cities, and Auburn/

Lewiston Municipal Airport, which primarily handles charter flights.

Walking and Bicycling

Durham has no dedicated on or off-road bicycle or pedestrian infrastructure. The 2002 Comprehensive Plan called for more concentrated growth in the Southwest Bend/Growth District, with sidewalks connecting residents to the School and other public facilities. However, these improvements were not budgeted for or constructed. This plan update abandons the designated growth area and calls for the whole town to develop at rural densities.

Parking Standards

Durham's Land Use Ordinance has parking standards for commercial uses and home occupations. These standards require a parking space for each anticipated employee, and maximum peak customers. Parking lots over 10 spaces are required to have buffering and screening, but there are no additional siting or design standards. Although almost all residences in Town have off-street parking, there are no residential parking requirements, even for multi-family. This policy is consistent with Durham's desired land use pattern and encourages development in the Southwest Bend/Growth District.

Connectivity

Connectivity between neighborhoods has proven to benefit public safety, traffic circulation, energy conservation, and the development of neighborhoods. Since there has not been a lot of subdivision development in Town so far, street connectivity is still relatively strong. However, almost all subdivision roads constructed in Durham are dead-ends, and the Town's roadway design standards do not have any provisions to encourage connectivity and/or com-

pact, efficient design. This development pattern does not allow for expansion to adjacent land or encourage the creation of a local street network.

Regional Planning

MaineDOT is responsible for setting the transportation goals for the State. To do so, they work with all of the State's transportation organizations and local governments as well as other interested parties. MaineDOT's planning process includes a Long-Range Multimodal Transportation Plan, an annual Work Plan, which covers a three-year period and includes all activities, and a Statewide Transportation Improvement Program (STIP). Consultation associated with each of these efforts provide non-metropolitan and metropolitan officials opportunities for input ranging from MaineDOT's long-range goals to requesting specific regional and local transportation improvement projects.

MaineDOT financially supports and partners with Maine's Regional Planning Commissions (RPCs) to coordinate and provide outreach to local governments, and to work directly with communities and local officials on transportation planning activities. The Greater Portland Council of Governments is the regional planning commission for Durham.

Public Facilities & Services

Like many small towns in Maine, Durham has limited municipal staff and resources. To compensate, the Town depends on a regional approach for some services and volunteer resources for others. As the Town continues to grow, these approaches may no longer satisfy future demand, with fewer qualified volunteers available and an increasing volume of needs. However, given the fact that over the next few decades, the population is projected to grow by just 4% per decade, the Town has some time to assess and gradually expand their facilities and services as needed.

Municipal Services

Administration

The current town staff consists of five individuals: a combination Town Administrator, Treasurer, and Tax Collector, a Town Clerk, a Deputy Treasurer and Tax Collector, a Code Enforcement Officer (CEO), and a part time contracted assessor. The Town re-

cently hired a part time Planner. The town provides a broad range of municipal services including registration of vehicles and other equipment, licensing, tax payments, and other similar items.

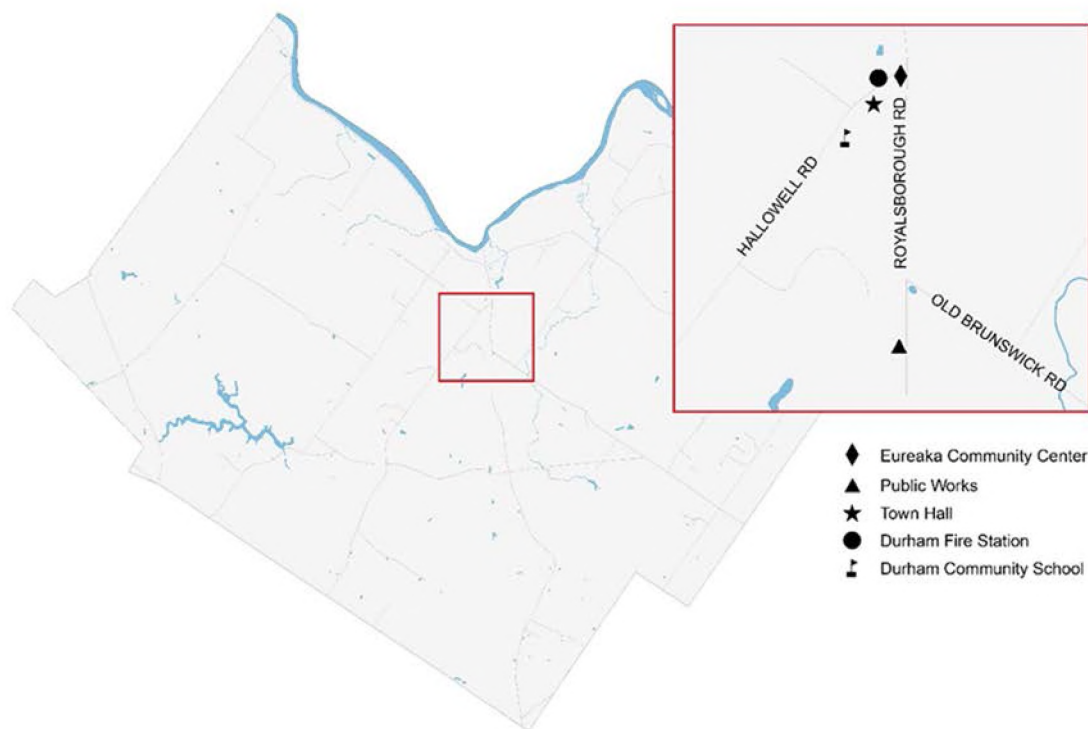
The Town Hall was built in the 1980s and is located on Hallowell Road. Space to accommodate current staff is limited and the

capacity of the building's meeting space is small (30 person capacity) and not well suited to live broadcast public meetings. The building is not currently fully ADA compliant.

The Town is governed by a Select Board composed of five members, with a Chair and Vice Chair. Meetings are held every other week at the Town Hall, and broadcast on the town's website along with minutes and agendas. There is no town-wide Capital

Improvement Plan, so it is difficult to estimate the cost of needed capital improvements to public facilities. However, both the Public Works and Fire departments each have their own reserve for equipment upgrades.

DURHAM PUBLIC FACILITIES



Public Works

The town's public works facility is located at 1099 Royalsborough Road. This building was purchased by the Town in 2014. The staff includes a Road Commissioner, a Foreman and three other staff positions. Durham has 7 plow trucks, an excavator, a loader, and a lawn mower stored at this location. The Town's salt storage shed is located on Route 9, near the West Durham area. Durham does not have a street tree program.

Public Safety

Durham does not have its own law enforcement staff and is one of 8 communities covered by the Androscoggin County Sheriff's Department. The Division is made up of one Lieutenant Assistant Public Safety Director, four Detectives with one having the rank of 1st Sergeant, twelve Full-time Patrol Deputies, seven Part-time Patrol Deputies, and nine Dispatchers. It is comprised of 4 Units consisting of Rural County Patrol, Canine Unit, Poland Patrol, and Criminal Investigations. The Maine State Police, responding out of its barracks in Gray, also have a call-sharing response agreement with the Sheriff's Department to protect Durham on alternating months.

Fire and Rescue

The Durham Fire and Rescue station is located at 615 Hal-lowell Road. The Town has a full-time Fire Chief and a part time administrative assistant. The station has 6 bays, administrative offices, a kitchen and two bathrooms. The building was renovated in the mid-2000s with funds from a USDA Rural Development Grant. Typical emergencies include house and car fires, automobile accidents, wildfires, and Emergency Medical Service calls. In 2016 a new record for requests for service was set as the Town received a combined total of 445 separate requests for service. The department is

staffed on a volunteer basis and as the town continues to grow this may be an issue. In 2017, the Town started a per diem and stipend system to cover any gaps in volunteer EMS service. The call volume coupled with shrinking membership may begin to have an impact on the Town's ability to staff all the requests for service.

Durham benefits in fire protection from its close proximity to Androscoggin and Cumberland counties. However, each county uses a different frequency for its communications, and that could create confusion. The primary partners for mutual aid are the towns of Lisbon and Pownal and secondary partners are Freeport and Brunswick, and if needed Auburn.

Current Equipment:

Forestry 28 was purchased new in 2011. It is first due on most types of brush fires, wires down and salvage calls.

Engine 21 was purchased new in 2004 from EVM. At the time of delivery it met the requirements of NFPA 1901. It is first due on vehicle fires, vehicle accidents, hazardous material, and special hazard responses. It is the back-up unit for medical responses, and also responds on structural responses.

Engine 22 was purchased new in 1994 from Central States. At the time of delivery it met the requirements of NFPA 1901. It is first due on structural related responses, mutual aid and carbon monoxide responses; also responding on vehicle related incidents.

Rescue 25 was purchased new in 2007 from PL Custom. It is a box ambulance on a F350 chassis. It is equipped for paramedic responses.

Tank 29 was purchased new in 2004 from EVM and the project completed by Dingee Machine. It is used as a mobile water supply, re-

sponding on structural and forestry incidents.

Truck 24 was purchased used in 2014 from Middlesex New Jersey, Parker Areal 24. Truck 24 is a 1994 Spartan cab and chassis with a Smeal Ladder. It seats 8. The truck is equipped with supplied air to the tip of the ladder and also to the Operators panel on the turn table.

Education

Durham Community School

The Town of Durham is part of RSU #5 along with Pownal and Freeport. Located on Route 9 near the Town Office and Fire Department, Durham Community School is a Pre K-8 school and was opened in 2010 replacing the old Durham Elementary school. Its energy efficient construction includes a geo-thermal system heating and cooling system, solar panels and natural light harvesting using

light shelves. Since a new school was recently constructed, and the Town’s population is relatively flat, expansion is not anticipated within the next decade. Due to its location and lack of pedestrian infrastructure, children attending the school are bused. There are likely opportunities to promote new residential development around the school, given the Town’s overall low density development pattern.

Since Durham does not have its own high school students have the choice of attending the high school of their choice. The Town provides tuition for either a public school, or a flat amount toward tuition for a private school, with the exception of religiously affiliated schools.

Eureka Community Center

The old grange hall (Eureka Grange #7) was organized in the year 1874, and built around 1910. Although the building is no longer active as a grange organization it has since been restored for use as the Durham Eureka Community Center. The building sits at the intersection of Routes 9 and 136, across the street from the Fire Department and is available to rent for gatherings of 50 people or less. It is overseen by an appointed board of four residents. It is currently used regularly by municipal committees as a meeting space. Recently, the Telecommunications Committee has worked with the Eureka Community Center to wire the center with Internet and cable. Once wired the community center can offer adult computer classes, overflow viewings of meetings, and a multimedia environment for presentations and gatherings. The Eu-

DURHAM COMMUNITY SCHOOL ENROLLMENT AND TEACHERS

Academic year	Enrollment	Teachers
2012-2013	421	34
2013-2014	425	36
2014-2015	393	34
2015-2016	425	36
2016-2017	421	Not yet available

Source: Maine Department of Education

reka Community Center also includes a full kitchen, two restrooms and is handicapped accessible.

Utilities

Water

The Town does not have a water utility. One consequence is the absence of fire hydrants, though the Town does have several fire ponds. However, there are several systems which meet the Dept. of Human Services criteria as a community or public water supply.

Remaining homes and businesses are supplied by individual wells and there are no storage or treatment facilities located in Durham. Given the low population projections for Durham, not having a public water system likely will not prevent the community from accommodating growth, however, the town has a history of well contamination, which may limit current and future

growth.

Sewage

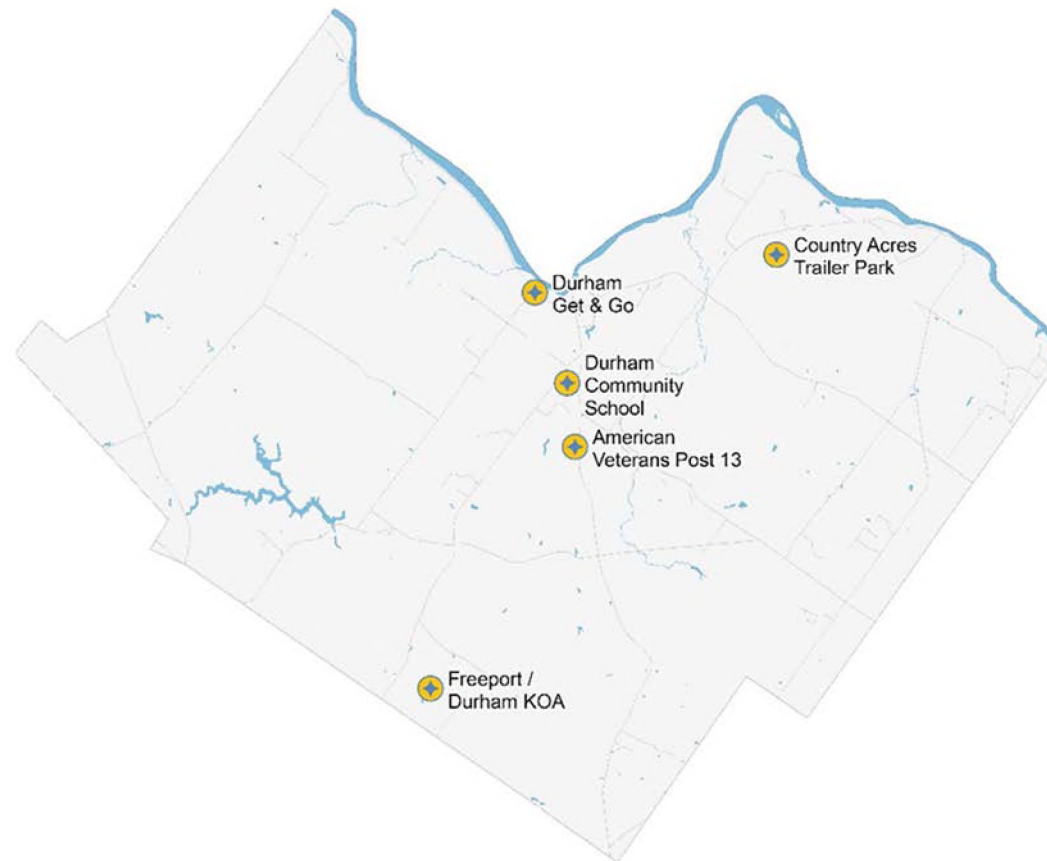
There are no sewage collection and treatment facilities located in Durham. Residences and businesses are serviced by individual sub-surface disposal systems which require a permit by the Town. Durham's Land Use Ordinance requires septic systems to comply

with Maine State Plumbing Codes, and performance standards for agricultural use of manure. As with public water, given the low population projections, not having a public sewer will not be a limiting factor for Durham in accommodating growth in the near-to-midterm future.

Solid Waste

Durham has no landfill, transfer station or solid waste management facility in Town. Durham employs an independent contractor, Pine Tree Waste, to pick up household rubbish and provide single stream recycling at

DURHAM COMMUNITY WATER SYSTEMS



curbside. Rubbish and recyclables are picked up weekly. Recyclables are free with rubbish collected using a tag system. To encourage recycling the Town voted in the 1990s to limit the number of free trash tags to 26 per year. Pine Tree is also contracted to provide one bulky waste collection day per year. Other than this day, residents use facilities in neighboring towns for bulky waste disposal needs. According to the Maine State Planning Office's 2011 Municipal Solid Waste Annual Report, the town's recycling rate is 28.45%, falling short of the State's 50% recycling goal.

Stormwater Management Facilities

Given that Durham is not a part of an urban impaired watershed and does not have public sewer or water, stormwater management facilities are minimal in Durham. A Stormwater Management Plan in accordance with Maine DEP is required for some subdivisions, as is a stormwater drainage and erosion plan.

Energy and Communication

The Town of Durham lies along the Androscoggin River and has water rights to the Miller Hydro Facility at Lisbon Falls, Maine. The Town does have access to three-phase power in some locations. Central Maine Power and Hydro Quebec have major utility lines crossing Durham, and Bell Atlantic Telephone has a transmission station located off Stackpole Road. In 1999, Maritimes & Northeast Energy constructed a natural gas pipeline through a small section of Durham, part of the network from the Sable Fields off Nova Scotia through Maine, to Westbrook and on to Massachusetts. The entire Town has access to fixed broadband coverage.

Health Care

Although the town has no facilities, its proximity to Port-

land, Lewiston, and Brunswick, gives residents easy access to several major hospital facilities. These include:

- Portland Maine Medical Center, Mercy Hospital
- Lewiston Central Maine Medical Center, St. Mary's Regional Medical Ctr.
- Brunswick Mid Coast Hospital

Public health and wellness resources are limited within the town, although nearby Lisbon, Pownal and Brunswick offer food pantries and other social service resources. Community Concepts, Inc. has offered a variety of housing, economic development and social services for the communities of Androscoggin, Franklin and Oxford counties of Maine. Services support the basic needs of low income families in the region.

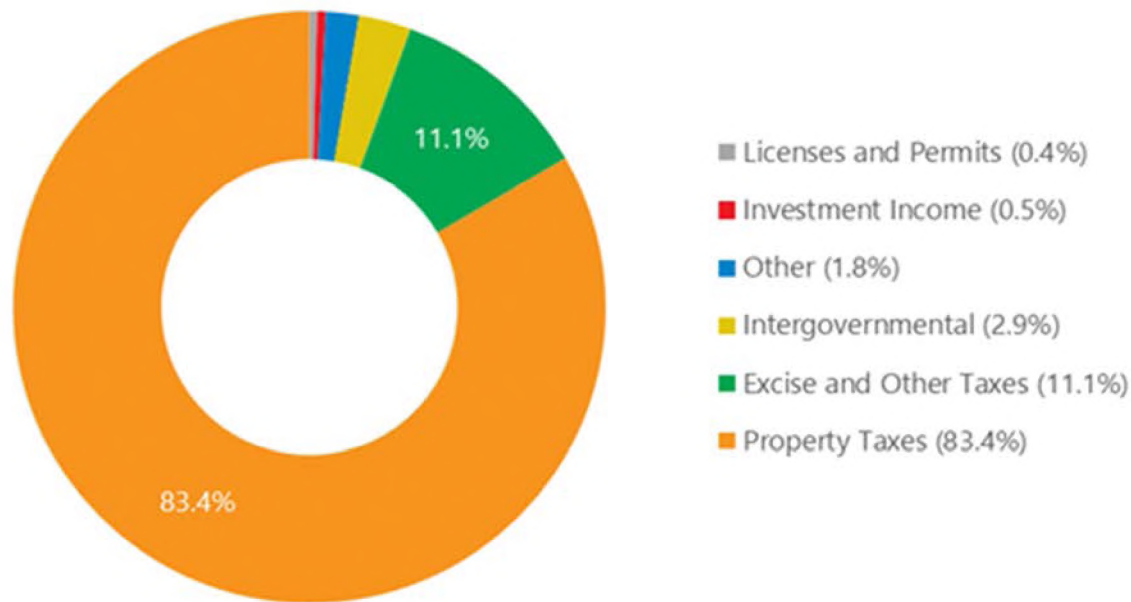
FISCAL CAPACITY

Revenues

Durham's 2016 Annual Report identifies total revenues of \$7,877,197. Most of this revenue was from property and excise taxes. The proportion of total revenues represented by property taxes has continued a significant upward trend since the early 1990s. Be-

tween 1991 and 2000 property taxes increased from 33% to 46% of total revenue, and between 2012 and 2016 property taxes increased from 76% to 83% of Durham's total revenue. Excise and other taxes accounted for the next largest share of Durham's total revenue, declining from 15% in 2012 to 11% in 2016. The third largest share of Durham's total revenue is from Intergovernmental sources, which have declined from 4.5% in 2012 to 2.9% of total revenues in 2016.

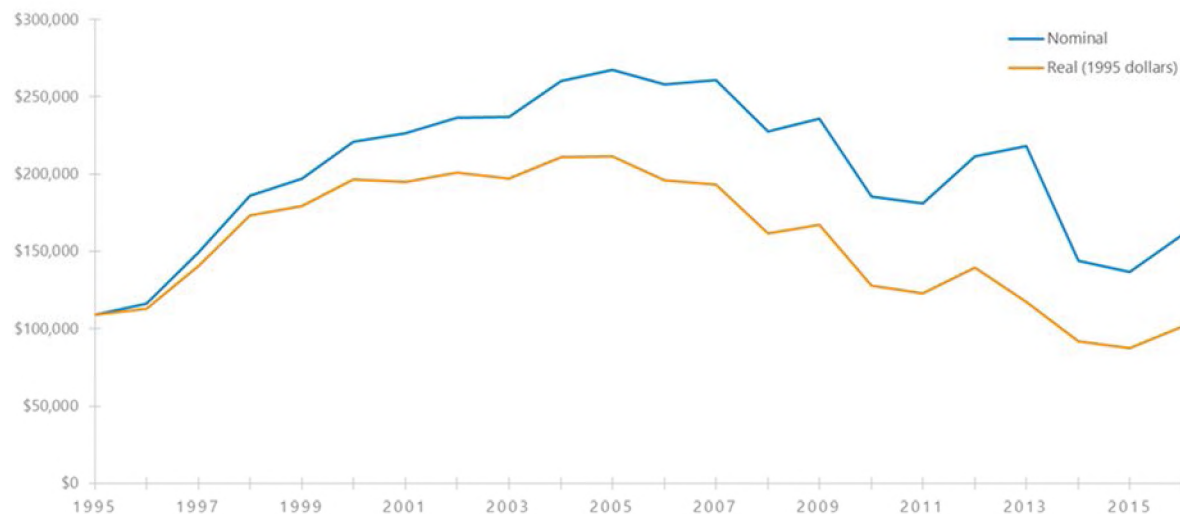
DURHAM REVENUE 2016



Source: Durham 2016 Annual Report

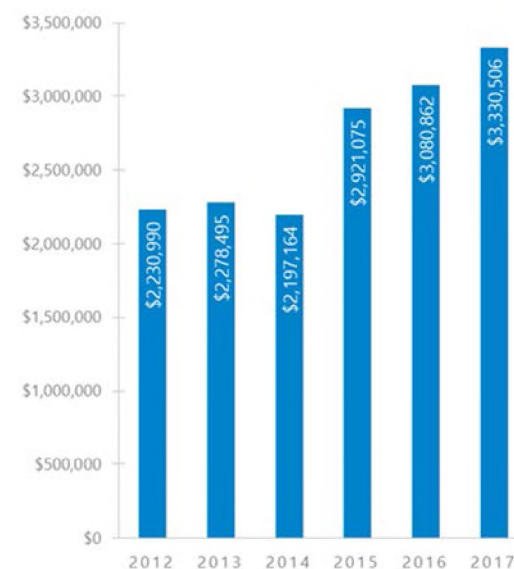
Of the \$225,902 of intergovernmental revenues in 2016 the single largest source was \$165,296 from Municipal Revenue Sharing. Municipal Revenue Sharing has become a smaller proportion of total revenues, going from almost 56% in 1990 to just over 35% in 2000 to about 2% in 2016. Between 2000 and 2016 Durham's allocation of Municipal Revenue Sharing has declined by 27% in nominal terms. However, since the late 1990s Maine's funding for Municipal Revenue Sharing has not kept up with inflation, and in real terms Durham's allocation of Municipal Revenue Sharing declined by 49% between 2000 and 2016. When adjusted for inflation, Durham's allocation of Municipal Revenue Sharing in 2016 (\$101,178) was lower than it was in 1995 (\$109,120). Over this period Durham's share has remained at a steady 0.2% of Maine's total allocation for Municipal Revenue Sharing, which indicates that this decline in State support is being experienced by local municipalities across the State.

DURHAM'S ALLOCATION OF MAINE REVENUE SHARING 1995-2016



Source: Office of the Maine State Treasurer

DURHAM TOTAL EXPENDITURES 2012-2017



Source: Durham Annual Reports 2012-2016

Expenditures

Total expenditures for the Town of Durham have increased by an average of 7.6% per year from 2012 to 2016, going from \$2,230,990 in 2012 to \$3,080,862 in 2016. In 2016 the total Town expenditures accounted for 39% of revenue collected that year. The 2016 Durham calendar year school budget was \$4,744,293, which was approximately 60% of revenue collected by Durham in 2016. Since 2009 when Durham joined Regional School Unit (RSU) 5, school system finances have been separated from Town finances.

The three largest components of Town expenditures are Public Works, Fire and Rescue, and Town Administration. Public Works makes up the largest component of Town expenditures, ranging between 49% to 55% of the Town's total budget between

2012 and 2017. This includes a Public Works capital fund that accounted for 8-16% of Durham's budget over the same period. The next largest share of Durham's budget goes to the Durham Fire and Rescue Department, which has ranged between 12% to 17% of Durham's total budget over the past six years. The Fire and Rescue Department budget also includes a capital reserve fund, which has ranged between 2-6% of the Town's budget over the past six years. Town administration accounts for the third largest share of the budget, ranging from between 11% to 15% of the Town's total budget. The remainder of the Town's budget goes towards paying for the Androscoggin County tax, Solid Waste, and other services, including animal control, assessing, cemeteries, conservation, donations, the Eureka Center, general assistance, parks and recreation, the planning board, and telecommunications.

DURHAM EXPENDITURES 2012-2017

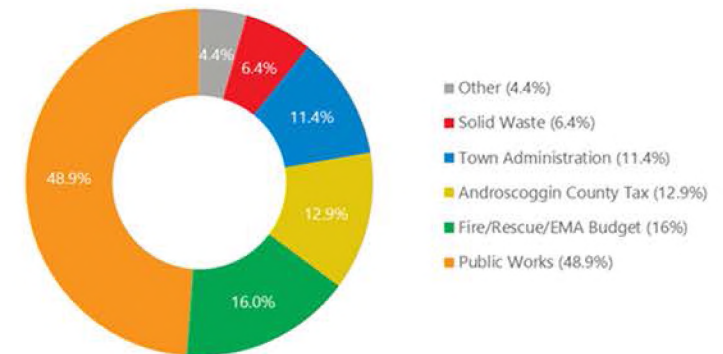
	2012	2013	2014	2016	2017
Town Administration	\$ 344,892	\$ 343,903	\$ 338,667	\$ 352,409	\$ 411,048
Animal Control	\$ 13,269	\$ 13,753	\$ 13,819	\$ 13,043	\$ 12,573
Assessing	\$ 19,200	\$ 20,450	\$ 20,150	\$ 20,050	\$ 20,150
Cemeteries	\$ 6,000	\$ 6,000	\$ 7,850	\$ 3,850	\$ 4,200
Conservation	\$ 2,150	\$ 2,150	\$ 2,150	\$ 2,150	\$ 2,100
Donations	\$ 2,500	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000
Eureka Center	\$ 3,550	\$ 9,900	\$ 7,990	\$ 5,436	\$ 4,903
Fire/Rescue/EMA Budget	\$ 246,026	\$ 259,612	\$ 263,225	\$ 306,552	\$ 321,680
Fire Capital Fund	\$ 105,946	\$ 109,510	\$ 114,510	\$ 183,914	\$ 83,004
General Assistance	\$ 5,000	\$ 5,000	\$ 5,000	\$ 3,000	\$ 2,000
Parks and Recreation	\$ 14,031	\$ 10,838	\$ 9,500	\$ 15,840	\$ 14,220
Planning Board	\$ 6,105	\$ 8,337	\$ 6,337	\$ 16,474	\$ 17,697
Public Works	\$ 989,471	\$ 1,029,533	\$ 1,177,524	\$ 1,055,440	\$ 1,208,464
Public Works Capital Fund	\$ 204,000	\$ 225,000	\$ -	\$ 450,885	\$ 542,639
Solid Waste	\$ 193,171	\$ 198,459	\$ 195,892	\$ 198,175	\$ 200,753
Telecommunications	\$ 39,929	\$ 33,050	\$ 31,550	\$ 52,658	\$ 53,663
Other	\$ 35,750	\$ -	\$ -	\$ -	\$ -
Androscoggin County Tax	\$ -	\$ -	\$ -	\$ 397,986	\$ 428,412
Total	\$ 2,230,990	\$ 2,278,495	\$ 2,197,164	\$ 3,080,862	\$ 3,330,506

Source: Durham Annual Reports 2012-2016

State Real Estate Valuation

According to the Maine Revenue Services Municipal Valuation Return, the latest state property valuation in Durham was effective April 1, 2010. The state valuation is a basis for the allocation of money appropriated for state general purpose aid for education, state revenue sharing, and for county assessments. The valuation of the Town of Durham for real estate and personal property decreased by 1% between 2012 and 2014, dipping just below \$348

DURHAM BUDGET 2016



Source: Durham 2016 Annual Report

DURHAM VALUATION 2012-2016

	Valuation	Change from Previous Year
2012	\$ 351,550,000	0.27%
2013	\$ 350,900,000	-0.18%
2014	\$ 347,950,000	-0.84%
2015	\$ 351,850,000	1.12%
2016	\$ 359,850,000	2.27%

Source: Maine Revenue Services

million in 2014. Since 2014 Durham's valuation has increased by 3.4%, reaching a high of \$359.85 million in 2016.

Local Property Tax Mil Rate

Durham's property tax mil rate has increased by nearly 20% between 2000 and 2017. The largest annual increase was seen in 2013 when the tax rate increased by about 12%. Since 2000, the category of school has accounted for about 75% of the mil rate. Even though Durham's property valuation declined over this same

period, much of this increase may be attributed to declining State funding for municipal revenue sharing, which has made municipalities more dependent on property taxes for funding basic services.

Even though Durham's mill rate has increased over time, the Town's rate is generally below the state and county average, and on par with surrounding communities.

DURHAM PROPERTY TAX MIL RATE BY CATEGORY TAX RATES 2000-2017

	Town		School		County		Overlay		Overall Total	
	Mil Rate	% of total	Mil Rate	% of total	Mil Rate	% of total	Mil Rate	% of total	Mil Rate	% change from previous year
2000	2.79	18%	11.77	75%	1.09	7%	0.00	0%	15.65	
2001	3.10	19%	12.50	75%	1.15	7%	0.00	0%	16.75	7%
2002	2.75	16%	13.52	77%	1.33	8%	0.00	0%	17.60	5%
2003	2.83	15%	14.29	77%	1.48	8%	0.00	0%	18.60	6%
2004	3.03	16%	15.01	77%	1.46	7%	0.00	0%	19.50	5%
2005	3.28	17%	13.81	71%	1.63	8%	0.78	4%	19.50	0%
2006	2.52	14%	12.84	72%	1.62	9%	0.82	5%	17.80	-9%
2007	2.52	14%	13.18	72%	1.78	10%	0.82	4%	18.30	3%
2008	2.50	13%	14.61	76%	1.73	9%	0.38	2%	19.22	5%
2009	4.49	21%	14.74	69%	1.71	8%	0.43	2%	21.36	11%
2010	2.61	20%	9.00	69%	1.04	8%	0.39	3%	13.05	revaluation
2011	2.10	16%	9.69	74%	1.05	8%	0.26	2%	13.10	0%
2012	2.00	15%	10.01	75%	1.07	8%	0.27	2%	13.35	2%
2013	2.47	17%	11.11	74%	1.09	7%	0.28	2%	14.95	12%
2014	2.90	17%	12.17	73%	1.12	7%	0.47	3%	16.65	11%
2015	2.60	15%	13.24	76%	1.14	7%	0.42	2%	17.40	5%
2016	3.40	18%	13.88	74%	1.16	6%	0.36	2%	18.80	8%
2017	3.27	17%	14.08	75%	1.23	7%	0.27	1%	18.85	0%

Source: Town of Durham Annual Property Tax Bill
(Note: 2008 - 2010 Tax Bills mis-state the percentage breakdowns. Adjusted figures provided by Durham Town Office)

DURHAM ESTIMATED FULL VALUE TAX RATE COMPARISON

	2015		2014		2013		2012		2011		2010		2009		2008		2007		2006		2005	
	Mil Rate	Rank	Mil Rate	Rank	Mil Rate	Rank	Mil Rate	Rank	Mil Rate	Rank	Mil Rate	Rank	Mil Rate	Rank	Mil Rate	Rank	Mil Rate	Rank	Mil Rate	Rank	Mil Rate	Rank
General Area																						
Lewiston	23.42	1	23.06	1	22.98	1	22.21	1	21.27	1	20.18	1	19.32	1	18.20	1	16.89	2	16.13	2	17.46	2
Auburn	21.23	2	20.95	3	20.55	2	20.01	2	19.89	2	19.62	2	18.51	2	18.04	2	18.98	1	18.61	1	19.99	1
Bath	20.81	3	20.64	4	20.25	3	19.42	3	18.28	3	17.44	3	16.90	3	16.22	3	15.73	3	15.26	3	14.06	5
Lisbon	20.35	4	21.26	2	19.63	4	19.22	4	18.14	4	17.23	4	15.74	5	14.84	5	13.77	5	14.60	5	15.34	3
Cumberland	18.63	5	17.95	5	17.85	6	17.75	6	16.53	7	15.78	6	14.67	6	13.51	6	13.26	7	14.85	4	12.54	9
Brunswick	17.92	6	17.93	6	17.74	7	16.45	8	15.55	8	14.41	8	13.47	8	13.01	8	12.80	8	12.89	7	13.46	6
Topsham	17.33	7	17.11	8	16.72	8	16.63	7	16.69	6	15.66	7	14.36	7	13.27	7	13.33	6	12.73	8	12.89	7
Yarmouth	17.32	8	17.51	7	18.66	5	18.56	5	17.94	5	17.00	5	16.11	4	15.21	4	14.43	4	14.43	6	15.22	4
Durham	16.08	10	15.65	10	14.23	14	12.82	15	12.38	14	12.25	14	11.58	13	10.33	14	9.59	14	9.77	12	10.59	12
North Yarmouth	16.08	10	16.41	9	15.92	9	15.88	9	14.55	9	13.61	10	12.51	10	11.50	11	11.75	10	11.21	10	12.85	8
Pownal	15.95	11	15.27	11	15.21	10	15.62	10	14.33	11	12.98	11	12.49	11	10.86	12	10.71	12	9.57	13	10.40	13
Freeport	15.58	12	14.67	13	15.10	11	15.05	11	14.43	10	13.81	9	12.62	9	12.27	9	11.93	9	11.82	9	12.33	11
Gray	15.29	13	15.11	12	14.76	12	13.46	13	12.91	13	12.10	15	11.36	14	10.56	13	9.70	13	8.71	14	9.68	14
Falmouth	14.00	14	13.82	14	14.30	13	13.82	12	13.15	12	12.60	12	12.16	12	11.81	10	11.36	11	10.74	11	12.44	10
New Gloucester	13.70	15	13.66	15	12.91	15	12.87	14	12.06	15	12.34	13	10.66	15	9.64	15	8.46	15	7.99	15	8.30	15
Boarding Towns																						
Auburn	21.23	1	20.95	2	20.55	1	20.01	1	19.89	1	19.62	1	18.51	1	18.04	1	18.98	1	18.61	1	19.99	1
Lisbon	20.35	2	21.26	1	19.63	2	19.22	2	18.14	2	17.23	2	15.74	2	14.84	2	13.77	2	14.60	2	15.34	2
Brunswick	17.92	3	17.93	3	17.74	3	16.45	4	15.55	4	14.41	4	13.47	4	13.01	4	12.80	4	12.89	3	13.46	3
Topsham	17.33	4	17.11	4	16.72	4	16.63	3	16.69	3	15.66	3	14.36	3	13.27	3	13.33	3	12.73	4	12.89	4
Durham	16.08	5	15.65	5	14.23	7	12.82	7	12.38	7	12.25	7	11.58	7	10.33	7	9.59	7	9.77	6	10.59	6
Pownal	15.95	6	15.27	6	15.21	5	15.62	5	14.33	6	12.98	6	12.49	6	10.86	6	10.71	6	9.57	7	10.40	7
Freeport	15.58	7	14.67	7	15.10	6	15.05	6	14.43	5	13.81	5	12.62	5	12.27	5	11.93	5	11.82	5	12.33	5
State and County Averages																						
Androscoggin County	19.65		19.47		19.07		18.45		17.79		17.06		16.24		15.51		15.46		15.41		16.37	
State Weighted	15.03		14.72		14.49		13.99		13.40		12.78		12.23		11.70		11.33		11.23		11.77	

Source: Maine Revenue Services (for comparison purposes only)

Note: Each year, Maine Revenue Services determines the full equalized value of each municipality and subsequently calculates a full value tax rate. These tax rates are calculated in order to facilitate equitable comparisons between municipalities. This is the most current data available from the State of Maine.

Long Term Municipal Debt

Maine statute limits municipal debt to a maximum of 7.5% of the last full state valuation, exclusive of debt for schools, for storm or sanitary sewers, for energy facilities, or for municipal airports, which have their own statutory limits. According to the Maine Municipal Bond Bank, Durham currently has three municipal bonds with a total outstanding balance of approximately \$2.7 million as of 11/1/17. Based on Durham's 2016 state valuation, this outstanding debt is well within the limits set by the State.

DURHAM MUNICIPAL DEBT AS OF NOVEMBER 1, 2017

Issue Date	Maturity Date	Total Due	Remaining Balance	Purpose
11/3/2016	11/1/2023	\$ 1,166,542	\$ 993,897	Road Paving Project
8/27/2009	11/1/2029	\$ 3,043,334	\$ 1,666,401	Durham Community School Options
5/22/2003	11/1/2018	\$ 781,820	\$ 41,119	Roof of old Durham School

Source: Maine Municipal Bond Bank

EXISTING LAND USE

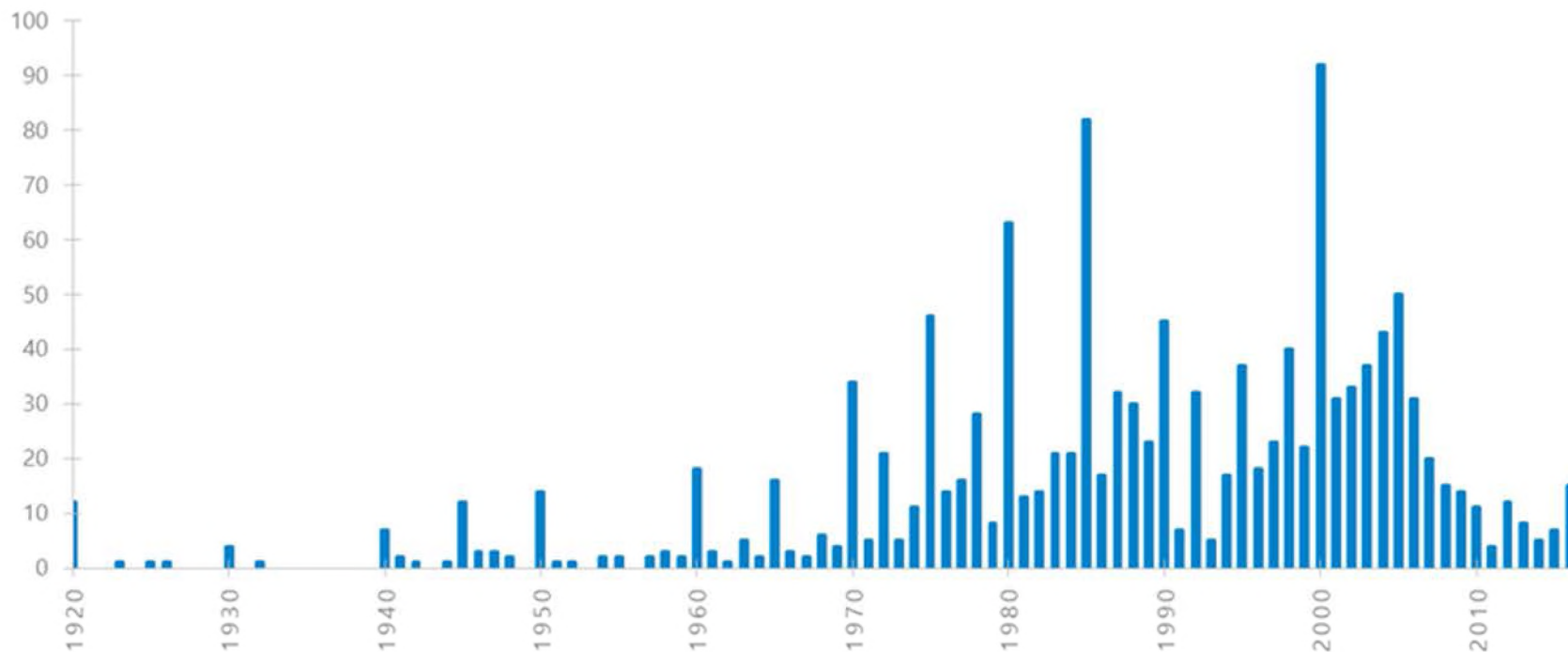
Land Use Patterns

The Town of Durham is just over 39 square miles in size and borders 8 different municipalities, including Auburn, Lewiston, Lisbon, Topsham, Brunswick, Freeport, Pownal and New Gloucester. Historically, Durham has been known for its large farms, but many have ceased operation over the past generation. During the past

decade there has been a slight resurgence for some older farms in Town as interest in purchasing and consuming organic and locally sourced produce and meats has increased across the region and state. However, the vast majority of growth and development in Durham over the past century has been residential.

From 1975 to 2007, there was a lot of residential housing growth in Durham. New construction peaked in 2000, with just shy of 100 new residential units, and growth has declined significantly

RESIDENTIAL CONSTRUCTION BY DATE

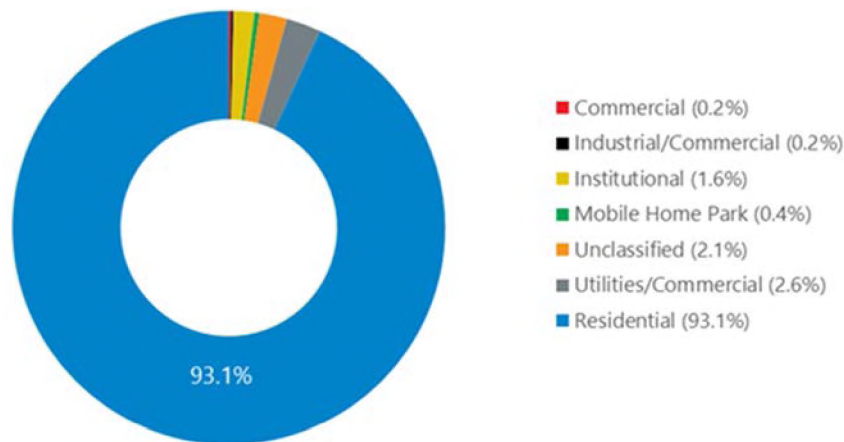


Source: Town of Durham Assessing Database

since the 2008 recession. Most of the development in Durham is detached single-family residential. This growth is mostly along Town and State roads, with the heaviest concentration in the areas around Southwest Bend, Crossman Corner, and along Routes 125 and 136. Development has mostly occurred on a lot by lot basis, but a few small subdivisions have been constructed.

About seventy percent of the Town is covered by forest canopy. The vast majority of that area and other undeveloped land is identified in the assessing database as Back Lots (lots that do not have frontage on a private or public road) and classified as residential whether or not there is currently development on the lot. As a result, 93% of Durham's total land area is classified as residential, with an average lot size of 11.5 acres.

DURHAM LAND CLASSIFICATIONS 2017



Source: Town of Durham

The Maine Office of Policy and Management projects the Town's population will rise by 322 over the next 19 years. Therefore even if the Town continues its current low density lot by lot development pattern, there is more than enough land available to accommodate this growth over the next several decades. However, a significant amount of Durham's road frontage has been developed. There is also more than enough land available for institutional, commercial and industrial development over the next decade and beyond.

According to the 2002 Comprehensive Plan, a growth and development goal is to "protect rural character, promote efficient use of public services and prevent development sprawl." Durham's current residential growth pattern does have the potential to diminish Durham's rural character as more and more farms are converted to residential uses. Should development pressure increase, the Town's Land Use Ordinance leaves the community vulnerable to sprawl. Land use regulations and policies focused on concentrating growth in the Town's historic villages, particularly the Southwest Bend, would help promote development more consistent with Durham's rural character.

Land Use Regulations

Land Use Ordinance

Durham's Land Use Ordinance was most recently adopted at Town Meeting on April 2, 2016. This document consolidated the Subdivision Ordinance, the Back Lot Development Ordinance, and the Groundwater Protection Ordinance into a single document to simplify the Town's ordinances and correct conflicts and duplications.

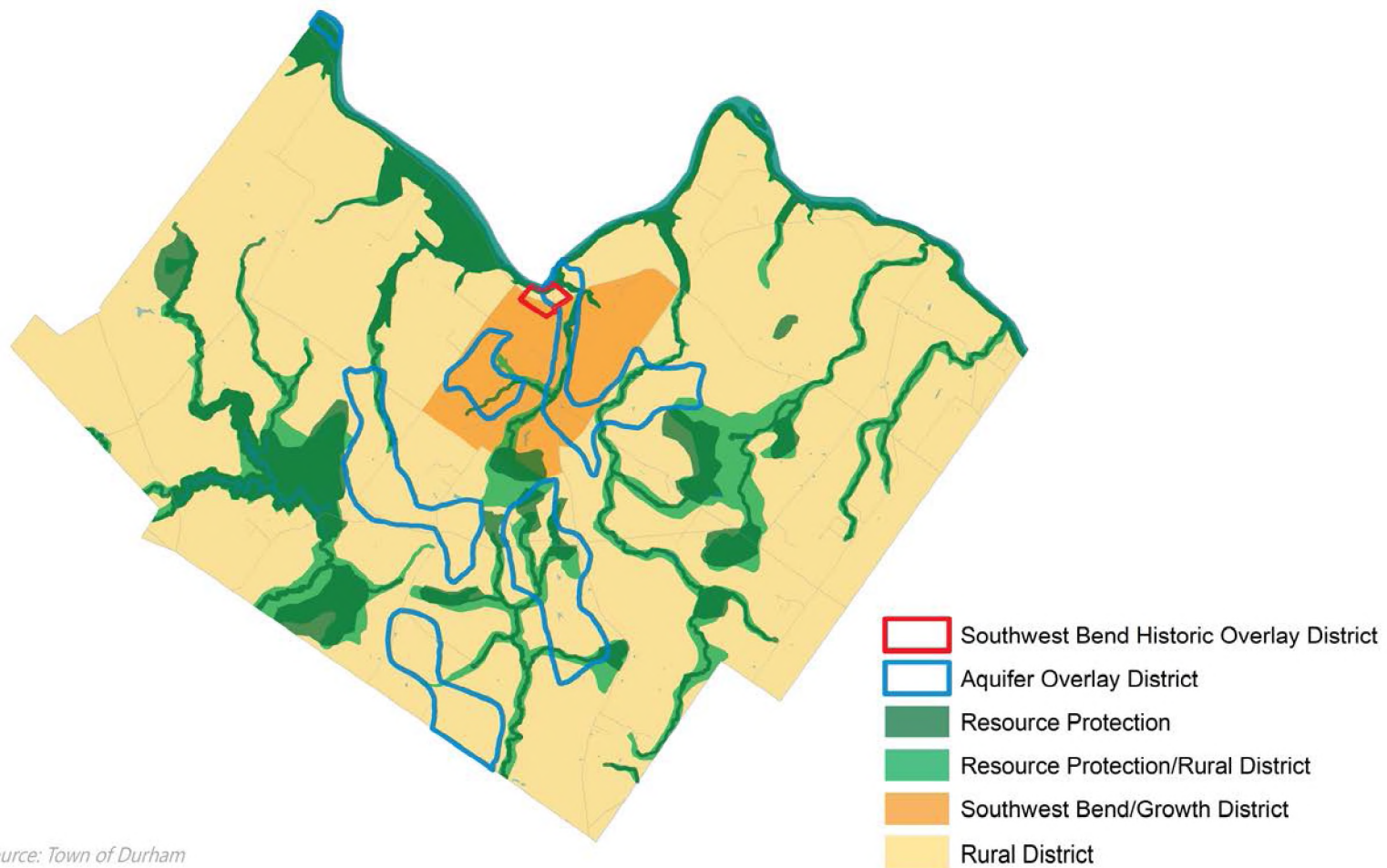
The Town is divided into three zoning districts: Southwest Bend/Growth, Rural Residential/Transitional, and Resource Protection. The Resource Protect District includes the Town's Shoreland Zoning in accordance with State requirements. There is also the Southwest Bend Historic Overlay District and Aquifer Protection Overlay District, which impose additional protective regulations beyond the

requirements of the base district.

Rural Residential/Transitional District

The Rural Residential District encompasses the vast majority of the Town's land area. The majority of this district remains undeveloped. According to the 2002 Comprehensive Plan, this district's primary uses will be agriculture, forestry, medium density residen-

DURHAM ZONING



Source: Town of Durham

tial, and home occupations. The Rural Residential District allows almost all uses, including residential, commercial, industrial and other uses, with a minimum lot size of 90,000 square feet.

Southwest Bend/Growth District

The 2002 Comprehensive Plan called for the creation of this district in order to accommodate a substantial portion of Durham's growth over the next 10 years and encourage pedestrian access to business and services. While the district was created, the dimensional standards in this district allow for smaller lots in some instances and reduce the lot area per dwelling unit requirement to 20,000 sq. ft. for multifamily development.

Resource Protection District

The Resource Protection District includes shoreland area adjacent to the Androscoggin River, Runaround Pond, other waterbodies, floodplains, and swampy areas. The allowed land uses are mostly limited to agriculture and light recreation. The State's mandated Shoreland Zoning provisions are incorporated into the district.

Aquifer Overlay District

Land use activities and practices within Durham's Aquifer Overlay District (also referred to as Groundwater Protection Overlay District) are designed to protect the quantity and quality of the Town's groundwater resources. New commercial or industrial development is not permitted in this district, except for home occupations. However, the Aquifer Overlay District no longer conforms to the aquifers as mapped and as a result the ordinance only provides partial protection.

Southwest Bend Historic Overlay District

This district is regulated by Durham's Historic District Ordinance, and administered by the Historic District Commission. The establishment of a historic district was a goal of the 2002 Comprehensive Plan, and was adopted in 2016. This ordinance's stated purpose is to:

- A. To prevent inappropriate alterations of buildings of historic or architectural value.
- B. To prevent the demolition or removal of designated sites or landmarks and significant historic structures within designated districts whenever a reasonable alternative exists or can be identified.
- C. To preserve the essential character of designated districts by protecting relationships of groups of buildings and structures.
- D. To assure that new Construction in Historic Districts is compatible with the historic character of the district so as to protect property and tax valuations.

Dimensional Requirements

The dimensional requirements in Durham's Land Use Ordinance encourage low density suburban residential and commercial development. All districts require large lot areas. Additionally, large front and side setbacks ranging from 50 to 100 feet in front and 20 to 100 feet on the side do not allow for traditional village development. The establishment of the Southwest Bend/Growth District was a start towards achieving the stated goals of protecting rural character and preventing sprawl, but the regulations could go further to allow and promote this growth pattern.

DURHAM DIMENSIONAL REQUIREMENTS

	Southwest Bend/Growth District	Rural Residential/ Transitional District	Resource Protection District
Min. Lot Per Dwelling	90,000 sq. ft	90,000 sq ft	90000 sq ft
Min Lot in Subdivision	45,000 sq ft with 45,000 sq ft open space	90,000 sq ft (contiguous 40,000 sq ft building envelope)	
Min. Road Frontage	250 ft	300 ft	300 ft
Multiple Family Housing	25 ft add for each add unit		
Min Setbacks			
Residential			
Front	50 ft	50 ft	100 ft
Side	20 ft	20 ft	100 ft
Rear	20 ft	20 ft	100 ft
Commercial/Industrial			
Front	100 ft	100 ft	
Side	100 ft	100 ft	
Rear	100 ft	100 ft	
Max Structure Height	35 ft	35 ft	
Max Structure School & Municipal	50 ft	50 ft	25 ft
Min Density per Dwelling Unit	1 per 2 acres	1 per 2 acres	
Max coverage Structures	0.25	0.25	0.05
Max Coverage Municipal structures	0.2		
Max Impervious	0.25	0.25	0.05
Multiple Family Density	90,000 sq ft plus 20,000 sq ft additional unit	110,000 sq ft for duplex	
Minimum Building Envelope		40,000 sq ft	

Source: Town of Durham Land Use Ordinance

Growth Management Ordinance

The Growth Management Ordinance was established on March 6, 2004 in order to:

- To prevent unreasonable burden on, and failure or shortage of, public facilities that is likely to result from unlimited growth.
- To maintain the predominantly rural character of the town.
- To provide for the local housing needs of Durham's existing residents, while accommodating Durham's "Fair Share" of population growth in Androscoggin county and immediate sub-region.
- To ensure fairness in the allocation of building permits.

This ordinance limits the number of new residential dwelling unit building permits to a maximum of 45 per year Town-wide. Individual applicants are limited to 5 permits per year in the Southwest Bend/Growth District, and 3 permits per year in the Rural Residential/Transitional District. Subdivisions in

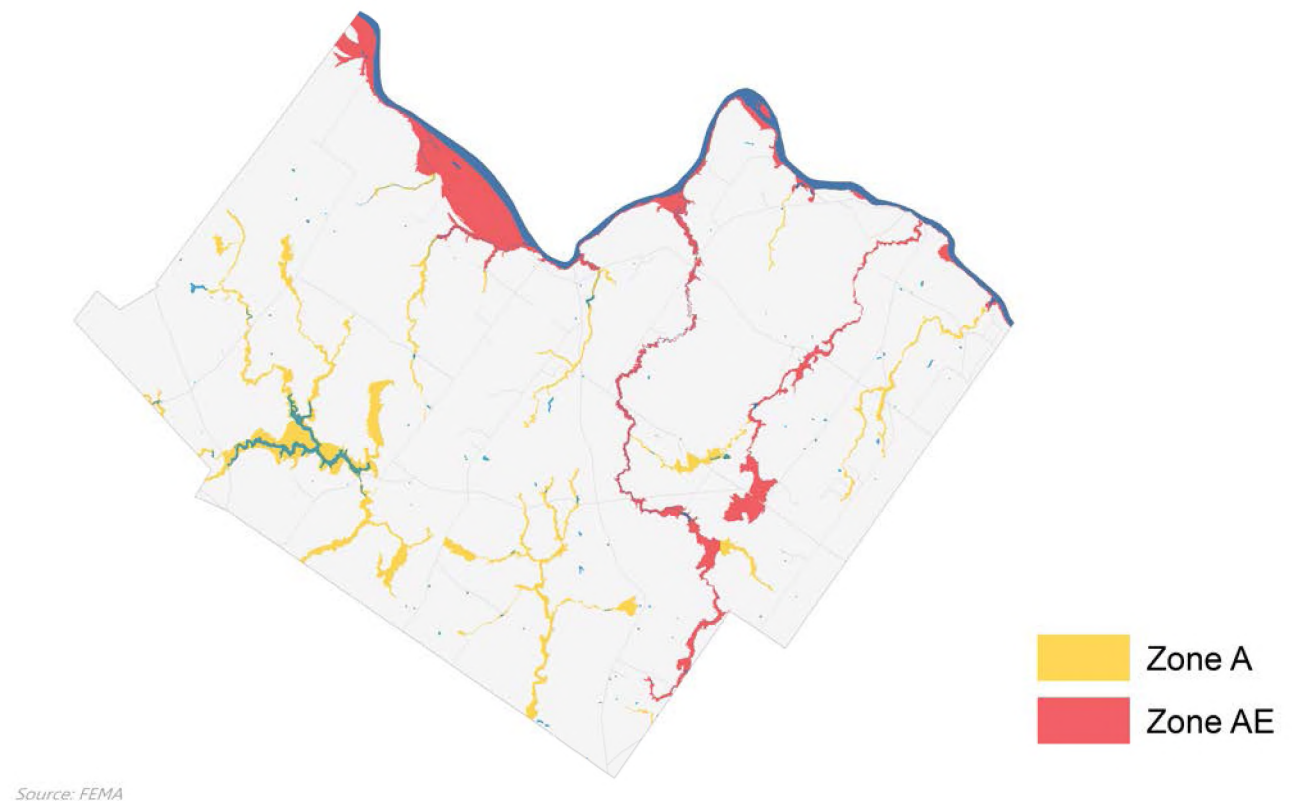
the Rural Residential/Transitional District are limited to 5 lots. However, since Durham does not have an adopted comprehensive plan, it is unclear whether or not this ordinance would withstand a legal challenge. Additionally, this ordinance contradicts the stated objective of concentrating growth in the Southwest Bend/Growth District. It is also unclear whether or not this ordinance is still being enforced since according to the 2016 Town Report, 70 building permits were issued last year, though it is unclear how many of these were for new dwelling units. In both 2015 and 2016, there were 14 new home inspections. The capacity to track building permits, particularly by location, would help the Town understand and manage development more effectively.

Floodplain Management Ordinance

Durham's Floodplain Management Ordinance codifies the Town's commitment to the National Flood Insurance Program, in order to best protect properties at risk from periodic flood damage. The implementation of a Flood Hazard Development Permit system and review program clearly defines limitations to development in flood zones defined by the Flood Insurance Rate Map as well as enabling enforcement of those limitations by the Code Enforcement

Officer. However, the Flood Insurance Rate Maps recognized in the ordinance were adopted in 1988 and are not the most recent. Additionally, a couple of requirements are outlined within this ordinance that require interaction with State agencies that have been restructured or eliminated since the ordinance was written.

National Flood Insurance Rate Map 100-Year Floodplain Zones



Other Ordinances

Other ordinances that guide specific development actions in the Town of Durham include: Electrical, Excavation, Waste Disposal Facility Licensing, Waste Oil and Used Tire, Supplemental Plumbing Code, Disposal of Solid Waste, and Auto Graveyards and Junkyards.

Administrative Capacity

The CEO position provides the sole administrative support and planning expertise to the Planning Board. With such limited staff capacity, updating, modernizing, and enforcing the Town's land use policies is challenging. Expertise in land use planning is essential to ensure that the community enacts and enforces policies that will achieve the Town's desired land use goals of maintaining rural character and preventing sprawl. While many of the actions from the 2002 Comprehensive Plan were achieved, these changes could have been more effective with more administrative capacity and expertise. The Town has recently added a part-time Planner to address these limitations.

The Planning Board is primarily responsible for reviewing development in Durham, with the exception of single family homes that are not part of a subdivision. The Planning Board would benefit from the adoption of land use policies more consistent with the Town's goals. Also, the majority of the applicants appearing before the planning board are for Conditional Use Permits related to home based and small business. Adjusting the regulations to accomplish some of this administratively may relieve some of their workload.

SECTION 4

PUBLIC PARTICIPATION PROCESS

1. How was this plan developed?

a. Establishment of the Comprehensive Plan Committee

In May of 2016 the Board of Selectmen appointed a Comprehensive Plan Committee to review and update the 2002 Durham Comprehensive Plan that failed to receive a letter of consistency from the Maine State Planning Office.

b. Initial Citizen Survey

The new committee met several times over the summer of 2016 getting organized and becoming familiar with the purpose and content of the 2002 Comprehensive Plan. The process kicked off with a paper citizen survey that was distributed at the November 2016 election. Although the number of responses was limited, this initial feedback from citizens led the Committee to better understand what Durham citizens most like about their community. The survey questions and responses follow:

	1. Resident Information				
	1A: Which of the following best describes your residency in Durham?				
Year Round	52				
Seasonal	2				
Nonresident property owner	0				
Post-secondary student	0				
	1B: Please check all that apply.				
Owner of a residence	49				
Renter of a residence	4				
Owner of vacant land	4				
Owner of commercial property	3				
Owner of a business	6				
Registered Voter	33				
	1C: How long have you lived in Durham?				
Two years or less	11				
Three to five years	8				
Six to ten years	5				
Eleven to twenty years	12				
More than twenty years	15				
	1D: What type of home is your Durham residence?				
Single family home	45				
Multi-family home	2				
Apartment	1				
Condo	0				
Mobile or manufactured home on individual lot	2				
Mobile or manufactured home in a community	0				
	1E: Including yourself, mark the number of people who live in your household.				
4 and younger	5				
5 to 18	27				
18 to 25	8				
26 to 35	17				
36 to 45	18				
46 to 55	34				
56 to 65	9				
over 65	19				
	1F: How many of your school age children attend public school?				

School aged children attending public school?	27					
	1G: How many attend private school?					
Attending private school?	2					
	2. Quality of Life in Durham					
	2D: How important are the following to you as a resident of Durham?					
	Very Important	Important	Not Important	No Opinion		Very Import + Important
Being close to your work place	10	24	17	2		34
Attractiveness of the town	21	26	4			47
Being close to family and friends	9	17	22	3		26
Quality of the school system	30	12	4	1		42
Natural environment	43	10	0	0		53
Outdoor recreational opportunities	22	23	4	0		45
Reasonable housing costs	24	22	5	1		46
Available town services/facilities	13	26	10	1		39
Clean water	43	9	0	0		52
Reasonable tax levels	33	16	2	0		49
Rural character	41	11	1	0		52
Availability of child care	6	12	27	6		18
Working farms	29	16	6	2		45
Little traffic congestion	28	20	2	0		48
Bike/pedestrian lanes	13	18	18	3		31
Community events	13	28	8	2		41
Preservation of natural resources	36	17	0	1		53
Wildlife habitat	36	15	0	1		51
Other	Post office					
	Quality of roads					
	Reducing private residence restrictions/codes					
	Noise reduction					
	2E: How important to you are the following town services?					
	Very Important	Important	Not Important	No Opinion		
Emergency medical services	28	19	5	0		47
Fire protection	32	18	4	0		50
Law enforcement	21	17	13	2		38
Road maintenance	23	25	5	0		48
Schools	31	13	8	2		44
Snow plowing/salting	24	25	5	0		49
Solid waste disposal	18	26	6	2		44
Recycling	26	20	4	1		46

Animal Control	8	24	16	5		32
Other	Library					
	Post Office					
	Library					
	On Hallowell Road, snowplow/salting is excessive					
	3. Housing and Development					
	3A: In your opinion, should Durham...					
	Yes	No	No Opinion			
1. Have more single family housing?	20	12	12			
2. Have more multi-family housing?	9	33	9			
3. Plan for low-income housing?	12	30	8			
4. Have more individual mobile homes?	4	34	13			
5. Encourage mobile home housing projects?	4	40	7			
6. Support senior housing projects?	27	14	10			
7. Consider cluster housing zoning?	20	26	4			
8. Encourage development of subdivisions?	16	27	7			
9. Preserve undeveloped land if possible?	40	4	6			
	3B: Aside from housing needs should Durham...					
	Yes	No	No Opinion			
1. Create recreational facilities or parks?	37	6	9			
2. Encourage more commercial businesses?	29	24	4			
3. Encourage more agriculture?	48	0	1			
4. Encourage industrial growth?	7	42	2			
			4			

Based on the tabulated survey input and upon reviewing the written comments on the surveys, the Comprehensive Plan Committee drew the following conclusions from this initial public input:

November 2016 Public Survey Themes

Top reasons people enjoy living in Durham

- Small town, rural character
- Open spaces
- Quiet
- Friendly people
- Easy access to more populated areas
- Strong school system

What should Durham be like ten to twenty years from now?

- Good place to raise a family
- Stay the same
- Strong schools
- Limit growth
- Small business development
- Better roads
- Outdoor recreation

Most Important Issues?

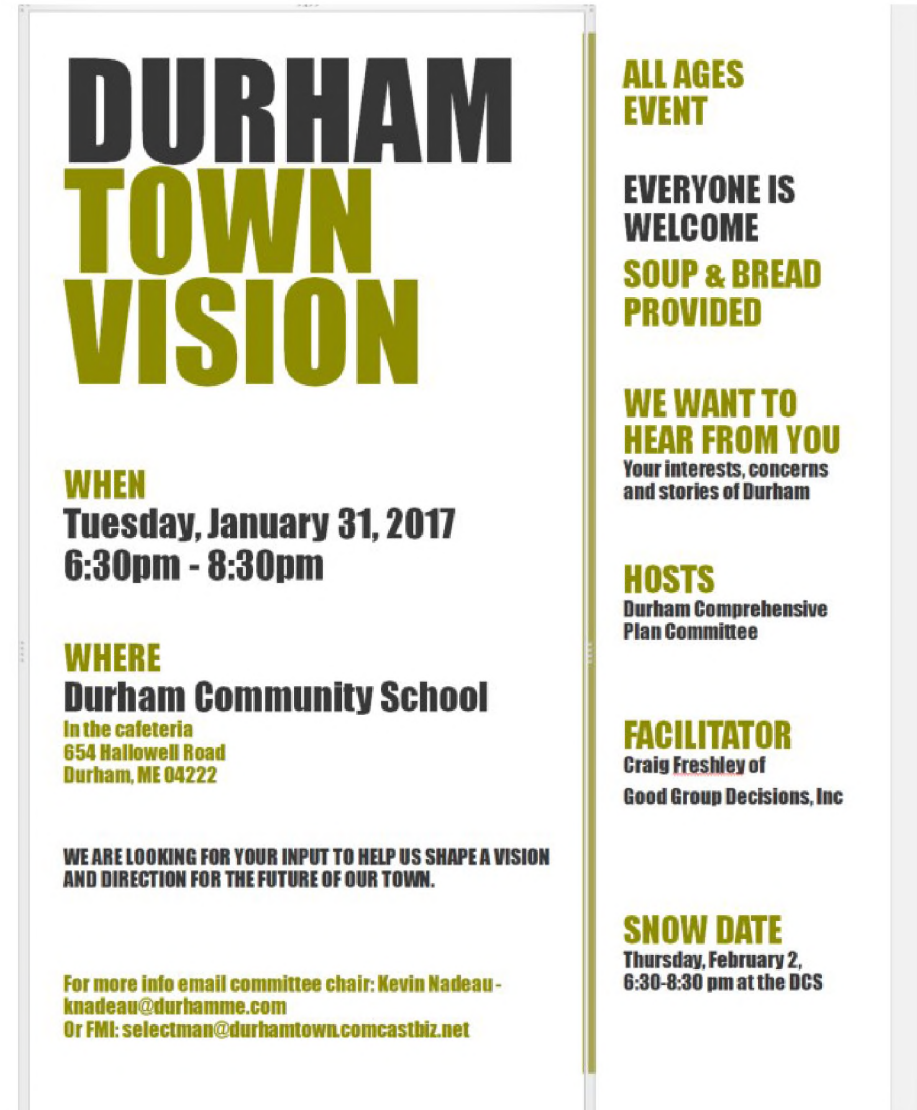
- Property tax increases
- Uncontrolled or poorly planned development
- Roads

c. Visioning Session

The comprehensive plan update project kicked off in earnest with a visioning session on January 31, 2017 when the Committee engaged a professional facilitator to help attendees discuss and formulate a vision statement to provide direction to the long-range planning process. A second goal of the visioning session was to educate members of the public on the value of the Comprehensive Plan and the importance of the update process. Finally, the Committee saw this effort as an opportunity to improve communication and connection in the community as residents met each other and shared their perspectives on life in Durham.

The facilitator challenged those who attended to explore what aspects of our community we want to keep the same and those things that need to change. After listening to individual citizen views expressed and processing the collective input of the visioning session, the facilitator reported six common themes that came through:

1. Preserve the rural character;
2. Maintain the small town feel;
3. Keep Durham affordable;
4. Maintain a sense of independence from over-regulation;
5. Build a greater sense of community; and,
6. Provide good information for decision-making.

A vertical poster for the Durham Town Vision session. The title 'DURHAM TOWN VISION' is at the top in large, bold, sans-serif font, with 'DURHAM' in dark blue and 'TOWN VISION' in olive green. Below the title, the date and time 'Tuesday, January 31, 2017 6:30pm - 8:30pm' are listed. The location 'Durham Community School' is followed by the address '654 Hallowell Road, Durham, ME 04222'. A call to action states 'WE ARE LOOKING FOR YOUR INPUT TO HELP US SHAPE A VISION AND DIRECTION FOR THE FUTURE OF OUR TOWN.' Contact information for Kevin Nadeau is provided. On the right side, a vertical column lists additional details: 'ALL AGES EVENT', 'EVERYONE IS WELCOME', 'SOUP & BREAD PROVIDED', 'WE WANT TO HEAR FROM YOU' with a subtext 'Your interests, concerns and stories of Durham', 'HOSTS' as the 'Durham Comprehensive Plan Committee', 'FACILITATOR' Craig Freshley of 'Good Group Decisions, Inc', and 'SNOW DATE' as 'Thursday, February 2, 6:30-8:30 pm at the DCS'.

**DURHAM
TOWN
VISION**

WHEN
Tuesday, January 31, 2017
6:30pm - 8:30pm

WHERE
Durham Community School
In the cafeteria
654 Hallowell Road
Durham, ME 04222

**WE ARE LOOKING FOR YOUR INPUT TO HELP US SHAPE A VISION
AND DIRECTION FOR THE FUTURE OF OUR TOWN.**

For more info email committee chair: Kevin Nadeau -
knadeau@durhamme.com
Or FMI: selectman@durhamtown.comcastbiz.net

**ALL AGES
EVENT**

**EVERYONE IS
WELCOME**

**SOUP & BREAD
PROVIDED**

**WE WANT TO
HEAR FROM YOU**
Your interests, concerns
and stories of Durham

HOSTS
Durham Comprehensive
Plan Committee

FACILITATOR
Craig Freshley of
Good Group Decisions, Inc

SNOW DATE
Thursday, February 2,
6:30-8:30 pm at the DCS

d. Outreach to Community Groups

The next stage of the comprehensive plan update process during the winter and early spring of 2017 was outreach by the Comprehensive Plan Committee to various community stakeholder groups. Individual Committee members contacted or met with the following groups:

- Historical Society;
- Board of Selectmen;
- Fire and Rescue;
- Planning Board;
- Snowmobile Club;
- Shiloh;
- Congregational Church;
- Friends Church; and,
- The Rod and Gun Club.

As a result of reviewing input from the initial citizen survey, the visioning session, and the various stakeholder groups, the Comprehensive Plan Committee drafted a vision statement in May of 2017:

e. Durham Community Vision Statement

Looking to the future, we, the citizens of Durham, Maine, want to plan the future of our town with hopes of improving upon the rural qualities we value, heightening engagement within our small community, and increasing opportunities for active lifestyles. These goals all contribute to the overarching vision to see Durham

grow while it remains a stable and secure community.

We have identified four prominent themes that consistently present themselves throughout Durham's varied plans for the future. They represent the characteristics the town will strive to embody as a foundation for all of proposed growth and development. Looking forward, the Town of Durham is:

1) Rural

- *The presence of our open farmland, county roads, forest groves, and natural streams is a point of pride for the town and we wish to preserve these rural qualities.*
- *A network of recreational trails, parks and conserved land connect the community with nature.*
- *The look of old wooden buildings and aging architecture provides a bridge to our history and contributes to our town's preferred aesthetic.*
- *Agricultural endeavors are very well suited to the town's landscape and support growth within the community that is in keeping with the ideal options for small-scale commercial growth.*
- *New residential and commercial development needs to fit within the rural, small town fabric of Durham.*

2) Engaged

- *Involvement in clubs, committees, community events and outreach programs are of significant importance to a diverse population of Durham townspeople.*
- *The Durham Community School is an integral part of*

town and provides consistent opportunities for individuals and families to play an active part in shaping Durham's youngest members.

- *A wide variety of small businesses sustain the town's ability to find select services and products locally, providing support to fellow community members.*

3) Active

- *With such lovely landscapes and scenic surroundings, Durham residents enjoy the ability to get outdoors for exercise and recreation.*
- *The Androscoggin River and Runaround Pond provide abundant opportunities for water sports.*
- *The town's public facilities, parks, churches, and small businesses are connecting points for residents.*

4) Stable/Secure

- *Property values, tax rates, and housing affordability are of growing concern to many Durham inhabitants and must be taken into consideration when looking at future growth.*
- *As growth is a natural part of a town's future, it is expected but must be carefully managed to best fit the long term goals for the town.*
- *Another reason to carefully manage growth is to ensure town services that currently adequate to serve our needs and budget are not compromised.*

- *We recognize the role of our town government in protecting what we appreciate most about Durham and the importance of land use ordinances.*

f. Future Land Use Plan Survey Questions

The Comprehensive Plan Committee, working with the Town Planner and staff at the Greater Portland Council of Governments prepared an on-line citizen survey to test public reception to various growth management strategies and gauge public support for increasing regulatory controls on development in Durham. To help the CPC determine public sentiments on important land use issues, the Future Land Use Plan survey asked the following questions:

1. How long have you lived in Durham?
2. Have you ever had a home built for you in Durham?
3. Have you bought an existing home in Durham?
4. Have you ever sold vacant land in Durham for a lot or subdivision?
5. Has a new home or subdivision been built near your home in Durham?
6. Would you support allowing house lots to be smaller than 2 acres?
7. Would you like to see a requirement for house lots to be more than 2 acres?
8. Are you concerned that development is changing the Town's character from rural to suburban?
9. Do you think it important to preserve commercial farm-

ing in Durham?

10. Do you think it important to preserve commercial forestry in Durham?
11. Do you support increasing regulatory protections for natural resources?
12. Do you support increasing regulatory protections for abutting homeowners?
13. Do you support increasing regulatory requirements for public safety?
14. Do you think land use regulations unfairly restrict property rights?
15. The last survey question presented three scenarios for managing future growth and development in Durham:
 - A. Focus future growth on smaller lots in a central location.
 - B. Allow growth to occur across town on larger lots.
 - C. Roll back regulations to make development easier everywhere in town.

Durham Future Land Use Plan Survey

Q1 How long have you lived in Durham? (Number of Years)

Answered: 326 Skipped: 1

#	RESPONSES	DATE
1	32	11/8/2018 12:48 PM
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7	2	10/26/2018 6:38 AM
8	29	10/25/2018 11:18 AM
9	1	10/24/2018 7:40 PM
10	34 years	10/22/2018 9:19 AM
11	6	10/21/2018 9:37 PM
12	2	10/21/2018 5:17 PM
13	2	10/21/2018 5:14 PM
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15	3	10/21/2018 10:43 AM
16	1	10/21/2018 6:32 AM
17	0	10/20/2018 4:38 PM
18	1	10/20/2018 11:38 AM
19	9	10/20/2018 11:26 AM
20	12	10/20/2018 11:24 AM
21	3	10/20/2018 7:48 AM
22	15	10/20/2018 6:39 AM
23	1, but right over the Freeport line for the last 10	10/20/2018 6:27 AM
24	15	10/20/2018 6:12 AM
25	16	10/20/2018 5:13 AM
26	11	10/19/2018 9:00 PM
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28	53	10/19/2018 2:15 PM
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32	20	10/19/2018 11:19 AM
33	11	10/19/2018 11:03 AM
34	15	10/19/2018 10:01 AM
35	15	10/19/2018 9:58 AM

Durham Future Land Use Plan Survey

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40	15 years	10/16/2018 7:38 PM
41	29	10/16/2018 1:06 PM
42	50	10/15/2018 2:13 PM
43	3	10/14/2018 9:02 PM
44	40+ years	10/13/2018 10:08 AM
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Durham Future Land Use Plan Survey

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Durham Future Land Use Plan Survey

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158	67	9/21/2018 4:11 PM

Durham Future Land Use Plan Survey

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164	2	9/21/2018 12:37 PM
165	13	9/21/2018 12:00 PM
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170	6	9/21/2018 11:13 AM
171	3	9/21/2018 11:09 AM
172	11	9/21/2018 11:09 AM
173	13	9/21/2018 11:07 AM
174	4	9/21/2018 11:06 AM
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199	15	9/19/2018 7:05 AM

Durham Future Land Use Plan Survey

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239	4	9/18/2018 3:01 PM
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Durham Future Land Use Plan Survey

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265	2	9/18/2018 12:42 PM
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270	3	9/18/2018 12:10 PM
271	9	9/18/2018 12:05 PM
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273	3	9/18/2018 11:52 AM
274	9 years	9/18/2018 11:46 AM
275	20	9/18/2018 11:42 AM
276	15	9/18/2018 11:28 AM
277	21	9/18/2018 11:28 AM
278	2	9/18/2018 11:27 AM
279	1	9/18/2018 11:25 AM
280	41	9/18/2018 11:24 AM
281	26	9/18/2018 11:21 AM

Durham Future Land Use Plan Survey

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284	2	9/18/2018 11:18 AM
285	15 years	9/18/2018 11:16 AM
286	6	9/18/2018 11:12 AM
287	10	9/18/2018 11:11 AM
288	4	9/18/2018 11:05 AM
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309	9	9/18/2018 10:31 AM
310	9	9/18/2018 10:31 AM
311	30+	9/18/2018 10:30 AM
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313	36	9/18/2018 10:25 AM
314	11	9/18/2018 10:22 AM
315	16	9/18/2018 10:20 AM
316	15	9/18/2018 10:20 AM
317	12	9/18/2018 10:18 AM
318	3	9/18/2018 10:17 AM
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321	48	9/18/2018 9:46 AM
322	72	9/18/2018 9:36 AM

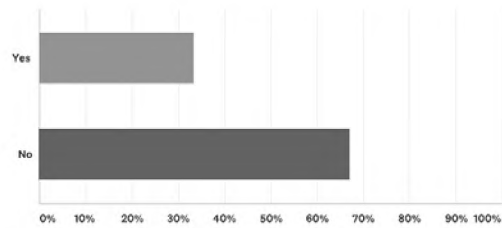
Durham Future Land Use Plan Survey

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324	10	9/18/2018 9:05 AM
325	40 years	9/18/2018 8:52 AM
326	19	9/18/2018 8:40 AM

Durham Future Land Use Plan Survey

Q2 Have you ever had a home built for you in Durham?

Answered: 323 Skipped: 4

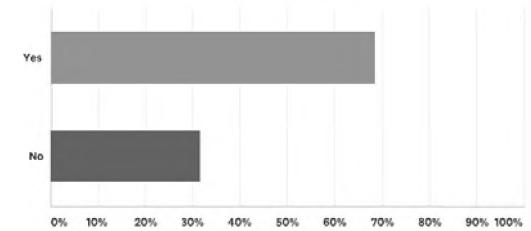


ANSWER CHOICES	RESPONSES
Yes	33.13% 107
No	66.87% 216
TOTAL	323

Durham Future Land Use Plan Survey

Q3 Have you bought an existing home in Durham?

Answered: 325 Skipped: 2

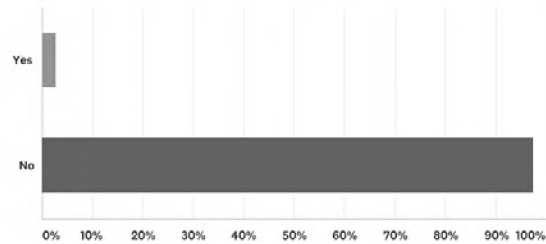


ANSWER CHOICES	RESPONSES
Yes	68.31% 222
No	31.69% 103
TOTAL	325

Durham Future Land Use Plan Survey

Q4 Have you ever sold vacant land in Durham for a lot or subdivision?

Answered: 323 Skipped: 4

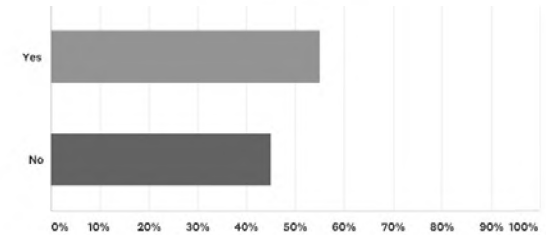


ANSWER CHOICES	RESPONSES
Yes	2.79%
No	97.21%
TOTAL	323

Durham Future Land Use Plan Survey

Q5 Has a new home or subdivision been built near your home in Durham?

Answered: 324 Skipped: 3

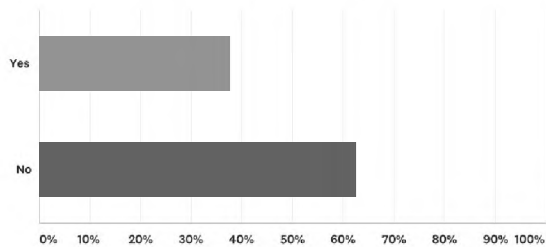


ANSWER CHOICES	RESPONSES
Yes	54.94%
No	45.06%
TOTAL	324

Durham Future Land Use Plan Survey

Q6 Would you support allowing house lots to be smaller than 2 acres?

Answered: 324 Skipped: 3

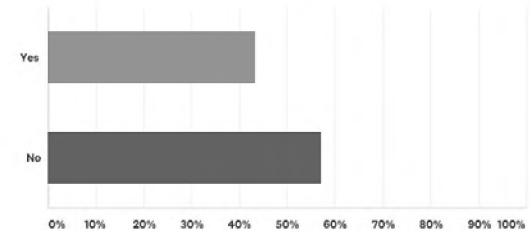


ANSWER CHOICES	RESPONSES
Yes	37.65%
No	62.35%
TOTAL	324

Durham Future Land Use Plan Survey

Q7 Would you like to see a requirement for house lots to be more than 2 acres?

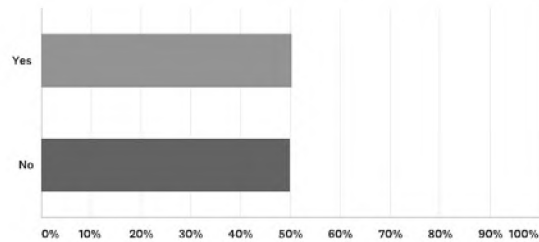
Answered: 323 Skipped: 4



ANSWER CHOICES	RESPONSES
Yes	43.03%
No	56.97%
TOTAL	323

Q8 Are you concerned that development is changing the Town's character from rural to suburban?

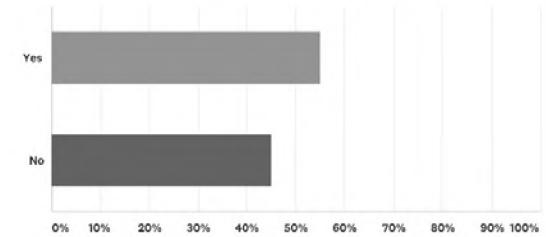
Answered: 324 Skipped: 3



ANSWER CHOICES	RESPONSES
Yes	50.31%163
No	49.69%161
TOTAL	324

Q5 Has a new home or subdivision been built near your home in Durham?

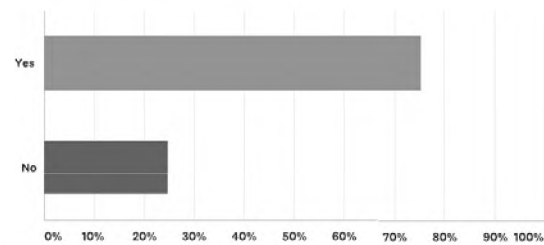
Answered: 324 Skipped: 3



ANSWER CHOICES	RESPONSES
Yes	54.94%178
No	45.06%146
TOTAL	324

Q10 Do you think it important to preserve commercial forestry in Durham?

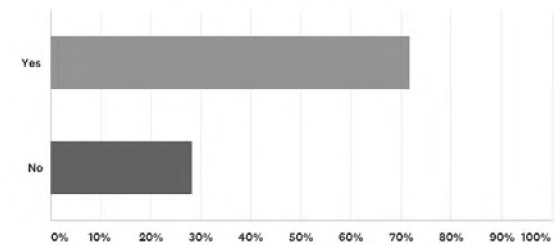
Answered: 324 Skipped: 3



ANSWER CHOICES	RESPONSES
Yes	75.31%244
No	24.69%80
TOTAL	324

Q11 Do you support increasing regulatory protections for natural resources?

Answered: 323 Skipped: 4

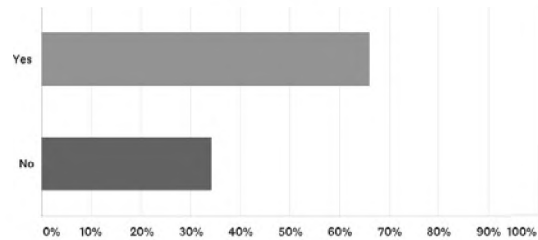


ANSWER CHOICES	RESPONSES
Yes	71.83%232
No	28.17%91
TOTAL	323

Durham Future Land Use Plan Survey

Q12 Do you support increasing regulatory protections for abutting homeowners?

Answered: 322 Skipped: 5

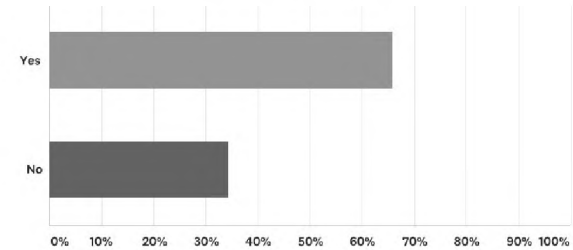


ANSWER CHOICES	RESPONSES	
Yes	65.84%	212
No	34.16%	110
TOTAL		322

Durham Future Land Use Plan Survey

Q13 Do you support increasing regulatory requirements for public safety?

Answered: 320 Skipped: 7

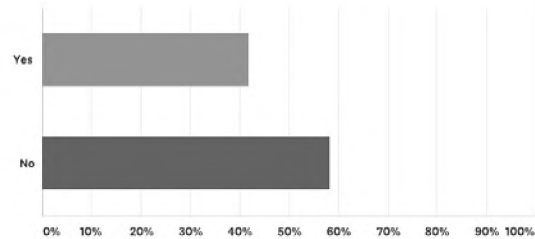


ANSWER CHOICES	RESPONSES	
Yes	65.63%	210
No	34.38%	110
TOTAL		320

Durham Future Land Use Plan Survey

Q14 Do you think land use regulations unfairly restrict property rights?

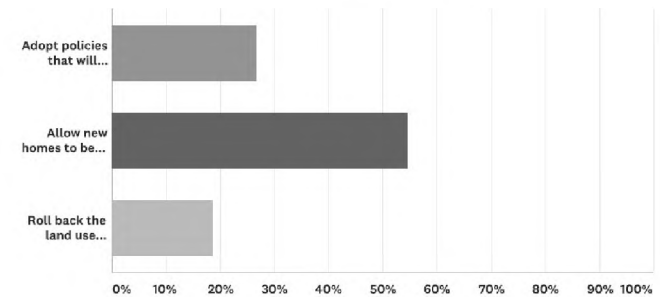
Answered: 322 Skipped: 5



ANSWER CHOICES	RESPONSES	
Yes	41.93%	135
No	58.07%	187
TOTAL		322

Q15 Which of the following three strategies would be the best way to manage growth and development in Durham over the next 20 years? (Choose the one strategy you most think the Town should pursue)

Answered: 321 Skipped: 6



ANSWER CHOICES	RESPONSES	
Adopt policies that will result in the majority of new homes being built on smaller lots in the Southwest Bend Growth District in the center of town and limit the construction of new homes in other parts of town to preserve rural character and protect natural resources.	26.79%	86
Allow new homes to be built anywhere in town as long as the lots are large, natural resources are protected, and views from development to public roads and neighbors are buffered.	54.52%	175
Roll back the land use regulations to make it easier to develop land and build new homes. Allow homes to be built on smaller lots anywhere in town as long as minimum State environmental standards are met.	18.69%	60
TOTAL		321

g. Future Land Use Plan Forum

Recognizing the limitations of citizen surveys in providing opportunity for in-depth discussion and understanding of complex land use issues, the Comprehensive Plan Committee organized and conducted a public forum to review the survey results and consider the three growth management alternatives presented in the survey.

On October 12, 2018, the CPC conducted a public forum at the Durham Community School cafeteria. This event was widely publicized, including a postcard sent to all households and taxpayers. Approximately fifty participants took advantage of this opportunity to influence the direction of the comprehensive plan where they explored the following questions:

1. What areas of Durham should be kept natural?
2. What parts of town should develop at rural densities with house lots of at least 2 acres?
3. What parts should be allowed to develop at suburban densities with lots as small as half an acre?

To intelligently answer these difficult questions, forum participants were provided maps and handouts on the location of constraints to and opportunities for development, including the constraints of floodplains, steep slope areas, and wetlands. Important wildlife habitats were also presented, as well as the locations of the town's sand and gravel aquifers, which have the potential to serve as public water supplies and are susceptible to contamination by pollutants. Areas without these development

constraints should be considered as having greater potential opportunity for development.

Although development pressure has substantially decreased in Durham since the Great Recession and demographic projections presented in Section 3 of this update indicate a continued decline in the trend of new housing starts, the CPC felt that using the 400 housing starts that occurred between 2000 and 2015 would be a reasonable projection for the level of development most likely to occur over the next 20 years.

The overarching question posed to forum participants was: Which of the alternative scenarios for future growth management can best accommodate the next 400 units of housing with the least impact on community character, natural resources, and existing residents? Unlike the on-line citizen survey, the public forum gave opportunity to compare details of the three alternative growth management scenarios. Details of the first scenario, titled "Focused Growth Area" are presented in the diagram on the next page.

This scenario follows the State's planning model for designated growth areas where the community will concentrate future growth and preserve the majority of the community as rural. This model was adopted in Durham's 2002 Comprehensive Plan, but it lacked supporting policies of capital investment and adequate development density to make a viable growth area and was deemed inconsistent with State legal requirements.

Scenario 1 presented that option again with policies required to make it consistent. It called for development of a public water system in the growth area and half acre lots, a density that would

support public utility service. It also proposed limits on the amount of development that could occur elsewhere in town.

SCENARIO 1 – FOCUSED GROWTH AREA*

*Under Scenario 1 the Town would need to adopt a capital improvement plan to help install public water in the Growth Area.

Resource Protection
(No Housing Units)

Growth Area
(300 Housing Units 75%)
(1/2+ Acre Lots)

Rural Areas
(100 Housing Units 25%)
(2+ Acre Lots)



SUMMARY OF SCENARIO 1 POLICIES

Resource Protection Areas

- ✓ All Critical Natural Resources
- ✓ No development allowed
- ✓ Open space and recreation uses

Southwest Bend Growth Area

- ✓ 20,000 sq. ft. minimum lot size
- ✓ 100 ft. road frontage
- ✓ No maximum size of subdivision
- ✓ No limit on number of housing starts
- ✓ Public water system to be developed

Rural Areas

- ✓ 90,000 sq. ft. minimum lot size
- ✓ 300 ft. road frontage
- ✓ Maximum of 5 lots in a subdivision
- ✓ No more than 45 housing starts per year

The second growth management scenario presented at the public forum is illustrated and described in the diagram below titled “All Rural.” This scenario abandons the growth area concept and instead allows the next 400 units of housing to be spread equally across town in all areas not constrained by current Resource Protection zoning. In addition to repealing the existing rate of growth ordinance, this scenario also removes an existing limitation on the size of subdivisions (maximum of 5 lots) outside the

Growth District that has never been enforced.

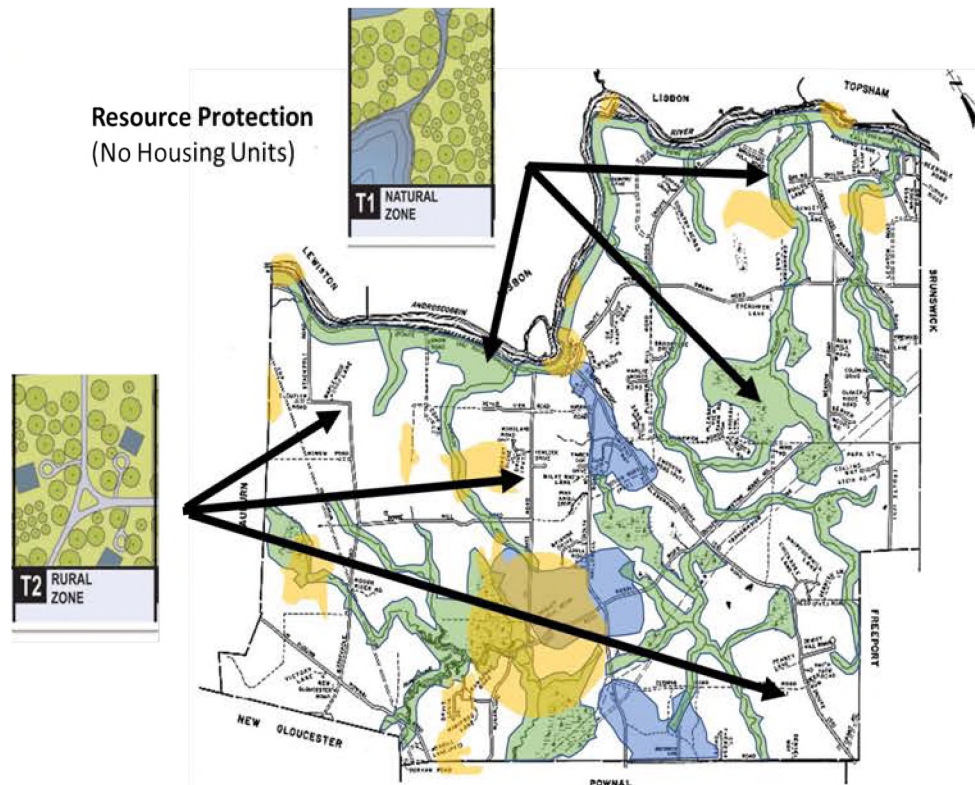
Under this approach to growth management, the town would look to other measures to protect rural character and natural resources, such as cluster development and buffering of development from public views and abutters. This model could also incorporate policies to increase regulatory requirements to address public concerns for preserving farming and forestry and improving fire protection services.

SCENARIO 2 – ALL RURAL*

*Under Scenario 2 the Town would need to repeal the rate of growth ordinance that limits housing starts to 45 units per year.

Resource Protection
(No Housing Units)

Rural Areas
(400 Housing Units 100%)
(2+ Acre Lots)



SUMMARY OF SCENARIO 2 POLICIES

Resource Protection Areas

- ✓ All Critical Natural Resources
- ✓ No development allowed
- ✓ Open space and recreation uses

Southwest Bend Growth Area

- ✓ Growth District removed
- ✓ Rate of Growth Ordinance repealed

Rural Areas

- ✓ 90,000 sq. ft. minimum lot size
- ✓ 300 ft. road frontage
- ✓ No maximum number of lots in a subdivision
- ✓ No limit on number of housing starts

In order to provide Future Land Use Plan forum participants equal opportunity to argue for a less restrictive growth management program than is currently in place, the third scenario titled “Regulation Roll Back,” was also provided as a potential direction for the new comprehensive plan. Like Scenario 2, this scenario abandons the concept of a designated growth area where public utilities will support higher density in a concentrated location.

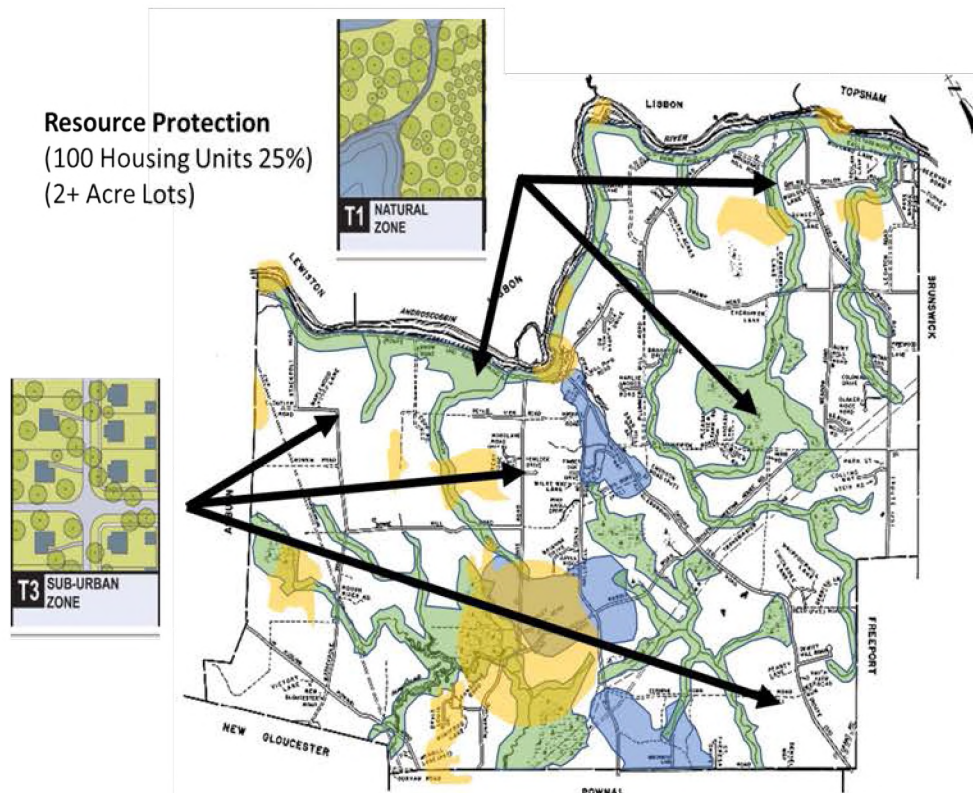
This scenario would also abandon the town’s 2-acre minimum lot size and instead adopt the State’s minimum lot size of one half acre allowed under the Plumbing Code. Finally, the Regulation Roll Back scenario would allow housing units to be built within areas currently protected by Resource Protection zoning, subject to compliance with minimum federal and state environmental standards.

SCENARIO 3 – REGULATION ROLL BACK*

*Under Scenario 3 the Town would need to repeal the comprehensive plan and zoning to go with minimum state environmental regulations.

Resource Protection
(100 Housing Units 25%)
(2+ Acre Lots)

Suburban Areas
(300 Housing Units 75%)
(1/2+ Acre Lots)



SUMMARY OF SCENARIO 3 POLICIES

Resource Protection Areas

- ✓ All Critical Natural Resources
- ✓ Some development on larger lots
- ✓ Open space and recreation uses

Southwest Bend Growth Area

- ✓ Growth District removed
- ✓ Rate of Growth Ordinance repealed

Suburban Areas

- ✓ 20,000 sq. ft. minimum lot size
- ✓ 100 ft. road frontage
- ✓ No maximum number of lots in a subdivision
- ✓ No limit on number of housing starts

Future Land Use Plan Forum Input

The forum had two small group discussion sessions. During Session 1, the groups discussed general and specific land use issues that should be addressed in the new comprehensive plan. There were three themes that seemed to come out of most of the groups:

1. Preserve rural character;
2. Preserve farming and forestry; and,
3. Protect investment-based expectations of people who purchased land based on current regulatory programs.

Session 2 asked participants to pick a growth management scenario (Focused Growth, All Rural, or Regulation Roll Back) that they thought would best address the identified land use issues.

There was not a lot of consensus between groups except that most groups favored a hybrid of two or more of the three scenarios. Three groups favored a hybrid consisting of parts of the Focused Growth Area and All Rural scenarios. Two groups chose different scenarios as their main goal, but agreed that the current Resource Protection zoning may be overly restrictive and should be examined.

Five out of the six discussion groups favored keeping the growth area concept alive but wanted the boundaries/locations reviewed and also favored allowing a minimum lot size of 1 acre rather than the Scenario 1 proposed half-acre lots in the designated growth area.

Finally, four of the six groups favored keeping a limit on the

rate of growth in terms of the number of housing units that can be built per year.



2. Will there be additional opportunities for input on the Town's future land use policies?

a. State law requires a documented public participation process.

State law requires that the development of any comprehensive plan be based on a public participation process that provides ample opportunity for members of the public to participate in the process. The Durham Comprehensive Plan Committee has provided multiple chances for citizens to engage and has actively sought public input throughout the process. This section of the 2018 Comprehensive Plan update documents that process and the input received to fully satisfy legal requirements for public participation.

b. Success of the plan depends on community buy-in.

But there is a more important reason for getting input from citizens in the development of this future vision and growth management program for our community. In order for it to succeed, we need the buy-in of the people who will be affected by these future land use policies. One of the themes that the CPC took to heart early in the process is the need to carefully balance private property rights with the interests of the community at

large for preservation and enhancement of rural character and natural resources that affect all citizens. We believe that this vision and plan represents the best interests of the community while considering the potential impacts of the proposed policies on landowners. Although the proposed land use policies and implementation strategies may not perfectly balance those competing interests, it is a fair plan and will help Durham effectively respond to the land use planning challenges of coming years.

c. Every implementation step will require its own public participation process.

Another factor for citizens who will be voting on adoption of the draft 2018 Comprehensive Plan update to consider is that the plans and policies contained in it do not have the force of law. For any part of this plan to have any effect on private property or to accomplish the stated goals of the community, there will need to be further, more detailed policy proposals in the form of ordinance amendments and Town budgets to be voted on. So this is not the end of the public participation process, it is just the beginning of that process. Both legal requirements and the need for community buy-in ensure that at every step of implementation, there will be plenty of opportunity for public engagement.

3. Comprehensive Plan Update Public Hearing

a. State legal requirements for public hearings.

The final step of the public participation process is the public hearing on the draft update. State law requires that at least one public hearing be held on the proposed comprehensive plan or comprehensive plan update. Public notice must be posted at least 30 days in advance of the public hearing. The Comprehensive Plan Committee may hold a second public hearing but is not required to.

b. Durham Comprehensive Plan Update public hearing.

The Town published legal notice on February 16, 2019 and held the public hearing on March 25, 2019 at the Eureka Community Center. In addition to many questions about current policies and those proposed by the comprehensive plan update, the following public input was taken at the public hearing:

- There is concern for affordability of housing given the large lot sizes required.
- Greater allowances for multi-family (3 & 4 units) would help address affordability.
- Alternative forms of housing (e.g., elderly housing) can help support the schools as they generate taxes

without increasing enrollments.

- There is concern for the development of farmland in Town.
- The multiple ownership of open, agricultural lands makes preservation more difficult.
- There could be a lag between the adoption of the comprehensive update and development of the ordinances needed to implement its recommendations.
- Eliminating the existing growth area and allowing development across town could increase the cost of providing public services.
- The Town-owned church buildings are in serious need of repairs.
- History-tourism provides great opportunities for the community.
- There is a lag between the time the Town identifies traffic hazards and when the State addresses them.
- There is a communications problem with the State not always informing the Town in advance of doing road projects.
- The strategy for a growth rate safety valve (the addendum) is a good one.
- It is important to get information on the comprehensive plan update out at Town Meeting.
- There is concern for studies needed to control groundwater withdrawal from aquifers.

SECTION 5

REGIONAL COORDINATION & PERIODIC EVALUATION

1. What does the new Comprehensive Plan offer on regional coordination?

Maine's Growth Management Act recommends that a regional coordination program be pursued with other communities to manage shared resources and facilities, including but not limited to lakes, rivers, aquifers, and transportation facilities. This section identifies resources and facilities that Durham shares with neighboring communities, describes issues pertaining to sharing these resources and facilities, summarizes regional coordination efforts, and describes what other approaches the community will take to coordinate management of shared resources and facilities.

a. Current Regional Coordination Efforts

Durham shares natural resources such as the Androscoggin River and the watersheds of Chandler Brook, as well as built facilities like the State highways passing through Town and the regional high school. During recent decades, Durham has made great efforts to participate in regional efforts to coordinate actions on these shared resources and to take advantage of partnerships with others to supplement limited municipal resources. A specific list of current regional coordination efforts includes:

1. Greater Portland Council of Governments

The Greater Portland Council of Governments assisted with the preparation of this comprehensive plan update, providing needed technical assistance and mapping services to the effort as well as

providing a regional perspective to the planning process. Durham also participates in GPCOG's joint purchasing program, and this update includes many strategies for increasing assistance from the regional planning agency.

2. Mutual Aid Agreements for Fire & EMS

Durham currently has mutual aid agreements with Brunswick, Freeport, Pownal, Lisbon EMS, Lisbon Fire Department, and Auburn Fire Department.

3. Public Safety Services

Durham has no police department and relies upon the County to provide dispatching and law enforcement services. The County shares responsibility for patrol coverage of Durham with the Maine State Police Barracks in Gray.

4. Education Facilities & Services

Durham is part of Regional School Unit 5 and shares education services with Pownal and Freeport. RSU 5 participates in the Region 10 vocational and technical education services program.

5. Animal Control

Durham currently shares animal control services with the Town of Lisbon.

6. Solid Waste & Recycling

The Town contracts with Mid-Maine Waste, a regional solid waste hauler, and provides regional recycling services through Eco-Maine.

7. Road Maintenance

Durham participates in the maintenance of three State

routes passing through the Town. It also has agreements with Auburn and Pownal for snowplowing on local roadways where turnaround opportunities exist on either side of the town lines.

8. Regional Land Trusts

Durham is currently working with the Androscoggin Land Trust for maintenance of River Park and the Royal River Land Trust for management and maintenance of conservation lands and trails around Runaround Pond.

b. Proposed Regional Coordination Strategies

Although Durham's current participation in regional growth management and services efforts is significant, there are many opportunities for expanding joint efforts with surrounding communities and regional agencies. Specific recommendations of the 2018 Comprehensive Plan update include the following strategies:

1. Water Resources Policies

Strategy 3.1 Provide local contact information at the Town Hall for water quality best management practices from resources such as the Natural Resource Conservation Service, University of Maine Cooperative Extension, Soil and Water Conservation District, Maine Forest Service, and/or Small Woodlot Association of Maine.

Strategy 4.1 Participate in local and regional efforts to monitor, protect and, where warranted, improve water quality.

2. Agriculture & Forestry Policies

Strategy 1.3 Work with Maine Farmland Trust, local land trusts and other programs which offer conservation/agricultural easements and similar programs to preserve valuable farmland.

Strategy 2.6 Support the growth of an organic farm cluster to enhance local and regional agricultural opportunities.

Strategy 3.1 Facilitate meetings between local institutions, wholesalers, growers, and others to grow markets and opportunities.

Strategy 3.2 Encourage development of local-grown food networks involving all businesses in the food production chain in the region.

3. Economy Policies

Strategy 5.1 Participate in regional efforts to improve telecommunications infrastructure needed to support hi-tech, information based companies.

Strategy 6.1 Explore regional opportunities for car pooling and ride share programs.

4. Recreation Policies

Strategy 1.3 Work with Royal River Land Trust, Androscoggin Land Trust, other conservation organizations, other towns, state agencies, and landowners to explore ways to protect important open space and recreational land.

Strategy 4.1 Create a map of existing trails, abandoned roads and future trails and potential linkage with regional recreational resources, including nearby Bradbury-Pineland Corridor Trails.

5. Transportation Policies

Strategy 1.3 Coordinate the Town's road maintenance and reconstruction programs with the State's road improvements projects where possible and where it is in the Town's interests.

Strategy 4.1 Review whether Durham's transportation needs can be best met by participation in PACTS, LACTS, and/or BACTS.

Strategy 4.2 Investigate options for encouraging carpooling for com-

muters and volunteer driver networks to provide needed transportation for underserved populations.

6. Public Facilities & Services Policies

Strategy 1.1 Explore alternative options for delivery of local services, including regional sharing agreements and contracted services.

Strategy 3.6 Participate in a regional firefighter training and recruitment program with automatic/mutual aid departments and seek funding under FEMA's Staffing for Adequate Fire and Emergency Response (SAFER) and other sources.

Strategy 3.9 Collaborate with the County Sheriff's office to ensure adequate police coverage while securing an equitable funding policy.

7. Fiscal Capacity Policies

Strategy 1.4 Explore opportunities to work with neighboring communities to plan for and finance shared or adjacent capital investments to increase cost savings and efficiencies.

Strategy 1.5 Participate in regional initiatives in solid waste, transportation, and cooperative purchasing and tax assessment/ revaluation services that improve efficiency and control operating costs.

Strategy 1.13 Support legislative initiatives to increase state financial support to towns and schools.

Strategy 1.14 Advocate for required fiscal impact analysis of all State incentive programs that result in revenue losses to municipalities.

2. When will the new Comprehensive Plan be reviewed and updated again?

Maine's Growth Management Act also requires that comprehensive plans be periodically evaluated for the following results of adopting the comprehensive plan:

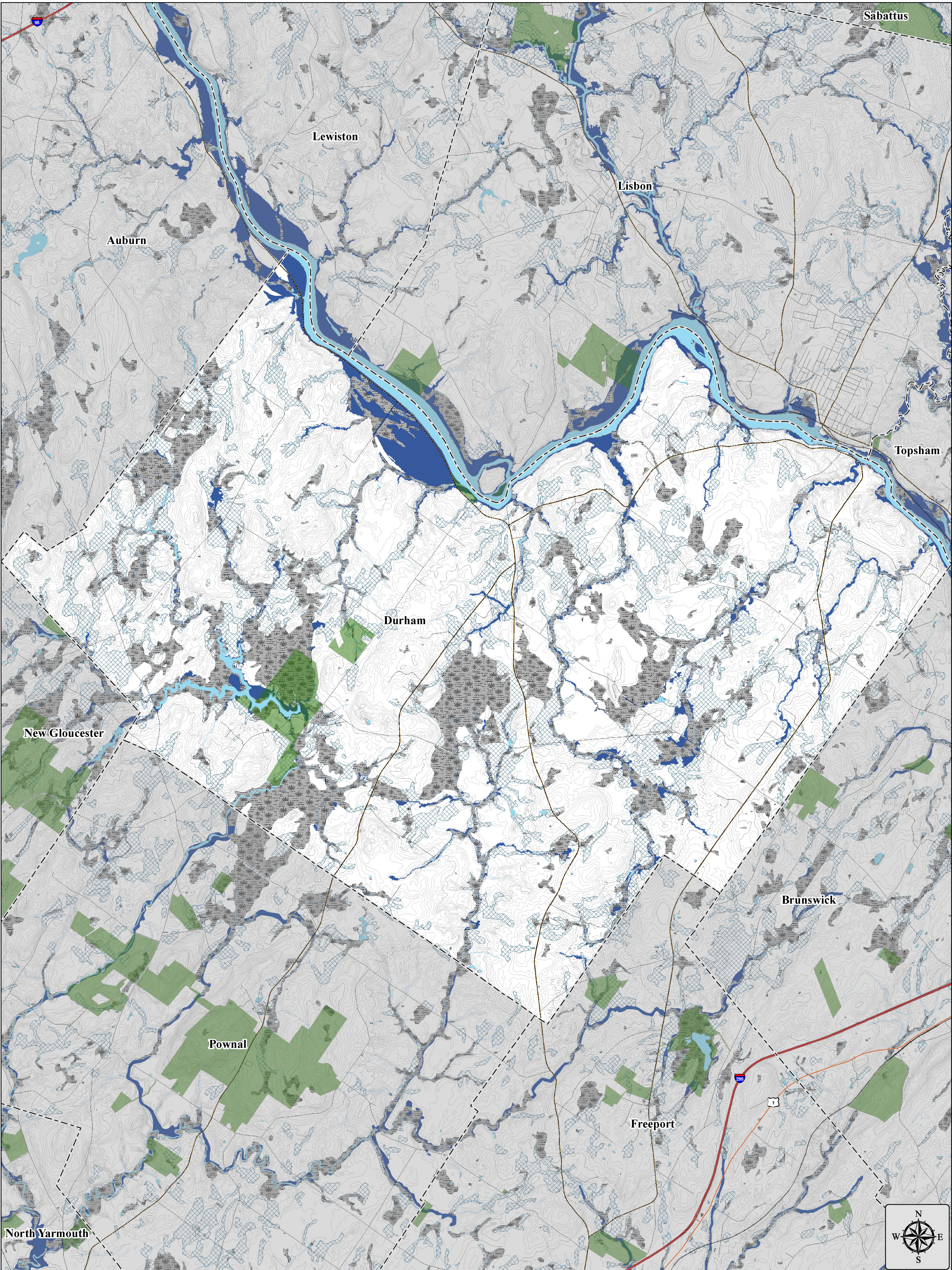
- A. The degree to which future land use plan strategies have been implemented;
- B. Percent of municipal growth-related capital investments in growth areas;
- C. Location and amount of new development in relation to community's designated growth areas, rural areas, and transition areas (if applicable)
- D. Amount of critical natural resource, critical rural, and critical waterfront areas protected through acquisition, easements, or other measures.

If the community's evaluation concludes that portions of the current plan and/or its implementation are not effective, the community is encouraged to propose changes as needed.

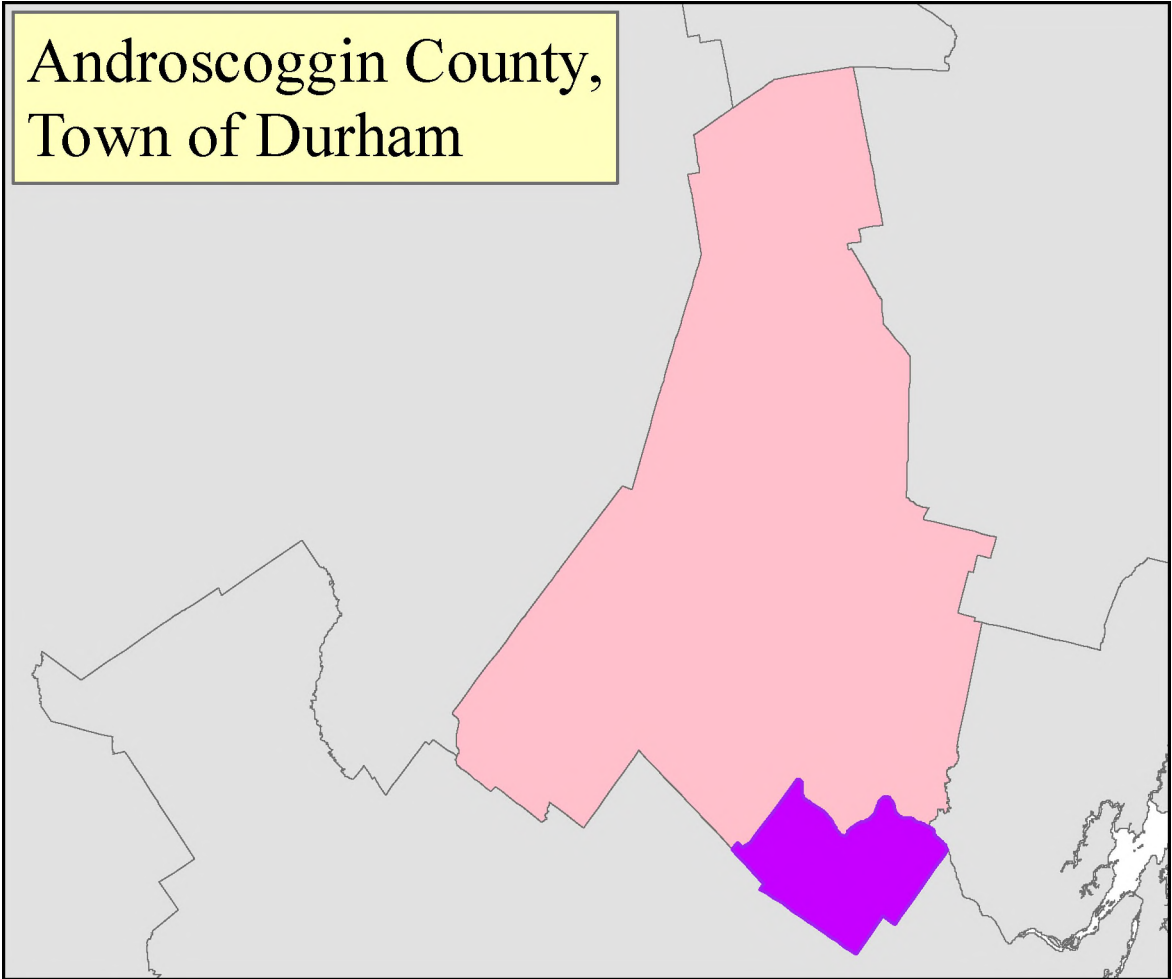
The vision and Future Land Use Plan of this comprehensive update seek to keep the whole Town rural, so items B. and C. above are not applicable to Durham. The Town should however, review implementation of the new comprehensive plan five years into its implementation to determine the degree to which its strategies have been implemented and how much effect they have had on protecting critical natural resources and critical rural areas as called for by the plan. The Town should also try to time updates to follow the US Census so it is working with the most current population and demographic data.

Appendix 1 — Maps

(Full size maps are available at
the Durham Town Offices)



Androscoggin County,
Town of Durham



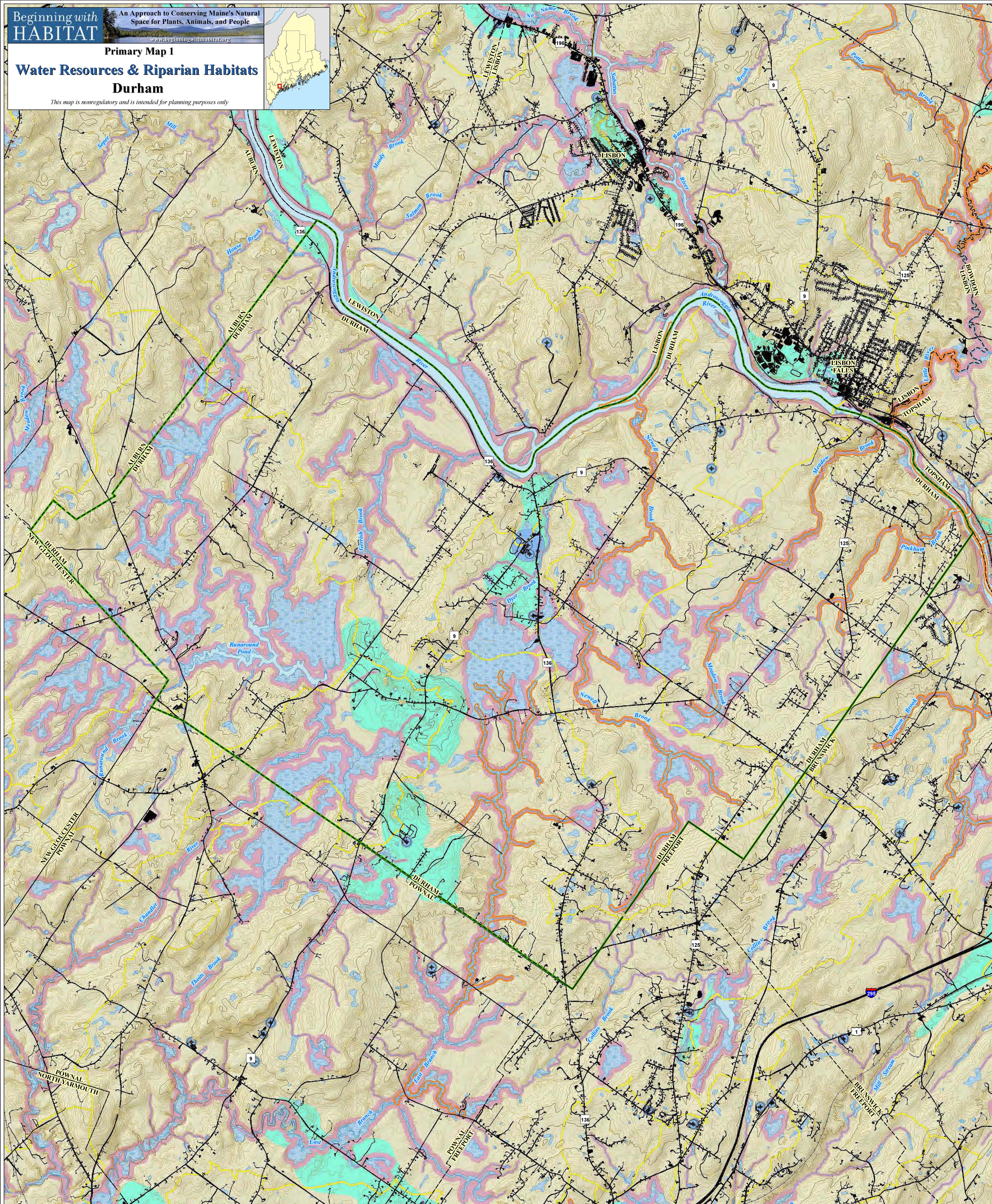
Durham Development Constraints

Source Data: USDA, MEGIS, Maine DACF
Projection: UTM, NAD83, Zone 19, Meters
Produced by: Municipal Planning
Assistance Program, DACF
October 2018















Legend

	Municipal border		Rivers/Streams
	Conserved Lands		Wetlands
	Interstate		100 year flood zone
	U.S. Routes		Hydric soils
	State Routes		
	Railroad		
	Waterbody		

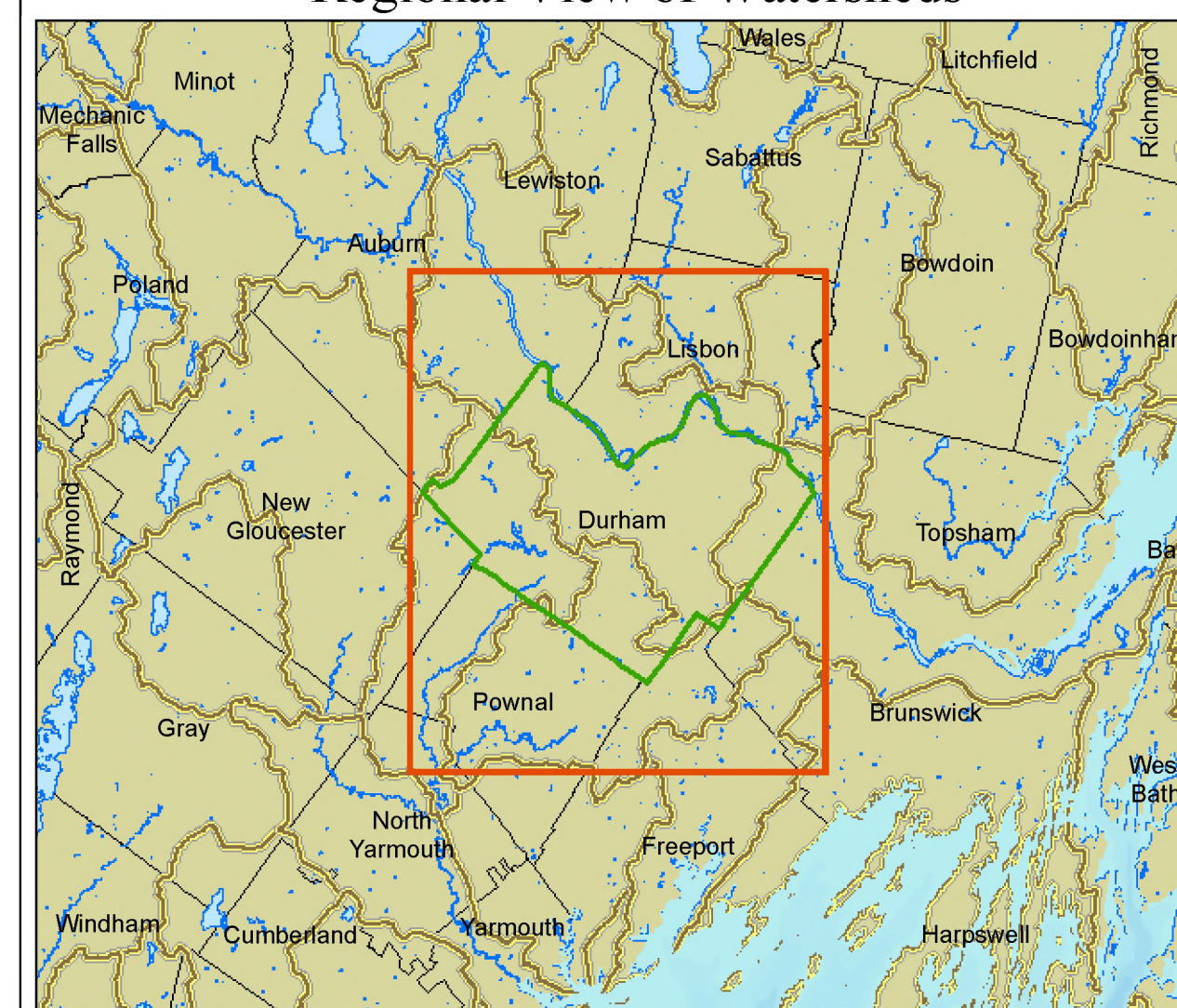


LEGEND

This map depicts riparian areas associated with major surface water features and important public water resources. This map does not depict all streams or wetlands known to occur on the landscape and should not be used as a substitute for on the ground surveys. This map should be used as a planning reference only and is intended to illustrate the natural hydrologic connections between surface water features. Protecting riparian habitats protects water quality, maintains habitat connections, and safeguards important economic resources including recreational and commercial fisheries.

-  **Selected Town or Area**
 -  **Organized Township Boundary**
 -  **Unorganized Township**
 -  **Developed** - Impervious surfaces including buildings and roads
 -  **Drainage divides** - These are the smallest hydrologic units mapped in Maine. They contain watershed boundaries for most ponds and rivers in Maine.
 -  **NWI Wetlands** - National Wetlands Inventory (NWI) uses aerial photographs to approximate wetland locations. NWI data is not a comprehensive mapping of wetland resources and typically under represents the presence of wetlands on the landscape. The presence of wetlands needs to be determined in the field prior to conducting activities that could result in wetland disturbance.
 -  **Riparian Habitat** - depicted using common regulatory zones including a 250-foot wide strip around Great Ponds (ponds ≥ 10 acres), rivers, coastline, and wetlands ≥ 10 acres and a 75-foot-wide strip around streams. Riparian areas depicted on this map may already be affected by existing land uses.
 -  **Shellfish Growing Areas** - The Maine Department of Marine Resources maps growing areas for economically important shellfish resources. This map depicts softshell and hard clam resources in order to illustrate the relation of these resources to streams and shoreline areas vital to their conservation.
 -  **Brook Trout Habitat** - Streams and ponds, buffered to 100 feet, where wild Brook Trout populations have been documented, or managed to enhance local fisheries.
 -  **Public Water Supply Wells**
 -  **Source protection area** - Buffers that represent source water protection areas for wells and surface water intakes that serve the public water supply. Their size is proportional to population served and/or by the type of water supply system. These buffers range from 300 to 2,500 feet in radius.
 -  **Aquifers** - flow of at least 10 gallons per minute

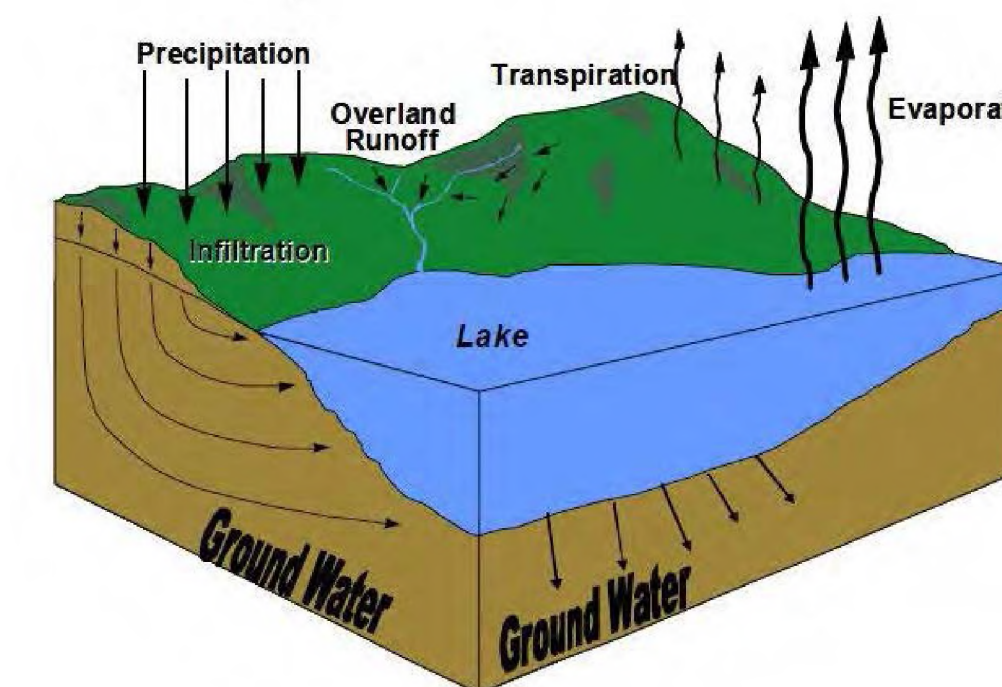
Regional View of Watersheds



A watershed includes all of the land that drains to a common waterbody. The areas within the watershed are linked ecologically by the water, sediment, nutrients, and pollutants that flow through them. For the purpose of mapping "hydrological units," watersheds are often grouped into larger drainages or divided into smaller ones depending on the map's scale. Drainage divides (shown on main map as yellow lines), are the smallest hydrological units and generally drain into small ponds, wetlands, or streams. These units are grouped into subwatersheds (HU12) and are represented on the inset map above by the yellow-brown outlines.

-  Main Map Extension
 Selected Town or Area
 Subwatersheds
 1 inch = 4 miles

Relationship of Ground Water and Surface Water



Precipitation is the source of all water. Surface water and groundwater are related. Draining water can come from either source. Ground conditions can affect both. The relationship between ground water and surface water is part of the **hydrologic cycle**. **Precipitation** that falls from the atmosphere as rain or snow reaches the land surface and recharges rivers, lakes, wetlands, and other surface bodies of water directly through **overland runoff**. Surface water also seeps into the ground through **infiltration** and eventually reaches the ground water, or through **evaporation**, returns to the atmosphere. Water evaporates from leaves and stems of plants through **transpiration**.

Shoreland Zoning

Maine's Mandatory Shoreland Zoning Act is intended to protect water quality, conserve wildlife habitat, and preserve the natural beauty of Maine's shoreline areas. Successful implementation requires local awareness of and appreciation for surface water resources and effective enforcement of setback and buffer requirements.

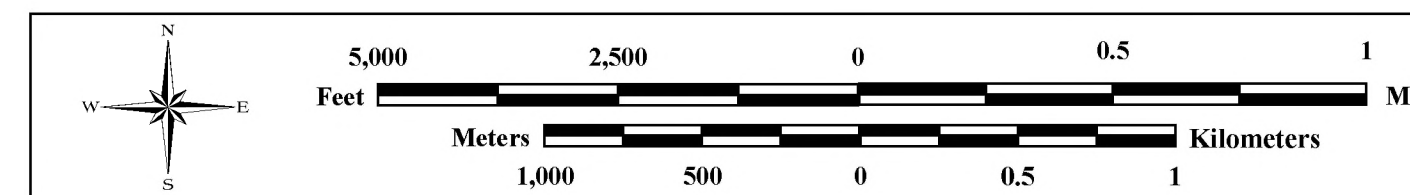
- 250 feet of the high-water line of any pond over 10 acres, any river that drains at least 25 square miles, and all tidal waters and saltwater marshes;
- 250 feet of a freshwater wetland over 10 acres (except "forested" wetlands); and
- 75 feet of a stream that is either an outlet stream of a great pond, or located below the confluence of two perennial streams as depicted on a USGS topographic map.

Shoreland zoning encourages towns to provide greater protection to their local water resources by applying shoreland zone protections to additional resource types such as smaller streams and wetlands, and rare terrestrial features. For specific guidance regarding Maine's Mandatory Shoreland Zoning Act contact the Dept. of Environmental Protection Shoreland Zoning Unit: 207-287-3901 (Augusta), 207-822-6300 (Portland), 207-941-4116 (Bangor). www.maine.gov/dep/blwq/docand/szpage.htm

Data Sources

DATA SOURCE INFORMATION	SHELLFISH
TOWNSHIP BOUNDARIES	Maine Department of Marine Resources; <i>separate_clams, hard_clams</i>
Maine Office of GIS (2013); <i>metvny24</i>	RIPARIAN BUFFERS
ROADS	Maine Office of GIS; Maine Natural Areas Program (2011)
Maine Office of GIS (2013); <i>metvny24</i>	WELLS, WELL BUFFERS
TRANSPORTATION (2015); <i>medotpub</i>	Maine Office of GIS; Maine Department of Human Services-Drinking Water Program (2011); <i>wells, wellbu</i>
HYDROLOGY	AQUIFIERS
USGS National Hydrography Dataset (NHD) (Maine 2012)	Maine Office of GIS; Maine Geological Survey (2011); <i>aquifer</i>
DEVELOPED	PALEONTOLOGICAL
Maine Office of GIS; Maine Department of Inland Fisheries and Wildlife (2015); <i>inpwild_change, 2015</i>	DRAINAGE DIVIDES
NATIONAL WETLANDS INVENTORY	Maine Office of GIS (1994); <i>medotvdr</i>
U.S. Fish & Wildlife Service (2015); <i>AWI</i>	BROOK TROUT HABITAT
	Maine Department of Inland Fisheries & Wildlife (2011)
DATA SOURCE CONTACT INFORMATION	
Maine Office of GIS; http://www.maine.gov/geogis/	
Maine Natural Areas Program; http://www.maine.gov/dnrc/magis/index.html	
Maine Department of Marine Resources; http://www.maine.gov/dmr/	
Maine Department of Transportation; http://www.maine.gov/dot/	
Maine Geological Survey; http://www.maine.gov/bsch/mcgmgs/index.html	
Maine Department of Inland Fisheries & Wildlife; http://www.maine.gov/difw/index.html	

DIGITAL DATA REQUEST
To request digital data for a town or organization, please visit our website:
http://www.beginningwithhabitat.org/the_maps/gis_data_request.html



Scale: 1:24,000
Projection: UTM
Datum: NAD 1983

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Space for Plants, Animals, and People

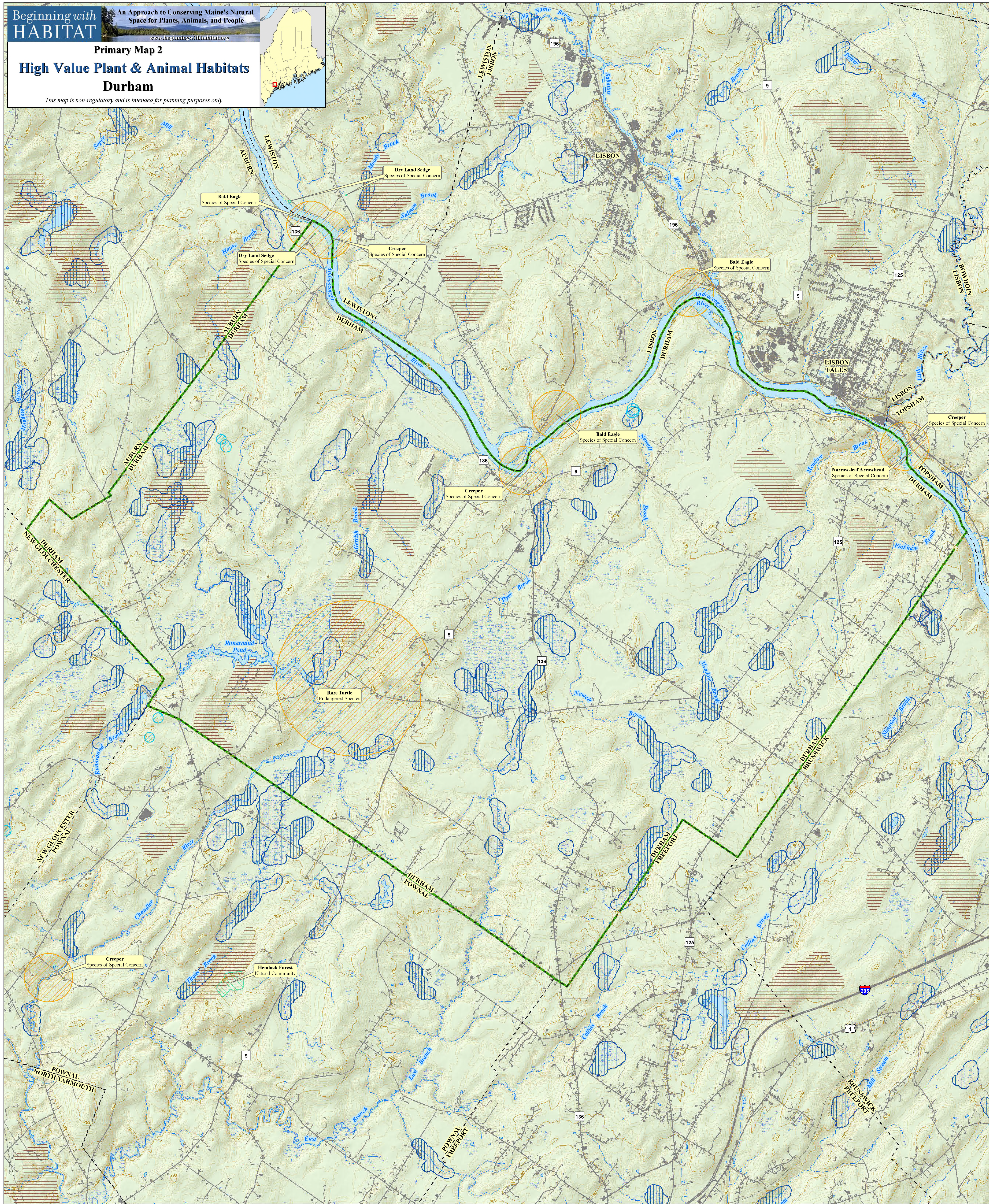
www.beginningwithhabitat.org

Primary Map 2

High Value Plant & Animal Habitats

Durham

This map is non-regulatory and is intended for planning purposes only



LEGEND

Beginning with Habitat (BwH) is a voluntary tool intended to assist landowners, resource managers, planners, and municipalities in identifying and making informed decisions about areas of potential natural resource concern. This data includes the best available information provided through BwH's coalition partners as of the map date, and is intended for information purposes only. It should not be interpreted as a comprehensive analysis of plant and animal occurrences or other local resources, but rather as an initial screen to flag areas where agency consultation may be appropriate. Habitat data sets are updated continuously as more accurate and current data becomes available. However, as many areas have not been completely surveyed, features may be present that are not yet mapped, and the boundaries of some depicted features may need to be revised. Local knowledge is critical in providing accurate data. If errors are noted in the current depiction of resources, please contact our office. Some habitat features depicted on this map are regulated by the State of Maine through the Maine Endangered Species Act (Essential Habitats and threatened and endangered species occurrences) and Natural Resources Protection Act (Significant Wildlife Habitat). We recommend consultation with MDIFW Regional Biologists or MNP Ecologists if activities are proposed within resource areas depicted on this map. Consultation early in the planning process usually helps to resolve regulatory concerns and minimize agency review time. For MDIFW and MNP contact information, visit <http://www.beginningwithhabitat.org/contacts/index.html>.

- Organized Township Boundary
- Unorganized Township
- Selected Town or Area of Interest
- Developed: impervious surfaces such as buildings and roads

Rare, Threatened, or Endangered Wildlife

Known rare, threatened, or endangered species occurrence and/or the associated habitats based on species sightings.

Consult with an MDIFW regional biologist to determine the relative importance and conservation needs of the specific location and supporting habitat. The names of some species have been masked with a "Rare Animal" designation on the map for further protection. For more information regarding individual species visit our website, http://www.maine.gov/fw/wildlife/endangered/listed_species_me.htm, for species specific fact sheets.

The Federal Endangered Species Act requires actions authorized, funded, or carried out by federal agencies be reviewed by the U. S. Fish and Wildlife Service. If your project occurs near an occurrence of the Atlantic Salmon, Roseate Tern, Piping Plover, Canada Lynx, New England Cottontail, Fish's Lousewort, or Small-whorled Pagnia contact the Maine Field Office, USFWS, 1168 Main St., Old Town, ME 04468.

Rare or Exemplary Plants and Natural Communities

Known rare, threatened, or endangered plant occurrences are based on field observations. The names of some species have been masked with a "Rare Plant" designation on the map for further protection. Consult with a Maine Natural Areas Program (MNAP) Ecologist to determine conservation needs of particular species. For more information regarding rare plants the complete list of tracked species and fact sheets for those species can be found at: <http://www.maine.gov/doc/nrim/mnap/features/plantlist.htm>

Rare or Exemplary Natural Community Locations

The MNAP has classified and distinguished 99 different natural community types that collectively cover the state's landscape. These include such habitats as floodplain forests, coastal bogs, alpine summits, and many others. Each type is assigned a rarity rank of 1 (rare) through 5 (common). Mapped rare natural communities or ecosystems, or exemplary examples of common natural communities or ecosystems, are based on field surveys and aerial photo interpretation. Consult with an MNAP Ecologist to determine conservation needs of particular communities or ecosystems.

Essential Wildlife Habitats

Roseate Tern Nesting Area or Piping Plover-Least Tern Nesting, Feeding, & Brood-Rearing Area

Maine's Department of Inland Fisheries & Wildlife (MDIFW, www.state.me.us/fw) maps areas currently or historically providing habitat essential to the conservation of endangered or threatened species as directed by the Maine Endangered Species Act (12 MRSA, Chapter 925, Subchapter 3, Sections 12804 and 12806) and regulations (MDIFW Rules, Chapter 8.05). Identification of Essential Habitat areas is based on species observations and confirmed habitat use. If a project occurs partly or wholly within an Essential Habitat, it must be evaluated by MDIFW before state and/or municipal permits can be approved or project activities can take place.

Significant Wildlife Habitats

- Candidate Deer Wintering Area
- Forested area possibly used by deer for shelter during periods of deep snow and cold temperatures. Assessing the current value of a deer wintering area requires on-site investigation and verification by IF&W staff. Locations depicted should be considered as approximate only.
- Inland Waterfowl / Wading Bird
- Freshwater breeding, migration/staging, and wintering habitats for inland waterfowl or breeding, feeding, loafing, migration, or roosting habitats for inland wading birds.
- Seabird Nesting Island
- An island, ledge, or portion thereof in tidal waters with documented, nesting seabirds or suitable nesting habitat for endangered seabirds.
- Shorebird Areas
- Coastal staging areas that provide feeding habitat like tidal mud flats or roosting habitat like gravel bars or sand spits for migrating shorebirds
- Tidal Waterfowl / Wading Bird
- Breeding, migrating/staging, or wintering areas for coastal waterfowl or breeding, feeding, loafing, migrating, or roosting areas for coastal wading birds. Tidal Waterfowl/Wading Bird habitats include aquatic beds, eelgrass, emergent wetlands, mudflats, seaweed communities, and reefs.
- Significant Vernal Pools
- A pool depression used for breeding by amphibians and other indicator species and that portion of the critical terrestrial habitat within 250 ft of the spring or fall high water mark. A vernal pool must have the following characteristics: natural origin, nonpermanent hydroperiod, lack permanently flowing inlet or outlet, and lack predatory fish.

Maine's Natural Resources Protection Act

Maine's Natural Resources Protection Act (NRPA, 1988) is administered by the Maine Department of Environmental Protection (MDEP, <http://www.maine.gov/dep/bwq/docstnd/nrpapage.htm>) and is intended to prevent further degradation and loss of natural resources in the state, including the above Significant Wildlife Habitats that have been mapped by MDIFW. MDEP has regulatory authority over most Significant Wildlife Habitat types. The regional MDEP office should be consulted when considering a project in these areas.

Atlantic Salmon Spawning/Rearing Habitat

- Atlantic Salmon Rearing Habitat
- Atlantic Salmon Spawning Habitat
- Atlantic Salmon Limited Spawning Habitat

Mapped by Atlantic Salmon Commission (ASC) and US Fish & Wildlife Service (USFWS) from field surveys on selected Penobscot and Kennebec River tributaries and the Denny's, Ducktrap, East Machias, Machias, Pleasant, Narragagus, and Sheepscot Rivers.

Data Sources

DATA SOURCE INFORMATION
TOWNSHIP BOUNDARIES
Maine Office of GIS: Metwp24 (2013)
ROADS
Maine Office of GIS, Maine Department of Transportation: Medotpub (2015)
HYDROLOGY
U.S. Geological Survey National Hydrography Dataset (NHD) Maine (2012)
DEVELOPED
Maine Office of GIS, Maine Department of Inland Fisheries and Wildlife, and multiple other agencies: Imperv (2015)
ESSENTIAL & SIGNIFICANT WILDLIFE HABITATS
Maine Office of GIS, Maine Department of Inland Fisheries & Wildlife: DWA, ETSC, Ehlpmv, Ehltrm, IWWH, Sni, Shorebird, TWWH (2003-2015)
RARE NATURAL COMMUNITIES & PLANTS
Maine Natural Areas Program: MNAP_2003 (2015)
ATLANTIC SALMON HABITAT
Maine Office of GIS, Maine Atlantic Salmon Commission, U.S. Fish & Wildlife Service: Aash3 (2013)
DATA SOURCE CONTACT INFORMATION
Maine Office of GIS: <http://www.maine.gov/mgis/catalog/>
Maine Natural Areas Program: <http://www.maine.gov/doc/nrim/mnap/index.html>
Maine Department of Inland Fisheries & Wildlife: <http://www.maine.gov/fw/>
U.S. Fish & Wildlife Service, Gulf of Maine Program: <http://gulfofmaine.fws.gov>
Maine Atlantic Salmon Commission: <http://www.maine.gov/asc/>
Maine Department of Transportation: <http://www.maine.gov/mdot/>

DIGITAL DATA REQUEST
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Map Prepared by Maine
Department of Inland
Fisheries & Wildlife
January 2018

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Maine Outdoor
Heritage Fund
Lottery ticket sales

Supported in part by
Maine
Conservation
Rate funds

The Nature Conservancy
Protecting nature. Preserving life.

MAINE
AUDUBON

Maine Coast Heritage Trust
A Statewide Land Conservation Organization

1:24,000 Scale
Projection: UTM 19N
Datum: NAD 1983

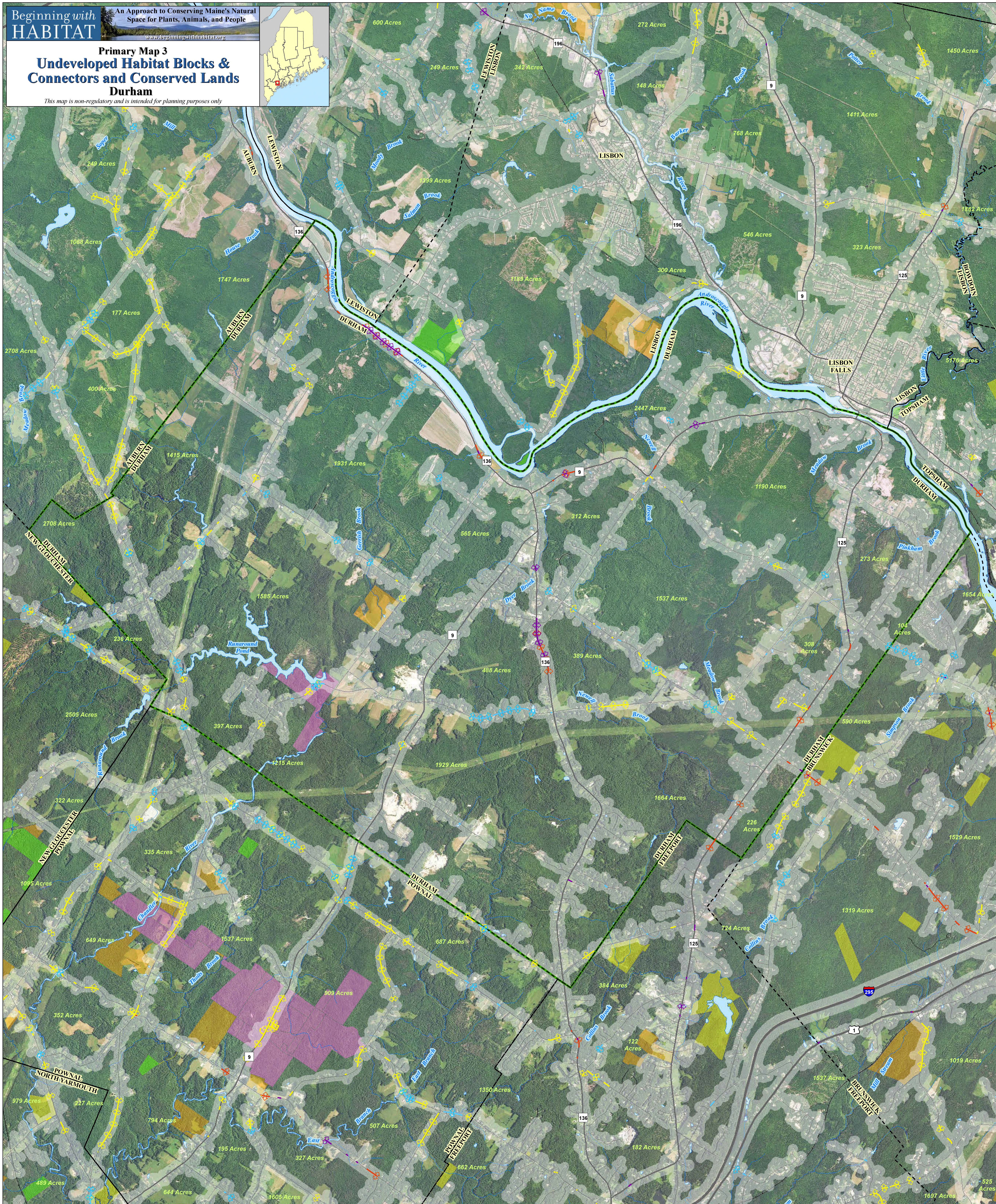
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Primary Map 3
**Undeveloped Habitat Blocks &
Connectors and Conserved Lands**
Durham

This map is non-regulatory and is intended for planning purposes only



LEGEND

This map highlights undeveloped natural areas likely to provide core habitat blocks and habitat connections that facilitate species movements between blocks. Undeveloped habitat blocks provide relatively undisturbed habitat conditions required by many of Maine's species. Habitat connections provide necessary opportunities for wildlife to travel between preferred habitat types in search for food, water, and mates. Roads and development fragment habitat blocks and can be barriers to moving wildlife. By maintaining a network of interconnected blocks towns and land trusts can protect a wide variety of Maine's species—both rare and common—to help ensure rich species diversity long into the future. Maintaining a network of these large rural open spaces also protects future opportunities for forestry, agriculture, and outdoor recreation.

Organized Township Boundary

Unorganized Township

Selected Town or Area of Interest

Habitat Blocks

Development Buffer (pale transparency)
250-500 foot buffer around improved roads and developed areas based on development intensity

Undeveloped Habitat Block
Remaining land outside of Development Buffers. Blocks greater than 100 acres are labeled with their estimated acreage

Approximate Road Crossing Habitat Connections

Represented habitat connections identified through computer modeling highlight locations where quality habitat is likely to occur on both sides of a given road between undeveloped habitat blocks greater than 100 acres and between higher value wetlands. These representations are approximate and have not been field verified.

Undeveloped Block Connectors

Likely road crossing areas linking undeveloped habitat blocks greater than 100 acres. The threat of habitat fragmentation and animal mortality corresponds to traffic volume.

Yellow lines represent habitat road crossings with daily traffic volumes less than 2000 vehicles per day

Red lines represent habitat road crossings with daily traffic volumes greater than 2000 vehicles per day

Riparian Connectors

Likely crossing locations for wetland dependent species moving between waterways and wetlands divided by roads

Blue lines represent riparian road crossings with daily traffic volumes less than 2000 vehicles per day

Purple lines represent riparian road crossings with daily traffic volumes greater than 2000 vehicles per day

Highway Bridge Connectors

Highway bridges along I-95 and I-295 that span riparian habitat connecting adjacent but separated habitat blocks. These are locations where species are likely to take advantage of infrastructure to move between habitat blocks.

Conserved Lands

The State of Maine's conserved lands database includes lands in federal, state, and non-profit ownership. It does not include many privately owned conservation lands, especially those protected by local land trusts, or town owned conservation lands. For the most accurate and current information about land ownership, consult with the local assessor and/or other local land management agencies. If public access potential to any of the properties displayed here is uncertain, landowners should be contacted to determine if permission is necessary.

Ownership Type (transparent layers)

Federal
National parks, forests, and wildlife refuges. (Includes Canadian conserved lands.)

State
Wildlife Management Areas and other properties managed by the Department of Inland Fisheries and Wildlife, state parks, and parcels managed by the Bureau of Parks & Lands.

Municipal
Town parks, water district properties, community forests, etc.

Private Conservation
Properties owned and managed by private (usually non-profit) organizations such as The Nature Conservancy, Maine Coast Heritage Trust, Trust for Public Land, and local land trusts.

Easement
Voluntary legal agreements that allow landowners to realize economic benefit by permanently restricting the amount and type of future development and other uses on all or part of their property as they continue to own and use it.

Aerial Imagery

Aerial imagery is often the best tool available to visualize existing patterns of development and resulting changes in the natural landscape. By depicting undeveloped habitat blocks, habitat connectors and conserved lands with aerial photos, the map user can more easily identify opportunities to expand the size and ecological effectiveness of local conservation efforts.

Regional Undeveloped Blocks

Data Sources

DATA SOURCE INFORMATION

TOWNSHIP BOUNDARIES
Maine Office of GIS: metwp24 (2013)

ROADS
Maine Office of GIS, Maine Department of Transportation: medotpub (2015)

HYDROLOGY
U.S. Geological Survey: NHD_Maine (2012)

UNDEVELOPED HABITAT BLOCKS, DEVELOPMENT BUFFER, CONNECTORS
Maine Department of Inland Fisheries and Wildlife (2015)

CONSERVED LANDS
Maine Department of Agriculture, Conservation, and Forestry, Land Use Planning Commission, Maine Department of Inland Fisheries and Wildlife.
Conserved Lands (2015)

AERIAL IMAGERY
U.S. Department of Agriculture: NAIP 2013 - state-wide 1-meter color orthoimagery

DATA SOURCE CONTACT INFORMATION

Maine Office of GIS - <http://www.maine.gov/megis/catalog/>
Maine Dept. of Agriculture, Conservation and Forestry - <http://www.maine.gov/dacf/>
Maine Dept. of Inland Fisheries & Wildlife - <http://www.maine.gov/ifw/>
Maine Department of Transportation - <http://www.maine.gov/mdot/>
Maine Department of Environmental Protection - <http://www.maine.gov/dep/>

DIGITAL DATA REQUEST

To request digital data for a town or organization, visit our website.
http://www.beginningwithhabitat.org/the_maps/gis_data_request.html

Scale: 1:24,000
Projection: UTM 19N
Datum: NAD 1983



LEGEND

This map depicts all wetlands shown on National Wetland Inventory (NWI) maps, but categorized them based on a subset of wetland functions. This map and its depiction of wetland features neither substitute for nor eliminate the need to perform on-the-ground wetland delineation and functional assessment. In no way shall use of this map diminish or alter the regulatory protection that all wetlands are accorded under applicable State and Federal laws. For more information about wetlands characterization, contact Elizabeth Hertz at the Maine Department of Conservation (207-287-8061, elizabeth.hertz@maine.gov).

The Wetlands Characterization model is a planning tool intended to help identify likely wetland functions associated with significant wetland resources and adjacent uplands. Using GIS analysis, this map provides basic information regarding what ecological services various wetlands are likely to provide. These ecological services, each of which has associated economic benefits, include: floodflow control, sediment retention, finfish habitat, and/or shellfish habitat. There are other important wetland functions and values not depicted in this map. Refer to www.maine.gov/dep/water/wetlands/ipwetf2.html for additional information regarding wetland functions and values. Forested wetlands and small wetlands such as vernal pools are known to be underrepresented in the National Wetlands Inventory (NWI) data used to create this map. The model developed to estimate the functions provided by each wetland could not capture every wetland function or value. Therefore, it is important to use local knowledge and other data sources when evaluating wetlands, and each wetland should be considered relative to the whole landscape/watershed when assessing wetland resources at a local level.

Wetland Functions: Fill Pattern

Some wetlands may have more than one function (fill pattern)

RUNOFF / FLOODFLOW ALTERATION
Wetlands provide natural stormwater control capabilities. As natural basins in the landscape, wetlands are able to receive, detain, and slowly release stormwater runoff. Wetland shelves along stream banks naturally regulate flood waters by providing an area for swollen stream flows to expand and slow, thereby protecting downstream properties. This map assigns Runoff/Floodflow Alteration Functions to wetlands that are (a) contained in a known flood zone, (b) associated with a surfacewater course or waterbody, and (c) with slope < 3%.

AND/OR EROSION CONTROL / SEDIMENT RETENTION
Wetlands act as natural sponges that can hold water, allowing suspended particles such as sediment to settle out. The dense vegetation in most wetlands helps to stabilize soil and slow water flows, thereby reducing scouring and bank erosion. This map assigns Erosion Control / Sediment Retention functions to wetlands with (a) slope < 3%, (b) emergent vegetation, and (c) close proximity to a river, stream, or lake.

FINFISH HABITAT
Wetlands with documented finfish populations, including wetlands adjacent to a river, stream, or lake.

AND/OR SHELLFISH HABITAT
Inland wetlands and streams can directly affect the status of coastal shellfish harvest areas. Fecal coliform bacteria and waterborne nutrients resulting from land use changes away from the coast can travel via surface water to harvestable flats. One failed septic system near a stream could close a mudflat several miles away. Excessive nutrients can reduce water clarity and stimulate epiphytic growth that degrades eelgrass meadows. Conservation of freshwater wetlands and stream buffers in coastal watersheds is a key component in marine resource conservation. This map assigns a Shellfish Habitat function to wetlands within 0.5 miles of (a) identified shellfish habitat, (b) identified shellfish closure areas, or (c) mapped eelgrass beds OR palustrine wetlands directly connected by a stream of < 0.5 mile in length to (a) identified shellfish habitat, (b) identified shellfish closure areas, or (c) mapped eelgrass beds.

PLANT/ANIMAL HABITAT
Nearly all wildlife species, and many of Maine's plant species, depend on wetlands during some part of their life cycle. For the purposes of this map, wetlands containing open water or emergent vegetation, 3 or more wetland vegetation classes (see below), and within 1/4 mile of a known rare, threatened, or endangered plant or animal occurrence, within 1/4 mile of a mapped significant or essential habitat, or within 1/4 mile of a rare or exemplary natural community have been assigned this function. Rare element occurrences and mapped habitats can be found on Map 2 High Value Plant & Animal Habitats.

OTHER FUNCTIONS
CULTURAL/EDUCATIONAL Wetlands within 1/4 mile of a boat ramp or school have been assigned this value as these wetlands are likely candidates for use as outdoor classrooms, or similar social/educational facilities. Wetlands rated for other functions listed above may also demonstrate cultural/educational values although not expressly shown.
OR
NO DOCUMENTED FUNCTION. The basis of this characterization is high altitude aerial photos. Photo quality often limits the information that can be interpreted from small wetland features, or those with dense canopy cover. Although not assigned a function under this study, ground surveys may reveal that these wetlands have multiple functions and values.

Wetland Class: Fill Color

Aquatic Bed (floating or submerged aquatic vegetation), Open Water

Emergent (herbaceous vegetation), Emergent/Forested Mix (woody vegetation >20 ft tall), Emergent/Shrub-Scrub Mix (woody vegetation <20 ft tall)

Forested, Forested/Shrub-scrub

Shrub-scrub

Other (rocky shore, streambed, unconsolidated shore, reef, rocky bottom)

National Wetlands Inventory (NWI) maps (the basis of wetlands shown on this map) are interpreted from high altitude photographs. NWI Wetlands are identified by vegetation, hydrology, and geography in accordance with "Classification of Wetlands and Deepwater Habitats" (FWS/OBS-79/31, Dec 1979). The aerial photographs document conditions for the year they were taken. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, State, or local government. NWI maps depict general wetland locations, boundaries, and characteristics. They are not a substitute for on-ground, site-specific wetland delineation.

Data Sources

DATA SOURCE INFORMATION
(note: italicized file names can be downloaded from Maine Office of GIS)
TOWNSHIP BOUNDARIES
Maine Office of GIS (2015); *metwp24*
ROADS
Maine Office of GIS, Maine Department of Transportation (2015); *medotub*
HYDROLOGY
Maine Office of GIS, U.S. Geological Survey (2010); *NHD*
DEVELOPED
Maine Office of GIS, Maine Department of Inland Fisheries and Wildlife (2015)
NATIONAL WETLANDS INVENTORY (NWI)
Maine Office of GIS (2015); *NWI*
DRAINAGE DIVIDES
Maine Office of GIS (2015); *medrdiv*

DATA SOURCE CONTACT INFORMATION
Maine Office of GIS: <http://www.maine.gov/mgis/>
Maine Department of Transportation: <http://www.maine.gov/mdot/>
Maine Department of Agriculture, Conservation and Forestry: <http://www.maine.gov/dacf/planning/index.html>
Maine Geological Survey: <http://www.maine.gov/doc/nrmcm/mgs/mgs.html>

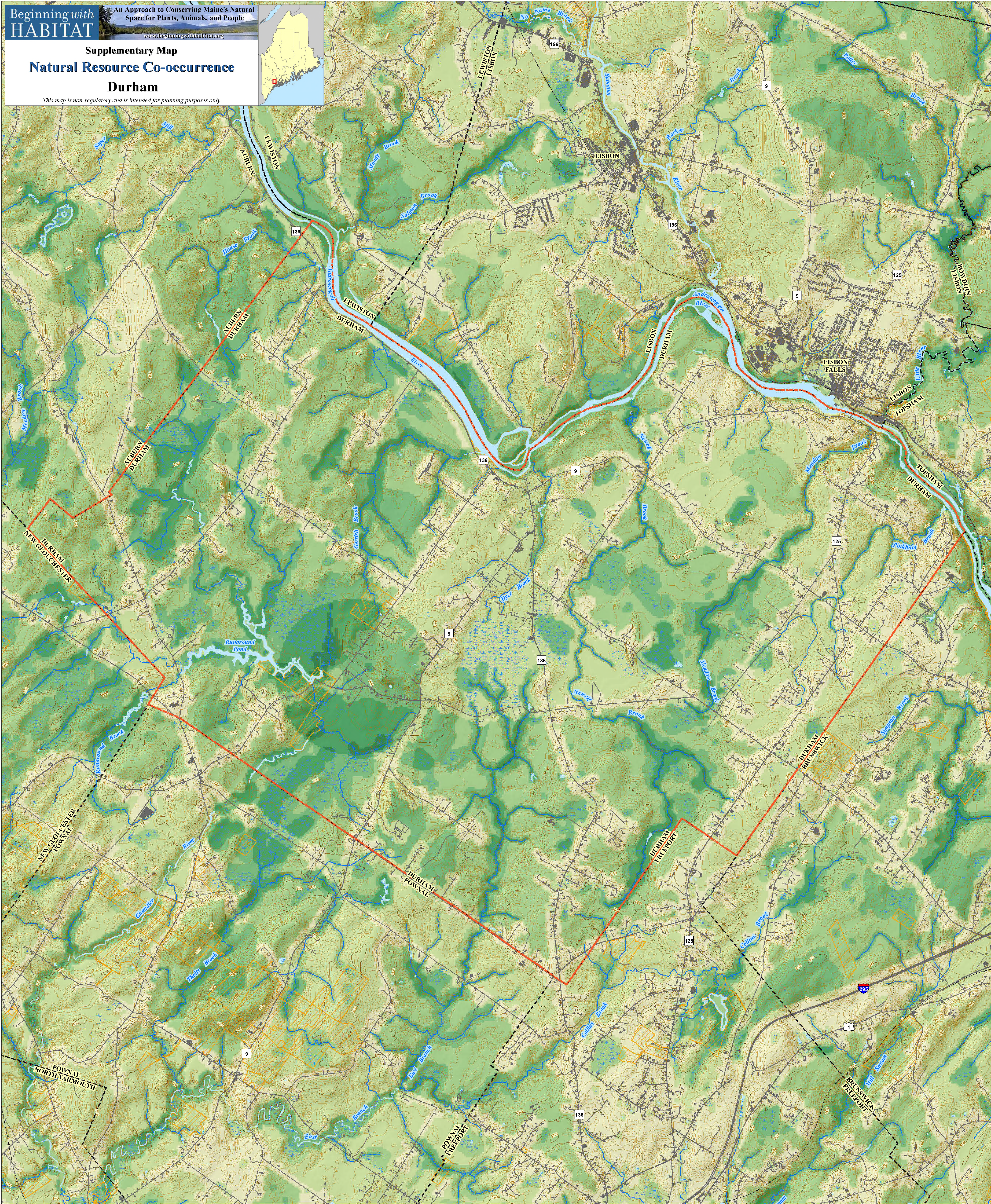
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Supported in part by Maine Outdoor Heritage Fund Lottery ticket sales

Map Prepared by Maine Department of Inland Fisheries & Wildlife January 2018

Supported in part by Local Conservation Rate funds

THANK YOU



Legend

This map represents the concentration of selected environmental asset data layers overlaid on the landscape. Its purpose is to highlight a given area's relative conservation values as an aid in planning. It offers a generalized and subjective view and should be considered as a starting point for discussion. The layers on this map include buffer zones around water features, important natural communities, listed plant and animal species, areas of undeveloped land, and conserved properties. Some of these layer attributes have been weighted based on qualitative features, such as rarity or size, and are noted below. Cooccurrence modeling is extremely flexible, allowing for the addition, substitution, and relative weighting of data and attributes that best reflect the particularities and priorities of a given area or community. This map draws on data that is depicted on the standard Beginning with Habitat map set, but should still be considered as both supplementary and as work in development.

- Organized Township Boundary
- Unorganized Township
- Selected Town or Area of Interest
- Developed: Impervious surfaces such as buildings and roads
- Conservation Land

Selected Resource Layers and Assigned Values

Geographic Information System (GIS) software provides a ready means to help identify areas of high resource cooccurrence. The selected data layers of interest are assigned a relative weight, or value, and then overlaid on one another. The values are then summed, classified, and symbolized, revealing the concentration of attributes in a given landscape. (Some of the layers listed may not apply to, or be present on, the area represented by this map.)

Rare and Exemplary Natural Communities

- S1 (Critically Imperiled). Value of 4
- S2 (Imperiled). Value of 4
- S3 (Rare). Value of 3
- S4 and S5 with A or B viability (Exemplary). Value of 3

Rare Plants

- S1 (Endangered). Value of 3
- S1S2 - S2 (Threatened). Value of 2
- S2S3 - S3 (Special Concern). Value of 1

Listed Animals

- Endangered Species (with buffer). Value of 3
- Threatened Species (with buffer). Value of 2
- Species of Special Concern (with buffer). Value of 1

Significant Wildlife Habitats

- Shorebird Habitat. Value of 3
- Seabird Nesting Islands. Value of 3
- Essential Wildlife Habitat. Value of 3
- Wading Bird and Waterfowl Habitats (inland and tidal). Value of 2
- Deer Wintering Areas. Value of 1
- Significant Vernal Pools (with 500' buffer). Value of 1
- Atlantic Salmon Habitat. Value of 2
- Heritage Brook/Trout Waters. Value of 2
- Shellfish Beds. Value of 1

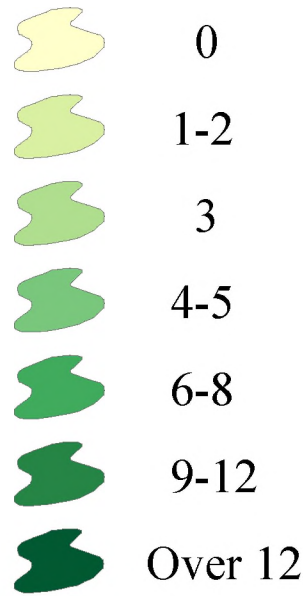
Riparian Zones and Water Resources

- Tidal waters 250' buffer. Value of 2
- Great Ponds 250' buffer. Value of 1
- Rivers 250' buffer. Value of 1
- Streams 75' buffer. Value of 1
- Wetlands greater than 10 acres plus 250' buffer. Value of 1
- Wetlands less than 10 acres plus 75' buffer. Value of 1
- Groundwater Aquifers. Value of 1

Undeveloped Habitat Blocks

- Areas over 1200 acres. Value of 3
- Areas of 600 to 1200 acres. Value of 2
- Areas of 200 to 600 acres. Value of 1

Sum of Attribute Values



Focus Areas

Focus Areas of Statewide Ecological Significance (note: not present in all regions)

Focus Areas of Statewide Ecological Significance have been designated based on an unusually rich convergence of rare plant and animal occurrences, high value habitat, and relatively intact natural landscapes (the combined elements of Beginning with Habitat Maps 1-3). Focus area boundaries were drawn by MNAP and MDIFW biologists, generally following drainage divides and/or major fragmenting features such as roads. Focus Areas are intended to draw attention to these truly special places in hopes of building awareness and garnering support for land conservation by landowners, municipalities, and local land trusts. For descriptions of specific Focus Areas, consult the Beginning with Habitat notebook or the following website: <http://www.maine.gov/dacf/mnap/focusarea/index.htm>

Data and Information Sources

DATA SOURCES

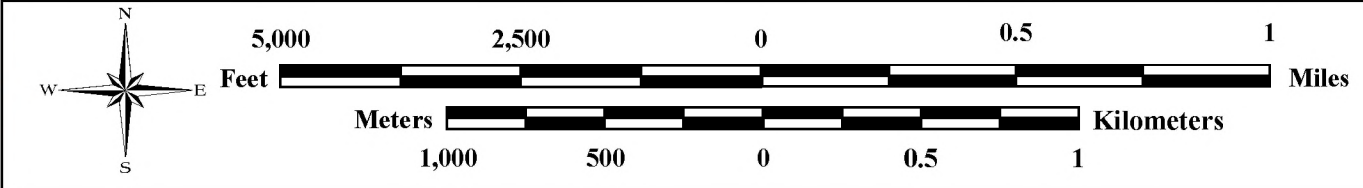
- TOWNSHIP BOUNDARIES**
 - Maine Office of GIS: *Metwp24* (2013)
- ROADS**
 - Maine Office of GIS, Maine Department of Transportation: *Medotpub* (2015)
- HYDROLOGY**
 - U.S. Geological Survey National Hydrography Dataset (NHD) Maine (2012)
- DEVELOPED**
 - Maine Office of GIS, Maine Department of Inland Fisheries and Wildlife, and multiple other agencies: *Imperv* (2015)
- ESSENTIAL & SIGNIFICANT WILDLIFE HABITATS**
 - Maine Office of GIS, Maine Department of Inland Fisheries & Wildlife: *DWA, ETSC, Ephem, Ethern, WWH, Sni, Shorebird, TWWH* (2003-2015)
- RARE NATURAL COMMUNITIES & PLANTS**
 - Maine Natural Areas Program: *MNAP_eos* (2015)
- ATLANTIC SALMON HABITAT**
 - Maine Office of GIS, Maine Atlantic Salmon Commission, U.S. Fish & Wildlife Service: *Ashab3* (2013)

DATA SOURCE CONTACTS

- Maine Office of GIS: <http://www.maine.gov/megis/catalog/>
- Maine Natural Areas Program: <http://www.maine.gov/dacf/mnap/index.html>
- Maine Department of Inland Fisheries & Wildlife: <http://www.maine.gov/ifw/>
- U.S. Fish & Wildlife Service, Gulf of Maine Program: <http://gulfofmaine.fws.gov>
- Maine Atlantic Salmon Commission: <http://www.maine.gov/asco/>
- Maine Department of Transportation: <http://www.maine.gov/mdot/>

DIGITAL DATA REQUEST

To request digital data for a town or organization, please visit our website. http://www.beginningwithhabitat.org/the_maps/gis_data_request.html

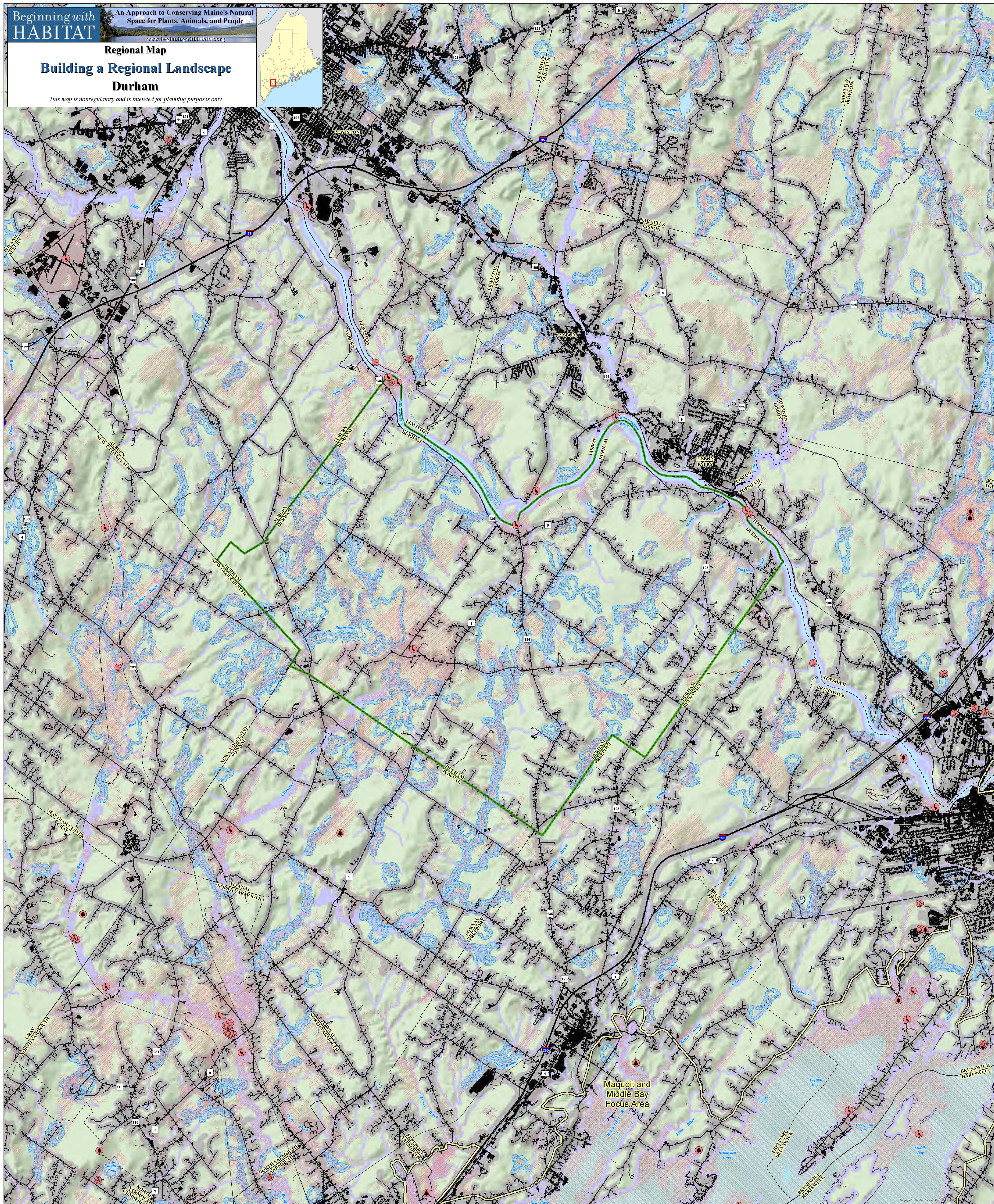


1:24,000 Scale
Universal Transverse Mercator (UTM) Projection
North American Datum (NAD) 1983



Map Prepared by Maine
Department of Inland
Fisheries & Wildlife
January 2018





LEGEND

The data presented here represents a compilation of core Beginning with Habitat map products. Comprehensive field surveys do not exist for all areas in Maine, so some important habitats may not be mapped. Habitat features on this map are based on limited field surveys, aerial photo interpretation, and computer modeling. Habitat data is updated regularly. Map users should consult with the Beginning with Habitat program to verify that data illustrated on this map is still current prior to utilizing it for planning decisions.

This regional map provides a landscape view of water resources, high value plant and animal habitats, and undeveloped habitat blocks. For more detailed information please consult the 1:24,000 (town level) Beginning with Habitat "Water Resources and Riparian Habitats", "High Value Plant and Animal Habitats" and "Undeveloped Habitat Blocks" maps. Availability of town level maps can be found at: www.beginningwithhabitat.org/the_maps/map_availability.html

- Organized Township Boundary
- Unorganized Township
- Selected Town or Area of Interest
- Developed Area of impervious surfaces including buildings and roads

MAP 1: Water Resources and Riparian Habitats

Riparian Buffer

Ponds ≥ 10 acres (Great Ponds), rivers, coastal waters, and wetlands ≥ 10 acres in size are surrounded by a 250 foot riparian buffer zone. Streams are surrounded by a 75 foot riparian buffer zone.

NWI Wetlands ≥ 10 Acres

The National Wetlands Inventory (NWI) uses aerial photographs from the mid-1980s to identify wetlands based on visible signs of wetland vegetation, hydrology, and geography. The NWI maps are not based on field wetland delineations and given the limits of aerial photo interpretation, do not depict all wetlands that occur. Ground verification should be used to determine actual wetland boundaries and NWI maps should be considered as only a planning tool to determine potential wetland locations.

MAP 2: High Value Plant and Animal Habitats

Essential Wildlife Habitats (MDIFW)

Maine's Department of Inland Fisheries & Wildlife (MDIFW, www.maine.gov/fw) maps areas currently or historically providing habitat essential to the conservation of endangered or threatened species including roseate terns, piping plovers, and least terns as directed by the Maine Endangered Species Act. These regulated areas may require special management. Identification of Essential Habitat areas is based on species observations (occupancy). For more information about Essential Wildlife Habitats, go to www.maine.gov/inlandfisheries/species/essential_habitat/introduction.htm. These habitat layers also may be downloaded from the Maine Office of GIS Data Catalog at <http://apollo.ogis.state.me.us/catalog>.

Significant Wildlife Habitats (MDIFW)

Maine's Natural Resources Protection Act (NRPA, 1988) was intended to slow further degradation and loss of Maine's natural resources. This act regulates activities within and adjacent to wetlands, streams, and other natural resources, but also regulates activities that could threaten the state's Significant Wildlife Habitats. Mapped Significant Wildlife Habitats include tidal and inland waterfowl/wading bird habitat, deer wintering areas, seabird nesting islands, shorebird areas, and significant vernal pools. For more information about NRPA, go to: www.maine.gov/depl/bwldocs/nd/nrpage.htm.

Natural Heritage Network Occurrences (Plants/Animals/Communities)

Plants- Observations of plants cataloged by the Maine Natural Areas Program (MNAP) that are rare in Maine. Locations have been field-verified within the last 20 years.

Animals- Observations of wildlife species that are endangered, threatened, or rare in Maine. Mapped by the Maine Department of Inland Fisheries and Wildlife.

Communities- The MNAP has classified and distinguished 98 different natural community types that collectively cover the state's landscape. These include such habitats as floodplain forests, coastal bogs, alpine summits, and many others. Each type is assigned a rarity rank of 1 (rare) through 5 (common). Mapped rare natural communities or ecosystems, or exemplary examples of common natural communities or ecosystems, are based on field surveys and aerial photo interpretation. Consult with an MNAP ecologist to determine conservation needs of particular communities or ecosystems.

High Value Habitat for Priority Trust Species (USFWS)

This data layer portrays the highest value habitat from the Gulf of Maine Watershed Habitat Analysis, a habitat suitability model developed by the U.S. Fish & Wildlife Service (USFWS) Gulf of Maine Coastal Program. The analysis evaluated existing field data and scientific literature for 91 species of fish, wildlife, and plants important to USFWS in the Gulf of Maine watershed and ranked the landscape based on potential habitat for each species. This theme shows only the most important habitat (top 25%) for all species combined and excludes areas less than 5 acres. For more information about the Gulf of Maine Watershed Habitat Analysis please visit: <http://www.fws.gov/GOMCP/identify.html> and http://www.fws.gov/GOMCP/identify_gomwatershed_techrep.html

MAP 3: Undeveloped Habitat Blocks

Undeveloped Habitat Blocks (MDIFW)

Undeveloped habitat blocks are areas with relatively little development and that provide opportunity for meaningful habitat conservation. These areas remain mostly unfragmented and are likely to include habitat conditions of a quality that could be expected to support most terrestrial species known to occur in the given region. Undeveloped habitat blocks have been depicted on this map by removing areas within 250-500 feet, based on intensity, of all improved roads identified by the Maine Department of Transportation and all developed areas identified in the 2006 MELCD Land Use/Land Cover and 2005 Impervious Surface data.

Development Buffer (MDIFW)

(note: transparent layer)

Areas defined by a 250-500 foot, intensity based zone of influence around all improved roads identified by the Maine Department of Transportation and all developed areas identified in the 2006 MELCD Land Use/Land Cover and 2005 Impervious Surface data.

Focus Areas

Focus Areas of Statewide Ecological Significance (note: not present in all regions)

Focus Areas of Statewide Ecological Significance have been designated based on an unusually rich convergence of rare plant and animal occurrences, high value habitat, and relatively intact natural landscapes (the combined elements of Beginning with Habitat Maps 1-3). Focus area boundaries were drawn by MNAP and MDIFW biologists, generally following drainage divides and/or major fragmenting features such as roads. Focus Areas are intended to draw attention to these truly special places in hopes of building awareness and garnering support for land conservation by landowners, municipalities, and local land trusts. For descriptions of specific Focus Areas, consult the Beginning with Habitat notebook or the following website: <http://www.maine.gov/dacf/mmap/focusarea/index.htm>

Data and Information Sources

DATA SOURCE INFORMATION

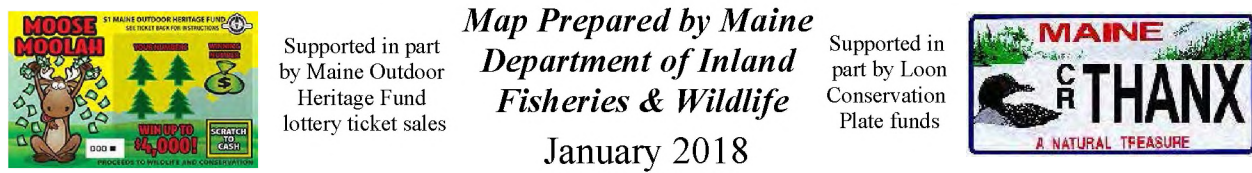
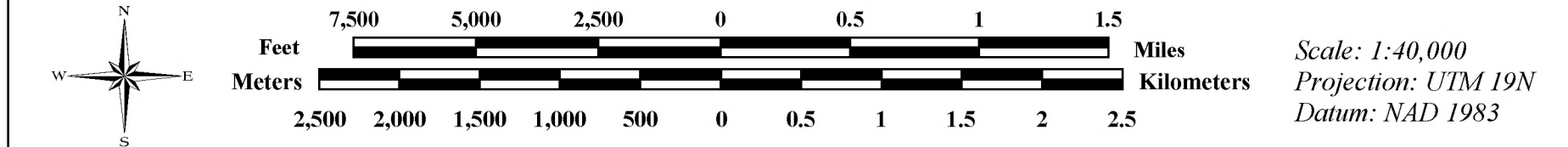
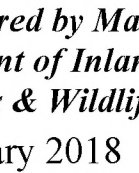
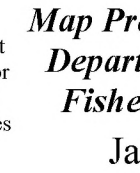
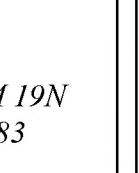
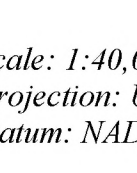
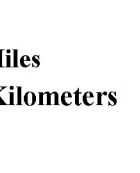
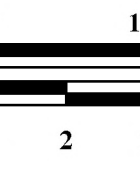
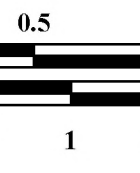
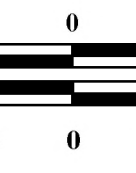
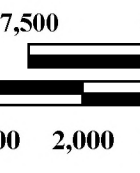
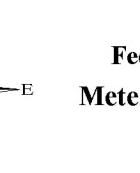
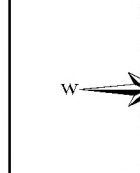
TOWNSHIP BOUNDARIES
Maine Office of GIS; *metwp24*
ROADS
Maine Office of GIS, Maine Department of Transportation; *medotpub*, *E911trds*, *railroadsys*
HYDROLOGY
U.S. Geological Survey; *NHDH Maine*
DEVELOPED
Maine Office of GIS, Maine Department of Environmental Protection; *imperv*
FOCUS AREA BOUNDARIES
Maine Natural Areas Program
NATIONAL WETLANDS INVENTORY
U.S. Fish & Wildlife Service; *NWI*
RIPIARIAN BUFFERS
Maine Natural Areas Program
HIGH VALUE PLANT & ANIMAL HABITATS
Maine Office of GIS, Maine Dept. of Inland Fisheries & Wildlife, Maine Natural Areas Program, U.S. Fish & Wildlife Service; *ehpvtm*, *ehrtm*, *shorebird*, *iwwh*, *shorezone*, *iwwh*, *snl*, *forest91*, *fresh91*, *grass91*, *saline91*, *goml7c*, *dwa*, *svpbuffers*
PLANTS, ANIMALS, AND NATURAL COMMUNITIES
Maine Department of Inland Fisheries & Wildlife, Maine Natural Areas Program
UNDEVELOPED HABITAT BLOCKS, DEVELOPMENT BUFFER
Maine Department of Inland Fisheries & Wildlife

DATA SOURCE CONTACT INFORMATION

Maine Office of GIS: <http://www.maine.gov/megis/>
Maine Natural Areas Program: <http://www.maine.gov/dacf/mnap>
Maine Department of Inland Fisheries & Wildlife: <http://www.maine.gov/ifw/>
U.S. Fish & Wildlife Service: Gulf of Maine Coastal Program- <http://www.fws.gov/GOMCP/>
Maine Department of Transportation: <http://www.maine.gov/dot/>

DIGITAL DATA REQUEST

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Appendix 2 —
Request for Exemption
for Growth Areas

[illegible]

Prepared by George Thebargue AICP

REQUEST FOR EXEMPTION FROM STATE REQUIREMENT FOR DESIGNATED GROWTH AREAS

Durham's Rate of Growth Ordinance

In 2002, the Town of Durham approved at Town Meeting and submitted a comprehensive plan update recommending that the Southwest Bend Growth District be designated as a growth area. The primary motivation for submitting the draft plan with a designated growth area was to support adoption of a rate of growth ordinance that limits issuance of building permits for new housing units to 45 in any calendar year. This decision to adopt a cap on housing starts was precipitated by a building boom in southern Maine and similar ordinances being adopted in neighboring communities. As indicated in Table 1, since adoption of the building permit cap in 2004, the cap has never been exceeded, and the low rate of housing starts since the great recession has led to its being completely ignored.

In addition to a current and foreseeable lack of need for a cap on issuance of building permits for new housing starts, the *Durham Growth Management and Establishment of Districts Ordinance* (a rate of growth ordinance) adopted in 2004 is potentially invalid for two reasons. First, Title 30-A, Chapter 187, §4314 M.R.S.A. requires that any rate of growth ordinance enacted in Maine be consistent with a comprehensive plan adopted in accord-

ance with the State requirements for comprehensive plans.

The 2002 Durham Comprehensive Plan update was determined by the State Planning Office (SPO) to be inconsistent with legal requirements for comprehensive plans (Letter from Frank Hample SPO, 12/20/2002).

The second reason to conclude that the *Durham Growth Management Ordinance* is in all probability invalid is that it does not meet statutory requirements for enactment of rate of growth ordinances. Title 30-A M.R.S.A., Chapter 187, §4360 sets out a specific formula for setting the rate of growth that is based on issuing 105 percent or more of the average number of permits issued for the prior 10 years.

The Rate of Growth Ordinance statute further requires that at least 10 percent of the building permits issued for new housing be dedicated to affordable housing units.

Finally, the Rate of Growth Ordinance statute requires that the number of building and development permits for new residential dwellings be recalculated every 3 years.

It is unclear whether the original enactment of the *Durham Growth Management Ordinance* that caps new housing starts at 45 per year was based on a calculation of the number of housing unit permits issued over the prior 10 years. It is clear, however, that the *Growth Management Ordinance* makes no provision for affordable housing units as required by Maine law. It is also clear that the Town has not recalculated the rate every 3 years since its adoption in 2004.

Table 1—New Housing Starts 2000-2017

2000—47 Housing Starts	2009—13 Housing Starts
2001—52 Housing Starts	2010—(Not Reported)
2002—73 Housing Starts	2011—(Not Reported)
2003—45 Housing Starts	2012—(Not Reported)
2004—42 Housing Starts	2013—6 Housing Starts
2005—33 Housing Starts	2014—7 Housing Starts
2006—29 Housing Starts	2015—5 Housing Starts
2007—27 Housing Starts	2016—18 Housing Starts
2008—18 Housing Starts	2017—14 Housing Starts

Purpose of a Designated Growth Area

The purpose of designating one or more growth areas in a community is to direct the majority of future growth to those areas and thereby avoid sprawling development throughout the community, particularly in rural areas.

The tools needed to successfully direct future development to growth areas include providing the infrastructure (roads, utilities, etc.) necessary to support denser development and changes to zoning to allow more compact neighborhoods. Durham has no public utilities, and it lacks the fiscal capacity to develop them. In recent years, the number of housing starts has dropped to less than 15 per year, and demographic projections indicate that the rate will drop to half that amount over the next 20 years. At this pace, the private sector will also lack the investment capital needed to support public utilities or a growth area in Durham.

Based on the lack of need for a cap on housing starts and the lack of financial capacity to support a growth area, the Town is seeking exemption from the requirement to designate growth areas. One of the requirements for a community to qualify for the Growth Area Exemption is a prohibition on growth caps or rate-of-growth ordinances (Chapter 208, Section 4.B).

Therefore, the Durham *Growth Management and Establishments of Districts Ordinance* (a rate of growth ordinance) adopted in 2004 must be repealed in order to qualify for the exemption. In addition to a warrant article on the 2019 Town Meeting Warrants seeking approval of the 2018 Durham Comprehensive Plan, a second warrant article will request repeal of the 2004 Durham *Growth Management and Establishment of Districts Ordinance*. A third

warrant article will propose an Addendum to the draft comprehensive plan update to include a framework for instituting one or more designated growth areas and a corresponding rate of growth ordinance should development conditions indicate a need in the future.

Growth Area Exemption Request Basis

The State recognizes that in some communities, conditions may make the identification of specific areas for residential, institutional, commercial, and/or industrial growth inappropriate. These conditions, as described in 30-A M.R.S.A., §4326(3-A) and Section 4.5 of Chapter 208, include:

- (1) Severe physical limitations;
- (2) Minimal or no growth; or,
- (3) The lack of a village or densely populated area.

Communities with one or more of these conditions may develop a Future Land Use Plan that does not identify growth areas for residential, institutional, commercial, or industrial growth pursuant to the criteria identified in Section 4.5. If a growth area exemption is proposed, the plan's description of existing trends and conditions must support the exemption request.

As indicated in Section III of the 2018 Comprehensive Plan update (Inventory and Analysis), there are no physical limitations such as floodplains, mountains, or unstable soils that would prevent creation of one or more growth areas in Durham, so the town could not qualify under the first exemption criterion of severe physical limitations.

The State defines "Minimal or no growth" as residential development in the community that is characterized by: (1) Less than five (5) percent population growth over the previous ten (10) years; and (2) Less than fifty (50) units of residential housing, including apartment, condominium, and seasonal units, constructed over previous ten (10) years. Durham's

population grew by more than 15 percent between 2000 and 2015, and there were more than 50 units of housing built over the past 10 years, so it unlikely the Town could qualify as having minimal or no growth.

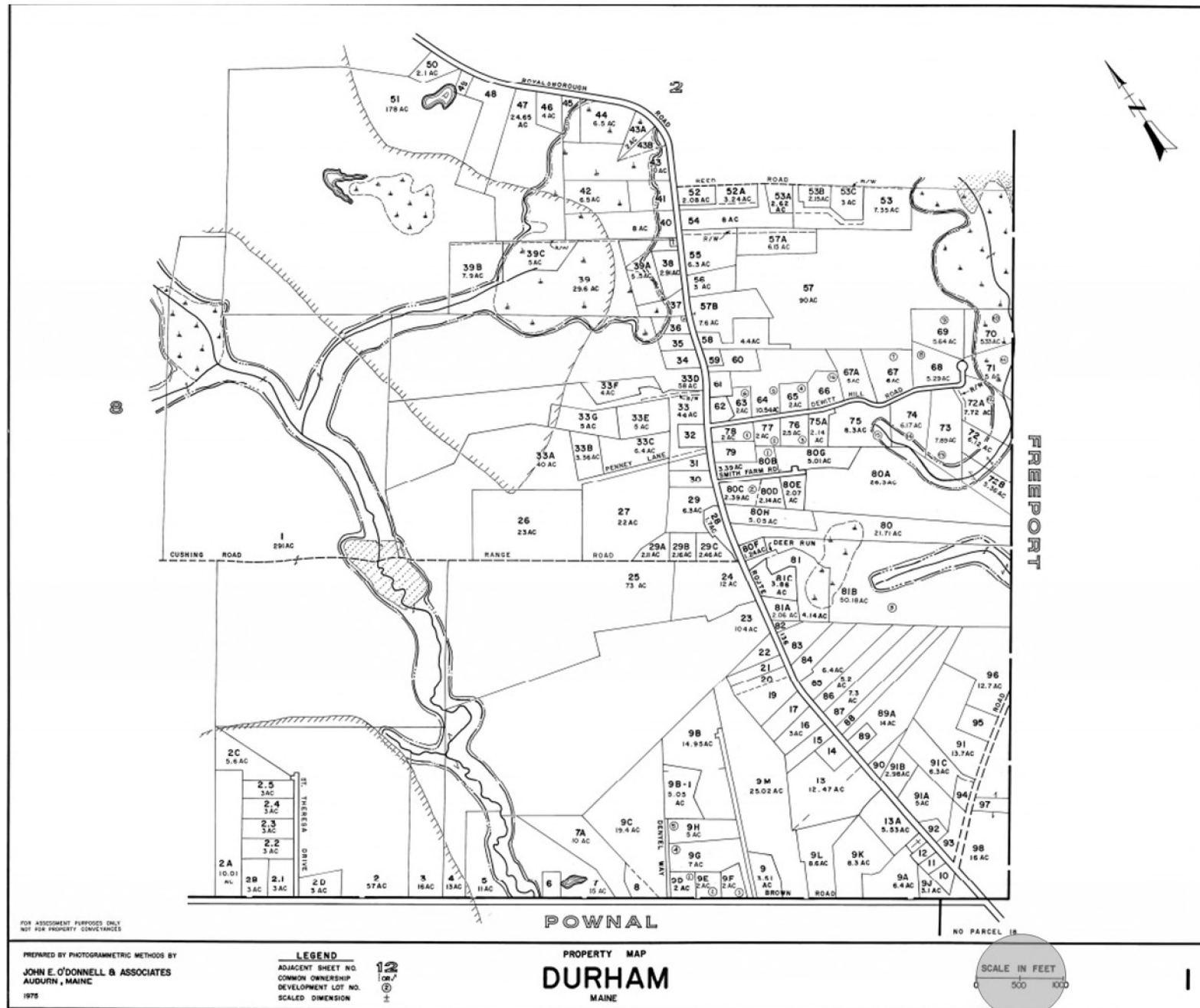
That leaves the third exemption criterion of the lack of a village or densely populated area. The State has established the following criteria for determining whether there is an existing village or densely populated area that could serve as a nucleus for a future growth area:

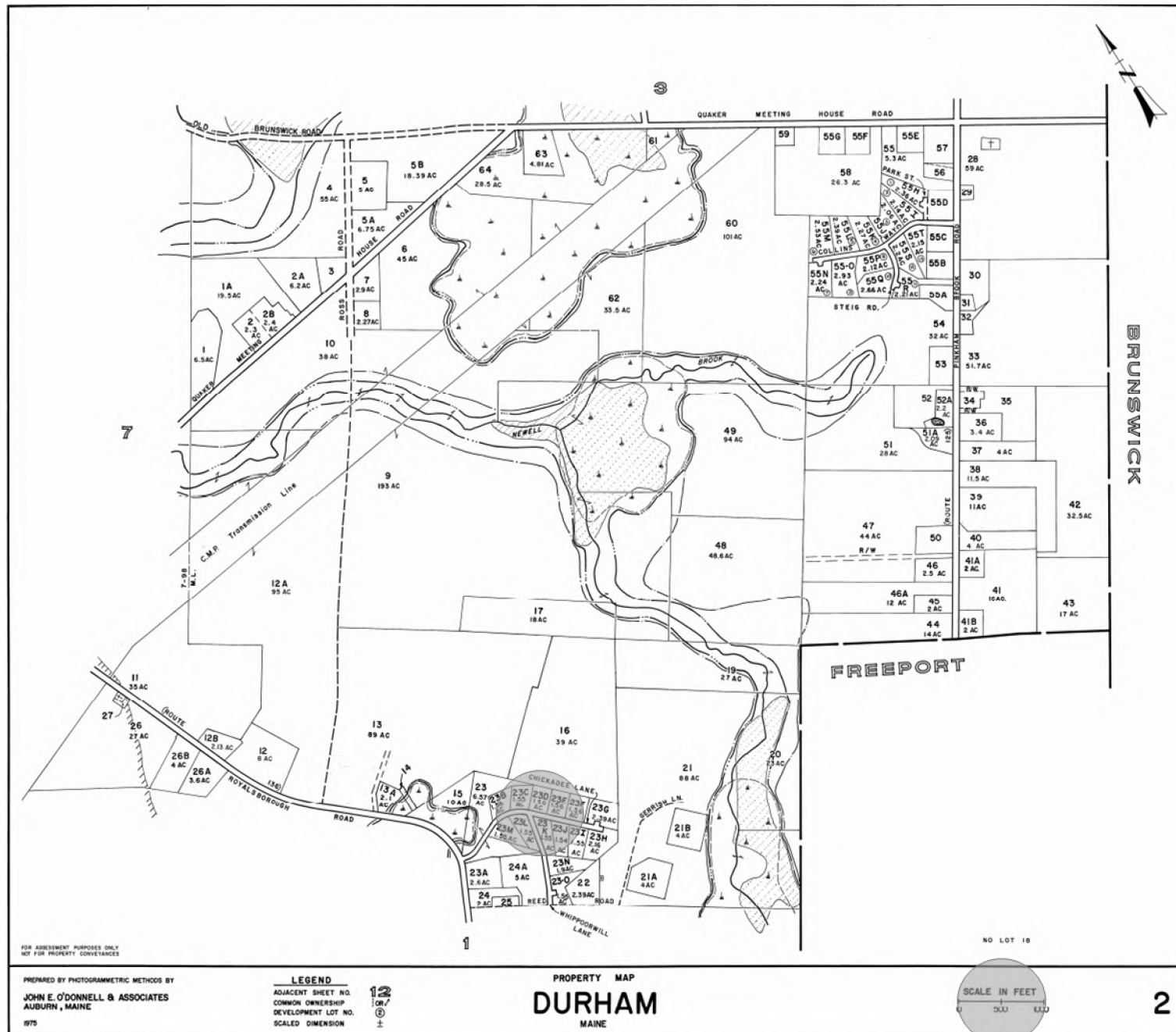
- (1) Except for shoreland zones, the community has no land areas with residential dwelling densities greater than one unit per two acres within an area encompassed by any 500-foot radius; and,
- (2) The community has no land areas with village characteristics, such as a compact mix of commercial, civic, and residential development or a mix of housing types; and,
- (3) The community has no municipal or quasi-public water or wastewater systems.

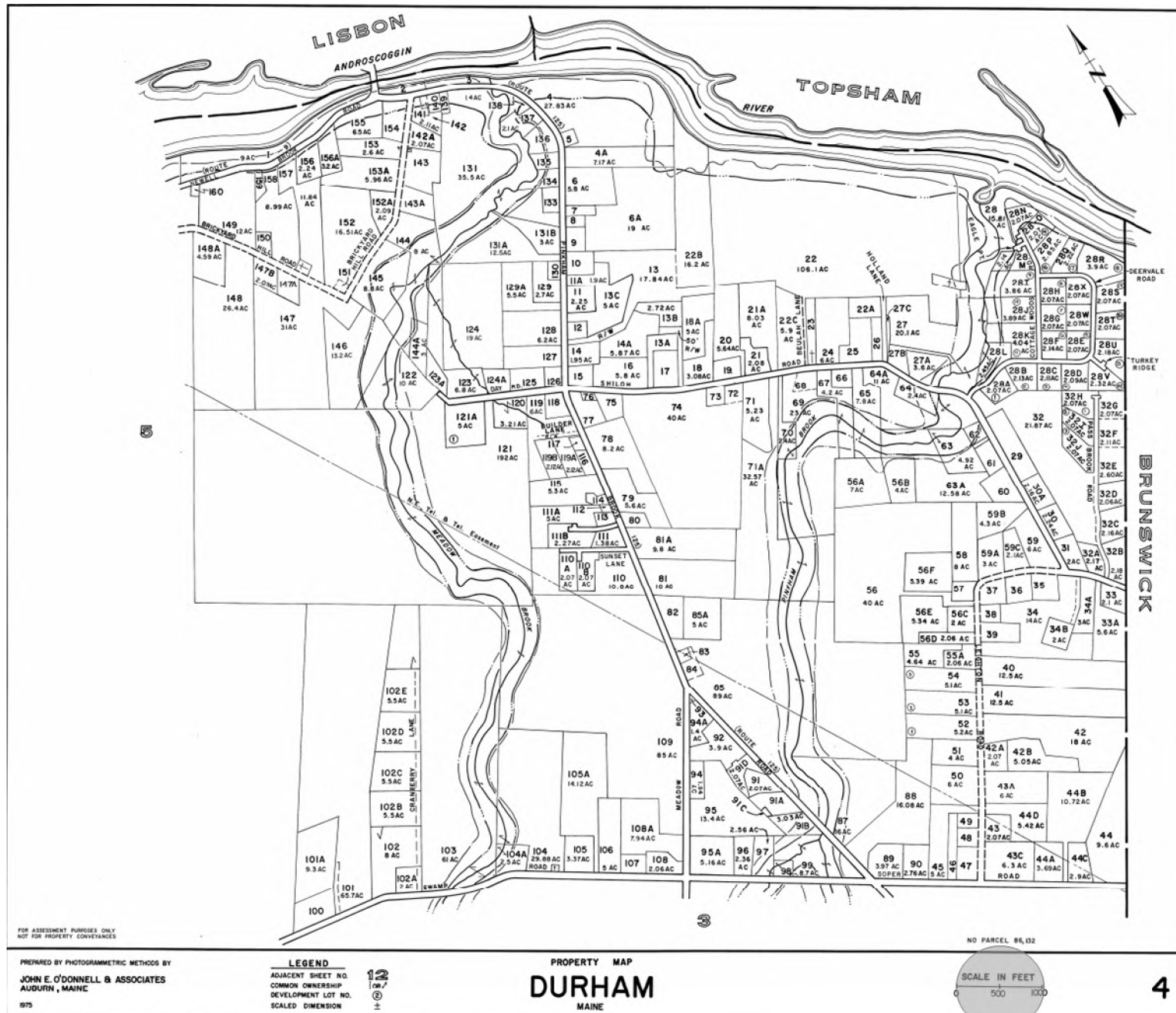
There are no municipal or quasi-public water or wastewater systems in Durham, nor are there land areas with village characteristics such as a compact mix of commercial, civic, and residential development or a mix of housing types. The following pages contain an analysis of the Durham property tax maps to determine whether there are any existing land areas with a density greater one unit per 2 acres. The entire town has a minimum lot size of 2 acres. The only exception is for planned unit developments (cluster) where minimum lot size can be reduced from 2 acres to 1 acre, provided that an equivalent area is set aside as common open space.

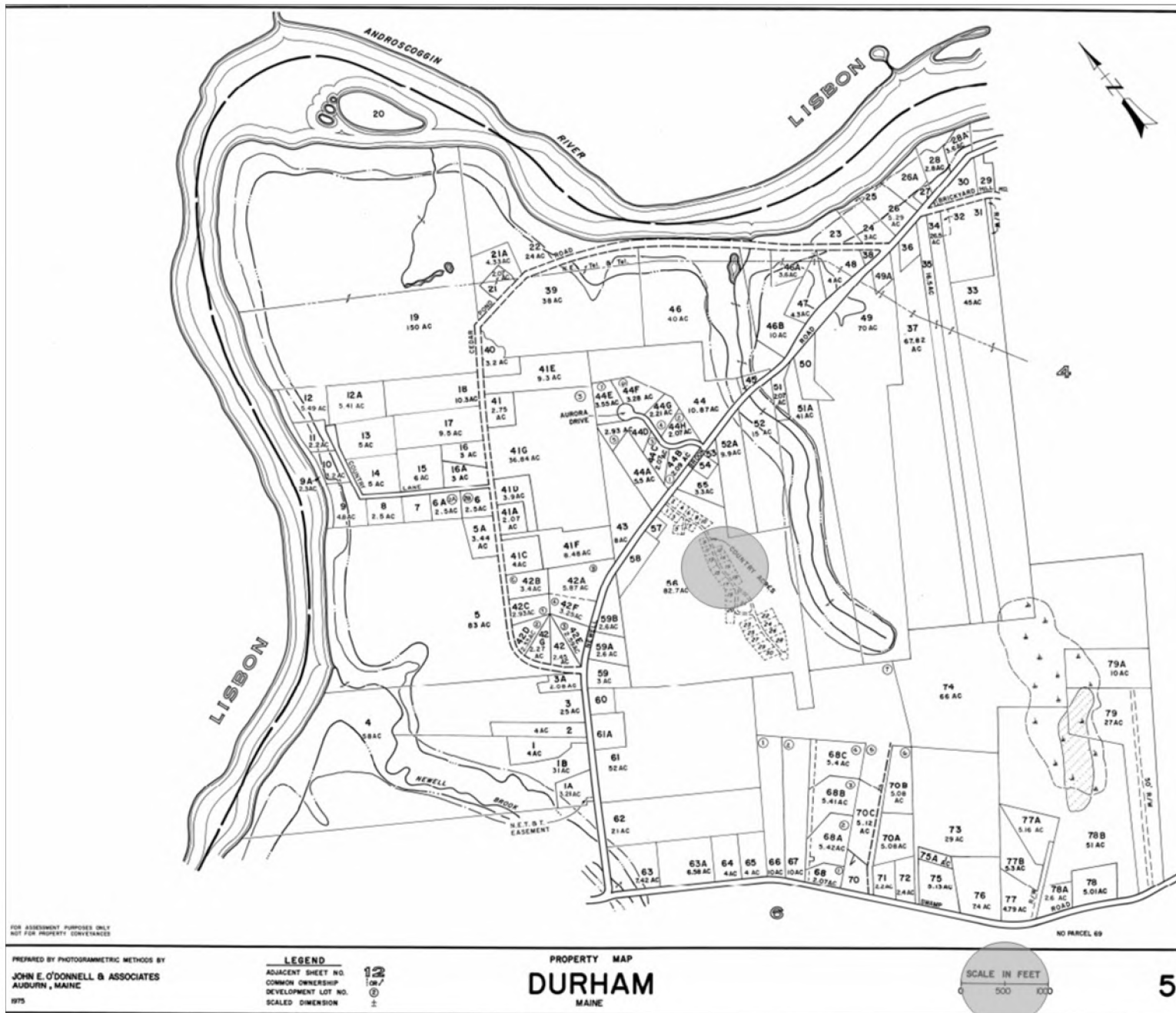
Over the years, the Planning Board has approved scattered cluster subdivisions throughout the Town, but none of them would constitute a “densely developed area,” nor would they serve as a suitable nucleus for a designated growth area. The attached tax maps identify all such subdivisions and applies the 500-foot radius to show that although

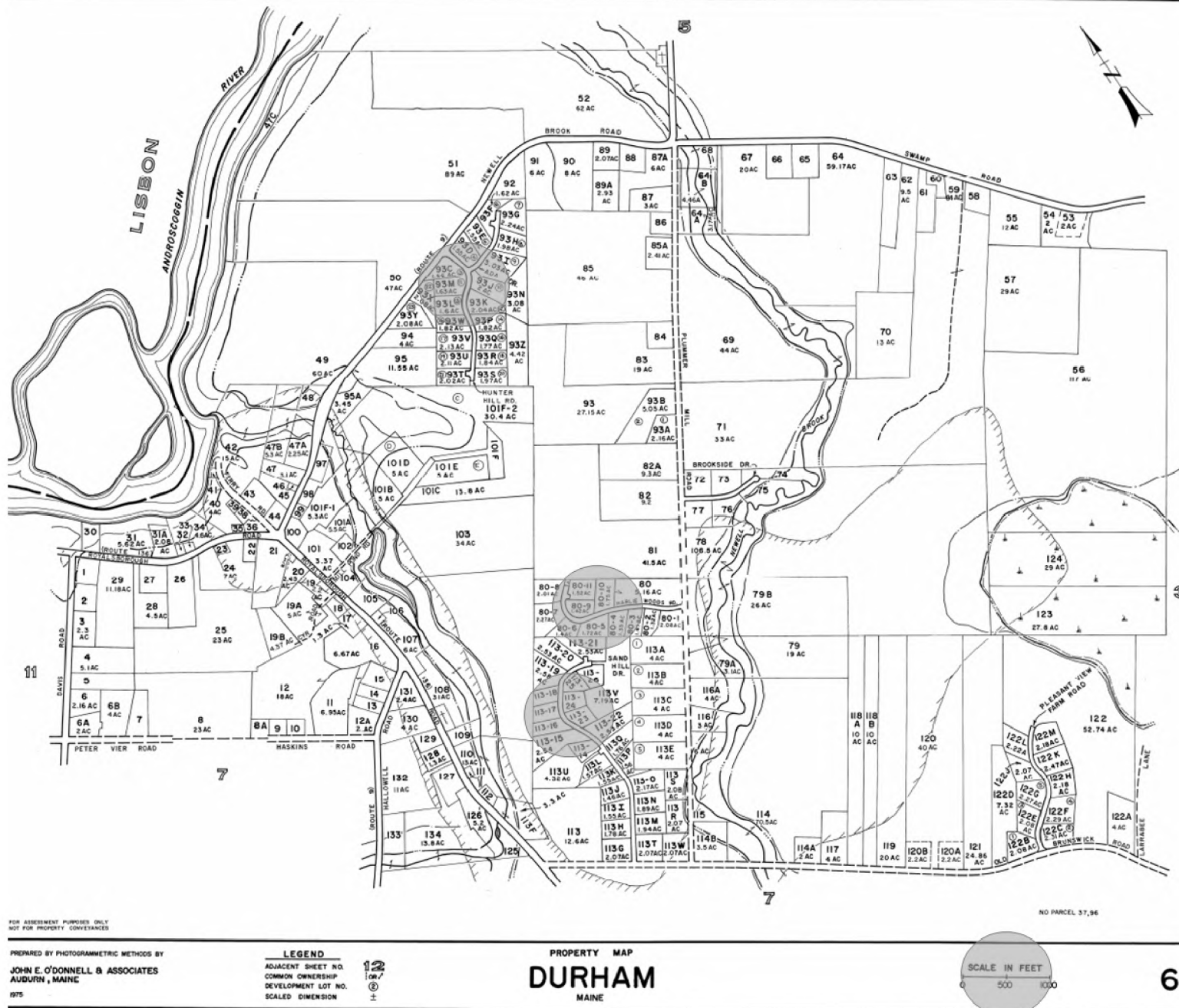
some of the lots fit within that dimension, the overall subdivisions fail to meet the criterion, and Durham lacks an existing village or densely developed area.

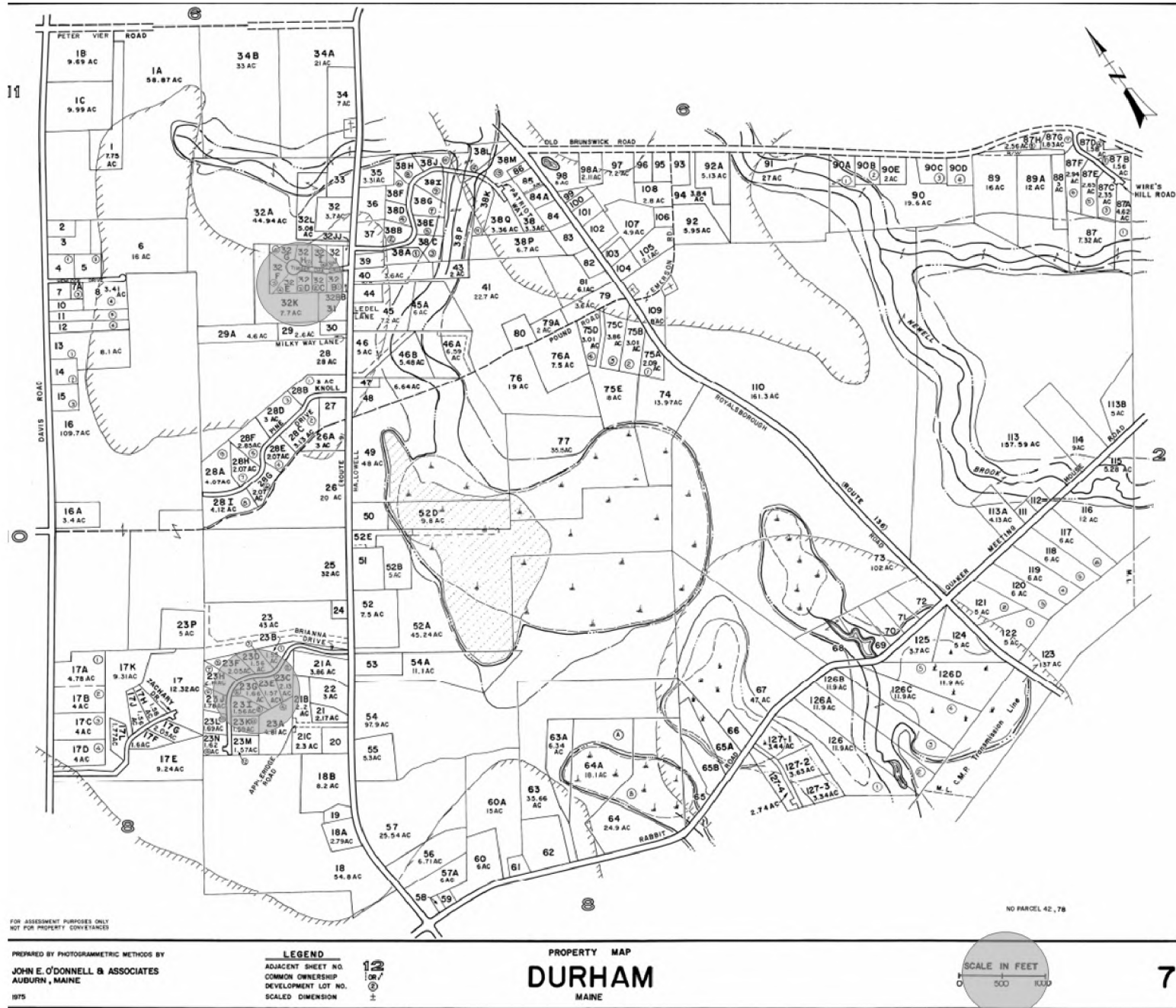


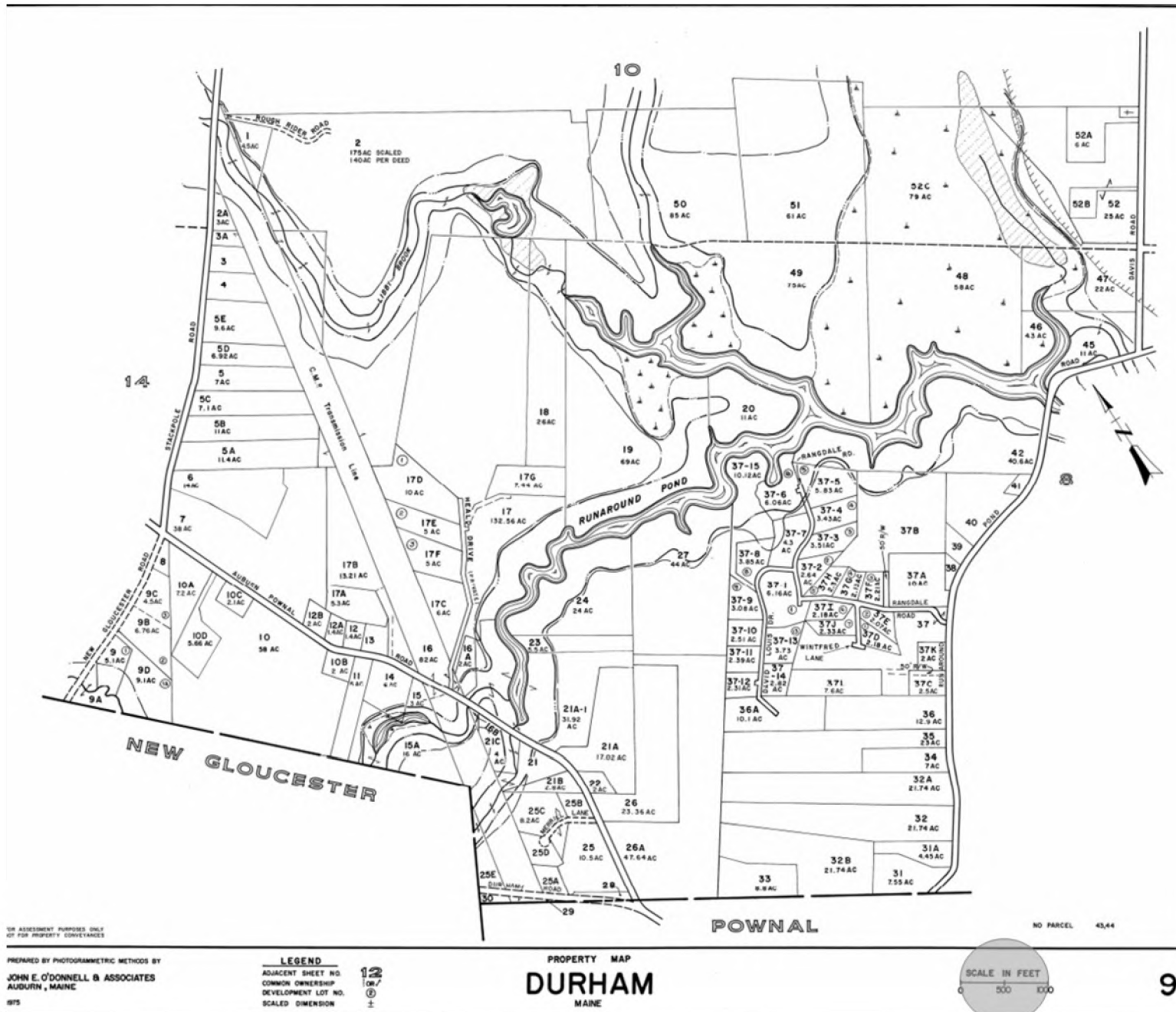


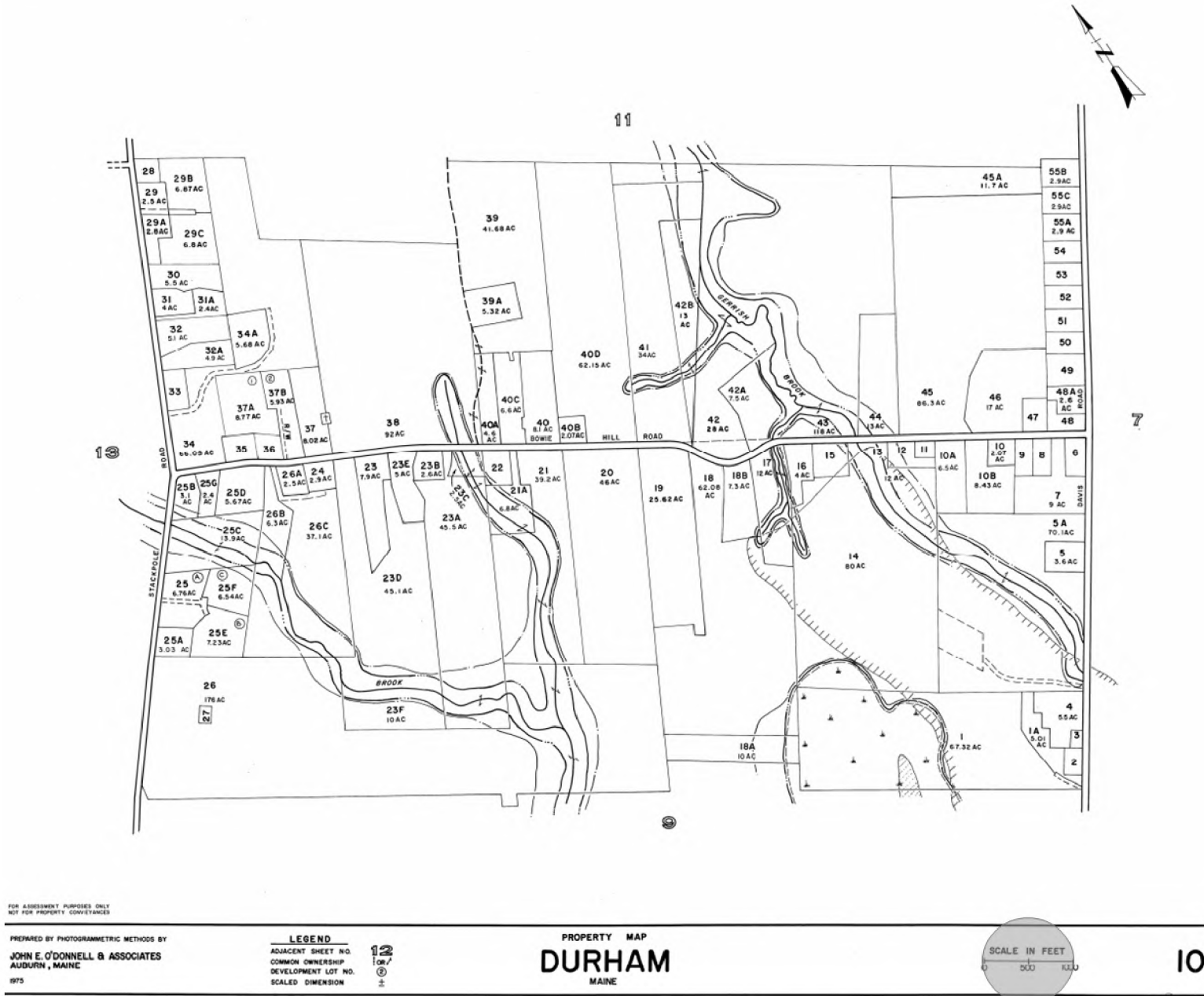


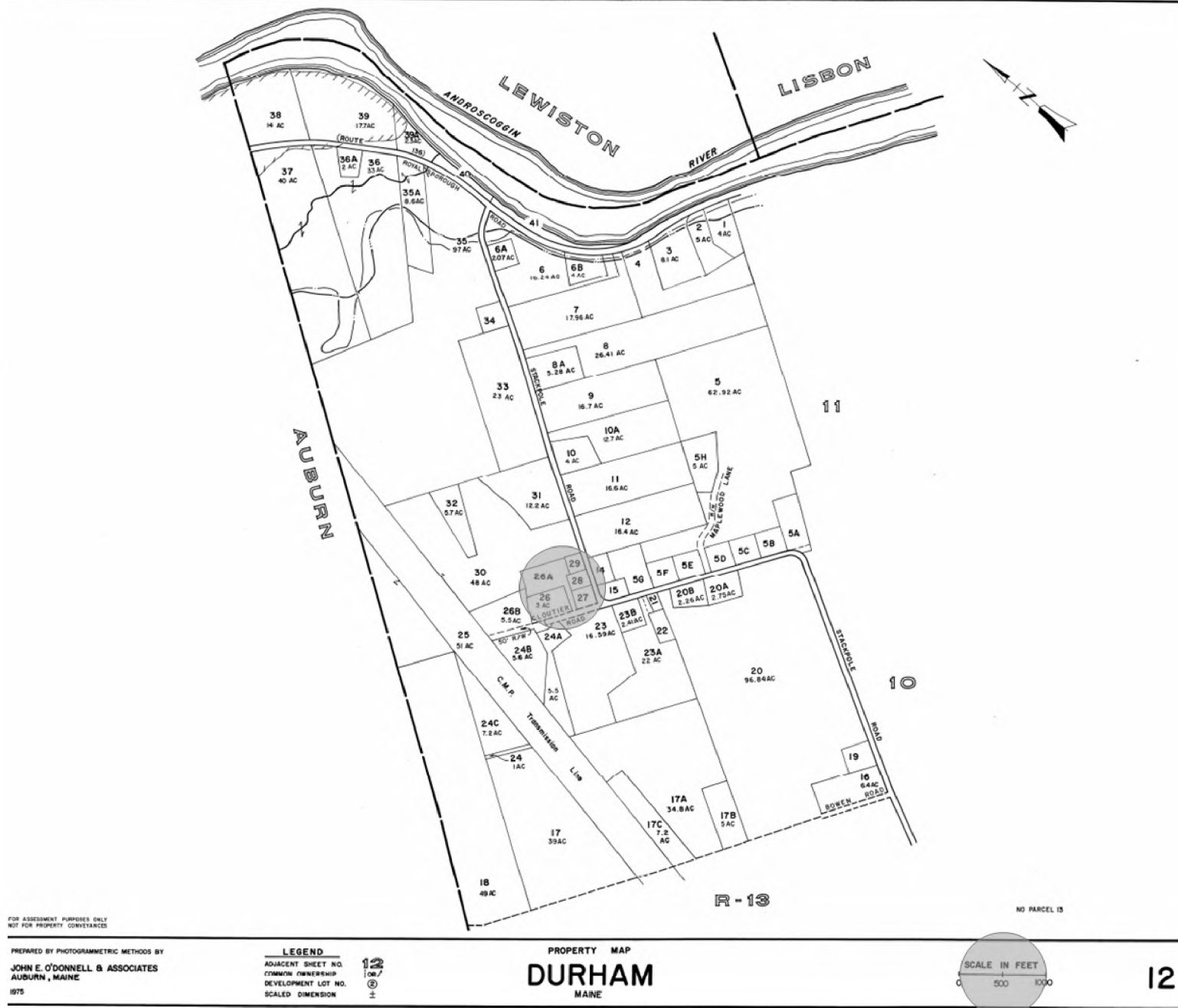


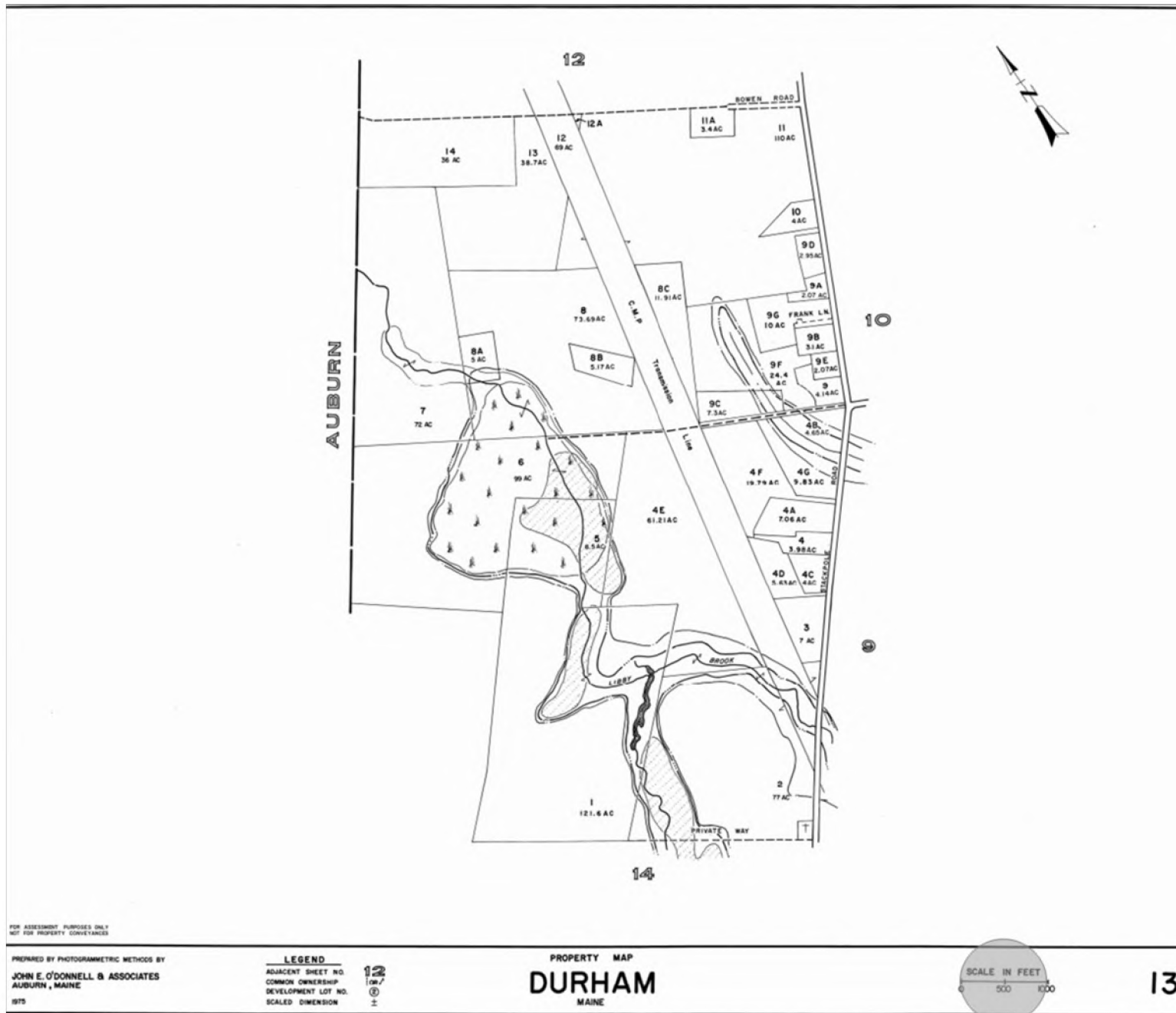


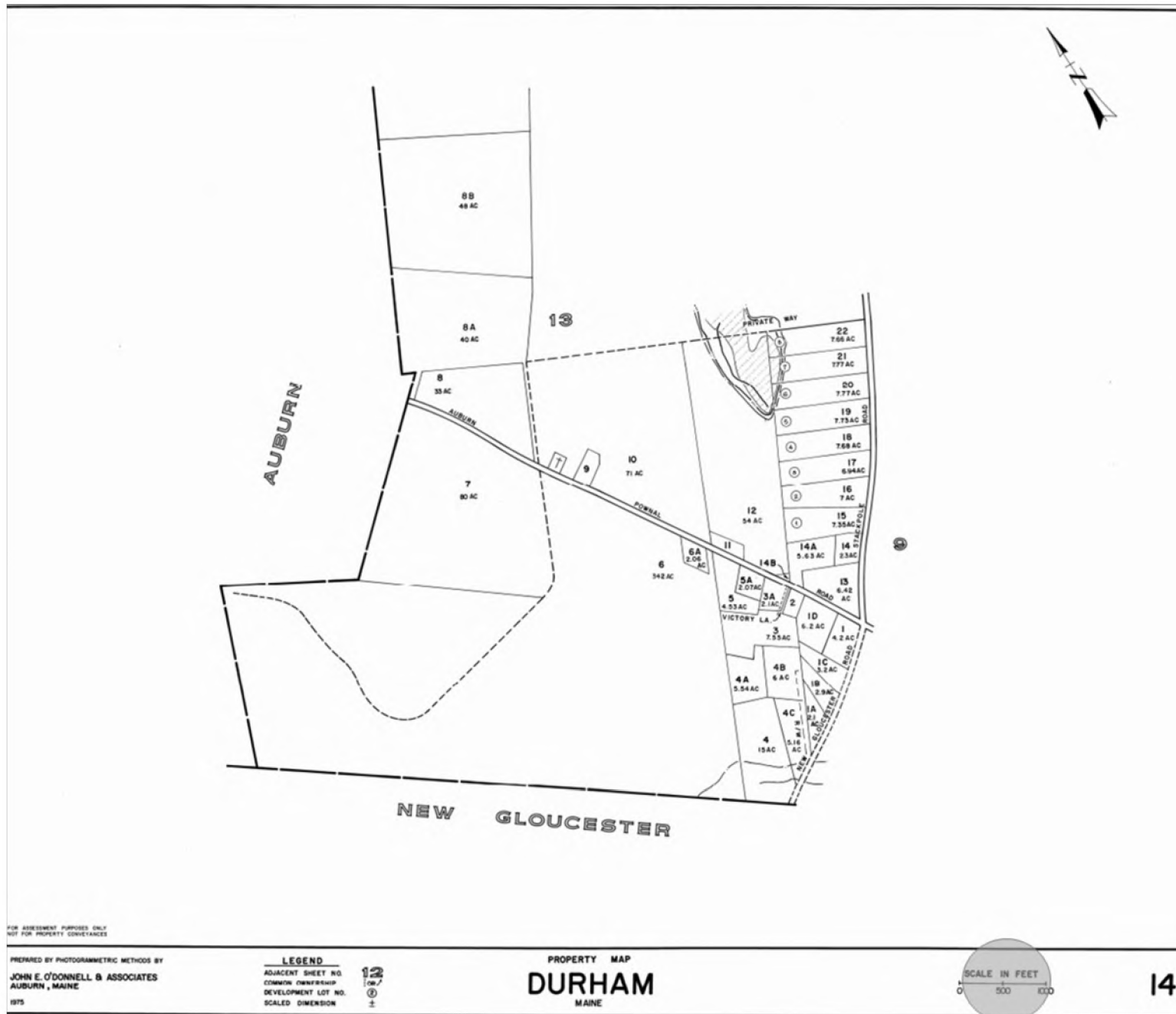












Appendix 3 — Municipal Certification

Comprehensive Plan for the Town of Durham

ADOPTED BY THE VOTERS OF DURHAM, MAINE

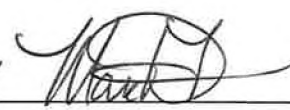
AT TOWN MEETING ON APRIL 6, 2019

We, Board of Selectmen for the Town of Durham, Maine do certify that this comprehensive plan was prepared with the intent of complying with the Growth Management Act (30 MSRA §§ 4312—4350) and that it contains all of the required elements of the Maine Comprehensive Plan Review Criteria Rule (07-105 CMR 208) and that it is true and accurate.


Board of Selectmen:



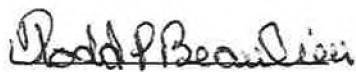
Kevin Nadeau



Marc Farrin



Richard George



Todd Beaulieu



Rob Pontau

**ADDENDUM 1 — Process for
Updating the Comprehensive Plan and
Adopting a Rate of Growth Ordinance**

ADDENDUM 1—PROCESS FOR AMENDING THE COMPREHENSIVE PLAN AND ADOPTING A RATE OF GROWTH ORDINANCE

Durham’s Rate of Growth Ordinance

In 2002, the Town of Durham approved at Town Meeting and submitted a comprehensive plan update recommending that the Southwest Bend Growth District be designated as a growth area. The primary motivation for submitting the draft plan with a designated growth area was to support adoption of a rate of growth ordinance that limits issuance of building permits for new housing units to 45 in any calendar year. This decision to adopt a cap on housing starts was precipitated by a building boom in southern Maine and similar ordinances being adopted in neighboring communities. As indicated in Table 1, since adoption of the building permit cap in 2004, the cap has never been exceeded, and the low rate of housing starts since the Great Recession has led to its being completely ignored.

In addition to a current and foreseeable lack of need for a cap on issuance of building permits for new housing starts, the *Durham Growth Management and Establishment of Districts Ordinance* (a rate of growth ordinance) adopted in 2004 is potentially invalid for two reasons. First, Title 30-A, Chapter 187, §4314 M.R.S.A. requires that any rate of growth ordinance enacted in Maine be consistent with a comprehensive plan adopted in accord-

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	2018—16 Housing Starts

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The purpose of designating one or more growth areas in a community is to direct the majority of future growth to those areas and thereby avoid sprawling development throughout the community, particularly in rural areas.

The tools needed to successfully direct future development to growth areas include providing the infrastructure (roads, utilities, etc.) necessary to support denser development and changes to zoning to allow more compact neighborhoods. Durham has no public utilities, and it lacks the fiscal capacity to develop them. In recent years, the number of housing starts has dropped to an average of about 15 per year, and demographic projections indicate that the rate will drop to half that amount over the next 20 years. At this pace, the private sector will also lack the investment capital needed to support public utilities or a growth area in Durham.

Based on the lack of need for a cap on housing starts and the lack of financial capacity to support a growth area, the Town is seeking exemption from the requirement to designate growth areas. One of the requirements for a community to qualify for the Growth Area Exemption is a prohibition on growth caps or rate-of-growth ordinances (Chapter 208, Section 4.B).

Therefore, the Durham *Growth Management and Establishments of Districts Ordinance* (a rate of growth ordinance) adopted in 2004 must be repealed in order to qualify for the exemption. This addendum to the draft comprehensive plan update includes a framework for instituting one or more designated growth areas and a corresponding rate of growth ordinance should development conditions indicate a need in the future.

Factors and Indicators of Potential Need for Rate of Growth Limitation

Regional economic trends over the past decade have led to a significant decline in the rate of new housing construction in rural communities in Southern Maine like Durham. Demographic projections indicate that over the next two decades, the trend for reduced housing starts in Durham will continue and produce even less demand for housing.

This trend, however, could reverse if one or more of the surrounding employment centers sees major expansion that draws more workers looking for affordable housing. The closure of the Brunswick Naval Air Station is an example of a regional change that significantly affects the housing market. Brunswick has actively marketed the former naval air base as a redevelopment site known as Brunswick Landing: Maine's Center for Innovation. To date, the center has generated almost 2000 jobs. If a major industrial or technology business were to land there, the regional housing demand could quickly jump, placing new pressure on Durham for development permits.

Rather than waiting until a major regional development creates a dramatic spike in housing starts and then reacting in panic, the Town should anticipate the possibility of such a change and chart out a process for responding in a measured, objective manner. There are two direct, measurable indicators of significant change in the regional housing market affecting Durham. The first would be a spike in the number of building permits for new homes. Such an increase might be preceded or accompanied by a significant increase in subdivision applications being filed with the Planning Board.

The Town will continue to monitor the rate of new home building permits issued annually and the number of subdivision lots approved by the Planning Board. If at any point, the number of new home building permits exceeds the previous annual cap of 45 or the number of subdivision lots approved by the Planning Board exceeds 100, the Board of Selectmen should call for a special Town Meeting to consider enacting a temporary moratorium to provide opportunity to revisit the question of whether to establish one or more growth areas with higher density development and the infrastructure to support it.

Such a moratorium might contain, if legally permissible, an allowance for a limited number of building permits for new homes to be issued while the comprehensive plan is updated and ordinances are revised for the new growth management program, if one is adopted. If a moratorium can be enacted with an allowance for limited issuance of development permits, as opposed to a total moratorium, issuing 45 permits annually during the comprehensive plan review and ordinance revision process would return the Town to the same status it was prior to repeal of the 2004 *Growth Management and Establishment of Districts Ordinance* (a rate of growth ordinance).

Suggested Approach to Establishing Required Growth Area(s)

The starting place for consideration of one or more designated growth areas could be the previously approved Southwest Bend District. The 2002 Comprehensive Plan designated that area as a growth district but failed to call for or allow development densities necessary to make it effective in absorbing the majority of new housing built in Durham. In their letters of inconsistency of

the comprehensive plan, State planners observed that keeping the same 2 acre minimum lot size as the rest of the community would do little if anything to encourage growth there or limit development effects in other parts of Durham.

One of the scenarios explored in the 2018 Comprehensive Plan update called for establishing a minimum lot size of 20,000 square feet with a road frontage of 100 feet in the Southwest Bend District. Such development could be served by individual septic systems on suitable soils, and a public water system tapping into the identified aquifers would address needed separations between septic systems and wells while providing a source of water for fire protection. The 6-month to 1-year moratorium, if enacted at special Town Meeting, would provide time to do a feasibility study to determine design and financing options for such a public water system to serve the growth area, as well as other needed ordinance amendments to make the growth area succeed.

The 2004 *Growth Management and Establishment of Districts Ordinance* included a differential growth rate cap for new housing within the Southwest Bend Growth District and revised the Town's road acceptance policy to favor that District. The State recognized and affirmed these growth management mechanisms in its letters of inconsistency. In order to legally support a permanent rate of growth ordinance (with required periodic updates), Durham will need to develop a growth management program that meets comprehensive planning requirements. Given the planning groundwork done to date, putting a revised plan together in the face of a regional building boom should be manageable. If the Town can legally allow an allocation of 45 new home building permits to be issued as it is updating the Comprehensive Plan and putting ordinance amend-

ments and infrastructure plans in place, local homebuilders could continue to meet current and continuing housing needs with little, if any interruption.

Moratorium Requirements

The requirements for enacting a development moratorium are contained in Title 30-A, MRSA §4356:

Any moratorium adopted by a municipality on the processing or issuance of development permits or licenses must meet the following requirements.

1. Necessity. The moratorium must be needed:

- A. To prevent a shortage or an overburden of public facilities that would otherwise occur during the effective period of the moratorium or that is reasonably foreseeable as a result of any proposed or anticipated development; or,*
- B. Because the application of existing comprehensive plans, land use ordinances or regulations or other applicable laws, if any, is inadequate to prevent serious public harm from residential, commercial or industrial development in the affected geographic area.*

2. Definite term. The moratorium must be of a definite term of not more than 180 days. The moratorium may be extended for additional 180-day periods if the municipality adopting the moratorium finds that:

- A. The problem giving rise to the need for the moratorium still exists; and,*

- B. Reasonable progress is being made to alleviate the problem giving rise to the need for the moratorium.*

3. Extension by selectmen. In municipalities where the municipal legislative body is the town meeting, the selectmen may extend the moratorium in compliance with subsection 2 after notice and hearing.

A moratorium is defined in State law (Title 30-A, MRSA §4301.11) as “...a land use ordinance or other regulation approved by a municipal legislative body that, if necessary, may be adopted on an emergency basis and given immediate effect and that temporarily defers all development, or a type of development, by withholding any permit, authorization or approval necessary for the specified type or types of development. “

Whether this language is broad enough to allow a limited number of building permits for new homes as a “type of development,” should be reviewed with legal counsel. If State law is not flexible enough to allow a partial moratorium with allowance for 45 housing starts, the Town can consider whether to enact a total moratorium for the 6-month to 1-year process of updating the Comprehensive Plan if either of the review triggers are activated (more than 45 new building permits or 100 subdivision lots approved).