

## Agriculture & Forestry

### Conditions & Trend

(1) *The community's Comprehensive Planning Agriculture and Forestry Data Set prepared and provided to the community by the Department of Agriculture, the Maine Forest Service, and the Office, or their designees.*

See the maps titled Bowdoinham Constraints (October 2023), Bowdoinham Agriculture (April 2020), and Farmland Soils and Hollis Soils for the identifying the location of Prime Farmland soils (USDA defined), soils categorized as Additional Farmland of Statewide Importance (State defined), and Additional Farmland Soils of Local Importance (Maine NRCS defined for Sagadahoc County) that includes non-forested open lands with these soils:

- AaC Adams loamy sand, 8 to 15 percent slopes
- AaB Adams loamy sand, 0 to 8 percent slopes
- AaC Adams loamy sand, 8 to 15 percent slopes
- BgB Nicholville very fine sandy loam, 0 to 8 percent slopes
- BgC Nicholville very fine sandy loam, 0 to 8 percent slopes
- Bo Biddeford mucky peat, 0 to 3 percent slopes
- BuB2 Lamoine-Buxton complex, 0 to 8 percent slopes
- BuC2 Buxton silt loam, 8 to 15 percent slopes
- CfB Charlton fine sandy loam, 0 to 8 percent slopes
- CfC2 Charlton fine sandy loam, 8 to 15 percent slopes
- ChB Charlton very stony fine sandy loam, 0 to 8 percent slopes (Prime farmland if stones removed)
- ChC Charlton very stony fine sandy loam, 8 to 15 percent slopes (Statewide importance if stones removed)
- ChD Charlton very stony fine sandy loam, 8 to 15 percent slopes
- EmB Elmwood fine sandy loam, 2 to 8 percent slopes
- EmC2 Elmwood fine sandy loam, 8 to 15 percent slopes, eroded
- GP Sand and gravel pits
- Ha Hadley silt loam
- HfB Hartland very fine sandy loam, 2 to 8 percent slopes
- HfC2 Hartland very fine sandy loam, 8 to 15 percent slopes, eroded
- HfD2 Hartland very fine sandy loam, 15 to 25 percent slopes, eroded
- HkB Hinckley gravelly sandy loam, 0 to 8 percent slopes
- HkC Hinckley gravelly sandy loam, 8 to 15 percent slopes
- HrB Lyman-Tunbridge complex, 0-8 percent slopes, rocky
- HrC Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky
- HrD Lyman-Tunbridge complex, 15 to 35 percent slopes, rocky
- HsB Lyman-Abram complex, 0 to 8 percent slopes, very rocky
- HsC Lyman-Abram complex, 8 to 15 percent slopes, very rocky
- HsD Lyman-Abram complex, 15 to 35 percent slopes, very rocky
- Lc Leicester fine sandy loam
- Le Leicester very stony fine sandy loam
- Lk Charles silt loam, 0 to 2 percent slopes, occasionally flooded
- MeB Melrose fine sandy loam, 0 to 8 percent slopes
- MkC2 Merrimac fine sandy loam, 8 to 15 percent slopes, eroded

- NgB Ninigret fine sandy loam, 0 to 8 percent slopes
- PbC Paxton loam, 8 to 15 percent slopes
- PfB Paxton very stony loam, 0 to 8 percent slopes (Prime farmland if stones removed)
- PfC Paxton very stony loam, 8 to 15 percent slopes (Statewide importance if stones removed)
- Sa Saco silt loam
- ScA Scantic silt loam, 0 to 3 percent slopes
- SuC2 Suffield silt loam, 8 to 15 percent slopes, eroded
- SuD2 Suffield silt loam, 15 to 30 percent slopes, eroded
- SxB Sutton loam, 0 to 8 percent slopes
- SxC Sutton loam, 8 to 15 percent slopes
- SyB Sutton very stony loam, 0 to 8 percent slopes (Prime farmland if stones removed)
- SyC Sutton very stony loam, 8 to 15 percent slopes (Statewide importance if stones removed)
- SzA Swanton fine sandy loam, 0 to 3 percent slopes
- Tn Pemaquid, Todd's Point, and Damariscotta soils, 0 to 2 percent slopes
- W Water
- Wa Walpole fine sandy loam
- Wn Winooski silt loam
- WsB Woodbridge very stony loam, 0 to 8 percent slopes (Prime farmland if stones removed)

County-level agricultural data from the U.S. Department of Agriculture is shown in the next two tables. Town-level USDA data is not available.

<b>Sagadahoc County 2017 Agricultural Census Detail</b>	
<b>Sales By Commodity Group</b>	<b>Value</b>
Fruits, tree nuts, and berries	\$271,000
Nursery, greenhouse, floriculture, and sod	\$580,000
Other crops and hay	\$244,000
Poultry and eggs	\$34,000
Cattle and calves	\$123,000
Milk from cows	(D)
Fruits, tree nuts	\$165,000
Nursery, greenhouse, floriculture, and sod	\$1,041,000
Poultry and eggs	\$55,000
Cattle and calves	\$320,000
Berries	\$47,000
Sheep, goats, and their products	\$87,000
<b>Top Crop Items</b>	<b>Acres</b>
Forage - hay, grass silage, greenchop	3,821
Cultivated Christmas trees	52
Land in orchards	29
Vegetables harvested for sale	178
Corn for silage or greenchop	110

<b>Sagadahoc County 2017 Agricultural Census Detail (cont'd)</b>	
<b>Top Livestock Inventory Items</b>	<b>Number</b>
Cattle and calves	1,094
Layers	2,319
Broilers and other meat-type chickens	(D)
Sheep and lambs	282
Horses and ponies	351
Hogs and Pigs	10

Source: USDA Agricultural Census

Note: (D) = Withheld to avoid disclosing data for individual farms

Farms increased in number but decreased in average size from 1997 to 2017 in Sagadahoc County.

<b>Sagadahoc County 1997, 2002, 2007, and 2017 Agricultural Census Comparison</b>					
<b>Category</b>	<b>1997</b>	<b>2002</b>	<b>2007</b>	<b>2017</b>	<b>Percent Change</b>
Number of Farms	153	158	183	209	19.6%
Land in Farms	20,320 acres	20,171 acres	18,616 acres	17,687 acres	-8.4%
Average Size of Farm	133 acres	128 acres	102 acres	85 acres	-23.3%
Market Value of Products Sold	\$3,184,000	\$4,271,000	\$2,583,000	\$7,749,000	-18.9%
Value of crops, nursery, greenhouse	\$1,521,000	NA	\$1,276,000	(D)	-16.1%
Value of livestock, poultry, related products	\$1,663,000	NA	\$1,307,000	(D)	-21.4%
Government Payments	\$32,000	\$81,000	\$171,000	\$379,000	434.4%

Source: USDA Agricultural Census

Most timber harvesting in Bowdoinham has been done through the selection method, with an annual average of 174.3 acres out of a total annual average harvest of 182.6 acres, as shown in the next table.

<b>Bowdoinham Summary of Timber Harvest Information</b>						
<b>Year</b>	<b>Selection harvest (acres)</b>	<b>Shelterwood harvest (acres)</b>	<b>Clearcut harvest (acres)</b>	<b>Total Harvest (acres)</b>	<b>Change of land use (acres)</b>	<b>Number of active Notifications</b>
1991	100	45	1	146	0	9
1992	171	0	20	191	20	9
1993	74	0	0	74	0	5
1994	400	0	4	404	2	11

<b>Bowdoinham Summary of Timber Harvest Information</b>						
<b>Year</b>	<b>Selection harvest (acres)</b>	<b>Shelterwood harvest (acres)</b>	<b>Change of land use (acres)</b>	<b>Clearcut harvest (acres)</b>	<b>Total Harvest (acres)</b>	<b>Number of Reports</b>
1990 - 1994	727	45	22	25	819	33
1995 - 1999	453	40	12	7	512	38
2000 - 2004	1,129	40	6	-	1,175	51
2005 - 2009	985	-	109	-	1,094	42
2010 - 2014	1,253	38	29	5	1,325	50
2015 - 2020	1,408	10	28	11	1,457	58
Total	5,955	173	206	48	6,382	272

Source: Maine Department of Conservation, Maine Forest Service

Note: To protect confidential landowner information, data is reported only where there are three or more landowner reports of harvesting in the town.

**(2) A map and/or description of the community's farms, farmland, and managed forest lands and a brief description of any that are under threat.**

In 2022, Bowdoinham had approximately 1,395 acres of farmland. A significant portion of these lands is protected from development through conservation easements or as reserves. See the maps titled Undeveloped Habitat Blocks & Connectors and Conserved Lands for the location of preserved lands. See the map titled Bowdoinham Agriculture for the locations of areas best suited for agricultural activities based upon soil conditions. See the map titled Landcover for areas under cultivation and for use as pasture or for haying. **These uses have been estimated through satellite imagery in 2004 as encompassing about 14.6% of the town's total land area.**

There are two major types of soil in Bowdoinham; the Hadley silt loam bordering the Bay requiring the water from the Bay for irrigation, and the heavy Buxton silt loam soils that are visible as the gently rolling fields in the rest of the Town. The prime farmland on the Bay is well suited to the production of high value, intensely managed vegetable crops. They include carrots, parsnips, potatoes, radishes, cucumbers, peas, tomatoes, etc. plus strawberries, herbs and flowers.

The prime farmland away from the Bay is suitable for orchards, short season vegetables and livestock production. The remains of many once successful apple orchards are still visible on the sloping well-drained hills. With the closing of the last canning factories, the corn, squash, turnip, beans and cabbage are no longer grown on these heavy soils. Currently and historically most of the land under active cultivation is used for livestock production either for grazing or for hay, silage, or corn crops.

<b>Active Farms with Land Operations in Bowdoinham as of 2023</b>		
<b>Name</b>	<b>Location</b>	<b>Organic Certified Products</b>
Abagadassett Farm	Carding Machine Rd	No
Applecreek Farm	Millay Rd	Yes
Blue Bell Farm	Carding Machine Rd	Yes
Campo di Fiori	Fisher Rd	No
Christopher Farm	White Rd	No
Dandelion Spring Farm	Ridge Rd	Yes

East of Eden	Browns Point Road	Yes
Enterprise Farm	White Rd	No
Fairwinds Farm	Browns Point Rd	No
Harvest Tide	Pork Point Rd	Yes
Lehman's Acre	Browns Point Rd	Yes
Living Nutz	Post Rd	Yes
Maggie's Farm	White Rd	No
Phil's Farm	Ridge Rd	Yes
Six River Farm	Centers Point Rd	Yes
Stonecipher Farm	River Road	Yes
Turning Wheel Farm	White Rd	Yes

Source: Town of Bowdoinham

Almost 56% of the Town is forested. See the map titled Landcover for these areas. Nearly all forestlands in the Town are privately owned. There are two parcels of state-owned land. **Reed's Point** is a 335-acre wildlife preserve at the end of the Wildes Point Road where over half the land is in forest. At the junction of Rt. 24 and the Pork Point Road is the Bachman property, which is owned and managed by the Maine State Department of Inland Fisheries and Wildlife. Forests dominate this 150-acre parcel.

Areas most threatened include those with suitable soils for farming that are not under a conservation easement.

A survey completed in 2012 of farmers in Bowdoinham had a 57% response rate, representing people who farm about 767.5 acres within the town. Some farmers recommended promoting and marketing farm products locally, making land use ordinance revisions to affirmatively protect agriculture, and limiting other types of development that compete for land, like residential. The observations and recommendations of the survey respondents have been considered by the town in the formulation of this comprehensive plan's policies and strategies to protect and enhance agriculture.

(3) information on the number of parcels and acres of farmland, tree growth, and open space enrolled in the state's farm, tree growth, and open space law taxation programs, including changes in enrollment over the past 10 years.

<b>Current Use Tax Programs Bowdoinham</b>				
	<b>2011</b>		<b>2022</b>	
<b>Category</b>	<b>Properties</b>	<b>Acres</b>	<b>Properties</b>	<b>Acres</b>
Open Space Tax Program	24	513	23	532
Tree Growth Tax Program	65	2,621	57	2,225
Farmland Tax Program	51	1,162(cropland/pasture) 1,386 (woodland)	66	1,395(cropland/pasture) 1,514 (woodland)

Source: Maine Revenue Service

<b>2022 Farmland Programs Bowdoinham</b>							
<b># of parcels</b>	<b>Cropland acres</b>	<b>Woodland acres</b>	<b>Cropland valuation</b>	<b>Woodland valuation</b>	<b>Withdrawn (parcels/acres)</b>		<b>Penalties assessed</b>
66	1395.41	1,154.11	\$861,165	\$559,472	0	0	\$0

Source: Maine Revenue Services

<b>2022 Open Space in Bowdoinham</b>					
<b># of parcels</b>	<b>Total acres</b>	<b>Total valuation</b>	<b>Withdrawn parcels / acres</b>		<b>Penalties assessed</b>
23	532.42	\$1,029.749	0	0	0

Source: Maine Revenue Services

The current use tax programs provide a property tax savings to landowners of farmland and forestland who choose to participate. Under these programs, land is taxed at its current use rather than for its development potential (full-market value). Should enrolled landowners leave these programs, they are assessed a penalty to make up the difference in valuation between current use and full-market value for development. The next table summarizes these programs.

<b>Summary of Current Use Tax Programs</b>			
<b>Program</b>	<b><i>Farmland F</i> (Tax Bulletin #20)</b>	<b><i>Open Space Program</i> (Tax Bulletin #21)</b>	<b><i>Tree Growth Program</i> (Tax Bulletin #19)</b>
<b>Purpose</b>	To encourage farmland owners to maintain and improve land that is used for farming, agricultural or horticultural activities.	To encourage landowners of open, undeveloped land to prevent or restrict its use from development by conserving scenic resources, enhancing public recreation, promoting game management or preserving wildlife or wildlife habitat.	To encourage forest landowners to retain and improve their forestlands; to promote better forest management; and to support the overall forest products industry in Maine.

<b>Summary of Current Use Tax Programs</b>			
<b>Program</b>	<b>Farmland Program (Tax Bulletin #20)</b>	<b>Open Space Program (Tax Bulletin #21)</b>	<b>Tree Growth Program (Tax Bulletin #19)</b>
<b>Types of Land Cover</b>	Mixed – annual and perennial crops, pasture, orchards, blueberries, wetlands, woodland and wasteland.	Undeveloped acres – open and/or wooded land that is not intended to be developed for commercial or residential purposes.	Forested land used primarily for the growing of trees used to produce commercial forest products.
<b>Length of Time</b>	Permanent: May be withdrawn with payment of a penalty; must be withdrawn if used for non-conforming purposes.		
<b>Enrollment</b>	Voluntary enrollment by landowner. The Town sets the value based upon value of the land as farmland only. State published per acre values recommended but not required.	Voluntary enrollment by landowner. The Town sets the valuation based upon comparable sales statutorily prescribed percentage reduction from full value.	Voluntary enrollment by landowner. The State tax Assessor determines the 100% valuation per acre for softwood, hardwood, and mixed wood cover types by region each year. Areas within a parcel other than classified forest acres must be valued on a fair market value basis.
<b>Tax Implications</b>	Landowner’s proportionate tax burden is reduced.		
<b>Municipal Benefit</b>	Avoids costs associated with development; state subsidies are positively impacted.		Avoids costs associated with development; state subsidies are positively impacted; direct subsidy available from the State.
<b>Parcel Size</b>	5 contiguous acre minimum.	5 contiguous acre minimum.	5 contiguous acre minimum.
<b>Landowner Requirements</b>	Application, detailed map of the parcel & gross income report* must be given to the assessor by April 1. Must report annual gross income* of \$2,000 in 1 of 2, or 3 of 5 years preceding application. *An accounting of the value of commodities produced and sold or for consumed by farm household. * If 2-year Provisional	Application with a detailed map of the parcel) must be given to the assessor by April 1. “Ordinary” @ 20%: none “Permanently Protected” (up to 50% reduction in value): recorded enforceable deed restrictions. “Permanently Protected and Forever Wild” (up to 70% reduction in value): recorded deed restrictions.	Must have written Forest Management and Harvest Plan prepared/approved by a Maine Licensed Forester. Landowner must follow the recommendations in the Plan, update the Plan at least once every 10 years, and is required to re- certify compliance with the plan to the assessing jurisdiction every 10 years. Must inform assessor of any changes in the use of the parcel.

Source: Maine Revenue Service

- (4) *A description of any community farming and forestry activities (e.g. community garden, farmer’s market, or community forest).*

The following table lists agricultural and forestry related programs that are active within Bowdoinham.

<b>Program</b>	<b>Occurs</b> (Seasonally, Weekly, Monthly)	<b>Organized/Managed</b>
Farmer’s Market	June – October on Saturdays 8:30 AM- 12:00 PM, at the	Farmers
Bowdoinham Food Pantry Community Garden	Seasonally	Bowdoinham Food Pantry
Falcon Pantry	School year	Elementary School & Food Pantry
Peary’s Community Garden Community Garden	Seasonally	Peary’s Community Garden
Merrymeeting Gleaners	Year Round	Merrymeeting Food Council

Source: Town of Bowdoinham

### Analysis

- (1) *How important is agriculture and/or forestry and are these activities growing, stable, or declining?*

Agricultural activities are essential to Bowdoinham, its history, rural character and economic future. A significant portion of the town’s land is devoted to agricultural use. See the figures in the Conditions and Trends section and the maps titled Undeveloped Habitat Blocks & Connectors and Conserved Lands, Bowdoinham Constraints, Farmland Soils and Hollis Soils and Landcover. The amount of conservation of farm and forestland in the town sets it apart from neighboring communities. Bowdoinham has one of the highest concentrations of organic farmers in the state. Due to this and to the rise of niche farming, the agricultural sector has grown in importance over the past decade and has potential for further growth as the appreciation of locally grown organic food increases.

In the past decade we have seen the number of workers in farming, fishing, and forestry occupations increase from 33 Bowdoinham residents in 2010 to 120 in 2021, and from 261 to 339, respectively in Sagadahoc County. These figures do not reflect the part-time, seasonal, migrant and informal employment in agriculture. The public’s appreciation of the value of locally raised healthy food has boosted the market for these commodities. Accordingly, grocery stores and supermarket chains are offering more local produce and related goods for sale. The region’s population could become a larger market for dairy and crops raised within town.

In addition to benefiting people who choose to farm in Bowdoinham, and those who want to purchase locally grown food, farmland has the following beneficial impacts on the community:

- Aesthetic. Open rolling fields define the character of Bowdoinham and afford a pleasant visual vista for people driving along the roads.
- Recreation opportunities. Farm fields offer space for cross-country skiing,



snowmobiling, horseback riding and all-terrain vehicles, with the permission of the landowner or farmer.

- **Avoided costs.** It is important to bear in mind that there are no real costs to the town for farmland. There are no education, busing, road maintenance fire and police costs per acre as there are for residential development.

A significant amount of land is enrolled in the tree growth program for individual woodlot owners. There is potential for an increase in such activities, however, large-scale industrial forestry, does not occur and is unlikely in the foreseeable future.

- (2) Is the community currently taking regulatory and/or non-regulatory steps to protect productive farming and forestry lands? Are there local or regional land trusts actively working to protect farms or forest lands in the community?*

Bowdoinham's Land Use Ordinance allows agricultural and forestry activities town wide, with limitations in certain shoreland areas as required by the Maine Department of Environmental Protection. The Town's land use ordinance does provide guidance to avoid siting solar energy systems on agricultural soils.

The town encourages farmers and woodlot owners to place their lands into conservation, or to enroll in current use tax programs. Voluntary actions by landowners to seek conservation easements or to enroll in tax programs are the preferred strategy for protecting farmland and forestland because such approaches respect individual choice and property rights.

There are land trusts active in the community including the Friends of Merrymeeting Bay, Kennebec Estuary Land Trust, and the Maine Farmland Trust.

- (3) Are farm and forest land owners taking advantage of the state's current use tax laws?*

Yes, please see the figures in the Conditions and Trends section.

- (4) Has proximity of new homes or other incompatible uses affected the normal farming and logging operations?*

The Town Code Enforcement Office receives complaints from the abutting owners near agricultural and forestry operations regularly. However, the Town has not received any complaints from farmers and woodlot owners about new development around their properties. The Town can advise farmers and woodlot owners on best management practices and put these persons in contact with state officials for further guidance to reduce complaints from neighbors.

- (5) Are there large tracts of agricultural or industrial forest land that have been or may be sold for development in the foreseeable future? If so, what impact would this have on the community?*

Yes. There are several undeveloped parcels along Browns Point Road, Center Point Road and on either side of River Road just north of the village area and these parcels contain Prime Farmland and/or Farmland of Statewide Importance. Some of these parcels are either state-owned or have conservation easements. If these properties are sold it would affect the viability of some farming operations, due to loss of hayland or crop production. If development occurred on the large parcels abutting existing agricultural and woodlot activities, it would be expected that complaints from the new residents in these areas regarding the noise or smell of these operations could be

made. Niche farming, however, has demonstrated agricultural viability even on smaller lots with fragmentation between residential and agricultural uses.

- (6) *Does the community support community forestry or agriculture (i.e. small woodlots, community forests, tree farms, community gardens, farmers' markets, or community-supported agriculture)? If so, how?*

Yes. The community currently supports a Farmers' Market that is open from June to October on Saturdays from 8:30am to 12:00pm located at the Maily Waterfront Park, and a few Bowdoinham farmers offers CSAs. The Town assists the Farmers' Market with funding & promotion. The Town also supports and promotes an annual Open Farm Day. The Town is also very supportive of the local food pantry which has a community garden as well as Peary's Community Garden. The Town also has a business website which allows businesses/farmers to have a free webpage on the Town's site.

- (7) *Does the community have town or public woodlands under management, or that would benefit from forest management?*

The town owns a small woodlot, but it is not currently in active use.