

# Washburn Maine



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## Community Resilience Pilot Community Resilience Building Dialogue Summary of Findings August 2021



# **Town of Washburn, Maine**

## **Community Resilience Building Dialogue**

### ***Summary of Findings***

#### **Overview**

The need for municipalities, regional planning organizations, corporations, academic institutions, states, and federal agencies to increase resilience to extreme weather events and a changing climate is strikingly evident amongst the communities across the state of Maine. Recent events such as the multi-year drought, ice out conditions, and extreme winter blizzards have reinforced this urgency and compelled leading communities like the Town of Washburn to proactively collaborate on planning and mitigating risks. Ultimately, this type of leadership is to be commended because it will reduce the vulnerability and reinforce the strengths of people, infrastructure, and ecosystems and serve as a model for other communities in Maine, New England, and the Nation.

In the summer of 2021, the Town of Washburn embarked on participation within the state of Maine's Community Resilience Pilot via the Office of Policy Innovation and the Future. As part of that participation, the Northern Maine Development Commission (NMDC) and the Nature Conservancy (TNC) provided the Town with a community-driven process to assess current hazard and climate change impacts and to surface projects, plans, and policies for improved resilience. In August 2021, the Washburn Core Team helped organized a Community Resilience Building Dialogue facilitated by TNC in partnership with NMDC. The core directive of this effort was the engagement with and between community members to define strengths and vulnerabilities and the development of priority resilience actions for the Town of Washburn.

The Washburn Community Resilience Building Dialogue's central objectives were to:

- Define top local, natural, and climate-related hazards of concern;
- Identify existing and future strengths and vulnerabilities;
- Identify and prioritize actions for the Town;
- Identify opportunities to collaboratively advance actions to increase resilience alongside residents and organizations from across the Town, regionally, and across the state of Maine.

The Town of Washburn employed a unique “anywhere at any scale”, community-driven process called Community Resilience Building (CRB) ([www.CommunityResilienceBuilding.org](http://www.CommunityResilienceBuilding.org)). The CRB’s tools, reports, other relevant planning documents, and local/county maps were integrated into the dialogue process to provide both decision-support and visualization around shared issues and existing priorities across Washburn. The Aroostook County Hazard Mitigation Plan (updated 2021) and consultation with the Northern Maine Development Commission staff were particularly instructive. Using the CRB process, rich with information, experience, and dialogue, the participants produced the findings presented in this summary report including an overview of the top hazards, current concerns and challenges, existing strengths, and proposed actions to improve Washburn’s resilience to hazards and climate change today, and in the future.

The summary of findings transcribed in this report, like any that concern the evolving nature of risk assessment and associated action, are proffered for comments, corrections and updates from dialogue attendees and other stakeholders alike. The leadership displayed by the Town of Washburn on community resilience building will benefit from the continuous participation all those concerned.

## **Summary of Findings**

### **Top Hazards and Vulnerable Areas for the Community**

Prior to the CRB Dialogue, the Washburn Core Project Team identified the top hazards for the Town. The hazards of greatest concern included excessive rainfall leading to riverine flooding, extreme winter storms (ice, wind, snow), and drought due to extended heat waves. As discussed by participants, these hazards have direct and increasing impacts on the infrastructure, residents, and environment including agricultural operations, drinking water availability via private wells, natural areas (rivers, ponds, wetlands), riverfront areas, residential areas, roads, bridges, businesses and commerce, municipal facilities, school system, civic events, churches, social support services and other critical infrastructure and community assets within Washburn.

## Current Concerns and Challenges Presented by Hazards

The Town of Washburn has several concerns and faces multiple challenges related to the impacts of natural hazards and climate change. In recent years, Washburn has experienced a series of highly disruptive and damaging weather events including severe thunderstorms and microburst activity (2011), annual riverine flooding along the Aroostook River and other local rivers, annual blizzard conditions that close the roads and close the Town, and severe drought conditions that impact water availability for agricultural uses and drinking water consumption over the last three seasons along with other less impactful but more frequent events. The magnitude and intensity of these events and others across Aroostook County have increased awareness of natural hazards and climate change, while motivating communities such as Washburn to proactively improve their resilience.

This series of extreme weather events highlights that the impacts from hazards are diverse ranging from riverine flooding of critical infrastructure, bridges and property damage to need to water for agricultural irrigation to regular power outages. Longer periods of elevated heat, particularly in July and August, have raised concerns about vulnerable segments of the population including elderly, disabled, underserved, and disproportionately disadvantaged residents. The combination of these issues presents a challenge to preparedness and mitigation priorities and requires comprehensive, yet locally-specific actions across the Town.

The dialogue participants were in agreement that Washburn is experiencing more intense and frequent storm events and heat waves leading to extended drought. Additionally, there was a general concern about the increasing challenges of being prepared for the worst case scenarios (e.g. major storms and blizzards)) particularly in the fall/winter months when more intense storms coincide with colder weather. The impact of the current Covid-19 pandemic was raised by dialogue participants as well.



(Credit: facebook.com)



(Credit: thecounty.me)



(Credit: bangordailynews.com)

## ***Specific Categories of Concerns and Challenges***

As in any community, Washburn is not uniformly vulnerable to hazards and climate change, and certain locations, assets, and populations have been and will be affected to a greater degree than others. Dialogue participants identified the following items as their community's key areas of concern and challenges across three broad categories - Infrastructure, Societal, and Environmental.

### **Infrastructure Concerns and Challenges**

#### **Roads, Bridges, Road Networks, and Stormwater Systems:**

- Seasonal flood vulnerability on Salmon Brook and the Aroostook River at Route 164 in Crouseville which interrupts transportation to Presque Isle and points south including several places along Parson Road and Hale Road
- Bridge Street Bridge (Route 164 on Hines Street) has limited capacity during high flood stages as determined via Maine Department of Transportation markers on bridge abutments.
- Growing concerns about ice jams and their potential impacts on bridges and adjoining roads.
- Surface drainage infrastructure, catch basins, appropriate sized drainage pipes for sub-surface drainage in urban areas is severely inadequate.
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#### **Emergency Management and Preparedness:**

- Outdated (100 years old) and undersized Public Safety Building that can no longer accommodate required fire trucks and the water tanker.
- Concerns about lack of understanding and preparedness of the severity of winters in Aroostook County amongst new residents from southern parts of New England and elsewhere.
- No back-up generator power options for municipal facilities including the Public Safety Building.
- Loss of power results in 75% of residents not being able to secure drinking water from their respective drinking water wells.
- Aging population that is living more and more remotely presents change when sheltering in place is less than adequate and unsafe (e.g. long power outages in winter months).

### **Societal Concerns and Challenges**

#### **Vulnerable Populations:**

- Power outages are concern for individuals dependent on electric medical devices.
- Growing number of private drinking water wells at private homes that go dry during drought season leaving many residents without an adequate and reliable water source.

## *Specific Categories of Concerns and Challenges (cont'd)*

### **Societal Concerns and Challenges**

- Growing elderly population that mostly continue to live in their own homes with the two senior citizen housing options are continuously full.
- Lack of assistance for private home drilling of new and/or deeper drinking water wells.
- Significant impacts to the agricultural community due to increasingly severe drought which has ramifications on local economies and wellbeing of residents.
- Recent influx of new residents without knowledge of northern Maine winters may not be prepared for emergency situations where the remoteness often leads to longer response times.
- Crouseville neighborhood with many single-family homes that have substandard septic systems that fail percolation tests and located 4 miles from nearest sewer line.
- Third year of severe drought beginning to result in a few private wells drying up and not providing drinking water to homeowners.
- Need to private homeowners to drill deeper wells (300'-500' now versus 150'-200' previously) to ensure adequate supply of drinking water during ongoing droughts.
- Concerns about declined quantity of snowpack which is crucial to ensuring private drinking wells and irrigation systems for agriculture do not run out of ground and surface water.

### **Community Needs & Amenities:**

- Aging housing stock in certain areas that require maintenance or improvements.
- Lack of adequate broadband connectivity and capacity for existing residents coupled to an influx of new residents during and post-pandemic.
- Inability to find experienced and affordable staff to fill critical positions within the municipality including highways and public works. Routine power outages that create ongoing annoyances to residents and business interruptions for large and small employers in Town (i.e. Penobscot McCrum) which are likely linked to the new management of the single electric power supplier.
- Drinking water plant supplies water to 25% of the residents but may not have a back-up generator to ensure continuity of service during power outages.
- Long-term concerns about turnover and continuity of municipal staff and leadership (e.g. code enforcement officer, building inspector, planning, etc.).
- Lack of necessary space within current Police Station (currently one small office for 3 officers) to conduct and provide all needed services (e.g. evidence storage, suspect interviews, administrative office space, etc.).

## *Specific Categories of Concerns and Challenges (cont'd)*

### *Environmental Concerns and Challenges*

#### **Agriculture, Open Space, and Waterways:**

- Due to droughts over last few years, agricultural operations now requires the use of irrigation which is derived from various sources including rivers, wells, ponds, and reservoirs.
- Maintaining connected vegetated stream course and waterways.
- Large agricultural use of lands can result in declining water quality due to high nutrient loads into receiving rivers, streams, and wetlands.
- Lack of unified strategy to secure conservation in current and future flood zones to help reduce risks to ecosystems and structures.



(Credit: flickr.com)

## **Current Strengths and Assets**

Just as certain locations, assets, and populations in Washburn stand out as particularly vulnerable to the effects of hazards and climate change, other features are notably assets for Washburn's resilience building. Participants in this dialogue identified the following items as their community's key strengths and expressed interest in using them as the core of future resilience building actions.

- Clearly, the responsive and committed engagement exhibited by leadership, staff, and residents is a very appreciated strength within and across Washburn. Ongoing collaboration between town council, municipal staff, business community, faith-based organizations, NGOs, adjoining municipalities, and various state-level organizations such as Maine DOT, among others, on priorities identified herein will help advance comprehensive, cost-effective, community resilience building actions.
- Washburn is a full-service community with municipal school system, library, police, fire, and recreation department which is unusual for towns of same size in Aroostook County and elsewhere in the state.
- Municipal staff have an outstanding track record and reputation of cooperation and collaboration with adjoining municipalities and on a regional basis for planning and innovative project implementation.
- The community members provide a welcoming spirit coupled with deliberate attention placed by residents, staff, and leadership on the betterment of the community.
- Town Council always tries to operate with the best interest of the town in mind and has a great deal of respect and trust from the residents of Washburn.
- Community generally unified without a great deal of divisiveness when important decisions are required particularly on the 5-person Town Council where unanimous decisions are common.
- Recent influx of new residents from other states has increase real estate values, expand tax base, broaden the demographics, and support local business (gas station, stores, etc.).
- Town has highly experienced staff with access to adequate resources for most emergency situations coupled with coordination amongst various departments including leadership, Public Works, Police, Fire, Ambulance, and adjoining municipalities.
- The residents of Washburn represent a diverse community that is always willing to help one another.



## **Current Strengths and Assets (cont'd)**

- The Town is increasingly preparing for climate change given the concern about current impacts from hazards and the threat of escalation—particularly from storms, flooding, drought, and snow.
- New potato processing plant (Penobscot McCrum) open last year and is contributing to the community by providing jobs and increased commerce with the hope of attracting young families with children to fill the schools as well as serving as an overall positive social catalyst (“lifting spirits”).
- The Aroostook River is viewed as a strength within the community although there are challenges at certain times of the year (i.e. ice out, spring flows).
- Washburn cooperatively supports shared school system with the adjoining towns of Wade and Perham.
- Long history within Public Works of dealing with extreme winter storms and snow removal across the Town’s roads and bridges network.
- Washburn is a significant draw and jumping off point for outdoor sports enthusiasts that bring ATVs and snowmobiles to use on the extensive trail systems.
- The proximity and abundant natural resources provide outdoor recreation opportunities that represent a strength within Washburn and has also been a draw for the relocation of the Penobscot McCrum processing plant that relies on ready availability of natural resources.
- The Park along the Aroostook River is a greatly appreciated and increasingly utilized asset amongst residents as is the fisheries and paddling opportunities along Salmon Brook.
- Washburn was built on agriculture and forestry which remain a vital part of the community’s fabric to this day, both culturally and economically.
- Strong and responsive faith-based community that comes together to lead food drives to ensure families in need have access to critical resources.
- Ever present and integrated NGO network including the Rotary Club and Scouts that serve as a social safety net for residents that require additional resources and caring.
- Emergency management professionals have a well identified understanding of egress and access options of more vulnerable portions of the Town during various types of disasters such as flooding.

## **Current Strengths and Assets (cont'd)**

- Aroostook Regional Transportation System coupled with local taxi service provide mobility options for those in need of transport.
- Homeless shelter in Presque Isle provides sheltering for those in need.
- Hot lunch program with school system provides critical food support for children and young adults from low income, working poor families from across the three-town area (Washburn, Wade, Perham).
- Location Faith-based organizations engaged and providing support for those in need within the community routinely and during times of crisis.

## **Recommendations to Improve Resilience**

A common theme among workshop participants was the need to continue community-based planning efforts focused on developing adaptive measures to reduce Washburn's vulnerability to extreme weather, climate change and other common concerns raised. To that end, the workshop participants reached agreement on several priority topics requiring more immediate and/or ongoing attention including:

- **Long-term Vision and Growth** (i.e. conservation, population trends, shifting demographics, volunteerism, employment opportunities, drought management);
- **Infrastructure Improvements** (i.e. stormwater management systems, utility infrastructure reliability, road improvements and safety, electrical grid, broadband);
- **Resilient Community Support** (i.e. sustainability, mobility, business and residential recovery, senior care, food security);
- **Emergency Management** (i.e. municipal facilities and equipment, communications, outreach, education, continuation of services, coordination)

In direct response, the dialogue participants developed the following priority and other action list. Mitigation actions from the Aroostook County Hazard Mitigation Plan (update 2021) are provided in Appendix A for cross reference.

### **Priority Actions**

- Secure funding to develop a design for a new Public Safety Building that would provide adequate space for all necessary equipment including the Fire Department's water tankers as well as opportunities to combine police, fire, and town office personal and services in one centralized facility. New facility with full back-up power generator(s) would help to establish an integrated emergency operations center to respond to immediate issues more effectively and efficiently as well as fulfill mutual aid agreements with adjoining Towns such as Wade and Perham.
- Work with adjoining municipalities and processing plant to advocate for and secure a meeting with current electrical power utility to examine the reasons for routine interruptive power outages so as to build a working partnership.
- Initiate conversation with Maine Department of Transportation regarding the current issues and future needs for the Salmon Brook Bridge which if compromised would impact 40% of the Town commuters.

## **Priority Actions (cont'd)**

- Seek to establish a private well replacement/drilling assistance program for residents to ensure adequate drinking water is equitably distributed and available for all households.
- Work with agricultural community, Maine Department of Agriculture, Conservation and Forestry, and Central Aroostook Soil and Water Conservation District to identify current and future ongoing irrigation needs in hopes of developing an irrigation assistance and source supply security program that factors in all existing assets including rivers, wells, ponds, and reservoirs.
- Work with Maine Department of Transportation to modify Priority Level and secure funding for improvements via design and engineering for Route 164 to Presque Isle. Road segment current a Priority Level 4 with funds available for resurfacing only.

## **Other Actions**

- Look to design, engineer, and implement improvement to Garner Creek Road (town-maintained road) to reduce the ongoing impacts of flooding including raising grade and improving drainage to ensure safety, reduce closures, increase culvert capacity, and ideally, enhance the floodplain ecosystem along this road segment.
- Continue to and expand promotion of Washburn as an outdoor recreation paradise particularly amongst the ATV and snowmobile communities across New England that currently or could take advantage of the year-round, extensive trail network.
- Explore different approaches and methods to both attracting and retaining capable staff to critical municipal staff positions via considerations of opportunities with local vocational, workforce training programs with local academic institutions and potential for cost sharing partnerships with adjoining municipalities and encompassing region.
- Continue to lead amongst municipalities in Aroostook County on capitalizing on securing funding for energy efficiency projects via the state's Efficiency Maine Program.
- Ensure that necessary improvements to roads and bridges are done in a manner that results in enhancements to ecological systems and natural resources across Washburn.

## Other Actions (cont'd)

- Develop a household winter and storm preparedness checklist to be distributed in the fall and spring and work with Washburn Utilities to include as an informational mailer along with utility bill.
- Continue to support and strengthen outreach on emergency preparedness with residents via social media coupled with the current involvement of police and fire in wellbeing and home bound checks.
- Increase the capacity and access to broadband for as much of the population in Washburn as is possible with considerations of future growth and development.



(Credit: weather.gov)



(Credit: thecounty.me)



(Credit: pixel.com)

## **CRB Dialogue Contributors: Department/Organization**

Town of Washburn - Town Council

Town of Washburn - Office of the Town Manager

Town of Washburn - Code Enforcement Department

Town of Washburn - Planning Board

Town of Washburn - Residents

Northern Maine Development Commission

State of Maine - Office of Policy Innovation and the Future

## **Washburn Core Project Team**

Donna Turner - Town Manager, Town of Washburn

Adam Doody - Code Enforcement Officer, Town of Washburn

## **Online CRB Dialogue Facilitation Team**

Northern Maine Development Commission - Jay Kamm (Project Lead)

The Nature Conservancy - Adam Whelchel (Lead Facilitator)

The Nature Conservancy - Jeremy Bell (Scribe)

## **Recommended Citation**

Town of Washburn (2021). Online Community Resilience Building Dialogue - Summary of Findings Report. State of Maine's Community Resilience Pilot Program. Northern Maine Development Commission and The Nature Conservancy. Washburn, Maine.

## **Acknowledgements**

Special thanks to the Town leadership and staff for their willingness to embrace the process in hopes of a more resilient future for Washburn. This online Community Resilience Building Dialogue was made possible in large part through the generous contribution of the facilitation team members who skillfully conducted the Dialogue in close partnership with the Town's Core Project Team. Partial funding was provided through a Community Resilience Pilot Program grant from the state of Maine Office of Policy Innovation and Future.

# **Appendix A**

## **Aroostook County Hazard Mitigation Plan (updated 2021)**

### **Updated Mitigation Strategies and Actions**



## AROOSTOOK COUNTY HAZARD MITIGATION PLAN – 2021 Update

Town Aroostook Co.	Project (in Priority Order)	Estimated Cost	Time Frame	Responsible Agency	Status
Washburn	<b>1) Porter, Woodman, Wilder, and Berce Streets</b> – Study costs and feasibility to dredge, ditch, upgrade culvert and install catch basins, underground drain to brook	\$4,000,000	Long Term	Public Works	Completed. Berce & Woodman done several years ago, Porter & Wilder done 2020
	<b>2) Emergency communication equipment</b> - install 3 backup generator system	\$20,000	Long Term	Public Works	New Project
	<b>3) Mill Pond</b> - Remove culverts, upgrade with bridge to eliminate flooding	\$250,000	Long Term	Public Works	Completed. Dam removed with DEP grant; culverts removed. No new bridge
	<b>4) Gardner Creek Road</b> - Upsize culverts & upgrade with bridge	\$1,000,000	Long Term	Public Works	Deferred – Lack of funds
	<b>5) Caribou Lake Road</b> - Control & remove beavers and upgrade culvert	\$4,000	Completed	Public Works	Completed
	<b>6) Annis Road</b> – Road build up with bridge	\$500,000	Long Term	Public Works	New Project

# **Appendix B**

**Washburn**

**Maine**

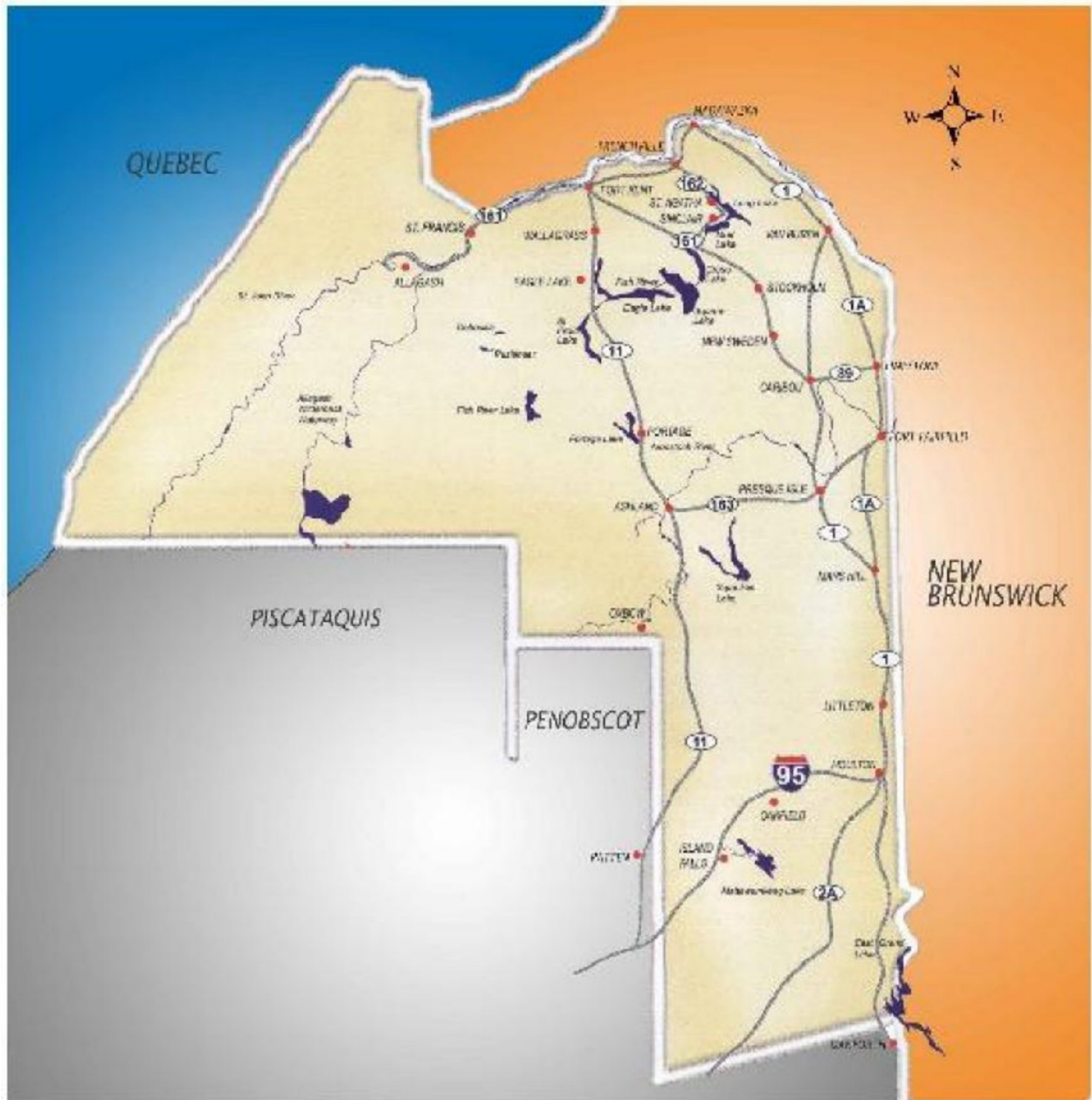
**Map Resource Packet\***

**Used During**

**Workshop**

**\*Gathered from Aroostook County HMP (updated 2021) and via Northern Maine Development Commission map resources.**

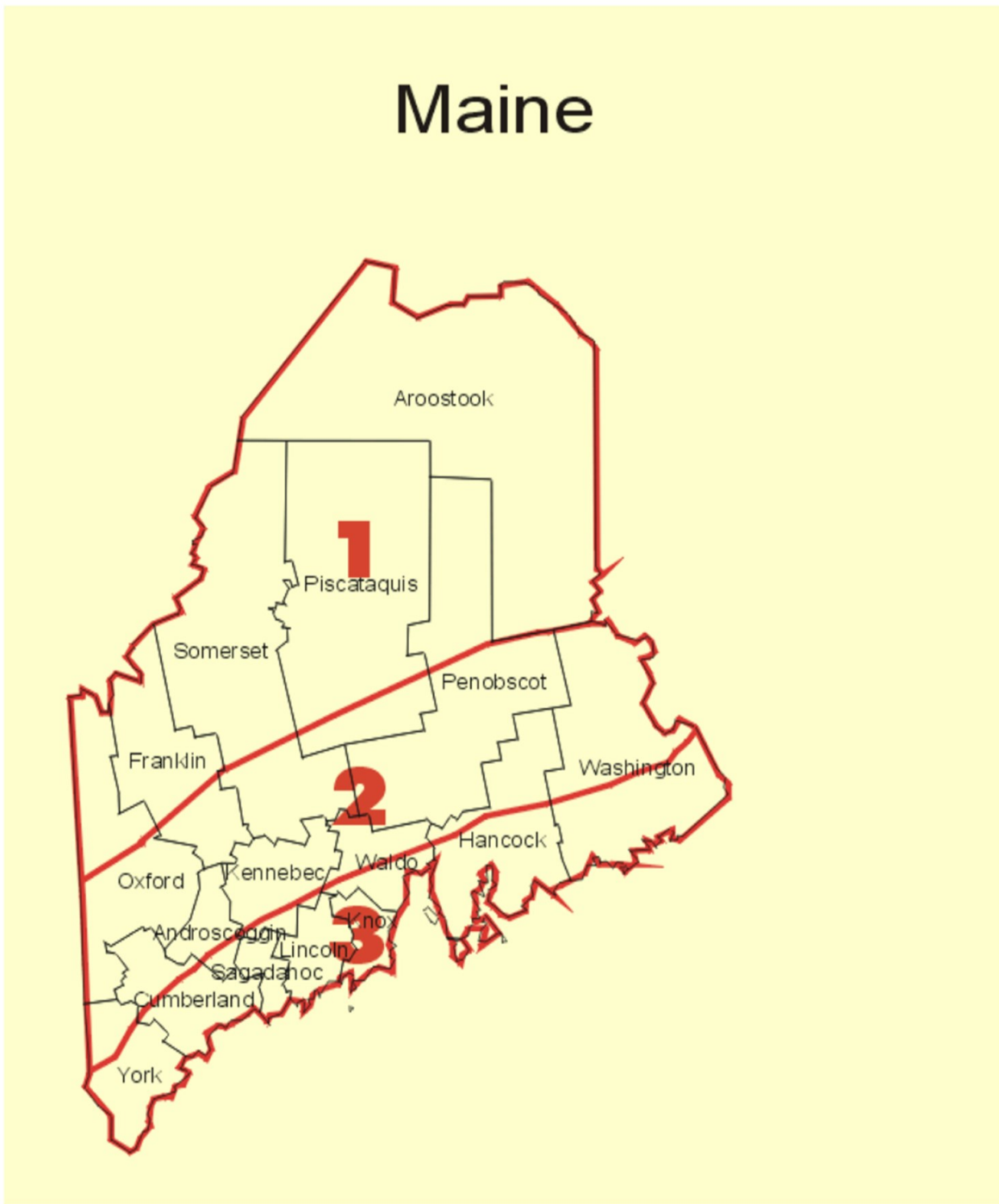




Aroostook County, ME | [www.appme.org](http://www.appme.org)

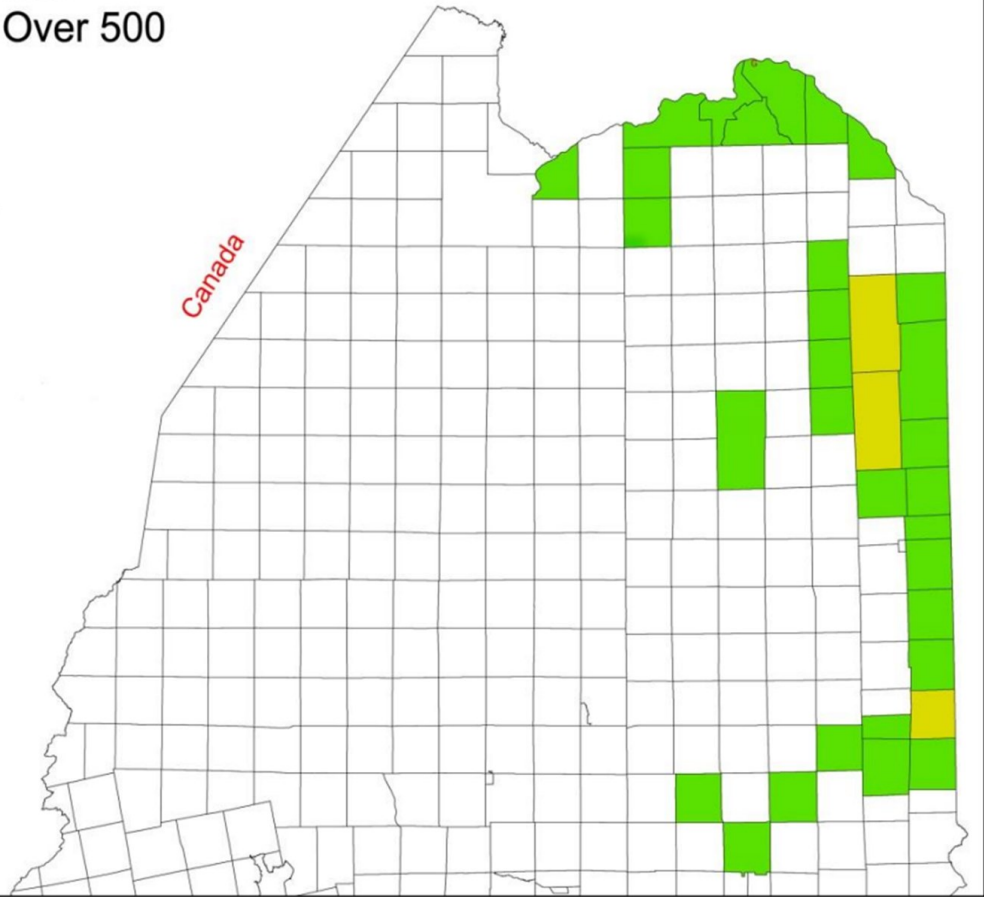
# AROOSTOOK COUNTY HAZARD MITIGATION PLAN – 2021 Update

## Climate Divisions of Maine



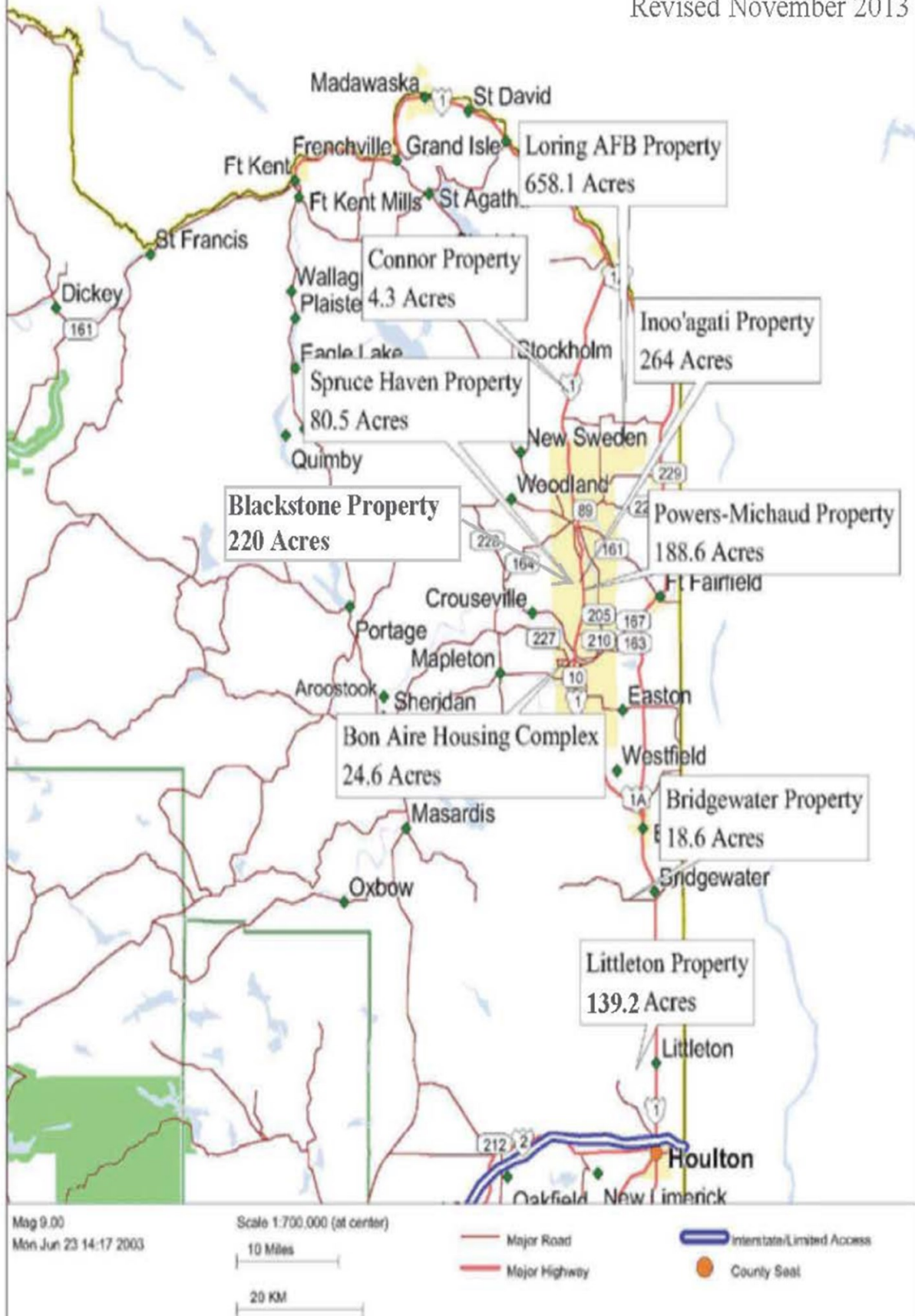
## Towns with Population Over 500

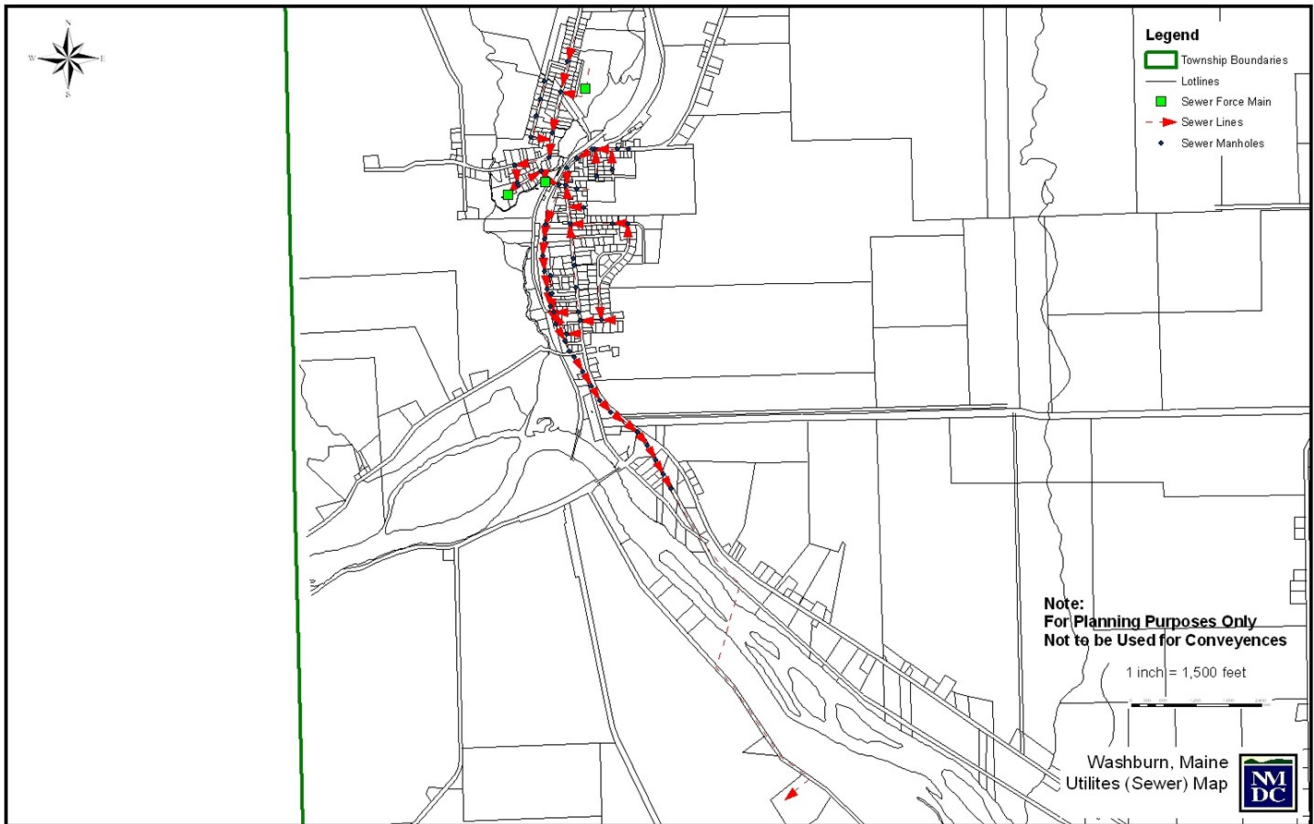
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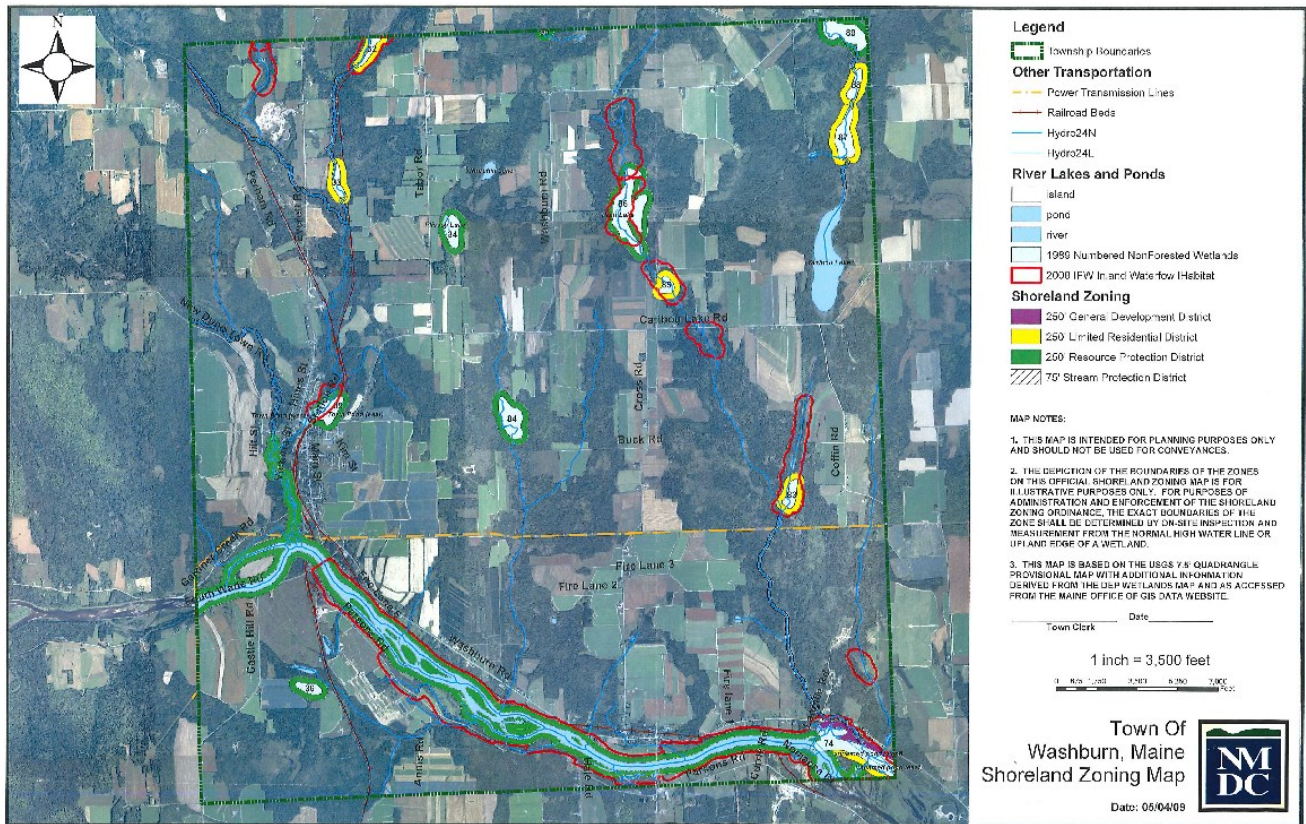
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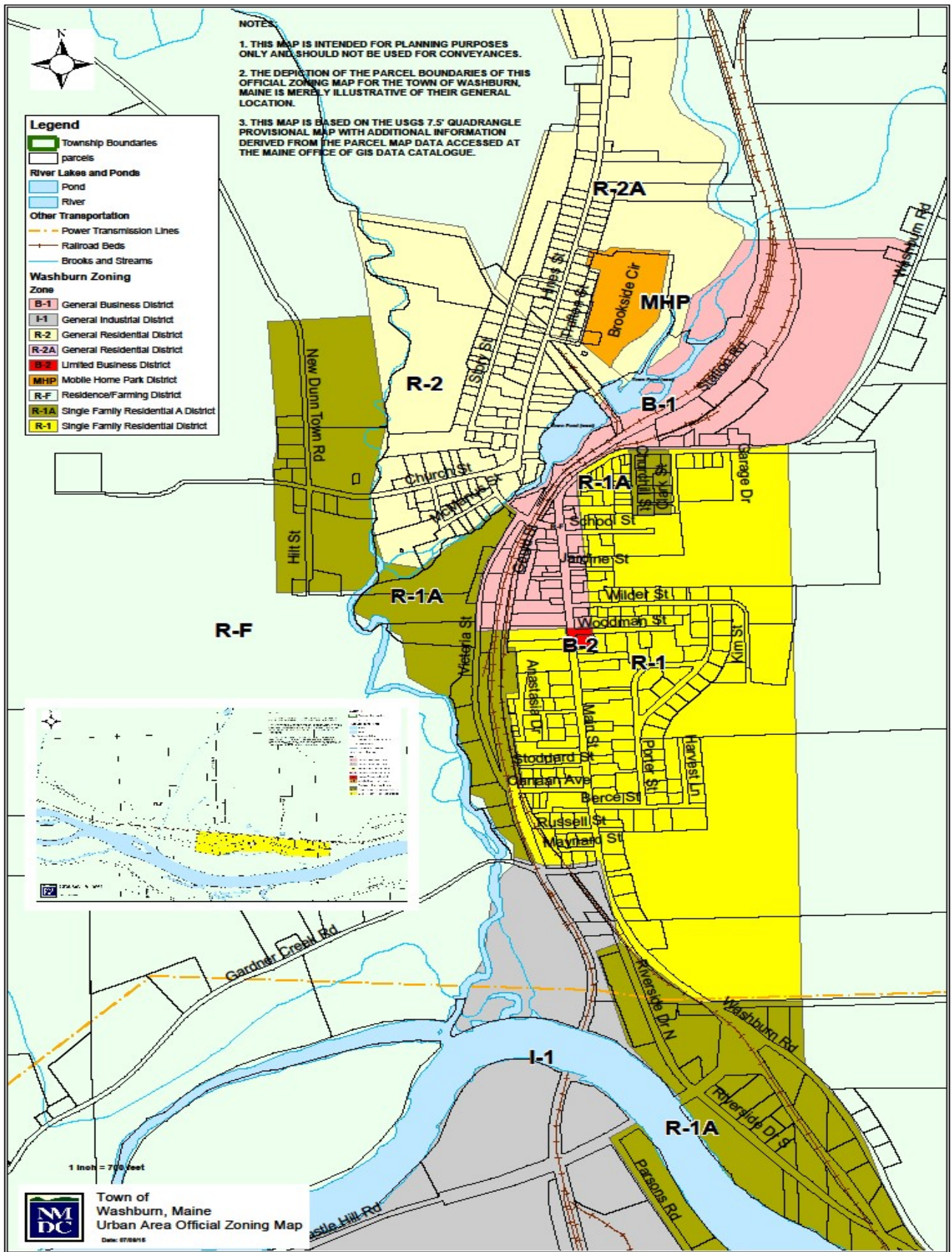
Revised November 2013

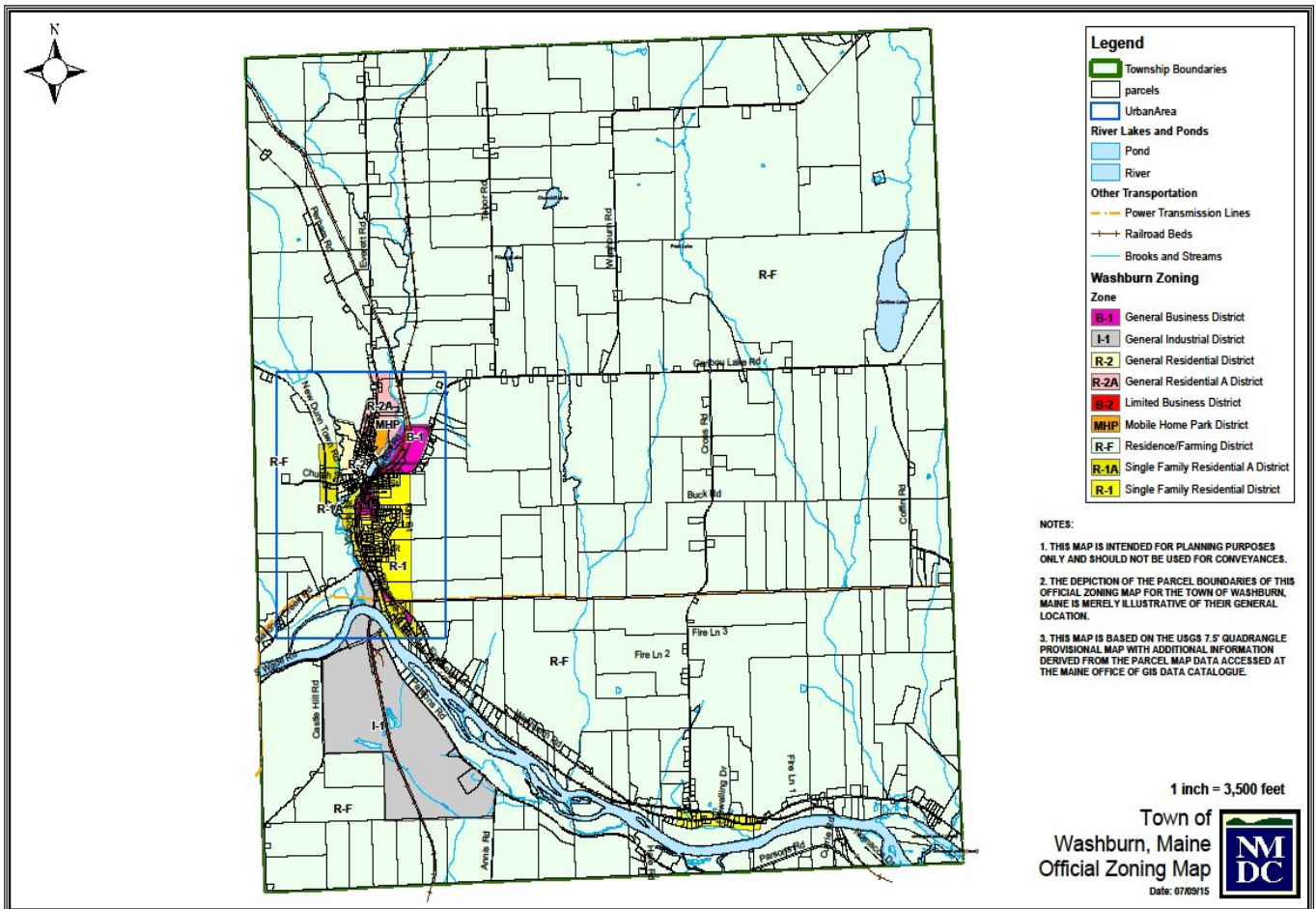














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