

# TOWN OF BOWDOINHAM



## COMPREHENSIVE PLAN

*APRIL 2024*

*FOR APPROVAL AT  
2024 TOWN MEETING*



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## **VISION STATEMENT**

In 2034, Bowdoinham is a quiet rural Maine community defined visually by agricultural landscapes, abundant woods and wetlands, a commercial village center, and historic buildings. Culturally, there is strong pride in the community backed up by a spirit of volunteerism and support for all things made and grown locally.

Bowdoinham is a place where people love the outdoors. The amount of land preserved for recreational access is increased, as are the miles of trails available for people-powered recreation such as walking, skiing, and biking. More waterfront acreage is preserved today for both recreation and wildlife habitat than in the past. To ensure protection, outdoor and undeveloped spaces are protected by land use regulations and other means and are valued by the community. Abundant opportunities exist for outdoor recreation that contribute to our economy and quality of life.

Bowdoinham is a place where small businesses thrive. Farmers, artisans, and local entrepreneurs feel welcome and supported here. Environmentally friendly practices are especially welcome. In Bowdoinham, rugged individualism is not at odds with a strong sense of community.

Bowdoinham has an impressive diversity of people, with differing incomes, occupations, and heritage. As a community we are intentional about welcoming them all. People here help each other out. Housing that is affordable is available.

The village is not significantly different in size or character from the past. It has improved sidewalks and looks more attractive. The historic assets are better protected. The waterfront has even more amenities and is more highly used. People drive slowly and safely, and people on foot enjoy the walkability.

The special places and events that define and unite our community remain steadfast and highly valued: the Library, Merrymeeting Hall, Bowdoinham Community School, Celebrate Bowdoinham, the Waterfront, Town Hall, and Farmers Markets, to name a few.

The town government works well and municipal buildings are updated and well maintained. Municipal services are effective and cost efficient, including recycling and other services for residents.

The community is knowledgeable about local climate change issues and aware of what we can do locally to mitigate risks and be resilient to climate change. It has made strides to protect human health, natural resources, and infrastructure. Renewable energy technologies are embraced and we have adopted more sustainable land use practices. There's an awareness that what we do here as a community affects ourselves, our state, and ultimately the world in which we live.



## **LAND ACKNOWLEDGEMENT**

The Town of Bowdoinham is located on the shores of Merrymeeting Bay in the unceded territory of the Wabanaki People. We live, work, play, create, hunt, farm, and fish on land that was taken from Native People who stewarded this land for millennia. We acknowledge the history of violence and the many forms of taking that resulted from Colonization. We recognize that Bowdoinham today is a community with Native peoples who continue to live and work here, and we are grateful for their presence in the community. We commit to supporting the efforts of Wabanaki People to honor their ancestral lands and restore their relationship to this beautiful place we now call Maine.

## **GOALS & RECOMMENDATIONS**

### **Economy**

Bowdoinham's economy is made-up of small businesses, the majority of which are home-based businesses located throughout Town.

#### Goals

1. To promote an economic climate that creates local job opportunities, enhances our sense of community, and improves overall economic well-being.
2. To encourage small business and entrepreneurship.
3. To encourage development that enhances our village and community.
4. To expand economic opportunities by making the most of our recreational, agricultural, natural, marine, historical, and cultural resources including our artisans.
5. To realize the full potential of recreational opportunities along the Cathance River and its access to Merrymeeting Bay.

#### Key Issues

How can we best support local businesses? What key services and supports do they need?

How can we grow the consumer base for local businesses?

How can we capitalize upon the trend of people working from home using hi-speed Internet?

How can we balance economic development with maintaining the rural and small town character of our community?

#### Recommendations

1. Support and promote current businesses and community groups through maintaining existing resources including the Town website, Town business directory, and Town newsletters.
2. Develop a brand and branding strategy to promote through multiple media types.
3. Attract complimentary businesses through brand development, maintenance of new business resources, and targeted investments in village/town infrastructure.
4. Support and promote the arts, eco-tourism, agri-tourism, and historic tourism.
5. Draft a strategic plan to support artists, artisans, and crafts people.
6. Implement the Waterfront Plan.
7. Implement the Walkable Village Plan.
8. Support the development and implementation of the Merrymeeting Trail.
9. Develop an Open Space Plan.
10. Plan for and utilize TIF funds to support our economic goals above.
11. Support the work and mission of the Community Development Advisory Committee.
12. Participate in regional economic development efforts.

### **Agriculture**

Agriculture is an important part of Bowdoinham's history and continues to be a strong economic sector. In addition to supporting healthy food access, agriculture also provides a multitude of cultural,

practical, aesthetic, and ecological benefits, and is an asset for community resiliency.

### Goals

1. To safeguard and enhance the viability of agriculture and related resources, so agriculture remains a resilient asset and economic strength for future generations.
2. To encourage economically viable, ecologically sound, and socially responsible agriculture.
3. To promote and enhance opportunities to obtain local agricultural products.
4. To continue current and expand effective town-level programs and policies that support and encourage growth of the agricultural sector.

### Key Issues

Protecting natural resources, critical acreage, and good soil require town-level and other policies to keep farmland in farming. Further, the retirement of existing farmers increases potential for loss of farmland to other purposes. Although proximity to major markets like Portland, Brunswick, and Bath increases the value of farmland and locally grown food, it also increases development pressure. Increases in development must not compromise farmland and local food production.

### Recommendations

1. Create and implement an Agricultural Conservation Plan that may include:
  - a. Development of an organic farm cluster.
  - b. Prioritization of conservation of contiguous farmland to enhance our regional agricultural opportunities.
2. Promote and recognize the benefits of agriculture for the economy and ecology.
3. Create maps of farms in town that delineates current use, soil designation, and those enrolled in the Farmland Tax Program.
4. Review the Farmland Taxation Program to ensure the program is beneficial to farmers and encourage owners of productive farmland to enroll in the Farmland Taxation Program as appropriate.
5. Create mechanisms to protect active agricultural activities and all farmlands from new non-agricultural development including:
  - a. Review and revise Land Use Ordinances to minimize non-agricultural and/or incompatible development on farmland soils and reduce lot fragmentation.
  - b. Encourage and support the preservation of farmland soils.
  - c. Ensure that all farmers and those living on farmland soils or historical farm properties are aware of all options for protection and maintaining their farms as productive farms.
6. Increase support of farmers in a variety of ways that may include:
  - a. Development of a Voluntary Municipal Farm Support Program.
  - b. Support for the Bowdoinham Farmers Market and other local food access venues.
  - c. Formation of a farmers' alliance/group or agricultural conservation commission.
  - d. Create and maintain a farmer resource package for the website and distribution to farmers and consumers.
  - e. Explore interest and ability to create a Bowdoinham Brand for agricultural products.
  - f. Support development of new markets for Bowdoinham agricultural products.
  - g. Encourage, support, and participate in regional agricultural projects.
  - h. Support agricultural educational opportunities.

7. Protect and increase access to local food for all people with a focus on access for children for growth and development, for all people experiencing food insecurity, in schools as well as other settings which may include:
  - a. Encourage and support gleaning groups.
8. Work with state level entities that also support farmlands and natural resources which may include:
  - a. Consulting with the Department of Agriculture, Conservation and Forestry when developing any land use regulations pertaining to agricultural management practices to ensure regulations are agriculture friendly.
  - b. Encouraging Maine Department of Inland Fisheries & Wildlife and other landowners with prime farmland soils to lease the land for agricultural uses.

## **Forest Resources**

Bowdoinham is a rural town with forests that cover approximately 56% of its land. See Landcover map.

### Goals

1. To promote sustainable forest management activities.
2. To protect and improve our recreational opportunities through sustainable forest management practices.
3. To maintain and expand our native forestry resources to improve air and water quality, protect and expand wildlife habitat, increase climate resilience, stabilize shorelines, and beautify neighborhoods, town properties, and travel corridors.
4. Develop community forests, including food forests, and tree nurseries.
5. To promote and educate our citizens and businesses about invasive pests, trees, and diseases.

### Key Issues

Our forest resources are vulnerable, limited, and fragmented yet highly valued as scenic, economic, environmental, and recreational resources. How do we encourage private property owners to manage their forest land in ways that meet these goals? How do we encourage good forest management practices? How do we expand, connect, and protect our forest resources?

### Recommendations

1. Develop a municipal forest management plan that includes tree care and replacement policy.
2. Provide resources and educational opportunities to maintain and expand our forestry resources.
3. Create a resource package that includes various options for forest management, such as types of timber harvesting, wildlife habitat enhancement possibilities, and recreational opportunities for the website and distribution to wood lot owners.
4. Install a community forest at the new waterfront park.
5. Develop a school orchard.
6. Explore becoming a Tree City.
7. Encourage enrollment in the Tree Growth Tax Program, and other conservation programs including incentive-based forest carbon programs.

## **Natural Resources**

Bowdoinham's rural setting is home to many natural resources, from wildlife habitats to unique natural areas, and beautiful scenic vistas, and good soils for farmland of both local and regional significance. Approximately 13% (2,663 acres) of our land is in conservation.

### Goals

1. Identify, manage, protect, and enhance our natural resources, including but not limited to water resources, farmland, terrestrial and aquatic habitats, forests, shorelands, scenic vistas, open space, and unique natural areas.
2. Improve the ability of the community's natural resources to adapt to the impacts of climate change including but not limited to extreme heat, drought, invasive species, flooding, and other extreme weather events.
3. Conserve more natural areas to increase carbon sequestration, protect and connect habitats, and build resilience, through increased land conservation.
4. Promote stewardship of our natural resources through education and outreach to our citizenry.
5. Promote good stewardship of Merrymeeting Bay and its' tributaries and watershed.

### Key Issues

Understand where our natural resources are and recognize their value at the local and regional level. Stay current on the direct or indirect threats to these resources and plan for their restoration, conservation, and protection. The scope, scale, and uncertainty of climate change will require a high level of expertise, support, and collaboration to protect our vulnerable resources both within and across municipal boundaries. We need to incorporate our values for protecting these resources from development and further degradation which requires more outreach, education, and planning to adequately address these concerns.

### Recommendations

1. Create a Conservation Commission to serve the Town and our resources and develop and oversee an Open Space Plan and a Climate Action Plan which includes a vulnerability assessment.
2. Develop and promote educational opportunities and resources on natural resource protection.
3. Make available information to those living in or near critical or important natural resources about current use tax programs and applicable local, state, or federal regulations.
4. Initiate and/or participate in interlocal and/or regional planning, management, and/or regulatory efforts around shared critical and important natural resources.
5. Ensure that the Town's Land Use Ordinance is consistent with applicable State laws and rules and recommendations of the Conservation Commission regarding critical natural resources.
6. Protect critical and important natural resources through public/private partnerships and encourage land conservation through voluntary, focused purchases of land, working forest, and/or farm conservation easements.
7. Encourage enrollment in the Open Space Current Use Tax Program, and other conservation programs including but not limited to incentive-based carbon offset programs.

## **Water Resources**

Bowdoinham prides itself on its location on Merrymeeting Bay, Kennebec River, Abagadasset River, Cathance River, West Branch and many streams; all of which have played an integral role in Bowdoinham's history.

### Goals

1. To manage and protect our water resources, including aquifers, wetlands, ponds, streams, rivers and Merrymeeting Bay.

### Key Issues

Protecting our valuable water resources for future generations.

### Recommendations

1. Promote good stewardship of our water resources.
2. Provide and support educational opportunities and resources.
3. Provide shoreland zoning guidance and materials for property owners.
4. Support and provide educational opportunities and resources to reduce water pollution.
5. Protect current and potential water sources.
6. Cooperate with other municipalities, Bowdoinham Water District, State of Maine, Friends of Merrymeeting Bay, Kennebec Estuary Land Trust, and other organizations to protect water resources.
7. Ensure the Town's Land Use Ordinance to be consistent with Maine Stormwater Management law and rules.
8. Amend the Town's Land Use Ordinance to incorporate low impact development standards.

## **Historic & Archaeological Resources**

Bowdoinham has a rich history; dating back to before its incorporation in 1762. Work has been done under the direction of the Bowdoinham Historical Society in the past three years to inventory all historic homes and farms in the town that were constructed prior to 1820. In addition, the Historical Society has worked with the State Preservation Office to survey all the properties in the village that could be designated as “contributing” to a historic district that would be eligible for inclusion in the National Register of Historic Districts. Extensive research has been done regarding the history of these properties.

### Goals

Recognize, protect, and encourage preservation of our archaeological and historic resources. Maintain the historic character of the village through provisions in the Land Use Ordinance.

### Key Issues

At present, the historic character of the village is not protected. Without regulation these assets may be modified or torn down at will. Further, the town’s scenic and natural resources include the historic

farms, cemeteries, stonewalls, and apple orchards scattered about the rural district. They are historic and should be preserved whenever possible.

### Recommendations

1. Create and maintain surveys and inventories of the town's historic and archaeological resources, including buildings and homes as well as other features like stonewalls, cemeteries, and apple orchards.
2. Create and implement a historic preservation plan.
3. Maintain and restore historic buildings.
4. Preserve and enhance the historic character of the village.
5. Support the activities and mission of the Bowdoinham Historical Society.
6. Educate the public about the town's historic and archaeological resources.
7. Create a cemetery map.

### **Recreation**

Recreation is an important aspect of life in Bowdoinham that greatly adds to Bowdoinham's quality of place.

### Goals

1. To promote, protect, and improve the availability and accessibility of outdoor recreational opportunities.
2. To plan for, develop, promote, and encourage recreational opportunities for all ages.
3. To plan for and develop regional recreational opportunities and facilities.
4. To expand on the list of current recreational offerings.

### Key Issues

Additional resources are needed to increase the current level of services, especially for teens and the elderly.

### Recommendations

1. Promote recreational opportunities in Bowdoinham including but not limited to biking, walking, and paddling.
2. Identify and promote recreational opportunities on publicly owned lands.
3. Support the Bowdoinham Snowbirds.
4. Investigate and develop a safe location for swimming.
5. Encourage landowners to allow access for hunting, fishing, snowmobiling, and trails.
6. Support the creation of the Merrymeeting Trail.
7. Maintain an inventory of our recreational resources.
8. Investigate the feasibility of and opportunities to develop a community center.
9. Develop, support, and promote indoor recreation for all ages.
10. Develop adult sports leagues.
11. Host board and card game events.

12. Develop and promote boating opportunities.
13. Investigate and develop a sledding hill.
14. Maintain and upgrade recreational facilities as prescribed by the recreation facility plan.
15. Develop additional safe access points to Merrymeeting Bay and the rivers.
16. Support our Age Friendly Committee in creating recreational activities for our seniors.
17. Explore and potentially create an Active Community Environment Team to implement our strategies for recreation.
18. Investigate the feasibility of and opportunities to develop a modern and efficient lighting system at the recreational fields.
19. Implement recreational opportunities as approved in the Waterfront Plan.

## **Housing**

Currently, Bowdoinham is made-up of predominantly single-family houses.

### Goals

1. To encourage and promote safe and affordable housing opportunities, consistent with other goals within this plan, such as those in the Age-Friendly section.
2. To promote a diversity of housing opportunities.
3. Decrease barriers to housing development, while also protecting our scenic, natural, and agricultural resources.
4. Encourage housing development in the Village district through infill and capitalize on our public water supply.

### Key Issues

We need more affordable housing, seasonal housing for our summer workforce, and manageable housing for elderly and others while protecting our farmlands and other natural resources. Housing opportunities are limited by access to public water and sewer as illustrated in the Bowdoinham Water District Service Area Map.

### Recommendations

1. Promote and encourage housing that is energy efficient, made from local and sustainable materials, reduces fossil fuel consumption, and is powered by on site renewable energy, by utilizing Property Assessed Clean Energy financing and other funding mechanisms as they become available.
2. Allow diverse housing types within the Town's ordinances including cluster and co-housing.
3. Support efforts to develop affordable, subsidized, seasonal, and workforce housing.
4. Encourage the development of housing opportunities for the elderly and disabled, including supported living.
5. Support efforts to help vulnerable populations remain in their homes by partnering with mutual aid programs.
6. Establish and support a housing sub-committee to recommend ways to increase housing in accordance with the comprehensive plan.
7. Expand Village District I to encompass all areas served by Bowdoinham Water District.



8. Create a Village District III that encompasses areas served by the Richmond Utilities District.
9. Encourage alternative and cooperative wastewater treatment systems to support increased housing density.

## **Transportation**

### Goals

1. To plan for and develop an efficient transportation system that accommodates anticipated growth, economic development, and changes in the State's transportation policies.
2. To implement and update a road maintenance plan.
3. To promote the development of and encourage the use of alternative forms of transportation.

### Key Issues

Transportation is expensive, making funding and state policies the key transportation issues.

### Recommendations

1. Develop additional parking in the village.
2. Encourage Maine Department of Transportation to reconstruct Route 24 and its intersections with Ridge Road, White Road, and Carding Machine Road as part of the Route 24 Corridor Master Plan in coordination with Topsham and Richmond that was submitted to the MDOT.
3. Encourage Maine Department of Transportation to create bike lanes on Route 24 as included in the Route 24 Corridor Master Plan.
4. Encourage Maine Department of Transportation to create sidewalks on Routes 24, 125, and 138 in the village area.
5. Continue to develop bike paths and bike lanes on Town roads.
6. Support the development of the Merrymeeting Trail as well as other future trails.
7. Continue to develop sidewalks throughout the village as approved in Walkable Village Plan.
8. Review and update the Town's Transportation Vision Statement as needed.
9. Promote, encourage, and support public transportation opportunities to serve the community at need.
10. Promote, encourage, and support alternative transportation, including exploring becoming a Bike Friendly community.
11. Promote, encourage, and support ride sharing.
12. Support the implementation of the Road Maintenance Plan.
13. Participate in regional and state transportation efforts.
14. When contemplating infrastructure improvements, consider the effects of sea level rise to ensure more resilient systems.
15. Update Walkable Village Plan as needed to promote future growth.
16. Promote, encourage, and support mobility.
17. Investigate and implement traffic calming measures.

## **Public Facilities and Services**

### Goals

1. To plan for and develop an efficient system of public facilities and services that supports current needs, anticipates growth, and promotes economic development.
2. To preserve and enhance the community institutions which make Bowdoinham special.
3. To implement existing Town plans, such as the Waterfront Plan and Walkable Village Plan.

### Key Issues

The key issue in providing public facilities and services is obtaining funding.

### Recommendations

1. Expand internet infrastructure to serve all Bowdoinham residents.
2. Develop additional public access internet service at the new waterfront park.
3. Investigate and resolve cell phone coverage gaps in the village center and other locations.
4. Maintain and improve current public facilities such as the Town Hall and the Combs Building as needed.
5. Develop new facilities at the Cathance Meadows Waterfront Park.
6. Support the mission and work of all Town Committees.
7. Develop a recruitment process for residents to join the Fire and EMS Departments.
8. Encourage residents to improve access to and identification of their homes for emergency services.
9. Promote, support, and encourage recycling.
10. Ensure that Town Boards receive proper training to perform their duties.
11. Coordinate with other municipalities to enhance services.
12. Develop and update resident and new resident resources to inform residents of recreation opportunities, local businesses, Town services and other resources.
13. Provide public facilities and services in a manner that promotes and supports growth and development in identified growth areas.
14. Improve accessibility to all public facilities.

## **Fiscal Capacity and Capital Investment Plan**

### Goals

To develop and implement a plan to finance an efficient system of public facilities and services that support current needs, anticipates growth, promotes economic development, and accommodates State policies.

### Key Issues

Funding and planning to get the most "bang for a buck."

### Recommendations

1. Maintain healthy fund balance.
2. Anticipate further reductions in state support.
3. Plan and save for capital projects.
4. Maintain the investment and purchasing plan.
5. Explore opportunities to work with other municipalities to plan for and finance shared or adjacent capital investments to increase cost savings and efficiencies.
6. Explore grant opportunities to assist in the funding of capital investments.

## **Land Use**

Bowdoinham is a rural community on Merrymeeting Bay. Much of the landmass is highly forested and undeveloped, providing regionally significant habitat through its contiguous undeveloped blocks in the Residential/Agricultural District and along Merrymeeting Bay and its tributaries. These areas provide passive recreation, working/productive landscapes, play a large role in climate mitigation and carbon sequestration. The Bay provides abundant fishing and hunting opportunities and supports high value agricultural soil. Village District I (VDI) is the most densely populated section of town centrally located on the banks of the Cathance River. Village District II flanks VDI to the west around the interstate and hosts some larger businesses and two housing developments.

## Goals

Be proactive in developing strategies to ensure residents can continue to afford to stay here, while protecting our cultural, ecological and agricultural resources, rural character, and make efficient use of public services.

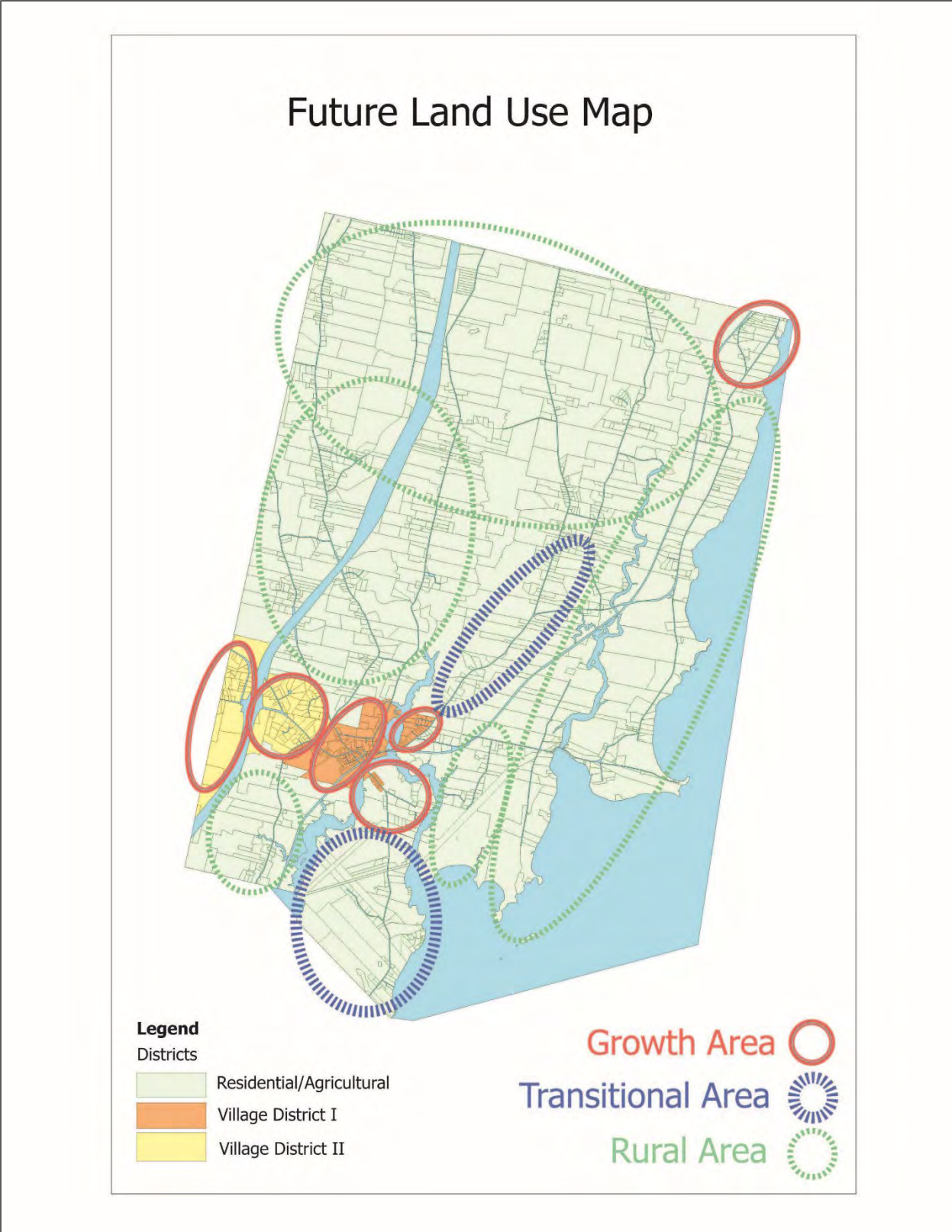
## Key Issues

How can we maintain the ability of property owners to develop their land, keep taxes low to allow families to stay here, and prioritize the conservation of natural and agricultural resources while maintaining our rural character?

## Recommendations

1. Allow for smaller lot sizes, road frontage, setbacks and higher density to encourage development in the village districts.
2. Expand Village Districts to encompass all areas served by Bowdoinham Water District.
3. Create a new land use district that encompasses areas that are or could be served by the Richmond Utilities District.
4. Encourage alternative and cooperative wastewater treatment systems to support increased housing density.
5. Continue to allow for mixed use development throughout Town with buffering between different uses.
6. Explore strategies such as but not limited to a Voluntary Municipal Farm Support Program, transfer of development rights, and easements which would allow for greater development densities in Village districts, while increasing preservation of high valued areas, such as agricultural soils, natural resources, and habitat in the Residential-Agricultural District.

7. Limit division of large contiguous parcels of land in the Residential/Agricultural District through exploring strategies like, but not limited to, increasing open space requirement for large subdivisions, reducing the density of new residential developments on large contiguous lots of land, directing new residential developments towards public roads by minimizing residential back-lots, and setting a maximum lot size so new developments have smaller “footprints” while maintaining land-owners’ options.
8. Minimize non-agricultural development on Prime Agricultural Soil, Farmland of Statewide Importance, or Farmland Soils of Local Importance.
9. Protect the viability of active agricultural activities from negative impacts of new development.
10. Minimize the impact of development in and around high valued areas, such as wetlands, waterbodies, and wildlife.
11. Continue to encourage the preservation of open space, creation of greenspace, and access to land and water resources.
12. Allow diverse housing types within the Town’s ordinances including cluster development, co-housing, and multi-family.
13. Support efforts to develop affordable, seasonal and workforce housing including the diverse housing types mentioned.
14. Encourage the development of housing opportunities for the elderly and disabled, including supported living.
15. Implement the Walkable Village Plan.
16. Implement the Waterfront Plan.
17. Continue to coordinate and partner with other municipalities, land trusts, and other organizations to protect natural resources.
18. Continue to maintain and protect our critical natural resources through our Town, State and Federal regulations, including (but not limited to) Shoreland Zoning, Floodplain Management, Natural Resources Protection Act, Subdivision, Site Plan Review, and Stormwater Management.
19. Maintain, enact, or amend local ordinances as appropriate to:
  - a. Clearly define the desired scale, intensity, and location of future development.
  - b. Establish and maintain fair and efficient permitting procedures.
  - c. Explore streamlining permitting procedures in growth areas.
  - d. Clearly define protective measures for critical and important natural resources.
  - e. Ensure that the Town’s Land Use Ordinance is consistent with applicable State laws and rules regarding critical natural resources.
  - f. Review and update Shoreland Zoning rules.
20. Assign responsibility for implementing the Future Land Use Plan to the appropriate committee(s), boards(s), or municipal official(s).
  - a. Establish and support a housing sub-committee to recommend ways to increase housing in accordance with the comprehensive plan.



### *Growth Area*

This Growth Area will allow the Town's historical village area to be maintained and grow into the surrounding developed area: Main Street to the highway interchange area and Pond Road, "Little Brooklyn" (the waterfront area to Wallentine Road), the area around the Bowdoinham Community School, Fisher Road where smaller lots currently exist, and the existing subdivision area around Browns Point Road. To allow for new development in the growth area, the required lot size will need to be reduced and residential density will need to be increased and provisions for cluster subdivisions and multi-family developments should be considered. The existing lots in the historic village area are 10,000 to 20,000 square feet. To keep in character with our historic village area, mixed-use development (residential, agricultural, commercial, institutional, and industrial) should be allowed to continue. The Town's Site Plan rules created in 2008 to address mixed-use development throughout Town should be improved to align with goals the comprehensive plan as mixed-use is allowed to continue. Due to the Shoreland Zone and Floodplain areas within this growth area, some industrial and commercial uses will have to continue to be restricted. As the village area develops, the Town will need to continue with its capital investments (sidewalks, three phase power, public utilities, and other amenities) as planned.

### *Transitional Area*

The Transitional Areas are the areas in Town which are located adjacent to more developed areas (Richmond's village, highway-interchange areas, and to a lesser extent, Topsham's Rural Residential District) and our growth area. While these areas may be appropriate for development, the Town wants to direct its growth and the capital investments to support growth into the growth area. These transitional areas should continue to allow mixed-use development (residential, agricultural, commercial, institutional, and industrial) in accordance with the Town's Site Plan Review rules. Additional regulations will impact development in the transitional areas that are within the Shoreland Zone and Floodplain areas.

### *Rural Area*

The Rural Area includes most of the Town's agricultural land, forests, natural resources (wetlands, wildlife habitats etc.), and preserved lands. The ability of the land to support new development varies through-out this Rural Area. Bowdoinham is known for both its poor soils (wet and clay) and good agricultural soils. The minimum lot size and residential density should remain one-acre on smaller lots, while the subdivision of large contiguous parcels should be limited by lower residential density requirements and a significant open space requirement for major subdivisions. Consider increasing the required road frontage for new lots. While home-based businesses, residential and agricultural uses should continue to be allowed, the Town should consider restricting commercial and industrial uses that would negatively impact the existing uses and important natural resources. Additionally, the Town should take steps to protect and maintain its agricultural activities and agricultural soils.

### Critical Natural Resources

Our critical natural resources should continue to be maintained and protected through our Town, State and Federal regulations, including but not limited to, Shoreland Zoning, Floodplain Management, Natural Resources Protection Act, Subdivision, Site Plan Review, Stormwater Management. Please refer to the following maps:

- Bowdoinham Habitat and Marine Resources
- Beginning with Habitat - High Value Plant & Animal Habitats
- Regionally Significant Habitats and Undeveloped Blocks
- Water Resources
- Bowdoinham Shoreland Zoning Map
- Bowdoinham Floodplain Map

## **Sea Level Rise & Climate Change**

### Goals

1. Plan and implement strategies to reduce the social, economic, and environmental impacts of climate change and create a more resilient community.
2. Reduce the Town's contributions to climate change including but not limited to reducing our greenhouse gas emissions and increasing our carbon sequestration.

### Key Issue

We recognize that climate change will continue to bring unprecedented weather events and cause other indirect challenges for the Town which could tax our infrastructure, energy systems, economy, and natural resources, and put people at risk. The Town may experience a myriad of impacts from climate change ranging from but not limited to road washouts, flooding, drought, wildfire, increase of invasives, tidal surges, and more frequent extreme weather. The scope, scale, and uncertainty of these impacts will require a high level of expertise, support, and collaboration to ensure the Town is socially, economically, and environmentally resilient. We must be proactive in our understanding, planning, and actions to reduce these risks from climate change.

### Recommendations

1. Develop and implement a Climate Action Plan which includes a vulnerability assessment.
2. Continue strengthening standards, beyond the minimum FEMA Flood Insurance Program requirements, for new or replacement construction in areas that flood, with potential premium savings to policy holders.
3. Participate in the FEMA National Flood Insurance Community Rating System (CRS) program, so flood insurance policy holders in Bowdoinham can get the best available flood insurance rates.
4. When replacing items in the Capital Investment Plan such as roads, bridges, drains, buildings or other properties at risk from flooding use the most current flood risk standards to elevate roads and bridges, improve road surfaces, and increase culvert sizes, to make them more flood-proof.
5. Consider the long-term benefits and costs for more resilient designs, when making capital budget decisions.
6. Maintain a digital Shoreland Zoning Map and locate the position of the highest annual tide level for Bowdoinham, so that the edges of the shoreland zone are accurate on the map, as sea level rise increases.
7. Consider natural ways to make shorelands more resistant to erosion, such as installing native plantings and creating berms, rather than putting in hard structures that may just shift the location of the erosion problem.

8. Encourage public or private purchases of uplands adjacent to tidal marshes, to allow marshes to migrate, as sea level rises.
9. Participate in Regional or State studies of sea level rise and climate change impacts.
10. Encourage the reduction of impervious surfaces in shoreland areas to improve drainage.
11. Maintain enrollment in the Community Resilience Partnership program and other programs that offer municipal assistance for resiliency and to address climate change.

## **Public Health**

Over the past 10 plus years there have been several public health/health-related events related to increasing extremes in weather, pest-borne diseases, and the Covid-19 pandemic. Emergency response services have also emerged as an issue. It is anticipated that between 2024 and 2034 additional health-related concerns will continue to emerge.

There are existing resources to inform community members and address these and other health-related issues that exist in Sagadahoc County, the Mid Coast Public Health District, and the State of Maine that are currently not readily available to or known about among Bowdoinham community members. These resources include information about health care, mental health resources, prevention of disease, and other support services to help all to thrive.

The population of Bowdoinham residents reveals higher percentages of individuals ages 0-9 and over 60. Both age groups tend to require more prevention and treatment resources than other age cohorts.

The duties of the Local Health Officer (LHO) of Bowdoinham are to deal with environmental health protection and nuisance control, and other duties as needed. The needs stated above are beyond the scope of that position.

### Goals

1. Maintain adequate access to reliable emergency response services.
2. Increase community member awareness and knowledge of available county, public health district, and state level health/public health resources.
3. Increase preparedness for emerging health and public health conditions.

### Key Issues

How can the town best maintain emergency services? How do Bowdoinham community members connect to available resources? How can the town prepare the community for awareness and preparedness for health-related emergencies?

### Recommendations

2. Develop and support a Public Health Plan that includes a Social Vulnerability Plan.
3. Explore and partner with other communities, the state, etc. to maintain Emergency Response Services.



4. Create an ad hoc committee to address health/public health and identify a liaison to town government.
5. Support and promote access to health information for residents.

## **Age Friendly**

The vision of Age Friendly Bowdoinham is to foster changes in the physical and social environment to make Bowdoinham a better place to live for people of all ages and physical abilities.

### Goals

1. To expand and promote services and supports to assist individuals to remain in Bowdoinham as they age.
2. To enhance the accessibility of services, buildings, events, and the physical environment.
3. To enhance programs to reduce social isolation and build social connections.
4. To develop accessible and affordable housing that promotes independent living.
5. To expand transportation options.
6. To develop, support, and promote recreational programs and facilities appropriate for all ages and abilities.

### Key Issues

As of the 2020 Census, one-third of Bowdoinham's population was over 60 years of age. The key issues facing older adults in Bowdoinham are insufficient affordable housing, inadequate services and support, and accessibility to buildings, services, events, and recreational opportunities.

### Recommendations

1. Support the current Age Friendly Bowdoinham three-year plan.
2. Expand and provide home improvement programs to help older adults remain in their homes.
3. Support and participate in initiatives to expand the in-home direct care workforce.
4. Build and sustain efforts to increase availability of wellness, health, and support services to older adults.
5. Update the evaluation of accessibility of the Town's public and private buildings and spaces and make improvements as recommended.
6. Expand the walk-ability and accessibility of residential areas and public grounds in the Village for all users, regardless of physical ability.
7. Expand opportunities for sharing ideas, activities, and knowledge across generations.
8. Expand programs to enhance the physical, mental, and social health of older adults.
9. Develop a dedicated space for older adults with access to services and resources.
10. Research and pursue new models of affordable housing, such as but not limited to cluster housing, shared housing, and Accessory Dwelling Units.
11. Develop options for individuals requiring in-home and other support services.
12. Promote the Rides in Neighbors' Cars program or other similar transportation programs through driver recruitment and building awareness of the program.

## **PLAN IMPLEMENTATION & EVALUATION**

### **Implementation**

Key –

*Town Departments, Boards & Committees*

SB – Select Board

CPC – Comprehensive Planning Committee

PB – Planning Board

PWD – Public Works Department

CC – Cemetery Committee

BOA – Board of Appeals

AFC – Age Friendly Committee

CDAC – Community Development Advisory Committee

DPD – Department of Planning & Economic Development

REC – Recreation Department

THC – Town Hall Committee

EMS – Emergency Medical Services Committee

SW – Solid Waste Committee

<b>Strategies</b>	<b>Responsible Party</b>	<b>Timeline</b>
<u>Economy</u>		
1. Support and promote current businesses and community groups through maintaining existing resources including the Town website, Town business directory, and Town newsletters.	DPD & CDAC	Ongoing
2. Develop a brand and branding strategy to promote through multiple media types.	DPD & CDAC	5-10 years
3. Attract complimentary businesses through brand development, maintenance of new business resources, and targeted investments in village/town infrastructure.	DPD & CDAC	Ongoing
4. Support and promote the arts, eco-tourism, agri-tourism, and historic tourism.	DPD & CDAC	Ongoing
5. Draft a strategic plan to support artists, artisans, and crafts people.	DPD & CDAC	2-5 years
6. Implement Waterfront Plan.	DPD & CDAC	Ongoing
7. Implement Walkable Village Plan.	DPD & CDAC	Ongoing

8. Support the development of and implement the Merrymeeting Trail.	DPD & CDAC	Ongoing
9. Develop an Open Space Plan.	DPD, CDAC, CPC & PB	Ongoing
10. Plan for and utilize TIF funds to support our economic goals above.	DPD & CDAC	Ongoing
11. Support the work and mission of the Community Development Advisory Committee.	SB	Ongoing
12. Participate in regional economic development efforts.	DPD & CDAC	Ongoing
<u>Agriculture</u>		
1. Create and implement an Agricultural Conservation Plan that may include:	DPD, CPC & PB	5-10 years
a. Develop an organic farm cluster.	DPD, CPC & PB	5-10 years
b. Prioritization of conservation of contiguous farmland to enhance our regional agricultural opportunities.	DPD, CPC & PB	5-10 years
2. Promote and recognize the benefits of agriculture for the economy and ecology.	DPD, CPC & CDAC	Ongoing
3. Create maps of farms in town that delineates current use, soil designation, and those enrolled in the Farmland Tax Program.	DPD & CPC	2-5 years
4. Review the Farmland Taxation Program to ensure program is beneficial to farmers and encourage owners of productive farmland to enroll in the Farmland Taxation Program as appropriate.	SB	Ongoing
5. Create mechanisms to protect active agricultural activities and all farmlands from new non-agricultural development including:	DPD, CPC & PB	Ongoing
a. Review and revise Land Use Ordinances to minimize non-agricultural and/or incompatible development on farmland soils and reduce lot fragmentation.	DPD, CPC & PB	Ongoing
b. Encourage and support the preservation of farmland soils.	DPD, CPC & PB	Ongoing
c. Ensure that all farmers and those living on farmland soils or historical farm properties are aware of all options for protection and maintaining their farms as productive farms.	DPD, CPC & PB	Ongoing
6. Increase support of farmers in a variety of ways that may include:	DPD, CPC, SB & PB	Ongoing

a. Development of a Voluntary Municipal Farm Support Program.	SB	2-5 years
b. Support for the Bowdoinham Farmers Market and other local food access venues.	DPD	Ongoing
c. Formation of a farmers' alliance/group or agricultural conservation commission.	DPD	5-10 years
d. Create and maintain a farmer resource package for the website and distribution to farmers and consumers.	DPD & CDAC	Ongoing
e. Explore interest and ability to create a Bowdoinham Brand for agricultural products.	DPD & CDAC	5-10 years
f. Support development of new markets for Bowdoinham agricultural products.	DPD & CDAC	Ongoing
g. Encourage, support, and participate in regional agricultural projects.	DPD & CDAC	Ongoing
h. Support agricultural educational opportunities.	DPD & CDAC	Ongoing
7. Protect and increase access to local food for all people with a focus on access for children for growth and development, for all people experiencing food insecurity, in schools as well as other settings which may include:	DPD	Ongoing
a. Encourage and support gleaning groups.	DPD	Ongoing
8. Work with state level entities that also support farmlands and natural resources which may include:	DPD	Ongoing
a. Consult with Department of Agriculture, Conservation and Forestry when developing any land use regulations pertaining to agricultural management practices to ensure regulations are agriculture friendly.	DPD, PB & CPC	Ongoing
b. Encourage Maine Department of Inland Fisheries & Wildlife and other landowners with prime farmland soils to lease the land for agricultural uses.	DPD	Ongoing
<u>Forest Resources</u>		
1. Develop a municipal forest management plan that includes tree care and replacement policy.	DPD, PWD, CC & REC	2-5 years
2. Provide resources and educational opportunities to maintain and expand our forestry resources.	DPD, CPC, CDAC & REC	2-5 years

3. Create a resource package that includes various options for forest management, such as types of timber harvesting, wildlife habitat enhancement possibilities, and recreational opportunities for the website and distribution to wood lot owners.	DPD, CPC, CDAC & REC	5-10 years
4. Install a community forest at the new waterfront park.	DPD, CPC, CDAC & REC	Ongoing
5. Develop a school orchard.	DPD, CPC, & REC	5-10 years
6. Explore becoming a Tree City.	DPD, CPC & REC	5-10 years
7. Encourage enrollment in the Tree Growth Tax Program, and other conservation programs including incentive-based forest carbon programs.	DPD, CPC & CDAC	Ongoing
<u>Natural Resources</u>		
1. Create a Conservation Commission to serve the Town and our resources and develop and oversee an Open Space Plan and a Climate Action Plan which includes a vulnerability assessment.	SB	2-5 years
2. Develop and promote educational opportunities and resources on natural resource protection.	DPD	Ongoing
3. Make available information to those living in or near critical or important natural resources about current use tax programs and applicable local, state, or federal regulations.	DPD, CPC & CDAC	Ongoing
4. Initiate and/or participate in interlocal and/or regional planning, management, and/or regulatory efforts around shared critical and important natural resources.	DPD, CPC, PB & CDAC	Ongoing
5. Ensure that the Town's Land Use Ordinance is consistent with applicable State laws and rules and recommendations of the Conservation Commission regarding critical natural resources.	DPD, CPC & PB	Ongoing
6. Protect critical and important natural resources through public/private partnerships and encourage land conservation through voluntary, focused purchases of land, working forest, and/or farm conservation easements.	DPD, CPC & PB	Ongoing
7. Encourage enrollment in the Open Space Current Use Tax Program, and other conservation programs including but not limited to incentive-based carbon offset programs.	DPD, CPC & CDAC	Ongoing

<u>Water Resources</u>		
1. Promote good stewardship of our water resources.	DPD	Ongoing
2. Provide for and support educational opportunities and resources.	DPD	Ongoing
a. Provide shoreland zoning workshops and materials for property owners.	DPD	Ongoing
b. Support and provide educational opportunities and resources to reduce water pollution.	DPD	Ongoing
3. Protect current and potential water sources.	DPD, PB & CPC	Ongoing
4. Cooperate with other municipalities, Bowdoinham Water District, Friends of Merrymeeting Bay, Kennebec Estuary Land Trust, and other organizations to protect water resources.	DPD	Ongoing
5. Ensure the Town's Land Use Ordinance to be consistent with Maine Stormwater Management law and rules.	DPD, PB & CPC	Ongoing
6. Amend the Town's Land Use Ordinance to incorporate low impact development standards.	DPD, PB & CPC	Ongoing
<u>Historic &amp; Archaeological Resources</u>		
1. Create and maintain surveys and inventories of the town's historic and archaeological resources, including buildings and homes as well as other features like stonewalls, cemeteries, and apple orchards.	CC & DPD	Ongoing
2. Create and implement a historic preservation plan.	DPD	Ongoing
3. Maintain and restore historic buildings.	SB	Ongoing
4. Preserve and enhance the historic character of the village.	SB, DPD	Ongoing
6. Support the activities and mission of the Bowdoinham Historical Society.	SB	Ongoing
7. Educate the public about the town's historic and archaeological resources.	DPD	Ongoing
7. Create a cemetery map.	DPD, CC	5-10 years

<u>Recreation</u>		
1. Promote recreational opportunities in Bowdoinham including biking, walking, and paddling.	SB, REC & CDAC	Ongoing
2. Identify and promote opportunities on publicly owned lands.	AFC, CDAC & REC	Ongoing
3. Support the Bowdoinham Snowbirds.	SB	Ongoing
4. Investigate and develop a safe location for swimming.	DPD & REC	2-5 years
5. Encourage landowners to allow access for hunting, fishing, snowmobiling, and trails.	DPD & REC	Ongoing
6. Support the creation of the Merrymeeting Trail.	DPD, CDAC & REC	Ongoing
7. Maintain an inventory of our recreational resources.	DPD & REC	Ongoing
8. Investigate the feasibility of and opportunities to develop a community center.	DPD & REC	0-5 years
9. Develop, support and promote indoor recreation opportunities for all ages.	REC	Ongoing
10. Develop adult sports leagues.	REC	Ongoing
11. Host board and card game events.	REC & AFC	Ongoing
12. Develop and promote boating opportunities.	DPD, CDAC, REC & AFC	Ongoing
13. Investigate and develop a sledding hill.	REC	0-5 years
14. Maintain and upgrade recreational facilities as prescribed by the recreation facility plan.	REC	Ongoing
15. Develop additional safe access points to Merrymeeting Bay and the rivers.	REC	Ongoing
16. Support our Age Friendly Committee in creating recreational activities for our seniors.	SB	Ongoing
17. Explore and possibly create an Active Community Environment Team to implement our strategies for recreation.	SB	0-2 years
18. Investigate the feasibility of and opportunities to develop a modern and efficient lighting system at the recreational fields.	REC	Ongoing

19. Implement recreational opportunities as approved in the Waterfront Plan.	REC, CDAC & DPD	Ongoing
<u>Housing</u>		
1. Promote and encourage housing that is energy efficient, made from local and sustainable materials, reduces fossil fuel consumption, and is powered by on site renewable energy, by utilizing Property Assessed Clean Energy financing and other funding mechanisms as they become available.	CPC & DPD	Ongoing
2. Allow diverse housing types within the Town's ordinances including cluster and co-housing.	DPD, PB &CPC	Ongoing
3. Support efforts to develop affordable, subsidized, seasonal and workforce housing.	CPC & DPD	Ongoing
4. Encourage the development of housing opportunities for the elderly and disabled, including supported living.	DPD, CPC & AFC	Ongoing
5. Support efforts to help vulnerable populations remain in their homes by partnering with mutual aid programs.	AFC & EMS	Ongoing
6. Establish and support a housing sub-committee to recommend ways to increase housing in accordance with the comprehensive plan	CPC	Ongoing
7. Expand Village District I to encompass all areas served by Bowdoinham Water District	CPC & DPD	0-5 years
8. Create a Village District III that encompasses areas served by the Richmond Utilities District.	CPC & DPD	0-5 years
9. Encourage alternative and cooperative wastewater treatment systems to support increased housing density.	CPC & DPD	Ongoing
<u>Transportation</u>		
1. Develop additional parking in the village.	DPD	5-10 years
2. Encourage Maine Department of Transportation to reconstruct Route 24 and its intersections with Ridge Road, White Road and Carding Machine Road as part of the Route 24 Corridor Master Plan in coordination with Topsham and Richmond that was submitted to the MDOT.	Town Manager & SB	Ongoing
3. Encourage Maine Department of Transportation to create bike lanes on Route 24 as included in the Route 24 Corridor Master Plan.	Town Manager & SB	Ongoing



4. Encourage Maine Department of Transportation to create sidewalks on Routes 24, 125 and 138 in the village area.	Town Manager & SB	Ongoing
5. Continue to develop bike paths and bike lanes on Town roads.	Town Manager & SB	Ongoing
6. Support the development of the Merrymeeting Trail as well as other future trails.	DPD & REC	Ongoing
7. Continue to develop sidewalks throughout the village as approved in Walkable Village Plan.	DPD	Ongoing
8. Review and update the Town's Transportation Vision Statement as needed.	Town Manager & SB	Ongoing
9. Promote, encourage, and support public transportation opportunities to serve the community at need.	DPD	Ongoing
10. Promote, encourage, and support alternative transportation, including exploring becoming a Bike Friendly community.	CPC, DPD, CDAC, REC	Ongoing
11. Promote, encourage, and support ride sharing.	CPC, DPD, CDAC & REC	Ongoing
12. Support the implementation of the Road Maintenance Plan.	Town Manager	Ongoing
13. Participate in regional and state transportation efforts.	DPD, PWD	Ongoing
14. When contemplating infrastructure improvements, consider the effects of sea level rise to ensure more resilient systems.	DPD, PWD, Town Manager & SB	Ongoing
15. Update Walkable Village Plan as needed to promote future growth.	DPD, AFC & CDAC	Ongoing
16. Promote, encourage, and support emobility.	DPD & CDAC	Ongoing
17. Investigate and implement traffic calming measures.	DPD, PWD, Town Manager & SB	Ongoing
<u>Public Facilities and Services</u>		
1. Expand internet infrastructure to serve all Bowdoinham residents.	DPD, CDAC	Ongoing
2. Develop additional public access internet service at the new waterfront park.	DPD, CDAC	Ongoing
3. Investigate and resolve cell phone coverage gaps in the village center and other locations.	DPD, CDAC	Ongoing
4. Maintain and improve current public facilities such as the Town Hall and the Combs Building as needed.	THC, SB & Town Manager	Ongoing

5. Develop new facilities at the Cathance Meadows Waterfront Park.	CDAC, REC & DPD	0-5 years
6. Support the mission and work of all Town Committees.	SB	Ongoing
7. Develop a recruitment process for residents to join the Fire and EMS Departments.	Town Manager, EMS & SB	Ongoing
8. Encourage residents to improve access to and identification of their homes for emergency services.	EMS & Fire Dept	Ongoing
9. Promote, support, and encourage recycling.	SWC & Recycling Dept	Ongoing
10. Ensure that Town Boards receive proper training to perform their duties.	Town Manager	Ongoing
11. Coordinate with other municipalities to enhance services.	Town Manager	Ongoing
12. Develop and update resident and new resident resources to inform residents of recreation opportunities, local businesses, Town services and other resources.	DPD, CDAC	0-5 years
13. Provide public facilities and services in a manner that promotes and supports growth and development in identified growth areas.	Town Manager & SB	Ongoing
14. Improve accessibility to all public facilities.	Town Manager & SB	5-10 years
<u>Fiscal Capacity and Capital Investment Plan</u>		
1. Maintain healthy fund balance.	Town Manager & SB	Ongoing
2. Anticipate further reductions in state support.	Town Manager & SB	Ongoing
3. Plan and save for capital projects.	Town Manager & SB	Ongoing
4. Maintain the investment and purchasing plan.	Town Manager & SB	Ongoing
5. Explore opportunities to work with other municipalities to plan for and finance shared or adjacent capital investments to increase cost savings and efficiencies.	Town Manager & SB	Ongoing
6. Explore grant opportunities to assist in the funding of capital investments.	Town Manager & SB	Ongoing

<u>Land Use</u>		
1. Allow for smaller lot sizes, lot frontage and setbacks to encourage higher density development in the village districts.	DPD, PB & CPC	0-2 years
2. Expand Village Districts to encompass all areas served by Bowdoinham Water District.	DPD, PB & CPC	0-2 years
3. Create a new land use district that encompasses areas that are or could be served by the Richmond Utilities District.	DPD, PB & CPC	0-2 years
4. Encourage alternative and cooperative wastewater treatment systems to support increased housing density.	DPD, PB & CPC	Ongoing
5. Continue to allow for mixed use development throughout Town with buffering between different uses.	DPD, PB & CPC	Ongoing
6. Explore strategies such as but not limited to a Voluntary Municipal Farm Support Program, transfer of development rights, and easements which would allow for greater development densities in Village districts, while increasing preservation of high valued areas, such as agricultural soils, natural resources, and habitat in the Residential-Agricultural District.	DPD, PB & CPC	Ongoing
7. Limit division of large contiguous parcels of land in the Residential/Agricultural District through exploring strategies like, but not limited to, increasing open space requirement for large subdivisions, reducing the density of new residential developments on large contiguous lots of land, directing new residential developments towards public roads by minimizing residential back-lots, and setting a maximum lot size so new developments have smaller “footprints” while maintaining land-owners’ options.	DPD, PB & CPC	0-2 years
8. Minimize non-agricultural development on Prime Agricultural Soil, Farmland of Statewide Importance, or Farmland Soils of Local Importance.	DPD, PB & CPC	Ongoing
9. Protect the viability of active agricultural activities from negative impacts of new development.	DPD, PB & CPC	Ongoing
10. Minimize the impact of development in and around high valued areas, such as wetlands, waterbodies and wildlife.	DPD, PB & CPC	Ongoing

11. Continue to encourage the preservation of open space creation of greenspace, and access to land and water resources.	DPD, PB & CPC	Ongoing
12. Allow diverse housing types within the Town's ordinances including cluster development, co-housing and multi-family.	DPD, PB & CPC	Ongoing
13. Support efforts to develop affordable, seasonal and workforce housing including the diverse housing types mentioned.	DPD, PB & CPC	Ongoing
14. Encourage the development of housing opportunities for the elderly and disabled, including supported living.	DPD, PB & CPC	Ongoing
15. Implement the Walkable Village Plan.	CDAC, CPC, AFC & DPD	Ongoing
16. Implement the Waterfront Plan.	CDAC, CPC, REC & DPD	Ongoing
17. Continue to coordinate and partner with other municipalities, land trusts, and other organizations to protect natural resources.	DPD	Ongoing
18. Continue to maintain and protect our critical natural resources through our Town, State and Federal regulations, including (but not limited to) Shoreland Zoning, Floodplain Management, Natural Resources Protection Act, Subdivision, Site Plan Review, Stormwater Management.	DPD & PB	Ongoing
19. Maintain, enact, or amend local ordinances as appropriate to:	DPD, PB & CPC	Ongoing
a. Clearly define the desired scale, intensity, and location of future development.	DPD, PB & CPC	Ongoing
b. Establish and maintain fair and efficient permitting procedures.	DPD, PB & CPC	Ongoing
c. Explore streamlining permitting procedures in growth areas.	DPD, PB & CPC	Ongoing
d. Clearly define protective measures for critical and important natural resources;	DPD, PB & CPC	Ongoing
e. Ensure that the Town's Land Use Ordinance is consistent with applicable State laws and rules regarding critical natural resources.	DPD, PB & CPC	Ongoing
f. Review and update Shoreland Zoning rules.	DPD & PB	Ongoing
20. Assign responsibility for implementing the Future Land Use Plan to the appropriate committee(s), board(s) or municipal official(s).	DPD, PB & CPC	Ongoing

a. Establish and support a housing sub-committee to recommend ways to increase housing in accordance with the comprehensive plan.	SB, CPC	Ongoing
<u>Sea Level Rise &amp; Climate Change</u>		
1. Develop and implement a Climate Action Plan which includes a vulnerability assessment.	CPC, DPD	0-5 years
2. Continue strengthening standards, beyond the minimum FEMA Flood Insurance Program requirements, for new or replacement construction in areas that flood, with potential premium savings to policy holders.	PB	0-5 years
3. Participate in the FEMA National Flood Insurance Community Rating System (CRS) program, so flood insurance policy holders in Bowdoinham can get the best available flood insurance rates	Town Manager & SB	Ongoing
4. When replacing items in the Capital Investment Plan such as roads, bridges, drains, buildings or other properties at risk from flooding use the most current flood risk standards to elevate roads and bridges, improve road surfaces, and increase culvert sizes, to make them more flood-proof.	Town Manager & SB	Ongoing
5. Consider the long-term benefits and costs for more resilient designs, when making capital budget decisions.	Town Manager & SB	Ongoing
6. Maintain a digital Shoreland Zoning Map, and locate the position of the highest annual tide level for Bowdoinham, so that the edges of the shoreland zone are accurate on the map, as sea level rise increases.	DPD & PB	Ongoing
7. Consider natural ways to make shorelines more resistant to erosion, such as installing native plantings and creating berms, rather than putting in hard structures that may just shift the location of the erosion problem.	DPD & PB	Ongoing
8. Encourage public or private purchases of uplands adjacent to tidal marshes, to allow marshes to migrate, as sea level rises.	DPD & PB	Ongoing
9. Participate in Regional or State studies of sea level rise and climate change impacts.	DPD & PB	Ongoing
10. Encourage the reduction of impervious surfaces in shoreland areas to improve drainage.	DPD & PB	Ongoing

11. Maintain enrollment in the Community Resilience Partnership program and other programs that offer municipal assistance for resiliency and to address climate change.	DPD & CPC	Ongoing
<u>Public Health</u>		
1. Develop and support a Public Health Plan that includes a Social Vulnerability Plan.	DPD, AFC & CPC	0-5 years
2. Explore and partner with other communities, the state, etc. to maintain Emergency Response Services.	EMS, Fire Dept & Town Manager	Ongoing
3. Create an ad hoc committee to address health/public health and identify a liaison to town government.	EMS & CPC	Ongoing
4. Support and promote access to health information for residents.	EMS & AFC	Ongoing
<u>Age Friendly</u>		
1. Support the current Age Friendly Bowdoinham three-year plan.	SB	0-3 years
2. Expand and provide home improvement programs to help older adults remain in their homes.	AFC	Ongoing
3. Support and participate in initiatives to expand the in-home direct care workforce.	AFC	Ongoing
4. Build and sustain efforts to increase availability of wellness, health, and support services to older adults.	AFC	Ongoing
5. Update the evaluation of accessibility of the Town's public and private buildings and spaces and make improvements as recommended.	Town Manager & SB	Ongoing
6. Expand the walk-ability and accessibility of residential areas and public grounds in the Village for all users, regardless of physical ability.	AFC & CDAC	Ongoing
7. Expand opportunities for sharing ideas, activities, and knowledge across generations.	AFC	Ongoing
8. Expand programs to enhance the physical, mental, and social health of older adults.	AFC & REC	Ongoing
9. Develop a dedicated space for older adults with access to services and resources.	AFC & REC	5-10 years
10. Research and pursue new models of affordable housing, such as but not limited to cluster	AFC, CPD, PB & DPD	Ongoing

housing, shared housing, and Accessory Dwelling Units.		
11. Develop options for individuals requiring in-home and other support services.	AFC	Ongoing
12. Promote the Rides in Neighbors' Cars program or other similar transportation programs through driver recruitment and building awareness of the program.	AFC	Ongoing

## **Evaluation**

All Responsible Parties should report annually, in the month of January, to the Select Board on their process with their respective strategies over the last year. Their reports should include:

- Their progress on their respective strategies.
- Barriers to accomplishing their respective strategies.
- Their proposed next steps for the next twelve months.
- Any proposed updates to Comprehensive Plan.



## **INVENTORY & ANALYSIS**

### **Population & Demographics**

#### **Conditions & Trend**

*(1) The community's Comprehensive Planning Population and Demographic Data Set (including relevant local, regional, and statewide data) prepared and provided to the community by the Office or its designee.*

Bowdoinham has seen a 135.4% growth since the year 1970, showing to be 2.4 times the growth of Sagadahoc County and 3.7 times that of the State.

<b>Population Changes from 1970 to 2020</b>			
<b>Year</b>	<b>Bowdoinham</b>	<b>Sagadahoc County</b>	<b>Maine</b>
1970	1,294	23,452	993,722
1980	1,828	28,795	1,125,043
1990	2,192	33,535	1,227,928
2000	2,612	35,214	1,274,923
2010	2,889	35,293	1,328,361
2020	3,047	36,699	1,362,359
Change	1,753	13,247	368,637
Percent Change	135.4%	56.4%	37%

Source: 2020 U.S. Census Bureau

Bowdoinham has continued to grow since the 1970s but at a slower rate each successive decade. The County and State have grown at a slower rate than has the Town in each of the last five decades.

<b>Percent Population Changes By Decade</b>			
<b>Decade</b>	<b>Bowdoinham</b>	<b>Sagadahoc County</b>	<b>Maine</b>
1970 - 1980	41.3%	22.8%	13.2%
1980 - 1990	19.9%	16.5%	9.1%
1990 - 2000	19.2%	5.0%	3.8%
2000 - 2010	10.6%	0.2%	4.2%
2010 - 2020	5.5%	4.0%	2.5%

Source: Maine State Economist Office

Note: Based upon 2020 U.S. Census Bureau population estimates.

The State predicts that both Bowdoinham's and Sagadahoc County's population will increase over the next seven years with data generated from the US Census Bureau population projections. The Town concurs with the predicted direction of growth. An analysis by the Midcoast Council of Governments projects this growth to be significantly higher, possibly up to 13%. This growth range projection is subject to unknown factors including the Covid pandemic and climate migration, among others. For planning purposes this greater growth rate should be accounted for.

State Economist Population Projections 2020 - 2040						
Area/Year	2020	2025	2030	2035	2040	Change
Bowdoinham	3,047	3,098	3,154	3,176	3,187	4.6%
Sagadahoc County	36,688	36,794	36,921	36,747	36,292	1.1%

Source: Maine State Economist Office

Note: Based upon 2020 U.S. Census Bureau population estimates.

From 2010 to 2020, the Town's population increased by 158 people. Of that growth, 57 was due to natural increase (births minus deaths). The remainder, 101, was due to the in-migration of new residents.

Vital Statistics for Bowdoinham												
Vitals/Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Deaths	12	23	24	23	18	18	22	21	25	22	15	223
Births	32	21		26	33	25	27	29	27	35	25	280

Source: Bowdoinham Annual Town Reports 2011-2021.

In 2020, females comprised 50.7% of Bowdoinham's population, while males comprised 49.3%. In Sagadahoc County, females comprised 50.9%, while males comprised 49.1%. Statewide, females comprised 50.7%, while males comprised 49.3%.

The median age of Bowdoinham residents has surpassed ten years over the past four decades. In 2020, Bowdoinham's median age was much higher than the County and the State's median age.

Median Age					
Area	1990	2000	2010	2020	Percent Change
Bowdoinham	33.9	39.1	43.7	53.4	57.5%
Sagadahoc County	32.6	38.0	44.1	46.8	43.5%
Maine	33.9	38.6	42.7	45.1	33%

Source: 2020 U.S. Census Bureau

In the last decade, Bowdoinham lost population in these age groups: 5-9, 10-14, 15-19, 35-44, and 45-54. The Town gained population in all the other groups, most noticeably for those aged 65-74, and to a lesser extent, those aged 75-84 and 60-64. This suggests that Bowdoinham's residents are aging, younger populations are moving away, and the new populations coming in are older. This also suggests that the Town has become more attractive to those in or nearing retirement age than it is to families with children.

Age Groups in Bowdoinham					
Population	2000	2010	2020	Change	Percent Change
Under 5 years	141	145	151	6	4%
5 to 9 years	179	174	170	-4	-2%
10 to 14 years	221	182	162	-20	-11%

15 to 19 years	188	181	169	-12	-7%
20 to 24 years	99	114	130	16	14%
25 to 34 years	283	299	322	23	8%
35 to 44 years	504	411	383	-28	-7%
45 to 54 years	469	568	400	-168	-30%
55 to 59 years	172	241	260	19	8%
60 to 64 years	92	208	278	70	34%
65 to 74 years	136	250	424	174	70%
75 to 84 years	93	87	165	78	90%
85 years and over	35	29	33	4	14%
Total	2,612	2,889	3,047	158	5%

Source: 2020 U.S. Census Bureau

Sagadahoc County lost population in age groups 0-5, 5-9, 10-14, 15-19, 20-24, 35-44, and 45-54. The county gained population in the other groups, the most notable were those in the groups 75-84 and 65-74. Overall, the county grew by 4%. This is data indicating that younger people and younger families are moving away and being replaced with older age groups.

<b>Age Groups in Sagadahoc County</b>					
<b>Population</b>	<b>2000</b>	<b>2010</b>	<b>2020</b>	<b>Change</b>	<b>Percent Change</b>
Under 5 years	2,153	1,912	1,613	-299	-16%
5 to 9 years	2,523	2,033	1,879	-154	-8%
10 to 14 years	2,814	2,114	2,021	-93	-4%
15 and 19 years	2,358	2,048	1,846	-202	-10%
20 to 24 years	1,534	1,606	1,550	-56	-3%
25 to 34 years	4,477	3,626	4,014	388	11%
35 to 44 years	6,253	4,717	4,351	-366	-8%
45 to 54 years	5,403	6,149	4,714	-1,435	-23%
55 to 59 years	1,933	2,852	2,943	91	3%
60 to 64 years	1,432	2,448	3,062	614	25%
65 to 74 years	2,261	3,341	5,093	1,752	52%
75 to 84 years	1,474	1,667	2,641	974	58%
85 years and over	599	780	972	192	25%
Total	35,214	35,293	36,699	1,406	4%

Source: 2020 U.S. Census Bureau

The State projects that Sagadahoc County’s population will have moderate growth between 2020 and 2023, but start its descent shortly after and end with a 2% growth by 2040 from 2020. Age groups 0-40, and age groups from 50-69, all show a negative growth rate. If not for the drastic increase in age groups 75-79 and up, the county’s population projection would showcase a drastic negative growth rate. This indicates that younger people are not coming back after college, young families are moving away, and older populations are moving in.

<b>State Economist Population Projections for Sagadahoc County</b>						
<b>Age/Year</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>Percent Change</b>
0-4	795	758	724	682	662	-17%
5-9	892	786	768	741	709	-21%
10-14	973	883	782	768	747	-23%
15-19	946	882	823	747	737	-22%
20-24	794	875	815	783	737	-7%
25-29	981	821	844	805	790	-19%
30-34	1,145	1,019	819	838	808	-29%
35-39	1,128	1,254	1,116	951	970	-14%
40-44	1,069	1,234	1,352	1,231	1,100	3%
45-49	1,123	1,077	1,202	1,306	1,204	7%
50-54	1,236	1,015	1,010	1,121	1,214	-2%
55-59	1,487	1,293	997	1,001	1,101	-26%
60-64	1,560	1,464	1,297	1,035	1,047	-33%
65-69	1,433	1,606	1,446	1,297	1,068	-25%
70-74	1,210	1,429	1,635	1,479	1,352	12%
75-79	849	1,118	1,400	1,577	1,433	69%
80-84	524	669	984	1,222	1,368	161%
85+	558	581	770	1,080	1,357	143%
<b>Total</b>	<b>18,703</b>	<b>18,764</b>	<b>18,785</b>	<b>18,665</b>	<b>18,404</b>	<b>-2%</b>

Source: Maine State Economist Office

Note: Based upon 2020 Census data.

The average household size has decreased in Bowdoinham, Sagadahoc County and statewide. This trend is due to several factors: a lower proportion of married couples, fewer children per family, and more people living alone. The Town’s relatively larger average household size than that of the County or State suggests the presence of proportionally more families in Bowdoinham. Given the lack of rental housing in Town, it is not surprising that single persons would be drawn to larger service center communities. See the Housing Chapter for more information.

<b>Average household size of owner-occupied unit</b>			
<b>Year</b>	<b>Bowdoinham</b>	<b>Sagadahoc County</b>	<b>Maine</b>
1970	3.37	3.12	3.16
1980	2.92	2.80	2.75
1990	2.68	2.63	2.56
2000	2.54	2.47	2.39
2010	2.45	2.32	2.32
2021	2.54	2.29	2.31
Percent Change	-24.6%	-26.6%	-26.9%

Source: Maine State Economist Office

Note: Based upon 2020 Census data.

Bowdoinham’s Educational Attainment has surpassed the County and State from 2000 to 2010. However, the County and State have now closed that gap and are more equal with numbers of residents graduating from both High School and College. See the Public Facilities Chapter for current enrollment figures in area schools.

<b>Educational Attainment</b>				
<b>Category</b>	<b>Year</b>	<b>Bowdoinham</b>	<b>Sagadahoc County</b>	<b>Maine</b>
High School Graduate or Higher	2000	90.53%	87.97%	85.4%
	2010	94.5%	91.8%	89.8%
	2020	94.5%	94.1%	93.7%
Bachelor's Degree or Higher	2000	28.63%	24.99%	22.9%
	2010	36.5%	29.6%	26.5%
	2020	36.5%	38.2%	33.6%

Source: Maine State Economist Office

Note: Based upon 2020 Census data.

### Analysis

*(1) Is the rate of population change expected to continue as in the past, or to slow down or speed up? What are the implications of this change?*

Over the past fifty years, the population of Bowdoinham has increased from 1,294 persons in 1970 to 3,047 persons in 2020. The rate of population increase has slowed. The State predicts a 4.6% population increase for the Town over the next two decades based upon 2020 data. Given the results of the most recent Census and the observed growth trends (since 1970 and since 2000), however, the Town believes that its population will continue to increase more significantly at 13%. For planning purposes, the 2040 population of the Town is forecast to total a maximum of 3,442 persons. With more residents, the demand for the range of existing municipal services, and for expanded services, like those found in larger communities, is likely to increase, putting pressure on already tight budgets. See the Fiscal Capacity Chapter for more information.

- (2) *What will be the likely demand for housing and municipal and school services to accommodate the change in population and demographics, both as a result of overall change and as a result of change among different age groups?*

Increasing population along with declining average household size, as seen locally over the past fifty years, suggests that the demand for new housing will outpace the overall forecasted growth in population. Much of the growth seen in the Town's population has been in the older age groups. School enrollments have declined over the past decade. School statistics of future enrollments are not available. For planning purposes, enrollments are predicted to remain stable or decline modestly. Expanded school facilities will not be needed. However, the renovation or replacement of aging facilities will be of concern. See the Public Facilities Chapter for more information.

The demand for services to meet elderly needs like assisted living is expected to increase. To balance these demographic trends, the Town could seek to attract younger families with children through the provision of more affordable housing options and growing our local businesses and employment opportunities. See the Housing Chapter and Economy Chapter for details.

- (3) *Does your community have a significant seasonal population, is the nature of that population changing? What is the community's dependence on seasonal visitors?*

In 2010, the Census recorded 42 seasonal housing units in Bowdoinham, this increased by 1 unit in 2020 for a total of 43 seasonal housing units. The national average household size was 2.54 persons in 2021. Accordingly, on average there are about 109 people in seasonal housing units in Town. Bowdoinham has no licensed transient accommodations (hotels, motels, or inns) and a modest number of Airbnb rentals. Given the small number of seasonal visitors, the Town is not dependent on this group economically.

- (4) *If your community is a service center or has a major employer, are additional efforts required to serve a daytime population that is larger than its resident population?*

Bowdoinham is not a service center community. Bath, with a 2020 population of 8,766, is the principal service center in Sagadahoc County. Brunswick, with a population of 21,756, in neighboring Cumberland County is the closest service center to Bowdoinham.

Bowdoinham does not have a single major employer. The Town does not draw a daytime population that is significantly larger than its resident population. See the Economy Chapter for more information.

**Economy**

Conditions & Trends

(1) *The community’s Comprehensive Planning Economic Data Set prepared and provided to the community by the Office or its designee.*

Over the past decade, the Town’s labor force increased by 113, which is greater than the increase of 48 people from 2000-2010. The unemployment rate has improved since the economic downturn in the previous decade, moving from 6.8% in 2010 to 4.7% in 2020. In 2020, 78 people in Bowdoinham’s labor force were unemployed. This was 28 fewer people than in 2010.

<b>Bowdoinham Labor Force</b>				
<b>Year</b>	<b>Civilian Labor Force</b>	<b>Employment</b>	<b>Unemployment</b>	<b>Unemployment Rate</b>
2000	1,509	1,483	26	1.7%
2001	1,486	1,459	27	1.8%
2002	1,469	1,438	31	2.1%
2003	1,464	1,434	30	2.0%
2004	1,517	1,468	49	3.2%
2005	1,523	1,456	67	4.4%
2006	1,535	1,476	59	3.8%
2007	1,563	1,502	61	3.9%
2008	1,582	1,510	72	4.6%
2009	1,547	1,444	103	6.7%
2010	1,557	1,451	106	6.8%
2020	1,670	1,592	78	4.7%
Change	161	109	52	3%

Source: Maine Department of Labor  
 Note: Annual Not Seasonally Adjusted Labor Force

Over the past decade, Sagadahoc County’s labor force has increased by 504 people. The unemployment rate went from 6.8% in 2010 to 4.7% in 2020. At the end of the decade, the Town and County had the same unemployment rate for the second decade in a row. In 2020, 911 people in the Sagadahoc County labor force were unemployed and looking for work. This was 370 fewer people than in 2010.

<b>Sagadahoc County Labor Force</b>				
<b>Year</b>	<b>Civilian Labor Force</b>	<b>Employment</b>	<b>Unemployment</b>	<b>Unemployment Rate</b>
2000	18,795	18,305	490	2.6%
2001	18,500	17,932	568	3.1%
2002	18,206	17,566	640	3.5%
2003	18,312	17,595	717	3.9%
2004	18,509	17,827	682	3.7%
2005	18,460	17,656	804	4.4%
2006	18,721	17,965	756	4.0%
2007	18,959	18,222	737	3.9%
2008	19,208	18,323	885	4.6%
2009	18,741	17,388	1,353	7.2%
2010	18,755	17,474	1,281	6.8%
2011	19,142	17,875	1,267	6.6%
2012	19,163	17,946	1,217	6.4%
2013	19,092	18,010	1,082	5.7%
2014	19,077	18,218	859	4.5%
2015	19,058	18,386	672	3.5%
2016	19,240	18,672	568	3.0%
2017	19,434	18,898	536	2.8%
2018	19,557	19,068	489	2.5%
2019	19,591	19,185	406	2.1%
2020	19,259	18,348	911	4.7%
Change	464	3	421	2.1%

Source: Maine Department of Labor

Note: Annual Not Seasonally Adjusted Labor Force

The Brunswick Labor Market Area (more recently designated as a Micropolitan Area) is almost twice the size of the labor force of Sagadahoc County. During the past two decades, the labor market area has been reduced by 680, with a decrease of 51 people between 2000-2010 and 629 fewer people between 2010-2020. The unemployment rate went from 6.9% in 2010 to 4.8% in 2020. In 2020, 1,360 people in the labor market area labor force were unemployed and looking for work. This was 751 fewer people than in 2010.



<b>Brunswick Labor Market Area / Micropolitan Statistical Area Labor Force</b>				
<b>Year</b>	<b>Civilian Labor Force</b>	<b>Employment</b>	<b>Unemployment</b>	<b>Unemployment Rate</b>
2000	34,704	33,765	939	2.7%
2001	33,993	32,950	1,043	3.1%
2002	33,417	32,218	1,199	3.6%
2003	33,365	32,041	1,324	4.0%
2004	33,865	32,619	1,246	3.7%
2005	33,784	32,322	1,462	4.3%
2006	34,371	32,992	1,379	4.0%
2007	34,904	33,552	1,352	3.9%
2008	35,327	33,739	1,588	4.5%
2009	34,575	32,115	2,460	7.1%
2010	34,653	32,272	2,381	6.9%
2020	34,024	32,394	1,630	4.8%
Change	-680	-1,371	691	2.1%

Source: Maine Department of Labor

Note: Annual Not Seasonally Adjusted Labor Force. The Brunswick Labor Market Area (LMA)/Micropolitan Area includes Brunswick, Harpswell, Dresden, Westport, Wiscasset, Arrowsic, Bath, Bowdoin, Bowdoinham, Georgetown, Perkins UT, Phippsburg, Richmond, Topsham, West Bath, and Woolwich.

The State labor force grew by 24,811 persons from 2000 to 2010 but shrank by nearly the same amount (20,701 people) between 2010 – 2020. While there were 18,483 fewer unemployed and looking for work from 2010 to 2020. The State unemployment rate fell to 5.4% in 2020, which was slightly higher than the unemployment rate in Bowdoinham, Sagadahoc County, and the Brunswick Labor Market Area.

<b>Maine Labor Force</b>				
<b>Year</b>	<b>Civilian Labor Force</b>	<b>Employment</b>	<b>Unemployment</b>	<b>Unemployment Rate (%)</b>
2000	672,440	650,385	22,055	3.3
2010	697,251	641,978	55,273	7.9
2020	676,550	639,760	36,790	5.4
Change	4,110	10,625	14,735	2.1%

Source: Maine Department of Labor

Note: Annual Not Seasonally Adjusted Labor Force

Twenty-two new businesses were located in Bowdoinham from 2010 to 2022, totaling 79 establishments. Further, Bowdoinham businesses employed 53 more employees in 2022 compared to 2010, bringing employment levels closer to 2005 reporting. Reported average wages in Bowdoinham workplaces have increased substantially by \$344 from 2005 levels.

<b>Bowdoinham Employment and Wages</b>			
<b>Year</b>	<b>Average # of Establishments</b>	<b>Average Employment</b>	<b>Average Weekly Wage</b>
2005	43	256	\$550
2010	57	197	\$557
2022	79	250	\$894
Change	22	-6	\$344

Source: Maine Department of Labor, Center for Workforce Research and Information

Average wages for those who worked in the County and State continue to be higher than for those who worked in the Town in 2005 and 2010, though the gap is closing. The increase in wages state-wide is significantly greater than the increase in Bowdoinham.

<b>State and County Employment and Wages</b>		
<b>Year</b>	<b>Sagadahoc County Average Weekly Wage</b>	<b>Maine Average Weekly Wage</b>
2005	\$690	\$629
2010	\$837	\$718
2022	\$1,103	\$923
Change	\$413	\$294

Source: Maine Department of Labor, Center for Workforce Research and Information

Despite significantly lower wages in Bowdoinham workplaces than in the State overall, the per capita income and mean household income are higher for Town residents than they are for residents of the County or State as a whole. Bowdoinham's higher income earners work for themselves, work outside of the Town, or have retirement income.

<b>Income Estimates</b>				
<b>Year</b>	<b>Category</b>	<b>Bowdoinham</b>	<b>Sagadahoc County</b>	<b>Maine</b>
2010	Per capita income	\$27,827	\$26,983	\$25,385
	Median Household Income	\$68,447	\$63,168	\$60,036
2020	Per capita income	\$38,663	\$35,226	\$33,774
	Median Household Income	\$92,270	\$68,039	\$59,489

Source: Census, American Community Survey

At 7.6%, Bowdoinham's poverty rate remains lower than both Sagadahoc County and the State. However, the gap between the County and State levels has closed since 2009 and Bowdoinham has seen an increase from 6.7% in 2009 to 7.6% in 2022.

<b>Population Below Poverty Level 2022</b>			
<b>Category</b>	<b>Bowdoinham</b>	<b>Sagadahoc County</b>	<b>Maine</b>
Total Population	3,083	36,527	1,329,454
Number of Individuals	233	3,979	145,491
Percent Below Poverty	7.6%	10.9%	10.9%

Source: Census, American Community Survey 2022 - 5 year estimates

The poverty level in 2020 was \$20,244 for a three-person family. See the next table for poverty levels by family size.

<b>U.S. Weighted Poverty Level by Family Size</b>		
<b>Category</b>	<b>2009</b>	<b>2020</b>
One person (unrelated individual)	\$10,956	\$13,171
Under 65 years old	\$11,161	\$13,465
65 years old and over	\$10,289	\$12,413
Two persons	\$13,991	
Householder under 65 years old	\$14,366	\$17,331
Householder 65 years old and over	\$12,968	\$15,644
Three persons	\$17,098	\$20,244
Four persons	\$21,954	\$26,695
Five persons	\$25,991	\$32,193
Six persons	\$29,405	\$37,027
Seven persons	\$33,372	\$42,605
Eight persons	\$37,252	\$47,650
Nine people or more	\$44,366	\$57,319

Source: 2020 U.S. Census Bureau

The largest occupational sectors in Bowdoinham were ‘management, professional and related occupations’, this is also the top sectors at the County and State level.

<b>Employment by Occupation in 2021</b>			
<b>Sector</b>	<b>Bowdoinham</b>	<b>Sagadahoc County</b>	<b>Maine</b>
Management, business, science, and arts occupations	751	7,752	270,644
Service occupations	164	3,086	115,875
Sales and office occupations	217	3,710	140,132
Farming, fishing, and forestry occupations	120	339	10,456
Natural resources, construction and maintenance occupations	123	2,397	72,099
Production, transportation, and material moving occupations	260	1,908	82,437
<b>Total</b>	<b>1,635</b>	<b>19,212</b>	<b>691,643</b>

Source: 2020 Census, Occupation by Sex for the civilian employed population 16 years and over.

Total taxable retail sales increased significantly in Bowdoinham from 2010 to 2020 by 155%. The only sector that saw growth locally was auto transportation: motor vehicle related businesses. Due to the small numbers of businesses in Town, some sectors have non-disclosable data and so are combined into a remainder figure in the next table.

<b>Taxable Retail Sales in Bowdoinham (in Thousands of Dollars)</b>								
<b>Categories</b>	<b>2010</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2016</b>	<b>2018</b>	<b>2021</b>	<b>Change</b>
Business Operating	326.5	333.1	344.4	305	256.2	1,084.7	1,471.4	350%
Auto Transportation	1,393	1,538.2	1,967	2,122	2,877	2,824	3,629	160%
Remainder	1,948	2,042	2,385	1,899	2,371	2,290	4,250	218%
<b>Total</b>	<b>3,667</b>	<b>3,913</b>	<b>4,696</b>	<b>4,326</b>	<b>5,504</b>	<b>6,199</b>	<b>9,350</b>	<b>155%</b>

Source: Maine Revenue Services. Sales Tax Reports

Notes: For confidentiality, categories with few businesses have been combined into the Remainder category.

Sagadahoc County recorded an increase of 14% in total taxable retail sales from 2015 to 2019. Growth was most pronounced in the food stores and business operating category, while the general merchandise was the only category with a slight decline of 3%. It would be expected that retail sales would be lower when considering the economic downturn associated with pandemic which started in 2020.

<b>Taxable Retail Sales in Sagadahoc County (in Thousands of Dollars)</b>						
<b>Categories</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>Change</b>
Business Operating	14,438	11,060	10,268	16,910	18,153	26%
Building Supply	45,185	13,938	13,936	49,000	50,432	12%
Food Stores	37,865	48,725	47,817	49,855	50,632	34%
General Merchandise	67,712	69,025	61,025	64,327	65,508	-3%
Other Retail	30,463	31,545	30,346	30,660	30,715	1%
Auto Transportation	67,656	10,932	10,931	81,543	82,054	21%
Restaurant & Lodging	65,647	71,448	73,549	77,950	78,668	20%
<b>Total</b>	<b>378,859</b>	<b>403,494</b>	<b>401,356</b>	<b>419,835</b>	<b>433,303</b>	<b>14%</b>

Source: Maine Revenue Services. Sales Tax Reports

Maine Revenue Services category descriptions:

- Total Retail Sales: Includes Consumer Retail Sales plus special types of sales and rentals to businesses where the tax is paid directly by the buyer (such as commercial or industrial oil purchase).
- Business Operating: Purchases for which businesses pay Use Tax, i.e., for items that are used by the business in its operation (like shelving and machinery) and not re-sold to consumers.
- Building Supply: Durable equipment sales, contractors' sales, hardware stores and lumberyards.
- Food Stores: All food stores from large supermarkets to small corner food stores. The values here are snacks and non-food items only, since most food intended for home consumption is not taxed.
- General Merchandise: In this sales group are stores carrying lines generally carried in large department stores. These include clothing, furniture, shoes, radio-TV, household durable goods, home furnishing, etc.
- Other Retail: This group includes a wide selection of taxable sales not covered elsewhere. Examples are dry good stores, drug stores, jewelry stores, sporting good stores, antique dealers, morticians, bookstores, photo supply stores, gift shops, etc.
- Auto Transportation: This sales group includes all transportation related retail outlets. Included are auto dealers, auto parts, aircraft dealers, motorboat dealers, automobile rental, etc.
- Restaurant/Lodging: All stores selling prepared food for immediate consumption. The Lodging group includes only rental tax.

(2) *A brief historical perspective on how and why the current economy of the community and region developed.*

The growth of manufacturing, which had employed most in the workforce for generations, occurred principally in larger communities like Bath, Brunswick, and Portland, which benefited from coastal harbors, and inland along larger rivers like the communities of Lewiston, Auburn and Augusta. Improvement in the roadway networks, especially during the second half of the

twentieth century, allowed more people to live farther from their workplaces in search of less expensive land and housing. Service sector employment (both public and private, and in low, moderate and high wage occupations) has surpassed manufacturing over the past four decades. Commuting has sustained predominantly residential communities like Bowdoinham. Nevertheless, there are important businesses located in the Town that provide needed services to residents. There have been and continue to be opportunities for business development that is in keeping with the character of Bowdoinham like small-scale, traditional trades, agricultural, and home-based occupations. Telecommunications and improved broadband services allow more people to work where they want to, which is now often closer to where they have chosen to live. Key businesses that have closed since 2000: FHC, Inc., Hilltop Log Homes, a hardware store, and Downeast Credit Union. While the Town Landing restaurant closed during the last decade the business was only vacant for a couple of years and a thriving Three Robbers pub opened in 2019.

- (3) *A list of local and regional economic development plans developed over the past five years, which include the community.*

The Midcoast Economic Development District, which includes Sagadahoc County and surrounding areas, prepares annual Comprehensive Economic Development Strategy (CEDS) reports. These reports outline economic trends and inventory planning and projects underway that seek to improve the economy by creating or retaining employment and services, and proposals for which there is community interest and for which funding from the U.S. Economic Development Agency is possible. Bowdoinham projects and proposals were included in the 2018 and 2021 CEDS. Among these plans and projects were the Bowdoinham Waterfront Redevelopment Project, and the Merrymeeting Trail.

- (4) *Where does the community's population work and where do employees in your community reside? A description of the major employers in the community and labor market area and their outlook for the future.*

Most Bowdoinham residents who work do so within a 24-minute commute in Brunswick, Bath, or Bowdoinham, with 30% working in Bowdoinham. About a third of those working in Bowdoinham work from home (9.4% of Bowdoinham's working population). Considering commuting data for State and Sagadahoc County, it is assumed that the remainder of Bowdoinham's workforce comes from neighboring communities such as nearby communities in Sagadahoc, Cumberland and Lincoln Counties within 24 miles.

<b>Commuting Characteristics of Bowdoinham 2021</b>	
Workers	1,474
<b>MEANS OF TRANSPORTATION TO WORK</b>	
Car, truck, or van	
Drove alone	82.6%
Carpooled	7.3%
Public transportation (excluding taxicab)	0.7%
Worked from home	9.4%
Workers over 16 who did not work at home	1,335
Less than 5 minutes	0.0%
5 to 9 minutes	2.2%
10 to 14 minutes	0.9%
15 to 19 minutes	10.7%
20 to 24 minutes	39.6%
25 to 29 minutes	7.9%
30 to 34 minutes	13.3%
40 to 44 minutes	1.9%
45 to 59 minutes	5.2%
60 to 89 minutes	2.9%
90 or more minutes	13.4%

Source: U.S. Census 2021 Commuting Characteristics

<b>Commuting Characteristics of Bowdoinham 2019 estimate</b>	
<b>PLACE OF WORK</b>	
Worked in state of residence	96.5%
Worked in county of residence	36.4%
Worked outside county of residence	60.1%
Worked outside state of residence	3.5%
Bowdoinham	31.5%
Worked in place of residence	0.9%
Worked outside place of residence	30.6%
Not Bowdoinham	68.5%
Workers 16 years and over who did not work from home	1,465

Source: U.S. Census 2019 est. Commuting Characteristics

Most employers in Bowdoinham employ just a few people each. The next table shows local employers with five or more employees, as reported to the Maine Department of Labor. Town government and education provide many of the jobs available in Bowdoinham. Declining school enrollments and the poor economy will continue to stress local government and school districts to reduce expenditures, often through staff downsizing. Private sector employment depends also on the incomes of area residents and so may face continued difficulties until the regional, State and national economies improve.

<b>Employers in Bowdoinham with 5 or more employees each in 2020</b>			
<b>Company Name</b>	<b>Partial Address</b>	<b>Sector</b>	<b>Employee Range</b>
Apple Creek Farm LLC	Millay Rd	Unclassified	10-19
Atlantic Organics	Port Point Rd	Professional and Technical Services	10-19
Blue Bell Farm LLC	Carding Machine Rd	Unclassified	10-19
Bowdoinham Community School	Cemetery Rd	Educational Services	20-49
Bowdoinham Country Store	River Rd	Accommodation and Food Services	5-9
Bowdoinham Fire Department	Post Rd	Public Administration	20-49
Brunswick Gastroenterology	Bay Rd	Health Care and Social Assistance	5-9
Cumberland County Glass	Pond Rd	Wholesale Trade	20-49
Ehs Advantage	Cairn Hill Rd	Health Care and Social Assistance	5-9
Five County Credit Union	Main St	Finance and Insurance	10-19
Harvest Tide Organics LLC	Ridge Rd	Unclassified	10-19
Judy Tuck	Preble Rd	Accommodation and Food Services	10-19
Robert's Auto Ctr Inc	Bay Rd	Other Services, Except Public Administration	5-9
Six River Farm LLC	Center Point Rd	Unclassified	10-19
T & H Excavation Inc.	Millay Rd	Construction	5-9
Taurus Systems Inc	River Rd	Information	5-9
Town of Bowdoinham	School St	Public Administration	20-49

Source: Maine Department of Labor. Employer Locator. Bowdoinham, ME. 2020 yr.

The largest single employer in the region remains the Bath Iron Works, with over 5,000 employees. It depends upon federal government contracts to build and repair military vessels. The medical sector provides a significant amount of employment (in low, moderate and high wage positions). Given the forecasted aging of the region's population, this sector is likely to continue growing regardless of the overall condition of the State or national economy. Retail and



education are also noteworthy regional employers. A large component of these sectors is dependent upon markets outside of the region and State. For education, Bowdoin College attracts qualified students who can afford its relatively high tuition or can receive loans or scholarships. For retail, LL Bean’s market is based on customers who live in the U.S. and abroad. Based upon solid reputations, both of these entities are poised to benefit from an upturn in the national economy should that occur.

<b>Brunswick Micropolitan Area Major Employers with 250+ employees each in 2021</b>		
<b>Company Name</b>	<b>Location</b>	<b>Sector</b>
Bath Iron Works	Bath	Shipbuilding, repair
Bowdoin College	Brunswick	Education
Downeast Energy Corp	Brunswick	Energy Supplier
LL Bean Mfg	Brunswick	Manufacturers
Mid Coast Hospital	Brunswick	Medical, hospitals
Sweetser	Brunswick	Mental Health Provider
Walmart Supercenter	Brunswick	Retail

Source: Maine Department of Labor

The Brunswick Micropolitan Area includes Brunswick, Harpswell, Dresden, Westport, Wiscasset, Arrowsic, Bath, Bowdoin, Bowdoinham, Georgetown, Perkins UT, Phippsburg, Richmond, Topsham, West Bath, and Woolwich.

The State’s major private sector employers are located in service center communities like Augusta, Bangor, Bath, Brunswick and Portland. Most of these employers have multiple locations.

<b>Major Employers in Maine 2020</b>				
<b>Rank</b>	<b>Company Name</b>	<b>Location</b>	<b>Employment</b>	<b>Business Description</b>
1	MaineHealth	Statewide	18,001-15,500	General Medical and Surgical Hospitals
2	Hannaford Bros	Statewide	8,001-8,500	Supermarkets and Other Grocery Stores
3	Wal Mart / Sam’s Club	Statewide	7,001-7,500	Warehouse Clubs and Supercenters
4	Bath Iron Works Corp General Dynamics	Bath	5,501-6,000	Ship Building and Repairing
5	Eastern Maine Medical Center	Statewide	3,501-4,000	General Medical and Surgical Hospitals

- (5) *A description of any economic development incentive districts, such as tax increment financing districts, in the community.*

Bowdoinham established a Natural Gas Pipeline Municipal Tax Increment Financing District and Development Program (TIF) for 20 years in 2000 which was renewed in 2019 for a total of 30 years. Further, the Town approved a 15-year CMP TIF in 2014 which was extended in 2023 for a total of 30 years. The purpose of the TIFs is to attract quality employment and expand the municipal tax base. TIF revenue has been designated to support its administration by funding the position of Director of Planning and Development, planning initiatives for small businesses to expand employment opportunities for low and moderate-income persons, increasing and improving public infrastructure, mitigating adverse impacts from development, and removing regulatory barriers to economic and community development.

### Analysis

- (1) *Is the economy experiencing significant change, and how does this, or might this, affect the local population, employment, and municipal tax base?*

Growth in the local economy had been inhibited by the poorly performing statewide and national economies. However, Bowdoinham has added several new small businesses and the size of the local labor force has experienced modest growth in the past ten years with a recent spike in local wages. Total unemployment at the Town, County and State levels have also decreased in the last decade. However, Bowdoinham residents have lower incomes on average compared to County residents and State residents. This is due in large part to an ability and willingness of Bowdoinham residents to commute to areas with greater employment opportunities outside of the Town. Importantly, as described in the Population and Demographics Chapter, the Town's population is aging, with more retirees who are not dependent upon the local economy for their income.

The municipal tax base is generated predominately from residential property taxes. See the Fiscal Chapter for more information.

- (2) *Does the community have defined priorities for economic development? Are these priorities reflected in regional economic development plans?*

The priorities for economic development are generated through public input and the Community Development Advisory Committee (CDAC) who advises the Select Board, which sets local economic development policies. The Economic and Community Development Director provides staffing and guidance. Priorities are formalized in the committee's work plan on an annual basis. Some of these priorities are communicated to the Midcoast Economic Development District, which drafts annual updates to its Comprehensive Economic Development Strategy (CEDS) report that covers a multi-county region. See the Conditions and Trends section.

The Town's current plans include revitalizing the village area, improving public infrastructure (sidewalks, internet) and amenities (Waterfront Park facilities), growing the Bowdoinham brand and increasing the number of visitors (through events, ecotourism and agri-tourism) that will encourage more people to use the village and support existing businesses.

- (3) *If there is a traditional downtown or village center(s) in the community? If so, are they deteriorating or thriving?*

The Bowdoinham village area retains its historic architecture of civic, commercial, religious, and residential buildings. There have been signs of renewal in the village center. The Country Store underwent a major restoration in 2021 and has improved significantly. The gas station next door provides the necessary local service. Three Robbers Pub has been very popular and has been attracting people from outside of Bowdoinham. While a hardware store was not sustainable it has been repurposed as a childcare facility in 2023. A new gallery has opened in the Knights of Pythias building which too contributes to village activity.

The liveliness of our village is enhanced through a variety of other activities. In the summer, the Farmers' Market brings people to our waterfront park from all over the area. Because the Market is a magnet, other ventures have been able to piggyback on its popularity such as artisans, the library, and local services. The Food Pantry brings families to the village, especially on the Wednesday food distribution day. Free concerts in the summer provide an opportunity for local musicians to perform, and local non-profits raise money by offering a supper for attendees. The Merrymeeting Arts Center's Gallery and Studio attract gallery visitors and art/pottery students.

A key feature of our village center are the waterfront parks along the Cathance River. Now that the town has developed Maily Park, where there is a public dock and restrooms, it is progressing with further development of an additional 20 acre parcel as a multi-use park, we have assured an attractive asset for future use. See Transportation Chapter and Public Facilities Chapter for a description of these efforts.

- (4) *Is tourism an important part of the local economy? If so, what steps has the community taken to support this industry?*

One of our greatest assets is outdoor recreation opportunities. Our "tourists" tend to be day visitors—cyclists, boaters, and hikers. The community has been deeply committed to enhancing outdoor opportunities. For instance, we have had representatives serving on the multi-town Merrymeeting Trail Committee which in 2023 made the recommendation to the Commissioner at the Department of Transportation to develop a rail/trail which passes right through the center of our village. It goes by our pub and general store and promises to bring visitors to our area.

Because Bowdoinham is located on Merrymeeting Bay, hunters and boaters have traditionally come to use this asset. Efforts to create a new paddle put-in facility right on the Bay are underway as of this plan. See the Recreation Chapter.

- (5) *Do/should home occupations play a role in the community?*

Home businesses are a vital part of our economy in Bowdoinham. The Town has provided many supports for these primarily service businesses. There is a business directory on the town website that has been recently updated. It helps to direct people to local service providers. Bowdoinham Friends and Family on Facebook often has posts from local businesses and serves as a referral to providers. The Town has offered free workshops for entrepreneurs in the past and stands ready to offer business start-up guidance. There are packets of information for new businesses at the Town Office that help to guide people who wish to get started or locate in our town. There is also

a small, local business loan fund that has helped many home businesses, including farms, to get needed equipment and funding.

- (6) *Are there appropriate areas within the community for industrial or commercial development? If so, are performance standards necessary to assure that industrial and commercial development is compatible with the surrounding land uses and landscape?*

Because the village area has many restrictions for development, the most appropriate area for industrial development is at Exit 37 on I-295. There are several parcels in that area that have been for sale for several years. There is also a large parcel on Main Street that could be used. However, access to that parcel is awkward and it is in the middle of a residential neighborhood. Any new facility would have to build its own wastewater system since there is no village sewer system. New development would have to go through a site plan review.

- (7) *Are public facilities, including sewer, water, broadband access or three-phase power, needed to support the projected location, type, and amount of economic activity, and what are the issues involved in providing them?*

The small-scale and traditional type of development does not necessarily require significant public expenditure for new infrastructure. If large-scale development were sought three-phase power is needed along Pond Road to support the light manufacturing at the old Hilltop Log Homes facility. The Town does not have public sewer, which is a barrier for new development in the village area. In 2019 the Town commissioned a study which found that creating a village sewer system would be unfeasible. However, public water is available in the village area. Further, Broadband access throughout Town was made possible in 2020 through a 25-mile fiber optic network project which now serves all but one rural road in town. This allows for more home-based businesses and home occupations. See the Public Facilities Chapter and Existing Land Use Chapter for the limitations that this places on additional development.

The fundamental concern in providing new public facilities is cost. Current municipal revenues are not sufficient to upgrade services to subsidize new large-scale development. See the Fiscal Capacity Chapter for the Capital Investment Plan and for information on reserve accounts.

- (8) *If there are local or regional economic development incentives such as TIF districting, do they encourage development in growth areas?*

Tax increment financing (TIF) districts were established in 2000 and 2014, that have been instrumental in helping us to develop the waterfront area. They have also funded essential economic development support activities.

- (9) *How can/does the community use its unique assets such as recreational opportunities, historic architecture, civic events, etc. for economic growth?*

Our very active Historical Society purchased the former Grange Hall, renovated it, and has built it into an important community resource for events, meetings, and a secondhand bookstore for the library. The cluster of historic municipal buildings provides a hub of activity. It should be said that both the Town Hall and the Coombs Building (town offices and library) are in desperate need of repair and renovation. There are ongoing efforts to raise the money for this work.

Bowdoinham is also a community of festivals and events. The Town annually hosts: The Ice and Smelt Festival in February, Open Farm and Studio Day in the July, Tour de Bowdoinham charity bike ride in August, the Celebrate Bowdoinham parade and festivities in September, and the Holiday Festival with craft fairs, fundraisers, and tree lighting in December. As mentioned before, the summer Farmers' Market and free summer concerts provide a hub of activity by the waterfront. Local organizations such as the Merrymeeting Arts Center, the Bowdoinham Guild of Artisans, the Food Pantry, Friends of Merrymeeting Bay, the Historical Society, and the Library (and its new used bookstore, Merryreading Books), enrich the life of our community.

As we move into the future, our very special location and the natural beauty of our landscape will provide important opportunities for community building. The development of the new park and paddle put-in on the Cathance River along with the creation of the Merrymeeting Rail Trail will solidify our town's reputation as a great place to walk, hike, boat, and recreate.

## 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	143.4%
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, around half (756.69 acres) 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

Note: Cannabis farm data not included

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. Bowdoinham Wildlife Management Area 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	24	513	23	532
Tree Growth	65	2,621	57	2,225
Farmland	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 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>Farmland Program (Tax Bulletin #20)</b>	<b>Open Space Program (Tax Bulletin #21)</b>	<b>Tree Growth Program (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><i>Farmland Program</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>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>Occurrence</b>	<b>Organized/Managed</b>
Farmer’s Market	June – October on Saturdays 8:30 AM- 12:00 PM	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.

## Natural Resources

### Conditions & Trend

(1) *The community's Comprehensive Planning Natural Resources Data Set prepared and provided to the community by the Department of Inland Fisheries and Wildlife, Department of Environmental Protection and the Office, or their designees.*

The data set has been incorporated and updated in these maps:

- Natural Resource Co-occurrence for Focus Areas of Statewide Ecological Significance: Kennebec Estuary, Maine Natural Areas Program locations, Approximate Deer Wintering Areas, Moderate and High Value Freshwater Wetlands, Waterfowl/Wading Bird Habitat, Threatened or Special Concern (Bald Eagle, Ribbon Snake and Tidewater Mucket).
- Water Resources and Riparian Habitat for National Wetland Inventory wetland classifications, drainage divides, identified vernal pools, active public water systems.
- Bowdoinham Water Resources for water quality classifications. Also shown on this map are threats to water quality and habitat: a wastewater outfall and overboard discharges.
- Map of Turnpike Streams identify streams at risk for impairment due to their location near I-95 exits.
- Undeveloped Habitat Blocks & Connectors and Conserved Land and Bowdoinham Constraints for undeveloped lands by size, lands in conservation currently, potential wildlife corridors and habitats of interest.

For more detailed habitat information, see the State-prepared map titled High Value Plant & Animal Habitats, which includes the location of these High Value Plant and Animal Habitats in Bowdoinham:

<b>High Value Plant and Animal Habitats</b>			
<b>Map ID #</b>	<b>Name</b>	<b>State Status</b>	<b>Source</b>
1.	Eastern Ribbon Snake	SC	ETSC Animals
2.	Eaton's Bur-marigold	SC	Rare Plant
3.	Estuary Bur-marigold	SC	Rare Plant
4.	Furn-leaved False Foxglove	SC	Rare Plant
5.	Freshwater Tidal Marsh	-	Rare/Exemplary Natural Community
6.	Horned Pondweed	SC	Rare Plant
7.	Lilaeopsis	SC	Rare Plant
8.	Long's Bitter-cress	T	Rare Plant
9.	Mudwort	SC	Rare Plant
10.	Parker's Pipewort	SC	Rare Plant
11.	Pygmyweed	SC	Rare Plant
12.	Spongy Arrowhead	SC	Rare Plant
13.	Stiff Arrowhead	T	Rare Plant
14.	Tidewater Mucket	T	ETSC Animals
15.	Water Pimpernel	SC	Rare Plant
16.	Yellow Pond-lily	SC	Rare Plant

Source: Maine Department of Inland Fisheries and Wildlife, 2023

Notes: Status Abbreviations: E = Endangered T = Threatened SC = Special Concern



There are no Endangered, Possibly Extirpated or Endangered Breeding populations identified in Bowdoinham.

See the Water Resources Chapter for information on water bodies and wetlands in Bowdoinham and their associated habitats.

- (2) *A map or description of scenic areas and scenic views of local importance, and regional or statewide importance, if available.*

Bowdoinham's physical character is shaped in large part by its scenic resources, which improve the local quality of life and enhance the economic value of surrounding properties. The rolling topography, rivers and streams, and rural agricultural landscape provide many scenic views.

Perhaps the most important scenic views from conserved lands, public roads, water bodies and public recreation areas, for example, in the village area and the town landing in Philip Maily Park.

### Analysis

- (1) *Are any of the community's critical natural resources threatened by development, overuse, or other activities?*

These areas within Bowdoinham have critical natural resources that could be threatened by development or overuse, and more generally, the Kennebec Estuary (A Focus Area of Statewide Ecological Significance), the Maine Natural Areas Program locations, forested wetlands, and select wetlands under 10 acres in size that have limited regulation by the Maine Department of Environmental Protection (DEP) and streams along the Maine Turnpike. For these locations, see the maps titled Natural Resource Co-occurrence, Water Resources and Riparian Habitat, Water Resources, Map of Turnpike Streams and Undeveloped Habitat Blocks & Connectors and Conserved Lands.

To preserve these areas, the use of conservation easements or purchases may be more tenable to residents and voters than regulations. Easements and conservation purchases result in permanent protection while municipal regulations are subject to future amendments or repeal. Protection for critical natural resources could be improved by incorporating the Beginning with Habitat information into the land use regulations and the permitting process.

- (2) *Are local shoreland zone standards consistent with state guidelines and with the standards placed on adjacent shorelands in neighboring communities?*

The Town's shoreland zoning ordinance provisions are consistent with current State law and have been approved by the Maine DEP. Shoreland zoning districts of adjacent shorelands in the neighboring communities of Richmond and Topsham are consistent with Bowdoinham's provisions for these border area shorelands.

- (3) *What regulatory and non-regulatory measures has the community taken or can the community take to protect critical natural resources and important natural resources?*

The Town has and can continue to ensure that its ordinances reflect current State law and that

the Official Shoreland Zoning Map is updated on a regular basis with accurate data of lands subject to regulation.

The Town has and can continue to work with non-profit, local, state, and national groups to acquire property in critical areas for conservation outright or through easements, and to maintain and responsibly use existing conserved areas. See the local and regional partners listed below.

*(4) Is there current regional cooperation or planning underway to protect shared critical natural resources? Are there opportunities to partner with local or regional groups?*

No, however there are opportunities to continue to partner with these local, regional, state and national organizations and agencies, which are working to protect shared critical natural resources in our region including the Kennebec Estuary:

- Cathance River Education Alliance (Topsham)
- Friends of Merrymeeting Bay (Richmond-Bowdoinham)
- Friends of the Kennebec River Rail Trail (Brunswick)
- Kennebec Estuary Land Trust (Bath)
- Kennebec River Network (Augusta)
- Land for Maine's Future Program (Augusta)
- Maine Department of Environmental Protection (Augusta)
- Merrymeeting Audubon Society Chapter (Falmouth)
- National Park Service (Maine Office: Brunswick)
- Natural Resources Council of Maine (Augusta)
- Topsham Trail Riders (Topsham)
- University of Maine Cooperative Extension (Androscoggin and Sagadahoc Counties)

## Water Resources

### Conditions & Trend

(1) *The community's Comprehensive Planning Water Resources Data Set prepared and provided to the community by the Department of Inland Fisheries and Wildlife, the Department of Environmental Protection and the Office, or their designees.*

See the maps titled Water Resources and Riparian Habitat for the locations in Bowdoinham of National Wetlands Inventory wetlands by type, and Bowdoinham Water Resources for water body classifications, wetland boundaries (drainage divides), wastewater outfall and overboard discharges, and identified significant vernal pools.

The next table shows information on the Bowdoinham Water District for the most recent year available from the Maine Drinking Water Program, as provided in the Comprehensive Planning Water Resources Data Set. Also see the Bowdoinham Water District Service Area Map.

<b>Public Water Supply Information Assessment for the Bowdoinham Water District</b>	
Location of well	Bowdoin
Service Area	Portions of Bowdoin and Bowdoinham
Date	May 1, 2003
Well identification number	90210201; 90210202
Well type	Gravel wells
Well description	90210201: 30 ft (1959); 90210202: 34 ft at 120 GPM
Overburden thickness	90210201: 30 ft 90210202: 34 ft
Wellhead protection radius around the well	90210201: 1,100 ft 90210202: 1,300 ft
Reported distance of land control around the well	At least 500 ft for both wells
Wellhead Protection Ordinance in effect	No
Existing risk of contamination based on well type and site geology	Moderate risk
Positive coliform test	No
Nitrate test greater than 5 ppm	No
Septic system within 300 feet of the well	No
Existing risk of acute contamination	Low risk
No legal land control or control status is unknown or legal control is less than a 150-foot radius around the well	No
Legal control of at least a 150-foot radius of property around the well	Yes
Legal control of at least a 300-foot radius of property around the well	Yes
Future risk of acute contamination	Low risk
Detection of Chronic Chemical Contaminant	90210201: No 90210202: Yes

<b>Public Water Supply Information Assessment for the Bowdoinham Water District</b>	
Name(s) of Chronic Chemical Contaminant(s) Detected	90210202: Bromodichloromethane and Bromoform
Total No. Potential Sources of Contamination within WHPA	None reported
Distance to nearest "Significant Potential Source of Contamination"	90210201: 2,000 feet
Name of nearest "Significant Potential Source of Contamination"	90210201: Animal grazing
Existing risk of chronic contamination	90210201: Low risk 90210202: Moderate risk
Legal control of Entire Wellhead Protection Area	No
Legal control of 2500 Phase II/V Waiver Radius	90210201: No 90210202: Yes
Future risk of chronic contamination - Land Ownership / Control	High risk

Source: Maine Drinking Water Program

Maine has four water quality classes of rivers and streams: AA, A, B, and C (Title 38 MRSA Section 465). Each classification assigns designated uses and water quality criteria (narrative and numeric) and may place specific restrictions on certain activities such that the goal conditions of each class may be achieved or maintained.

- Class AA waters are the highest classification and are an outstanding natural resources which should be preserved because of their ecological, social, scenic or recreational importance.
- Class A waters are the second highest classification and are suitable for the designated uses of drinking water after disinfection; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as habitat for fish and other aquatic life. The habitat must be characterized as natural.
- Class B waters are the third highest classification and waters are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as habitat for fish and other aquatic life. The habitat must be characterized as unimpaired. All waterways in Bowdoinham are Class B. See Title 38 MRSA Sections 467 and 468.
- Class C waters are the fourth highest classification and are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as a habitat for fish and other aquatic life.

<b>Maine Water Quality Criteria for Classification of Fresh Surface Waters</b>				
<b>Classification</b>	<b>Dissolved Oxygen Numeric Criteria</b>	<b>Bacteria (E.coli) Numeric Criteria</b>	<b>Habitat Narrative Criteria</b>	<b>Aquatic Life (Biological) Narrative Criteria</b>
<b>Class AA</b>	naturally occurs	May not exceed a geometric mean of 64 CFU or MPN per 100 milliliters over a 90-day interval or 236 CFU or MPN per 100 milliliters in more than 10% of the samples in any 90-day interval.	Free flowing and natural	No direct discharge of pollutants; as naturally occurs
<b>Class A</b>	7 ppm; 75% saturation	Same as above	Natural	As naturally occurs
<b>Class B</b>	7 ppm; 75% saturation	May not exceed a geometric mean of 64 CFU or MPN per 100 milliliters over a 90-day interval or 236 CFU or MPN per 100 milliliters in more than 10% of the samples in any 90-day interval	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.
<b>Class C</b>	5 ppm; 60% saturation	May not exceed a geometric mean of 100 CFU or MPN per 100 milliliters over a 90-day interval or 236 CFU or MPN per 100 milliliters in more than 10% of the samples in any 90-day interval.	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.

Source: Maine Department of Environmental Protection

- (2) *A description of each great pond, river, surface drinking water supply, and other water bodies of local interest including:*
- a. *ecological value;*
  - b. *threats to water quality or quantity;*
  - c. *documented water quality and/or invasive species problems.*

See the map titled Natural Resource Co-occurrence for the location of the Focus Area of Statewide Ecological Significance: Kennebec Estuary. This area comprises about half of the Town and all of its principal water bodies: Kennebec River, Merrymeeting Bay, Cathance River, Abagadasset River, and tributary rivers, streams and brooks. The information on the ecological value, threats to water quality and the documented water quality that follow were excerpted from the Maine Department of Conservation Beginning with Habitat description of the Kennebec Estuary.

#### *Merrymeeting Bay / Kennebec River*

At the heart of the Kennebec Estuary is Merrymeeting Bay, one of the most important waterfowl areas in New England. Six rivers, draining one-third of the state of Maine, converge in Merrymeeting Bay to form an inland, freshwater, tidal delta. Extensive beds of emergent and submerged aquatic vegetation support thousands of ducks, geese, rails, wading birds, and other water-dependent species during spring and fall migrations. Wild rice is common throughout the bay, providing an important food source for migratory waterfowl and other birds such as bobolinks. The intertidal mudflats are also important feeding areas for migrating shorebirds. Floodplain forests and shrub swamps serve as key migratory stopover sites for neo-tropical passerines.

Over 50 species of freshwater fish and ten species of anadromous fish use Merrymeeting Bay, including the rare Atlantic salmon (*Salmo salar*), shortnosed sturgeon (*Acipenser brevirostrum*), and Atlantic sturgeon (*Acipenser oxyrinchus*). At least one rare mussel species, the tidewater mucket (*Leptodea ochracea*), inhabits the bay. One of the small tributaries flowing into Merrymeeting Bay is Maine's only known location for the redbfin pickerel (*Esox americanus*). American eels, currently believed to be declining in much of their geographic range, are abundant in parts of the bay.

Merrymeeting Bay has some of the Northeast's best habitat for rare plants associated with tidal freshwater marshes. Several sites around the bay are particularly significant, such as the Cathance River, Chops Creek, Eastern River, Lines Island, Abagadasset Point and River, and Swan Island.

#### *Cathance River*

The Cathance River, meaning "crooked river" in Abenaki, is a twenty-mile, roaming river that navigates its way through Bowdoin, Bowdoinham, and Topsham. The surrounding watershed is mostly rural with forests, fields, and agricultural lands. The river and the associated Bradley Pond are known for excellent paddling and fishing. Like many areas of Merrymeeting Bay, the freshwater tidal marshes along the Cathance River are dominated by wild rice (*Zizania aquatica*). Less abundant are pickerelweed (*Pontederia cordata*), water parsnip (*Sium sauve*), soft-stem bulrush (*Schoenoplectus tabernaemontanii*), and river bulrush (*Bolboschoenus fluviatilis*).

Perhaps the most notable inhabitant of this stretch of river is the globally rare Eaton's bur marigold (*Bidens eatonii*). More than a thousand individuals of this rare plant live along a 300-meter section of the riverbank. Also present are the rare estuary bur marigold (*Bidens hyperborea*), spongy arrowhead (*Sagittaria calycina* ssp. *spongiosa*), Parker's pipewort (*Eriocaulon parkeri*), and Long's bittercress (*Cardamine longii*).

#### *Abagadasset Point to Pork Point*

The cove on the north side of Abagadasset Point has a broad, extensive tidal flat of approximately 200 acres with bands of vegetation. The ledgy Abagadasset Point supports small populations of Parker's pipewort, mudwort (*Limosella australis*), water pimpernel, and Eaton's bur-marigold.

#### *Ecological Services of the Focus Area*

- Nutrient export and sediment retention resulting in a rich and productive habitat for aquatic organisms
- Cleansing of water from several major river systems
- Protection of downstream areas from flooding

#### *Economic Contributions of the Focus Area*

- Coastal wetlands and dune systems protect properties from storm surge and sea-level rise
- Food source and nursery for commercially important shellfish and finfish
- Destination for duck hunters, birders, paddlers, and beachgoers

#### *Conservation Considerations in the Focus Area*

Although much of the shoreline in the lower Kennebec Estuary has been developed, most of the development is low-density residential. Some large parcels remain undeveloped, offering significant opportunities for conservation. However, residential development pressures are increasing, and further development is likely to degrade existing shoreline buffers, fragment wildlife habitat, lower water quality, and serve as a pathway for invasive species. Protection of undeveloped shoreline parcels along the estuary, especially wetlands and wetland buffers, should be a top priority.

Climate change and sea-level rise may have major impacts on estuaries such as the Kennebec. Tidal marshes and other shoreline habitats may be flooded by rising seas, while the entire ecosystem could be altered by rising air and water temperatures, shifts in ocean circulation, increased erosion due to more intense storms, and other poorly understood effects of climate change.

Culverts and other structures crossing streams and rivers should be large enough and installed properly so that they do not block the passage of fish and other aquatic species. Maintaining connections among aquatic habitats allows species to access areas that they use for breeding, feeding, and shelter. For example, forage fish such as silversides move between salt marshes and the open ocean. Removing barriers to fish passage and tidal flow can benefit offshore species that eat forage fish.

Invasive species such as the common reed (*Phragmites australis*) have expanded rapidly in salt and brackish marshes in parts of New England. While invasive plants do not seem to be a major threat currently in the Focus Area, their distribution and abundance should be monitored.

In recent years, the use of personal watercraft has increased dramatically, including illegal use in some of the smaller creeks. Personal watercraft may have negative impacts on waterfowl and sensitive shoreline vegetation.

This area includes Significant Wildlife Habitat for wintering deer, wading birds and waterfowl and shorebirds. Land managers should follow best management practices with respect to forestry and development activities in and around wetlands, shoreland areas, and Significant Wildlife Habitat. Vegetation removal, soil disturbance and construction activities may require a permit under the Natural Resources Protection Act.

#### *Pollution in the Focus Area*

Because Merrymeeting Bay drains nearly one third of Maine, the potential for water-quality degradation is high. Both the Androscoggin and Kennebec Rivers have major industries upriver. Although these industries are much cleaner than in years past, contamination remains in the bay's fine-grained sediments. Eagle eggs from Merrymeeting Bay have been found to contain some of the highest levels of PCBs (polychlorinated biphenyls) ever recorded. Soils and wells contaminated with Per- and Polyfluorinated Substances (PFAS) have been found in the focus area. Mitigating past and future contamination of the watershed will be a continuing challenge.

#### *Tributary Waterways*

The tributary waterways in Bowdoinham face the threats noted above for the Kennebec Estuary, and the town-wide threats to water quality noted below.

The Abagadasset River (16 miles in length) comes to Bowdoinham from Gardiner, through Richmond. It runs among extended wetlands between Carding Machine Road and Route 24 and into the Bay just beyond Brown's Point Road.

Baker Brook runs north to south from the Richmond Border until it runs into the Abagadasset River.

The Cathance River (16.4-miles length) forms a horseshoe shape in Southern Bowdoinham. It comes to Bowdoinham from Topsham; Bradley Pond is its headwaters, it flows by a cattle farm in Topsham, but after that, its shores are still undeveloped. It flows though the Village, where the new Cathance landing boat access and Park are along its shores.

Carros Brook or Heath's Brook seems to get its start about a third of a mile East of Millay Road where it crosses I-95. It meanders right through the Village.

Denham Stream is the next stream running north to south. It comes to Bowdoinham from Richmond. It flows between the White Road and the Ridge Road. It appears to have steep slopes. It does not appear to have residences anywhere near it. The predominant land use in the



immediate watershed is forestry. It runs into the West Branch of the Cathance.

Mallon Brook seems to get its start west of the Post Road and runs into Sedgely Brook.

Sampson's Creek (or Puddledock) is that body of tidal water next to the gas station, exiting to the Cathance.

Sedgely Brook seems to get its start right in Bowdoinham between I-95 and the Old Post Road. It runs south right in the middle strip of I-95, then crosses under the Ridge Road to enter the top of the West Branch of the Cathance. It runs through hilly country, farm, and forestland; again, no residences appear to be along its shores.

Shinglemen's Creek - Runs into the Cathance about one-half mile North of the Topsham line. It gets its start around I-95.

The West Branch of the Cathance appears to be no more than a mile stream formed by the confluence of the Sedgely and the Denham streams. It runs between the Ridge Road and River Road into the Cathance where the Railroad and Route 24 coincide, very close to the village.

### *Wetlands*

In addition to providing needed habitat for nearly all wildlife species, 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 floodwaters by providing an area for swollen stream flows to expand and slow, thereby protecting downstream properties. 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.

National Wetlands Inventory (NWI) maps (the basis of wetlands shown on the map titled Water Resources and Riparian Habitat) 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.

### *Vernal Pools*

A vernal pool, also referred to as a seasonal forest pool, is a natural, temporary to semi-permanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer. Vernal pools have no permanent inlet and no viable populations of predatory fish. A vernal pool may provide the primary breeding habitat for wood frogs (*Rana sylvatica*), spotted salamanders (*Ambystoma maculatum*), blue-spotted salamanders (*Ambystoma laterale*), and fairy shrimp (*Eubranchipus* sp.), as well as valuable habitat for other plants and wildlife including several rare, threatened, and endangered species. A vernal pool intentionally created for the purposes of compensatory mitigation is included in this definition.

Whether a vernal pool is a significant vernal pool is determined by the number and type of pool-breeding amphibian egg masses in a pool, or the presence of fairy shrimp, or use by threatened or endangered species. Identified significant vernal pools are shown on the map titled Water Resources and Riparian Habitat.

#### *Town-wide Threats to Water Quality*

As noted in the Analyses section, the potential threats to surface and ground water quality come from two categories of discharges: the point sources at the end of a pipe, and the non-point, or dispersed, sources. Bowdoinham is at the end of two long rivers that carry the waste products of numerous paper mills and effluent from many municipal treatment systems.

Non-point source possibilities include malfunctioning septic systems.

There are other potential sources of contamination. They include, but are not limited to:

- Closed dumps in the Denham and Abagadasset Watersheds which are monitored by test wells
- Fertilizer (nitrates) up river from the site of the chemical plant at an abandoned farm
- Pesticides, fertilizer, manure, and sludge used in farming and residential lawns and gardens
- Erosion of soil from plowing or wood cutting operations along the streams
- Road treatments and spill potential along the highway and other roads

It is not known if any of these potential sources of contamination have become actual.

See the map titled Bowdoinham Water Resources for the locations of point-source pollution (discharges) and Map of Turnpike Streams (non-point) in Bowdoinham. See the Marine Resources Chapter for more information on the Town's coastal waterways.

#### *Underground Oil Tanks*

There are registered underground oil tanks at two locations in Bowdoinham: Bowdoinham Community School (23 Cemetery Rd) and G&G Gas and Repair Station (50 River Rd). Both sites are in the village area. According to the State, in Bowdoinham most of the registered underground oil tanks have been removed. Given the potential for oil leakage into the surrounding soils and groundwater and the high costs for cleanup of contaminated sites, the removal of underground oil tanks is recommended.

- (3) *A summary of past and present activities to monitor, assess, and/or improve water quality, mitigate sources of pollution, and control or prevent the spread of invasive species.*

The Maine Department of Environmental Protection (DEP) and Department of Marine Resources (DMR) monitor water quality regionally. The State monitors water quality at the site of discharge of treated effluent from the Bowdoinham Community School (RSU/MSAD 75) wastewater outfall and facilities on a regular basis.

A study of the Kennebec Estuary (Moore, S., and J. Reblin. 2010. *The Kennebec Estuary: Restoration Challenges and Opportunities*. Biological Conservation, Bowdoinham, Maine) noted that mercury concentrations in Kennebec Estuary eels from Bowdoinham exceeded the Maine Center for Disease Control & Prevention mercury fish tissue action levels for developmental and

adult health as well as the US EPA mercury subsistence consumption screening value. Lobster tomalley, American eel, rainbow smelt, and smallmouth bass from the Kennebec Estuary have each exceeded Polychlorinated Biphenyls (PCB) tissue action levels for reproductive-developmental health and cancer-related risk. In 2006, Maine DEP documented elevated dioxin concentrations in fish and shellfish of the Kennebec Estuary.

On monitoring, the same study found, “The lack of data allowing assessments of current ecological conditions will hinder restoration efforts until consistent funding sources are marshaled to support and, in some cases, expand programs that have demonstrated benefit. There is also a dire need to initiate new research and monitoring programs that more realistically reflect the complexity of managing natural systems. Currently, accurate assessments of system health and risk to human well-being are hampered by a lack of data that would otherwise characterize lynchpins of ecosystem integrity and resilience such as water quality, dominant plant communities, and toxic contaminant levels.”

The Friends of Merrymeeting Bay monitor invasive species on a volunteer basis. Statewide, most monitoring is done through volunteer groups and associations, as State funding is limited.

*(4) A description of the location and nature of significant threats to aquifer drinking water supplies.*

According to current State data, no significant aquifers exist in Bowdoinham. A significant aquifer is capable of yielding 10 gallons or more of ground water per minute to a properly installed well.

*Groundwater Resources*

Precipitation that does not run off as surface water infiltrates the soil. Some may remain near the surface as soil moisture, where it is drawn up by the roots of plants, but much of it continues to percolate downward, becoming groundwater. Depending on underground conditions, recoverable groundwater supplies may be plentiful or scarce in any given location.

Because virtually all of Bowdoinham's drinking water is drawn from groundwater sources, this is a particularly important resource.

*Bedrock Groundwater*

Groundwater is found in the cracks and fissures of the underlying granite bedrock (ledge). From wells drilled in bedrock there are usually a relatively low yields and sometimes wells must be drilled to depths of several hundred feet to obtain adequate yields for household use. Typically, yields are below 10 gallons per minute (gpm). Occasionally, there are high yield bedrock wells, but these are rare. Nearly all of Bowdoinham's private wells draw groundwater found in bedrock.

*Sand and Gravel Aquifers*

In Bowdoinham, the only sand and gravel aquifer is located in the Brown's Point area. It has an estimated yield of 10 to 50 gallons per minute, which is suitable for a small public water supply. This aquifer currently provided water for several residents in the area, the irrigation of the agricultural land in the area and the vegetable washing facilities on Pork Point Road.

Sand and gravel aquifers, are highly porous and allow for both storage and release of greater volumes of water through shallower wells that do not need to penetrate bedrock. Groundwater is available in higher yields from sand and gravel deposits that lie below the ground surface, but above the bedrock.

There is another sand and gravel aquifer of significance to Bowdoinham because it is a source of supply for the Bowdoinham Water Company. It is located in Bowdoin. Its yield is listed as 210 gallons per minute or 302,000 gallons per day. The Public Water System is described in the Public Facilities and Services Chapter.

### *Threats to Groundwater Quality and Quantity*

Because sand and gravel aquifers are porous and transmit water rapidly, they are susceptible to pollution. Once a pollutant enters an aquifer, its movement is governed by the groundwater flow, and it may remain in the aquifer for an indeterminate period. The impact of a pollutant on an aquifer depends on the size and characteristics of the aquifer and on the nature and amount of pollution that is introduced. Sources of aquifer pollution are often located on the ground surface directly above or contiguous to the aquifer. Septic tank effluent, landfill effluent, leakage from ruptured and/or abandoned fuel tanks, uncontrolled hazardous materials sites, road salt, sand-salt storage piles, PFAS, and agricultural fertilizers and pesticides are all possible sources of aquifer pollution.

Drinking water threats may be particularly acute to those residents with dug wells or well points. East Bowdoinham lies atop a shallow aquifer and as such is particularly prone to water quality threats from the surface.

Gravel mining may expose the water table to direct pollution and may result in increased evaporation.

Assessment of the availability of groundwater in terms of present and future demands for water are ongoing. The potential lasting values of groundwater could be jeopardized by excessive exploitation of their other values.

- (5) *A summary of existing lake, pond, river, stream, and drinking water protection and preservation measures, including local ordinances.*

State and federal laws that protect water resources are summarized below. Enforcement of these laws by State agencies can be limited due to agency staffing levels. Compliance with most State and federal environmental regulations is often left to individual landowners. In many communities, there is greater monitoring and enforcement of State and federal regulations through the municipal Code Enforcement Officer. Some of the most significant State laws affecting water resources, and other natural resources, include the following:

- Maine Erosion and Sedimentation Control Law – requires basic controls and stabilization when a project involves filling, displacing, or exposing earthen material. No permit is required, but the law sets minimum across-the-board standards that help prevent harm to surface waters.

- Maine Forest Practices Act – requires that landowners notify the Bureau of Forestry of any commercial timber harvesting activities, and that commercial harvest activities meet specific standards for timber harvesting adjacent to water bodies, clearcutting and forest regeneration following the timber harvest. If harvesting activities result in a clear-cut larger than 5 acres, there must be a separation zone between clearcuts, and regeneration standards must be met. This rule requires a harvest management plan developed by a licensed forester for clearcuts greater than 20 acres. The rules prohibit clearcuts greater than 250 acres.
- Maine Natural Resource Protection Act (NRPA) – regulates activities in, on, over or adjacent to natural resources, such as lakes, wetlands, streams, rivers, fragile mountain areas, high and moderate value waterfowl and wading bird habitats, high and moderate value deer wintering areas, significant vernal pools, and sand dune systems. Standards focus on the possible impacts to the resources and to existing uses.
- Maine Plumbing Code – rules pertain to materials, fixtures, vent and waste piping potable water supply piping, and approved subsurface wastewater disposal (septic) systems necessary to protect the public health, safety, and welfare of the citizens of Maine.
- Maine Site Location of Development Law (Site Law) – regulates developments that may have a substantial impact on the environment (i.e., large subdivisions and/or structures, 20-acre-plus developments, and metallic mineral mining operations). Standards address a range of environmental impacts.
- Maine Storm Water Management Law – regulates activities creating impervious or disturbed areas (of size and location) because of their potential impacts to water quality. In effect, this law extends storm water standards to smaller-than Site Location of Development Law–sized projects. It requires quantity standards for storm water to be met in some areas, and both quantity and quality standards to be met in others.

These provisions in the Town of Bowdoinham Land Use Ordinance affect water resources:

- The Water Quality Protection performance standard states, “No activity shall locate, store, discharge, or permit the discharge of any treated, untreated, or inadequately treated liquid, gaseous, or solid materials of such nature, quantity, toxicity, or temperature that run off, seep, percolate, or wash into surface or ground waters so as to contaminate, pollute, or harm such waters or cause nuisances, such as objectionable shore deposits, floating or submerged debris, oil or scum, color, odor, taste, or unsightliness or be harmful to human, animal, plant or aquatic life.”
- Shoreland Zoning provisions provide considerable protection to water bodies and other natural resources located within shoreland areas. Shorelands are environmentally important because of their relationship to water quality, value as critical wildlife habitat and travel corridors, and function as floodplains. Development and/or the removal of vegetation in shoreland areas can increase runoff and sedimentation, as well as the amount of nitrogen and phosphorus entering the water that can lead to algae blooms. Steep slopes with highly erodible soils are particularly susceptible to erosion. Specifically, as relates to water quality, the ordinance states, “No activity shall deposit on or into the ground or discharge to the waters of the State any pollutant that, by itself or in combination with other activities or substances, will impair designated uses or the water classification of the water body, stream or coastal or freshwater wetland.”
- Site Plan Review provisions include similar requirements as found in the performance standard shown above. Namely, “No proposed development shall locate, store, discharge, or permit the discharge of any treated, untreated, or inadequately treated liquid, gaseous, or solid

materials of such nature, quantity, obnoxiousness, toxicity, or temperature that may run off, seep, percolate, or wash into surface or groundwater so as to contaminate, pollute, or harm such waters or cause nuisances, such as objectionable shore deposits, floating or submerged debris, oil or scum, color, odor, taste, or unsightliness or be harmful to human, animal, plant, or aquatic life.” The site plan review provisions include State requirements for the storage of fuel, chemicals, wastes and raw materials, and State requirements for projects within the direct watershed of a ‘body of water most at risk from development’ or ‘a sensitive or threatened region or watershed’, as identified by Maine DEP. In addition, it is stated, “If the project does not require a stormwater permit from the DEP, it must be designed to minimize the export of phosphorous from the site to the extent reasonable with the proposed use and the characteristics of the site.”

- Subdivision provisions on water quality protection note, “The subdivision must not adversely affect the water quality or shoreline of any adjacent water body, to the extent practicable.” In addition, “No subdivision shall increase any contaminant concentration in the ground water to more than one-half of the Primary Drinking Water Standards. No subdivision shall increase any contaminant concentration in the ground water to more than the Secondary Drinking Water Standards.” See the ordinance itself for specific groundwater standards and hydrogeologic assessment requirements.

Analysis

*(1) Are there point sources (direct discharges) of pollution in the community? If so, is the community taking steps to eliminate them?*

There are three State-identified point sources of pollution from licensed discharges (one wastewater outfall, two overboard discharges). See the map titled Bowdoinham Water Resources for their locations.

<b>Wastewater Outfalls and Overboard Discharges (OBD) in Bowdoinham</b>				
<b>DEP ID</b>	<b>ATS ID</b>	<b>Applicant</b>	<b>Waterbody</b>	<b>Flow GPD</b>
1003	65549	Bowdoinham Community School (Outfall)	Cathance River	7,500
3137	35051	Gaviria, Residential (OBD)	Kennebec River	300
3299	66830	Goodall, Residential (OBD)	Cathance River	720

Source: Maine Department of Environmental Protection (Maine DEP), 2023

Note: GPD is gallons per day

*(2) Are there non-point sources of pollution? If so, is the community taking steps to eliminate them?*

Since 2010, three of the four sources have been eliminated. The Lapointe OBD on the Kennebec River has been removed and been properly abandoned. The Goodall residential OBD which was along the Cathance River is not currently active since the source of the wastewater was lost to a fire and has not been rebuilt. The permit for this location has expired and a new subsurface investigation will be required before a new wastewater system can be sited. The outfall has not been properly abandoned yet as the property is still being evaluated for redevelopment. Lastly, the outfall at the Bowdoinham Community School is still listed as active with the Maine DEP,

however the pipes have all been capped and it is no longer discharging. Once the abandonment process is complete the outfall will be removed from the list.

Further, runoff from rain falling on impervious surfaces, like buildings and pavement and to a somewhat lesser extent from agricultural fields, bare ground and residential lawns is defined as non-point source pollution. In such runoff, pollutants occurring naturally like phosphorous, or from petroleum (motor vehicles and storage tanks), fertilizers and pesticides, in addition to untreated or insufficiently treated wastewater and sewage, can be transported into wetlands and water bodies. Impervious surface percentage maximums, as set in shoreland zoning ordinance provisions, can reduce the amount of runoff into water bodies. In especially sensitive areas, resource protection designations limit or prohibit development. Stormwater best management practices are referenced in the Land Use Ordinance. It is believed that shoreland zoning and related provisions are effective overall. Accordingly, it is recommended that monitoring should occur, especially during construction activities, and where water quality is found to be impaired, increased protections should be adopted.

The Town advises homeowners, business owners and farmers, and responds to citizen concerns on an ongoing basis. The Town informs the Maine Department of Environmental Protection of potential violations that could result in increased runoff, for example in shoreland and wetland areas. See the responses below, the Marine Resources Chapter, Public Facilities Chapter and Capital Investment Plan in the Fiscal Capacity Chapter for more information.

*(3) How are groundwater and surface water supplies and their recharge areas protected?*

The Town holds that public water supplies and their recharge areas are adequately protected overall through the Land Use Ordinance and its shoreland zoning provisions, and through already conserved areas.

The well of the Bowdoinham Water District is in Bowdoin, and so is subject to protections enacted and enforced in that Town, in addition to State regulations. See the Public Facilities Chapter for more information on the Water District. See the map titled Water Resources for the locations of public water supplies. Outside of the village area served by the Water District, drinking water for residences and businesses comes from individual private wells, the installation of which are subject to State regulation. Surface waters are not generally used for drinking water. No significant aquifers exist in Bowdoinham. A significant aquifer can yield 10 gallons or more of ground water per minute to a properly installed well. See Community Water Source Protection Map for location of Bowdoinham's drinking water source.

*(4) Do public works crews and contractors use best management practices to protect water resources in their daily operations (e.g. salt/sand pile maintenance, culvert replacement street sweeping, public works garage operations)?*

Local road construction, repair, and maintenance are done using best management practices to minimize pollution. For example, appropriate seasonal timing of construction is important to avoid excessive amounts of movement of disturbed soil during the high flows of spring. Other techniques may entail temporary mulching of exposed soil surfaces, temporary seeding, and installation of siltation fences, riprap, gravel-filled trenching or the use of siltation basins. Town public works officials are trained in these practices and the Code Enforcement Office investigates

the activities of private construction crews and individuals to ensure that they adhere to these practices as well.

*(5) Are there opportunities to partner with local or regional advocacy groups that promote water resource protection?*

There are opportunities to continue to partner with local and regional organizations that are working to protect water resources through monitoring, education of landowners and those who use these resources, as well as suggesting more effective regulations. The Kennebec Estuary (Kennebec River, Merrymeeting Bay, Cathance River, Abagadasset River, and other tributary streams and brooks in Bowdoinham) is served by these organizations:

- Bowdoinham Water District
- Brunswick Topsham Land Trust (Topsham)
- Friends of Merrymeeting Bay (Richmond-Bowdoinham)
- Friends of the Kennebec River Rail Trail (Brunswick)
- Kennebec Estuary Land Trust (Bath)
- Kennebec River Network (Augusta)
- Maine Rural Water Association (Richmond)
- Richmond Utility District



## Historic & Archeological Resources

### Conditions & Trends

- (1) *The community's Comprehensive Planning Historic Preservation Data Set prepared and provided to the community by the Historic Preservation Commission, and the Office, or their designees.*

There are 18 known prehistoric archaeological sites in Bowdoinham. Most of them are located along tidal water or on riverbanks. Orange highlight areas on planning map (dated September 2010 are still current/useful) show areas of professional archaeological survey. See the map titled Known Archaeological Sites and Areas Sensitive for Prehistoric Archaeology in Bowdoinham, prepared by the Maine State Historic Preservation Commission.

A probable prehistoric fish weir consisting of wooden stakes preserved in intertidal mud has been located in a shallow portion of Merrymeeting Bay. This site (Maine Archaeological Survey number 25.61) is significant and highlights the possibility of preservation of wooden or perishable artifacts. The Maine State Historic Preservation Commission notes that the banks of the Cathance, Abagadassett, and Kennebec Rivers, and the river floodplain soils in the Bowdoinham Wildlife Management Area are likely locations for prehistoric archaeological sites and should be surveyed. The next table lists identified historic sites in Bowdoinham.

<b>Know Historic Archaeological Sites in Bowdoinham</b>				
<b>Site Name</b>	<b>Site Number</b>	<b>Site Type</b>	<b>Periods of Significance</b>	<b>Nat'l Register Status</b>
Gyles Settlement	ME049-001	settlement	1620 - 1675 (1669 - 1676)	undetermined
Somerset Settlement	ME049-002	settlement	circa 1719	undetermined
McCurdie's Point	ME049-003	shipyard	18th and 19th Centuries	undetermined
<i>Richard</i> (vessel)	ME049-004	wreck, sloop	9/20/1923	undetermined
Cathance River #1	ME049-005	farmstead	19th Century	undetermined
Cathance River #2	ME049-006	farmstead	19th Century	undetermined
Richard Collacott	ME049-007	trading post	1658(?) - 1676	undetermined
Ebenezer F. Whitney	ME049-008	farmstead	circa 1839 - 1900	undetermined
Brooks Carding Mill	ME049-009	mill, carding and gristmill	circa 1800 - 1950s	eligible
E. Robbins	ME049-010	domestic	1826 - late-1940 - early-1950s	undetermined
J. Hall Cellar and Cemetery	ME049-011	domestic and cemetery	pre-1828 - post-1936	undetermined
Jefferson Farmstead	ME049-012	farmstead	mid-late 19 <sup>th</sup> century farmstead	undetermined
Browns Point Historic Fish Weir	ME059-013	weir	3 radiocarbon dates on wooden stakes calibrate 70% probability between 1811 and 1912 AD	possibly eligible

Source: Maine State Historic Preservation Commission, October 2023.

No professional town-wide surveys for historic archaeological sites have been conducted to date in Bowdoinham. The Maine State Historic Preservation Commission recommends that future archaeological survey should 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 seventeenth and eighteenth centuries.

Five buildings in Bowdoinham are listed on the National Register of Historic Places, as shown in the next table.

<b>Bowdoinham Historic Buildings on the National Register of Historic Places</b>
1. Cornish House, Main Street
2. Robert P. Carr House, Main Street
3. Viola Coombs House, Main Street
4. Harward Family House, Pork Point Road
5. Butterfield-Sampson House, River Road

Source: Maine State Historic Preservation Commission, October 2023

The Maine State Historic Preservation Commission notes that a comprehensive survey of Bowdoinham's historic above-ground resources needs to be conducted in order to identify other properties that may be eligible for nomination to the National Register.

- (2) *An outline of the community's history, including a brief description of historic settlement patterns and events contributing to the development and character of the community and its surroundings.*

The Town of Bowdoinham was incorporated September 18, 1762, as the 14th Town in the District of Maine. Trappers, fishermen, surveyors, and timber cruisers peopled the area, at least seasonally, as early as 1630.

Permanent settlers arrived in the 1730's, shortly after the end of the Maine Indian wars. The first settlers lived on the fringes of Merrymeeting Bay and its tributary rivers. They were farmers and fishermen first, working to push the woods back. A 1795 map of "old" Bowdoinham offers a handwritten comment from its surveyor/editor: "there are yet no real roads in this town... passage is mostly by water."

Bowdoinham, in those early days before Maine's statehood, included all of present-day Richmond (White's Landing) a part of Topsham (Cathance Neck) and a large part of present-day Bowdoin (West Bowdoinham). Since 1823, Bowdoinham's boundaries have remained essentially unchanged, stretching some eight miles along the western shore of Merrymeeting Bay and the Kennebec River, then inland due west nearly five miles.

Today’s Bowdoinham Village, or Cathance Landing, was settled about 1800. A toll bridge spanned the Cathance by 1805, and the tidewater landing developed into a bustling center for trade in less than a decade. The landlocked, developing towns of Bowdoin, Litchfield, Webster, Wales, even Lisbon and Lewiston found “the Landing” to be quick and easy access to tidewater, and the sailing vessels that plied the Atlantic coast.

Bowdoinham became one of the earliest shipbuilding centers in a State that became known as a "Ship building State." Vessels of wood were constructed at Bowdoinham a decade before the American Revolution, and during the next 125 years, more than 250 vessels of all class and tonnage were built here.

The decades before the American Civil War brought the town unparalleled prosperity. Warehouses, chandlers, icehouses, mills, stores, and shipyards lined both shores of the Cathance. Boarding houses, two hotels, several taverns, private estates and more than two dozen shops, businesses, and manufacturing operations shared frontage on the Town's steep Main Street with private homes, churches, and civic clubs.

In the 1850 census, the Town's population reached 2,382. But the decade following the Civil War triggered an economic decline in Bowdoinham and other parts of the north and east. Many young men went to and were wounded or killed in the war, while many more followed the rivers and railroads south and west when the conflict was done. The Town's only bank was robbed in 1867; more than \$73,000 was taken and never recovered.

Bowdoinham's smaller, wooden ships became obsolete, her yards too small to compete. The town which helped to foster the state's maritime industry had to stand helplessly aside, watching her seamen and master builders move to towns with wider rivers and the ability to build bigger ships. By 1890, Bowdoinham had reverted to what it had been in its earliest days, a small, independent, agricultural-based community of self-sufficient family farms. Residents produced apples, hay, wheat and potatoes, some sheep, poultry, and beef, or worked in small shops. They harvested fish and ice from the rivers, and wood from the forests. The Kendall Brothers came to town and their successful fertilizer, sheep, and grain business became known across the state.

In 1902, a mid-December fire raged largely unchecked through Bowdoinham's downtown commercial center, destroying almost all of it. Dozens of shops, homes, and warehouses were leveled. Fire struck the downtown area again in 1904, taking out another section of the town's center. Most of Bowdoinham's commerce, and much of her historical village center, were lost in these misfortunes.

After the global depression of the 1930's, Bowdoinham's population sank to a modern low of 904 people.

At the end of World War II, Bowdoinham rode the success of its neighboring towns to make gains of its own. Today, her population has grown steadily to 3,047 residents. Bowdoinham has become a "bedroom town," with industry and fortunes tied to our neighbors. Our history, made even more remote by these recent changes, has become all the more precious, even more worthy of preservation.

- (3) *An inventory of the location, condition, and use of any historical or archaeological resource that is of local importance.*

In addition to the prehistoric and historic sites noted above by the Maine State Historic Preservation Commission, the Town has at least 48 cemeteries, some public, some private some have financial support, most do not. See the map titled Public Facilities and Services for the public cemetery locations. Additional buildings and structures of local historic importance are shown in the next table.

<b>Historic Buildings and Structures in Bowdoinham of Local Importance that are NOT on the National Register of Historic Places</b>			
<b>Name</b>	<b>Location</b>	<b>Condition</b>	<b>Use</b>
Town Hall	School St	Poor - Structural Work Needed	Inactive
John C. Coombs Municipal Building	School St	Fair	Active
Merrymeeting Grange	Main St	Fair	Active

- (4) *A brief description of threats to local historic resources and to those of state and national significance as identified by the Maine Historic Preservation Commission.*

Development and accompanying excavation and re-grading activities may disturb prehistoric and historic sites and artifacts. Detailed archaeological surveys prioritized for shoreland areas could reduce this risk by informing developers and the planning board where such assets are located. As noted in the Analyses section above, ordinance provisions for site plan review, subdivision and shoreland zoning are meant to protect historic and archeological resources from new development. There are no ordinance standards to protect historic buildings and structures or the village area from being razed or altered beyond recognition.

Analysis

- (1) *Are historic patterns of settlement still evident in the community?*

The Bowdoinham village area retains many of its historic buildings: civic, commercial, residential, and religious. The streets converge on the village following in many instances the original road alignments and pathways through the surrounding hillsides, fields and along waterways. The density of development in the village area also continues to reflect early traditional development in which buildings were sited close together on small lots.

- (2) *What protective measures currently exist for historic and archaeological resources and are they effective?*

Most known historic and archeological resources in Bowdoinham are located within shoreland areas. One of the purposes of the shoreland zoning districts is, “to protect archaeological and historic resources.” Shoreland zoning provisions note, “A permit is not required for an archaeological excavation as long as the excavation is conducted by an archaeologist listed on the State Historic Preservation Officer’s level 1 or level 2 approved list, and unreasonable erosion and sedimentation is prevented by means of adequate and timely temporary and

permanent stabilization measures.” Shoreland zoning development approval criteria includes, “Will not have an adverse effect on historic and/or archaeological sites.”

The Town holds that its ordinance provisions are effective in protecting historic and archeological resources from new development. Bowdoinham does not have design requirements specific to the preservation or historically accurate renovation of historic buildings and structures. Ordinance provisions for site plan regulated development and subdivisions are noted in response to the next question.

- (3) *Do local site plan and/or subdivision regulations require applicants proposing development in areas that may contain historic or archaeological resources to conduct a survey for such resources?*

Archeological or historic surveys are not explicitly defined in the Land Use Ordinance. However, Tier III projects require a site inventory and analysis, which includes identifying the location of, “...historic and/ or archaeological resources, together with a description of such features.” Likewise, subdivision inventory and analysis requires identifying, “Locations of all culturally, historically or archaeologically significant buildings, features, or sites.” These requirements may be waived by the planning board.

Subdivision, site plan review, and general performance standards include historic and archaeological provisions for development on sites identified as containing historic or archaeological resources by the Maine Historic Preservation Commission and require, “appropriate measures for protecting these resources, including but not limited to, modification of the proposed design of the site, timing of construction, and limiting the extent of excavation.” Furthermore, subdivisions and proposed developments that have buildings or sites on the National Register of Historic Places or are adjacent to such sites must, “minimize the impacts on the historic features. When the historic features to be protected include buildings, the placement and the architectural design of new structures in the subdivision shall be similar to the historic structures. The Board may require the applicant to seek the advice of the Maine Historic Preservation Commission.”

- (4) *Have significant historic resources fallen into disrepair, and are there ways the community can provide incentives to preserve their value as an historical resource?*

Most significant historic resources in Bowdoinham are in adequate to fair condition. The following historic properties are in substandard or blighted condition: Ridge Road Church. Property owners could use historic preservation tax credits (Federal and State) to reduce the costs to redevelop old buildings for new uses while maintaining their historical appeal.

The Town Hall is also in poor condition. The Town Hall Preservation Committee has been leading the charge to promote the building as an asset to the community through the creation of a video project and through fundraising. They have also commissioned an architectural study which identified the various defects in the building including critical repairs to the foundation and the roof of upwards of \$1,000,000. At the 2023 Town Meeting the town was not able to garner the support to make a substantial investment in the building at that time. In 2023, the building was listed as one of the top ten most endangered historic places to preserve by the Maine Preservation. However, the committee continues working on developing a plan to save the

building, which includes looking for grant money and using local sweat equity.

Additional local efforts to preserve and restore historic resources could be undertaken by town-appointed committees and by volunteer groups. The Bowdoinham Historical Society gathered the largest single collection of records, photographs, and artifacts relating to the town, managed to index at least 48 of the cemeteries that exist in Bowdoinham, and fostered the publication of 14 historical feature newspapers called the Bowdoinham Advertiser. The attention of the Bowdoinham Historical Society to the Town's history coupled with its many social, community-building activities and events make the Society a vital promoter of the Town's future as well as its past.

DRAFT

## Recreation

### Conditions & Trend

- (1) *The community's Comprehensive Planning Recreation Data Set prepared and provided to the community by the Department of Conservation, and the Office, or their designees.*

See the map titled Public Facilities and Services for recreational facilities included in the state-prepared data set and additional facilities as identified by the Town.

- (2) *A description of important public and private active recreation programs, land and water recreation areas (including hunting and fishing areas), and facilities in the community and region, including regional recreational opportunities as appropriate, and identification of unmet needs.*

### *Inventory of Physical Assets*

- The Bowdoinham Community School (BCS) was built in 1955, with additions in 1968, 1977, and 1991 /1992. It has an attached auditorium/gymnasium with a small stage. The facility has a poured rubber floor and a regulation-sized basketball court. The School District and the Town have an agreement for access to the building for community use.
- A Little League baseball/softball field, built in 1992, is on school property. Two additional ball fields for baseball and soccer are at the recreation complex. The Town owns the batting cage, a pitching machine, and soccer goals.
- A community playground for small children was constructed behind BCS. The construction was supervised by the Bowdoinham Parent Teacher Club members.
- The outdoor regulation basketball court was built in the summer of 1993. A regulation tennis court was built in 1993. The school is responsible for maintaining the basketball court while the town is responsible for maintaining the tennis court. In the summer of 2023, both courts were resurfaced and repainted to include lines for one pickleball court on the basketball court and two pickleball courts on the tennis court. The basketball court also received new backboards, rims, and nets.
- The outdoor ice-skating rink is situated in the parking area for the ball fields along Ridge Road. The rink is approximately 30 feet by 100 feet and is weather dependent and maintained by volunteers and the Bowdoinham Fire Department.
- There is also a nature trail adjacent to the ball fields and a one-kilometer strip mowed on the fields for cross-country running and skiing.
- Volunteers constructed a snack shack and storage building with water and electricity, at the athletic field on Ridge Road in 1999. Extensive repairs were made to the snack shack in the spring of 2022, including a new roof covering and new plumbing. Two picnic tables were purchased, and an electronic scoreboard was installed at the community school for basketball season.
- In 2011 the Army National Guard built a garage in the parking lot of the Recreational facility on Ridge Road.
- The State of Maine manages the Merrymeeting Bay Wildlife Area, located at the tip of Wildes Point Road. Area and State level field dog trials occur here on a regular basis, but the State discourages camping and many other activities often associated with the outdoors.
  - The Masons, The Knights of Pythias and The Historical Society all have buildings in the

Village. These social clubs are a recreational asset for their members and are potentially available for community use.

- In June 2017 a skateboarding park was constructed in memory of Matthew Parker. The park is located across the railroad tracks from Maily Park and is open to the public from dusk to dawn during the spring, summer, and fall.
- Bowdoinham has many East-West discontinued roads. The public right of way to these roads has often been retained when the road was discontinued. These provide public access for snowmobiling, hiking, cross-country skiing, and horseback riding. These are not part of an established recreation program but should be identified and maintained for public uses.

#### *Bowdoinham Waterfront Park / Philip Maily Park and Town Landing / Boat Launch*

The Bowdoinham Waterfront Park, also known as the Philip Maily Park, is on two acres purchased in 1992 following years of informal town use. Volunteers, the Merrymeeting Yacht Club, and Public Works have assisted with maintenance at the Park with the town budget providing the funds for maintenance. Facilities include picnic benches, horseshoe pits, fishing area, public restrooms and a gazebo for outdoor entertainment and concerts.

The Town Landing, located within Philip Maily Park, is primarily a boat launch jointly owned by the Town and the Department of Conservation. It consists of a boat ramp and two docks, one for handicapped use, where the public may launch and board boats. It is located on the Cathance River, just east of the Route 24 Bridge at the foot of Main Street. This public right of way was completely rebuilt with town and Department of Conservation funds and a federal grant, which provided the assistance of the Navy Seabees. The Waterfront Committee supervised the renovation.

The Landing is a full-tide ramp, so that boats can be launched at any tide. There is a mean low tide of 4 feet, 8 inches at the site. The 13 and 1/2-degree ramp angle makes it easier to launch large boats at any tide. Kayak racks are located at the landing with spaces available to rent seasonally.

The former Public Works facility is being developed as a new waterfront park. As of December 2023 a new non-motorized, ADA accessible boat launch was installed. The park is in its infancy of development.

Down river from the landing are spaces for 49 moorings. Thirty-three were used in 2023, were reserved by non-residents and 21 by residents. These moorings are registered with the Town and supervised by a paid Harbormaster, who reports to the Town manager.

#### *Recreation Programs*

The Town approved a full time Director of Recreation and Community Services in June 2023.

Baseball/Softball - This is the largest recreation program in the town, serving approximately 130 players: on average 35 T-ball players (grades K & 1st), 60 Baseball players (2nd grade –6th grade) and 40 softball players (2nd grade-6th grade). The Baseball Program is part of



the Ararat Cal Ripken League which includes the towns of Bowdoin, Bowdoinham, Harpswell, and Topsham. The Softball Program is part of the Ararat Babe Ruth Softball League which includes the towns of Bowdoin, Bowdoinham, Harpswell, Richmond, Bath, and Topsham. Babe Ruth Baseball teams are available for baseball players ages 13-15 for "pool" and "draft" interested players from all the towns in S.A.D. #75. Senior Babe Ruth and American Legion teams are available for players 16-18 years of age.

Basketball - The season begins in November and runs through February. Third and fourth graders have 25 players on average. Fifth and sixth grades have on average 25 players, usually enough for 1 team of each. These teams are part of the Ararat Youth Basketball League (AYBL) and consists of the towns of Bowdoin, Bowdoinham, Harpswell, and Topsham. Some players choose to tryouts for "travel teams" and play in leagues overseen by the AYBL Board. There is also a kindergarten, 1<sup>st</sup> and 2<sup>nd</sup> grade basketball program which runs in the winter and is a skills development program.

Ice Skating - The town maintains an outdoor ice-skating rink and has ice skates available for residents to rent (at no charge). The Recreation Department holds after-school ice skating sessions for both hockey and free skating.

Cross Country Running – Two sessions of cross country running is offered for grades 1 – 6 in the spring and fall seasons. Teams average about 25 runners in the fall and 10 in the spring. Competitive meets each week are held throughout the region as part of the Coastal Running League.

Soccer - During the fall soccer season, interested Bowdoinham children participate in the Topsham Recreation soccer leagues. Many children participate in other local club and camp offerings throughout the year.

Skiing - A downhill skiing program is offered beginning in January and running through mid- February. This program takes place at Lost Valley in Auburn and consists of six one-hour sessions (one hour of which is instruction if needed) and a seventh half day session. This program has been in existence for several years and has been attended by as many as thirty children plus a handful of adult chaperones. The town rents out (at no charge) snowshoes and cross-country ski equipment for residents. A 1-km cross-country loop trail has been maintained around the athletic fields.

Tennis - People who play tennis arrive at the courts and play on a first come first serve basis. The tennis court was resurfaced, painted, net reset and new perimeter drainage installed in the summer of 2023.

Swimming - Farley Field House at Bowdoin College hosts Family Swim. There are two sessions of Sunday free swim for families that live in the SAD #75 towns. One Session runs September – December and the other begins in January and runs through April.

Village Seniors - Lunches, socials, bingo and other events are planned on a monthly basis through the Age Friendly Bowdoinham Committee. Other activities for seniors include weekly cribbage, bridge, yoga, line dancing and pickleball.

Library - The library offers a variety of reading, activity, and workshop programs throughout the year.

#### *Events*

The Town sponsors community events including:

- The Bowdoinham Summer Concert Series is held in Maily Waterfront Park. The free outdoor concerts begin at 6pm and go until at least 8pm every Sunday starting in late June to late August. This popular concert series features a wide range of rock, folk, county, and acoustic music from local and regional musicians. Celebrate Bowdoinham is the Town's annual celebration in September in and around the Waterfront Park.
- Open Farm Day in July gives people a chance to meet their local farmers and tour the local farms.
- Holiday Festival is an opportunity for our local artisans to showcase their goods on the first weekend in December.
- Ice & Smelt Festival is a February event coordinated by the Merrymeeting Arts Center the Library and Bowdoinham Recreation Department.

#### *Other and non-municipal programs*

Other recreation is available through organizations such as Scouts, the Bowdoinham Snowmobile Club (the "Snowbirds"), as well as the Parent Teacher Club, and local churches. While these are not town supported activities, they do provide opportunities for free or inexpensive recreation. Again, volunteers are vital to their success.

With its rural character, rivers, and Merrymeeting Bay, the Town has had many opportunities for these kinds of private recreational activities: Hunting, fishing, walking, boating, bicycling, horseback riding.

Richard Ferrier Scholarship - The Richard Ferrier Scholarship Fund is for students between the ages of 13 and 18 who are residents of Bowdoinham and provides financial assistance so that they may pursue artistic, academic, athletic and vocational or interests outside of the traditional school environment (including but not limited to: music lessons, tuition for summer programs or studies, or special athletic instruction). The Maine Community Foundation administers this fund.

#### *Recreational Businesses*

The following recreational businesses are located within Bowdoinham:

- Ackers Acres Disc Golf: disc golf course: 30 holes, 2 courses with 4'x8' cement T-pads a small clubhouse with snacks and drinks available. Host weddings, anniversaries, company parties, etc., 60 acres, open year-round, Dingley Rd.
- Dragonworks Kayaks: Manufacture whitewater and sea touring kayaks, accessories, offer tours of Merrymeeting Bay and instruction, Stevens Rd.
- Jim's Smelt Fishing Camp. Cathance River, 24 camps, Route 24.
- Leighton's Smelt Fishing Camp Abagadasset River, 10 camps, Brown's Point Rd.
- Point of View Helicopter Services: Scenic sightseeing of Merrymeeting Bay and region, aerial photography, aerial surveying, wildlife tracking, pipeline patrols and cargo, Stevens Rd.

- (3) *An inventory of any fresh or salt water bodies in the community determined locally to have inadequate public access.*

Bowdoinham has miles of frontage on the Kennebec, Cathance, and Abagadasset Rivers and Merrymeeting Bay, but it has no organized swimming areas and only limited points of access.

See the map titled Public Facilities and Services for the location of shorefront access points. There are four “Paddle Put-ins” shorefront access points:

- Maily Waterfront Park (Town Landing) on the Cathance River
- CMP Carry-in (CMP property) on the Lower Abagadasset River
- Gallant Carry-in (State Inland Fisheries and Wildlife property) on the Upper Abagadasset River
- Unnamed off Porkpoint Rd (State agricultural property) on the Kennebec River, below Swan Island

No public access is available to the West Branch of the Cathance within Bowdoinham.

- (4) *A description of local and regional trail systems, trail management organizations, and conservation organizations that provide trails for all-terrain vehicles, snowmobiling, skiing, mountain biking, or hiking.*

#### *Local trails*

The Bowdoinham Community School has an indoor and outdoor wading paths. The Cathance River Walk (3/4 mile) follows the river on town owned property opposite the Philip Maily Park. The Detweiler/Leyman property on Carding Machine Rd (3/4 mile) has a trail to the Abagadasset River.

See the maps titled Public Facilities and Services and Bowdoinham Constraints for the location of conserved and town properties with trails. The State of Maine holds two significant parcels that total 485 acres. Bowdoinham Wildlife Management Area and the Bachman Property are managed as wildlife preserves and are accessible by trails. On State Inland Fisheries and Wildlife (IFW) property in Bowdoinham (Wildes Rd), the following uses are allowed:

- Snowshoeing, skiing, bird watching
- Hunting (portable tree stands only), fishing, trapping,
- Water access at designated points or at road crossings, carrying in canoes across open land is allowed
- Snowmobiles and ATV's on designated trails only
- Walking on existing trails is allowed but. IFW do not plan to establish any additional trails.

The following are not allowed on State Inland Fisheries and Wildlife (IFW) property in Bowdoinham:

- Camping
- Fires
- Cutting trees or vegetation without written permission

- New trails established or marked without written permission

Regional conservation organizations such as the Friends of Merrymeeting Bay and the Kennebec Estuary Land Trust hold several conservation easements of lands near or adjacent to State properties, connecting habitats and ecosystems. Most of the areas attract recreational visitors.

The Cathance River Education Alliance, based in Topsham, promotes ecological awareness and nature-based learning among students, educators and the public in order to foster wise use of the Cathance River Preserve. The Bowdoinham Snowbirds, a snowmobile club, maintain over 50 miles of trails throughout Bowdoinham. For the locations of these trails, see the map titled Recreation: Trails. These trails also connect to Bowdoin, Richmond, Litchfield, and Merrymeeting Bay, which link to other trail networks beyond Sagadahoc County.

### *Proposed Regional Trail*

The goal of the proposed Merrymeeting Trail is to use the existing railroad corridor to create a thirty-two mile regional rail-with-trail from Topsham through Bowdoinham and Richmond to Gardiner. The Merrymeeting Trail would connect the following locations:

- Androscoggin River Pedestrian Bike Path in Topsham that links Brunswick to Topsham;
- the village area in Bowdoinham;
- the village area in Richmond;
- the village area in Gardiner; and
- Kennebec River Rail Trail that links Gardiner, Farmingdale, Hallowell, and Augusta.
- East Coast Greenway

Regular meetings of the Board of Supervisors from all four towns along the Merrymeeting Trail (Topsham, Gardiner, Bowdoinham, and Richmond) have been occurring since 2008 to develop the project and grants have been obtained to fund planning. A feasibility study with preliminary engineering and cost estimates was completed in 2011. In 2020 a Rail Use Advisory Council was conveyed made up of many interest groups that would use the trail including representatives from pro-rail groups, bicyclists, ATV users, and others. In 2023, after several years of meeting the Council made the recommendation of this group to the Maine Dept. of Transportation's Commissioner to use the trail for primarily non-motorized use, with several sections possibly being used by motorized vehicles (such as ATV) until it would be reverted to rail. As of December 2023, the Commissioner is deciding whether to bring this recommendation to the Legislature before making a final decisions.

Recreational benefits of the trail would include enhanced connections to several major water bodies like Merrymeeting Bay, which is a world-renowned recreational area with significant natural habitat, popular with locals and tourists for sailing, kayaking, swimming, walking, bird watching, fishing and duck hunting. The trail would support healthy communities by providing healthy outdoor activities for area residents. Additionally, it would:

- Serve as an alternate/additional route for the East Coast Greenway (a planned trail system from Canada to Florida)
- Create economic development opportunities and support downtown revitalization
- Allow for future rail use (transportation & shipping) along the corridor, while

- accommodating safe bicycle and pedestrian routes
- Provide potential cultural/historic education opportunities for communities along the trail
- Provide potential environmental and natural resources education opportunities for local and regional natural resources groups

(5) *A map or list of important publicly-used open spaces and their associated facilities, such as parking and toilet facilities.*

See the map titled Public Facilities and Services for the location of open spaces. See the responses to question #2 above for a description of these recreational facilities.

### Analysis

(1) *Will existing recreational facilities and programs in the community and region accommodate projected growth or changes in age groups in your community?*

The natural resources of Bowdoinham and the region provide numerous recreational opportunities like hiking, hunting, horseback riding, ATV, snowmobiling, cross-country skiing, fishing, canoeing, kayaking, boating, and cycling. Open space includes parks, reserves, certain shoreland areas, athletic fields, farms, forestlands, wetlands, and rivers, as described in this plan. Existing recreational facilities generally meet the projected needs of the community over the next ten years. Allocating sufficient resources for the ongoing maintenance of all facilities will be crucial. With our population of adults over age 60 at 30% (and growing). An increase in the number and frequency of programs to meet the growing senior population might be warranted.

(2) *Is there a need for certain types of services or facilities or to upgrade or enlarge present facilities to either add capacity or make them more usable?*

The need for a permanent home for the Senior Center, expanded senior activities and a community center have been discussed. Another common desire is a place for public swimming or “splash pad” area.

(3) *Are important tracts of open space commonly used for recreation publicly-owned or otherwise permanently conserved?*

Several important open spaces used for recreation are conserved. See the Condition and Trends section in this chapter for a listing of town-owned and permanently conserved lands and facilities, and see the maps titled Public Facilities and Services and Bowdoinham Constraints.

(4) *Does the community have a mechanism, such as an open space fund or partnership with a land trust, to acquire important open spaces and access sites, either outright or through conservation easements?*

The Town has worked with area land trusts on the preservation of open spaces and access. The adoption of a formal municipal policy and mechanism might prove beneficial.

The Town does not have a dedicated open space fund to receive donations from private sources and from government grants to support the acquisition of open spaces for recreation, conservation, forestry or agricultural uses.

(5) *Does the public have access to each of the community's significant water bodies?*

There is public access to the major water bodies in Bowdoinham. However, as noted below, these points are limited.

(6) *Are recreational trails in the community adequately maintained? Are there use conflicts on these trails?*

Yes, the current trails are adequately maintained, and no conflicts have been identified. However, an accessibility study by Enoch Glidden of Community Geographics in the summer of 2023 showed that our trails are not easily accessible for everyone.

(7) *Is traditional access to private lands being restricted?*

A few property owners post their land to restrict hunting, for privacy, to reduce illegal dumping, or for other reasons.

## Housing

### Conditions & Trend

(1) *The community's Comprehensive Planning Housing Data Set prepared and provided to the community by the Maine State Housing Authority, and the Office, or their designees.*

The increase in the number of housing units has occurred at a moderately faster rate than the growth in population in Bowdoinham over the past twenty years. Population grew by 16.7% from 2000 to 2020, while housing grew by 23.4%. The vacancy rate was 7.2% in 2000 and 8.9% in 2020. Of that, 0.9% of housing was for sale in 2000 and 0.3% in 2020, indicating high demand and/or a limited supply of housing locally.

<b>Housing Units in Bowdoinham</b>						
<b>Units by Tenure</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>2020</b>	<b>Change</b>	<b>Percent Change</b>
Total Units	884	1,107	1,279	1,366	259	23.4%
Occupied	818	1,027	1,179	1,245	218	21.2%
Vacant	66	80	100	121	41	51.3%
- Vacant, for rent	4	6	9	8	2	33.3%
- Vacant, for sale only	15	10	11	4	-6	-60.0%
- Vacant, rented or sold, not occupied	2	8	7	9	1	12.5%
- For seasonal, recreational, occasional use	4	34	42	43	9	26.5%
- All other vacant	41	22	31	57	35	159.1%

Source: 2020 U.S. Census Bureau

The increase in the number of housing units has occurred at a faster rate than the growth in population for Sagadahoc County over the past thirty years. The population grew by 4.2% from 2000 to 2020 countywide, while housing grew by 14.9%. The County vacancy rate was 14.4% in 2000 and 14.8% in 2020. Of that, 0.6% of housing was for sale in 2000 and 0.7% in 2020. As a coastal county, Sagadahoc has more seasonal housing proportionally than does the Town of Bowdoinham.

<b>Housing Units in Sagadahoc County</b>						
<b>Units by Tenure</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>2020</b>	<b>Change</b>	<b>Percent Change</b>
Total Units	14,633	16,489	18,288	18,938	2,449	14.9%
Occupied	12,581	14,117	15,088	16,136	2,019	14.3%
Vacant	2,052	2,372	3,200	2,802	430	18.1%
- Vacant, for rent	273	250	478	248	-2	-0.8%
- Vacant, for sale only	129	107	275	138	31	29.0%
- Vacant, rented or sold, not occupied	50	102	110	131	29	28.4%
- For seasonal, recreational, occasional use	1,293	1,683	1,829	1,796	113	6.7%
- All other vacant	307	230	508	483	253	110.0%

Source: 2020 U.S. Census Bureau

About 82.7% of the Town's housing is comprised of single-units (single-family: attached and detached). In comparison, the County's housing stock is 77.5% single-family units, while the State's is 72.7%. It is unclear why the data notated Bowdoinham having an absence of multi-unit housing. Bowdoinham in fact does have a modest amount of multi-family housing, of about (1%) in contrast to the County's 14.5% and the State's 18.9% multi-unit housing percentages. For more information, please see the notation below about Bowdoinham Estates and Greenleaf Apartments. At 17.3%, the Town had more than twice the percentage of mobile homes as a proportion of its total housing than did the County (8%) and the State (8.3%).

<b>Estimate of Units by Structure Type 2017-2021</b>						
<b>Category</b>	<b>Bowdoinham</b>		<b>Sagadahoc County</b>		<b>Maine</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
Total Est. Units	1,328	100.0%	18,880	100.0%	737,782	100.0%
1, detached	1,069	80.5%	14,178	75.1%	518,526	70.3%
1, attached	29	2.2%	448	2.4%	17,537	2.4%
2	0	0.0%	761	4.0%	35,090	4.8%
3 or 4	0	0.0%	897	4.8%	39,904	5.4%
5 to 9	0	0.0%	612	3.2%	26,872	3.6%
10 to 19	0	0.0%	199	1.1%	11,911	1.6%
20 to 49	0	0.0%	153	0.8%	14,819	2.0%
50 or more	0	0.0%	107	0.6%	11,188	1.5%
Mobile home	230	17.3%	1,509	8.0%	61,563	8.3%
Boat, RV, van, etc.	0	0.0%	16	0.1%	372	0.1%

Source: U.S. Census Bureau, 2017-2021 American Community Survey

Notes: The total "estimate of units by structure type" does not equal the total number of units as recorded by the Census in 2020.

Two complexes of housing for the elderly and low income were built in the late 1980's and early 1990's. Bowdoinham Estates on Preble Street, off 125 close to the I-95 interchange, is an apartment complex for elderly over 62 or handicapped over 18. There are 25 one-bedroom units for rent.



Greenleaf Apartments, also on Preble Street, is a complex of 21 attached units in groups of 2-4 each. The rent is set at 30% of income, an affordable rate for all ages.

During the past decade, all of Bowdoinham’s housing permits were for single-family homes. No multi-family unit permits were issued. Permit activity was stronger in the end of the decade. Bowdoinham had about 14.1% of the permits issued in Sagadahoc County, while having about 8.3% of the County’s population.

<b>Bowdoinham Housing Unit Building Permits Issued</b>													
<b>Housing Type</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Sum</b>	<b>Yearly Avg</b>
Units in Single-Family Structures	10	6	4	13	13	9	20	19	19	19	20	152	13.8
Units in All Multi-Family Structures	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Units</b>	<b>10</b>	<b>6</b>	<b>4</b>	<b>13</b>	<b>13</b>	<b>9</b>	<b>20</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>20</b>	<b>152</b>	<b>13.8</b>

Source: Housing unit Building Permits for: Bowdoinham Town, ME.

SOGDS Building Permit Database: <https://socds.huduser.gov/permits/>

Like Bowdoinham, there was more building permit activity countywide in the end of the decade than at the beginning or the middle. At the County level, about 3.7% of all permits were for multi-family structures.

<b>Sagadahoc County Housing Unit Building Permits Issued</b>													
<b>Housing Type</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Sum</b>	<b>Yearly Avg</b>
Units in Single-Family Structures	102	60	67	83	97	77	110	122	100	105	113	1,036	94.18
Units in All Multi-Family Structures	0	0	0	0	0	0	16	2	12	0	10	40	3.63
<b>Total Units</b>	<b>12</b>	<b>60</b>	<b>67</b>	<b>83</b>	<b>97</b>	<b>77</b>	<b>126</b>	<b>124</b>	<b>112</b>	<b>105</b>	<b>123</b>	<b>1,076</b>	<b>97.81</b>

Source: Housing Unit Building Permits for: Bowdoinham Town, ME.

SOGDS Building Permit Database: <https://socds.huduser.gov/permits/>

There is no data regarding housing units in Sagadahoc County since 2019. The State exhibits a notably low rate of housing construction, with only 804 new houses built since 2019, and its median year built stands at 1975.

<b>Housing Units by Year Built</b>			
<b>Age of Housing Unit</b>	<b>Bowdoinham</b>	<b>Sagadahoc County</b>	<b>Maine</b>
Total	1,328	18,880	737,782
Built 2010 to 2019	106	1,158	39,590
Built 2000 to 2009	105	2,178	91,908
Built 1990 to 1999	270	2,462	86,701
Built 1980 to 1989	306	2,701	104,083
Built 1970 to 1979	238	2,350	101,516
Built 1960 to 1969	53	912	51,715
Built 1950 to 1959	19	1,098	52,345
Built 1940 to 1949	11	934	34,332
Built 1939 or earlier	220	5,084	174,788
Median Year Built	1984	1976	1975

Source: U.S. Census Bureau, 2017-2021 American Community Survey

About 90.5% of occupied housing in Bowdoinham was owner occupied in 2021, as compared with 76.7% in Sagadahoc County and 73.4% for the state. As a portion of total occupied housing, there is less renter occupied housing at the local level than at the County level or statewide. About 16.5% of owner-occupied housing in Bowdoinham was built before 1989. For the County that figure was 19.5% and for the State that figure was 19.8%. After 2019, Bowdoinham does not have any data on owner-occupied or renter-occupied units.

<b>Occupied Housing Units by Year Householder Moved into Unit</b>			
<b>Age of Housing Unit</b>	<b>Bowdoinham</b>	<b>Sagadahoc County</b>	<b>Maine</b>
Total Occupied	1,196	15,879	571,064
Owner occupied Total	1,082	12,184	419,024
Moved in 2019	0	484	23,047
Moved in 2015 to 2018	213	2,480	76,013
Moved in 2010 to 2014	159	1,800	61,358
Moved in 2000 to 2009	441	3,397	108,299
Moved in 1990 to 1999	90	1,648	67,319
Moved in 1989 or earlier	179	2,375	82,988
Renter occupied Total	114	3,695	152,040
Moved in 2019 or later	0	747	24,928
Moved in 2015 to 2018	43	1,695	68,496
Moved in 2010 to 2014	29	643	31,594
Moved in 2000 to 2009	0	479	17,813
Moved in 1990 to 1999	42	86	4,984
Moved in 1989 or earlier	0	45	4,225
Median Year Householder Moved into Unit	2007	2010	2,010

Source: U.S. Census Bureau, 2017-2021 American Community Survey

In 2010, the median income earner in Bowdoinham could afford about 83% of the median home sale price in the Town. Despite an overall increase in incomes, the town experienced a decrease in housing affordability since 2016. Notably, the most affordable year for home purchases was 2012, with a median home sale price of \$128,500. Fast forward to 2020, and the median home sale price surged to \$310,000, necessitating an income of \$85,561 to afford it, a 115% increase compared to the median income. The next table also shows the income needed to afford recent home sale prices, and home prices that are affordable for recent income figures. Home sale prices are for units sold through multiple-listing services. These sales do not include homes and lands sold directly by the owner without the use of a real estate agent, which tend to fetch lower prices and are often sold or given to relatives.

<b>Housing Affordability in Bowdoinham</b>					
<b>Year</b>	<b>Affordability Index</b>	<b>Median Home Sale Price</b>	<b>Median Income</b>	<b>Income Needed to afford Home Price</b>	<b>Home Price Affordable to Median Income</b>
2020	0.87	\$310,000	\$74,309	\$85,561	\$269,232
2019	0.99	\$224,000	\$65,990	\$66,357	\$222,761
2018	0.88	\$221,500	\$59,931	\$67,733	\$195,985
2017	0.92	\$209,500	\$56,583	\$61,348	\$193,229
2016	1.1	\$190,000	\$60,537	\$55,107	\$208,722
2015	1.15	\$196,000	\$64,080	\$55,731	\$225,364
2014	1.39	\$162,000	\$64,098	\$46,075	\$225,370
2013	1.3	\$160,000	\$60,484	\$46,468	\$208,262
2012	1.52	\$128,500	\$58,032	\$38,226	\$195,079
2011	1.06	\$180,000	\$57,689	\$54,520	\$190,462
2010	0.83	\$205,000	\$58,838	\$70,895	\$170,136

Source: Maine State Housing Authority.

Notes: The affordability index is the ratio of Home Price Affordable at Median Income to Median Home Price. An index of less than 1 means the area is generally unaffordable – i.e., a household earning area median income could not cover the payment on a median priced home (30 year mortgage, taxes and insurance) using no more than 28% of gross income.

Despite having a higher median income, Bowdoinham exhibits a lower affordability index compared to both the County and the State. This is due to a greater variety of housing stock found outside of the Town, including more multi-family housing units, which are often less expensive than single-family detached housing units.

<b>Housing Affordability in 2020</b>					
<b>Area</b>	<b>Affordability Index</b>	<b>Median Income</b>	<b>Median Home Sale Price</b>	<b>Income Needed to afford Home Price</b>	<b>Home Price Affordable to Median Income</b>
Bowdoinham	0.87	\$74,309	\$310,000	\$85,561	\$269,232
Sagadahoc County	0.94	\$68,406	\$271,000	\$72,716	\$254,936
Maine	0.91	\$63,340	\$255,000	\$69,691	\$231,762

Source: Maine State Housing Authority

Notes: The affordability index is the ratio of Home Price Affordable at Median Income to Median Home Price. An index of less than 1 means the area is generally unaffordable – i.e., a household earning area median income could not cover the payment on a median priced home (30-year mortgage, taxes and insurance) using no more than 28% of gross income. The Brunswick LMA includes Brunswick, Harpswell, Dresden, Westport, Wiscasset, Arrowsic, Bath, Bowdoin, Bowdoinham, Georgetown, Perkins UT, Phippsburg, Richmond, Topsham, West Bath, and Woolwich.

Over half of the households in their community are unable to meet the financial requirements to purchase a housing unit at the existing sale prices.

<b>Households Unable to Afford Median Home Sale Price in 2020</b>			
<b>Area</b>	<b>Percent of Households that can't afford</b>	<b>Number of Households that can't afford</b>	<b>Total Households</b>
Bowdoinham	59.4%	698	1,218
Sagadahoc County	58.1%	8,277	15,658
Maine	56.4%	317,492	572,586

Source: Maine State Housing Authority

Due to the limited number of rental units in Bowdoinham, local data is not available on affordability from the Maine State Housing Authority. Consequently, data from Brunswick is presented instead. Similar to the table above, over half of the renter households cannot afford the average 2-bedroom rent at the existing sale prices in the County and the State.

<b>Renter Households That Can't Afford the Average 2-Bedroom Rent 2020</b>			
<b>Area</b>	<b>Percent of Households Unable to Afford Avg. 2BR Rent</b>	<b>Number of Households Unable to Afford Avg 2BR Rent</b>	<b>Average 2 BR Rent (with Utilities)</b>
Brunswick Micropolitan Housing Market/LMA	50.3%	3,878	\$1,011
Sagadahoc County	52.8%	2,024	\$1,011
Maine	57.2%	93,292	\$1,062

Source: Maine State Housing Authority

Notes: Bowdoinham rental figures are not available.

From 2018 to 2022, 114 families participated in the First Time Home Program in Bowdoinham receiving financial assistance from the Maine State Housing Authority.

<b>Maine Housing First Home Program Participation in Bowdoinham</b>						
<b>Year</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>Totals</b>
Number of Loans	31	25	28	12	18	114

Source: Maine State Housing Authority

In Bowdoinham, 40.5% of homeowner households earned more than 80% of Median Household Income. About 22% of homeowner households earned more than 50% but less than 80% of the Median Household Income. About 14.6% of Bowdoinham homeowners earned more than 30% to 50% of the Median Household Income. For the County as a whole, those figures were 37.7%, 20.3% and 10.4% respectively.

<b>Homeowner Households by Income in 2020</b>					
<b>Area</b>	<b>Total Homeowner Households</b>	<b>&gt;80% Median Household Income</b>	<b>&gt;50% to 80% Median Household Income</b>	<b>&gt;30% to 50% Median Household Income</b>	<b>Average Household Size</b>
Bowdoinham	1,085	439	239	158	2.45
Sagadahoc County	11,980	4,519	2,431	1,250	2.25

Source: Maine State Housing Authority

Due to the limited number of rental units in Bowdoinham, data from the Maine State Housing Authority is not available on renter income at the Town level, 38.8% of renter households earned more than 80% of Median Household Income. About 21.6% of renter households earned more than 50% but less than 80% of the Median Household Income. About 11% of renter households earned more than 30% to 50% of the Median Household Income.

<b>Renter Households by Income in 2020</b>					
<b>Area</b>	<b>Total Renter Households</b>	<b>&gt;80% Median Household Income</b>	<b>&gt;50% to 80% Median Household Income</b>	<b>&gt;30% to 50% Median Household Income</b>	<b>Average Household Size</b>
Bowdoinham	142	N/A	N/A	N/A	2.45
Sagadahoc County	3,830	1,487	828	422	2.25

Source: Maine State Housing Authority

- (2) *Information on existing local and regional affordable/workforce housing coalitions or similar efforts.*

The Midcoast Council of Governments began convening the Five Rivers Affordable Housing Working Group in the winter of 2023. Stakeholders include public and private stakeholders in the Sagadahoc County, Harpswell and Brunswick. The goal of the working

group is to align existing housing assessments and agreements, work to consolidate zoning approaches, inform the development of common housing models, and facilitate collaboration on regionally focused housing projects.

In October of 2022 the Bowdoinham Community Development Initiative and the Bowdoinham Comprehensive Planning Committee cohosted a housing forum to review housing data, affordable housing options, local regulations regarding housing, and to discuss housing needs. The conversations and efforts to make progress on creating more affordable housing continues through the Comprehensive Planning Committee's Housing Subcommittee which meets monthly.

The Maine Affordable Housing Coalition based in Portland is a diverse coalition of private and public sector organizations, including developers, architects, engineers, builders, investors, Community Action agencies, public housing authorities, housing and service providers, advocates and others committed to ensuring that all Mainers are adequately and affordably housed. The group was formed initially as the Southern Maine Affordable Rental Housing Coalition in 2000, but since that time, has extended its membership and activities to other areas of the State including Sagadahoc County.

The United Way of Mid-Coast Maine based in Bath administers the Emergency Home Heating Assistance and Emergency Food and Shelter Program in the region.

The Greater Brunswick Housing Corporation was created in 1998 to increase the supply of affordable housing in the region. The specific purposes of the corporation are to own, lease, organize, develop, construct, financially assist, manage and operate, on a non-profit basis, projects or programs providing low- income rentals or homeownership opportunities to elderly, handicapped and/or families.

The Bath Housing Authority is a non-profit agency concerned with providing Bath area residents with safe, attractive, efficient, and affordable housing in the City of Bath. *A summary of local regulations that affect the development of affordable/workforce housing.*

One- and two-family residential units are allowed town-wide excluding the Commercial Fisheries and Maritime District. Multi-unit residential is allowed in most of Bowdoinham (General District: Residential/Agricultural District, all areas outside of the shoreland zoning districts, and in the Limited Residential and Limited Commercial shoreland zoning districts).

Outside of the shoreland zoning districts, the minimum lot size in the Residential/Agricultural District is one acre and the maximum residential density is one unit per acre for development on individual lots and one acre, net residential density, in subdivisions. The one- acre standard was set due to the lack of sewer in Bowdoinham, which inhibits the development of multi-unit housing.

Affordable housing tends to be located on lots smaller than one acre, and/or as part of multi-unit development with connections to sewer or community wastewater systems. The Land Use Ordinance allows for higher density for housing units that would be connected to sewer, should it become available, or to community wastewater systems, or for units designated as affordable based upon State or federal criteria. In Village District I and II, the minimum lot size is 10,000

square feet for subdivisions with community subsurface wastewater systems with a maximum residential density of two dwelling units per acre. Further, in 2023 the Land Use Ordinance was amended to allow for an additional accessory dwelling unit of up to 1,600 square feet which is exempt from any density or lot area requirements in all districts.

Additionally, manufactured housing (mobile homes and mobile home parks) are allowed town-wide excluding certain shoreland districts. As noted above, Bowdoinham has a relatively low proportion of multi-units and a high proportion of mobile homes as compared to the County and State.

### Analysis

- (1) *How many additional housing units (if any), including rental units, will be necessary to accommodate projected population and demographic changes during the planning period?*

Based upon observed trends, the 2035 population of the Town is forecast to total a maximum of 3,176 persons, up by 129 from 2020. See the Population Chapter for more information. At the current average household size of 2.54 persons, that would require an additional about 51 housing units by 2035. However, an analysis by the Midcoast Council of Governments projects this growth to be significantly higher, possibly up to 13%. If that growth is actualized, along with the trend in increased average household size projected to be around 2.65 persons, the Town could be looking to support an additional 396 people requiring 149 more housing units. Given the actual amount of housing growth seen from 2010 to 2019 (106 units), it may be possible that the additional units to be built over the next planning period may fall short.

Rental housing in the form of multi-family units comprised very little of the Town housing stock. Without sewer or community wastewater systems, multi-unit housing is unlikely to increase significantly. However, changes to allow more density in the Village Districts and allowance for an additional accessory dwelling unit could spur rental housing development.

- (2) *Is housing, including rental housing, affordable to those earning the median income in the region? Is housing affordable to those earning 80% of the median income? If not, review local and regional efforts to address issue.*

In 2020, the median income household in Bowdoinham (\$74,309) could afford about 86.8% (\$269,332) of the median home sale price in the Town (\$310,000). The affordability figure was notably better for Sagadahoc County (94%). Of course, for those earning less than the median income, housing is even less affordable. About 646 Bowdoinham homeowner households earned 80% or less of the median household income, as estimated in 2020. Rental household figures were not available at the Town level. Housing affordability, as based upon the standard definition of not spending more than 30% of one's income on housing, concerns middle and low-income earners in Bowdoinham as it does residents statewide.

Mobile homes comprise about 17.3% of Bowdoinham's housing stock and provide the majority of affordable housing, as there are few multi-units in the Town. The Land Use Ordinance allows mobile homes in most parts of the community, except for certain shoreland zoning districts.

Since 2000, the Town has not facilitated any affordable housing. See the Conditions and Trends

section for a description of regional affordable housing efforts.

- (3) *Are seasonal homes being converted to year-round use or vice-versa? What impact does this have on the community?*

Bowdoinham has few seasonal units (43 in 2020). The Code Enforcement Office reports that since 2010 there have been few conversions of seasonal units to year-round. While the Town does not actively monitor occupancy, there has been no appreciable impact on the community from conversions.

- (4) *Will additional low and moderate income family, senior, or assisted living housing be necessary to meet projected needs for the community? Will these needs be met locally or regionally?*

As noted in the Population Chapter, much of the forecasted population increase in Bowdoinham will be in the older age groups. The demand for housing to accommodate the needs of the elderly will increase. Expansion of existing subsidized facilities (Bowdoinham Estates and Greenleaf Apartments) in Bowdoinham for low-income persons and the elderly, or the construction of new similar facilities including assisted living would be needed to meet future local demand. A wider variety of elderly housing options are found nearby in the larger communities of Bath and Brunswick, which benefit from a range of complementary services and medical facilities that Bowdoinham lacks. It is likely that service center communities will continue to provide the majority of subsidized units, with a smaller, but growing portion provided locally.

- (5) *Are there other major housing issues in the community, such as substandard housing?*

The CEO does occasionally respond to substandard housing issues a few times a year with reports concerning wastewater disposal and internal plumbing issues. In addition, the local health inspector has been called to respond less frequently to substandard housing conditions.

- (6) *How do existing local regulations encourage or discourage the development of affordable/workforce housing?*

Affordable housing tends to be located on lots smaller than one acre, and/or as part of multi-unit development with connections to sewer or community wastewater systems. The Land Use Ordinance allows for higher density for housing units that would be connected to sewer, should it become available, or to community wastewater systems, or for units designated as affordable based upon State or federal criteria. In Village District I and II, the minimum lot size is 10,000 square feet for subdivisions with community subsurface wastewater systems with a maximum residential density of two dwelling units per acre. Further, in 2023 the Land Use Ordinance was amended to allow for an additional accessory dwelling unit of up to 1,600 square feet which is exempt from any density or lot area requirements in all districts.

Additionally, manufactured housing (mobile homes and mobile home parks) are allowed town-wide excluding certain shoreland districts. As noted above, Bowdoinham has a relatively low proportion of multi-units and a high proportion of mobile homes as compared to the County and State.



## Transportation

### Conditions & Trend

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

See the map titled Bowdoinham Traffic Volume Counts for factored annual average daily traffic volumes, noted as (AADT) at key points on roadways in 2019. Maine DOT estimated these figures, which are based upon actual traffic counts. I-295 had the highest estimated volume 12,620 (southbound) and 12,610 (northbound) south of the Route 125 entrance and exit ramps. Main Street at the intersection of Route 125 (at the center of town) had a count of 1,870. Route 24 had an estimated 1,730 vehicles daily near the Topsham town line, while Route 24 at the Richmond town line had 740 trips in 2017.

The next table shows traffic volumes as recorded by Maine DOT for select roadways within Bowdoinham.

Location	1990	2000	2007	2009	2010	2017	2019
I-295 (NB) N/O Off Ramp To SR 125/138	7,800	9,840		10,940	11,340		13,570
I-295 (NB) S/O Off Ramp To SR 125/138	8,270	11,840		12,100	12,610		14,560
I-295 (SB) S/O Off Ramp To SR 125/138	7,810	10,340		11,340	11,360		14,230
I-295 (SB) S/O On Ramp From SR 125/138	8,320	12,180		12,400	12,620		14,750
Dingley Rd S/O IR 1143						20	
Browns Pt Rd E/O SR 24 (S JCT)		660	500			540	
Pork Point Rd S/O SR 24 (N JCT)		130					
Ridge Rd NE/O Cemetery Rd			400			480	
White Rd N/O SR 24 (River Rd)		700	700			580	
Center St SE/O SR 138 (Post Rd)			720				
Millay Rd NW/O SR 138 (Post Rd)		380	460				
Fisher Rd SW/O SR 125 (Main St)		660	750			640	
S Pleasant St NW/O SR 24 (River Rd)			210			240	
SR 125 (Main St) NW/O SR 24 (River Rd)			2,150			1,870	
SR 125 (Main St) SE/O SR 138 (Post Rd)		2,120	2,010				
SR 125 (Pond Rd) N/O SR 138			1,870		1,770	1,700	
SR 125/138 (Main St) E/O I-95 Ramps			3,370			3,010	
SR 125/138 (Main St) E/O SR 125 (Pond Rd)			2,780		2,590		
SR 138 (Post Rd) NE/O Millay Rd	660	1,050	910				
SR 138 (Post Rd) NE/O SR 125 (Main St)			1,240			1,100	
SR 138 W/O SR 125							
SR 24 (River Rd) at Richmond TL	590	730	750			740	
SR 24 (River Rd) E/O SR 125 (Main St)		3,400	2,740			2,510	
SR 24 (River Rd) SW/O SR 125 (Main St)			1,660			1,780	
SR 24 (River) SW/O S Pleasant St	720	840	730			750	
SR 24 NE/O Browns Pt Rd (S JCT)	1,160	1,950				1,560	
SR 24 NE/O Pork Point Rd (N JCT)		920	810				
SR 24 SW/O Pork Point Rd (N JCT)		850	760			690	
SR 24(River Rd) NW/O Wallentine Rd		2,040					
SR 24 (River Rd) S/O Wallentine Rd	1,630		1,660			1,730	
SR 24 (River) SW/O Browns Pt Rd (S JCT)		2,540	2,170				

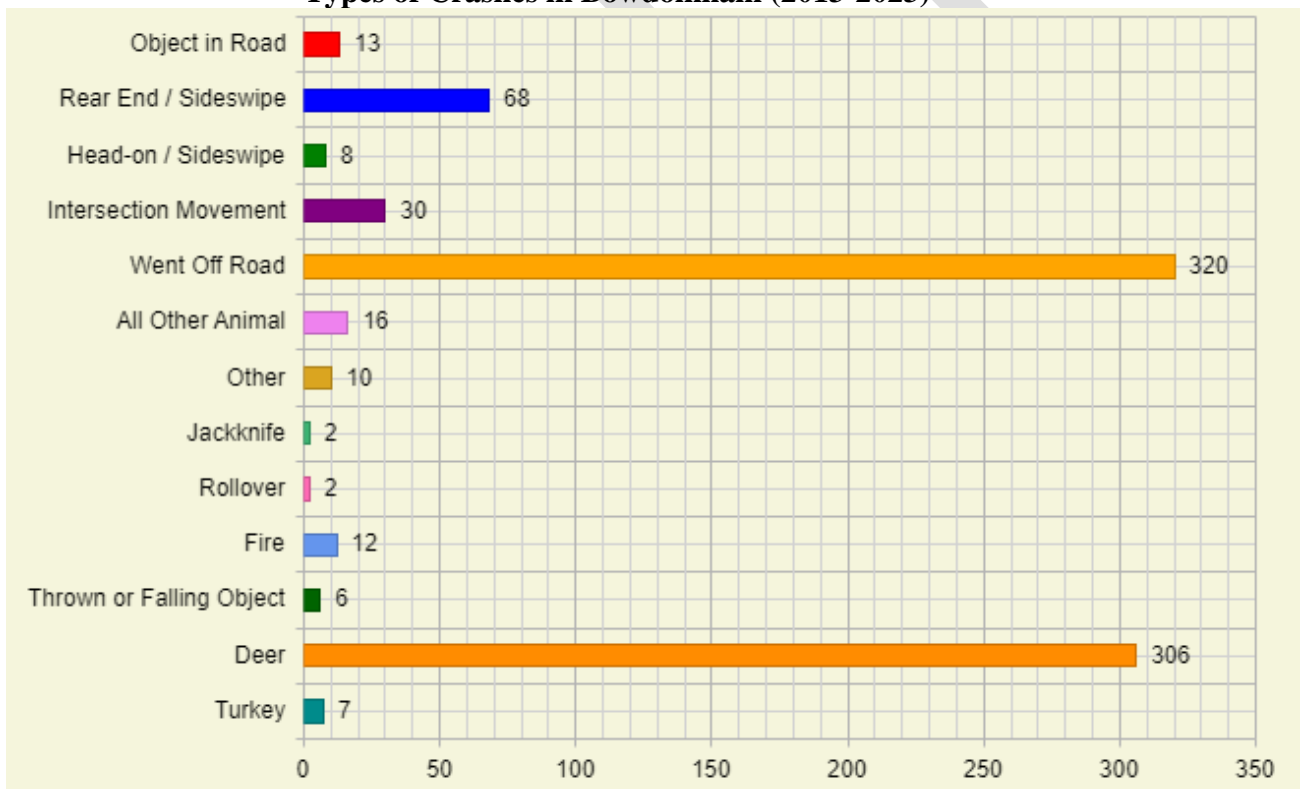
Source: Maine DOT

Note: SR = State Route, NE/O = northeast of, NW/O = northwest of, and so forth.

Level of service (LOS) is a measure of congestion shown on the map titled LOS Map. Route 24, Interstate 295, Maily Road, and most of Route 25 in Bowdoinham are LOS A with congestion and road/bridge postings being the major factors. Portions of Routes 125, all of Route 138 and White Road and are LOS C with the major factors being road posting. These ratings indicate that roadways within Bowdoinham have not reached their maximum capacities and that delays in which the travel speed is lower than the posted speed are infrequent. LOS D is usually considered an indication of the maximum acceptable volume/capacity if current posted speeds and travel lane configurations are to be maintained.

Maine DOT records of crash locations and have identified the segment of Rt. 24 from the Topsham Line north to its intersection with Wallentine Rd. and between the intersection of Pork Point Rd. and River Rd. and the intersection of River Rd. and Pleasant St. Most crashes in Bowdoinham were the result of vehicles running off the road. See the bar graph below. Other principal causes included crashes with deer, sideswipes with other vehicles and with objects in the road.

**Types of Crashes in Bowdoinham (2013-2023)**



Source: Maine DOT

The majority of Bowdoinham residents who commute to work drive alone. About 7.3% carpooled and 0.7% used public transportation. For the county, those figures were 6.6% and 0.2% respectively. It should be noted that because of the Covid-19 pandemic working from home jumped from 52 individuals in 2009 to 139 in Bowdoinham, an increase of 167%. County and state figures also increased 110% and 118%, respectively.

<b>Commuting Characteristics of Bowdoinham 2021</b>	
Workers	1,474
<b>MEANS OF TRANSPORTATION TO WORK</b>	
Car, truck, or van	
Drove alone	82.6%
Carpooled	7.3%
Public transportation (excluding taxicab)	0.7%
Worked from home	9.4%

Source: U.S. Census 2021 Commuting Characteristics

<b>Transportation - Means of Travel to Work, 2021</b>			
<b>Method</b>	<b>Bowdoinham</b>	<b>Sagadahoc County</b>	<b>Maine</b>
Number of Workers	1,474	18,330	667,845
Car, truck, or van – Drove alone	1,218	14,453	501,398
Car, truck, or van – Carpooled	107	1,204	59,799
Public transportation	10	48	3,285
Motorcycle, Bicycle, Taxi, or other	0	251	8,800
Worked at home	139	1,795	69,896

Source: Census, American Community Survey

About 61% of Bowdoinham residents who commuted took on average 20-34 minutes to travel (one-way). For the county, 31.5% took that same amount of time, while 31.6% did statewide.

<b>Commuting Characteristics of Bowdoinham 2021</b>	
Workers over 16 who did not work at home	1,335
Less than 5 minutes	0.0%
5 to 9 minutes	2.2%
10 to 14 minutes	0.9%
15 to 19 minutes	10.7%
20 to 24 minutes	39.6%
25 to 29 minutes	7.9%
30 to 34 minutes	13.3%
40 to 44 minutes	1.9%
45 to 59 minutes	5.2%
60 to 89 minutes	2.9%
90 or more minutes	13.4%

Source: U.S. Census 2021 Commuting Characteristics

<b>Transportation - Travel Time to Work, 2021</b>			
<b>Travel Time</b>	<b>Bowdoinham</b>	<b>Sagadahoc County</b>	<b>Maine</b>
Workers over 16 who did not work at home	1,335	16,535	597,949
Less than 5 minutes	0	649	28,501
5 to 9 minutes	29	2,104	75,845
10 to 14 minutes	12	2,620	89,506
15 to 19 minutes	143	2,577	87,775
20 to 24 minutes	528	2,379	80,762
25 to 29 minutes	106	971	40,212
30 to 34 minutes	178	1,865	68,310
35 to 39 minutes	26	448	20,765
40 to 44 minutes	25	597	21,763
45 to 59 minutes	70	1,454	45,129
60 to 89 minutes	39	492	26,255
90 or more minutes	179	379	13,126

Source: U.S. Census 2021 Commuting Characteristics

- (2) *Location and overall condition of roads, bridges, sidewalks, and bicycle facilities, including any identified deficiencies or concerns.*

The Bowdoinham Federal Functional Classification of Roads map shows the locations of roads and the Bowdoinham Bridges and Culverts map shows the bridges and culverts. According to Maine DOT, Bowdoinham has 60.78 miles of public roads, of which 7.39 miles are interstate (I-295), 7.74 miles are State highway, 15.79 miles are State Aid highway, and 29.86 miles are Town roads.

Public roads are vitally important as they allow residents to commute to work, school, stores, and around Bowdoinham. The overall condition (poor, fair, or good) of each roadway as judged by the Town is noted in the next table.

<b>Bowdoinham Public Roadway Inventory</b>				
<b>Roadway Name</b>	<b>Owner</b>	<b>Length (mi)</b>	<b>Surface</b>	<b>Overall Condition</b>
Abagadasset Rd	Town	1.00	paved	good
Backhill Rd	Town	0.10	paved	good
Batchelder Dr	Town	0.14	gravel	fair
Blanchard Rd	Town	0.60	gravel	fair
Browns Point Rd (dirt 0.63 mi)	Town	2.63	paved/gravel	Good/(fair)
Carding Machine Rd (1.4 mi)	Town	3.81	paved/gravel	Good/(poor)
Carlson Cross	Town	0.33	gravel	fair
Cemetery St	Town	0.40	paved	good
Center St	Town	0.40	paved	good
Center's Point Rd	Town	0.76	gravel	Fair
Church St	Town	0.05	paved	good
Curtis Farm Rd	Town	0.10	gravel	fair
Dingley Rd (0.4 gravel)	Town	1.80	gravel	good/(fair)

<b>Bowdoinham Public Roadway Inventory (cont'd)</b>				
<b>Roadway Name</b>	<b>Owner</b>	<b>Length (mi)</b>	<b>Surface</b>	<b>Overall Condition</b>
Dinsmore Cross Rd	Town	0.30	paved	good
Fisher Rd	Town	1.82	paved	fair
Hornbeck Cross Rd	Town	0.15	gravel	fair
I-295	State	7.39	paved	good
Lucas Ln	Town	0.12	paved	good
Main St Ext	Town	0.10	paved	good
Mallard Ln	Town	0.10	gravel	fair
Millay Rd	Town	3.00	paved	fair
Pioneer Rd	Town	0.10	gravel	fair
Pork Point Rd	Town	2.32	paved	good
Pratt Rd	Town	0.78	gravel	good
Preble Rd	Town	0.40	paved	good
Ridge Rd (2 mi)	Town	6.00	paved	good/(fair)
State Route 125 – Pond Rd portion	State	0.71	paved	good
State Route 125- Main St portion	State	1.40	paved	good
State Route 138 – Post Rd portion	State	7.90	paved	good
State Route 24 – Bay Rd portion	State	2.50	paved	good
State Route 24 – River Rd portion	State	7.90	paved	good
S Pleasant St	Town	0.76	paved	poor
School St	Town	0.10	paved	good
Spear Dr	Town	0.18	paved	good
Spring St	Town	0.10	paved	good
Stevens Rd	State	0.15	gravel	unkn
U.S. Route 201 – Augusta Rd/ Brunswick Rd	State	unkn	paved	poor
Vine St	Town	0.07	gravel	good
Wallentine Rd	Town	0.38	gravel	fair
White Rd	State	3.98	paved	fair
Wildes Rd	Town	0.82	paved	good

Sources: Maine DOT and Town

Note: These road names may differ from local sources.

The next table shows bridge ownership, length, year built, most recent inspection date and federal sufficiency rating (overall condition) as assessed by Maine DOT. The Abagadasset Bridge, located on Route 24 was identified for improvement in 2014-2015.

Bowdoinham Bridge Inventory							
Bridge Name	Location	Owner	Year Built	MDOT ID #	Length (feet)	Inspection Date	Sufficiency Rating
Abagadasset	Route 24	State	1936	5493	75	07/09/2019	50
Brooklyn	Route 24	State	1953	5190	156	09/18/2019	47
Card Machine	Carding Machine Rd	Town	1920	0977	18	10/29/2018	78
Carr	Route 138	State	1918	3990	33	10/25/2019	72
Creek	Route 24	State	2006	5397	11	07/25/2019	96
I-295 NB / Rte 125 & 138	I-295 NB	State	1976	6311	93	05/20/2020	94
I-295 SB / Rte 125 & 138	I-295 SB	State	1976	1552	93	05/20/2020	94
I-95 NB / Curtis Farm Rd	I 95 NB	Town	1975	6334	19	07/03/2019	92
I-95 SB / Curtis Farm Rd	I 95 SB	Town	1975	1538	16	04/10/2019	88
I-95 SB / Sedgely Bk	I 95 SB	State	1974	1537	23	07/03/2019	92
I-95NB / Sedgely Bk	I 95 NB	State	1974	6333	22	08/06/2019	92
Leavitt	Ridge Rd	State	2000	3632	13	04/05/2018	97
Lower Abagadasset	Browns Point Rd	State	1949	3432	94	05/26/2020	25
Mallon Brook	Dingley Rd (North)	Town	1991	6366	20	11/20/2019	41
Millay Road / I-295 NB	Millay Rd	State	1976	6312	146	04/04/2019	96
Millay Road / I-295 SB	Millay Rd	State	1976	1553	146	04/04/2019	96
Randall	Route 138	State	1939	3991	33	07/30/2019	69
Route 138 / I-295	Route 138	State	1976	6313	288	07/09/2019	82
Stone	Ridge Rd	State	1955	5469	19	06/06/2018	84
Two Bridges East	Route 24	State	1934	2974	25	07/09/2019	64
Two Bridges West	Route 24	State	1934	0972	30	07/16/2020	61
Upper Abagadasset	Batchelder Rd.	Town	2009	1685	24	10/31/2018	72

Source: Maine DOT

Notes: NB = northbound, SB = southbound

- (3) *Identify potential on and off-road connections that would provide bicycle and pedestrian connections to neighborhoods, schools, waterfronts, and other activity centers.*

The Town has created a Walkable Village Plan and Transportation Vision Statement which addresses these connections. The Merrymeeting Trail would also provide off-road connections as well if created.

- (4) *Identify major traffic (including pedestrian) generators, such as schools, large businesses, public gathering areas/activities, etc. and related hours of their operations.*

The next two tables list major traffic generators and events that can draw considerable traffic to Bowdoinham.

Major Traffic Generators	Location	Hours of Operation
Bowdoinham Community School	23 Cemetery Rd	School year: 8 a.m. & 3 p.m.

Source: Town

<b>Major Events/Activities</b>	<b>Location</b>	<b>Dates</b>
Farmers' Market	Philip Maily Waterfront Park	Saturday mornings June - October
Summer Concert Series	Philip Maily Waterfront Park	Sunday evenings during the summer months
Open Farm & Studio Day	Town Wide	Fourth Sunday in July
Tour de Bowdoinham Bike Ride	Philip Maily Waterfront Park	Third Saturday in August
Celebrate Bowdoinham	Philip Maily Waterfront Park	Mid September
Holiday Festival	Village	Early December
Berry Picking	Browns Point Rd.	Summer
Merrymeeting Hall Activities	Main Street	Year round
Recreation Fields	Ridge Rd.	Year round

Source: Town

- (5) *Identify policies and standards for the design, construction, and maintenance of public and private roads.*

The Town is concerned that all roadways and bridges be well engineered and built to last so that potential damage will be minimized from flooding and adverse weather and vehicular use. Substandard design or construction will result in higher costs to taxpayers and/or subdivision associations for repair and remediation. Road damage from flooding, adverse weather conditions and from use, especially heavy trucking activity, requires that roads be built to appropriate standards, including sufficient sub-bases, drainage systems and grading. While this may result in higher development costs upfront, in the long-term it will reduce costs for the taxpayers, residents, and business owners, all of whom depend on the road network.

The Land Use Ordinance has road design provisions. The purposes of these provisions are to provide for safe access to and from public and private roads. See the responses in the Analyses section, questions 13 and 14 for examples of these provisions as well as the Ordinance itself for specific standards.

- (6) *List and locate municipal parking areas including capacity, and usage.*

Municipal parking lots are shown in the next table.

<b>Municipal Parking Lots</b>			
<b>Name and Location</b>	<b>Spaces</b>	<b>Overall Condition</b>	<b>Usage</b>
Town Office, 13 School St	20	fair	daily
Town Landing, Route 24	29	good	summer

Source: Town

There is one commuter Park-and-Ride lot in Bowdoinham, located off I-295 at Exit 37. This lot has 24 parking spaces, and is served by GO MAINE, a statewide commuter service.



(7) *Identify airports within or adjacent to the community and describe applicable airport zoning and airspace protection ordinances your community has in place.*

The Merrymeeting Field Airport is privately owned and located approximately one mile southeast of the village, with a runway of 1,935 feet. There are no published instrument procedures for this airport. It is open to the public and averaged 42 aircraft operations per month in 2023, of which 80% were local general aviation and 20% were transient general aviation.

Some land around the airport is conserved (Wallentine Parcel). The Land Use Ordinance does not include specific protections for the airport, like limitations on incompatible uses around the airfield. The general performance standards in site plan review limit building height to 40 feet, with lower maximum heights for storage facilities and for buildings in certain shoreland zones. There is no height limit for telecommunications and related towers but the provisions state, “The tower should be located so that the distance it is setback from the property line is equal to or greater than its height.”

The closest airports to Bowdoinham with instrument procedures:

- Brunswick Executive Airport (7 nm S)
- Wiscasset Airport (8 nm E)
- Auburn/Lewiston Municipal Airport (17 nm W)
- Augusta State Airport (20 nm N)

(8) *Identify bus or van services.*

Midcoast Connector is the State of Maine designated Regional Transportation Provider operating transportation services for residents of Knox, Lincoln, and Sagadahoc Counties and the Towns of Brunswick and Harpswell. Their public transportation program provides flex route and demand response services throughout the region as well as the DASH city route services in Belfast and Rockland. Fares depend on service and distance travelled. In addition to general public transportation services and MaineCare non-emergency transportation, their transportation support program provides specialized and discounted services for the elderly, individuals traveling to dialysis services, cancer care services and individuals with disabilities. Reduced fares are available for seniors, children under 17, and people with disabilities for DASH bus services and seniors traveling to medical appointments. Mid-Coast Connector & Mid-Coast Public Transportation are operated by non-profit Waldo Community Action Partners. Within Brunswick Western Maine Transit operates the Brunswick Explorer, a deviated fixed route transit system that operates Monday through Friday from 6:45 a.m. to 6:30 p.m. with an additional morning and evening commuter express.

Age Friendly Bowdoinham members advocated for the Rides in Neighbors Cars program which began offering rides to residents aged 60 and older or who have a disability. There are no charges for rides as this is a volunteer-based program.

Concord Coach (Trailways) offers daily service on their Maine Coastal Route between Orono and Boston’s Logan Airport. Stops include Orono, Bangor, Searsport, Belfast, Lincolnville, Camden/Rockport, Rockland, Waldoboro, Damariscotta, Wiscasset, Bath, Bowdoin College, Brunswick, and Portland.

- (9) *Identify existing and proposed marine and rail terminals within your community including potential expansions.*

There are no existing or proposed marine or rail terminals within Bowdoinham.

The railroad line from Brunswick to Waterville runs through Bowdoinham. It is owned by the State of Maine and is currently unused. Ideas for possible future use of the rail line include restoring passenger service and creating a recreational multi-use trail from Topsham to Augusta along the rail corridor. See the Recreation Chapter for more information.

- (10) *If coastal communities identify public ferry service and private boat transportation support facilities (may be covered under Marine Resources with cross reference) including related water-side (docks/piers/wharves) and land-side (parking) facilities.*

There are no public ferries serving Bowdoinham waterways. Private ferry services or water taxis are not available.

### Analysis

- (1) *What are the transportation system concerns in the community and region? What, if any, plans exist to address these concerns?*

The Town is concerned with maintaining and improving the condition of its roadways because they provide the primary source of transportation for Bowdoinham residents. Poor road conditions reduce safety and impede the local economy upon which citizens depend. To address this concern the Town continues to implement and update its Road Maintenance Plan.

Maine DOT records of crash locations and have identified the segment of Rt. 24 from the Topsham Line north to its intersection with Wallentine Rd. and between the intersection of Pork Point Rd. and River Rd. and the intersection of River Rd. and Pleasant St. Local concern has also been expressed for these intersections: Main/Fisher/Post intersection, Route 24/Main Street, Route 24/Ridge Road, Rt 24/White Road and Rt 24/Carding Machine Road. To address this concern the Town has a scoping process with MDOT, reviewing the condition of the road along with the proposed upgrades.

In 2023 the Town received DOT approval to install a demonstration crosswalk across Route 24 at its intersection with Main Street. As part of the project a survey was conducted, and which lead to the support to apply for a Village Partnership Initiative to design pedestrian safety improvements at the Route 24 and Main Street intersection which will begin in 2024.

Pedestrian and bicyclist safety along Route 24 to the Topsham Line is also a concern. This is a State road which was paved in 2023, however shoulders are not scheduled to be paved until 2030. Further, there is pedestrian concern along Main Street from its intersection with School Street to Preble Road. The Town is continuing to make progress on its Walkable Village Plan and has applied for a Maine DOT grant to extend the sidewalks along Main Street ½ mile to its intersection with Post Road. The Town also received approval of the location of several share signs to be painted on Route 24 and Main street to improve bicycle safety which will be installed in 2024.

- (2) *Are conflicts caused by multiple road uses, such as a major state or U.S. route that passes through the community or its downtown and serves as a local service road as well?*

Route 125 functions both as a collector road, serving regional traffic, and as the Main St, serving local traffic. Route 24 also passes through the village. Both roadways raise safety concerns due to the often-excessive speed of through-traffic and because of the overall high traffic volumes.

Where the speed limit is not posted, the following limits apply:

- 15 mph in a school zone during recess or during opening or closing hours
- 25 mph in a business or residential area or built up portion
- 45 mph on all other public ways

As a controlled access highway, I-295, an arterial serving long distance and regional traffic at high speeds, does not conflict with local traffic.

- (3) *To what extent do sidewalks connect residential areas with schools, neighborhood shopping areas, and other daily destinations?*

In 2009, Bowdoinham approved the use of up to \$133,750 from the Undesignated Fund Balance as the local match for a grant of \$535,000 in Federal Enhancement Funds distributed through the Maine DOT Quality Community Program for the engineering and construction of sidewalks in the village area. Sidewalks have been construction on the following:

- Main Street - from River Road to School Street
- School Street - from Main Street to the John C. Coombs Municipal Building & Town Hall
- Center Street
- Cemetery Road
- River Road - from the Cathance River bridge to Ridge Road
- Bay Road - about 500-ft from the Cathance River bridge
- Ridge Road - from River Road to Cemetery Road

These sidewalks serve to connect the Town Office, Bowdoinham Public Library, Town Hall, Fire Station, Bowdoinham Community School, Maily Waterfront Park, Bowdoinham Recreation Fields, and local businesses.

Additional sidewalks are needed to connect neighborhoods to the village area. In the summer of 2023, the Town has applied for a Maine DOT grant to extend the sidewalk ½ mile down Main Street from its intersection with School Street to Post Road.

- (4) *How are walking and bicycling integrated into the community's Bowdoinham Traffic Volume Counts (including access to schools, parks, and other community destinations)?*

Vehicular volumes and speeding threaten the safety of pedestrians and bicyclists. Most roads have narrow and inadequate shoulders. Increased bicycle use of roadways in summer impedes motor vehicle mobility. The addition of sidewalks and multi-use paths in certain areas as noted in the strategies section of this chapter could improve both of these issues, but would require the expenditure of public funds and the cooperation of private landowners.

The Town's Transportation Vision Statement calls for improvements for walking and bicycling.

(5) *How do state and regional transportation plans relate to your community?*

The Working to Move Maine: Maine DOT's Long Range Transportation Plan, is an overarching plan which communicates the vision for the transportation system and the strategies that Maine DOT and their partners plan to deliver throughout the next 20+ years (2023-2032). This policy document shapes investments that appear in Maine DOT's Work Plan. The 20-year plan goals agree generally with this Comprehensive Plan.

The Maine DOT Work Plan for 2023-2024-2025, included these Bowdoinham projects:

- Ultra-thin bonded wearing course on the Interstate beginning at Brunswick town line and extending north 21.51 miles through Bowdoin, Bowdoinham, Brunswick, Gardiner, Richmond, Topsham, and West Gardiner. Scheduled for 2024/25, WIN# 026342.00.
- Ultra-thin bonded wearing course on the Interstate beginning 1.19 miles north of Gardiner town line extending south 21.63 miles through Bowdoin, Bowdoinham, Gardiner, Richmond, Topsham, and West Gardiner. Scheduled for 2024/25, WIN# 026340.00.
- Light capital paving begins at Route 201 and extending 9.48 miles in Bowdoin, Bowdoinham and Richmond. Scheduled for 2024, WIN#026772.00
- Bridge Improvements on Abagadasset Bridge (#5493) over the Abagadasset River, located 0.15 mile east of Carding Machine Road. Scheduled for 2024/25, WIN#025099.00)
- New construction of piers, floats, and fenders located on Railroad Avenue off River Road, completed in 2023, WIN#025203.00.
- Bridge rehabilitation on Brooklyn Bridge (#5190) over Cathance River. Located 0.24 of a mile south of Route 125. Scheduled for 2024/25 WIN#027256.00.
- Bridge joint replacement on Region 2 Interstate 295 bridges in Bowdoinham, Brunswick, Gardiner, Richmond, Topsham, and West Gardiner. Scheduled for 2023, WIN#026884.00.
- Feasibility studies on the railroad, including a public advisory process for future use of the rail corridor between Bowdoinham, Gardiner, Richmond, and Topsham. Completed in 2023, WIN#024759.00.
- Light capital paving beginning at the Topsham town line extending north 10.44 miles from Bowdoinham to Richmond. Completed in 2023, WIN#05863.00.

(6) *What is the community's current and approximate future budget for road maintenance and improvement?*

Road maintenance is an ongoing effort and municipal budgets are often stretched as the cost of such upkeep increases faster than the costs of other goods and services, due principally to the costs of petroleum-based products like asphalt. The State and federal match for such work has always been important and has become even more crucial to maintain safe roadways.

The Town has a road maintenance plan that covers ten years and is updated annually. The plan references Road Surface Management Systems (RSMS) for the maintenance, resurfacing, reconstruction and planning of municipal roadways.

(7) *Are there parking issues in the community? If so, what are they?*

The Town created ten new parallel parking spaces on Main Street with its sidewalk project. There is limited parking on Main Street for businesses and their customers. If the Town were to move forward with a permanent crosswalk at the intersection between Route 24 and Main Street

the required adjoining sidewalk which would follow lower main street may have the potential to reduce parking which will be discussed with the community through public forums.

*(8) If there are parking standards, do they discourage development in village or downtown areas?*

Off-street parking requirements in the Land Use Ordinance, including in village and shoreland areas, have not discouraged development in the village or pushed development out of the village. The lack of vacant lots in the village though does limit new development with the exception of redevelopment. Existing lots in the village tend to be small, which therefore would require the consolidation of lots or cooperative agreements with neighbors to provide for more off-street parking opportunities.

*(9) Do available transit services meet the current and foreseeable needs of community residents? If transit services are not adequate, how will the community address the needs?*

The frequency of scheduled bus service is insufficient for most individuals to be able to use on a regular basis for travel outside of Brunswick. The dispersed location of residents and of workplaces inhibits public transportation to some extent in the region as a whole.

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Age Friendly Bowdoinham members advocated for the Rides in Neighbors Cars program which began offering rides to residents aged 60 and older or who have a disability. There are no charges for rides as this is a volunteer-based program.

Concord Coach (Trailways) offers daily service on their Maine Coastal Route between Orono and Boston's Logan Airport. Nearby stops include Bath, Bowdoin College, and Brunswick.

*(10) If the community hosts a transportation terminal, such as an airport, passenger rail station, or ferry terminal, how does it connect to other transportation modes (e.g. automobile, pedestrian, bicycle, transit)?*

The Town hosts no passenger rail station or ferry terminal.

*(11) If the community hosts or abuts any public airports, what coordination has been undertaken*

*to ensure that required airspace is protected now and in the future? How does the community coordinate with the owner(s) of private airports?*

The Merrymeeting Field Airport is privately owned and located approximately one mile southeast of the village. No rental vehicles or public transportation serves the airport. Currently, the Town does not coordinate with the Airport owner(s).

*(12) If you are a coastal community are land-side or water-side transportation facilities needed? How will the community address these needs?*

Within Bowdoinham, public access to the shorefront is found at these locations:

- Maily Waterfront Park (Town Landing Boat Launch) on the Cathance River
- CMP Carry-in (CMP property) on the Lower Abagadasset River
- Gallant Carry-in (State Inland Fisheries and Wildlife property) on the Upper Abagadasset River
- Unnamed off Pork Point Rd (State agricultural property) on the Kennebec River, below Swan Island

The Town Landing Boat Launch was recently upgraded in 2015 to include a dump station and bathroom facility to meet current and anticipated needs. Further, there was a need for a separate hand-carry launch for non-motorized boats which was completed in 2023 at the new waterfront park. For more information, see the Public Facilities and Service Chapter, and Recreation Chapter.

*(13) Does the community have local access management or traffic permitting measures in place?*

The Land Use Ordinance has access management performance standards that regulate new driveways, streets, and commercial entrances onto Town roads with minimum site distance requirements, based upon posted speeds, as well as standards for geometry, drainage, construction, curbs, and sidewalks. Access management related provisions are included in subdivision provisions as well:

- “The layout of the lots and streets within the subdivision shall minimize the number of points of vehicular access onto existing public streets.”
- “If lots are created that have direct vehicle access to or from an existing public street, the number of access points shall be minimized through the use of shared driveways or common access ways.”
- “Where a lot has frontage on two (2) or more streets, the access to the lot shall be provided across the frontage and to the street where there is lesser potential for traffic congestion and for hazards to traffic and pedestrians.”

*(14) Do the local road design standards support the community’s desired land use pattern?*

The local road design standards have generally supported the type of development favored by residents: low density residential. However, much development occurs on a piecemeal basis outside of the subdivision or the site plan review process. See the Future Land Use Plan of this Comprehensive Plan for discussion of the community’s desired land use pattern.

The road standards of the Land Use Ordinance differentiate road design based upon two

categories: roads serving less than 10 dwelling units and roads serving 10 or more dwelling units. The subdivision standards differentiate road design based upon two categories: minor subdivisions and major subdivisions (serving 6 or more dwelling units).

In addition to local regulations, State access management rules apply to State and State Aid roads.

*(15) Do the local road design standards support bicycle and pedestrian transportation?*

Subdivision provisions do encourage street connectivity and sidewalk installation, which support bicycle and pedestrian use by creating multiple (and shorter) linkages to existing roadways and safe spaces for people to walk along roads. Such provisions include:

- “Any subdivision containing more than fifteen (15) dwelling units or lots, shall have at least two (2) street connections with existing public streets, streets shown on an Official Map, or streets on an approved subdivision plan for which performance guarantees have been filed and accepted.”,
- “Where street lengths exceed one thousand (1,000) feet between intersections with other streets, the Board may require a utility/pedestrian easement, at least twenty (20) feet in width, to provide for underground utility crossings and/or a pedestrian pathway of at least five (5) feet in width...”
- “Sidewalks are required if connection to an existing sidewalk is feasible.”
- “Sidewalks are required for streets carrying more than one hundred fifty (150) trips a day or to a distance within the subdivision as deemed appropriate by the Planning Board.”

Site plan approval criteria provisions include, “Pedestrian Circulation – The proposed site layout will provide for safe pedestrian circulation both on-site and off-site.” General performance standards in the Land Use Ordinance also address pedestrian and cyclist safety for internal roadways and parking lot design.

*(16) Do planned or recently built subdivision roads (residential or commercial) simply dead-end or do they allow for expansion to adjacent land and encourage the creation of a network of local streets? Where dead-ends are unavoidable, are mechanisms in place to encourage shorter dead-ends resulting in compact and efficient subdivision designs?*

Of the 4 subdivisions approved since 2012, only one resulted in a new dead-end road (i.e., having just one access), the other three created private driveways or utilized existing roads.

The subdivision provisions state, “A dead-end street shall be limited to a maximum of fifteen (15) dwelling units (not including corner lots that gain access from another street). The length of a dead-end shall not exceed one thousand five hundred (1,500) feet.”

The Land Use Ordinance allows for cluster (conservation) subdivision developments that conserve a portion of the parent parcel. Since 2012, there has been 1 subdivision that included the permanent dedication of open space for conservation, recreation, agriculture or wood lot use.

The Town can allow and encourage housing development in areas close to existing public and private services, so that residents can choose to walk rather than drive, and so that public

transportation with fixed-routes becomes more practical at sufficient development (housing) densities to provide adequate ridership levels. In less developed portions of the Town, the use of cluster (conservation) subdivisions can preserve habitat by setting aside ecologically sensitive but developable land into permanent conservation. See the Housing Chapter, Natural Resources Chapter and Existing Land Use Chapter of this Comprehensive Plan for more information.

DRAFT



## Public Facilities & Services

### Conditions and Trends

(1) *Location of facilities and service areas (mapped as appropriate).*

See the map titled Public Facilities and Services.

(2) *General physical condition of facilities and equipment;*

(3) *Capacity and anticipated demand during the planning period;*

(4) *Identification of who owns/manages the systems;*

For (2) through (4) see the responses below.

(5) *Estimated costs of needed capital improvements to public facilities; and*

See the Capital Investment Plan.

(6) *The following information related to each of these public facilities and services:*

a. *Sewerage and/or Water Supply – Identify number and types of users, and percent of households served*

Bowdoinham has no public sewer, however the Richmond Utility District provides sewer and water to 15 customers in Bowdoinham on South Pleasant Street and River Road. See Richmond Utility Map. As of 2023, the Bowdoinham Water District has 298 water connections in Bowdoinham. Most are residential customers (about 21% of the Town's households are connected). Twelve are commercial customers. Five are municipal accounts (Town of Bowdoinham). The Bowdoinham Community School is connected. There are 48 fire hydrants in Bowdoinham.

b. *Septage – Identify any community policies or regulations regarding septage collection and disposal.*

The Town follows State regulations regarding septage collection and disposal from municipal facilities. The Town enforces the State Plumbing Code regarding subsurface waste.

c. *Solid Waste – Describe the community's solid waste management system. Identify types and amounts of municipal solid waste and recycled materials for the past five (5) years.*

Bowdoinham operates a recycling facility for residents. In November of 2020 the town moved the operations at the former recycling center located at 243 Post Road at the advice of and as a result of an engineering study and relocated to our Public works facility located at 121 Pond Road in Bowdoinham.

The town provides single stream recycling which accepts plastics #1-7, mixed paper, aluminum/tin cans, and cardboard in Silver Bullets. It also provides a food scrap drop-off kiosk and Christmas trees are collected and chipped for mulch. Further, source separated cardboard gets baled, and scrap metal is collected in 30yd dumpster for recycling. Shredded paper is collected for use at local farms for bedding and compost.

Bulky wastes and construction waste are also collected and hauled to a processing and disposal company. In addition, the Town participates in a yearly regional Household Hazardous Waste Collection drive hosted in neighboring communities. The town can accept and properly dispose of lead acid batteries. Additionally, the Town also participates in the following product stewardship programs at our facility: Paint Care, mercury bulb and thermostat programs, rechargeable batteries and electronics.

Trash pickup is done through private haulers contracted and permitted by the town. Bowdoinham uses the “Pay As You Throw Program” charging \$3.00 per bag.

Below is the recycling and solid waste data available for the last five years. Please note that in 2018 the state was revamping their municipal solid waste reporting system and that construction and demolition debris was not required to be reported to the state until 2021.

<b>Municipal Solid Waste (MSW) Management</b>	<b>Amount (tons) 2018</b>	<b>Amount (tons) 2019</b>	<b>Amount (tons) 2020</b>	<b>Amount (tons) 2021</b>	<b>Amount (tons) 2022</b>
MSW (trash) disposed via landfill or waste-to-energy incinerator	-	215.9	253.17	248.53	243.04
MSW recycled - typical household items like containers, cardboard, paper, etc.	-	107.85	115.01	83.97	107.76
MSW recycled - scrap metal/white goods, etc.	-	-	-	36.67	27.32
MSW organics composted or sent for anaerobic digestion	-	16.7	11.8	5	9
<b>Total MSW diverted from disposal</b>	<b>-</b>	<b>124.55</b>	<b>126.81</b>	<b>125.64</b>	<b>144.08</b>
<b>Total MSW generated</b>	<b>-</b>	<b>340.45</b>	<b>379.98</b>	<b>374.17</b>	<b>387.12</b>
<b>Estimated MSW diversion rate includes recycling, composting, reuse and a 5% credit for Maine's bottle bill recycling activity</b>	<b>-</b>	<b>41.6%</b>	<b>38.4%</b>	<b>38.6%</b>	<b>42.2%</b>

Source: Town of Bowdoinham Recycling and Solid Waste Department

<b>Construction and Demolition Debris (CDD) Management</b>	<b>Amount (tons) 2018</b>	<b>Amount (tons) 2019</b>	<b>Amount (tons) 2020</b>	<b>Amount (tons) 2021</b>	<b>Amount (tons) 2022</b>
CDD sent to processing facility	-	-	-	8.91	8.19
Tons CDD generated	-	-	-	8.91	8.19
Estimated CDD Diversion Rate	-	-	-	100.0%	100.0%

Source: Town of Bowdoinham Recycling and Solid Waste Department

<b>Total Waste Generated</b>	<b>Amount (tons) 2018</b>	<b>Amount (tons) 2019</b>	<b>Amount (tons) 2020</b>	<b>Amount (tons) 2021</b>	<b>Amount (tons) 2022</b>
All MSW and CDD	-	-	-	383.08	395.31

Source: Town of Bowdoinham Recycling and Solid Waste Department

<b>Total Waste Diverted</b>	<b>Amount (tons) 2018</b>	<b>Amount (tons) 2019</b>	<b>Amount (tons) 2020</b>	<b>Amount (tons) 2021</b>	<b>Amount (tons) 2022</b>
All MSW reused, recycled or composted plus all CDD sent to a processing facility	-	-	-	134.55	152.27
Average MSW & CDD Combined Diversion Rate	-	-	-	69.3%	71.1%

Source: Town of Bowdoinham Recycling and Solid Waste Department

<b>Bowdoinham Municipal Solid Waste (MSW) Expenses in 2022</b>			
<b>Municipal MSW Expense</b>	<b>Amount Per Person</b>	<b>Tons of MSW</b>	<b>Population</b>
\$188,313	\$61.80	243.04	3,047

Source: Town of Bowdoinham Recycling and Solid Waste Department

In addition, the Land Use Ordinance has solid waste provisions.

- d. *Stormwater Management – Identify combined sewer overflows. For Municipal Separate Stormwater System (MS4) communities, describe plan and status of the major goals of the MS4 requirements.*

Bowdoinham does not provide public sewer. The Town is not an MS4 community.

- e. *Power and Communications – Availability of 3-phase power, Internet (including broadband), and cable within the community.*

Three-phase power is available on Bay Road and Main Street. Broadband and cable television service is available to most properties abutting State and State aid roads, however, notable gaps are found in several areas.

*f. Emergency Response System –Average call response times for fire, police, and emergency/rescue.*

In 2023, the Town Fire Department responded to 216 calls a 100% increase from 2013. 87 of these calls were mutual aid in surrounding towns, up 82% from 2013. Within Bowdoinham, the average response time in 2023 was 8 minutes down from 12 minutes in 2013.

Sagadahoc County Sheriff's Office provides police protection for the Town. In 2023, the Sheriff's Office responded to or handled 800 incidents, which made up approximately 13% of the total calls for service in the county and was a 2% increase from 2010. The most common call for service was accident-related incidents. The Patrol Division stopped 291 vehicles and issued 26 warnings and 86 traffic citations. There were 3 burglaries reported in 2023, a 73% drop compared to 2014. Average response time was 19 minutes.

In 2023, Bowdoinham Emergency Medical Services received 218 calls for medical attention. Being staffed with volunteers who hold full time jobs elsewhere presents challenges during the day for local first responders. Further, the Town has had to switch transport service providers in early 2023 from Topsham to Lisbon due to issues with capacity. The additional drive time has had an affect on response times increasing them from 11 minutes in 2010 to 22 ½ minutes in 2023.

*g. Education – Identify school administrative unit. Include primary/secondary school system enrollment for the most recent year information is available and for the ten (10) years after the anticipated adoption of plan.*

The Town of Bowdoinham is a member community of Regional School Unit / School Administrative District 75. Other member communities are Harpswell, Topsham and Bowdoin. The voters of Bowdoinham elect two School Directors to represent them on the Board of Directors.

The Bowdoinham Community School, Grades K-5, is located on Cemetery Road in Bowdoinham and provides a location for cultural and community events. The local elementary school has served K-5 since 2001. Sixth, seventh and eighth grade students attend middle school in Topsham. Until 1998 access to the gymnasium and athletic facilities was severely limited but an agreement allows the Recreation Department access for after school and weekend athletic programs for youth. Secondary School students attend Mt. Ararat High School in Topsham. The next table shows school enrollments of Bowdoinham residents in area schools and the total enrollments for these schools.

<b>School Enrollment as of October 2023</b>			
<b>District/Unit</b>	<b>School</b>	<b>Bowdoinham Resident Enrollment</b>	<b>Total Enrollment</b>
Baxter Academy for Technology and Science	Baxter Academy for Tech & Sciences	3	UNKN
Brunswick Public Schools	Kate Furbish Elementary School	1	UNKN
Lewiston Public Schools	Raymond A. Geiger Elementary School	1	UNKN
Richmond Public Schools	Marcia Buker School	3	UNKN
RSU 75/MSAD 75	Bowdoin Central School	16	197
RSU 75/MSAD 75	Bowdoinham Community School	172	189
RSU 75/MSAD 75	Harpwell Community School	1	129
RSU 75/MSAD 75	Mt Ararat High School	120	743
RSU 75/MSAD 75	Mt Ararat Middle School	87	529
RSU 75/MSAD 75	Williams-Cone School	3	232
RSU 75/MSAD 75	Woodside Elementary School	6	318
	Counts PK	8	27
	Counts K-2	94	483
	Counts K-8	188	1563
	Counts 9-12	123	743
	Total	413	2,333

Source: RSU 75/MSAD 75

As of January 2024, the Superintendent of RSU/MSAD 75 does not have enrollment projections for the next ten years. The RSU records a total enrollment decline of 90 students from 2011 to 2023.

- h. Health Care - Describe major health care facilities (hospitals, clinics) and other providers serving the community. Identify public health and social services supported by the community through municipal subsidy.*

There is no health care facility in Bowdoinham. Bowdoinham is served by the Richmond Area Health Center, one hospital in Brunswick: Mid Coast Hospital. Ambulance services are provided by an annual contractual agreement between the Town of Bowdoinham and Northeast Mobile Health. The Town funds the Bowdoinham EMS annually through the Town operating budget. In 2022 the EMS budget was \$50,000 and in 2023 the budget was

\$250,000. The Bowdoinham EMS currently has 2 licensed AEMTs, 5 licensed as EMTs and one licensed as EMR.

Richmond Area Health Center provides family health care. The health center is an outpatient practice offering referrals to Maine General Medical Center (Augusta) as well as with specialists at Mid-Coast Hospital (Brunswick), Central Maine Medical Center (Lewiston), and St. Mary's Hospital (Lewiston).

In 2001, Mid-Coast Hospital opened a consolidated facility that includes emergency and intensive care departments, in-patient and out-patient surgery, advanced diagnostics, cardiac and pulmonary rehabilitation, a sleep lab, and wound care center.

*i. Municipal Government Facilities and Services – Describe facilities and staffing for municipal administrative, enforcement, and public works operations.*

Form of Government

Bowdoinham is governed by the Town Manager Plan as defined in Maine Statutes, Title 30 §2631: “The government (under this plan)... shall consist of a town meeting, an elected board of selectmen, an elected school committee, an appointed town manager and any other officials and employees that may be appointed under this subchapter, general law or ordinance. Other town officials may be elected by ballot, including, but not limited to, moderator, assessors, overseers of the poor, clerk and treasurer”.

Staffing/Personnel

Select Board -

In Bowdoinham, the only elected body is the Select Board. They also serve (and are therefore elected as) the Board of Assessors and the Overseers of the Poor. The registered voters elect them for staggered terms of three years.

Assessor -

The Select Board has delegated the authority for assessments to an assessors' agent that is a part-time employee and a Certified Maine Assessor.

Overseer of the Poor -

The Select Board has delegated this authority to the Town Manager who also serves as the General Assistance Administrator. Assistance to the poor is provided according to the General Assistance Ordinance developed and approved by the Maine Department of Health and Human Services and the Maine Municipal Association. This ordinance assures that all members of the public qualifying for assistance shall receive it in a fair and judicious manner.

Municipal Officials Appointed by the Select Board -

Under the Town Manager Plan, the Select Board may choose to appoint all town officials. Bowdoinham has chosen to grant authority to the Select Board to appoint the Treasurer, Tax Collector, and Town Clerk. These officials, who may be elected in other towns, have statutory responsibilities, but they are still accountable to the Town Manager, unless otherwise assigned by charter or ordinance. The Select Board may remove these officials for cause, after notice and hearing (30 MRSA § 2601)

#### Town Manager -

The Select Board currently appoints the Town Manager. Because it is such an important administrative position the powers and duties of town manager are quoted in full from Maine Statutes (30A MRS §2636).

1. “Executive and administrative officer. Is the chief executive and administrative official of the town;
2. Administer offices. Is responsible to the selectmen for the administration of all departments and offices over which the selectmen have control;
3. Execute laws and ordinances. Shall execute all laws and ordinances of the town;
4. Appoint department heads. Shall serve in any office as the head of any department under the control of the selectmen when directed by the selectmen;
5. Appoint town officials. Unless otherwise provided by town ordinance, shall appoint, supervise and control all town officials whom the municipal officers are required by law to appoint, except members of boards, commissions, committees and single assessors; and appoint, supervise and control all other officials, subordinates and assistants, except that the town manager may delegate this authority to a department head and report all appointments to the board of selectmen.
6. Purchasing agent Shall act as purchasing agent for all departments, except the school department, provided that the town or the selectmen may require that all purchases greater than a designated amount must be submitted to sealed bid;
7. Attend meetings of selectmen. Shall attend all meetings of the board of selectmen, and the town manager may attend meetings when the manager's removal is being considered.
8. Make recommendations. Shall make recommendations to the board of selectmen for the more efficient operation of the town;
9. Attend town meetings. Shall attend all town meetings and hearings;
10. Inform of financial condition. Shall keep the board of selectmen and the residents of the town Informed as to the town's financial condition;
11. Collect data. Shall collect data necessary to prepare the budget;
12. Assist residents. Shall assist, insofar as possible, residents and taxpayers in discovering their lawful remedies in cases Involving complaints of unfair vendor, administrative and governmental practices; and
13. Remove appointments. Has exclusive authority to remove for cause, after notice and hearing, all persons whom the manager is authorized to appoint and report all removals to the board of selectmen.”

#### Treasurer -

The Select Board appoints the Treasurer, traditionally, the Town Manager. The Treasurer shall disburse money only on the authority of a warrant affirmatively voted by the majority of the Selectmen, with the exception of routine payroll, which can be authorized by written policy, on file with the Town Clerk. The Treasurer shall keep all financial accounts, which shall be examined by the municipal officers every month. The Treasurer appoints a Deputy to assure continued coverage. The Treasurer is covered by a Faithful Performance of Duties Bond.

#### Tax Collector -

Traditionally the Town Manager has been appointed as Tax Collector. The office is responsible for the collection of all excises, real estate, and personal property taxes. The Tax

Collector is covered by a Faithful Performance of Duties Bond. The Town maintains insurance against criminal acts by all Town employees.

**Municipal Clerk -**

Pursuant to state law the office of the Town Clerk is responsible for maintaining the official records of the Town: the supervision of state and municipal elections; the recording of vital statistics (birth, death, and marriage); and the issuing of all permits and licenses as required by state law. The Town Clerk appoints a Deputy and an Assistant to assure there are no lapses of coverage.

**Appointed Municipal Staff -**

The Select Board confirms the appointment of administrative positions as recommended by the Town Manager.

**Assessors Agent -**

The Board of Assessors has appointed a professional Assessor as their agent who provides complete assessing services for the town. The Assessors' Agent is a part-time contract position.

**Code Enforcement Officer -**

This position, which includes Local Plumbing Inspector (LPI), is a certified code enforcement officer and licensed plumbing inspector. They consult with builders, developers and homeowners, to interpret state environmental laws and local ordinances. They inspect and enforce permits and licenses and act as a liaison with the Planning Board and the Board of Appeals.

**Registrar of Voters -**

This is an appointment every two years in the odd-numbered year (i.e., 2023), and generally resides with the Town Clerk. The position receives no separate compensation. The duties and responsibilities of the Registrar are prescribed by state statute.

**Road Commissioner -**

The Town Manager is appointed Road Commissioner. This position is required by State statute and serves as the department head for the Public Works Department. This position receives no separate compensation.

**Recreation & Community Services Director -**

This part-time position was converted to full-time position in 2023 due to an increased demand for staff time addressing the needs of the older population and to assist with the work of the Advisory Committee for Age-Friendly Bowdoinham. This is in addition to being responsible for coordinating recreational activities for youth and adults as well as supervising volunteers.

**Solid Waste and Recycling Director -**

This position is for 22 hours per week and is paid an hourly rate. The Solid Waste and Recycling Director is responsible for the supervision of two part-time employees.



#### Appointed Stipend Positions -

The Select Board also has authority to appoint positions which receive an annual stipend. The Select Board have adopted a policy to assure fair and equitable treatment of these stipend positions.

#### Animal Control Officer -

This is an annual appointment required by state law. In addition to an annual stipend the ACO is also paid mileage for the use of a privately owned vehicle used in the execution of the duties and responsibilities of the position as required by state law.

#### Health Officer -

This appointment is required by state law and until 1997 was filled by the Town Manager. At that time, the Town Manager requested the Selectmen appoint a person with health care training. It is now a stipend position currently filled by a resident with a nursing degree.

#### Harbor Master -

This is an annual appointment by the Town Manager and confirmed by the Selectmen. This position, authorized by State law, requires certification and receives an annual stipend. The position has the authority to manage the harbor on the Cathance River according to Rules & Regulations for Harbor Management as adopted by the Board of Selectmen.

#### Fire Chief -

The Town of Bowdoinham has a municipal fire department created by local ordinance. The Fire Chief is appointed by the Select Board for a term of three years. This position receives an annual stipend.

#### Constable -

There are no appointed constables in the Town of Bowdoinham.

#### Cemetery Sexton -

In a position created in 1999, the Sexton supervises the maintenance and care of the cemeteries in town. They receive an annual stipend.

#### Quasi-Judicial or Municipal Boards -

State Law requires the establishment of a Planning Board and the Board of Appeals. Since some of the decisions are like judicial decisions and they have to follow adjudicator procedures, they are referred to as Quasi (somewhat) Judicial.

#### Planning Board -

The Town appoints 5 members and 2 alternates for staggered 5 year terms. This board is governed by bylaws approved and adopted by the Selectmen. Land Use Ordinances adopted by the Town at Town meeting govern decisions on permits issued by the Planning Board. The members of the Planning Board are volunteers and do not receive an annual stipend.

#### Planning & Development Director -

This full-time position oversees the Department of Planning and Development to support existing businesses of Bowdoinham through the promotion of their services, educational opportunities, obtaining grants to improve public facilities, community awareness and

networking. They also consult with builders, developers and homeowners, to interpret state environmental laws and local ordinances. They inspect and enforce permits and licenses and act as a liaison with the Planning Board and the Board of Appeals.

### Municipal Property and Structures

#### John C. Coombs Building -

The Town's administrative offices are located in the Coombs Building at 13 School Street. The building is a three-story, wood-framed converted school building, built in 1911. The Town purchased the building from SAD 75 in 1989 for \$1.00. In 1998 the first floor was extensively renovated to facilitate efficiency in providing services. The first floor has offices for the Town Manager, Treasurer, Tax Collector, Town Clerk, Registrar of Voters, Assessors Agent, Recreation & Community Services Director, and Code Enforcement. It also has a small conference room/kitchen and one restroom, which is accessible. The second floor has been made accessible by the installation of a ramp to the back door of the Select Board's Meeting Room. It has two conference/committee meeting rooms, and two rooms permanently occupied by the Bowdoinham Public Library. Since the third floor is not accessible, it is used primarily for storage for the town and the library.

The building has had several updates over the past decade. The septic system was updated in 2015 and is located at the bottom of School Street on a lot owned by the town. In 2022 the roof was replaced. Emergency exit doors were added for the main office and library. Further, the storage area was renovated to office space along with the installation of fire alarms and emergency lighting in 2023. Also, in 2023 the building was outfitted with heat pumps throughout for supplemental heating and more efficient cooling, and all interior lights were updated to LEDs. Streetlights throughout the town were also updated to LEDs including at the Maily Waterfront Park and at the recreation field.

#### Areas of Deficiency:

1. Parking Lot - The Coombs School lot cannot completely accommodate parking during heavy use events. When the Town Hall is hosting an election or other event and the administrative offices and the Library are open for business there is an overflow of traffic.
2. Town Office layout – With the increasing requirements for town office staff the current layout of the town office is not efficient and lacks good access to assessing records by the public. The storage room in the northwest side of the first floor should be renovated to house the assessing office and assessing records. The front entryway and surrounding area should be renovated to better utilize the space and to increase energy efficiency.
3. Energy efficiency – All exterior windows are in need of replacement to improve energy efficiency and to add security.
4. There are other cosmetic needs in the building as well. The suspended ceiling in the town office counter area needs to be replaced; carpet needs replacement on the second floor; and the entire interior needs painting.
5. The chimney is in need of replacing.
6. Better accessibility for the library is needed for the library as the parking near the ramp makes it difficult to use.

#### Town Hall -

The Town Hall is located adjacent to the Coombs Building. The steeple and front foundation was extensively renovated in 1996 and 1997 at a cost of \$40,000. In 1998, the hard wood floor was refinished. The CDBG grant for \$55,000 was used to install a restroom and move the primary entrance so people do not have to step out into traffic and to make the building handicapped accessible. In 2011, the front stairs leading to School Street were replaced by the Public Works Department. In 2012, the entire exterior of the building was scraped, primed and painted at a cost of \$8,600. Many governmental functions took place in this building - elections, town meetings, and public events up until 2023 when the building was closed due to safety concerns found during a study of the buildings condition. This promoted the listing of the building on the Maine Historic Preservation Commission's list of most endangered historic sites in 2023.

#### Areas of Deficiency:

1. Energy Efficiency – The building has very little, if any, insulation and is heated by an oil-fired boiler. As such, the building is not energy efficient. The oil boiler and vents need replacement. The replacement heating system should be more energy efficient and not oil-fired.
2. Lighting – The building is equipped with several small wall-mounted light fixtures and a few overhead, poorly designed lights that do not produce enough light for meetings and events. These lights need to be replaced by energy efficient overhead lights.
3. Storage space – There is no storage space for tables and chairs when not in use.

#### Fire Station Post Road -

The fire station is located on a 4-acre corner lot on Post Road and Center Street. It was constructed in 1998 for a cost of \$363,000 for which the voters approved a ten-year general obligation bond. It provides four bays for fire equipment - three to the front of the building and one to the rear. There are two offices for the Fire Chief and administrative needs of the fire department. It has many modern conveniences for the fire staff including a decontamination shower, heated floors, a radio/communications room and more. The building provides a large community room complete with kitchen and handicap accessible rest room. Use Policy has been developed and adopted by the Select Board for the public use of the community room and the adjoining kitchen. The remainder of the building is used exclusively for fire emergency services. Recently the building had a heat pump system installed to provide additional heating and cooling and new audio and visual technology is being installed to improve meeting facilitation.

#### Public Works Facilities -

The Public Works Facilities include a Public Works Garage, a salt storage building and a cement pad used to store the winter sand pile were removed from its location on the bank of the Cathance River and a new facility was constructed in 2019 at 121 Pond Road.

The Facilities include an 80' x 122' Public Works Garage with an office, crew room, restrooms, vehicle maintenance/repair space and 7 garage bay spaces to store trucks and equipment and a 60' x 120' sand/salt storage building with laminated arches and metal roof. It also hosts the recycling collections and storage to the rear of the building.

#### Recreation Field -

The recreation field is located on Ridge Road behind Bowdoinham Community School. The field was developed into two ball fields, a tennis court, and a basketball court in the late 1980's. The courts are owned jointly with RSU 75, which pays for half of its maintenance. In the summer of 2023, both courts were resurfaced and repainted to include lines for one pickleball court on the basketball court and two pickleball courts on the tennis court. The basketball court also received new backboards, rims, and nets.

A "Snack Shack" and storage facility was constructed by community volunteers under the guidance of the Recreation Committee in 1999. It is complete with hot and cold running water and electricity. Extensive repairs were made at the snack shack in the spring of 2022, including a new roof covering and new plumbing. A storage garage was constructed by the Army Corps of Engineers in 2011. This is used to store equipment for the Recreation Department, medical equipment for the Age-Friendly "Durable Medical Equipment Loan Program and as well as field maintenance equipment.

In 2012, a group of volunteers began rehabilitating the regulation size baseball field including replacing the turf, creating basepaths, building wooden dugouts, and improving the drainage. The field needs a permanent homerun fence and backstop that will require less maintenance but continue to allow for use of the field for cross country skiing in the winter months.

Philip Maily Park/ Waterfront Park and Harbor -

The reconstruction of the Cathance Landing Waterfront Park is a monument to public private cooperation. The Town and the Maine Department of Conservation had purchased the waterfront property east of Route 24 for development of a boat launch. In 1997 the Town, the Bureau of Conservation, the Seabees, and the National Guard Reserve partnered up with funds and the launching facility received a \$200,000 renovation.

The harbor was organized to accommodate 40 moorings, docks were installed, the lot was completely re-landscaped, and a portion of the parking lot was paved. In 1998, Bowdoinham built a vault privy on the property, using a \$5,500 Department of Conservation grant. This privy was destroyed by fire, was rebuilt and subsequently has been used for storage for the Harbor Master. In 2012, the Town received a planning grant to design a new bathroom facility and possible boat pump-out station for the Waterfront Park. The planning work began in 2013 and in 2015 construction was completed on a new dump station and bathroom facility to meet current and anticipated needs. Further, there was a need for a separate hand-carry launch for non-motorized boats which was completed in 2023 at the new waterfront park. There are additional amenities planned for the new Cathance Waterfront Park across Route 24 from Maily Waterfront Park. These include stabilizing 500 feet of shorefront, creating a pavilion, ADA accessible trails along the river with interpretive signage, informational kiosks, and recreational facilities and natural play areas among others.

River View House -

This single-story wood frame building is located on the bank of the Cathance River and was part of the Central Chemical Company complex until the Town purchased the property in 1998. The building consists of four offices and a small restroom, which is not handicapped accessible. The building is currently leased by Taurus Systems, Inc. on a yearly basis.

Areas of Deficiency: This building is only 984 square feet - so it is very small. The cellar is

wet and a sump pump must be maintained for the integrity of the building. The septic system consists of a holding tank that must be emptied on an annual basis. The building is in the floodplain and the Town is looking into grant funding to flood proof the building.

#### The site of the Sagadahoc Mill Property -

This parcel located on the Cathance River and was part of the Central Chemical Company complex until the town purchased it in 1998 and moved its Public Works Department there. In 2019 Public Works was moved out and the 20 acre parcel is being transitioned into the Cathance Meadows Waterfront Park. 16 acres have been devoted to the Cathance Meadows Trail system and the other four acres is being redeveloped into a park which will include a pavilion, ADA accessible trails along the river with interpretive signage, informational kiosks, and recreational facilities and natural play areas among others. A non-motorized boat launch was installed at the site in 2023.

#### Back Hill Storage Building -

This building is located on Back Hill on a 50' x 50' lot. It is of brick construction and was used exclusively for storage of the Historical Society's artifacts of Bowdoinham. In 2012 and 2013, the Historical Society began moving these artifacts to another location as the building is not heated.

Areas of Deficiency: This building does not have electricity so the electric heater is disconnected. The roof is in need of re-shingling and has had leaks over the past several years.

#### Landfill -

The old landfill, located on the Carding Machine Road was closed in 1992 The Town is required to mow it twice a year to keep the "cap" from being breached by trees and bushes.

#### Cannon, Veterans' Park -

This area located in the center of the village is a small lot bounded by Route 24 (River Road), and Main Street. It is a commemorative park with a Civil War cannon, a 1908 granite watering trough and a flagpole.

In 2012, as part of the Town's 250th Anniversary Celebration, a group of dedicated volunteers led by Lara Ashouwack renovated the entire park. The base of the cannon was replaced with granite and the cannon was repainted. The flag pole was replaced. The park was completely landscaped to include a walking path with recycled pavement, signs providing information on Bowdoinham's veterans, and new shrubs, trees and flowers. Funding for the project was from the 250th Anniversary Fund created by William Kendall in 1912. The park was rededicated to Bowdoinham veterans on November 11, 2012, Veterans' Day.

#### Cemeteries and Commemorative Lots Held in Trust -

During the past two centuries, various groups and individuals have left the town designated trust funds for the care and maintenance of a cemetery or a commemorative lot. There are 48 cemeteries in town. The Sexton supervises their maintenance with assistance from the Town Manager and Public Works Department.

## Public Services

The administrative offices for the Town of Bowdoinham are located in the Coombs Building at 13 School Street. The staff is adequate for the current population.

### *Administrative Services*

#### Tax Collection -

The Tax Collector is responsible for the collection of excise taxes on boats, airplanes, and motor vehicles as well as for the collection of taxes on real and personal property.

#### Treasurer' Office -

The Treasurer's office is responsible for recording all receipts from the Tax Collector and Town Clerk as well as the recording of all accounts payable and payroll.

#### Town Clerk -

The Town Clerk is responsible for the issuance of all State licenses including hunting and fishing, dog, marriage and burial licenses. The Town Clerk is also responsible for the recording of all vital statistics of the community such as birth and death records.

#### Planning & Development-

The Town employs a state certified Code Enforcement Officer and Local Plumbing Inspector. The Planning & Development Director works full-time doing planning and community and economic development. Both of these positions consult with builders, developers and homeowners, to interpret state environmental laws and local ordinances. They inspect and enforce permits and licenses. Both staff are liaisons with the Planning Board and the Board of Appeals.

#### Assessing Services -

The town contracts with an assessing professional to provide tax assessment services on all real and personal property in Bowdoinham.

### *Departments*

The Public Works staff consists of a full-time Public Works Foreman, four full time drivers/laborers and one on-call part time snow plow driver. The Supervisor is the Road Commissioner, which in Bowdoinham is the Town Manager. This department is responsible for the maintenance of all town facilities (with the exception of the Post Road Fire Station), 46 miles of roadway and 92 miles of drainage system, and maintenance and mowing of three cemeteries. Since 2014, the Town has increased the size of the staff for the Public Works Department from three full-time and one part-time seasonal employees to five full-time employees. The Town also purchased an excavator and an additional dump truck. The Department currently rents front-end loaders to assist with its work during the summer construction season and winter plowing season.

#### Solid Waste and Recycling Department -

The Town previously operated its recycling at a privately held Recycling Barn until it moved operations to the Town's new Public Works facility in 2020. The Solid Waste and Recycling

Facility is open to the public on Tuesdays, Thursdays, and Saturdays year-round and is staffed by a part-time director and two part-time laborers.

A hauling contractor under a three-year contract picks up household trash and recycling material at curbside. The contractor drops the recyclable material at the Solid Waste and Recycling Facility and takes the bulky waste to Pine Tree Waste, Inc./Cassella in Bath for a contracted tipping fee of \$115 per ton in 2023. In 2013, that fee was 73.39 per ton up from \$50 in 1998. There is also a pay per bag program. Residents may pick up their tags at the Country Store or the Town Office. This fee raised \$81,604 in revenue in 2021/22. The costs of a trash tag went from \$2.50 up to \$3.00 per bag for the 2023-2024 fiscal year.

#### Recreation Department -

During the spring of 1998 there was a resurgence of interest in the recreation program. As discussion progressed, the Selectmen believed it more appropriate to have a Recreation Department rather than expecting a fundraising committee to be fully responsible for the program. In July 1998, the Selectmen created a 20-hour per week Recreation & Community Services Director position. The hours were increased to 22.5 per week in 2013.

As the population continues to age, there is a new focus on providing activities for adults and seniors. In 2014, the Town employed Older Adult Services Coordinator for 10 hours per week to support committee. In 2021, the recreation and older adult coordinator were combined for 30 hours per week. In 2023 the Town approved this becoming a full-time position.

#### Harbor and Waterfront Department -

The Town owns 1,300 feet of waterfront along the Cathance River and the responsibility to manage the waterfront is assigned to an appointed Harbor Master. Currently the Harbor Master receives a modest stipend.

#### Community and Economic Development -

This Department supports existing businesses of Bowdoinham through the promotion of their services, educational opportunities, obtaining grants for improvements to public facilities, community awareness and networking. It strives to develop and attract sustainable businesses to Bowdoinham that will reflect the high quality of life and strong sense of community. The Department also develops, organizes, and coordinates community-enhancing events to bring together the citizens of Bowdoinham. It is funded through two TIFs (Tax Increment Financing). The funds are derived from tax dollars of the Maritime & Northeast Pipeline and Central Maine Power properties located in Bowdoinham. The Pipeline TIF originated by town vote in June 2000, was amended in 2019 and set to sunset in 2034. The CMP TIF originated in 2014, was amended 2023 and set to sunset in 2044.

#### Fire Department & Emergency Medical Services-

The Fire Chief is appointed for a three-year term by the Selectmen and supervises the Fire Department. In 2023, there are 23 fire department personnel who receive stipends. Maintaining adequate staffing is difficult given that many volunteers have full-time employment, often outside of Town.

#### Police Services -

The Bowdoinham Police Department was disbanded in the early 1990's. Since that time, the Sagadahoc Sheriff's Department has provided police coverage for the community. There are currently no constables appointed.

#### Public Sewer and Water -

The Town of Bowdoinham has no public sewer system; however, the Bowdoinham Water District provides public water to most of the Village. The Selectmen appoint the trustees to the Water District but otherwise have no voice in the administration of the entity. For further discussion, please see the Water Resources and Bowdoinham Water section of this Plan and the Bowdoinham Water Service Area Map. However, the Richmond Utility District does provide water and sewer to Bowdoinham customers in the northeast corner of Bowdoinham. See [Richmond Utility Map](#).

#### Public Library -

The Bowdoinham Public Library is located on the second floor of the Coombs Building. The Library is only partially supported by the Town's municipal budget with an annual appropriation. The Friends' of the Bowdoinham Public Library raise funds throughout the year with plant sales, book sales, and other fundraisers for the remainder of funding necessary to operate the library.

#### *Town Committees*

Town volunteer committees advise and assist the Town boards and municipal staff to provide municipal services. These committees allow residents a meaningful opportunity to have a say in what types of services the town offers now and should offer in the future. The following is a list of current committees.

- Age Friendly Committee creates opportunities to allow people to continue to live in Bowdoinham as they age.
- Community Development Advisory Committee advises the Select Board to develop plans that support and enhance economic development. This Committee will develop a plan for the goals, strategies and projects for Bowdoinham's economic development.
- Comprehensive Planning Committee creates an updated Comprehensive Plan that is consistent with the Growth Management Act (30-A MRSA §4312 et seq.).
- Finance Advisory Committee assists the Select Board and the Treasurer with financial decisions regarding development of the municipal budget and the investment program for the Town of Bowdoinham.
- Solid Waste Advisory Committee advises the Select Board on matters related to the efficiency and effectiveness of the municipal solid waste and recycling program as well as to educate the community on matters related to solid waste and recycling. Encourage citizens to participate in recycling and to suggest new policies and procedures, which will further strengthen the program.
- Town Hall Committee supports efforts to restore the Town Hall.
- Water District Trustees advises/oversees the Water District.
- Emergency Medical Services Committee was established in 2023 to plan for emergency medical services for the Town.



## *Public Water*

The original system was constructed for the Bowdoinham Water District in 1959. It consists of a well and pump station located on a 9-acre parcel of land owned by the District adjacent to the West McIver Road on Lot 89 in Bowdoin, east of Route 201 and north of the junction of Route 201 and Route 138. A new pump station and treatment facility was completed in January 1999, which replaced the original pump house constructed in 1959. Two 8-inch by 12-inch gravel pack wells exist on the property one well is 31 feet and the redundant well 34 feet deep in an abandoned gravel pit. These wells were drilled in 1959 and 2010, respectively.

### System Storage -

There are two 125,000 gallon welded steel standpipes located on Preble Road, east of I-95. In 2005, a new concrete tank was built in Bowdoin, which added an additional 425,000 gallons of storage capacity. The combined tanks give the District a maximum capacity of 675,000 gallons.

### Water Quality -

There have been no water quality problems. The water is disinfected through a hypochlorite feed system. Samples for bacteriological testing are submitted quarterly and are negative. Annual Consumer Confidence Reports are mailed out to residents and can be found also on their website.

### Water Demand -

There are currently 298 service connections in Bowdoinham (most are residential, 6 are commercial, 5 are municipal). For fire hydrants, see below. The water line extends to the village, Ridge Road, Main Street, a portion of Millay Road, Post Road, Bay Road to the airport, River Road through one mile north on Brown Point and about ½ mile down Brown's Point Road.

The average demand in 2011 was 43,159 gallons per day. The average daily demand in 2023 was 39,375 gallons, a reduction of 8.7% since 2011.

A 1992 engineering study indicated limited supply and capacity. The 2000 Comprehensive Plan recommended that an updated study should be conducted. However, there have been no studies conducted on water capacity and supply since then. At current rate of development, the district has indicated it can sustain moderate growth. If there were a need to expand capacity the district has taken the initiative to discuss the potential with the Five Rivers Regional Water Council to connect to the Brunswick Topsham Water District.

### Fire Protection -

There are 55 fire hydrants connected to the system - 48 in Bowdoinham and 7 in Bowdoin.

### Organizational Structure-

The District was chartered in 1957 to provide water to Bowdoinham. The charter was amended in 1961 to allow service to any adjacent town. A five member Board of Trustees manage the District. The Select Board of Bowdoinham appoint all Trustees. The District's Charter requires that a majority of the Board of Trustees be residents of the Town of Bowdoinham.

The District's Superintendent, who is employed on a part-time basis, oversees operation and maintenance of the District. Billing, accounting, and office services are provided through a contractual arrangement with the Richmond Utilities District.

Note on Private Water Supply -

Approximately 79% of households are on private wells. There is only sporadic and rather unreliable data on private wells. Since there are no significant sand and gravel aquifers in Bowdoinham, most of the wells must draw from bedrock recharged wells. The only regulation of well placement is in the Plumbing Code that wells and septic systems must be 100 feet apart.

Analyses

*(1) Are municipal services adequate to meeting changes in population and demographics?*

Over the past decade staffing levels have increased. In general, Bowdoinham has the capacity to provide basic and necessary municipal services to its citizens over the ten-year planning period.

*(2) Has the community partnered with neighboring communities to share services, reduce costs and/or improve services? In what ways?*

The following is a list of inter-municipal and regional efforts in which Bowdoinham participates:

- Emergency dispatch through the Sagadahoc County Regional Communications Center.
- Regional emergency and disaster planning through the Sagadahoc County Emergency Management Agency.
- Police protection through the Sagadahoc County Sheriff's Department.
- Fire and rescue participation in countywide mutual aid program, as well as mutual-aid agreements with Bowdoin, Richmond, and Topsham.
- Ambulance transportation is provided by Northeast Mobile Health which also serves other communities in the area.
- Public education as a member of RSU/SAD 75, which serves Bowdoin, Bowdoinham, Harpswell and Topsham.
- Bowdoinham Water District, a quasi-municipal organization that serves areas within the Town of Bowdoin and the Town of Bowdoinham, and shares an office with the Richmond Utilities District in Richmond.

*(3) If the community has a public sewer system, what issues or concerns are there currently and/or anticipated in the future? Is the sanitary district extension policy consistent with the Future Land Use Plan as required by (38 M.R.S.A. §1163), or will it be?*

Bowdoinham does not have a public sewer system. There is a concern about the significant number of small lots in the village area and the potential for groundwater contamination from on-site septic systems.

- (4) *If the community has a public water system are any public water supply expansions anticipated? If so, have suitable sources been identified and protected? Is the water district extension policy consistent with the Future Land Use Plan?*

At current rate of development, the district has indicated it can sustain moderate growth. If there were a need to expand capacity the district has taken the initiative to discuss the potential with the Five Rivers Regional Water Council to connect to the Brunswick Topsham Water District. The Water District anticipates no public water supply expansions for the ten-year planning period. The Water District follows the Maine Public Utilities Commission Chapter 65 extension rules.

- (5) *If the town does not have a public sewer or water system, is this preventing the community from accommodating current and projected growth?*

In 2019 the Town commissioned a study which found that creating a village sewer system would be unfeasible. The lack of a public sewer system has and will continue to inhibit large-scale or higher density growth. Projected growth is modest based upon observed trends and assumes that sewer will remain unavailable during the ten-year planning period of this plan. The Town can accommodate the growth anticipated, predominantly residential, in the form of mostly single-family detached housing units. If multiunit development were sought, sewer or a community wastewater system would likely be needed, especially if such growth were to occur within the village area.

- (6) *Are existing stormwater management facilities adequately maintained? What improvements are needed? How might future development affect the existing system?*

The drainage system in Bowdoinham is a mix of public infrastructure installed over the years, and private stormwater management systems installed as part of subdivision and site plan regulated development. Ongoing maintenance is crucial for these systems to continue to function properly. Needed improvements include improved drainage ditches along Bay Road (state maintained) and on several town-maintained roads that will occur as pavement projects are completed over the the-year planning period. As part of routine road maintenance, the Town corrects drainage issues including replacing culverts and excavating roadside drainage ditches.

Without adequate stormwater management, the cumulative effect of small, piecemeal development (new buildings and impervious surfaces like parking lots), in addition to mid- and large-scale development, would threaten adjacent properties and roadways with increased flooding. Accordingly, the review of all projects through the Land Use Ordinance, its subdivision, shoreland zoning and site plan review provisions includes drainage standards. Improvements to public stormwater facilities that are needed because of development projects have a share of the cost for those improvements borne by the applicant. As well, State regulations for applicable projects address stormwater management.

- (7) *How do residents dispose of septic tank waste? Are there issues or concerns regarding septic tank waste?*

Property owners are responsible for the maintenance and disposal of their septic waste. The Town is aware of failing septic systems in some areas and works with property owners to address these issues on a case-by-case basis.

- (8) *Is school construction or expansion anticipated during the planning period? Are there opportunities to promote new residential development around existing and proposed schools?*

The Mt. Ararat regional high school, which educates students from Bowdoin, Bowdoinham, Harpswell and Topsham was built in 1979. In 2020, a new high school was built on the same parcel and held its first classes during the Covid-19 pandemic.

Given the decline in enrollments seen over the past decade, and the forecasted population increase in the adult population predominately, new school construction or expansion during the planning period is unlikely to be warranted in Bowdoinham.

Funding cuts, which have occurred chiefly at the State level, will dictate the amount of school improvements to be made over the planning period and may result in the closing of underutilized facilities. Regionalization of education has been promoted by the State to reduce education costs, especially administrative costs. The decisions on education spending will be made on a regional basis, not by any one municipality alone.

Under current Town ordinances, and with some undeveloped parcels nearby, new residential development is possible around the Bowdoinham Community School. This school is within the village area and within walking distance of village residences.

Sidewalks were constructed in the village area in 2011 and 2012 on Cemetery Road, lower Ridge Road, River Road, Main Street, School Street and Bay Road. The village area is now served by sidewalks connecting the village with the public library, town office and Community School and recreation fields. See the Transportation Chapter and the Future Land Use Plan Chapter for more information.

- (9) *Is the community's emergency response system adequate? Are improvements needed?*

Bowdoinham's Fire Department and EMS are staffed mostly by volunteers who hold full-time or part-time jobs in other occupations or are retired. Maintaining adequate staffing levels is an ongoing concern. There are no needed facility improvements to existing buildings during the ten-year planning period. New or replacement vehicles (fire trucks and ambulances) anticipated to be needed during this same period include two pumper trucks and a tanker truck. Fire Trucks are the most significant expenditure and they are replaced on a regular basis with funding from a reserve account and bonding.

- (10) *Is the solid waste management system meeting current needs? Is the community reducing the reliance on waste disposal and increasing recycling opportunities? Are improvements needed to meet future demand?*

Recycling has reduced the volume of waste in Bowdoinham. The system is meeting the current capacity. However, there is ongoing investigation through the solid waste committee find ways

to improve access to recycling in Bowdoinham.

*(11) Are improvements needed in the telecommunications and energy infrastructure?*

All businesses require basic public services. In the current economy, access to markets far beyond Bowdoinham is essential for many as well. Internet and telecommunications infrastructure in Bowdoinham is sufficient in some parts of the community but could be improved (as technology advances) and expanded to fill the current gaps in coverage and to increase internet speeds. Town received ConnectME grant, to expand service - <https://www.bowdoinham.com/project/internet-project>.

*(12) Are local and regional health care facilities and public health and social service programs adequate to meet the needs of the community?*

Health care is provided at a regional level through a clinic in Richmond and two hospitals in Brunswick. See the conditions and trends section below for more information. Locally, Bowdoinham EMS provides emergency response with additional assistance from Northeast Mobile Health. The Town Health Officer, a registered nurse with a master's degree in public health advises residents on issues of local concern like vaccinations, pests, mold, and disposing of expired medications. In addition, there are several social service agencies that provide services to residents include Spectrum Generations, People Plus and KVCAP. The current arrangement works fairly well, however, additional needs may be necessary in the future for the elderly population of Bowdoinham as it increases over the next 10 years. These additional needs may include visiting nurses, in-home care or paramedicine services.

*(13) Will other public facilities, such as town offices, libraries, and cemeteries accommodate projected growth?*

The Town's public facilities, including the municipal building and fire station, recreation facilities, and the cemeteries generally have adequate capacity for the next ten-year period. The Town has completed designs for a renovated Town Office and expanded facility at Pond Road for Solid Waste, these will be large projects in the next 7 to 15 years.

*(14) To what extent are investments in facility improvements directed to growth areas?*

Most public facilities (school, town office, public works, recreation fields, library) are located within the village area, which is a designated growth area, and so funding for their improvement, benefits the growth area.

*(15) Does the community have a street tree program?*

The Town does not have a formal street tree program. Public Works plants trees as requested by the Select Board and Town Manager. Since 2014, such work has occurred at cemeteries and at Maily Waterfront Park.

## Fiscal Capacity & Capital Investment Plan

### Conditions and Trends

(1) *Identify community revenues and expenditures by category for the last five (5) years and explain trends.*

Total municipal revenues increased 15.4% over the last five years compared to 18.1% from 2006-2010. Property and business equipment taxes comprised 87.3% of revenues in 2010 and increased to 91.5% of revenues in 2022. The average annual amount of intergovernmental revenue (State aid) decreased 3% from \$375,465 during 2006-2010 to \$363,528 during 2018-2022. Other sources of revenue remained relatively constant as a percentage of total revenues.

<b>General Fund Town Revenues for the years ending June 30th</b>						
<b>Categories</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>Percent Change</b>
Taxes	\$4,652,448	\$4,796,841	\$5,037,180	\$5,405,113	\$5,436,248	16.8%
Intergovernmental	\$306,181	\$348,236	\$439,021	\$295,511	\$428,693	40.0%
Licenses, Permits, Fees	\$54,967	\$55,251	\$52,594	\$74,788	\$92,389	68.1%
Charges for Services	\$121,139	\$107,086	\$88,799	\$89,421	\$95,855	-20.9%
Investment Income	\$11,175	\$23,647	\$30,992	\$171,551	-\$118,731	-1,162.5%
Other	\$2,379	\$30,783	\$2,439	\$4,319	\$6,121	157.3%
<b>Total</b>	<b>\$5,148,289</b>	<b>\$5,361,844</b>	<b>\$5,651,025</b>	<b>\$6,245,354</b>	<b>\$5,940,575</b>	<b>15.4%</b>

Source: 2018-2020 Financial Audit Reports prepared by Smith & Associates, CPAs, 2021-2022 reports generated by James Wadman, CPA.

Notes: General Fund Statement of Revenues, Expenditures and Changes in Fund Balance: Actual Amounts.

Total expenditures increased 33% over the last five years compared to 17.9% from 2006-2010, a difference of 15%. Inflation over the past few years has played a significant role in the increase. The dollar had an average inflation rate of 3.89% per year between 2018 and 2022, producing a cumulative price increase of 14.16%. Further, the town is now fully staffed and pays competitive wages. In addition, the construction of a new public works facility was another large expense the town has taken on during this time frame. The largest single expense, education (over which municipal government has no control) increased 15.5% from 2018 to 2022, comprising 50% of total expenditures in 2022, down from 55.8% of total expenditures in 2010. Further, when changing auditing companies public health and welfare costs were absorbed into the general government expenditures which accounts for a modest percentage of the increase in the general government category.

<b>General Fund Town Expenditures for the years ending June 30th</b>						
<b>Categories</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>Percent Change</b>
General Government	\$456,408	\$504,037	\$574,496	\$740,046	\$764,870	67.6%
Public Works, Maintenance	\$495,965	\$464,881	\$547,037	\$490,067	\$452,769	-8.7%
Solid Waste	\$174,135	\$166,739	\$178,595	\$228,735	\$168,343	-3.3%
Public Safety	\$100,219	\$108,593	\$93,154	\$114,966	\$102,835	2.6%
Recreation	\$32,344	\$42,517	\$25,883	\$33,289	\$53,466	65.3%
Public Health, Welfare	\$26,300	\$49,388	\$63,100	-	-	-
Education	\$2,917,228	\$3,033,690	\$3,367,082	\$3,375,271	\$3,370,366	15.5%
Contingency	-	-	-	-	-	-
Debt Service	\$306,663	\$380,882	\$388,038	\$898,064	\$1,148,616	274.6%
County Tax, Overlay	\$485,269	\$483,142	\$523,426	\$529,611	\$579,880	19.5%
Capital Outlay	-	-	\$19,500	\$18,034	\$56,980	-
<b>Total</b>	<b>\$4,994,531</b>	<b>\$5,233,869</b>	<b>\$5,760,811</b>	<b>\$6,410,049</b>	<b>\$6,641,145</b>	<b>33.0%</b>
Excess (deficiency) of revenue	\$153,758	\$127,975	(\$109,786)	(\$164,695)	(\$700,570)	-555.3%

Source: 2018-2020 Financial Audit Reports prepared by Smith & Associates, CPAs, 2021-2022 reports generated by James Wadman, CPA.

Notes: General Fund Statement of Revenues, Expenditures and Changes in Fund Balance: Actual Amounts.

(2) Describe means of funding capital items (reserve funds, bonding, etc.) and identify any outside funding sources.

Capital investments are funded through capital reserve funds supported by property tax revenues town-wide as well as through tax increment financing district property tax revenues (pipeline), intergovernmental revenues (State aid), grants and loans from federal and state sources, and from municipal bonds.

(3) Identify local and state valuations and local mil rates for the last five (5) years.

The local valuation of Bowdoinham increased 15.8% in the last five years.

<b>Bowdoinham Local Valuations</b>						
<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>Change</b>	<b>Percent Change</b>
\$262,247,000	\$265,927,600	\$297,799,100	\$298,615,200	\$303,845,510	41,598,510	15.8%

Source: Town Annual Reports; Town tax assessment records

The State valuation of the Town increased 34.4% in the last five years.

<b>Bowdoinham State Valuations</b>						
<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>Change</b>	<b>Percent Change</b>
\$264,450,000	\$279,505,000	\$291,550,000	\$332,950,000	\$355,450,000	\$91,000,000	34.4%

Source: Maine Revenue Services

The Town's mil (tax) rate increased 0.71% in the last five years.

<b>Bowdoinham Mil Rates</b>						
<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>Change</b>	<b>Percent Change</b>
16.85	17.15	16.47	16.87	16.97	0.12	0.71%

Source: Town Annual Reports, Town tax assessment records

- (4) *How does total municipal debt (including shares of county, school and utility) compare with the statutory and Maine Bond Bank recommended limits on such debt?*

Title 30-A MRSA Section 5702 contains a limitation on the amount of debt that municipalities may incur. A municipality cannot issue debt (for purposes other than school, storm or sanitary sewer, energy facility or for municipal airports) that would exceed 7.5% of the municipality's last full State valuation. The statute contains additional limits for school, storm or sanitary sewer, energy facility and for municipal airports. There is an overall debt limit for all types of debt of 15% of the municipality's last full State valuation. The Town has never exceeded the statutory limit.

The Maine Bond Bank has no set policy on the amount of total debt a municipality can or should have outstanding other than to be sure that the municipality is in compliance with the provisions of Maine law regarding limitations on local debt. The Maine Bond Bank looks at outstanding debt, both direct and contingent, from such perspectives as debt per capita, percentage of operating budget to debt service, and total debt among other factors.

Analysis

- (1) *How will future capital investments identified in the plan be funded?*

Capital investments will continue to be funded through capital reserve funds supported by property tax revenues town-wide as well as through tax increment financing district property tax revenues (pipeline), intergovernmental revenues (State aid), grants and loans from federal, state and private sources, and from municipal bonds.

- (2) *If the community plans to borrow to pay for capital investments, does the community have sufficient borrowing capacity to obtain the necessary funds?*

The community does have sufficient borrowing capacity. In fiscal year 2023, total municipal debt was 1.67% of the Town's last full State valuation, below the statutory limits (7.5% and 15%) as set forth in Title 30-A MRSA Section 5702.

- (3) *Have efforts been made by the community to participate in or explore sharing capital investments with neighboring communities? If so, what efforts have been made?*



As noted in the Public Facilities and Services Chapter, the Town does cooperate with neighboring communities, multi-community quasi-municipal organizations and with Sagadahoc County in the provision of services (public education, police protection, fire department mutual aid, and the Bowdoinham Water District).

### Capital Investment Plan

*The comprehensive plan must include a capital investment plan that:*

- (1) Identifies and summarizes anticipated capital investment needs within the planning period in order to implement the comprehensive plan, including estimated costs and timing, and identifies which are municipal growth-related capital investments;*
- (2) Establishes general funding priorities among the community capital investments; and*
- (3) Identifies potential funding sources and funding mechanisms.*

For (1) through (3), see the table below titled Bowdoinham Capital Investment Plan Summary 2014-2024.

### *Purpose and Definition*

The purpose of a capital investment plan (CIP) is to establish a framework for financing needed capital investments. A CIP guides budgeting and expenditures of tax revenues and identifies needs for which alternative sources of funding such as loans, grants or gifts and donations will be sought.

Capital investments include the repair, renewal, replacement or purchase of capital items. Capital investments differ from operating expenses or consumables. The expense of consumables is ordinarily budgeted as operations. Capital investments generally have the following characteristics: they are relatively expensive (typically having an acquisition cost of \$5,000 or more); they usually do not recur annually; they last for years (often having a useful life of three or more years); and they result in fixed assets. Capital items can include equipment and machinery, buildings, real property, utilities and long-term contracts and are funded through the establishment of financial reserves.

Capital investments are prioritized each year in the budget process based on the availability of funds and the political will of the community. A complete CIP describes expected yearly investment and allows for both changes in priorities and reduction of available funds. The CIP is intended to prevent a large capital investment from occurring in a single fiscal year. The unexpected purchase of a sizeable investment can overburden the tax rate and cause large fluctuations in tax bills from year to year. The annual provision for eventual replacement of capital investments depends on the useful life of the capital investments. It is important that capital investments be financially accounted for each fiscal year, minimizing later expenses.

For the purposes of this plan, the total costs have been recognized with an indication of the expected period for each item that is desired based upon priority ratings. The Town is currently drafting a complete capital investment plan that will provide for a yearly allocation of available and applicable funds. Each year any necessary changes will be made to the CIP and it will be

included in the annual budget. Each year the Finance Advisory Committee will review the funding requests and make a recommendation for Select Board review.

*Priority Rankings*

The capital investments identified below were assigned a priority based on the listed ratings. Logically, “A” investments would be implemented prior to “B” and so on. Lower priority items may be funded ahead of schedule if higher priority items have already been funded or are prohibitively expensive, or if other sources of revenue (such as donated funds) become available. In order to fund capital investment projects it is necessary to begin to identify funding sources and set aside funds in advance of the projected time of funding.

- A. *Immediate need. A capital investment rated in this category would typically remedy a danger to public health, safety and welfare.*
- B. *Necessary, to be accomplished within two to five years. A capital investment rated in this category would typically correct deficiencies in an existing facility or service.*
- C. *Future investment or replacement, to be accomplished within five to ten years. A capital investment rated in this category would be desirable but is of no urgency. Funding would be flexible and there would be no immediate problem.*
- D. *Desirable, but not necessarily feasible within the ten year period of this Comprehensive Plan.*

Projects referenced in this Comprehensive Plan and existing reserve accounts are the basis for this capital investment plan and have been incorporated into the table below. As well, State and federal mandates necessitating some of these projects have been noted in the table. The need for each project is shown in parentheses.

<b>Bowdoinham Capital Investment Plan Summary 2024-2034</b>					
<b>Comprehensive Plan Chapter/Town Dept.</b>	<b>Anticipated Item and (Need)</b>	<b>Estimated Cost</b>	<b>Priority</b>	<b>Responsible Party (ies)</b>	<b>Possible Funding Sources</b>
Administration	Chimney repair – town office	\$25,000	High	Town Manager	Reserve
Administration	Parking Lot – town office	\$125,000	High	Town Manager	Grant/Reserve
Administration	Future septic – town office	\$25,000	Low	Town Manager	CI Reserve
Administration	Repairs, upgrades – town office	\$100,000	Low	Town Manager	Reserve, grants

**Bowdoinham Capital Investment Plan Summary 2024-2034**

<b>Comprehensive Plan Chapter/Town Dept.</b>	<b>Anticipated Item and (Need)</b>	<b>Estimated Cost</b>	<b>Priority</b>	<b>Responsible Party (ies)</b>	<b>Possible Funding Sources</b>
Administration	Repairs – Town Hall	\$750,000	High/Med	Town Manager, Select Board	Grant/Bond/ Reserve
Solid Waste	Recycling facility upgrades	\$250,000	Med	Town Manager, Select Board	Recycling Reserve/Grants
Public Works	Future repairs - Public Works facility	\$50,000	High	Town Manager, Select Board	Public Works Reserve
Fire Department	EMS addition	\$350,000	Low	Town Manager, Fire Chief, Select Board	Fire Reserve/Grants
Fire Department	Future Repairs	\$100,000	Low	Town Manager, Fire Chief, Select Board	Fire Reserve/Grants
Recreation Department	Recreation Facility	\$25,000	Low	Town Manager, Select Board	Recreation Reserve/Grants
Cemeteries	Repairs	\$300,000	Med	Town Manager, Select Board	Cemetery Reserve/Grants
Administration	Replace computer server and rack	\$10,000	Low	Town Manager, Select Board	Electronic Equipment Reserve
Administration	Electronic Kiosk Sign	\$20,000	Med	Town Manager, Select Board	Grant/TIF
Administration	Technology improvements (phones, locks, cameras)	\$25,000	Med	Town Manager, Select Board	Reserve
Fire Department	2011 E-One Class A Pumper (Engine #1)	\$500,000	Low	Town Manager, Fire Chief, Select Board	Reserve & Bond
Fire Department	2002 International Class A Pumper (Engine #2)	\$750,000	High	Town Manager, Fire Chief, Select Board	Bond

<b>Bowdoinham Capital Investment Plan Summary 2024-2034</b>					
<b>Comprehensive Plan Chapter/Town Dept.</b>	<b>Anticipated Item and (Need)</b>	<b>Estimated Cost</b>	<b>Priority</b>	<b>Responsible Party (ies)</b>	<b>Possible Funding Sources</b>
Fire Department	2007 Freightliner tanker (Tank #3)	\$500,000	Low	Town Manager, Fire Chief, Select Board	Reserve & Bond
Fire Department	SCBA Airpacks	\$100,000	High	Town Manager, Fire Chief, Select Board	Reserve
Fire Department	Extraction Equipment	\$30,000	High	Town Manager, Fire Chief, Select Board	Reserve
Fire Department	Ambulance	\$350,000	Low	Town Manager, Fire Chief, Select Board	Lease
Public Works	2017 Freightliner truck w/ dump	\$200,000	High	Town Manager, Select Board	Reserve
Public Works	2018 Ford F-550 Superduty truck w/ dump	\$200,000	Low	Town Manager, Select Board	Reserve
Public Works	2016 Freightliner 114SD truck w/ dump	\$250,000	Low	Town Manager, Select Board	Bond
Public Works	2014 Dodge Ram 1500 pickup truck	\$35,000	Med	Town Manager, Select Board	Reserve
Public Works	Excavator	\$250,000	Low	Town Manager, Select Board	Municipal lease
Public Works	Sander	\$10,000	Low	Town Manager, Select Board	Reserve
Public Works	2003 Cadet Mower	\$7,000	Low	Town Manager, Select Board	Reserve
Public Works	2005 Cadet Mower	\$7,000	Low	Town Manager, Select Board	Reserve
Public Works	Zero Turn Mower	\$7,500	Low	Town Manager, Select Board	Reserve

**Bowdoinham Capital Investment Plan Summary 2024-2034**

<b>Comprehensive Plan Chapter/Town Dept.</b>	<b>Anticipated Item and (Need)</b>	<b>Estimated Cost</b>	<b>Priority</b>	<b>Responsible Party (ies)</b>	<b>Possible Funding Sources</b>
Public Works	Sweeper (backhoe, front mount)	\$8,000	High	Town Manager, Select Board	Reserve
Public Works	Back-up plow truck	\$100,000	High	Town Manager, Select Board	Reserve
Solid Waste	New Van or Box Truck – Recycling	\$15,000	High	Town Manager, Select Board	Recycling Reserve
Solid Waste	Toyota Electric Pallet Truck – Recycling	\$20,000	Low	Town Manager, Select Board	Recycling Reserve
Public Works	Pork Point Road (1¼” surface coat & shoulders)	\$310,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Dingley Road (1¼” surface coat & shoulders)	\$175,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Carding Machine Road – 2 (1¼” surface coat & shoulders)	\$175,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Wildes Road (1¼” surface coat & shoulders)	\$90,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Abagadasset Road (1¼” surface coat & shoulders)	\$100,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Ridge Road – 2 & 3 (¼” width shim) [rutting]	\$200,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Millay Road (¼” width shim) [rutting]	\$150,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Carding Machine Road - 1 (¼” width shim) [rutting]	\$75,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	South Pleasant Street (¼” width shim) [rutting]	\$50,000	Med	Town Manager, Select Board	Budget/Bond

**Bowdoinham Capital Investment Plan Summary 2024-2034**

<b>Comprehensive Plan Chapter/Town Dept.</b>	<b>Anticipated Item and (Need)</b>	<b>Estimated Cost</b>	<b>Priority</b>	<b>Responsible Party (ies)</b>	<b>Possible Funding Sources</b>
Public Works	Fisher Road (¾" full width shim)	\$175,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Browns Point Road (¾" full width shim)	\$200,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	South Pleasant Street (¾" full width shim)	\$100,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Ridge Road – 4 (¾" full width shim)	\$200,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Carding Mach. Rd. - 4 (¾" full width shim)	\$150,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Dinsmore Cross Road (¾" full width shim)	\$50,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Ridge Road – 2 & 3 (¾" full width shim)	\$400,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Millay Road (¾" full width shim)	\$300,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Back Hill Road (reconstruct)	\$150,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	School Street (¾" full width shim & stormwater infrastructure)	\$150,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Church Street (¾" full width shim)	\$20,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Lucas Lane (¾" full width shim or Chip Seal)	\$25,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Preble Road (¾" full width shim)	\$60,000	Med	Town Manager, Select Board	Budget/Bond

**Bowdoinham Capital Investment Plan Summary 2024-2034**

<b>Comprehensive Plan Chapter/Town Dept.</b>	<b>Anticipated Item and (Need)</b>	<b>Estimated Cost</b>	<b>Priority</b>	<b>Responsible Party (ies)</b>	<b>Possible Funding Sources</b>
Public Works	Spear Drive (3/4" full width shim or Chip Seal)	\$30,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Wildes Road (Chip Seal)	\$35,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Abagadasset Road (Chip Seal)	\$35,000	Med	Town Manager, Select Board	Budget/Bond
Public Works	Carding Machine Road (Chip Seal)	\$200,000	Med	Town Manager, Select Board	Budget/Bond

Source: Town Manager

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## Land Use

### Conditions & Trend

- (1) An existing land use map, by land use classification (such as mixed-use, residential, commercial, institutional, industrial, agricultural, commercial forests, marine, park/recreational, conserved, and undeveloped land).

Existing land uses are shown on these three maps titled Bowdoinham Aerial Image, Land Cover, and Public Facilities and Services. Current land use districts are shown on the Town of Bowdoinham Land Use Map and on the Official Shoreland Zoning Map.

According to the Census, the total area for Bowdoinham is 39.1 square miles (34.4 square miles of land and, 4.7 square miles of water). The next table shows the acreage and percent by land cover category. See the map titled Land Cover for the locations of these areas.

<b>Land Cover in Bowdoinham</b>		
<b>Categories</b>	<b>Acres</b>	<b>Percent</b>
Developed Land	418.6	1.7%
Cultivated Crops and Pasture/Hay	3,649.4	14.6%
Forest	13,968.3	55.7%
Grasslands/Herbaceous and Scrub/Shrub	346.9	1.4%
Wetlands and Wetland Forest	2,228.4	8.9%
Open Water	2,590.1	10.3%
Other	1,871.3	7.5%
Total Area (land and water)	25,073.0	100.0%

Source: Maine Land Cover Dataset

Note: The land cover data is based on 2004 SPOT imagery and 2001 LandSat data

The next table shows land owned by the Town or State, and enrolled in current use tax programs. See the maps titled Public Facilities and Farmland/Hayland & Current Use Tax Programs for the locations of these parcels.

<b>Bowdoinham: Town, State, Tax Programs Acreage</b>		
<b>Categories</b>	<b>Acres</b>	<b>Percent</b>
Town-owned	94	0.4%
State-owned	1,537	6.1%
Enrolled in Tree Growth Tax Program	2,174	8.6%
Enrolled in Open Space Tax Program	681	2.7%
Enrolled in Farmland Tax Program	1,299	5.2%
Total Land in Bowdoinham	22,016	87.8%
Total Area (land and water)	25,073	100.0%



Source: Town Assessor Data, 2024

Note: Individual parcels may be included in more than one category.

Accordingly, acreage figures should not be added together.

(2) A summary of current lot dimensional standards.

There is one town-wide district outside of the shoreland zoning districts. Its dimensional standards are shown in the next table.

<b>Town-wide Land Use District Outside of the Shoreland Zoning Districts</b>						
<b>District</b>	<b>Min. Lot Size</b>	<b>Front Setback</b>	<b>Side Setback</b>	<b>Rear Setback</b>	<b>Open Space Requirement</b>	<b>Min. Road Frontage</b>
Residential/Agricultural	43,560sf	50ft	10ft	10ft	25% of Net Residential Area	150ft
Village District I	20,000sf	20ft	10ft	10ft	-	75ft
Village District II	30,000sf	30ft	10ft	10ft	-	100ft

Source: Land Use Ordinance

Note: 43,560 square feet = 1 acre

Within the Shoreland Zone, the following dimensional standards apply for minimum lot size and shore frontage:

<b>Shoreland Zoning Districts</b>	<b>Minimum Lot Area</b>	<b>Minimum Shore Frontage</b>
Residential per dwelling unit	40,000 sf	200 ft
Governmental, Institutional, Commercial, or Industrial per principal structure:		
- within the Shoreland Zone Adjacent to Tidal Areas, Exclusive of Those Areas Zoned for Commercial Fisheries and Maritime Activities	40,000 sf	200 ft
- within the Shoreland Zone Adjacent to Tidal Areas Zoned for Commercial Fisheries and Maritime Activities	None	None
- within the Shoreland Zone Adjacent to Non-tidal Areas	60,000 sf	300 ft
Public and Private Recreational Facilities Within the Shoreland Zone Adjacent to Tidal and Non-Tidal Areas	40,000 sf	200 ft

Source: Land Use Ordinance

Notes:

- Land below the normal high-water line of a water body or upland edge of a freshwater or coastal wetland and land beneath rights-of-way and/or easements serving more than two (2) lots shall not be included toward calculating minimum lot area.
- Lots located on opposite sides of a public or private road shall be considered each a separate tract or parcel of land unless such road was established by the owner of land on both sides thereof after September 22, 1971.
- The minimum width of any portion of any lot within one hundred (100) feet, horizontal distance, of the normal high-water line of a water body or upland edge of a freshwater or

coastal wetland shall be equal to or greater than the shore frontage requirement for a lot with the proposed use.

- If more than one residential dwelling unit, principal governmental, institutional, commercial or industrial structure or use, or combination thereof, is constructed or established on a single parcel, all dimensional requirements shall be met for each additional dwelling unit, principal structure, or use.
- A cluster subdivision may be allowed as permitted in the underlying district provided that the overall dimensional requirements, including frontage and lot area per dwelling unit, are met. When determining whether dimensional requirements are met, only land area within the shoreland zone shall be considered.

Dimensional minimum setbacks standards for principal and accessory structures, as measured horizontal distance, from the normal high-water line of water bodies, streams, or the upland edge of a coastal or freshwater wetland, are shown in the next table.

<b>Shoreland Zoning Districts</b>	<b>Shoreland minimum setbacks for principal and accessory structures</b>
General Development II, Limited Commercial, Limited Residential, Stream Protection	100ft
General Development I	25ft
Marine (Commercial Fisheries/Maritime Activities)	None
Resource Protection	250ft

Source: Land Use Ordinance

Note: \*Except for structures, roads, parking spaces or other regulated objects specifically allowed in that district in which case the setback requirements specified above shall apply.

Dimensional lot area coverage standards are shown in the next table.

<b>Shoreland Zoning Districts</b>	<b>Maximum Lot Area Coverage within Shoreland Zone (Impervious Surface)</b>
Limited Commercial, Limited Residential, Stream Protection, Resource Protection	20%
General Development (Both I and II) adjacent to tidal waters and rivers	70%
Marine Commercial Fisheries/Maritime Activities	70%

Source: Land Use Ordinance

Height limits for principal or accessory structures and expansions of existing structures in these shoreland zone districts: Resource Protection, Limited Residential, Limited Commercial, and Stream Protection Districts, shall not exceed 35 feet. This limitation does not apply to structures such as transmission towers, windmills, antennas, and similar structures having no floor area.

- (3) *A description or map identifying the location of lots and primary structures created within the last ten years. Include residential, institutional, commercial, and industrial development.*

Most development within Bowdoinham from 2012 to 2022 has consisted of single-family detached residential dwellings.

The next table shows the number of units and structures built from 2012 to 2022 by category.

<b>Development in Bowdoinham 2012-2022</b>	
<b>Categories</b>	<b># of Structures Built</b>
Residential Structures (Housing Units)	131
Institutional Structures (Education Government Related)	0
Commercial Structures	12
Industrial Structures	0

Source: Planning Department, Assessor Records

Note: 192 dwelling units were constructed, including existing structures converted into dwelling units. 61 dwelling units were demolished or removed.

The number of dwelling units in Bowdoinham had therefore increased by 131.

From 2012 to 2022, there have not been any multi-unit developments in Bowdoinham. Four (4) residential subdivisions totaling approximately 5 new house lots have been approved since 2012, of which one (1) included land set aside for conservation. In comparison, 87 new house lots were created during this time though simple lot division outside of subdivision regulation. Divisions mostly occurred in Village District II (R02) and the Residential/Agricultural District (R03 and R04) in the northwestern section of Bowdoinham. Commercial development includes agriculture, trails, parking lots, parks, and shoreland management projects. There has been one office park developed in Town since 2012.

- (4) *Provide a brief description of existing land use regulations and other tools utilized to manage land use, including shoreland zoning, floodplain management, subdivision, site plan review, and zoning ordinances.*

Bowdoinham's existing land use regulations consist of the Land Use Ordinance most recently amended in 2022. This ordinance includes overall performance standards, land use (zoning), shoreland zoning, floodplain management, subdivision, site plan review provisions, administration, enforcement, penalties, and appeals.

See the response to question #2 above for information on zoning districts and see the Land Use Ordinance itself for a description of permitted uses within each district. With the exception of the Marine (Commercial Fisheries/Maritime Activities) District and the Resource Protection District, districts within Bowdoinham allow for mixed-use development, with the lowest or no impact uses allowed without a permit. Those uses with low to moderate potential impacts require a permit from the Road Commissioner or Code Enforcement Officer/Local Plumbing Inspector, as dictated by State law and/or as defined in the Land Use Ordinance. Uses with potentially moderate or greater impacts require planning board permits and/or site plan review permits. For purposes of site plan review, based upon scale and use, proposed projects are classified as Tier I, II, III, or as an Amendment.

Overall Land Use Ordinance performance standards (requirements) regulate the following in Bowdoinham:

<b>Land Use Ordinance Performance Standards (Article 4)</b>	
Access management (driveways/entrances)	Subsurface wastewater disposal
Back lots	Signs
Erosion and sedimentation control	Solar energy systems
Farm stand	Temporary buildings & non-permanent structures
Home based-business	Timber harvesting
Lighting	Vernal pools
Pool	Water quality protection
Road standards	Wind mills

Source: Land Use Ordinance

Performance standards for development and activities in shoreland zoning districts are listed in the next table.

<b>Shoreland Zoning Performance Standards* (Article 7)</b>	
Piers, Docks, Wharves, Bridges and Other Structures and Uses Extending Over or Below the Normal High-Water Line of a Water Body or Within a Wetland	Essential Services
	Mineral Exploration and Extraction
	Agriculture
Campgrounds	Timber Harvesting
Farm Stand	Clearing or Removal of Vegetation for Activities Other Than Timber Harvesting
Individual Private Campsites	Hazard Trees, Storm-Damaged Trees, and Dead Tree Removal
Commercial and Industrial Use	Exemptions to Clearing and Vegetation Removal Requirements
Parking Areas	Revegetation Requirements
Roads and Driveways	Erosion and Sedimentation Control
Stream Crossings	Soils
Signs	Water Quality
Storm Water Runoff	Archaeological Site
Septic Waste Disposal	Marinas

Source: Land Use Ordinance

Note: \*Minimum Lot Standards and Principal and Accessory Structures Standards are not shown in this summary table. They are referenced in the response to question #2.

Performance standards for development and activities within flood zones as delineated by FEMA are listed in the next table.

<b>Floodplain Management Development Performance Standards (Article 8)</b>	
Construction Standards	Recreational Vehicles
Water Supply	Accessory Structures
On Site Waste Disposal Systems	Floodways
Watercourse Carrying Capacity	Enclosed Areas Below the Lowest Floor
Residential	Bridges
Non Residential	Containment Walls
Manufactured Housing	Wharves, Piers and Docks

Source: Land Use Ordinance

Performance standards and design guidelines for subdivisions are listed in the next table.

<b>Subdivision Performance Standards and Design Standards (Article 9)</b>	
Vehicular Access	Historic and Archaeological
Traffic	Groundwater
Visual Impact	Wildlife Habitat
Utilities	Natural Areas
Water Supply	Open Space
Sewage Disposal	Solid Waste Management
Fire Protection	Air Quality
Financial Capacity	Stormwater
Technical Ability	Sedimentation and Erosion Control
Shoreland (cross-reference to Article 7)	Compliance with Ordinances
Floodplain (cross-reference to Article 8)	Spaghetti-lots
Wetlands and Waterbodies	Liquidation Harvesting
Water Quality	

Source: Land Use Ordinance

Performance standards for projects that are regulated by site plan review are listed in the next table.

<b>Site Plan Review Performance Standards (Article 10)</b>	
<b>General Performance Standards</b>	<b>Use-Specific Performance Standards</b>
Vehicular Access	Asphalt/Concrete Plant/Fabrication
Internal Vehicular Circulation	Automobile Graveyard & Junkyard
Pedestrian Circulation	Automobile Recycling Business
Municipal Services	Automobile Repair Garage
Visual Impact	Automobile Service Station
Lighting	Bank/Financial Institution
Signage	Bed & Breakfast
Buildings	Boarding/Lodging Facility
Landscaping	Campground
Buffering	Commercial Complex
Utilities	Daycare, Center
Water Supply	Daycare, Home
Sewage Disposal	Distribution Center
Fire Protection	Farm stand
Capacity of Applicant	Food Processing Facility
Shoreland	Gravel Pit
Floodplain	Kennels
Wetlands & Waterbodies	Hotel, Motel, & Inn
Historic & Archaeological	Manufactured Housing Park
Groundwater	Marijuana Establishments
Wildlife Habitat	Non-Roadside or Cross-Country Distribution Lines (greater than 34.5kV)
Natural Areas	Restaurant
Environmental Impact	Retail
Solid Waste Management	Self-Storage Facility
Hazardous, Special & Radioactive Materials	Solar Energy System
Air Quality	Telecommunication Tower
Water Quality	Warehouse
Stormwater	Wood Processing Facility
Sedimentation & Erosion Control	Noise

Source: Land Use Ordinance

For a description of Land Use Ordinance provisions covering natural resources, see the Natural Resources Chapter, Water Resources Chapter and Marine Resources Chapter. For a description of Land Use Ordinance provisions covering roads, driveways, entrances, sidewalks, parking lots and related facilities, see the Transportation Chapter.

- (5) *Estimate the minimum amount of land needed to accommodate projected residential, institutional, commercial, or industrial development at least ten (10) years into the future.*

For planning purposes, the 2035 housing unit count is forecast to total 1,399 units. At the current minimum lot size and maximum housing density, the projected new housing (149 units) would require up to 149 acres of buildable lots and did not include any ADUs. Since 2001, there has

been little demand for commercial or industrial development. Similar trends are likely, with an anticipated demand of 50 acres for future commercial and industrial development in the next ten years.

### Analysis of Current Land Use

- (1) *Is most of the recent development occurring: lot by lot; in subdivisions; or in planned developments? Is recent development consistent with the community's vision?*

Most recent development in Bowdoinham has consisted of single-family, detached residential units constructed on a lot-by-lot basis town-wide. New house lots have principally been created along existing public roads as opposed to being served by newly constructed subdivision roads. For more information on development trends please refer to the 2020 report titled “*Mapping Development and Predicting the Future in Bowdoinham, Maine: A Temporal Analysis of Development and Subsequent Predictions for the Future*” in the Additional Studies Section.

Development trends have in general been consistent with the community's vision statement adopted in 2024, an excerpt of which states, “In 2034, Bowdoinham is a quiet rural Maine community defined visually by agricultural landscapes, abundant woods and wetlands, a commercial village center, and historic buildings.

- (2) *What regulatory and non-regulatory measures would help promote development of a character, and in locations that are consistent with the community's vision?*

The Town could standardize the residential requirements of Village District I and II and expand the districts to match availability of municipal water to increase housing density. Further, to increase housing while preserving open space, the town could pursue a number of regulations including but not limited to increasing open space requirements in subdivisions, increase density, or adjust lot size requirements. See the Future Land Use Plan for more information.

Non-regulatory measures to promote the Town's vision statement would include the continued prioritizing of public improvements sought for the village area. These improvements could be funded through the already established tax increment financing district, and through grants and private donations. Likewise, Town support for community groups to promote businesses within the Town as a whole and within the village area specifically could help to rejuvenate the local economy and expand the employment opportunities of Bowdoinham residents. See the Economy Chapter for more information.

Private landowners can continue to be encouraged to place portions of their properties in conservation easements for agriculture, forestry, recreational activities, and for natural resource protection outside of the village area. The Town can continue to facilitate the activities of land trusts in these pursuits as well. See the Agriculture and Forestry Chapter and the Natural Resources Chapter for more information.

- (3) *Is the community's administrative capacity adequate to manage its land use regulation program, including planning board and code enforcement officer?*

Administrative capacity is adequate currently; however as development increases staff levels

may also have to increase. Ongoing training for the citizen-staffed volunteer Planning Board and Board of Appeals will be necessary, regardless of changes to municipal ordinances, to continue to ensure civil rights protections (due process) for applicants and citizens. This training is necessary because of the complexity of State statutory requirements, which are subject to change.

- (4) *Are floodplains adequately identified and protected? Does the community participate in the National Flood Insurance Program? If not, should it? If so, is the floodplain management ordinance up to date and consistently enforced? Is the floodplain management ordinance consistent with state and federal standards?*

Floodplains are identified on FEMA-issued Flood Insurance Rate Maps (FIRM) (ID 23023C0082F, effective date 7/16/2015 for Bowdoinham. It is believed these accurately show areas subject to flooding (100-year and 500-year flood events). See the map titled Hurricane Surge Inundation for areas prone to flooding from storms (Hurricane Categories 1-4), which includes areas beyond those shown on the FEMA FIRMs. The Town participates in the National Flood Insurance Program. Floodplain management provisions within the Land Use Ordinance were last amended in 2019. These provisions are consistent with State and federal standards and are consistently enforced.

#### Analysis of Future Land Use Plan

- (1) *Does the Future Land Use Plan align and/or conflict with the community's vision statement?*

The Future Land Use Plan is aligned with the vision statement.

- (2) *Is the configuration of the growth area(s) shaped by natural opportunities and/or constraints (i.e. the physical suitability or unsuitability of land for development)? The location of public facilities? The Bowdoinham Traffic Volume Counts?*

The configuration of the growth area was created based on location: of our historic village, the highway interchange, public facilities, and existing development. Shoreland Zoning and Floodplain Management will continue to impact new development in the growth area.

- (3) *How does the Future Land Use Plan relate to recent development trends?*

Bowdoinham's development trend has consisted of single-family homes and home-based businesses throughout Town. One of the goals of the Future Land Use Plan is to encourage new development primarily in the growth area.

- (4) *Given current regulations, development trends, and population projections, estimate how many new residential units and how much commercial, institutional, and/or industrial development will likely occur in the planning period? Where is this development likely to go?*

In the next ten years we can expect another 51 to 149 new homes and 10-15 new businesses. Over the last ten years, less than 10% of our new development occurred in the growth area. To encourage new developments to locate in our growth area, new standards/regulations are needed.



*(5) How can critical natural resources and important natural resources be effectively protected from future development impacts?*

New developments will have to continue to meet the standards of the Town's Land Use Ordinance, which includes Shoreland Zoning, Floodplain Management, Site Plan Review and Subdivision, as well as any applicable State and Federal regulations.

DRAFT

## Sea-Level Rise & Climate Change

### Inventory

#### *Introduction*

Climate change is already impacting Bowdoinham and poses significant threats to the community, including its beaches, natural resources, historical and cultural resources, infrastructure, people, and economy. Warming air and ocean temperatures; shifting precipitation patterns; more frequent and intense storm events; sea level rise; increasing risk of drought; habitat loss; reduced biodiversity; and increasing prevalence of vector-borne diseases such as Lyme are just some of the climate hazards and impacts facing the town.

Climate change will not only exacerbate existing hazards and issues, but also cause new risks and challenges for Bowdoinham. Intense precipitation events could cause more stormwater runoff, amplifying existing water quality problems. Increasing storm intensity and frequency will likely cause more power outages that last longer, disrupting the community's normal activities, impairing public safety, and straining local resources. Shifting terrestrial habitat conditions and warming temperatures could harbor the expansion of existing invasive species and enable the arrival of new invasive species, jeopardizing traditional recreation and fishing activities like snowmobiling and ice fishing. Extreme heat and drought will threaten public health, natural resources and agricultural production.

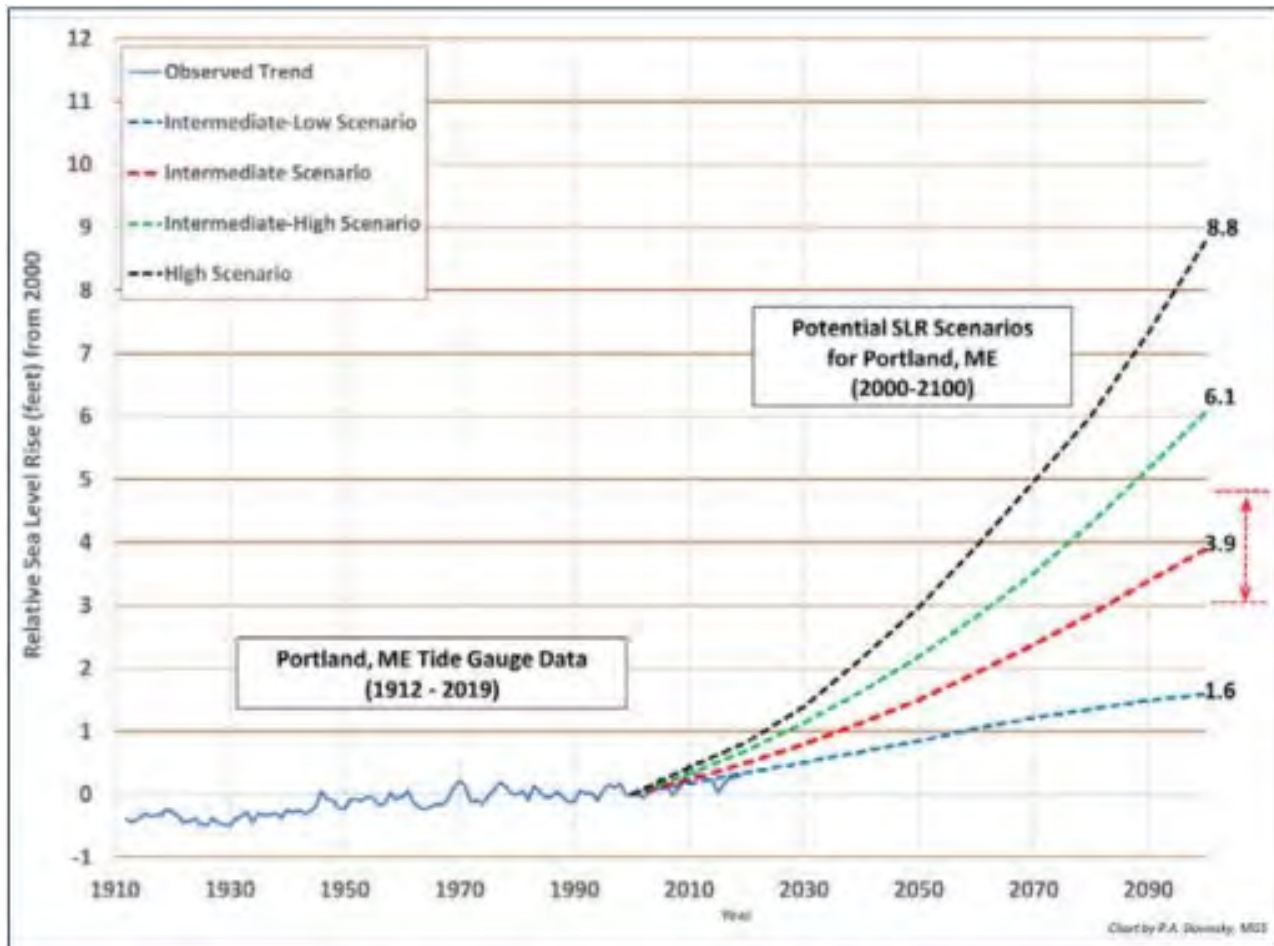
While climate change will likely impact every facet of the community in some way, those impacts will not be felt evenly across the community and will not be uniformly distributed among population groups. Individuals who already have increased social vulnerability or have been traditionally marginalized and underrepresented will be disproportionately affected by climate hazards, as they generally have lower capacity to prepare for, respond to, and recover from hazard events and disruptions. Those populations include children and older adults, households with lower or moderate incomes, individuals with preexisting health conditions, people of color, and those living alone. Bowdoinham has a relatively high percentage of older individuals (65+) living alone, characteristics that contribute to elevated social vulnerability as they tend to be associated with social isolation and decreased ability to prepare for and respond to storms, flooding, and other natural disasters. As a result, the community likely has an elevated level of vulnerability to natural hazards and climate impacts.

#### *(1) Trends in Sea Level Rise*

Sea level rise is a global phenomenon driven by two primary factors related to climate change: an increase in the volume of ocean water caused by the melting of land-based ice sheets and glaciers, and thermal expansion of seawater as it is warmed by increasing global temperatures. While sea level in Maine has been rising in the long-term, over the past few decades the rate of rise has accelerated. Nearly half of the locally documented sea level rise that has occurred over the past century has happened since 1993, representing a rapid increase in the rate of change. That rise increases the frequency of nuisance and high tide flooding, with southern Maine seeing four times as many nuisance flooding events over the last decade compared with the average of the past 100-years. According to a State 2020 study, under intermediate global greenhouse gas emissions scenarios there is a 67% probability that sea level will rise between 1.1 and 1.8 feet by 2050, and between 3.0 and

4.6 feet by the year 2100 relative to 2000 water levels. Further, those scenarios do not account for more intense rainfall expected from climate change in the region, which will exacerbate flooding.

### Historical Sea Level Rise in Portland



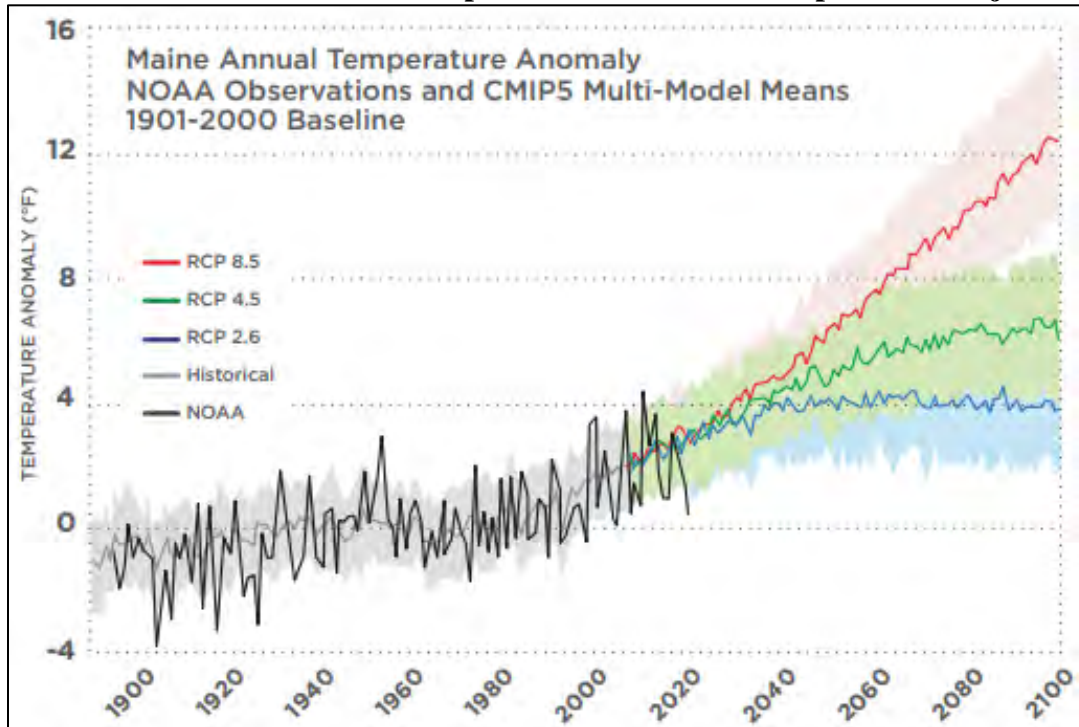
Source: Scientific Assessment of Climate Change and Its Effects in Maine prepared by the Maine Climate Council Scientific and Technical Subcommittee. P. Slovinsky, Maine Geological Society  
 Notes: Graph illustrating historical sea level rise in Portland (solid blue line) and scenarios from 2000-2100 with central estimates (50% probability of being met or exceeded) for low-intermediate to high sea level rise scenarios. The likely range of 3.0 to 4.6 feet (67% probability of sea level rise falling between these values) for the intermediate scenario is shown as a dashed red arrow and red lines on the right side of the figure. Values are presented in tenths of a foot and relate to a year 2000 starting point. Scenario data from the U.S. Army Corps of Engineers Sea Level Change Calculator based on sea level rise scenarios developed for the 4th U.S. National Climate Assessment.

### (2) Trends in Annual Temperature Rise

From increasing land and ocean temperatures, to rising sea levels, more frequent severe storms, shortening winters and disrupted agricultural seasons, and more prevalent public-health risks, scientists have cataloged, and continue to catalog, the current and expected harms of climate change on Maine. Since 1895, Maine’s statewide annual temperatures have risen by 3.2°F (1.8°C), with coastal areas warming more than the interior of the state. Of all the seasons, winters in Maine have warmed the most, which has caused Maine’s agricultural growing season to increase by two weeks.

According to a 2020 study by the State, climate models suggest Maine may warm by an additional 2 to 4°F by 2050 and up to 10°F by 2100, depending on the success of curbing greenhouse gas emissions.

### Historical Trends in Maine's Temperature and Future Temperature Projections



Source: State of Maine's 2020 Climate Action Plan, Maine Won't Wait.

Notes: Observed (black line) and model-projected (gray and colored lines) potential future temperature anomalies for Maine under different socio-economic/emissions scenarios (RCPs – Representative Concentration Pathways). Anomalies are the difference between the temperature in a particular year and the 1901-2000 baseline average.

Extreme heat days (days over ninety degrees) are expected to be 2-4 times more frequent in Maine by 2050, increasing the likelihood of heatwaves. Increasing temperatures and more high-heat days are putting people at risk, especially the elderly, those with health issues, or have limited access to home air conditioning. Extreme weather may cause injuries and deaths, outbreaks of waterborne diseases, and food borne illnesses following power outages, as well as mental health stress. Plant-based allergens have longer to affect Mainers during the year due to longer summers and shorter winters. The length of the pollen season and the amount of pollen produced will likely increase with rising temperatures and carbon dioxide concentrations. Asthma and hay fever are also likely to increase with climate change.

Further, nearly two-thirds of Maine's plants and animals, habitats, and at-risk species are either highly or moderately vulnerable to climate change. Warmer, shorter winters are contributing to increased tick-borne illnesses, such as Lyme disease. Tick abundance and disease risk are expected to increase with warming temperatures. If warming remains unchecked, our most sensitive plant and animal species on land and sea are expected to shift their ranges further north in pursuit of preferred environmental conditions.

### *(3) Trends in Precipitation and Drought*

Trends in Maine's precipitation have become both heavier and more frequent. Maine Climate Council's Scientific Assessment of Climate Change and its Effects in Maine note that Maine's annual precipitation (rain and snow) has increased by more than six inches since 1895, whereas extreme precipitation events (over an inch in 24 hours) are becoming more frequent. More extreme weather events like nor'easters and hurricanes cause flooding, extreme wind, uprooted trees, and damage to infrastructure and buildings.

Further, the impact of less precipitation falling as snow results in changes in seasonal water-flow patterns and increases drought conditions. These conditions decrease the resilience of water resources and can negatively impact the quantity and quality of water supplies, agricultural operations, and ecosystem health. Drought conditions and increased winds also increase the risk of wildfire.

#### Analysis

*This section was prepared by JT Lockman, Catalysis Adaptation Partners, LLC, for the Town of Bowdoinham through a grant from the Maine Coastal Program, funding provided by National Oceanic and Atmospheric Administration, U.S. Department of Commerce. Peter Slovinsky, Marine Geologist for Maine Geological Survey, Department of Agriculture, Conservation and Forestry created the data and maps showing the potential effects of sea level rise in Bowdoinham.*

#### *Vulnerability Assessment – Sea Level Rise Impacts on Roads, Rails, Buildings, Tidal Marshes, and Land Use*

The Maine Geological Survey (MGS) prepared a vulnerability assessment for the Town of Bowdoinham, predicting how many miles of roads and railroads, and the number of buildings that might be flooded by sea level rise alone, in the coming decades. MGS also predicted these impacts to roads, railroads, and buildings, if a 100-year storm occurred, on top of the risen sea level, in the coming decades.

Storms of varying strengths are described in terms of their probability of occurrence. A 100-year storm is defined as a storm that has a one in a hundred chance of occurring in any given year, also known as a "1% storm". It does not necessarily mean that such a storm will occur only once every 100 years. (With bad luck, such storms can arrive closer together in time.) In the flood insurance studies published for towns by the Federal Emergency Management Agency (FEMA), the overall water height is predicted for the 100-year storm, which is called the "Base Flood Elevation," or BFE.

The analysis started by determining the height of the highest tide of the year that occurs today and using that as the starting point for the assessment. Table 1 shows, in the first row, that the highest tide of the year occurring today in Bowdoinham is 7.5 feet above Mean Lower Low Water (MLLW). The 1% storm water elevation from the Town's effective FEMA flood study is 13.2 feet MLLW. With 3.3 feet of sea level rise (1 m), the highest annual tide would reach 10.8 feet, and the 1% storm would reach 16.5 feet. The table below summarizes the various water heights that would occur with different amounts of sea level rise during the highest annual tide of the year (the Spring Tide) and with a 1% storm. It should be noted that we used the current flood study height for the 1% storm, when looking into the future. It is probable that every 15 to 20 years, FEMA will update its flood

study for Bowdoinham, into the future.

**Table :1 Heights of the Highest Annual Tide with 1% Storm, at Different Amounts of Sea Level Rise**

Level Rise Scenario	Planning Timeframe	Highest Annual Tide*	
			1% storm **
<b>Existing (2013)</b>	Current	7.5	13.2
<b>1 foot (0.3 m)</b>	2050	8.5	14.2
<b>2 feet (0.6 m)</b>	2100	9.5	15.2
<b>3.3 feet (1.0 m)</b>	2100	10.8	16.5
<b>6 feet (1.8 m)</b>	2100+	13.5	19.2

*All elevations referenced to feet, above Mean Lower Low Water (MLLW).  
 \* HAT data derived from the nearest NOS tidal prediction stations (Cathance River, 7.5 ft MLLW and Sturgeon Island 6.9 ft MLLW); only Cathance River data shown.  
 \*\* 1% storm data is taken from the community's effective FEMA Flood Insurance Study, dated 11/19/1997; this is 9.4 ft NGVD, or 8.7 ft NAVD.  
 The NOAA VDATUM tool was used to convert NAVD to MLLW datum*

Source: Peter Slovinsky, MGS, POSM project, 2013

Further, a GIS analysis (Geographic Information Systems, or computer mapping) was conducted to estimate the impacts to roads, railroads, and buildings, associated with these higher water levels. These are general estimates based solely on the current building stock and current road and rail network and are suitable for planners to understand the relative changes in impacts at varying states of sea level rise and storm surge.

There are 85.6 miles of roads and 10.3 of rails in the Town of Bowdoinham. This table shows the mileage of roads and rails that would be flooded, as well as the percentage of total road and rail miles flooded, with different levels of sea level rise on top of the Highest Annual Tide.

**Table 2: Road and Rail Infrastructure Affected by Sea Level Rise Alone**

Scenario (HAT)	Impacted Roads		Impacted Rails	
	Miles	% impacted*	Miles	% impacted*
<b>Existing Conditions</b>	0.0	0.0%	0.0	0%
<b>0.3 m (1 foot) SLR</b>	0.0	0.0%	0.0	0%
<b>0.6 m (2 feet) SLR</b>	0.0	0.0%	0.0	0%
<b>1.0 m (3.3 feet) SLR</b>	0.2	0.2%	0.0	0%
<b>1.8 m (6.0 feet) SLR</b>	1.8	2.1%	0.3	3%

*\*impacted means the road or rail is covered by water*

Source: Peter Slovinsky, MGS, POSM project, 2013

The next step in the analysis was to model how much flooding might occur, when a 1% storm came on top of sea level rise. This table shows the mileage of roads and rails that would be flooded, as well as the percentage of total road and rail miles flooded, with a 1% storm on top of different levels of sea level rise.

**Table 3: Road and Rail Infrastructure Affected by a 1% Storm on Top of Sea Level Rise**

Scenario (1% storm)	Miles of Impacted Roads and Rails			
	Road Miles	% impacted*	Rail Miles	% impacted*
<b>Existing Conditions</b>	1.0	1.2%	0.1	1%
<b>0.3 m (1 foot) SLR</b>	1.8	2.1%	0.3	3%
<b>0.6 m (2 feet) SLR</b>	2.2	2.6%	0.7	7%
<b>1.0 m (3.3 feet) SLR</b>	3.4	4.0%	1.5	15%
<b>1.8 m (6.0 feet) SLR</b>	5.1	6.0%	2.9	28%

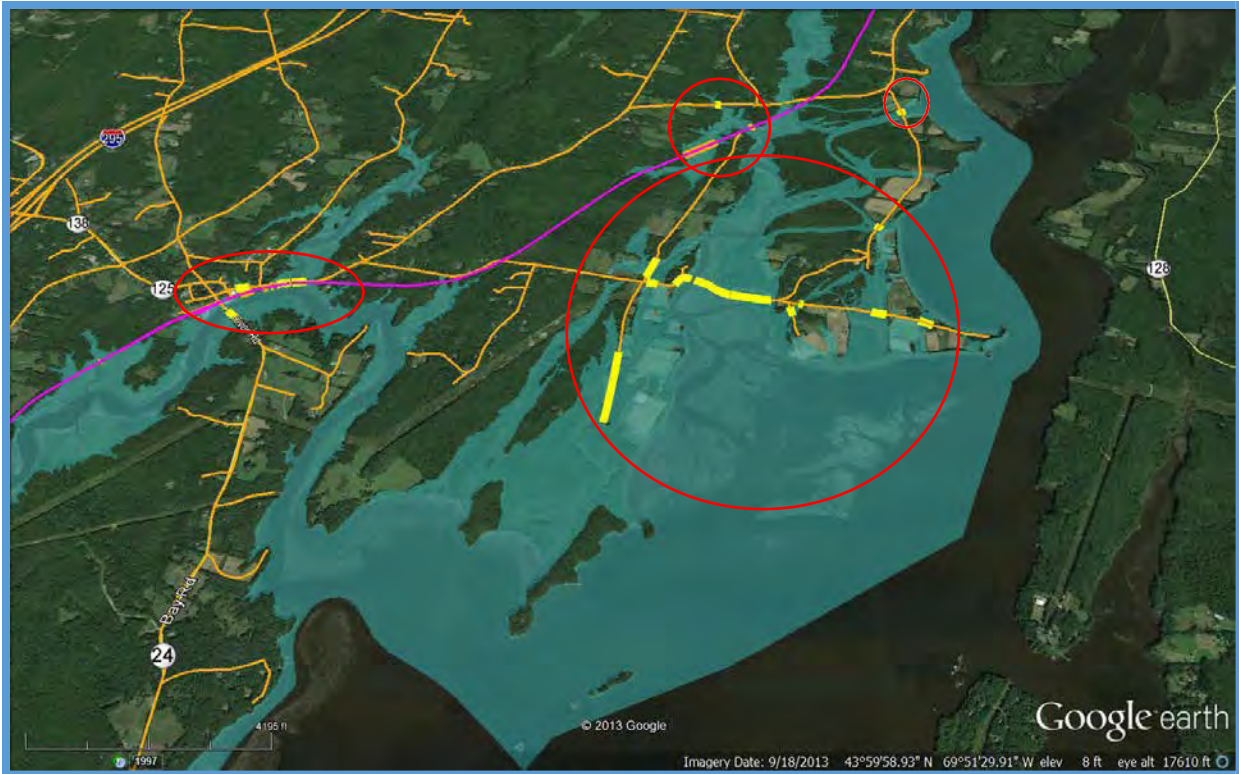
*\*impacted means the road or rail is covered by water*

Source: Peter Slovinsky, MGS, POSM project, 2013

The following figures, illustrate the locations of predicted future road and rail inundations, as summarized in Tables 2 and 3. Each of the figures represents predicted flooding for a scenario of either sea level rise alone, or a 1% storm heightened by sea level rise, by a future date. It should be noted that no figures were provided below for the year 2025, as only 6 inches of sea level rise is expected by that date, and no impacts were predicted that would be visible at this scale.



**Figure 1: 2050 Predicted Road and Rail Inundation with 1 foot of Sea Level Rise and 1% Storm**



Source: Peter Slovinsky, MGS, POSM project, 2013

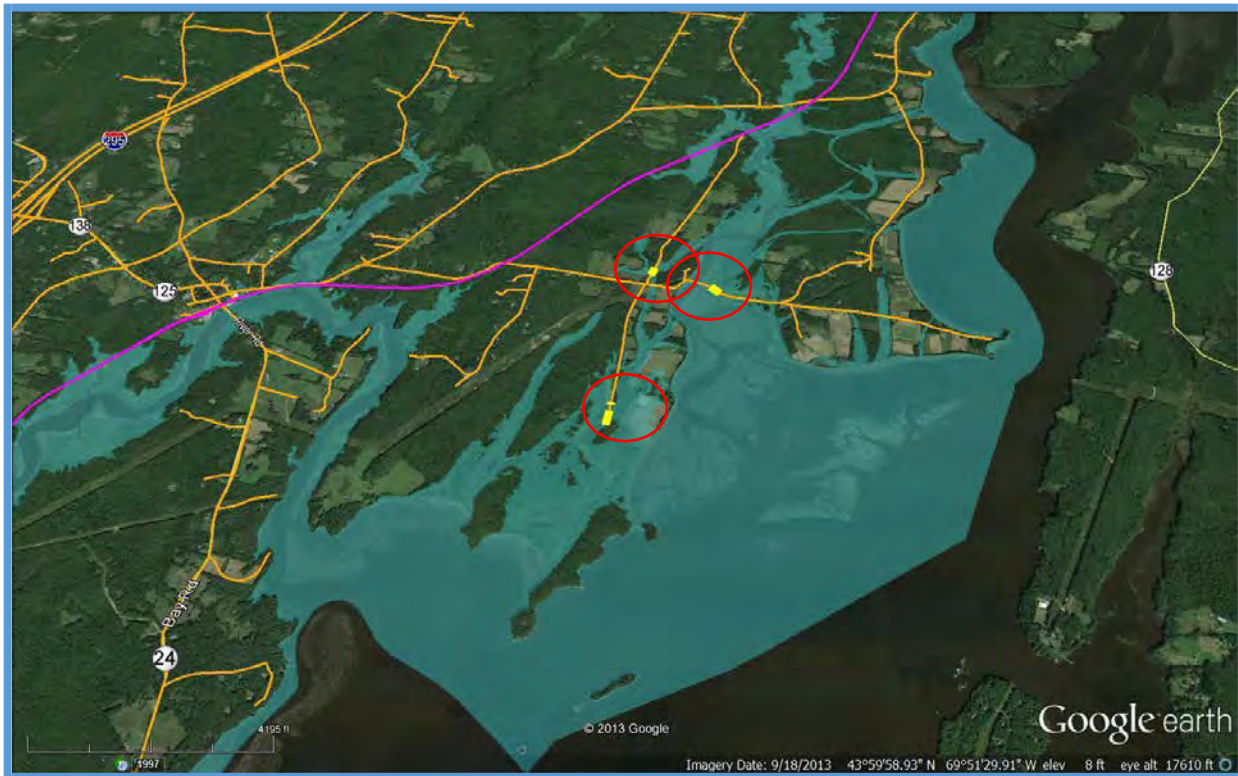
Notes: 2050 Predicted Road and Rail Inundation with 1 foot of Sea Level Rise and Storm Surge from a 1% Storm, illustrating Table 3, row 2. Total Water Elevation = 14.2 feet above MLLW.

**Legend:**

- Purple Line – Railroad
- Orange Lines – Road Network, from E-911
- Yellow Segments – Inundated Roads
- Orange Segments – Inundated Rails
- Red Circles – Areas around inundation
- Blue Shade – Extent of Flooding



**Figure 2: 2100 Predicted Road and Rail Inundation with 3.3 feet of Sea Level Rise Only**



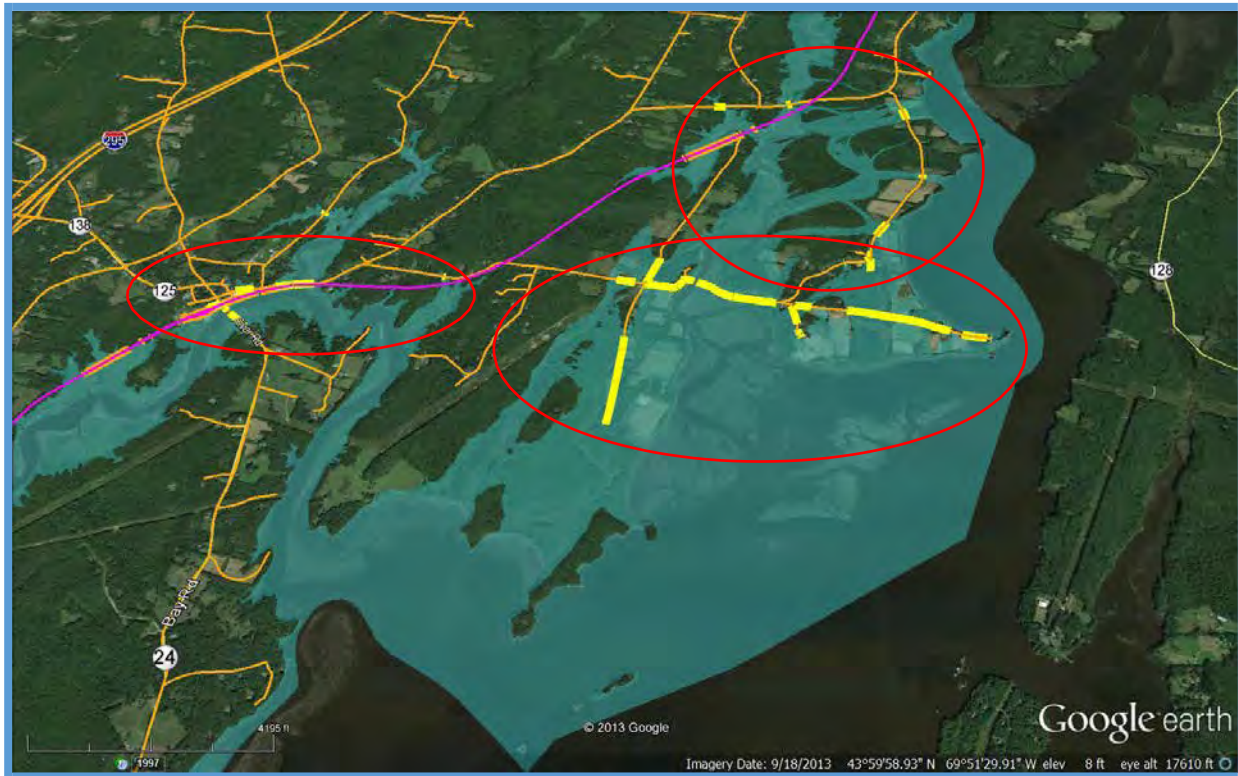
Source: Peter Slovinsky, MGS, POSM project, 2013

Notes: 2100 Predicted Road and Rail Inundation with 3.3 feet (1 m) of Sea Level Rise Alone, illustrating Table 2, row 4. Total water level = 10.8 feet above MLLW.

**Legend**

- Purple Line – Railroad
- Orange Lines – Road Network, from E-911
- Yellow Segments – Inundated Roads
- Orange Segments – Inundated Rails
- Red Circles – Areas around inundation
- Blue Shade – Extent of Flooding

**Figure 3: 2100 Predicted Road and Rail Inundation with 3.3 feet of Sea Level Rise and Storm Surge from a 1% Storm**



Source: Peter Slovinsky, MGS, POSM project, 2013

Notes: Figure 11: 2100 Predicted Road and Rail Inundation with 3.3 feet (1 m) of Sea Level Rise and Storm Surge from a 1% Storm, illustrating Table 3, row 4. Total water level = 16.5 feet above MLLW.

**Legend**

- Purple Line – Railroad
- Orange Lines – Road Network, from E-911
- Yellow Segments – Inundated Roads
- Orange Segments – Inundated Rails
- Red Circles – Areas around inundation
- Blue Shade – Extent of Flooding

The next step of the MGS analysis was an estimate of the number of buildings affected by sea level rise and future storm surges. Table 4 indicates the number of buildings whose center points would be flooded by the highest annual tide (HAT) with varying amounts of sea level rise, as well as how many would be flooded if a 1% storm in the future, came on top of sea level rise.

**Table 4: Number of Buildings Affected by Sea Level Rise Alone; by Sea Level Rise on Top of a 1% Storm**

<b><u>Number of Buildings Impacted*</u></b>		
<b>Scenario of Sea Level Rise on Top of the Highest Annual Tide (HAT)</b>	<b>By HAT only</b>	<b>By the 1% storm</b>
<b>Existing Conditions</b>	0	7
<b>0.3 m (1 foot) SLR</b>	0	12
<b>0.6 m (2 feet) SLR</b>	0	14
<b>1.0 m (3.3 feet) SLR</b>	4	23
<b>1.8 m (6.0 feet) SLR</b>	12	46

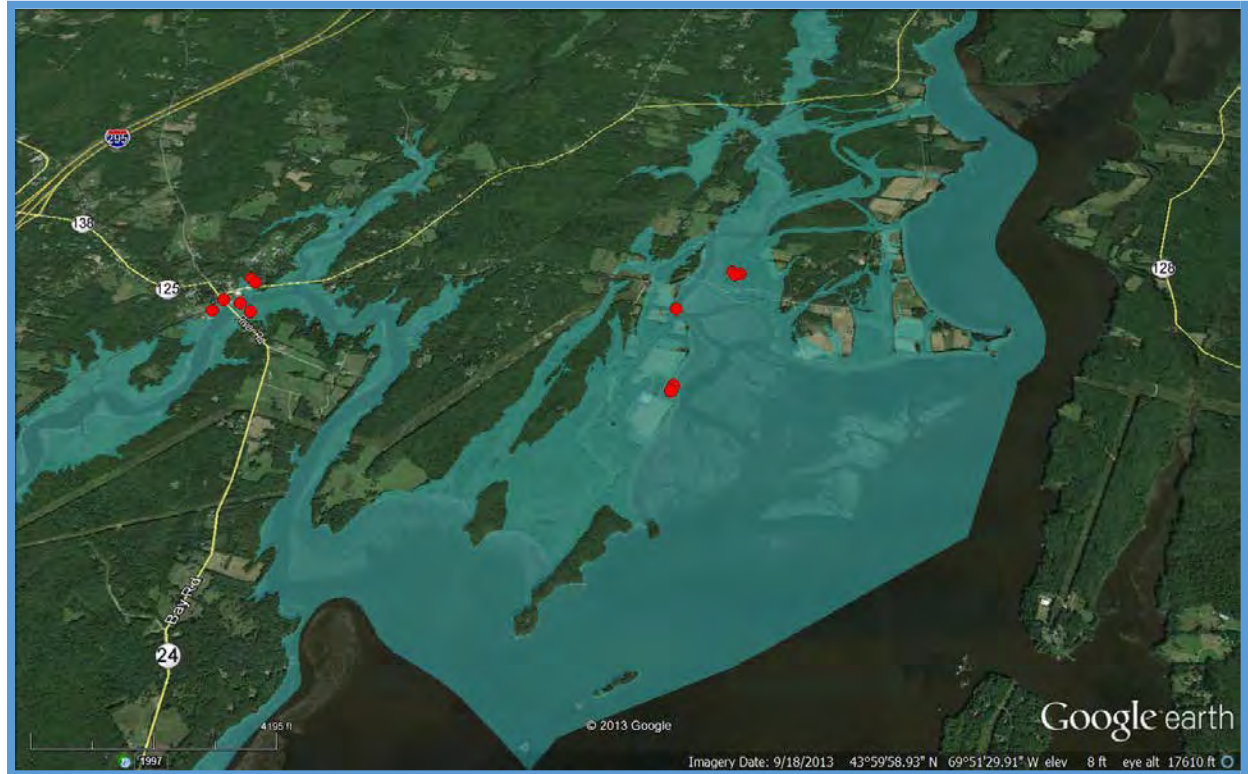
*\*impacted means the building point is intersected by water*

Source: Peter Slovinsky, MGS, POSM project, 2013

Figures 4 through 6 below, illustrate the building impacts from Table 4.



**Figure 4: 2050 Predicted Building Inundation with 1 foot of Sea Level Rise and Storm Surge from a 1% Storm**



Source: Peter Slovinsky, MGS, POSM project, 2013

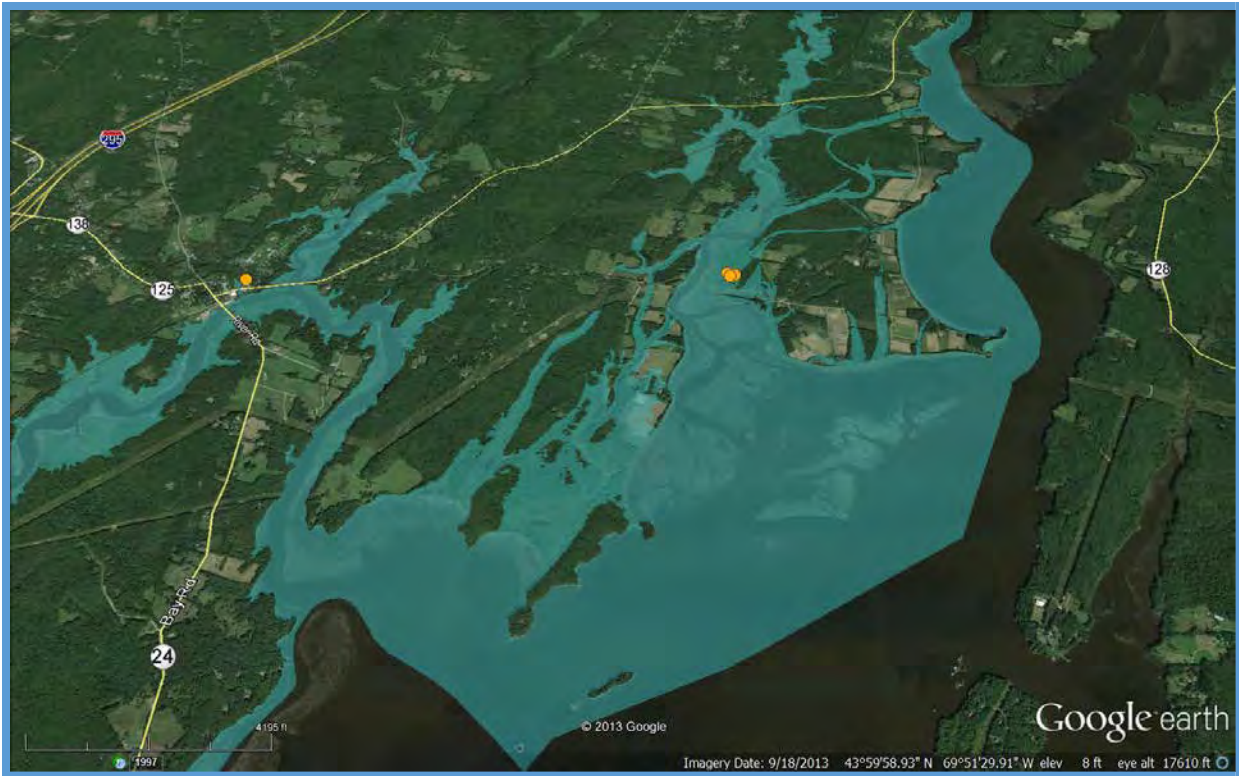
Notes: 2050 Predicted Building Inundation with 1 foot of Sea Level Rise and Storm Surge from a 1% Storm, illustrating Table 4, row 2. Total Water Elevation = 14.2 feet above MLLW.

**Legend**

Red Dots – Center Points of Buildings Inundated

Blue Shade – Extent of Flooding

**Figure 5: 2100 Predicted Building Inundation with 2 to 3.3 feet of Sea Level Rise Only**



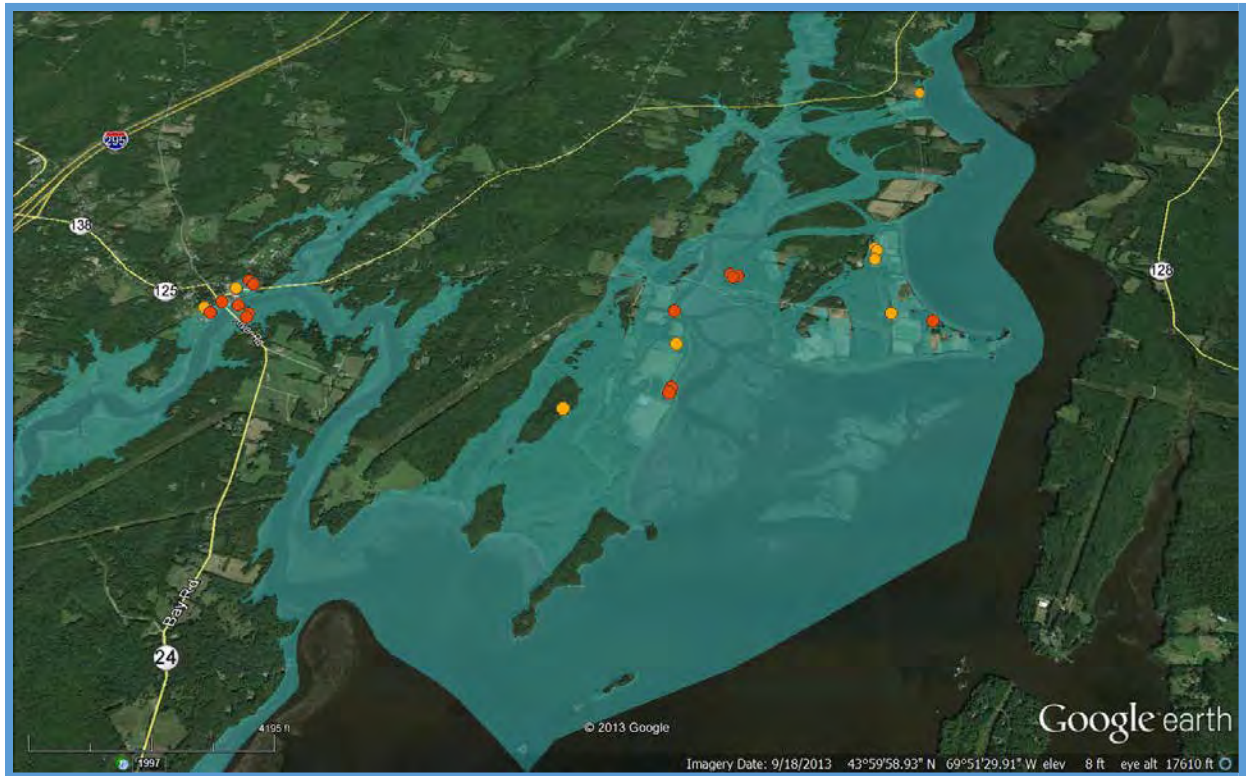
Source: Peter Slovinsky, MGS, POSM project, 2013

Notes: 2100 Predicted Building Inundation with 2 to 3.3 feet (0.6 - 1 m) of Sea Level Rise Alone, illustrating Table 4, rows 3 & 4, column 1. Total Water Elevation = 10.8 feet above MLLW.

**Legend**

Orange Dots – Center Points of Buildings Inundated  
Blue Shade – Extent of Flooding

**Figure 6: 2100 Predicted Building Inundation with 2 to 3.3 feet of Sea Level Rise and Storm Surge from a 1% Storm**



Source: Peter Slovinsky, MGS, POSM project, 2013

Notes: 2100 Predicted Building Inundation with 2 to 3.3 feet (0.6 – 1 m) of Sea Level Rise and Storm Surge from a 1% Storm, illustrating Table 4, rows 3 & 4, column 2. Total Water Elevation = 16.5 feet above MLLW.

#### **Legend**

Orange Dots - Center Points of Buildings Inundated by 3.3 feet of Sea Level Rise (SLR) with a 1% Storm

Red Dots - Center Points of Buildings Inundated by 2 feet of SLR with a 1% Storm

Blue Shade – Extent of Flooding

In the next step of the assessment, MGS predicted the effect of sea level rise on tidally influenced marshes in Bowdoinham. Marshes serve many important functions, including nurseries for fish and other aquatic species, as habitat for birds, and as reservoirs that slow down and store stormwater during storm events. Furthermore, it has been shown that healthy salt marshes can provide other ecological benefits, such as filtering pollutants and sediments that run off from adjacent uplands.

Table 5 shows the acreage of lands adjacent to today’s tidal marshes that may be expected to convert to marsh, as sea level rises. If the marshes of today are allowed to flood higher as sea level increases, and are not obstructed by walls, roads, or fill, they will naturally attempt to migrate landward, and continue to provide ecological services as habitat for aquatic life and birds, and as reservoirs for flood control, and as filters for sediments and pollutants.

**Table 5: Estimates of Acres of Land, Adjacent to Today’s Tidal Marshes, that May Convert to Tidally-Influenced Marsh, with Various Levels of Sea Level Rise**

<b>Scenario</b>	<b>Estimated Potential Expansion Area Of Tidal Marshes (acres)</b>	<b>Cumulative Potential Expansion Area</b>
<b>Existing Conditions</b>	N/A	N/A
<b>0.3 m (1 foot) SLR</b>	292	292
<b>0.6 m (2 feet) SLR</b>	187	479
<b>1.0 m (3.3 feet) SLR</b>	276	755
<b>1.8 m (6.0 feet) SLR</b>	520	1275

*\* based on tidal elevations for each SLR scenario*

Source: Peter Slovinsky, MGS, POSM project, 2013

Figures 7 and 8 below illustrate the results in Table 5.



**Figure 7: 2050 Predicted Tidal Marsh Expansion with 1 foot of Sea Level Rise**



Source: Peter Slovinsky, MGS, POSM project, 2013

Notes: 2050 Predicted Tidal Marsh Expansion with 1 foot of Sea Level Rise, illustrating Table 5, row 2. Total Water Level = 8.5 feet above MLLW.

**Legend**

Dark Blue – Current Extent of Tidal Marshes

Gold – Predicted Expansion Area of Marsh with 1 foot of Sea Level Rise



**Figure 8: 2100 Predicted Tidal Marsh Expansion with up to 3.3 feet of Sea Level Rise**



Source: Peter Slovinsky, MGS, POSM project, 2013

Notes: 2100 Predicted Tidal Marsh Expansion with up to 3.3 feet (1 m) of Sea Level Rise, illustrating Table 5, rows 3 & 4. Total Water Level = 10.8 feet above MLLW.

### **Legend**

Dark Blue – Current Extent of Tidal Marshes

Gold – Predicted Expansion Area of Marsh with 1 foot of Sea Level Rise

Brown - Predicted Expansion Area of Marsh with 2 feet of Sea Level Rise

Yellow - Predicted Expansion Area of Marsh with 3.3 feet (1 m) of Sea Level Rise

Finally, in the last step of the assessment, MGS measured the change in general land use, with predicted sea level rise. The State classified all land into 3 very basic categories: Natural, Agricultural, and Developed. In Bowdoinham, land in the natural category would usually be woods, brushy areas, and marshes. Land in the Agricultural Category would be farm fields, and Developed Land would include buildings, yards, paved areas, and roads. Table 6 below, summarizes expected losses of these three land cover types, as the highest annual tide increases with sea level rise. Figures 17 and 18 illustrate the results of Table 6.

**Table 6: Predicted Loss of Land Cover, by Type, with Various Amounts of Sea Level Rise.**

Sea Level Rise Scenario	Planning Timeframe	Losses of Maine Land Cover Type (acres)*			
		Natural	Agricultural	Developed	Total
<b>1 foot (0.3 m)</b>	2050	278.1	6.3	1.7	286.1
<b>2 feet (0.6 m)</b>	2100	166.3	15.4	2.6	184.3
<b>3.3 feet (1.0 m)</b>	2100	230.1	38.2	6.0	274.3
<b>6.0 feet (1.8 m)</b>	2100+	413.2	83.4	20.8	517.4

*Maine Land Cover Data included 21 different types which were grouped into 3 dominant types for this study*  
*\*acreage differs from estimated wetland expansion areas due to some areas not being classified by MELCD*

Source: Peter Slovinsky, MGS, POSM project, 2013

**Figure 9: 2050 Predicted Inundation of Natural, Agricultural, and Developed Lands with 1 foot of Sea Level Rise Alone**



Source: Peter Slovinsky, MGS, POSM project, 2013

Notes: 2050 Predicted Inundation of Natural, Agricultural, and Developed Lands with 1 foot of Sea Level Rise Alone, illustrating Table 6, row 1. Total Water Level = 8.5 feet above MLLW.

**Legend**

Light Green – Inundated Natural Areas



**Figure 10: 2100 Predicted Inundation of Natural, Agricultural, and Developed Lands with 3.3 feet of Sea Level Rise Alone**



Source: Peter Slovinsky, MGS, POSM project, 2013

Notes: 2100 Predicted Inundation of Natural, Agricultural, and Developed Lands with 3.3 feet (1.0 m) of Sea Level Rise Alone, illustrating Table 6, rows 2 & 3. Total Water Level = 10.8 feet above MLLW.

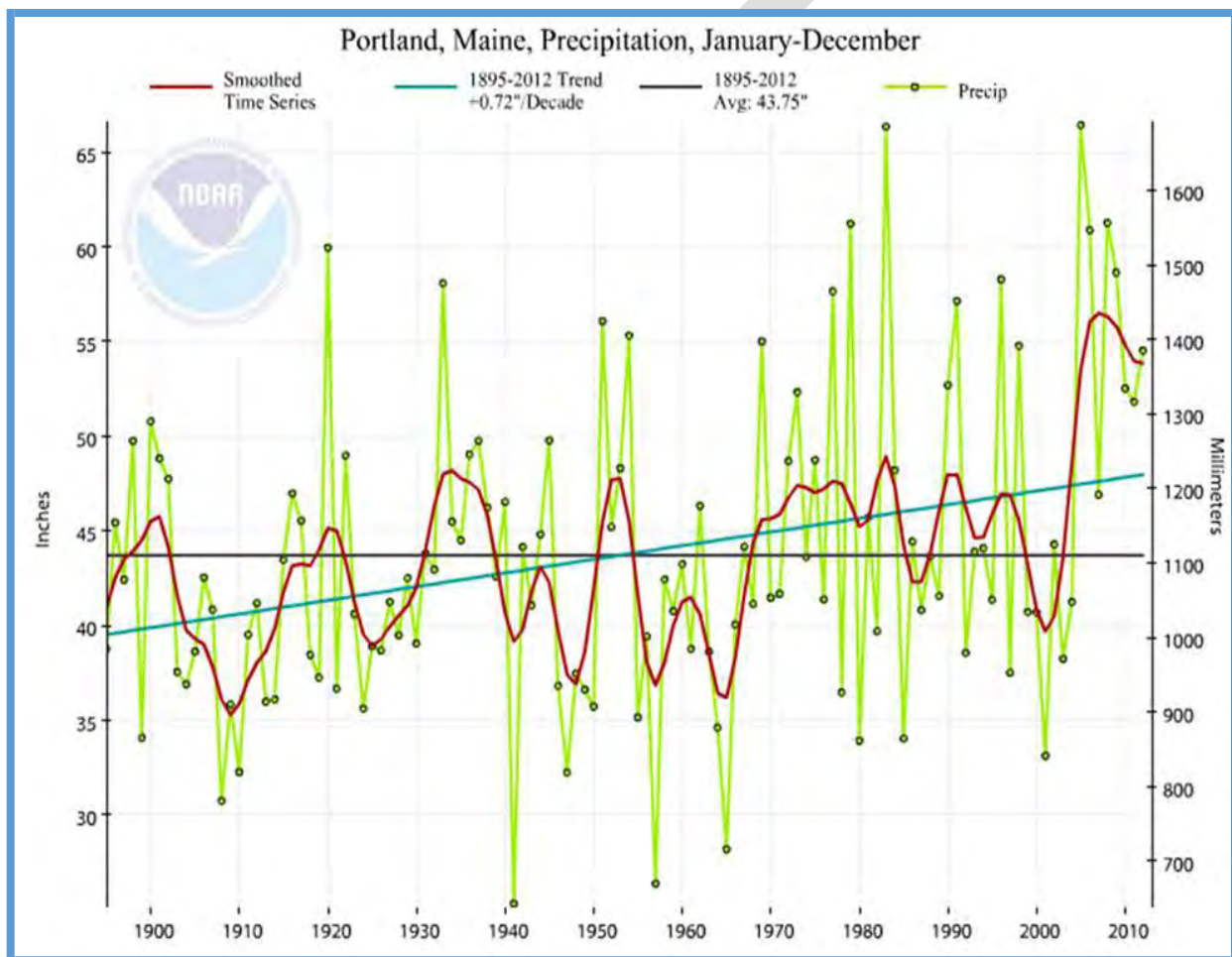
**Legend**

- Light Green – Inundated Natural Areas
- Dark Green – Inundated Agricultural Lands
- Red – Inundated Developed Areas including Roads

### *Climate Change and Increased Precipitation*

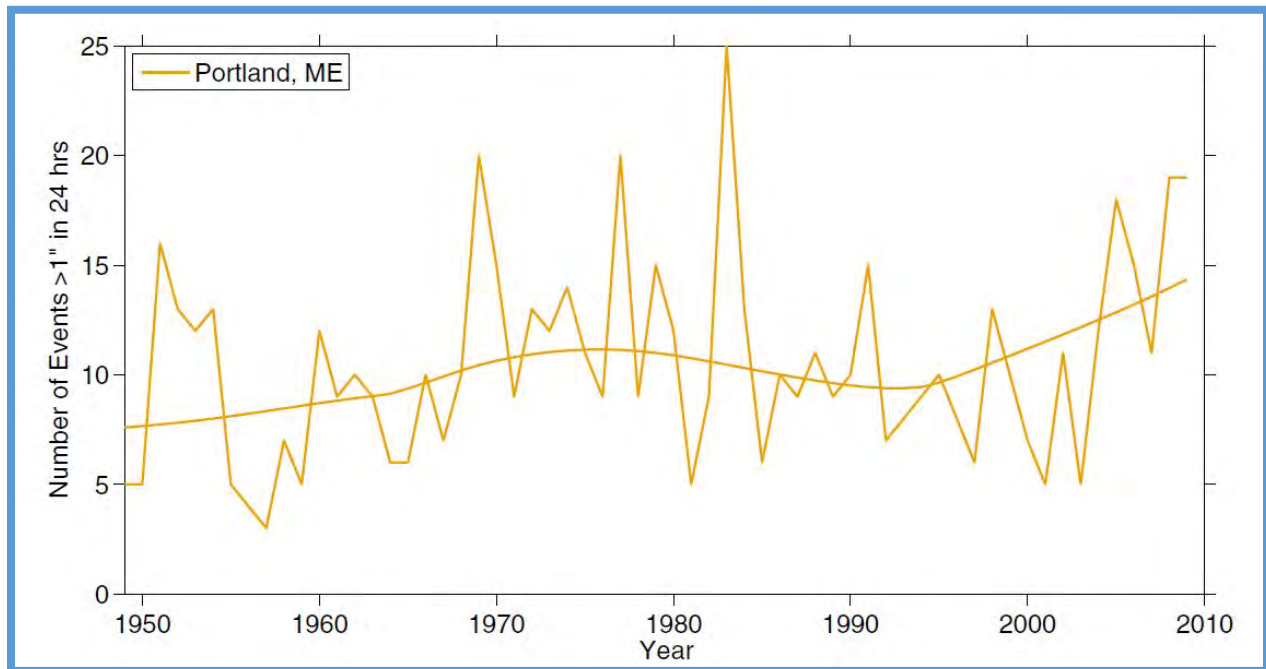
The next figures in this chapter, Figure 11 & 12, show that water level increases from sea level rise are not the only component that will affect potential flooding conditions in the Town of Bowdoinham. It appears in the rainfall records that there is a trend for higher and more intense rain events that has started in the last twenty to thirty years. Both the annual amount of rain, and the number of rain storms with greater than one inch of rain in 24 hours have increased. The higher levels of rainfall are expected to increase damage experienced in future storms, when combined with the negative effects of sea level rise.

**Figure 11: Record of Increasing Annual Precipitation for Portland, Maine**



Source: P. Slovinsky, MGS. From NOAA Data through Dec. 31, 2012.

**Figure 12: Increasing Number of Rain Events Per Year, Greater than 1 inch, in a 24-Hour Period, for Portland, Maine**

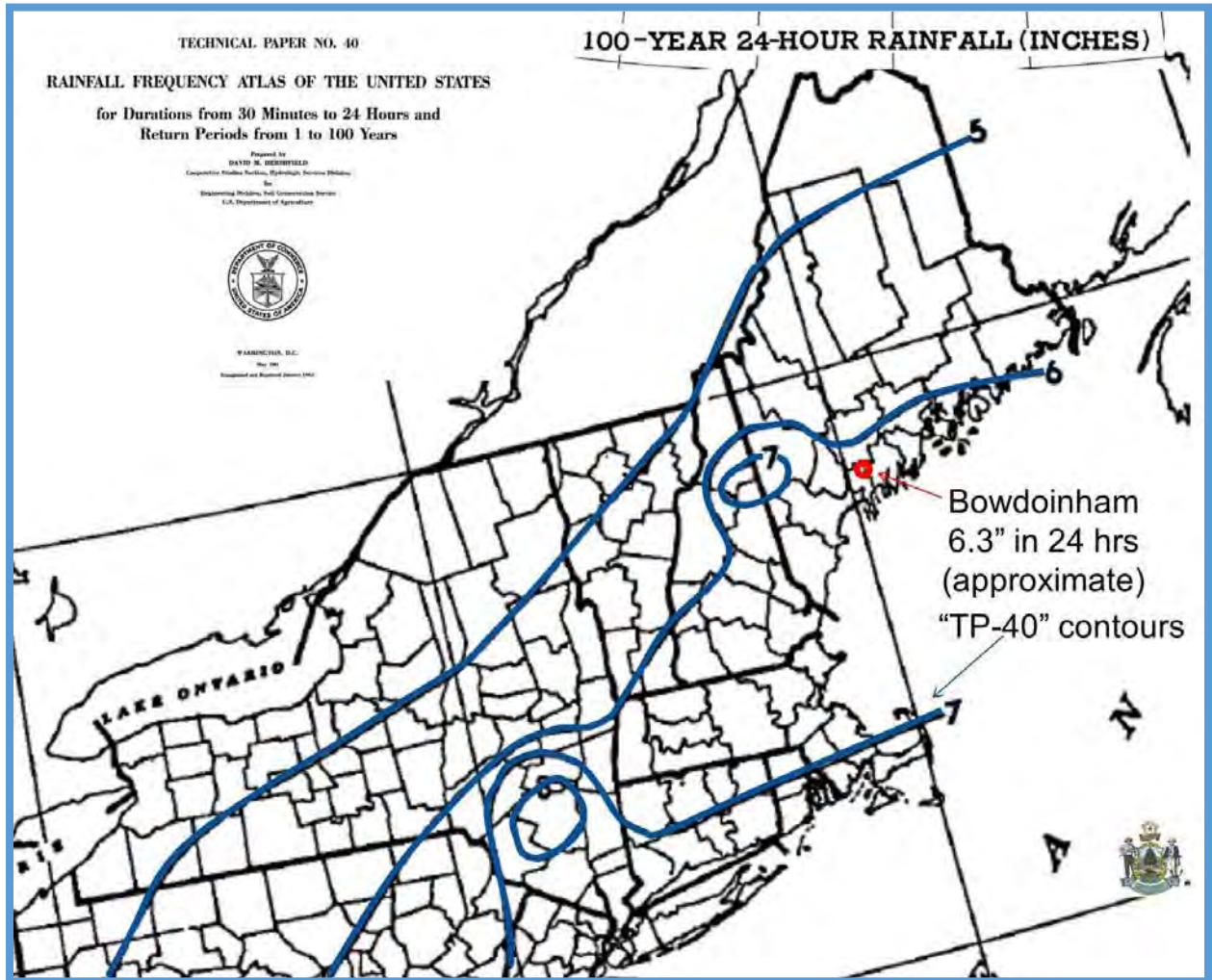


Source: Climate Change in the Piscataqua/Great Bay Region: Past, Present, and Future Carbon Solutions New England, Cameron Wake, et al., December 2011.

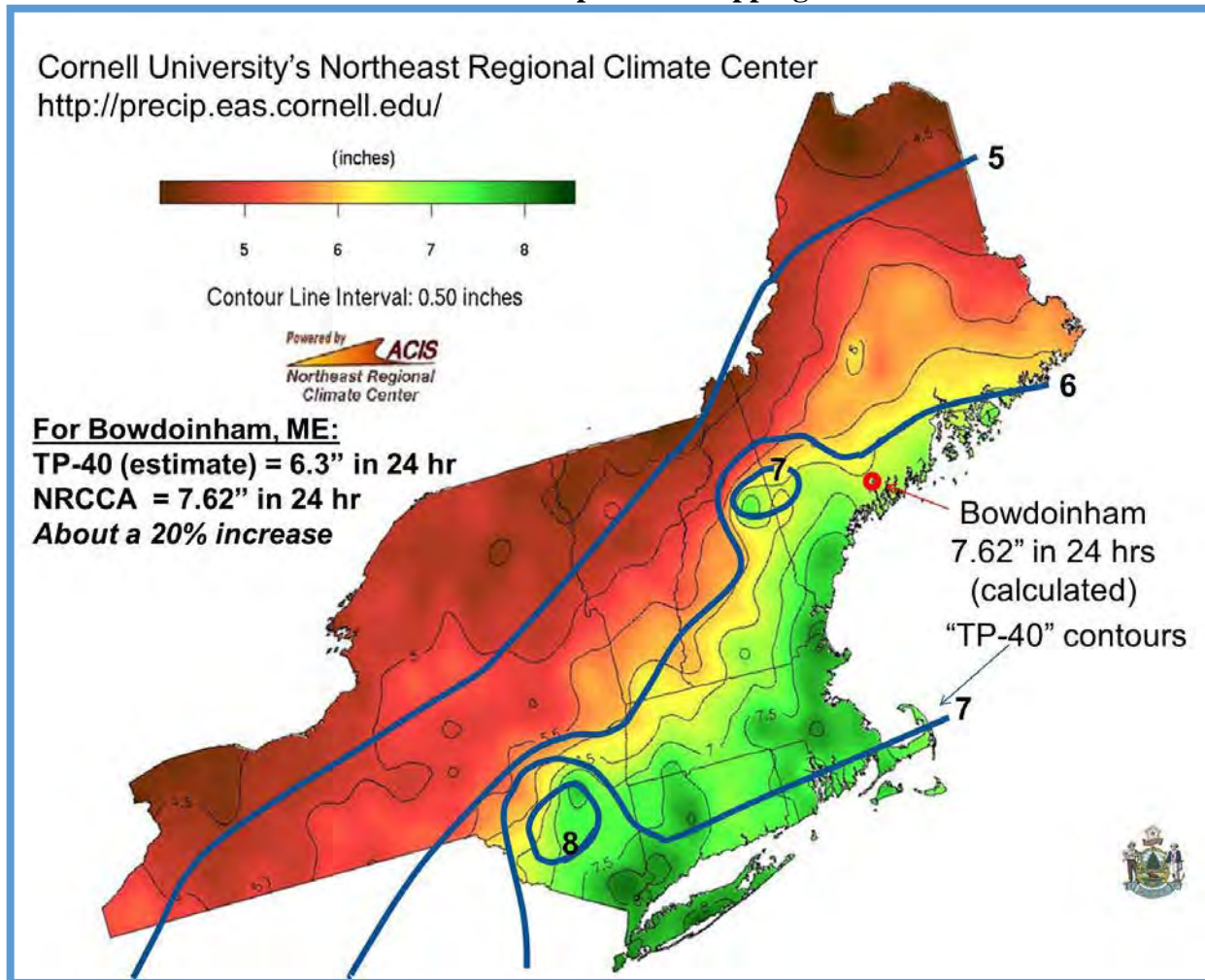
When engineers have designed roads, culverts, and bridges in the last 50 years or so, they have used the “Rainfall Frequency Atlas of the United States,” known as Technical Paper #40, published by the US government. A page from the Atlas is shown in Figure 21 below, shows that in Bowdoinham, the 24-hour rainfall that could be expected from a 1% storm would be 6.3 inches. Because of all the observations that annual rainfall has gone up, as well as the intensity of 24-hour storms, Cornell University’s Northeast Regional Climate Center has recently completed an update of the Technical Paper #40 (TP-40). This new update indicates that the 24-hour rainfall that could be expected from a 1% storm would now be 7.62 inches, which is about a 20% increase. What this means as a practical matter, is that any bridge, culvert, or drain in Bowdoinham, which was designed to handle the amount of rain in the TP-40, is probably sized 20% too small to handle a 1% percent, 24-hour rainfall that might occur at any time. For this reason alone, any infrastructure that conveys or crosses water should be considered for an upgrade, when it is going to be replaced.



Figure 13: New England Area, from the Rainfall Frequency Atlas of the United States, Technical Paper No. 40.



**Figure 14: New England Area, from Cornell University's Northeast Regional Climate Center Precipitation Mapping.**



*Other Climate Change Impacts Not Included in This Chapter*

It should be noted that other possible climate change impacts were not reviewed in the creation of this Comprehensive Plan chapter. These include such varied issues as:

- health impacts from insect-borne diseases such as Lyme Disease;
- high heat days in summer;
- plant and animal species changes, as forest and ocean habitats change; and
- agricultural impacts with higher temperatures.

Only issues of sea level rise and increased water levels on roads, rails, buildings, marshes, and land cover were considered in this chapter.

## **Public Health**

### Conditions & Trend

*(1) The Public Health section of the Bowdoinham 2024 Comprehensive Plan is new. External events and conditions such as extreme weather events noted in the climate section; increases in infectious diseases such as Covid-19; and insect-borne diseases impact community members. Emergency Medical Services have greatly increased in cost in recent years. There are many public health resources of which community members may not be aware.*

There is a Local Health Officer (LHO) that serves Bowdoinham. The recommended activities of this committee are beyond the scope of that position. However, it is recommended that the committee share information, and connect with the LHO on a periodic basis.

The Town does not have a Public Health Plan. With high rates of community members over age 60 and ages 0-10 (See Population & Demographics Chapter), a Public Health Plan should have a focus on socially vulnerable populations.

A Public Health Committee could connect community members to local resources and information through articles in Bowdoinham's newsletter and/or on the Town of Bowdoinham website. Additionally, if there is a public health emergency, the Select Board would seek information and guidance from the committee to address such a situation.

### Environmental

Prevention of environment-related health concerns such as:

- Insects (brown tail moth caterpillar infestation, tick borne-exposures, mosquito-borne diseases, etc.)
- Animal concerns (rabies, etc.)
- Weather related threats such as extreme heat, cold, rain, etc.

### Infectious Diseases

Ways to prevent/reduce infectious diseases such as Covid-19, flu, RSV, pneumonia, measles, whooping cough (immunization clinics, or other strategies, etc.)

### Emergency Medical Services

- An Emergency Medical Services Committee was established and began meeting in Fall of 2023. This is led by the Bowdoinham Fire Chief to assess the Emergency Medical Service needs and possible alternatives to meet the needs specific to Bowdoinham.

### Health Care Resources

There are many medical providers and services in Sagadahoc County.

- Richmond Area Health Center (RAHC) is the only Federally Qualified Health Center (FQHC) in Sagadahoc County and is a part of Health Reach Community Health Centers. FQHCs are established in areas that have limited access to other health resources. RAHC serves Bowdoinham and other surrounding towns with primary care and mental health services; accepts all types of private insurance, MaineCare, Medicare, and offers sliding fee scales for qualified individuals and families.



- The MidCoast-Parkview Hospital and related practices provide information and resources for health care and mental health and substance use treatment, including diverse types of providers.
- Other healthcare systems in Lewiston (Central Maine Medical Center), Augusta (Maine General), and Portland (MaineHealth) are also accessible to many.
- There are Urgent Care providers in Brunswick and other nearby communities.

Public Health Systems and Planning Resources: There are existing resources in Sagadahoc County, the MidCoast Public Health District, and the State of Maine, that can be accessed by any individual. Access to planning processes, health and mental health services are part of these services.

*(2) Current Inventory of local, county, public health district, and state resources*

- The Sagadahoc County Board of Health (BOH) serves as an official advisory board to the Sagadahoc County Commissioners.
- MidCoast Public Health District. Maine has 8 public health districts. Midcoast Public Health District (District 4) includes Knox, Lincoln, Sagadahoc, and Waldo Counties. Maine CDC supports prevention systems within the public health districts. This is a 10-year commitment that started in 2023.
- Midcoast Maine Prevention Network. There is a system of eight (8) local Maine Prevention Networks that focus primarily on prevention of underage substance use including tobacco and marijuana use, and prevention of underage alcohol and other drug use; and support for healthy eating and appropriate physical activity for good health. MidCoast Hospital hosts the MidCoast Prevention Network.
- Needs Assessments and Plans. The Maine Center for Disease Control and Prevention has published the 2022 Maine Shared Community Health Needs Assessment and the 2022 State Public Health Systems Assessments which can be found on their website.

Analysis

*(1) Is there a process to assess and address the needs for Emergency Medical Services?*

There is an Emergency Medical Services Committee that has been established by the Select Board with initial members appointed and meetings convened in Fall of 2023. There is an identified town employee to staff this committee.

*(2) Are existing public health resources accessible to the town and community members?*

Public health resources can be found in a variety of ways, though there is no central hub for this information. Public service announcements are passed on by the Town office through newsletters, its website and Facebook page. Other resources include community groups, social media accounts, and to a lesser extent the library. Local radio, tv, and mailers from national and state sources are most widespread.

*(3) Is there a Public Health Plan for Bowdoinham?*

There is no Public Health Plan.

*(4) Is there a system in place to provide information regarding resources and health information to the town and community members?*

There is no plan or process for sharing health and public health related information.

DRAFT

## Age Friendly

### Conditions & Trend

(1) *The Age Friendly section of the Bowdoinham 2024 Comprehensive Plan is new. The rapid growth in our older population has significant impact on the community, including housing needs, access to support and health service, accessibility, risks of isolation, and civic and social engagement.*

Data on the characteristics of Bowdoinham’s older population came largely from the 2020 American Community Survey (ACS) 5-year estimates conducted by the US Census. Another major source of information about Bowdoinham’s older population was from findings of listening sessions held in the Summer of 2022 with major Town stakeholders whose work brings them into close contact with older adults, especially those at-risk.

### Growth in Older Populations

There has been a significant increase in the percent of Bowdoinham’s population 60 years and over in the past 20 years, increasing from 14% of the population to 29%. This trend will continue until the baby boom bubble recedes after 2040.

<b>Percent Distribution of Older Population in Bowdoinham</b>			
<b>Age Cohort</b>	<b>2000</b>	<b>2010</b>	<b>2020</b>
60 to 64 years	4%	7 %	9%
65 to 74 years	5%	9%	14%
75 to 84 years	4%	3%	5%
85 years & over	1%	1%	1%
Total 60 years & over	14%	20%	29%

Source: 2020 U.S. Census Bureau

### Impact on Housing

Fifty-seven percent of households in Bowdoinham had one or more people 60 years or over residing in them. One in five households included a person 65 and over as the primary head. Often as people age, their homes are no longer safe in their homes due to stairs, inaccessible bathrooms, fire hazards, or other barriers. Some homes may be too large and unaffordable to maintain. Although a high percentage of Bowdoinham’s housing is owner occupied, rental arrangements often become the option of choice for older adults who plan to live off the proceeds from the sale of their homes. The simultaneous rise in the number of young families suggests the need for a flexible housing market which can meet the needs of all ages and abilities.

### Impact on Support Services and Health Care Services

- Over 12% of Bowdoinham residents who are 65 years and over reported that living independently was a challenge. Slightly less than 4% of older residents are covered by Medicaid, most often due to a disability. Although almost all residents over 65 years are covered by Medicare, Medicare does not cover long term care services such as assisted living, residential care, or in-home support services.
- From July 2022 through June 2023, program data from Rides in Neighbors’ Cars showed that this volunteer-led ride program provided 440 rides logging 13,342 miles and 855

volunteer driver hours. Most commonly rides are given to medical appointments and grocery shopping. Although there is increased demand, driver recruitment is challenging. The State Medicaid program also covers transportation to medical appointments, but residents report frequent unavailability of the service. New models to support the transportation demands of older residents are needed, such as possible scheduled services for areas of highest need such as grocery shopping.

- Data are not currently collected on the use of other volunteer-operated support services in Town including Medical Equipment Loan program, Twin Town Handy Brigade (formerly Handy Brigade), Digital Literacy Program, and Sand Bucket Brigade. Systems for tracking the use of these programs are needed to better assess trends and capacity.
- The 2022 listening sessions raised concerns about the fragmentation of services and the challenges experienced by residents in knowing how to navigate complex support and health service systems. The half-time position of the Town's Older Adults Services Coordinator has provided a critical contact point for residents to learn about available services and to get assistance in getting timely access. More work is needed to create a broader coalition of local stakeholders who can work together to assist older adults access support, health care, financial assistance, and housing services.
- There are no regular health care services in Town, including preventive and first aid. The Age Friendly Committee supports partnerships with surrounding Towns to determine the feasibility of satellite services in Bowdoinham or the development of a community paramedic program as part of our emergency medical service response program.

#### Accessibility of Buildings, Services, Meetings and Open Spaces

- Plans are proposed to repeat an assessment of public and private buildings to determine both major and minor barriers to use by people of all ages and abilities. The 2022 listening session found that accessibility to the full services of the Town Office and Library were significant barriers to use.
- The Age Friendly Committee is working with Committees responsible for the Merrymeeting Trail and Waterfront development to assure access by young and older residents and people with limited abilities.
- Significant efforts are underway to improve the safety of pedestrians through the proposed extension of sidewalks and the installation of crosswalks at major intersections. Such improvements affect all walkers, including older pedestrians, those with walkers or mobility devices and those pushing strollers.
- The Age Friendly Committee has made full accessibility to public meetings a major priority, including the use of effective sound systems, visual presentations, parking for those with disabilities and printed handouts.

#### Risks of Isolation Among Older Adults

- Of residents who are 65 years and over, 13% live alone. While living alone does not itself bring isolation, often it results from the loss of a spouse or partner, separation from family or lack of financial options to move. There is growing evidence of the connection between isolation and the onset of physical and mental conditions.
- Concern was raised during the 2022 listening sessions that older adults often are reluctant to ask for help and instead wait until a crisis before reaching out. Living outside of the Village was seen as an added factor contributing to isolation from the community, its activities and services.

- Since the hiring of a part time Older Adults Services Coordinator, there has been a growing awareness of the overlap among various service entities in town (Ride Share, Fire & Rescue, Food Pantry) with respect to serving at-risk residents. A development of a coalition of these stakeholders is planned to better identify high risk residents and to coordinate responses.
- Ninety percent of residents 65 years and over have a computer at home and 79% have broadband internet access. However, the pandemic raised awareness that many older adults lack the skills to fully use their computers to access medical, financial or personal services. In conjunction with the Age Friendly Committee, the Library developed a Digital Literacy Program to help address this “digital divide” and continues to expand its classes and workshops to meet the needs of all residents, including older adults.

Civic, Social and Economic Benefits of Older Adults to the Community

- Many programs and services in Town are dependent on the volunteer time of older residents for their operations. A disproportionate number of older adults serve as members on Town committees. The Food Pantry, Library, Rides in Neighbors’ Cars, Historical Association, and Bookstore depend on the volunteer efforts of older adults. Bowdoinham’s financial health and economy relies on the spending, taxes and employment of older adults.
- Labor force participation of older residents in Bowdoinham remains high. One out of every three residents who are 60 years and over work. Their spending helps the local economy, stabilizes a stagnant workforce, and transfers knowledge and skills across generations.

<b>Labor Participation of Older Adults, 2020</b>		
60 to 64 years		73%
65 to 74 years		26%
75 years+		11%
TOTAL	60	49%
years+		

Source: 2020 U.S. Census

(2) *A complete inventory of area resources for older adults can be found on the Town’s Age Friendly website. A more general review of major local resources is given below.*

Bowdoinham’s Older Adults’ Services Coordinator serves as the Town’s liaison to older residents as well as implements and oversees locally sponsored services and programs, and partners with local, regional and state resources on issues affecting older adults. The Town also has had access to Fellowship Programs and consultants through grants awarded by AARP and the Maine Center on Aging.

The Committee for Age Friendly Bowdoinham advocates for policy changes as well as identifies and seeks grant funds to support programs, events and resources for older adults. The Committee is part of a larger network of Age Friendly communities in the State that brings insights, tools and assistance to advance the Town’s understanding of emerging trends and initiatives to improve the lives of older residents.

Partnerships with local and state entities helps to expand available resources to residents. These include AARP which has funded digital literacy and accessibility initiatives at the Bowdoinham Public Library as well as the development of an educational brochure on universal design concepts in housing; Maine Community Foundation funding for lunch and recreational programs

during the pandemic; Maine Center on Aging which provided staff support through their Fellowship Program; MidCoast Hospital sponsored vaccine clinics for Bowdoinham residents; Richmond Senior Center co-sponsored a series of talks on the connection of mental health and physical conditions and partners with Bowdoinham in operating the Twin Town Handy Brigade to assist older residents with chores; the Bowdoinham Food Pantry works with Age Friendly to help target our programs to at-risk and isolated residents; CASHMaine offers free state and federal tax preparation and trains our volunteers to assist in that effort; the Bath-Brunswick Resource Council meets monthly with surrounding communities to share resources and information across major stakeholders whose work brings them into close contact with older adults; and the Merrymeeting Trail Committee is developing a 25 mile regional rail-with-trail from Topsham to Gardiner that can be used by people of all ages and abilities.

#### Volunteer led Support Services:

- Medical Equipment Program provides equipment and devices on a short or long term basis
- Rides in Neighbors' Cars matches residents needing rides with volunteer drivers
- Sand Bucket Brigade delivers sand to local residents
- The Twin Town Handy Brigade is a joint program with Richmond offering volunteer assistance with small chores in the home
- Digital literacy programs at the Bowdoinham Public Library offers in person and online classes to help older adults build their skills in using digital devices for personal, professional or educational purposes

#### Social Activities and Events

- Monthly luncheons followed by speakers at the Fire House
- Weekly cribbage, bridge, yoga, and line dancing
- Participation in Celebrate Bowdoinham and Smelt Festival

Spectrum Generations is a state designated agency responsible for assisting older adults and those living with disabilities to access information and services for which they qualify.

Richmond Health Center and OASIS Clinic offer free or low-cost access to preventive and health care services.

Bowdoinham Estates is a 25-unit subsidized housing complex for older adults and those living with disabilities.

Midcoast Hospital and MidCoast Senior Health Center offer a full range of medical and ancillary services as well as educational programs for older adults.

Emergency Medical Services are currently offered through Northeast Mobile Health, which subcontracts to Lisbon Rescue to service our calls. Mutual aid also is provided by Topsham and Gardiner Rescues if needed. Bowdoinham EMS department currently has 8 licensed members (1 EMR and 7 EMTs).

Physical Resources. The Town has no dedicated physical space that serves as a community center for residents. The Fire House makes their facilities available to Age Friendly for monthly luncheons as well as cribbage and bridge. The Town provides funding each year to help underwrite expenses for events that are held at Merrymeeting Hall including yoga and line

dancing. The local Baptist Church has given Age Friendly space to conduct luncheons and offer speakers. All events are open to the public. In conjunction with Recreation, the Community School opens its gym each Wednesday evening to pickleball players and walkers.

There has been interest in establishing a Senior Center in Bowdoinham where older residents can congregate on an impromptu and scheduled basis for social, physical, emotional, and intellectual pursuits.

### Analysis

*(1) Is it realistic for residents to remain living independently in Bowdoinham as they age?*

Many studies show that people generally want to stay in a familiar setting when they age, to be as independent as possible, and to have access to help when needed. The goal of the Age Friendly movement is to extend the option of living at home (whether alone, with a spouse or others) for as long as possible. For some this may mean downsizing to a smaller, more accessible home or making adaptations to their current homes. Others may need transportation or someone to help with chores around the house. For most, having a reliable source to help navigate services and options is also critical to retaining independence. The goals of the 2034 Comprehensive Plan aim to provide a structure and approach for supporting older adults as their needs change.

*(2) Are there sufficient resources in Bowdoinham to meet the needs of older residents?*

Bowdoinham is a small community with limited resources. Yet working within our means there are multiple approaches for expanding services to older residents. Many of our social and support programs operate solely by volunteers, whether donating or dispensing medical equipment, providing rides, carrying sand buckets and hosting luncheons. Partnerships also are vital to connecting the Town to resources from surrounding larger communities. Twin Town Handy Brigade is a joint venture with the Richmond Senior Center that broadens the availability of volunteer workers to do small repairs for residents. Through outreach to MidCoast Hospital we were able to set aside 2 days for Bowdoinham residents to receive COVID, flu, or RSV vaccines. Bowdoinham's participation in the Bath-Brunswick Resource Council has increased awareness of area resources and opportunities for additional partnerships. Pursuing grant awards has made new projects possible, such as the Library's digital literacy program and a new ramp, Fellowships through Maine Center on Aging have increased staff capacity to conduct resident focus groups to learn more about emerging needs. Our goal is to continue to pursue volunteers, partnerships, and grants to expand options for supporting older residents, develop pilot programs, and learn from the experience of others to find solutions to issues facing our residents.

*(3) Are there effective mechanisms to coordinate the work of Age Friendly with other priority initiatives in the Town and Region?*

The inclusion of an Age Friendly section in the 2034 Comprehensive Plan is an important first step to assuring that the values and work of Age Friendly are integrated in all aspects of Town plans, policies and practice. Similarly, through both formal and informal relationships, Age Friendly maintains regular communication with the Town's Select Board and Committees to make sure our activities do not duplicate or conflict with that of others. The Older Adults Services Coordinator is pivotal in helping the Committee stay knowledgeable about Town

activities and discussions that may have implications for its work. As part of the Age Friendly Network in Maine, we learn about emerging issues and successful solutions that can be adapted for Bowdoinham. We work closely with our Maine State Representative to assure we are up to date on legislation and initiatives that relate to our work so that we are aligned with current policy. Through its own projects and its advocacy for the work of others in Town, Age Friendly seeks to integrate its efforts and work cooperatively with Town partners and stakeholders to create cohesive and integrated strategies that improve the lives of all residents, young and old.

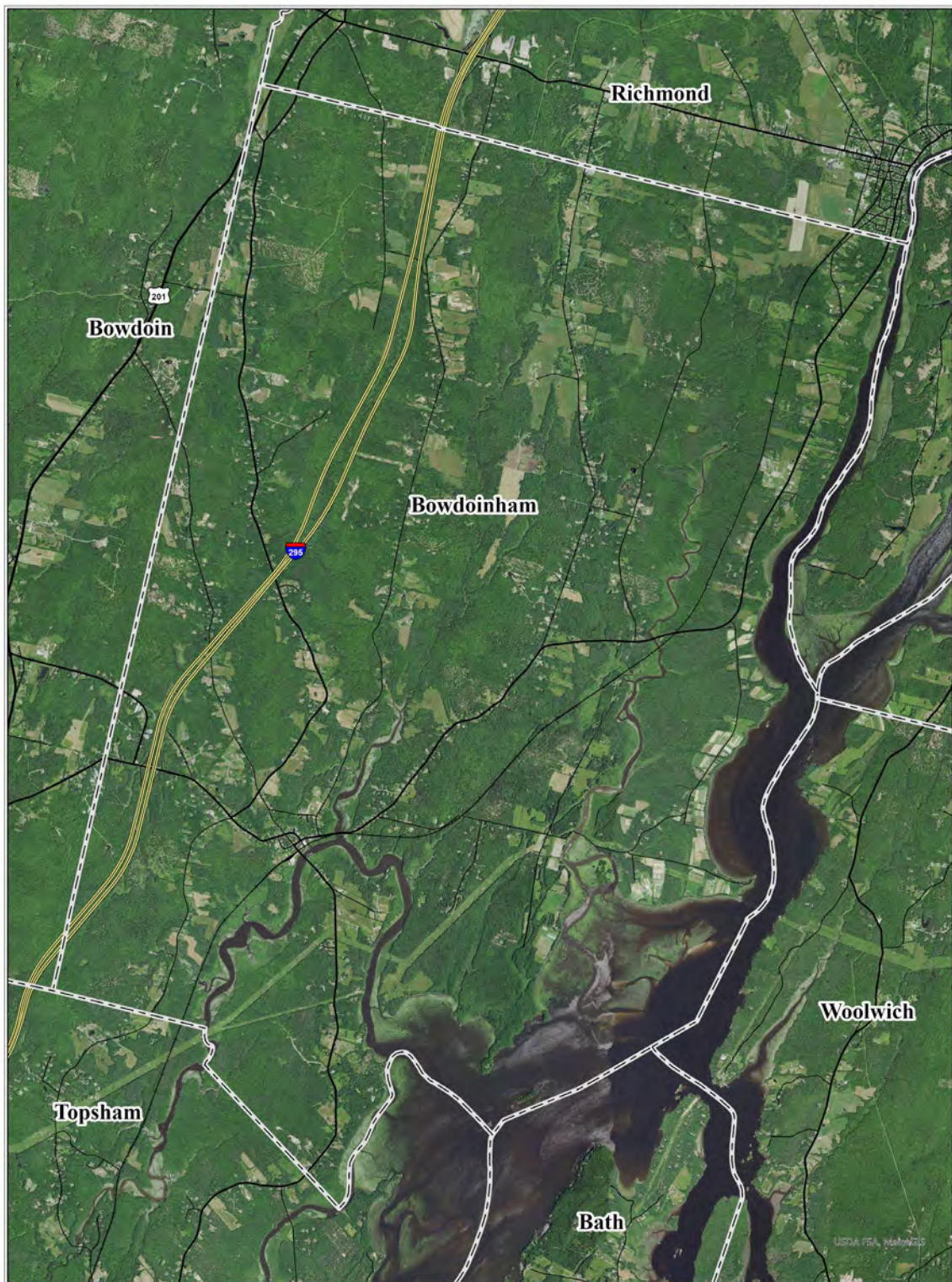
DRAFT



## **Inventory Maps**

Full-size maps are available on the Town's website and at the Town Office. The maps are based on the most recent data the State has provided to the Town of Bowdoinham, specifically for the purposes of creating a Comprehensive Plan.

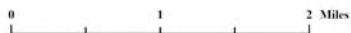
DRAFT



Sagadahoc County,  
Town of  
Bowdoinham

### Bowdoinham Aerial Image

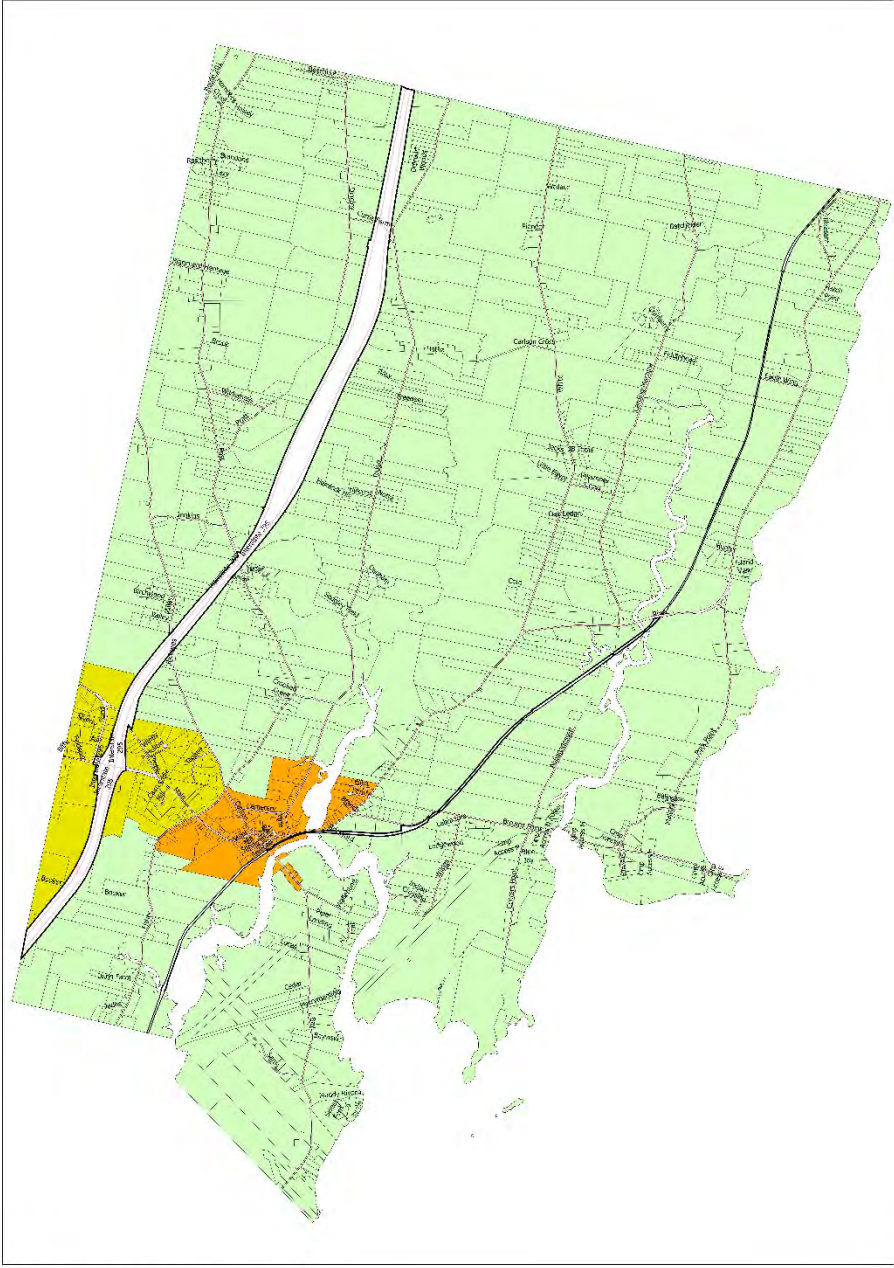
Source Data: USDA, MEGIS, Maine DACF  
 Projection: UTM, NAD83, Zone 19, Meters  
 Produced by: Municipal Planning  
 Assistance Program, DACF  
 October 2023



Legend	
	Municipal border
	Interstate
	U.S. Routes
	State Routes
	Railroad



# Town of Bowdoinham Land Use Map



Land Use Districts by Parcel and Identifying Features

- Transportation Corridor
- RES\_AGRI
- VDI
- VDII
- e911 Roads Bowdoinham
- e911 Roads Bowdoinham



0 1/2 1 2 Miles

Land Use Districts effective as of June 11, 2017  
Parcel Data effective as of April 2021



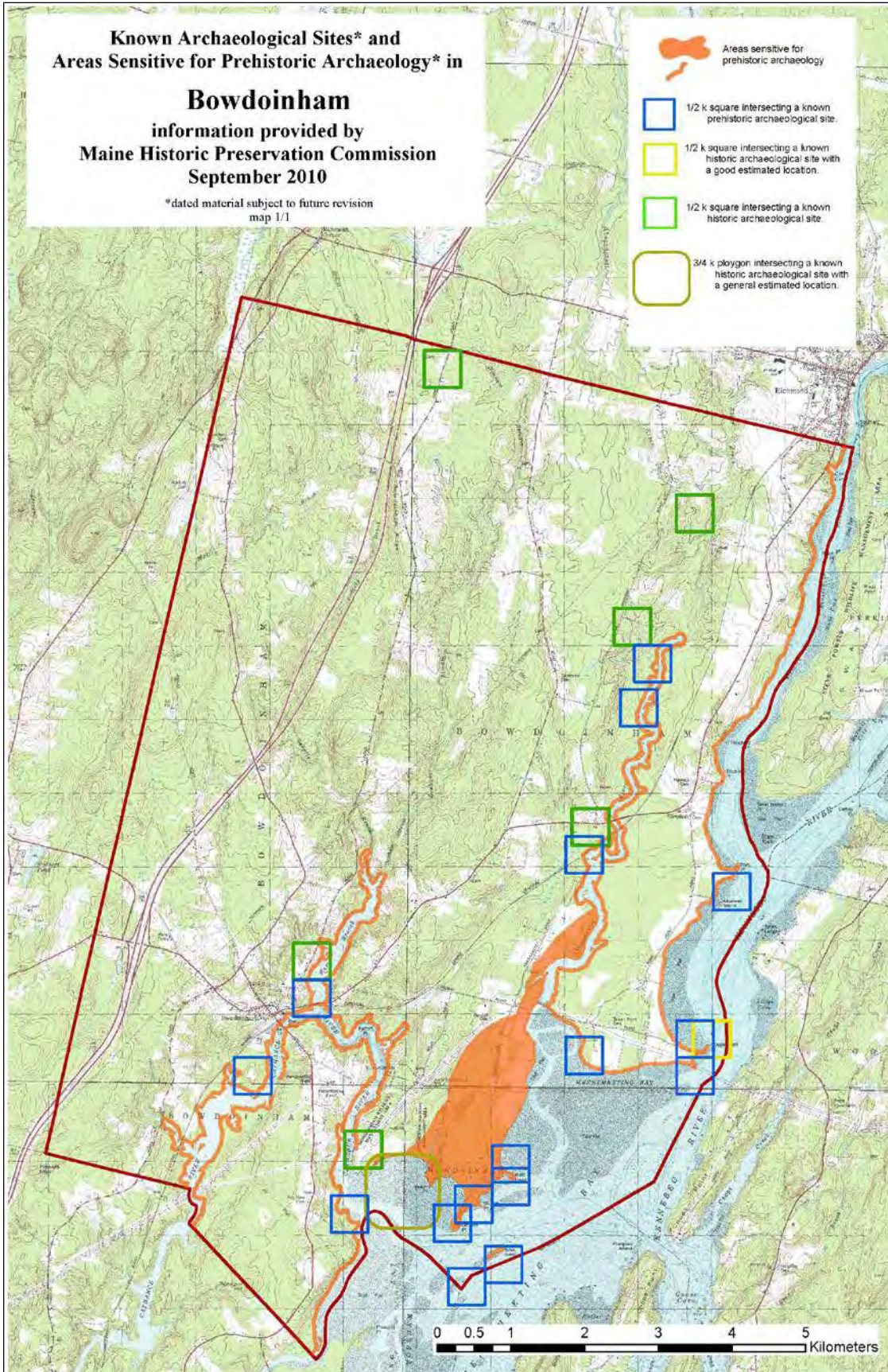
**Known Archaeological Sites\* and  
Areas Sensitive for Prehistoric Archaeology\* in**

**Bowdoinham**

information provided by  
**Maine Historic Preservation Commission**  
September 2010

\*dated material subject to future revision  
map 1/1

-  Areas sensitive for prehistoric archaeology
-  1/2 k square intersecting a known prehistoric archaeological site.
-  1/2 k square intersecting a known historic archaeological site with a good estimated location.
-  1/2 k square intersecting a known historic archaeological site.
-  3/4 k polygon intersecting a known historic archaeological site with a general estimated location.







### Legend

The map represents the co-occurrence of selected natural resource categories overlaid on a topographic background. The map is not intended to be used as a substitute for a detailed site-specific study. The map is not intended to be used as a substitute for a detailed site-specific study.

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

### Selected Resource Layers and Assigned Values

Conservation Land: 1000  
 Wetlands: 1000  
 Riparian Zones: 1000  
 Significant Wildlife Habitats: 1000  
 Unprotected Habitat: 1000

### Sum of Attribute Values

0
1-2
3
4-5
6-8
9-12
Over 12

### Focus Areas

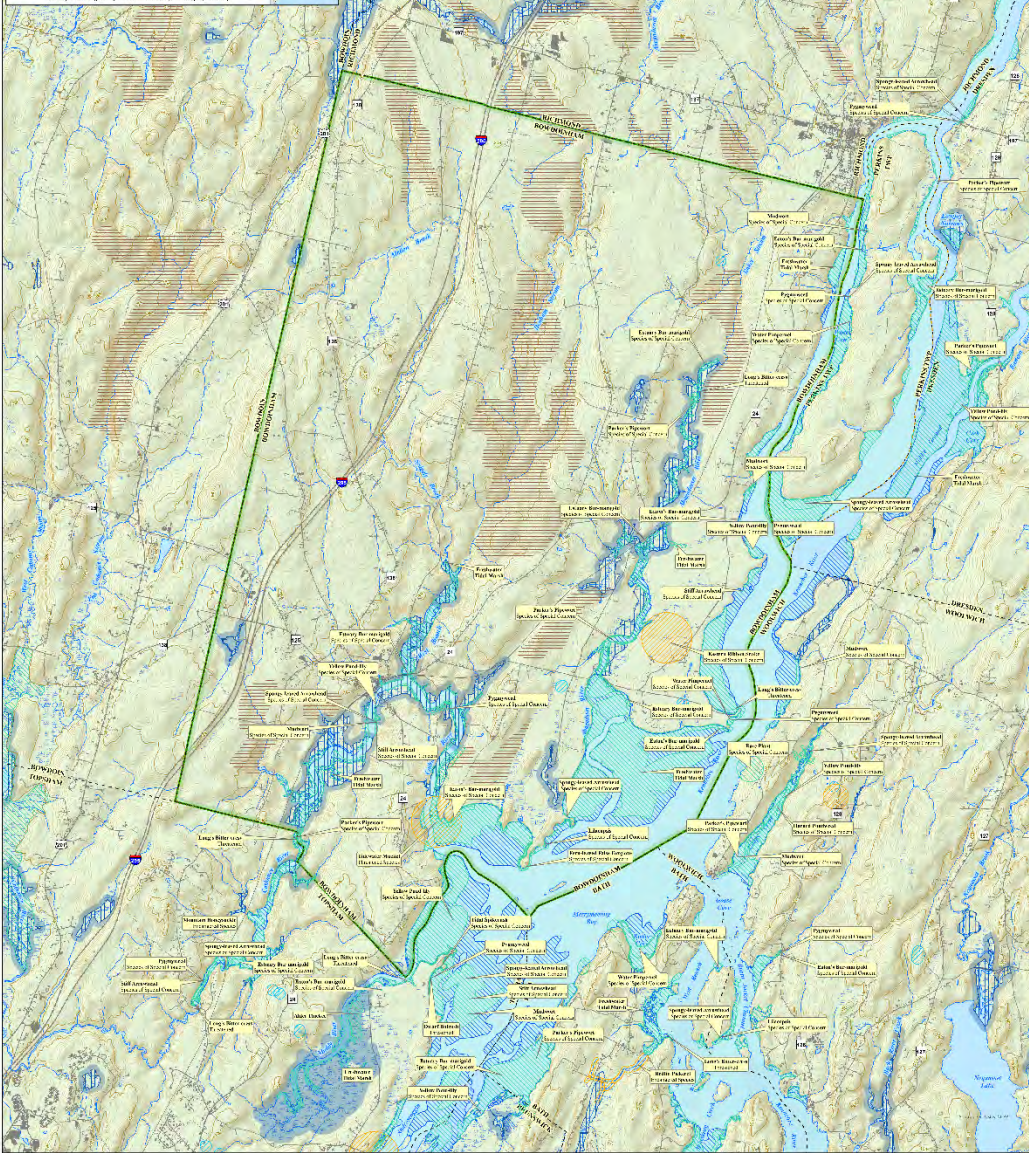
Focus Areas of Statewide Ecological Significance (not present in all regions)

### Data Sources

MAINE BIODIVERSITY  
 U.S. Geological Survey National Wetland Inventory (NWI) Data (2001)  
 U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) Data (2001)  
 U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) Data (2001)



**Beginning with HABITAT**  
 An Approach to Conserving Maine's Natural Space for Plants, Animals, and People  
 Primary Map 2  
**High Value Plant & Animal Habitats**  
**Bowdoinham**



**LEGEND**

Beginning with Habitat is a voluntary tool created by the State of Maine, resource management agencies, and other partners to help landowners and managers understand the value of their land and the potential benefits of conservation. This tool is not a substitute for professional advice or legal counsel. It is intended to provide information for informational purposes only. It does not create a legal obligation or a right of action. It is intended to provide information for informational purposes only. It does not create a legal obligation or a right of action. It is intended to provide information for informational purposes only. It does not create a legal obligation or a right of action.

**Rare, Threatened, or Endangered Wildlife**

**Rare or Exemplary Plants and Natural Communities**

**Essential Wildlife Habitats**

**Significant Wildlife Habitats**

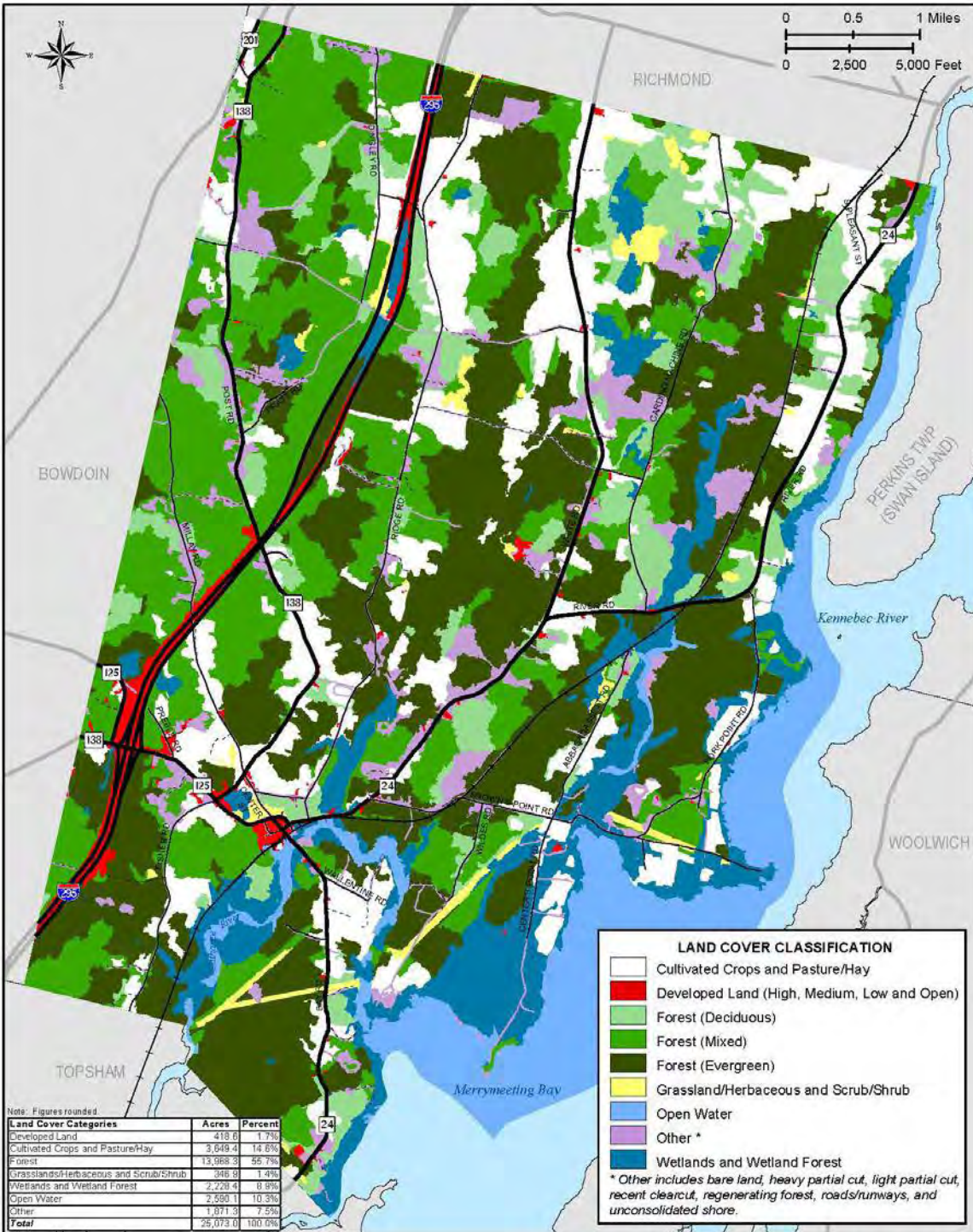
**Atlantic Salmon Spawning/Rearing Habitat**

**Data Sources**

**Map Prepared by:** Maine Department of Environmental Protection  
 Fisheries & Wildlife  
 October 2023



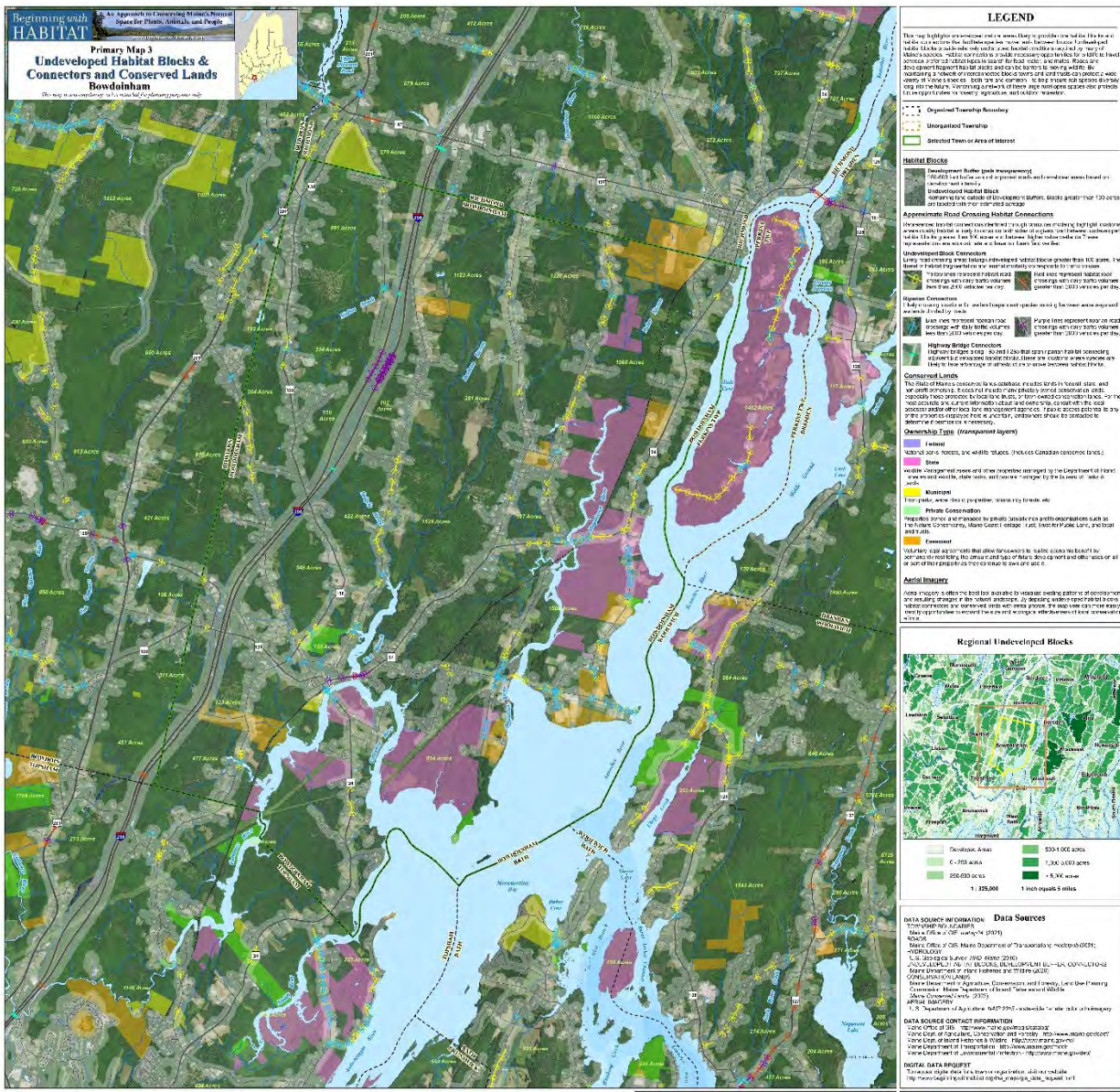




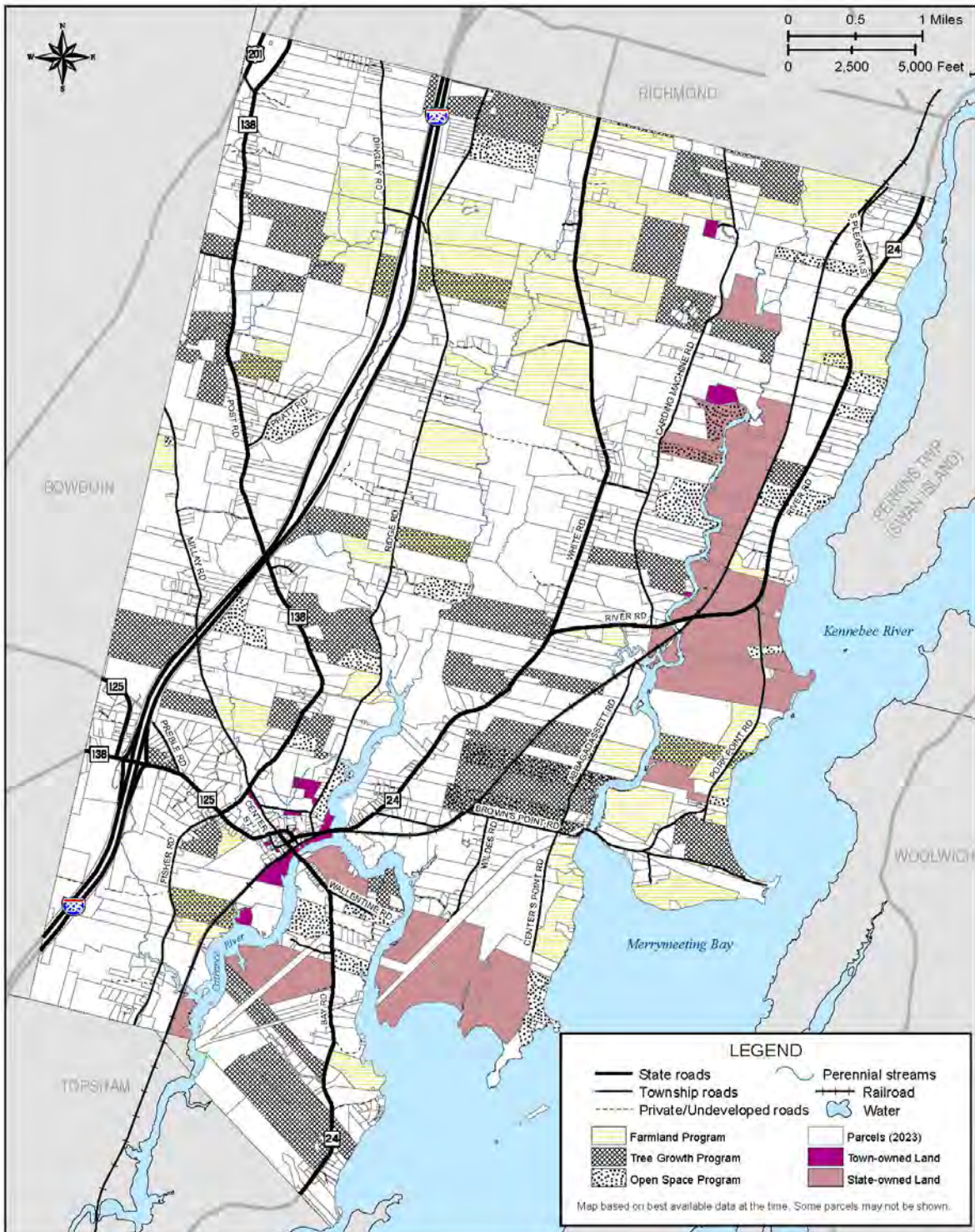
Map created: February 2012  
 Map prepared by LatLong Logic, LLC  
 Sources: Jointly funded and supported by USGS, NOAA, EPA, MEDEP, MESPO, MEIRW, MEDOT, MEDHHS, MEGIS and the Maine GeoLibrary Board.  
 The landcover data is based on 2004 SPOT imagery combined with 2001 Landsat data.

**BOWDOINHAM COMPREHENSIVE PLAN  
 LANDCOVER**





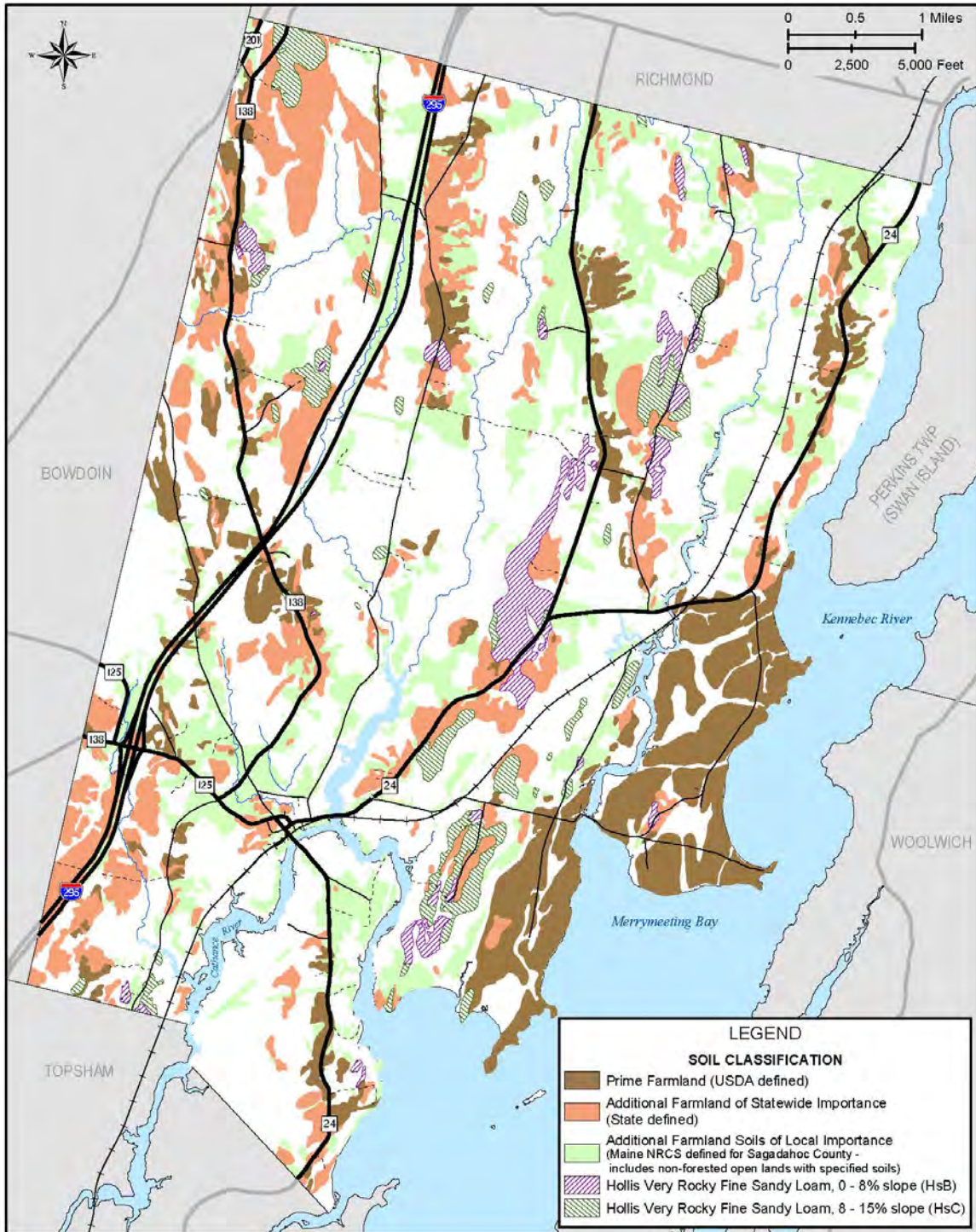




Map created: January 2024  
 Map prepared by Lallong Logic, LLC  
 Sources: Town of Bowdoinham and MEGIS

**BOWDOINHAM COMPREHENSIVE PLAN  
 CURRENT USE TAX PROGRAMS**

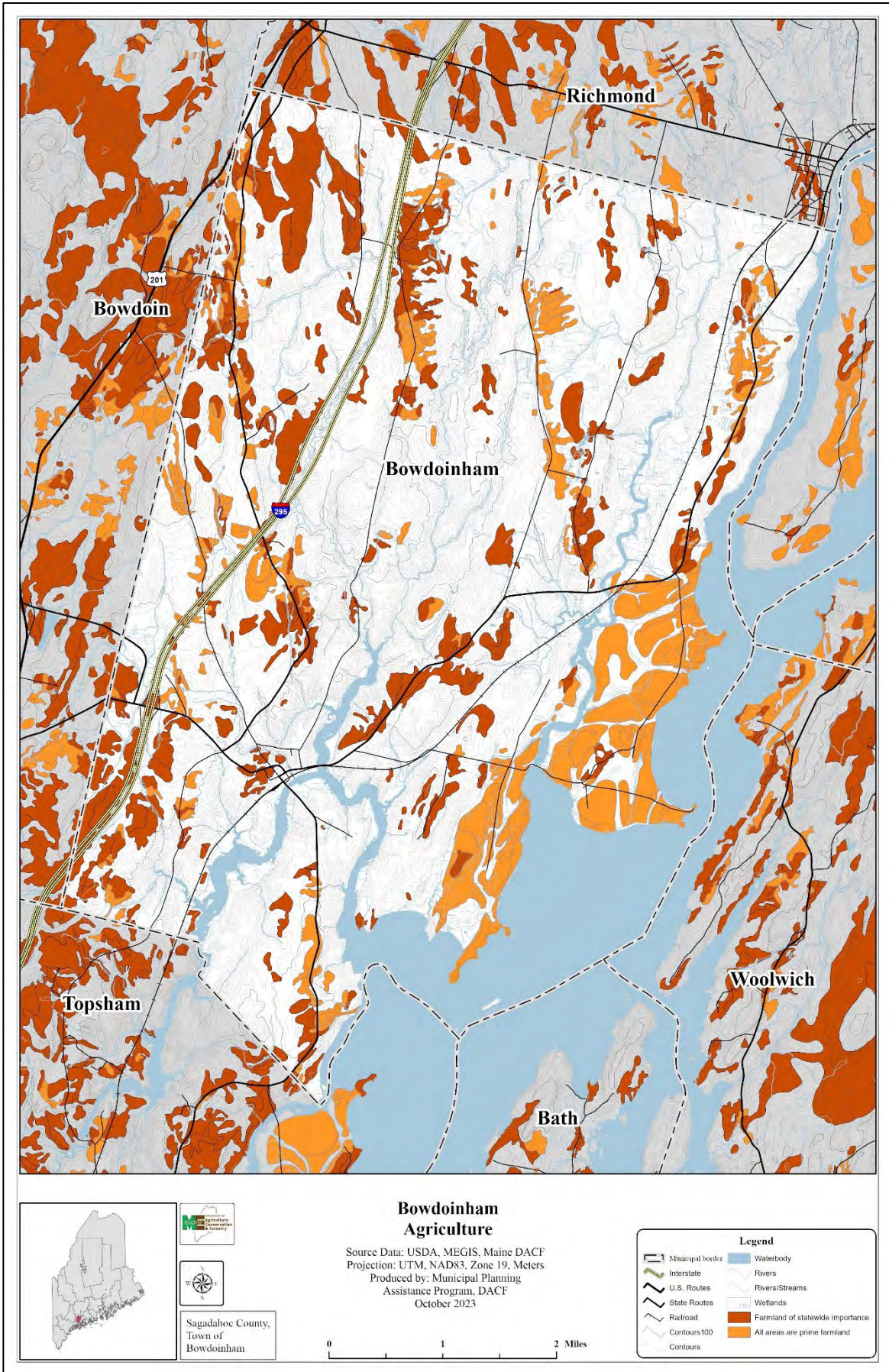




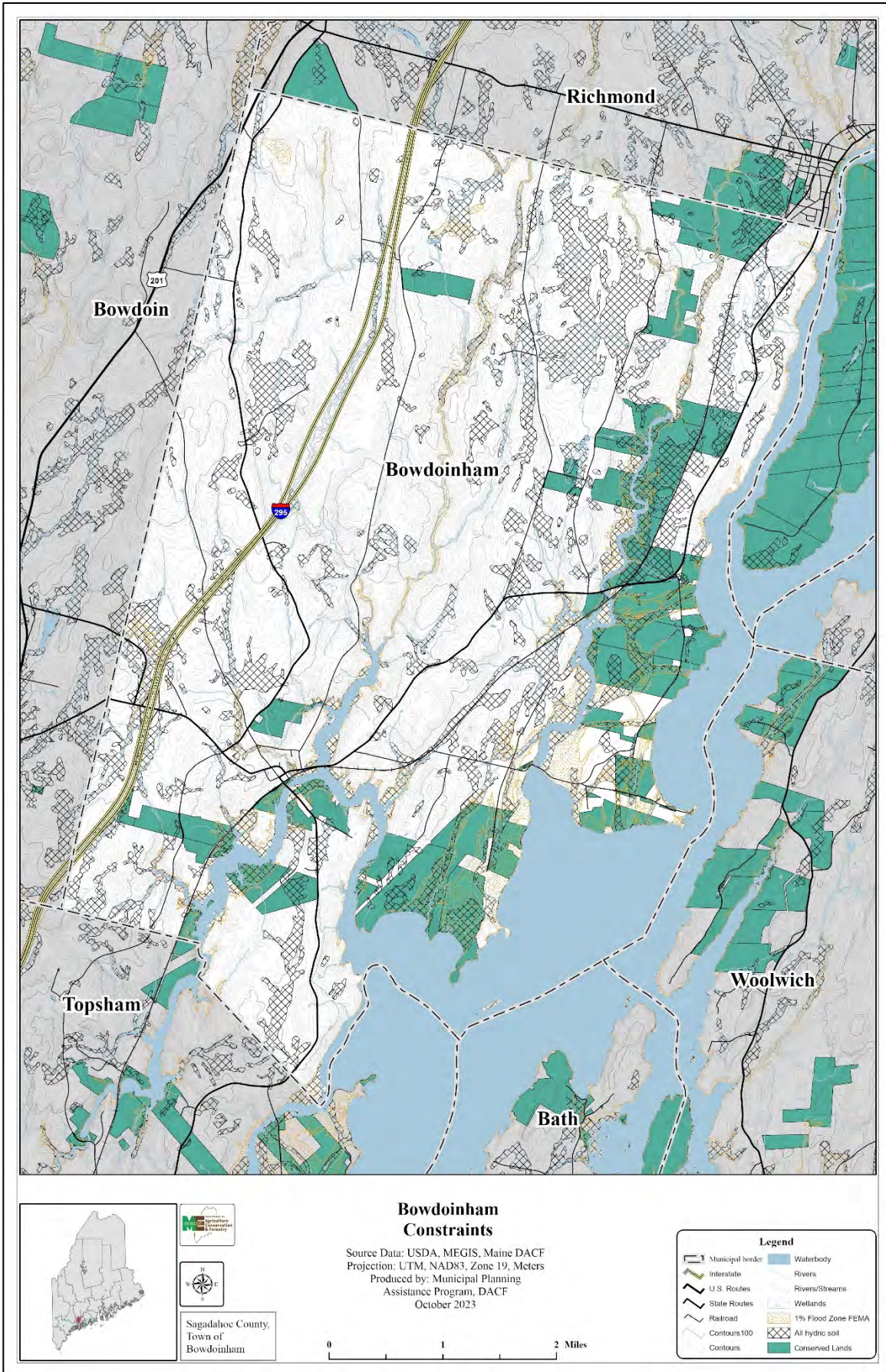
Map created: March 2012  
 Map prepared by LatLong Logic, LLC  
 Sources: Town of Bowdoinham, USDA-NRCS and MEGIS

**BOWDOINHAM COMPREHENSIVE PLAN  
 FARMLAND SOILS AND HOLLIS SOILS**



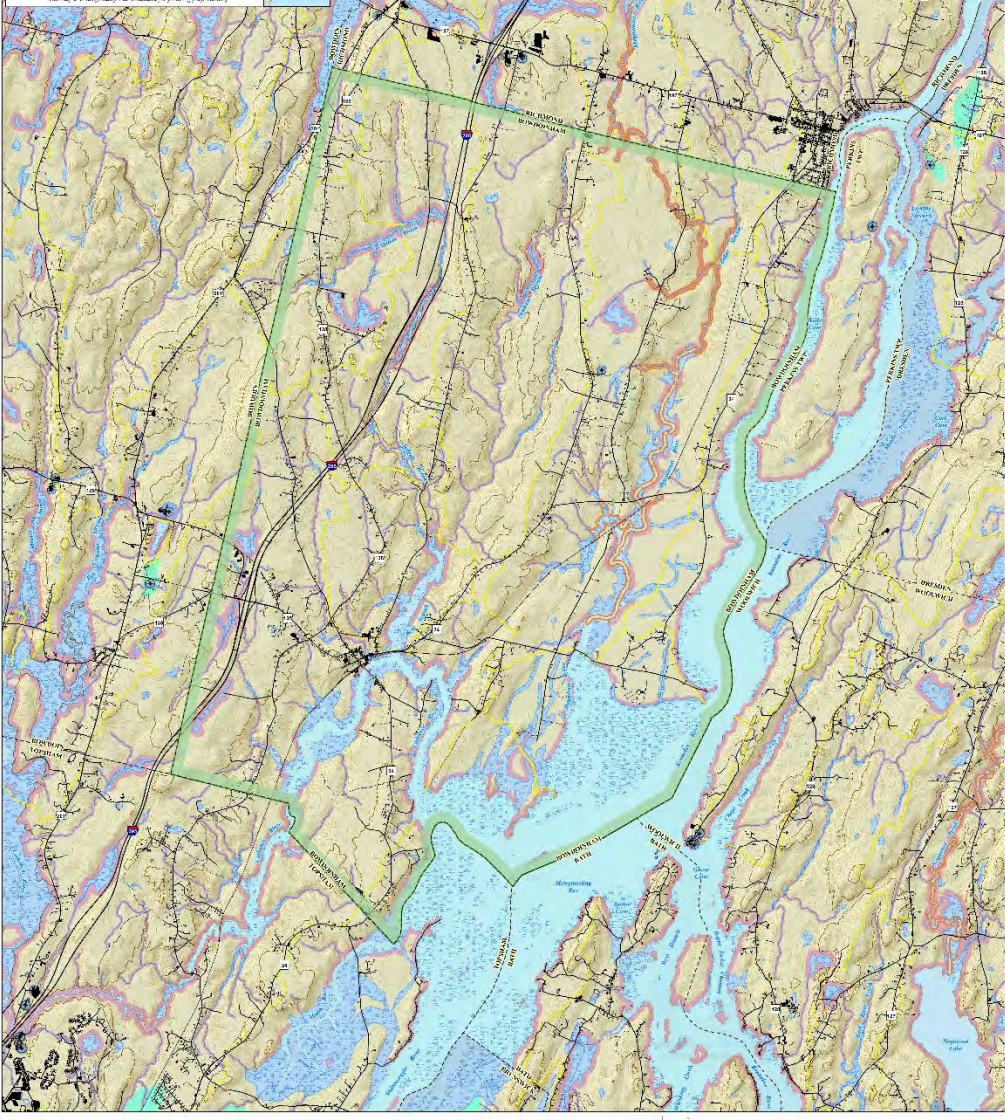








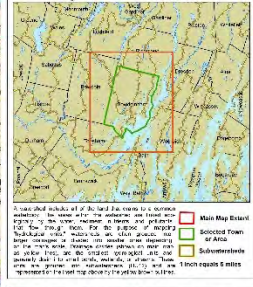
**Beginning with HABITAT**  
 An Approach to Conserving Maine's Natural Resources for Plants, Animals and People  
 Primary Map 1  
**Water Resources & Riparian Habitats**  
**Bowdoinham**



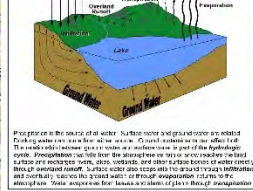
**LEGEND**

- Selected Town or Area
- Organized Township Boundary
- Unorganized Township
- Developed Impervious Surfaces: Roofs and Roads
- Stream Channel
- Wetlands
- Riparian Habitat
- Shallow Groundwater
- Public Water Supply Well
- Shallow Groundwater Area
- Wild Brook Inundation

**Regional View of Watersheds**



**Relationship of Ground Water and Surface Water**



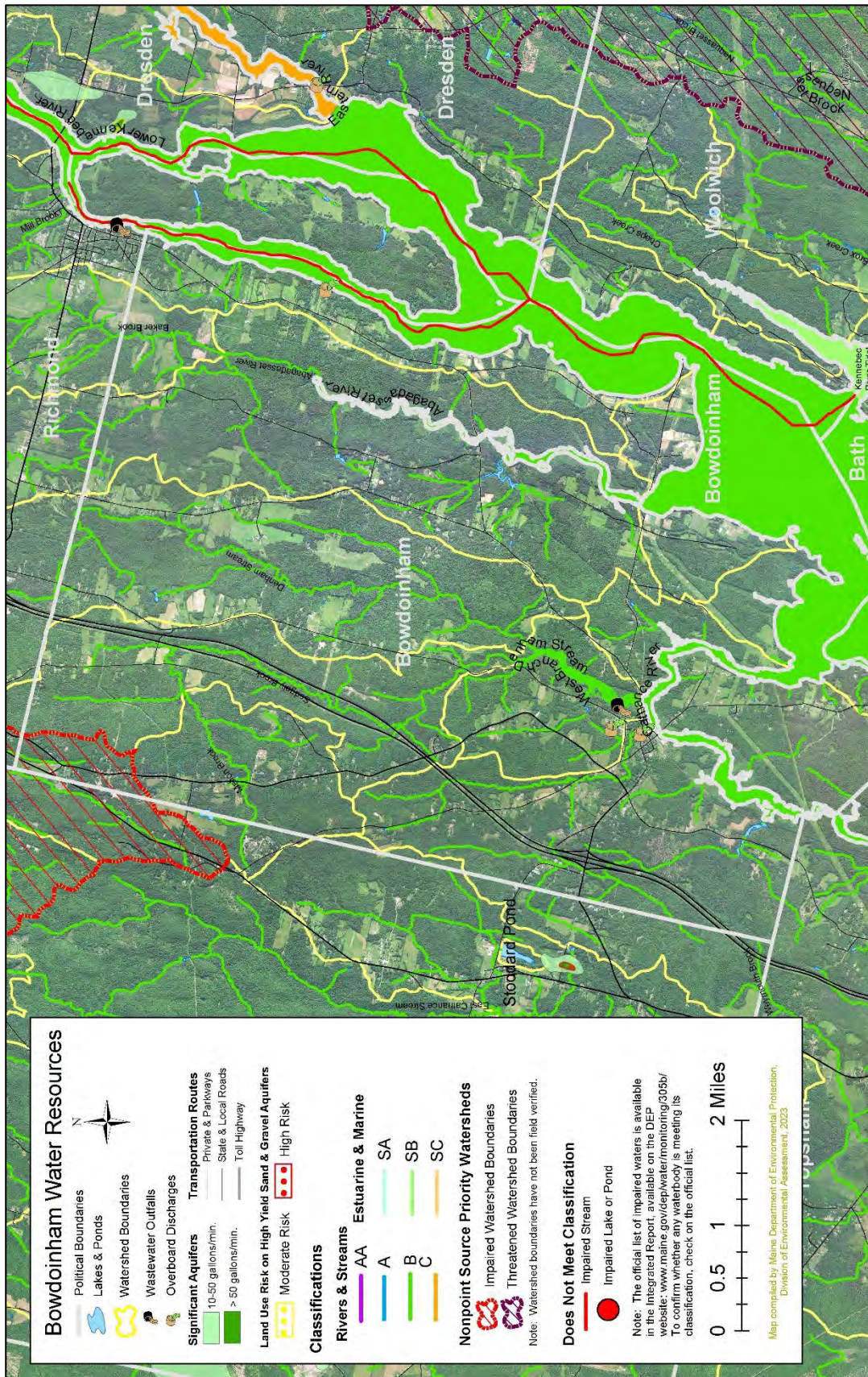
**Shoreland Zoning**

Maine's Shoreland Zoning and Planning Act is designed to protect water quality, conserve wildlife habitat, and preserve the scenic beauty of lakes, streams, ponds, and wetlands. It also provides for the management of land adjacent to these water bodies. The Act defines shoreland as land within 100 feet of the ordinary high water mark of a lake, stream, pond, or wetland. The Act requires that shoreland be managed in a way that protects and enhances the water resources and the scenic beauty of these areas.

**Data Sources**

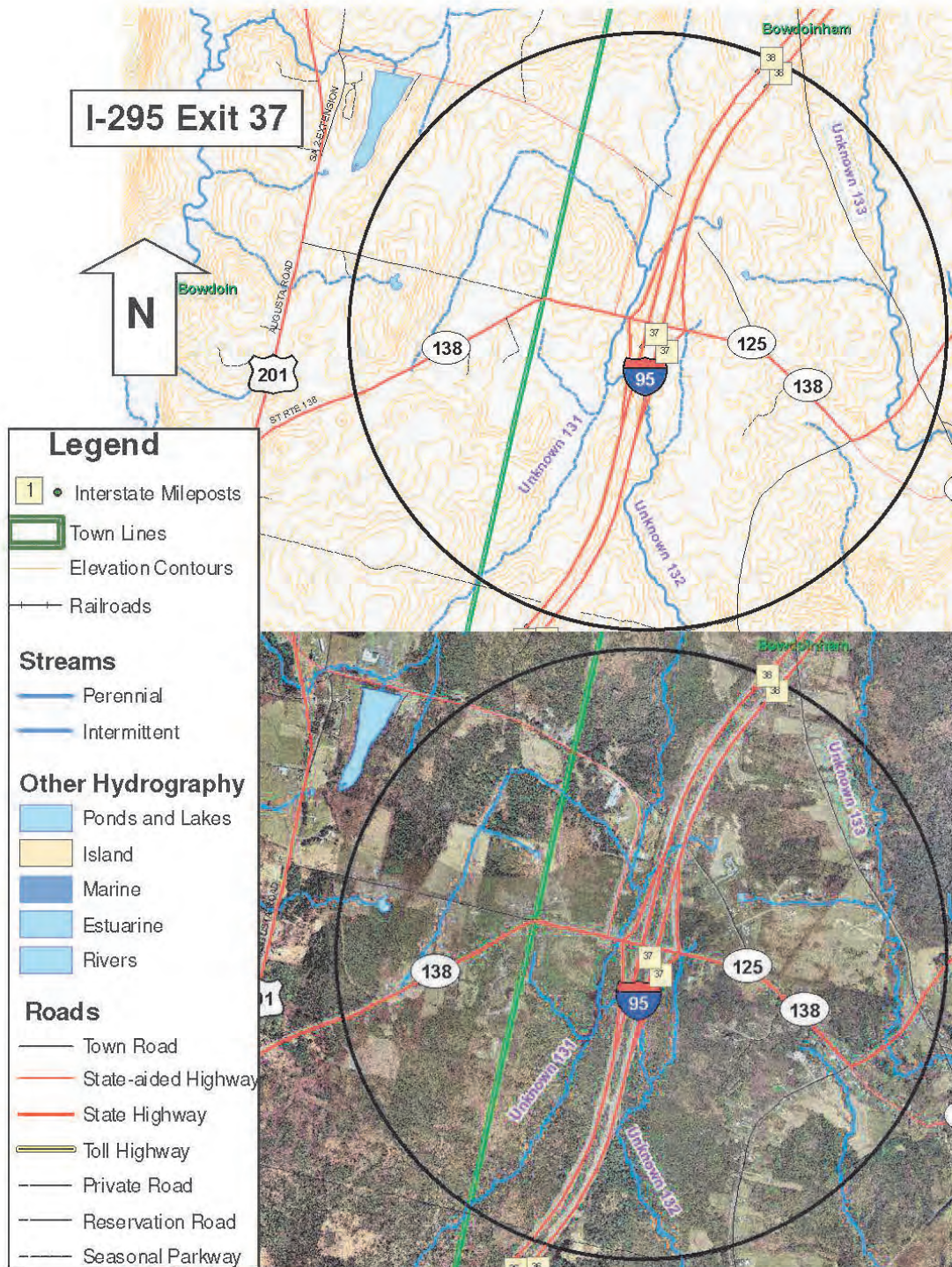
- Aerial Photography:** Aerial photography was used to identify wetlands and riparian habitats.
- Topographic Maps:** Topographic maps were used to identify stream channels and other features.
- Field Surveys:** Field surveys were conducted to identify wetlands and riparian habitats.
- GIS Data:** GIS data was used to analyze the spatial distribution of water resources and riparian habitats.
- Public Records:** Public records were used to identify public water supply wells and other infrastructure.



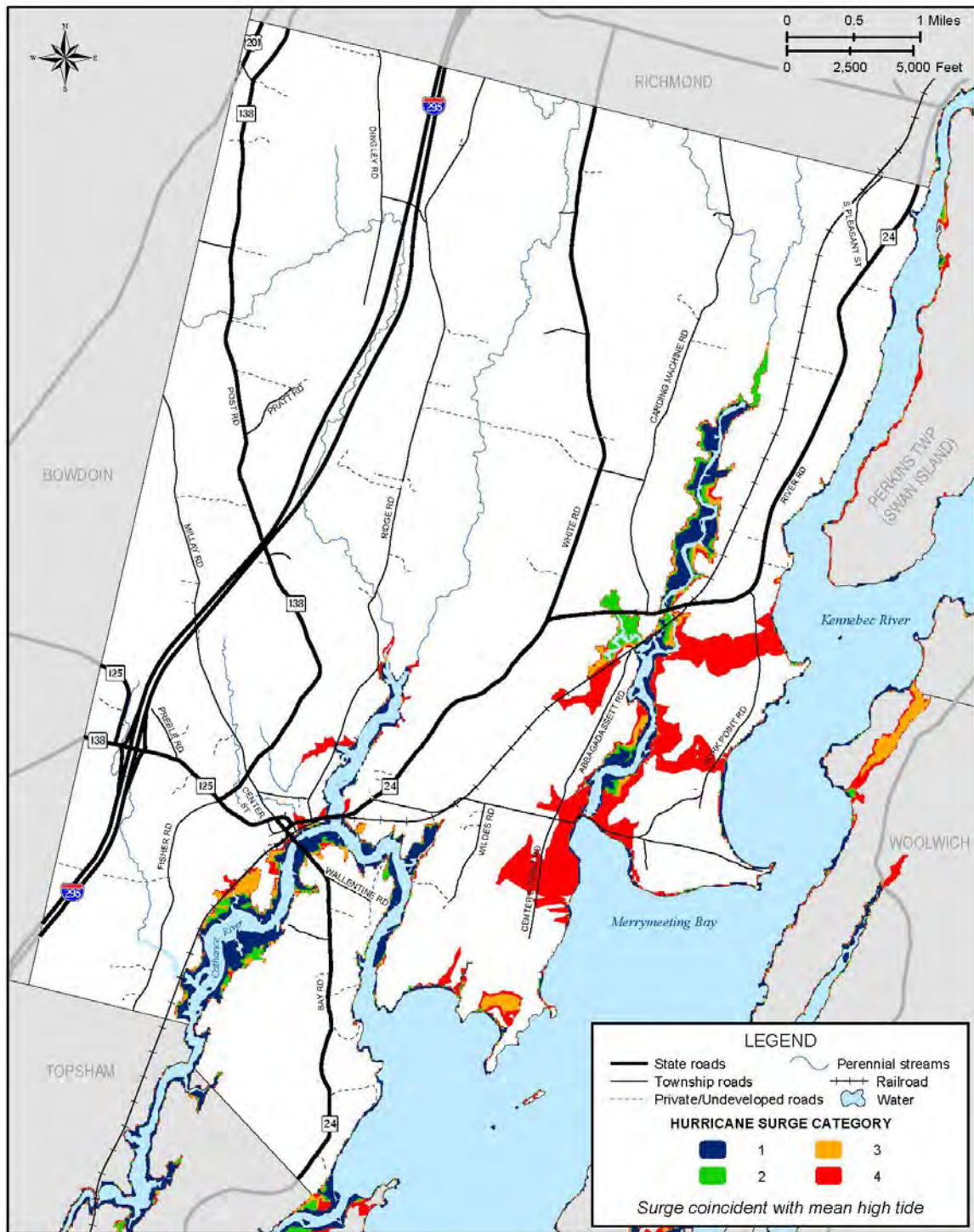




# Map of Turnpike Streams





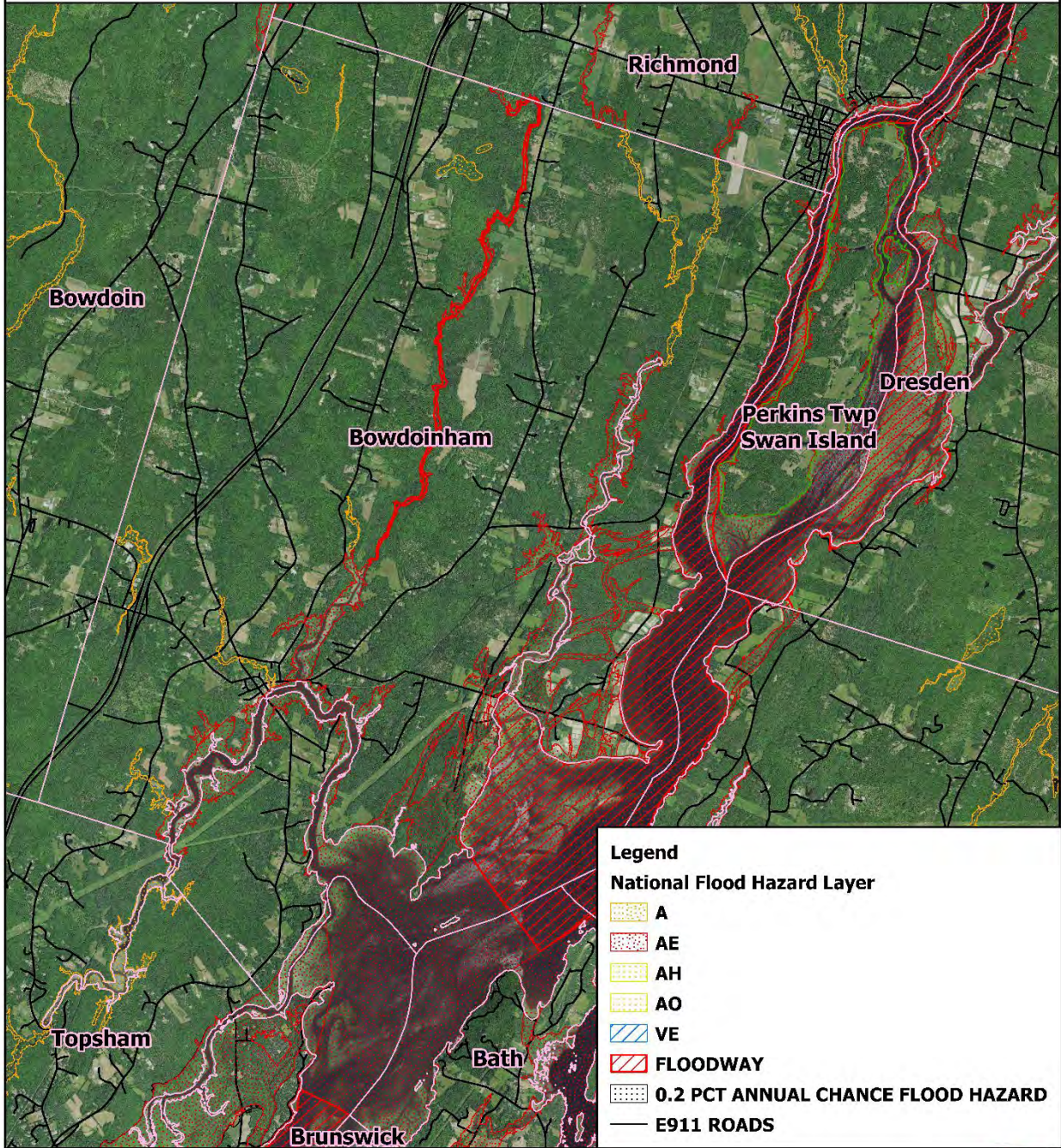


Map created: February 2012  
 Map prepared by LatLong Logic, LLC  
 Sources: U.S. Army Corps of Engineers, MEDOT and MEGIS

**BOWDOINHAM COMPREHENSIVE PLAN  
 HURRICANE SURGE INUNDATION**



FEMA Floodplain Map, December 2023



Maine Floodplain Management Program  
 Maine Department of Agriculture, Conservation and Forestry



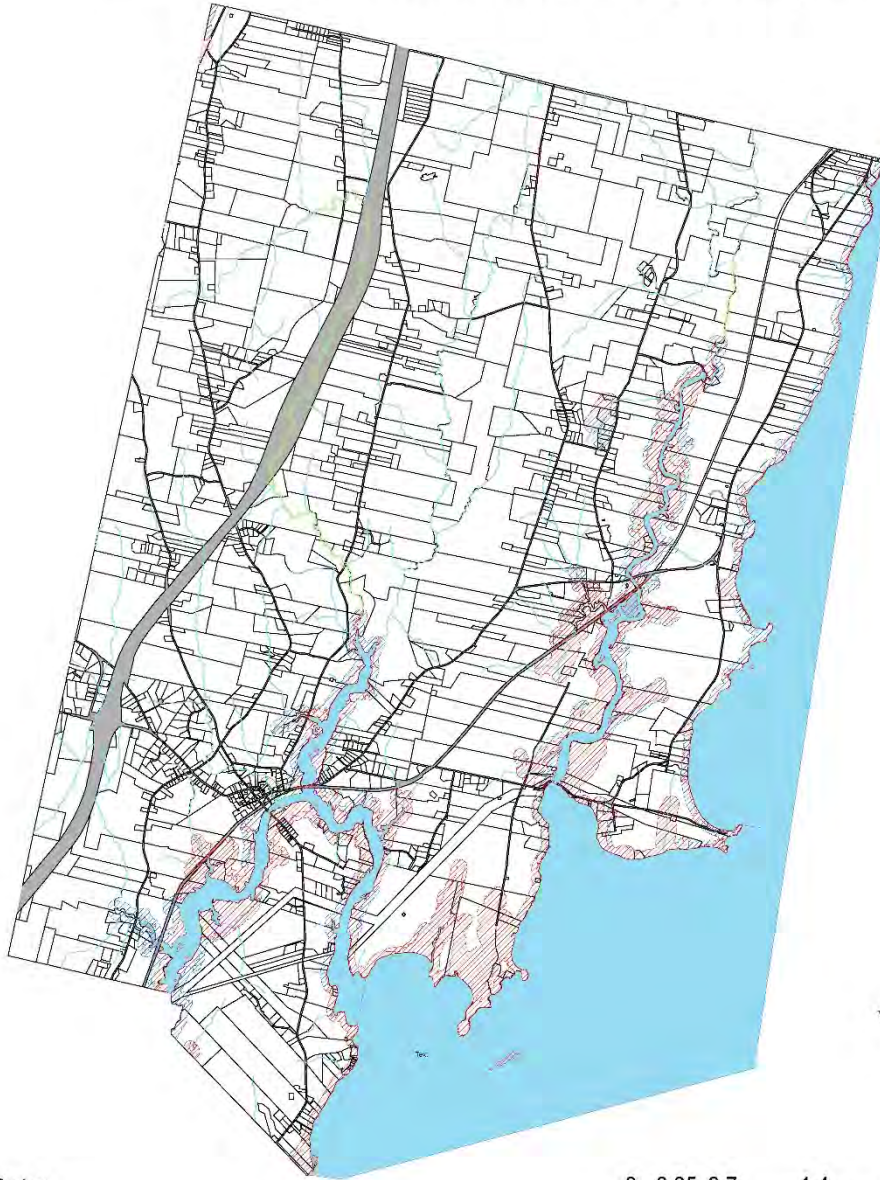
Base map layers from the Maine Office of GIS. Flood data from FEMA.  
 Map produced by the Maine Floodplain Management Program, Janet Parker, CFM.

Scale: 1:75,000

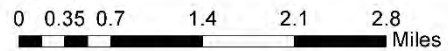




# Town of Bowdoinham Official Shoreland Zoning Map



Effective Date: \_\_\_\_\_  
 Town Clerk: \_\_\_\_\_

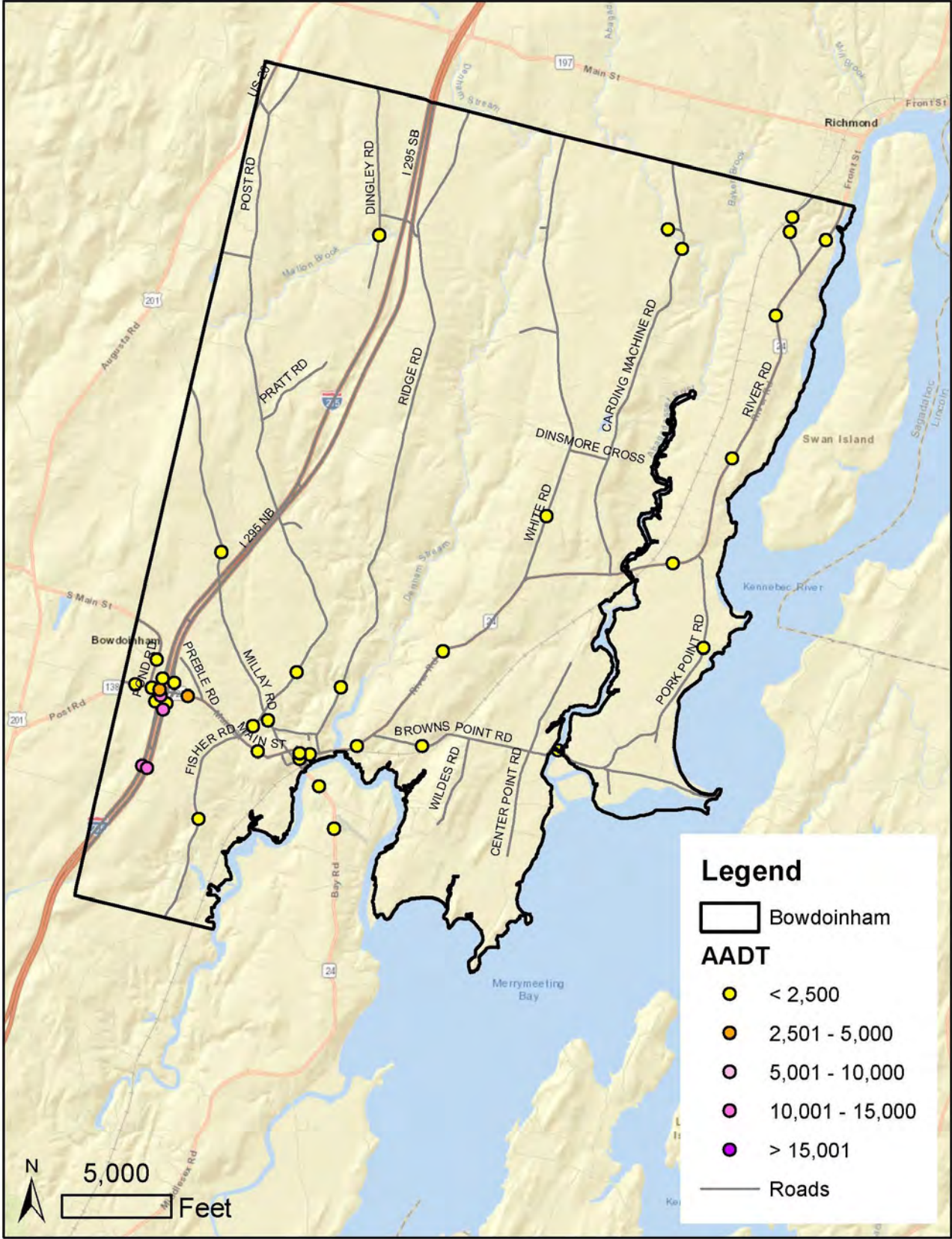


**Notes:**

1. The Official Shoreland Zoning Map was adopted pursuant to Shoreland Zoning Amendments at Town Meeting on June 10, 2015.
2. The areas of the Resource Protection District are shown on this Official Shoreland Zoning Map through use of aerial data. The actual, on-the-ground location of the Resource Protection District shall be determined the District's description in the Land Use Ordinance and may be located by a professional surveyor.
3. Areas that are shown as Resource Protection on this Official Shoreland Zoning Map, but are proven not to be Resource Protection based on on-the-ground determination shall be considered to be the Limited Residential District.
4. Wetland areas contiguous with and at the same elevation as the normal high water line of the river and streams are considered part of those waterbodies.

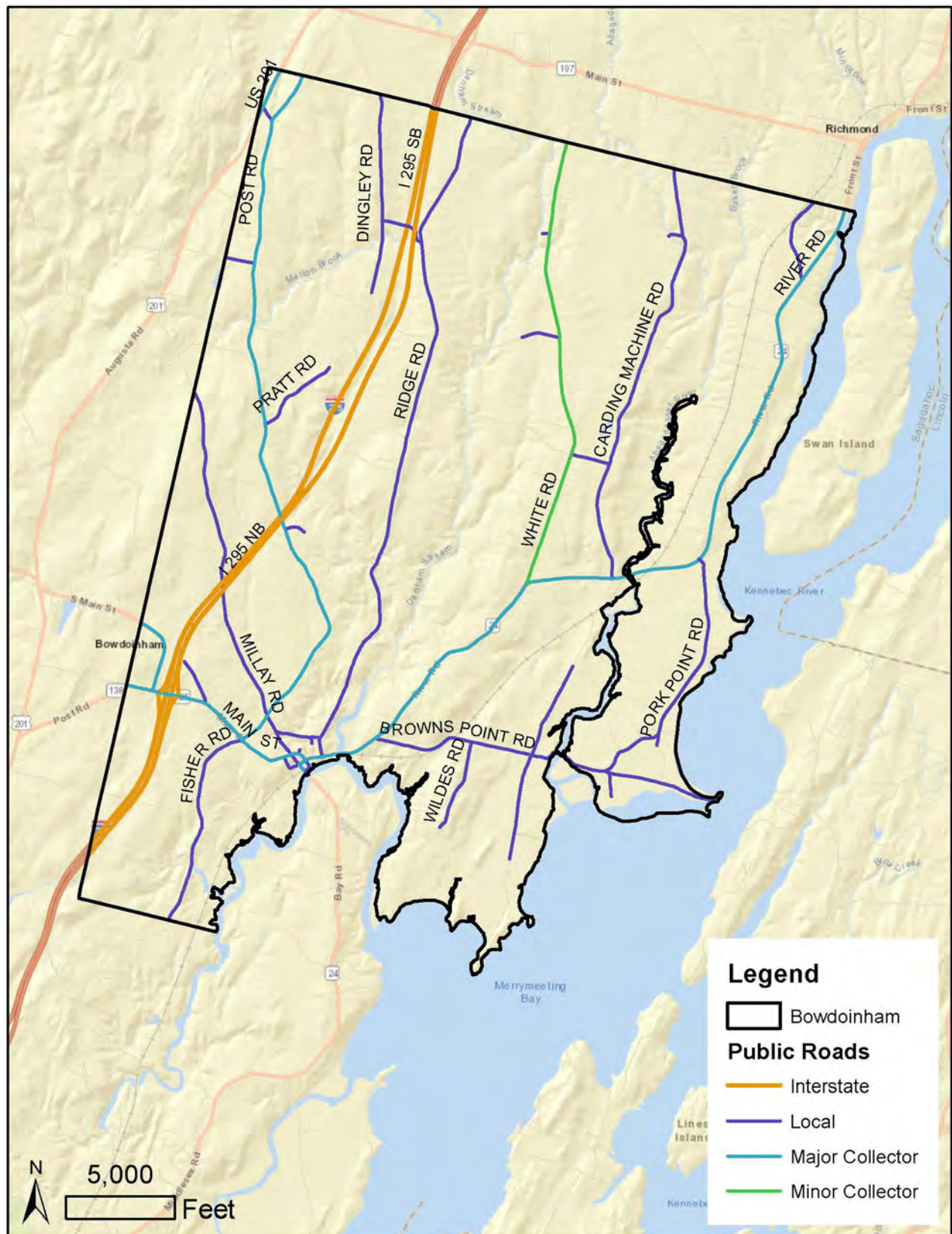
<b>Shoreland Zoning</b>	
<b>Shoreland Zoning District</b>	
<b>Type</b>	
	Commercial Fisheries & Maritime Activities District
	General Development I District
	General Development II District
	Limited Commercial District
	Limited Residential District
	Resource Protection District
	Stream Protection District

# Bowdoinham Traffic Volume Counts



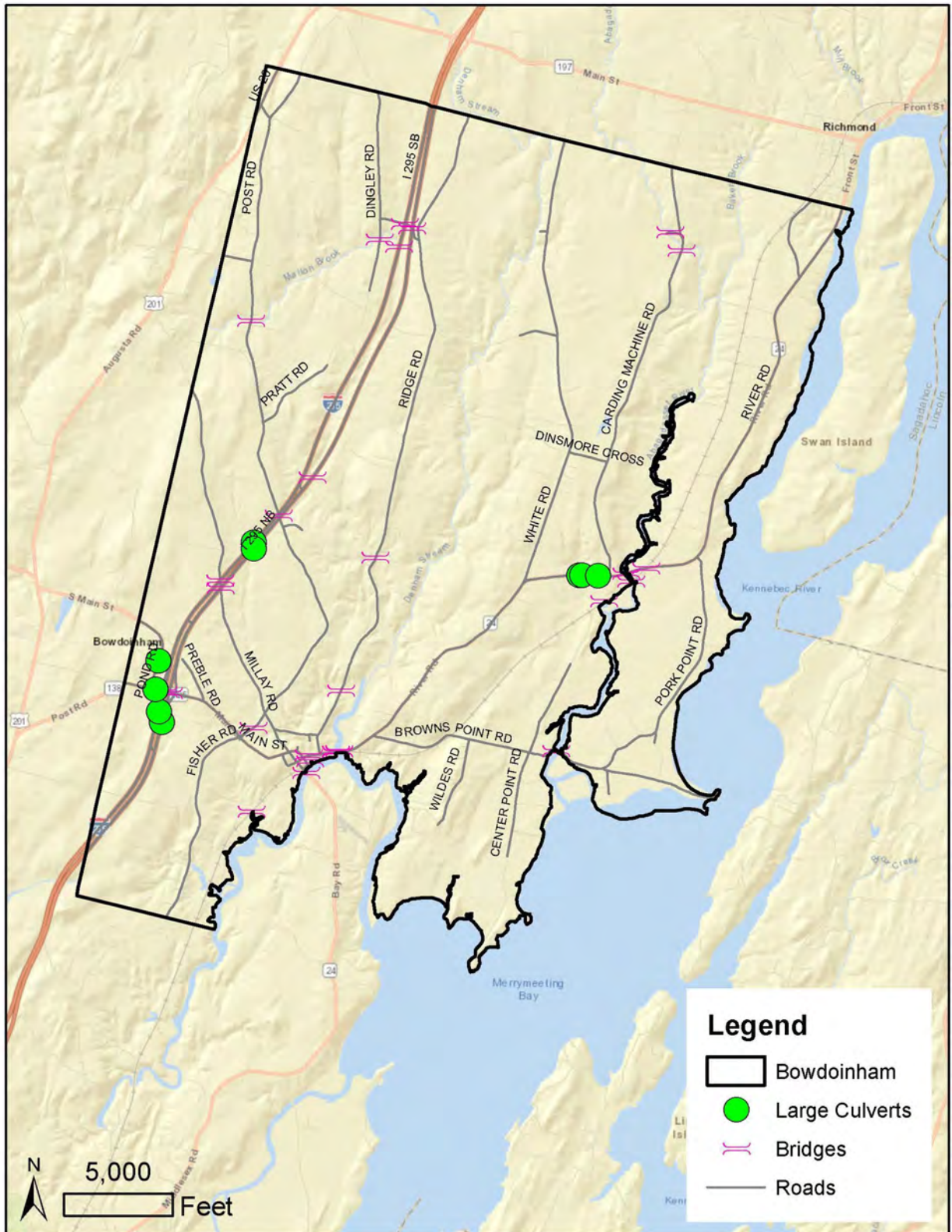


# Bowdoinham Federal Functional Classification of Roads

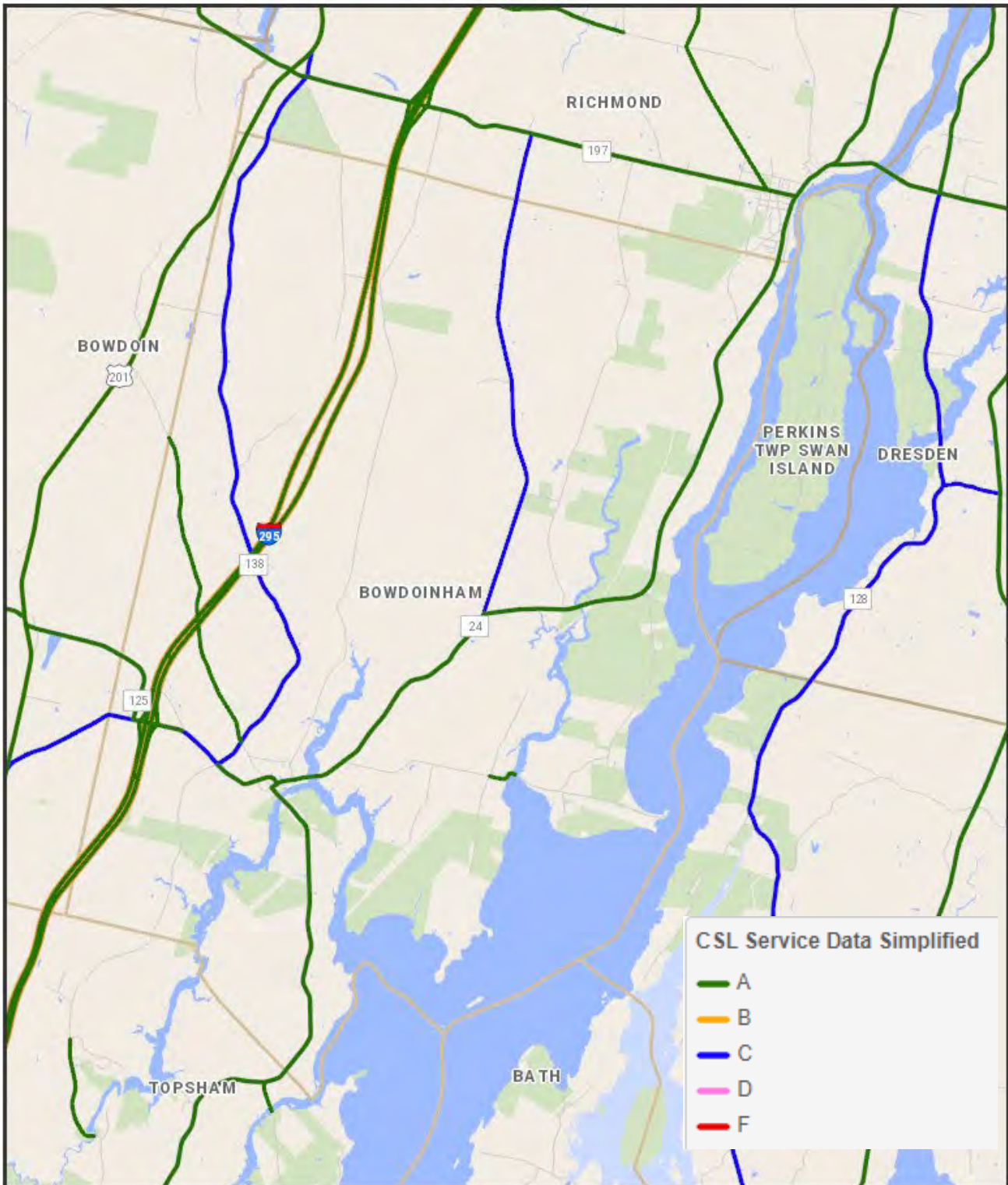




# Bowdoinham Bridges and Culverts



# LOS MAP

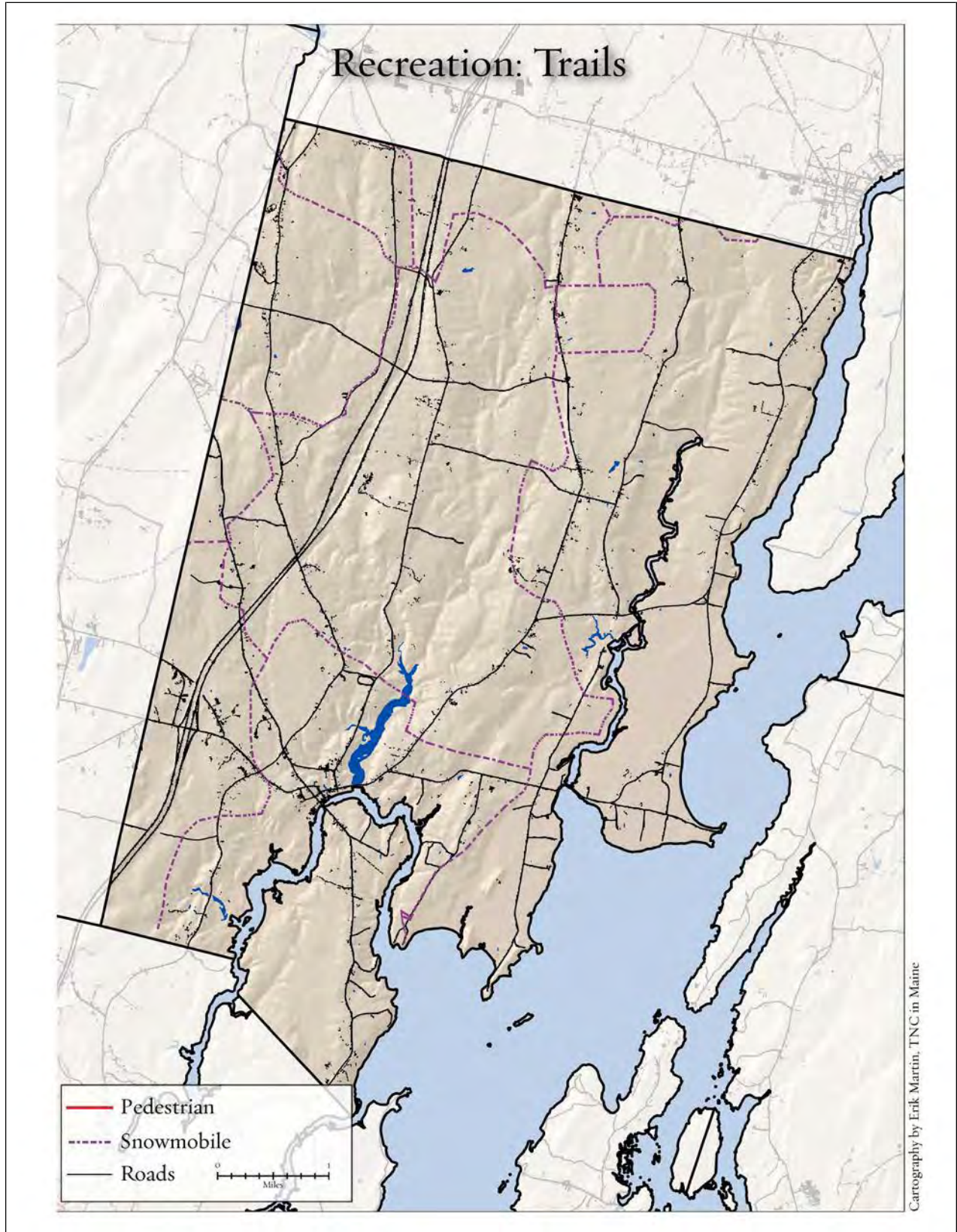


The Maine Department of Transportation provides this publication for information only. Reliance upon this information is at user risk. It is subject to revision and may be incomplete depending upon changing conditions. The Department assumes no liability if injuries or damages result from this information. This map is not intended to support emergency dispatch.

1.5 Miles  
1 inch = 1.61 miles

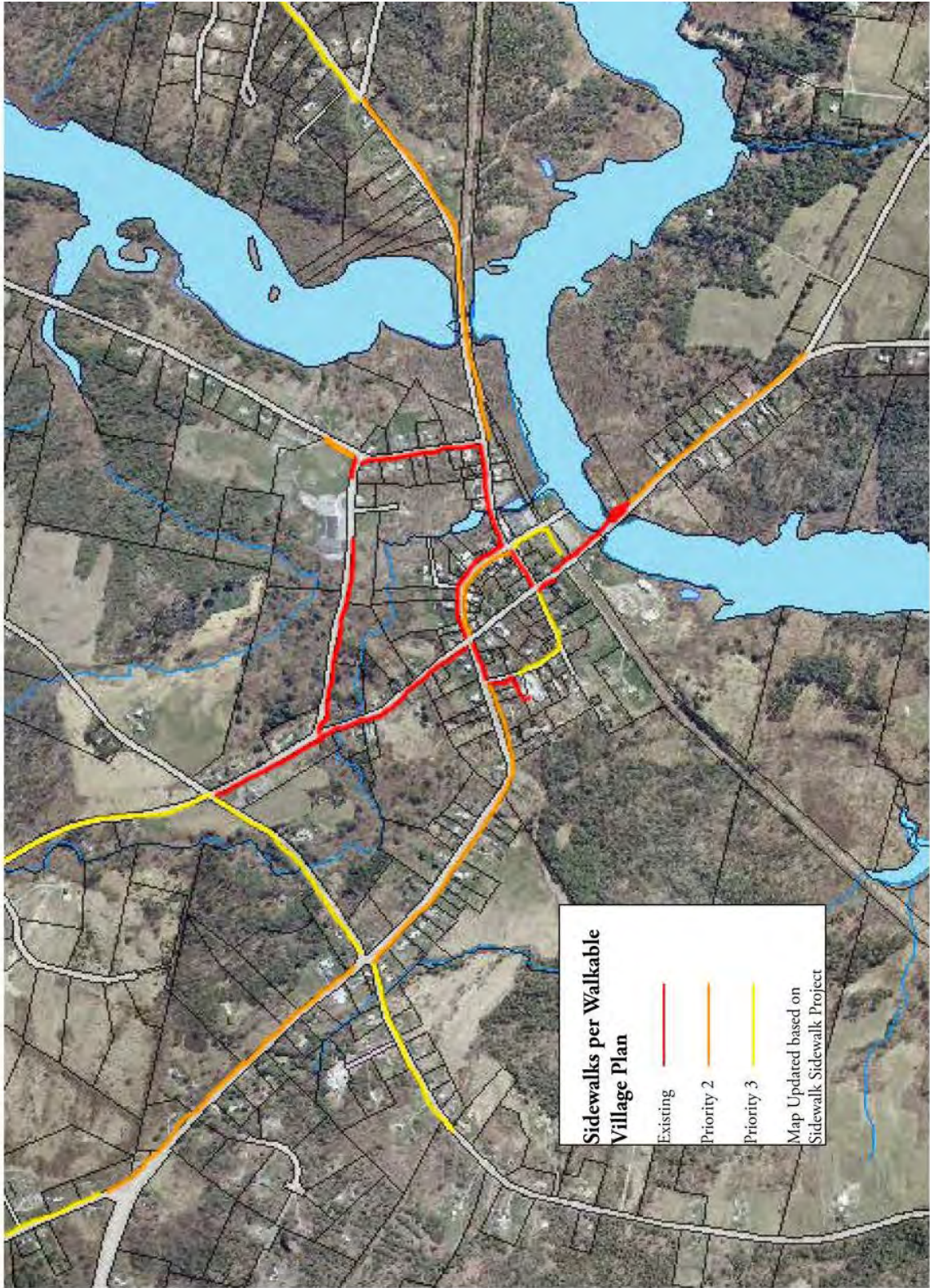
Date: 12/14/2023  
Time: 12:33:49 PM



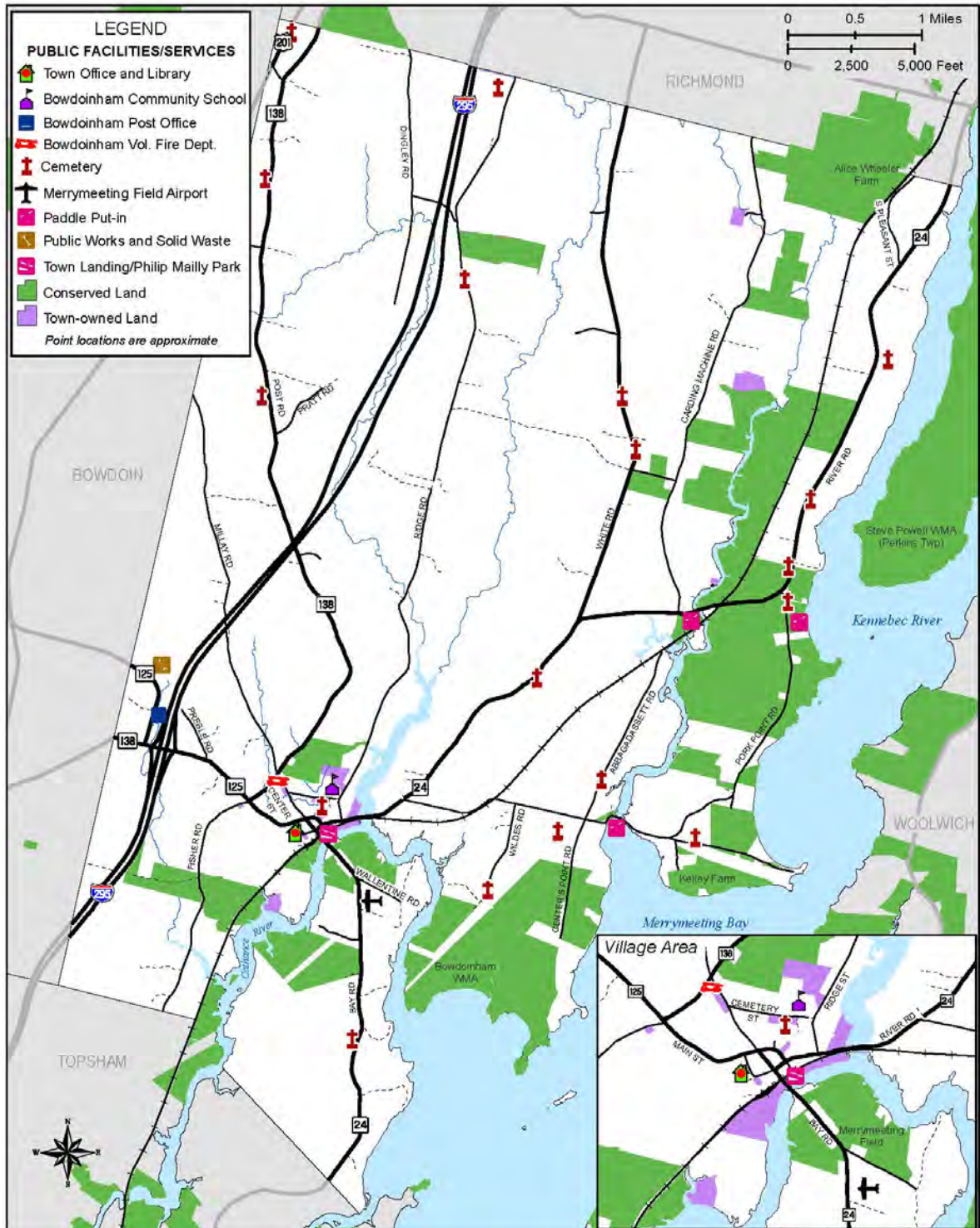


This map is based on the most recent data available from 2011, some trails may have changed.





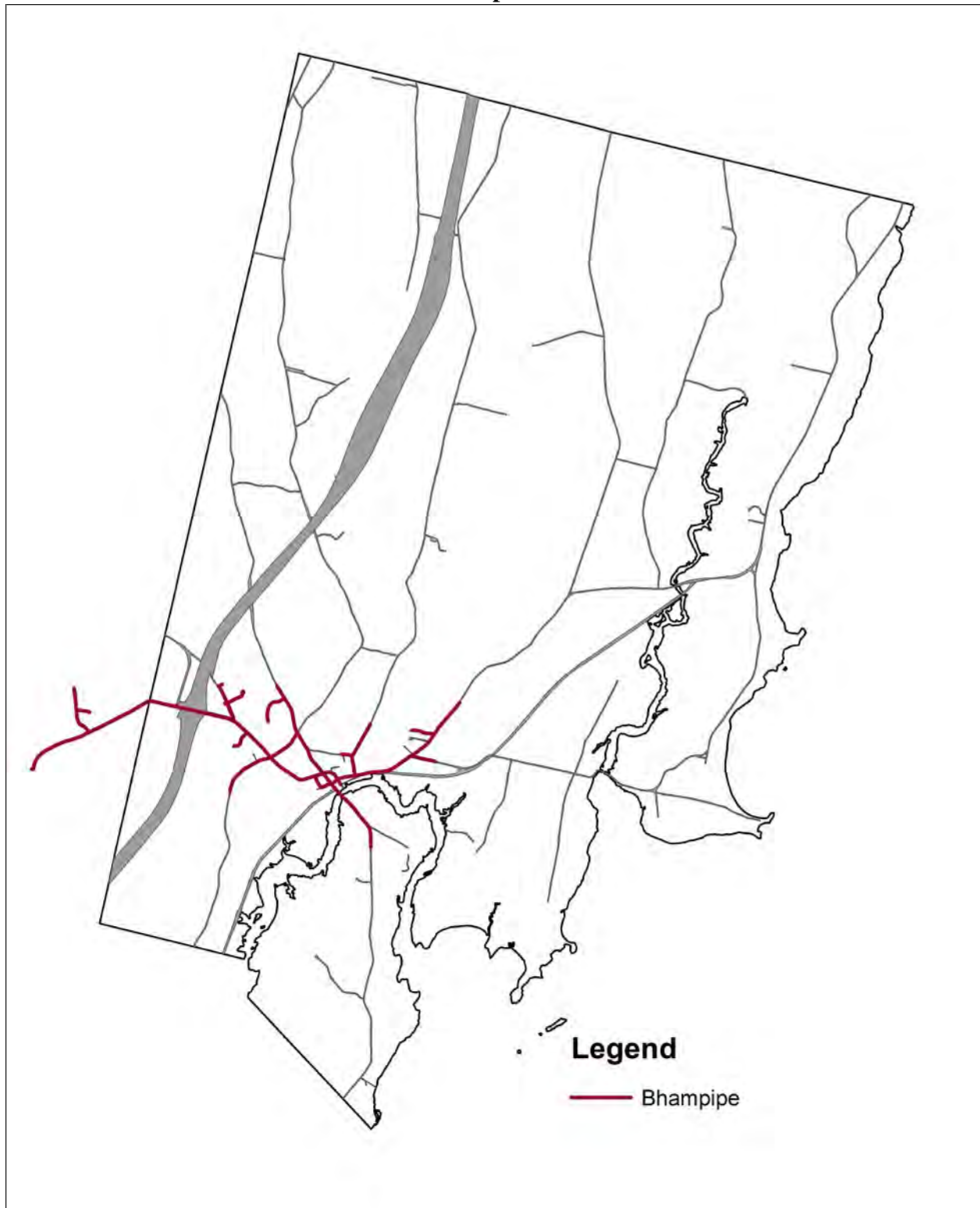




Map created: December 2023  
 Map prepared by LatLong Logic, LLC  
 Sources: Town of Bowdoinham, MEDOC, MEDOT and MEGIS

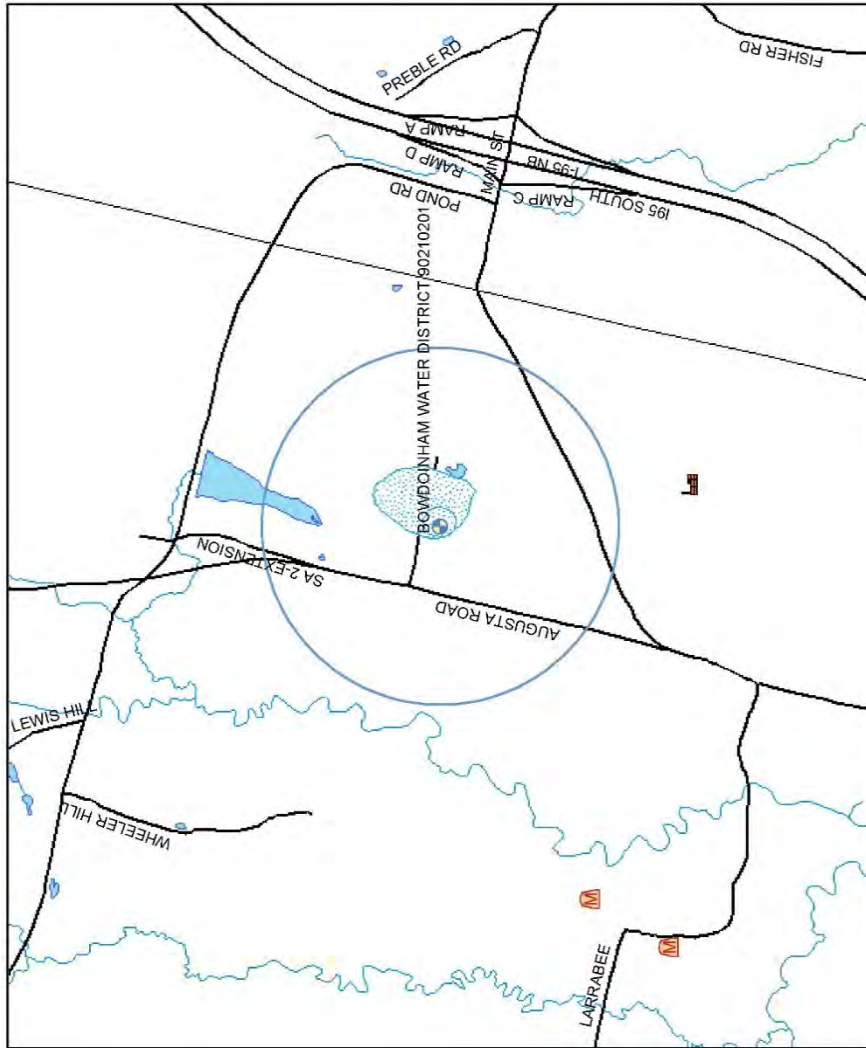
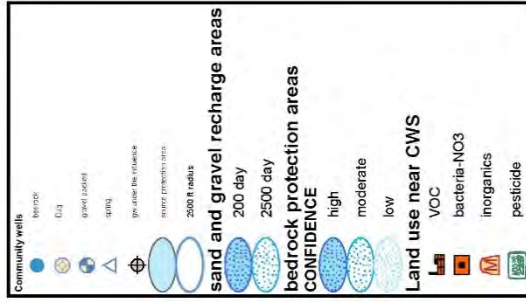
**BOWDOINHAM COMPREHENSIVE PLAN  
 PUBLIC FACILITIES AND SERVICES**

# Bowdoinham Water District Service Area Map





This map accompanies the Source Water Assessment for the public water supply shown on the map. Please refer to the assessment for an explanation of the significance of the symbols on the map

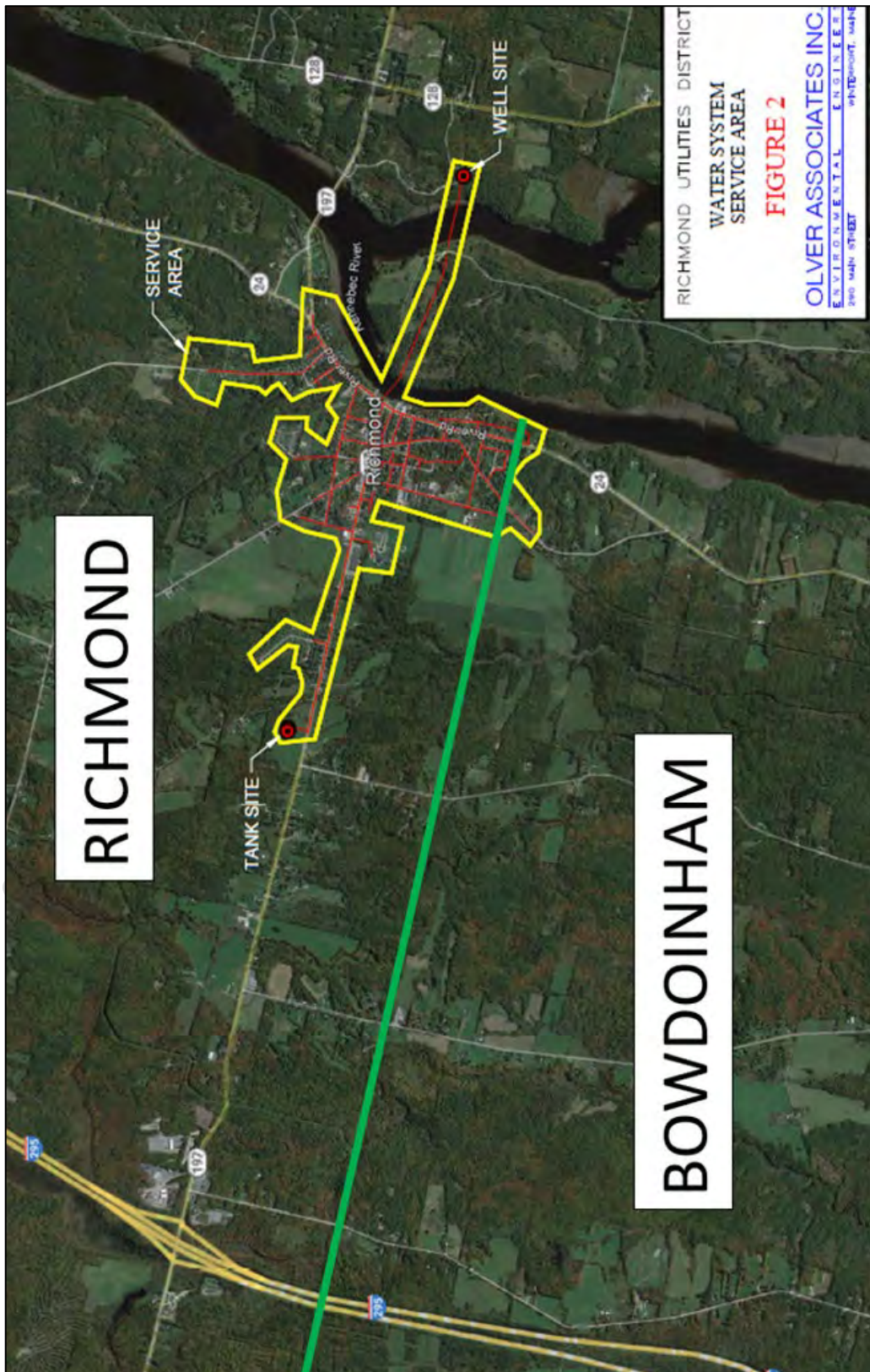


ALT 10/02

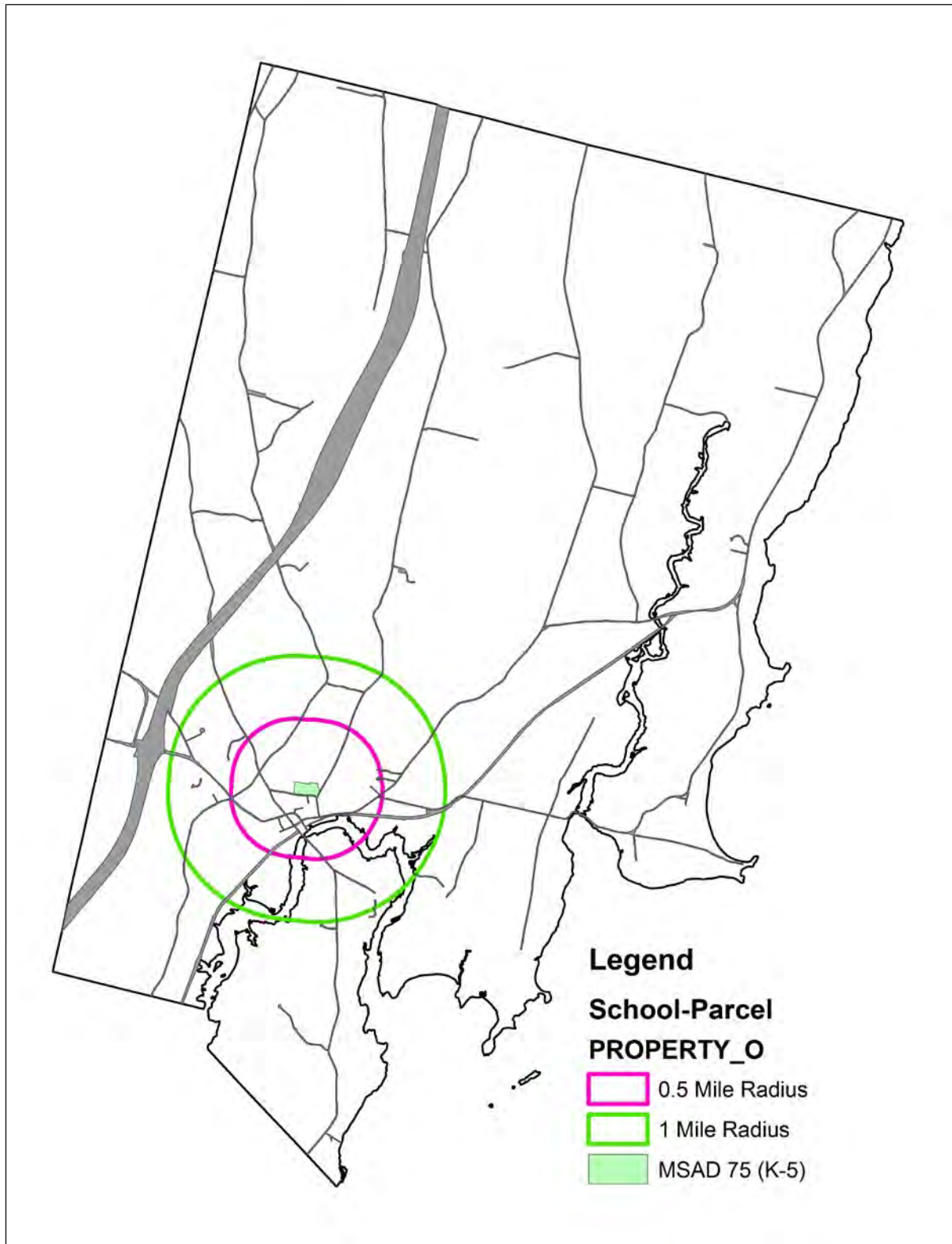
Community Source Water Protection Map



Richmond Utility District Service Area



**Area within 1 mile of Bowdoinham Community School**



## **REGIONAL COORDINATION**

### **Economy**

Our businesses and residents work across town boundaries so it is important that our town government does too. Currently, the Town participates in the regional efforts of Midcoast Economic Development District and Midcoast Council of Governments and is represented on their Board of Directors and Executive Committee. The Town is also a member of the Southern Midcoast Maine Chamber and has worked with them to advertise Bowdoinham's businesses.

### **Agriculture**

The Town supports and works with regional organizations, such as Kennebec Estuary Land Trust, Merrymeeting Food Council, Bowdoinham Farmers' Market, Maine Farmland Trust, Maine Department of Agriculture, Conservation and Forestry, and Maine Organic Farmers & Growers Association to protect farmland and promote agriculture.

### **Forest Resources**

The Town has adopted the State's forestry rules so that our timber harvesting rules are consistent with others in our region. The Town would be willing to work with others, but at this time there are no regional projects planned.

### **Natural Resources**

The Town supports and works with organizations, such as Kennebec Estuary Land Trust and Maine Department of Inland Fisheries & Wildlife to preserve land and protect our natural resources. The Town has also participated in a regional sea-level project with Bowdoin College and a marsh migration project with the municipalities of Topsham and Bath.

### **Water Resources**

The Town complies and enforces several State rules (Shoreland Zoning, Erosion Control, Stormwater, etc.) to preserve the quality of the water we all share. In addition, the Town works with and supports the Bowdoin & Bowdoinham Water District and Friends of Merrymeeting Bay.

### **Historic and Archaeological Resources**

The Town supports the work of the Bowdoinham Historical Society in preserving our rich history. The Town would be willing to work with others, but at this time there are no regional projects planned.



## **Recreation**

The Town works closely with the Ararat Youth Basketball League, Ararat Youth Baseball/Softball League, and Topsham Youth Soccer League to provide sport opportunities for our elementary school children. The Town also coordinates with Bowdoin College and Lost Valley to provide additional swim and ski opportunities for our residents. In addition, the Town is actively working with the municipalities of Topsham, Richmond and Gardiner and several other groups to plan for the Merrymeeting Trail.

## **Transportation**

Our Bowdoinham Traffic Volume Counts extends outside of our Town boundaries, therefore the Town works with our neighbors and region on transportation issues. The Town coordinates plowing on several roads with the Town of Richmond. The Town participated in the process led by Midcoast Council of Governments to create a Management Plan for the Route 24 Corridor and is now supporting the implementation of the plan. In the future, we look forward to participating in Midcoast Council of Governments public transit study. Additionally, as stated above, the Town is actively working with the municipalities of Topsham, Richmond, and Gardiner and several other groups to plan for the Merrymeeting Trail.

## **Housing**

In 2024 the Town began participating in the Midcoast Council of Government's Five Rivers Affordable Housing Working Group. The goal of the working group is to align existing housing assessments and agreements; work to consolidate zoning approaches and inform the development of common housing models; and facilitate collaboration on regionally focused housing projects. The subregion includes Harpswell, Brunswick in addition to Sagadahoc County.

## **Public Facilities and Services**

The Town works with other municipalities, regional organizations, and other groups to provide services for our residents. Bowdoinham is part of MSAD 75 School District, which includes Bowdoin, Topsham, and Harpswell. Our emergency personnel, who plan, coordinate, train and work with our neighbors and our region. The Town participates in the regional efforts of Midcoast Economic Development District and Midcoast Council of Governments.

## **Fiscal Capacity and Capital Investment Plan**

At this time, the Town has no shared resources. The Town would be willing to work with others, but at this time there are no regional projects planned.

## **PUBLIC PARTICIPATION SUMMARY**

### **Comprehensive Planning Committee**

#### Members

The Town formed a Comprehensive Planning Committee (CPC) to update the Town's Comprehensive Plan. The Town advertised for members through the Town's Bowdoinham News, Town's Website and existing Town Committee's, in order to form a well-rounded, diverse committee. The Comprehensive Planning Committee was formed in January of 2021 with the following members:

- **Allen Acker –**
- Dave Asmussen – Served as the CPC Vice Chair until becoming Chair in 2023. David has a background in environmental biology and earth science and runs Blue Bell Farm, a MOFGA Certified Organic mixed vegetable farm on Carding Machine Road. During the summer he helps organize the Bowdoinham Farmers' Market which takes place at the waterfront park from June to October. He also has three children in the MSAD 75 school district.
- Jan Marks – Jan moved to Bowdoinham from western Maine in 2016. She has served on the Board of the Merrymeeting Arts Center for three years and joined the CPC in 2022.
- Jason Lamoreau - Jason is a lifelong resident of Bowdoinham. Born and raised on the Carding Machine Road, he now lives with his wife and four children on White Road. He is the Recreation & Community Services Director for Bowdoinham as well as a volunteer Fire Fighter and EMT.
- Joanne Joy, Served as Vice Chair for the 2014 Comp Plan Update and as Chair for the 2024 update until November 2023 when she started serving as a selectboard member. Joanne was the Executive Director of Healthy Communities of the Capital Area. Joanne is married, has 3 adult children and 2 young grandsons. She enjoys gardening, hiking, kayaking, and camping.
- Laura Arnold – Laura is a mostly retired lifestyle and family medicine physician. She has lived in Bowdoinham since 2018 with her husband. They have three grown children and two dogs. She enjoys hiking, boating, gardening, traveling, and pickleball.
- Peggy Christian - Peggy Christian has been in Bowdoinham since the year 2000. After several years of small-scale volunteering for local organizations she joined the CPC in 2018. She is currently serving as vice-chair of the committee.
- Robert Schott - Robert currently works as a Power and Controls Designer. He moved to Bowdoinham in 2008 and is married with two children. He enjoys whitewater boating and downhill skiing and snowboarding.
- William Stanton - Bill studied Architecture at Rensselaer Polytechnic Institute and Civil Engineering at the University of Maine. He worked in various capacities as a licensed civil engineer for 42 years. His most noticeable project was the LL Bean Wing at the Maine Medical Center in Portland, where he was a member of the construction management team. Bill taught structural engineering at the college level and practiced as an engineering consultant and retired to Bowdoinham in 2005. He is also an artist and owner of the Cathance River Gallery in Bowdoinham.

## Committee Meetings

The Comprehensive Planning Committee set regular monthly meeting with some exceptions and several extra meetings. All committee meetings are open to the public and have been advertised on the Town's website, newsletter, and periodically advertised in The Bowdoinham News.

While the CPC has been meeting monthly for several years the Comp Plan update work started in earnest on their December 20, 2020 meeting. The CPC held committee meetings on the following dates:

- December 20, 2020
- January 13, 2021
- February 17, 2021
- March 9, 2021
- April 13, 2021
- May 11, 2021
- June 8, 2021
- July 13, 2021
- August 10, 2021
- September 14, 2021
- October 12, 2021
- November 9, 2021
- November 30, 2021
- December 14, 2021
- January 11, 2022
- February 2, 2022
- March 8, 2022
- April 7, 2022
- April 12, 2022
- May 10, 2022
- June 14, 2022
- July 12, 2022
- August 9, 2022
- September 13, 2022
- October 11, 2022
- November 8, 2022
- December 13, 2022
- December 14, 2022
- January 10, 2023
- February 14, 2023
- March 14, 2023
- April 11, 2023
- May 9, 2023
- June 13, 2023
- July 11, 2023
- July 25, 2023
- August 8, 2023
- September 12, 2023
- October 10, 2023
- October 17, 2023
- November 14, 2023
- November 29, 2023
- December 12, 2023
- January 9, 2024
- February 13, 2024
- March 12, 2024 (scheduled)
- April 9, 2024 (scheduled)
- May 14, 2024 (scheduled)
- June 1, 2024 (scheduled)

All meeting minutes are available at the Town Office.

## **Comprehensive Planning Process**

The Committee created this Comprehensive Plan using the process outline below. Throughout this process, the Committee used the Town's website, Facebook page and newsletter to inform residents of their work, upcoming workshops, and surveys. All meeting minutes and survey results are available at the Town Office.

### Committee Start-up - December 2020 - July 2021

The Committee's first order of business was to determine the process and timeline they would use for creating this comprehensive plan. The committee also secured external resources available for assistance including data collection help from Midcoast Council of Government, and other vendors for GIS mapping, and meeting facilitation. The committee also compiled a list of local community groups and committees to target for assistance with writing and promoting the plan.

### Visioning - August 2021 – April 2022

The Committee began their comprehensive process by creating the Vision, of which the goals and strategies would be built on. To create the Vision Statement, the committee conducted the following:

#### *Public Workshops*

The Committee held two public workshops to create the Vision Statement. To ensure a fair, efficient, and productive process, Craig Freshley of Good Group Decisions was hired to facilitate the meetings. The agendas are as follows:

#### Visioning Workshop - November 16, 2021

- 6:15 Arrival and Refreshments
- 6:30 Welcome
- 6:40 What Do We Love About Our Town and Want To Keep?
- 7:00 What About Our Town Would We Like to Change?
- 7:20 Special Topics
- 7:50 Reports and Conclusions
- 8:15 Adjourn

#### Visioning Workshop - March 15, 2022

- 6:15 Arrival and Refreshments
- 6:30 Welcome
- 6:35 What We've Heard So Far
- 6:55 Where and How to Protect what we Love?
- 7:35 How to Prepare for Climate Change?
- 8:00 Closing Comments
- 8:15 Adjourn

### *Visioning Survey*

The Committee conducted a Vision Survey, which was created in partnership with Craig Freshley of Good Group Decisions to gather input on the draft Vision Statement during the month of February 2022. The survey was informed by the questions that came up at the first public visioning on November 16, 2022 workshop. The survey had 126 respondents.

### *Public Outreach*

An effort was made from committee members to engage with our community and civic groups at the following events.

- Celebrate Bowdoinham - September 11, 2021

### Goals & Recommendations - May 2023 - July 2023

Using the State's list of Goals and the feedback the Committee gathered through the visioning process, the Committee created a draft list of goals and recommendations. The Committee then used the feedback gathered from public outreach and a goals survey to create the goals for this Plan.

### *Public Outreach*

The committee engaged with the following local groups to provide feedback on the Goals and Recommendations sections most pertinent to their organizations:

Community Development Advisory Committee – December 16, 2022

Table at Celebrate Bowdoinham - September 10, 2022

Age Friendly – February 14, 2023

Bowdoinham Water District – December 13, 2022

Table at Celebrate Bowdoinham - September 15, 2023

### Inventory & Analysis - March 2021 - February 2024

Using the State's list of policies and strategies and the feedback the Committee gathered through the public workshops and outreach, the Committee created the recommendations for this Plan. It is noted that much of the data was originally gathered in 2021 prior to the 2020 Census Data being published. As a result, these sections were updated again throughout 2023 and into 2024 to ensure the most recent data was included. This effort included staff from GrowSmart Maine, Midcoast Council of Governments and LatLong Logic, LLC.

### *Public Outreach*

The committee engaged with the following local groups to provide feedback on the Inventory & Analysis sections most pertinent to their organizations:

Community Development Advisory Committee – December 16, 2022

Bowdoinham Water District – December 13, 2022

Select Board - March 28, 2023

## Future Land Use - September 2023 - December 2023

The Committee began their comprehensive process on developing the land use section of the plan by conducting the following:

### *Housing Forum*

The Committee began a public feedback process on this section by first cohosting housing forums with the Bowdoinham Community Development Initiative at the Bowdoinham Community School to facilitate a public conversations about the housing needs of the community as informed by the findings of the demographics and housing data analysis sections of the draft plan. The agendas are as follows:

#### Housing Forum - October 26, 2022

- 6:00 Welcome and Introductions
- 6:10 Information Presentations
- 6:30 What is Attainable Housing?
- 7:30 Check for Consensus
- 7:45 Next Steps, Final Comments, Thank you
- 8:00 Adjourn

#### Housing Forum – February 1, 2023

- 6:00 Welcome and Introductions
- 6:05 Brief summary of the first meeting
- 6:20 “Keeping things the same won’t keep things the same”
- 6:35 What does increased housing look like
- 6:40 Introduction and review of breakout group discussion topics
- 6:50 Breakout groups discussion
- 7:20 Check for Consensus
- 7:50 Presentation of groups’ thoughts and next steps
- 8:00 Adjourn

Following up with the feedback received at these housing forums the Committee hosted two Land Use Forums focused on possible Future Land Use strategies that would allow for more housing. This included revisiting the Future Land Use Map created in the previous comprehensive plan. The committee gathered feedback on the list of possible strategies from the public workshops to create the recommendations in this plan.

### *Land Use Forums*

The Committee hired Craig Freshley of Good Group Decisions to facilitate two workshops. The agendas are as follows:

#### Land Use Forum – October 11, 2023

Participants were provided with the Future Land Use Map, copies of the existing comprehensive



plan, and the Vision Statement.

6:00 Arrival and Refreshments  
6:15 Welcome  
6:25 Context and Ideas  
6:45 The Village District I & II  
7:05 Route 24 (Near Richmond)  
7:25 Residential Agricultural District  
7:45 Closing Comments  
8:00 Adjourn

Land Use Forum - November 1, 2023

Participants were provided with the Future Land Use Map, copies of the existing comprehensive plan, and the Vision Statement. It is noted that mailed meeting invitations were sent to the fifty largest landowners in Bowdoinham to boost attendance of those potentially most impacted by the suggested changes.

6:00 Welcome  
6:55 Potential New Village District Near Richmond  
7:15 Increasing Density in the Village Districts I and II  
7:45 Closing Comments  
8:00 Adjourn

Finalize Comprehensive Plan - *February - May 2024*

A public hearing on Wednesday, February 28 from 6-8pm was held to review the Plan with the public and take public comment at the Community School.

The Selectboard is scheduled to hold a hearing on the Comprehensive Plan in April of 2024.

An educational session is scheduled to be held on May 22 from 6-8 pm at the Community School to inform the residents about the Plan and answer any questions.

## **ADDITIONAL STUDIES**

### **Rodger Heidgerken, Bowdoin College**

During the spring semester of 2020 at Bowdoin College, Rodger Heidgerken in the Environmental Studies Program: GIS and Remote Sensing was asked to support the Comprehensive Planning Committee of the Town of Bowdoinham, Maine in their planning efforts. The research provided data and maps detailing the development of new properties, tax accounts, split-lots, and the formation of new subdivisions in Bowdoinham over the past 10 years from 2010-2019. Based upon the analysis, parameters were defined emphasize areas of social importance (parcels within the proximity of roads, town buildings, public lands, places of worship, schools, farmland) to predict what areas of Bowdoinham we expect to see development in the next 10 years. With a discussion as to what this may mean for future regulations in Bowdoinham. Rodger's report "*Mapping Development and Predicting the Future in Bowdoinham, Maine: A Temporal Analysis of Development and Subsequent Predictions for the Future*" is available at the Town Office and on the Town's website.

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