York County, Maine

HAZARD MITIGATION PLAN

2022

Prepared by:

York County Emergency Management Agency

York County Hazard Mitigation Plan 2022

Index

1. OVERVIEW

A. BACKGROUND

In 2004, the York County Emergency Management Agency (YCEMA) prepared a multi-jurisdictional hazard mitigation plan, in accordance with the Federal Disaster Mitigation Act of 2000. This plan was updated in 2010, 2015, and again in 2022. The 2022 update to the 2015 plan fulfills the Federal Emergency Management Agency (FEMA) requirement that local hazard mitigation plans be updated every five years.

Pursuant to §201.6 of the Interim Final Rule prepared by FEMA, York County, Maine, chose to do a multi-jurisdictional hazard mitigation plan for the county and its municipalities. The primary reasons for conducting this as a countywide plan were that the county possesses greater hazard mitigation resources than do many of its municipalities and that the hazards faced by its municipalities are similar.

The YCEMA was the lead agency for the 2022 plan update. YCEMA serves as the central coordinating agency for the 29 local EMAs in York County and contributed considerable informational and professional resources to this plan update. YCEMA worked in conjunction with several Maine State Agencies and the council of governments that serves all of York County.

In accordance with the state home rule laws, each of the 29 municipalities in the county has jurisdiction over all land use and planning regulations. Therefore, the 2022 plan update was written with local interests in mind and with participation and input from the local emergency directors and other officials. It is being presented to the legislative bodies of all 29 cities and towns for adoption.

The York County Hazard Mitigation Plan Update contains six sections:

1. Overview of Jurisdiction
2. Prerequisites for FEMA Review
3. Planning Process
4. Risk Assessment
5. Mitigation Strategies
6. Plan Maintenance Procedures

B. MAJOR FEATURES OF YORK COUNTY

Topography:
The County's topography, major physical features and soils were largely shaped by glaciers that receded from the area some 14,000 years ago. They created the County's hills, valleys, flatlands, rivers, lakes, streams, and wetlands, and helped to shape variations in soil types, vegetative cover, groundwater characteristics, and the general suitability of areas for development and other land uses.

The entire east side of York County is bordered by the Atlantic Ocean. The southern Maine coastline is famous for its ruggedness, sandy beaches, and scenic views resulting from many bays, harbors, promontories, and rocky islands.

In the northern part, the hills are numerous, several of which are near 1,000 feet in height. At around 600 feet high, Mount Agamenticus, which is located in the town of York, is the highest elevation near the coast. The rocks of the region are chiefly granitic with some argillaceous points near the coast. The soil of the southern and eastern parts of the county inclines to sandy loam, though clay and clayey and gravelly loam are frequent.

Major Water Bodies:
According to the U.S, Census Bureau[1], the county has a total area of 1,270 square miles, of which 991 square miles (78%) of it is land and 279 square miles (22%) of it is water.

The Saco River passes through the eastern section, and then forms its boundary line for some fifteen miles on the northeast. The Ossipee River continues this line ten miles or more further to the New Hampshire line. The Salmon Falls River forms the western boundary line for about thirty miles, and the Piscataqua River continues it some ten miles further to the sea. The other considerable rivers are the Little Ossipee, Mousam, Kennebunk, Great Works, Little, and York. In the northern part, there are numerous ponds. The Little Ossipee, located somewhat north of the center of the county in Waterboro is the largest, except for Great East Pond, which is partly in New Hampshire.

Major Transportation Thoroughfares:
Below is a list of the major transportation highways in York County, and shown on Maps 1 and 2:

A) Southern Coast Corridors
- Portsmouth, NH/Kittery to Portland
  (US 1, I-95, Eastern Trail, Guilford Rail Line/Amtrak)

B) Coastal PACTS Corridors
- Portland to Brunswick
  (US 1, I-95, I-295, Rail)

C) Cumberland County Central Corridors
- Portland to Lewiston
  (I-95, Route 26, Route 100)

D) York County Central Corridors
- Northern York County to KACTS via Sanford
  (Route 5, Route 202/4, Route 4, Route 236, Route 11, Route 11A)

E) Portland West/Lakes Region Corridors
- Portland to Fryeburg
  (US 302, Route 113, Route 114, Route 25)
- Mountain Division Rail with Trail

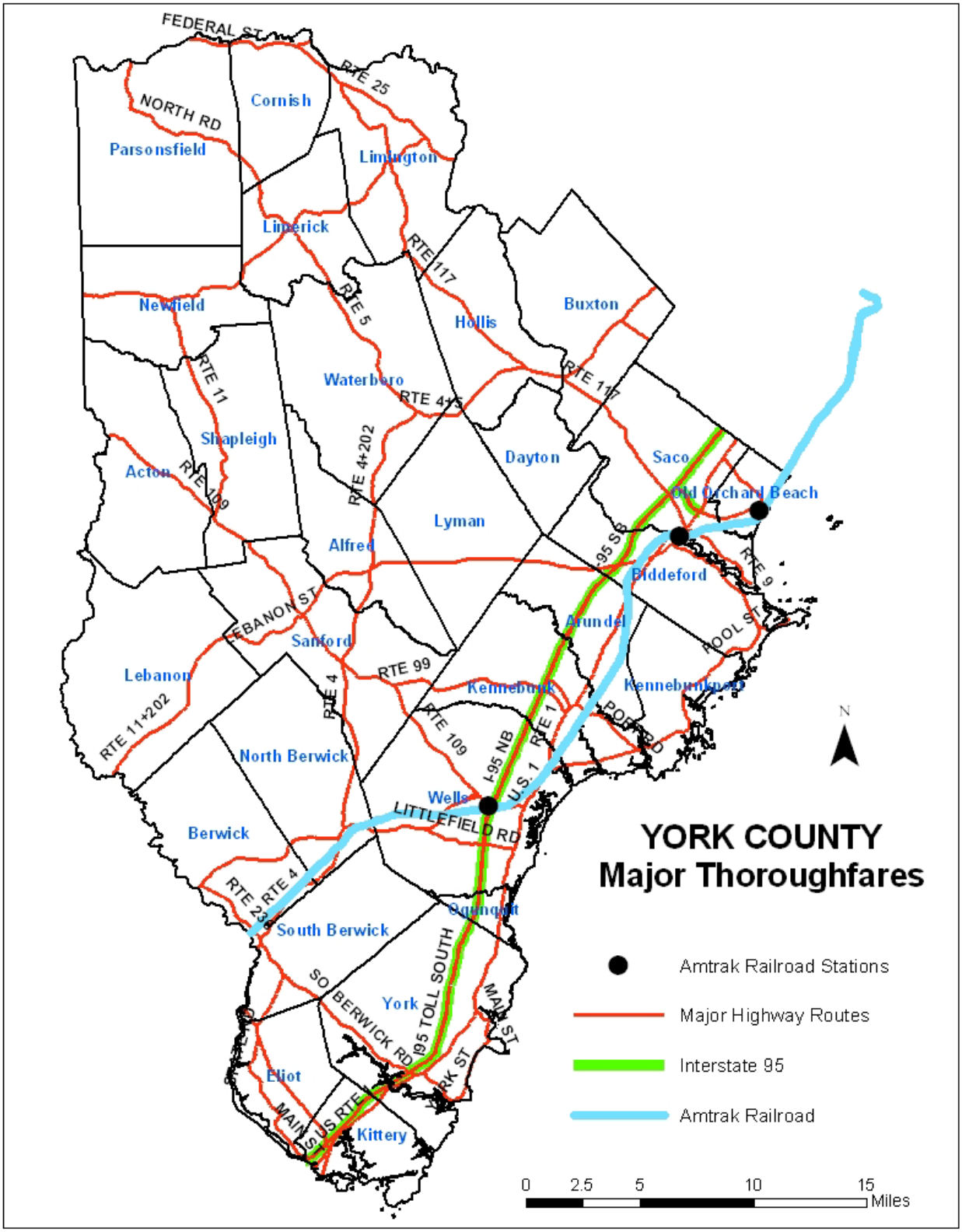
[1] https://www.census.gov/quickfacts/yorkcountymaine

F) York County East-West Corridors
- Northern York County to Southern PACTS Area
  (Route 22, Route 202, Route 4A, Route 5,
  Route 117, Route 112)
- NH to I-95 and Coastal Towns via Sanford
  (US 202, Route 111, Route 99, Route 109)
- Somersworth, NH/Berwick to Wells
  (Route 9, Guilford Rail Line/Amtrak)

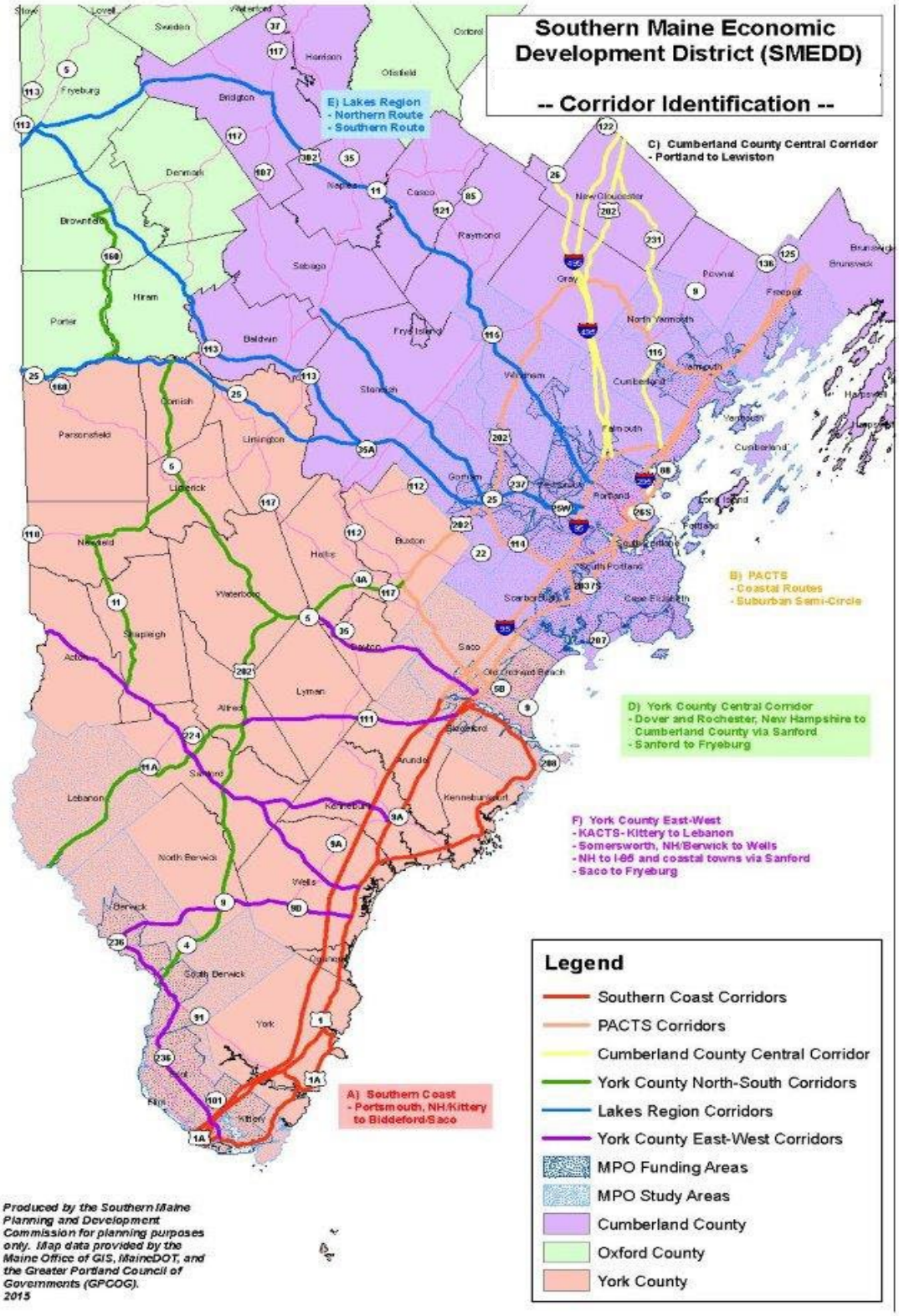
The York County Community Action Corporation's Transportation program offers a range of transportation options which are open to the general public and people of all ages. They offer transportation for shopping and non-emergency medical transport for any purpose including trips for cancer treatments as well as scheduled trips for work or training. They also offer contracted or special transportation for children case managed by the Department of Human Services or Child Development Services as well as medical (non-emergency) transports for citizens that cannot be served on public transportation. Some typical routes are Sanford to Wells and Sanford to Biddeford with destinations including Goodall Hospital, Southern Maine Medical Center, Biddeford Crossing Shopping Mall, and York County Community College. Summer trolley services are offered along York County's coastline.

Map 1 – York County Major Thoroughfares

Map 2 – Southern Maine Economic Development District (SMEDD) – Corridor Identification


FEDERAL ST
RTE 25
NORTH RD
Cornish
Parsonsfield
Limington
Limerick
RTE 117
Newfield
RTE 5
Hollis
Buxton
RTE 11
Waterboro
RTE 4+5
RTE 117
Shapleigh
Acton
RTE 109
RTE 4+202
Dayton
Saco
Old Orchard Beach
Lyman
Alfred
I-95 SB
Biddeford
RTE 9
LEBANON ST
Arundel
POOL ST
Sanford
Lebanon
RTE 99
Kennebunk
Kennebunkport
RTE 11+202
RTE 4
RTE 109
I-95 NB
RTE 1
POST RD
North Berwick
U.S. 1
Wells
LITTLEFIELD RD
Berwick
RTE 4
RTE 236
Ogunquit
South Berwick
I-95 TOLL SOUTH
SO BERWICK RD
York
MAIN ST
Eliot
MAIN ST
US RTE
Kittery
N
YORK COUNTY
Major Thoroughfares
Amtrak Railroad Stations
Major Highway Routes
Interstate 95
Amtrak Railroad
0
2.5
5
10
15
Miles

Map 1


Southern Maine Economic Development District (SMEDD)
-- Corridor Identification --
E) Lakes Region
- Northern Route
- Southern Route
C) Cumberland County Central Corridor
- Portland to Lewiston
B) PACTS
- Coastal Routes
- Suburban Semi-Circle
D) York County Central Corridor
- Dover and Rochester, New Hampshire to Cumberland County via Sanford
- Sanford to Fryeburg
F) York County East-West
- KACTS - Kittery to Lebanon
- Somersworth, NH/Berwick to Wells
- NH to I-95 and coastal towns via Sanford
- Saco to Fryeburg
A) Southern Coast
- Portsmouth, NH/Kittery to Biddeford/Saco
Legend
Southern Coast Corridors
PACTS Corridors
Cumberland County Central Corridor
York County North-South Corridors
Lakes Region Corridors
York County East-West Corridors
MPO Funding Areas
MPO Study Areas
Cumberland County
Oxford County
York County
Produced by the Southern Maine Planning and Development Commission for planning purposes only. Map data provided by the Maine Office of GIS, MaineDOT, and the Greater Portland Council of Governments (GPCOG).
2015

Map 2

Major Employment Centers and Employers
York County is also a major employment center. Around 107,197 people are employed in the county[2]. Over half of York County's employment is concentrated in Biddeford, Saco, Sanford, York, Kennebunk, Wells, and Kittery. These seven cities and towns together 54,810 or 52% of all jobs in the county. Banking, insurance, health services, manufacturing and marine-related industries are the major business sectors. There are five large employers (more than 500 employees) in York County, with many smaller companies located throughout the region[3]. The only operations employing more than 500 people at a single location are:

- Maine Health: 2,001 to 2,500 employees
- Pratt & Whitney Aircraft Group (North Berwick): 2,001 to 2,500 employees
- Hannaford Bros Co.: 1,001 to 1,500 employees
- York Hospital (York): 1,001 to 1,500 employees
- University Of New England (Biddeford): 501 to 1,000 employees

Climate and Geography
There are two different climates in York County. The northwest interior portion of the County is least affected by marine influences and contains hilly and mountainous terrain. The southeast section of the County is most affected by the ocean but has minimal elevation changes and thus, minimal climatic impact from any topographic controls.

Precipitation and Temperature
The York County climate is influenced by the Atlantic Ocean. Average annual temperature is 46.5°F, with August as the warmest (79.9°F) and February the coldest (13.4°F) based on 2021 data.[4] The total annual precipitation in 2021 averaged 4.05 inches, with June being the driest and July the wettest month. On average, there are 200 sunny days. The comfort index, which is based on humidity during the hot months, is a 52 out of 100 – higher is more comfortable. The United States average is 44 days. These statistics may vary between the inland and coastal sections of the County.

Prevailing Winds
Most of the County is under northwest to west-northwest winds throughout much of the year, and particularly during the winter. The formation of a sea breeze occurs especially when regional winds are weak during the summer months. The sea breeze produces cool, refreshing temperatures during the summer along the coast, while the inland remains hotter and humid.

Topographic Features
The Southern Maine Coast is famous for its ruggedness and scenic views resulting from the many inlets, bays, harbors, promontories, and rocky islands found along its entire length. Summer tourists flock to York County for the beautiful sandy beaches that run along its eastern shores.

The landscape in general is a direct result of glacial erosion and deposition from the large ice sheets that completely covered Maine about 14,000 years ago. A variety of glacial deposits cover the County providing a rich variety in the landscape as well as abundant sand and gravel

[2] Maine Department of Labor County Profiles: https://www.maine.gov/labor/cwri/county-economic-profiles/Excel/CountyProfiles.xlsx
[3] Maine County Top 25 Employers: https://www.maine.gov/labor/cwri/publications/pdf/MaineCountyTop25Employers.pdf
[4] NOAA National Centers for Environmental information, Climate at a Glance: County Mapping: https://www.ncdc.noaa.gov/cag/

for construction materials. These glacial deposits and erosion are also responsible for the many large lakes and ponds throughout the County. Past glaciations combined with existing climatic conditions have produced extensive wetland areas that provide habitat for many ecosystems.

Sea Level Rise

Maine's coast has been and will continue to be profoundly affected by an increase in sea level. Sea level rise in Maine is influenced by glacial and ice sheet melt, thermal expansion, vertical land motion, and regional current pattens. Based on analysis of Maine's longest operational tide gauge at Portland, ME, the Maine Geological Survey (MGS) estimates that the ocean has risen along Maine's coast about seven and a half (7.5) inches since 1912.[5] Analysis of tide gauges in Maine indicate that over about the last 30 years, that rate has almost doubled consistent with global sea level rise rates. The result has been increased flooding and erosion of coastal sand dunes, beaches, marshes, and bluffs.

No one knows for sure how high the sea will rise or how quickly it will occur, but the Maine Climate Council has adopted a scenario of planning for 1.5 feet of sea level rise by 2050 and 4 feet by 2100 (using a 2000 start time)[6]. In addition, sea levels will likely continue to rise beyond 2100.

Along the Maine Coast, a sea level rise of one (1) foot means that a storm that had a 1% chance of occurring in any one year (the 100-year storm) will have a 10% chance of occurring in any one year (the 10-year storm). This would cause the future 10-year event to have the same impact as the current 100-year event. In addition, 1 foot of sea level rise will increase nuisance flooding of low-lying areas by ten to fifteen-fold over current levels. As a result, more homes, businesses, public infrastructure such as roads, and entire communities will be subject to more devastating coastal floods on a more frequent basis. Work by the MGS estimates that 1.5 feet of sea level rise may inundate 43% of the protective dry beach and between 60% and 90% of Maine's dunes.[7] Higher base sea levels will also likely exacerbate dune and beach erosion during storm events. Based on MGS' inventory of coastal bluffs between York and Machias, about 50% of Maine's coast is comprised of unconsolidated bluffs, and one-third of those are currently eroding and unstable. Sea level rise and subsequent impacts from increased water levels during storms will likely increase the rate of currently unstable bluffs and cause currently stable bluffs to become unstable. In addition, unstable coastal bluffs in excess of 20 feet in height will likely be subject to landslides on a more frequent basis. As a result, more homes, businesses, and public infrastructure will be threatened with catastrophic loss.

On June 16, 2021, Governor Janet Mills signed into law H.P. 1169–L.D. 1572[8], directing state-level departments and agencies to conduct a review of their laws and regulations to incorporate considerations of a relative sea-level rise of 1.5 feet by 2050 and 4 feet by 2100. Additionally, this law directs state-level departments and agencies to identify ways to implement strategy F3 of the Maine Climate Action Plan, Maine Won't Wait, "to enhance community resilience to

[5] Maine Geological Survey Sea Level Rise Dashboard, https://www.maine.gov/dacf/mgs/hazards/slr_ticker/slr_dashboard.html
[6] Maine Climate Council (2020) *Maine Won't Wait*: https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/MaineWontWait_December2020.pdf
Maine Climate Council Sea Level Rise Handout, https://climatecouncil.maine.gov/sea-level-rise-maine-accelerating-problem#:~:text=The%20future%20path%20of%20climate,and%204%20feet%20by%202100.
Maine Climate Council Science Dashboard, https://climatecouncil.maine.gov/maine-climate-science-dashboard
Maine Climate Council Scientific and Technical Subcommittee Report, https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/GOPIF_STS_REPORT_092320.pdf
[7] Maine Geological Survey Sea Level Rise Viewer, https://www.maine.gov/dacf/mgs/hazards/slr_ss/index.shtml
[8] L.D. 1572: https://legislature.maine.gov/LawMakerWeb/summary.asp?ID=280080599

flooding and other climate impacts." The state passed this law to address the impact of increasingly frequent nuisance or high-tide flooding on waterfront and shorefront communities, industry, and infrastructure over the next 80 years. The law requires state departments and agencies to complete these reviews and report any recommendations and the need for legislative changes by January 1, 2022.

C. DEMOGRAPHICS

Located in the southwestern corner of Maine, York County is a large and diverse county. Its population[9] of 211,972 is scattered throughout 29 jurisdictions: 26 towns and the cities of Biddeford, Saco, and Sanford. This population level makes York County the second most populous in the state, trailing only neighboring Cumberland County.

The largest municipality in the county is the City of Biddeford, which has 22,552 residents according to the 2020 Census. The next largest municipalities are the City of Sanford with a population of 21,982, and the City of Saco with a population of 20,381. These three urban centers only account for just under 31 percent of the county's total population which illustrates how scattered the population is throughout York County.

In addition to the population base, York County also has a substantial population of seasonal residents and visitors who are drawn to the region's beaches, lakes, and ponds in the summer months. Since many of the hazards faced by the county are at their highest risk levels in the summer, the additional people in the county during those months raise the risk exposure. According to the Maine Office of Tourism arrivalist data, from 2019 to 2021, a range from 3,392,124 to 3,595,976 people visited coastal York County throughout the year.[10] This influx of visitors, particularly in the summer months, increases the overall population for coastal towns.

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
2019	89,006	101,461	125,443	172,466	309,507	381,183	609,382	667,446	335,849	260,856	181,712	157,813	**3,392,124**
2020	114,461	144,269	107,011	53,492	147,608	339,916	646,260	711,483	398,505	301,174	129,217	98,872	**3,192,268**
2021	95,643	107,433	148,566	240,430	388,476	501,389	663,789	669,865	307,526	238,172	135,687	99,000	**3,595,976**

The total land area of York County is 990.8 square miles, with the individual municipalities ranging in size from 4.1 to 59.0 square miles. The county's overall population density is 213.94 people per square mile. The density of individual municipalities is widely varied as well. It ranges from as low as 30.36 people per square mile in the rural areas to as high as 1,210.81 people per square mile in the urban areas.

York County contains about 112,198 housing units with approximately 24,148 vacant units, 17,978 units of which are used for seasonal, recreation or occasional use. The remaining 88,050 units comprise the year-round housing stock of the county. The following table summarizes population, density, and housing for each of the communities in York County.

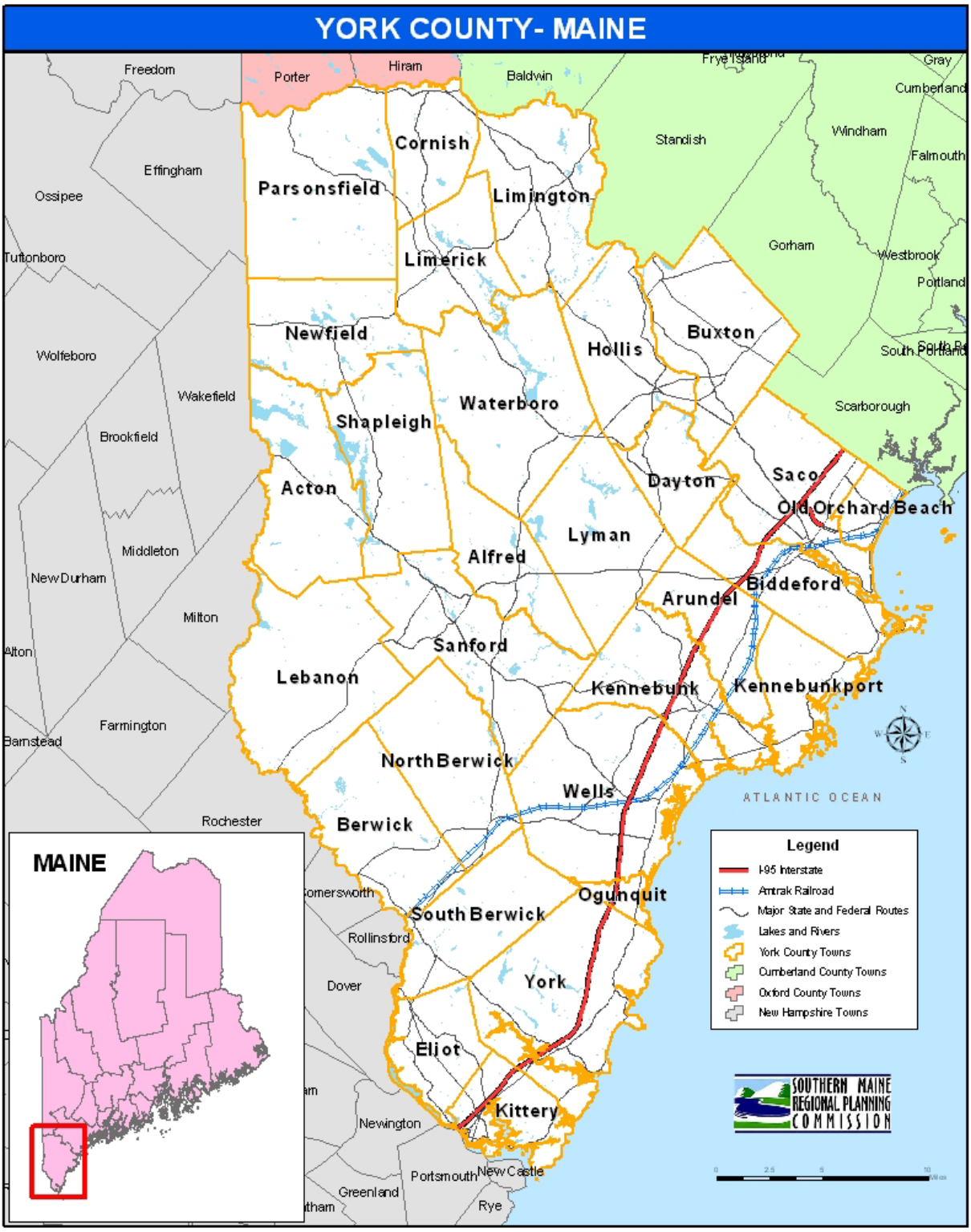
Measure	York County	Maine	USA
Population**	211,972	1,362,359	331,449,281

[9] Census QuickFacts for York County, Maine: https://www.census.gov/quickfacts/yorkcountymaine
[10] Arrivalist data, courtesy Maine Office of Tourism, retrieved March 2022.

Total Housing Units**	112,198	739,072	140,498,736
Total Households*	86,919	569,551	122,354,219
Average Household Size*	2.33	2.29	2.6
Median Household Income*	68,932	59,489	64,994
Persons Below Poverty*	15,059	144,384	40,910,326
Percent Below Poverty*	7.4%	11.1%	12.8%
% of Population under 5*	4.7%	4.8%	6.0%
% of Population 18 and over*	81.2%	81.3%	77.6%
% of population 65 and over*	20.5%	20.6%	16.0%
Persons per square mile	214.0	44.2	93.8

Sources: *2020 American Community Survey 5-year estimates **2020 Decennial Census

Municipality	Population 2020	Population Density 2015 Land Area (Sq. Mi.)	Population Density 2015 Per Sq. Mile	Housing Units 2020 Total	Occupied	Vacant	Seasonal	% of Seasonal
Acton	2,671	37.8	70.66	2,487	1,121	1,366	1,278	53.27%
Alfred	3,073	27.2	112.98	1,220	1,165	55	55	4.51%
Arundel	4,264	23.9	178.41	1,724	1,580	144	111	6.56%
Berwick	7,950	37.1	214.29	3,641	3,293	348	59	1.76%
Biddeford	22,552	30	751.73	10,576	9,431	1,145	668	6.61%
Buxton	8,376	40.5	206.81	3,620	3,257	363	98	2.92%
Cornish	1,508	22.1	68.24	738	618	120	70	10.17%
Dayton	2,129	17.9	118.94	801	771	30	7	0.90%
Eliot	6,717	19.7	340.96	3,114	2,777	337	205	6.87%
Hollis	4,745	32	148.28	2,247	2,027	220	138	6.37%
Kennebunk	11,536	35.1	328.66	5,809	5,019	790	508	9.19%
Kennebunkport	3,629	20.6	176.17	2,950	1,642	1,308	1,114	40.42%
Kittery	10,070	17.8	565.73	5,241	4,915	326	83	1.66%
Lebanon	6,469	54.7	118.26	2,531	2,259	272	178	7.30%
Limerick	3,188	27.1	117.64	1,554	1,131	423	408	26.51%
Limington	3,892	42	92.67	1,794	1,530	264	219	12.52%
Lyman	4,525	38.9	116.32	2,287	1,760	527	448	20.29%
Newfield	1,648	32.3	51.02	1,187	714	473	393	35.50%
North Berwick	4,978	38.3	129.97	2,083	1,936	147	147	7.06%
Ogunquit	1,577	4.1	384.63	2,044	581	1,463	1,309	69.26%
Old Orchard Beach	8,960	7.4	1,210.81	7,289	5,147	2,142	1,806	25.97%
Parsonsfield	1,791	59	30.36	1,119	710	409	300	29.70%
Saco	20,381	38.5	529.38	9,004	8,341	663	303	3.51%
Sanford	21,982	47.8	459.87	9,701	8,760	941	178	1.99%
Shapleigh	2,921	38.7	75.48	1,973	1,067	906	872	44.97%
South Berwick	7,467	32.2	231.89	3,121	2,835	286	33	1.15%
Waterboro	7,936	55.5	142.99	3,439	2,666	773	704	20.89%
Wells	11,314	57.7	196.08	8,907	4,525	4,382	3,817	45.76%
York	13,723	54.9	249.96	8,866	5,341	3,525	3,145	37.06%
County Total	**211,972**	**990.8**	213.94	**111,067**	**86,919**	**24,148**	**18654**	**17.67%**


YORK COUNTY- MAINE
Freedom
Porter
Hiram
Baldwin
Frye Island
Gray
Cumberland
Standish
Windham
Falmouth
Effingham
Ossipee
Parsonsfield
Cornish
Limington
Limerick
Gorham
Westbrook
Portland
Tuftonboro
Wolfeboro
Newfield
Hollis
Buxton
South Portland
Wakefield
Waterboro
Scarborough
Brookfield
Shapleigh
Acton
Dayton
Saco
Old Orchard Beach
Lyman
Middleton
Alfred
New Durham
Biddeford
Arundel
Milton
Sanford
Alton
Lebanon
Kennebunk
Kennebunkport
Farmington
Barnstead
North Berwick
Wells
ATLANTIC OCEAN
Rochester
Berwick
Ogunquit
Somersworth
South Berwick
Rollinsford
Dover
York
Eliot
Kittery
Newington
Portsmouth
New Castle
Greenland
Rye
MAINE
Legend
I-95 Interstate
Amtrak Railroad
Major State and Federal Routes
Lakes and Rivers
York County Towns
Cumberland County Towns
Oxford County Towns
New Hampshire Towns
SOUTHERN MAINE REGIONAL PLANNING COMMISSION

Map 3

2. PREREQUISITES

Multi-Jurisdictional Plan Adoption
Requirement §201.6(c)(5): For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))

This plan is a multi-jurisdiction plan. Municipalities that participated in the preparation of this plan include:

Acton, Town of
Alfred, Town of
Arundel, Town of
Berwick, Town of
Biddeford, City of
Buxton, Town of
Cornish, Town of
Dayton, Town of
Eliot, Town of
Hollis, Town of
Kennebunk, Town of
Kennebunkport, Town of
Kittery, Town of
Lebanon Town of
Limerick, Town of
Limington, Town of
Lyman, Town of
Newfield, Town of
North Berwick, Town of
Ogunquit, Town of
Old Orchard Beach, Town of
Parsonsfield, Town of
Saco, City of
Sanford, City of
Shapleigh, Town of
South Berwick, Town of
Waterboro, Town of
Wells, Town of
York, Town of

A copy of the resolution that will be adopted by each participating jurisdiction is compiled in the Appendixx. The York County Commissioners will adopt the resolution on behalf of the county.

3. PLANNING PROCESS

Multi-Jurisdictional Planning Participation	
Requirement §201.6(a)(3): Multi-jurisdictional plans (e.g., watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process…Statewide plans will not be accepted as multi-jurisdictional plans.	
Elements	**A.** Does the new or updated plan describe how each jurisdiction participated in the plan's development?
	B. Does the updated plan identify all participating jurisdictions, including new, continuing, and the jurisdictions that no longer participate in the plan?

A. DOCUMENTATION OF MULTI-JURISDICTIONAL PARTICIPATION PLANNING PROCESS

Municipality	Meetings	E-mail	Phone	Mitigation Actions
Acton, Town of	X	X	X	LED
Alfred, Town of	X	X	X	SBM/C
Arundel, Town of	X	X	X	LED
Berwick, Town of	X	X	X	SBM/C
Biddeford, City of	X	X	X	LED
Buxton, Town of	X	X	X	LED
Cornish, Town of	X	X	X	LED
Dayton, Town of	X	X	X	LED
Eliot, Town of	X	X	X	LED
Hollis, Town of	X	X	X	SBM/C
Kennebunk, Town of	X	X	X	LED
Kennebunkport, Town of	X	X	X	LED
Kittery, Town of	X	X	X	LED
Lebanon, Town of	-	X	X	LED
Limerick, Town of	X	X	X	RC
Limington, Town of	X	X	X	SBM/C
Lyman, Town of	X	X	X	LED
Newfield, Town of	X	X	X	SBM/C
North Berwick, Town	X	X	X	TM
Ogunquit, Town of	X	X	X	LED
Old Orchard Beach, Town of	X	X	X	LED
Parsonsfield, Town of	X	X	X	LED
Saco, City of	X	X	X	DPW
Sanford, City of	X	X	X	LED
Shapleigh, Town of	X	X	X	LED
South Berwick, Town	X	X	X	LED
Waterboro, Town of	X	X	X	LED
Wells, Town of	X	X	X	TM
York, Town of	X	X	X	LED

To communicate with the municipalities, the planning team would reach out the local Emergency Directors either via email or phone for them to provide the information needed. The Local Emergency Directors serve as liaisons between the planning team and the municipalities when able. If the information was not available, the Emergency Manager would provide a contact within the municipality who would have the most appropriate knowledge. These contacts would be, but not limited to, Town/City Managers, Select Board members, Council members, Director of Public Works, Road Commissioners, etc. In the event the Emergency Manger was not

available, the planning team would contact the Town/City Managers to determine who the best point of contact would be.

The table above shows the various opportunities for public participation in the drafting of the York County Hazard Mitigation Plan – Update 2022. Note that we considered "planning" to be broader than attending meetings or responding to emails. Also, under the "Mitigation Actions" column, the following abbreviations indicate who verified the information for the city/town on behalf of their governing body: DPW (Director of Public Works), RC (Road Commissioner), LED (Local Emergency Director), SBM/C (Select Board Member/Council), TM (Town Manager) or FC (Fire Chief). Note that those involved in validating the mitigation actions were also involved in emails, phone conversations, and/or meetings.

B. STATUS OF MULTI-JURISDICTIONAL PARTICIPATION

Summary of Participating Municipalities		
Name of Municipality	**Participated in Prior Plan 2015**	**Participated in this Plan 2022**
Acton, Town of	**X**	**X**
Alfred, Town of	**X**	**X**
Arundel, Town of	**X**	**X**
Berwick, Town of	**X**	**X**
Biddeford, City of	**X**	**X**
Buxton, Town of	**X**	**X**
Cornish, Town of	**X**	**X**
Dayton, Town of	**X**	**X**
Eliot, Town of	**X**	**X**
Hollis, Town of	**X**	**X**
Kennebunk, Town of	**X**	**X**
Kennebunkport, Town of	**X**	**X**
Kittery, Town of	**X**	**X**
Lebanon, Town of	**X**	**X**
Limerick, Town of	**X**	**X**
Limington, Town of	**X**	**X**
Lyman, Town of	**X**	**X**
Newfield, Town of	**X**	**X**
North Berwick, Town of	**X**	**X**
Ogunquit, Town of	**X**	**X**
Old Orchard Beach, Town of	**X**	**X**
Parsonsfield, Town of	**X**	**X**
Saco, City of	**X**	**X**
Sanford, City of	**X**	**X**
Shapleigh, Town of	**X**	**X**
South Berwick, Town of	**X**	**X**
Waterboro, Town of	**X**	**X**
Wells, Town of	**X**	**X**
York, Town of	**X**	**X**

Documentation of the Planning Process	
Requirement §201.6(b): In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include: (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval; (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.	
Requirement §201.6(c)(1): (The plan shall document) the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.	
Elements	A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))
	A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))
	A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))
	A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))
	A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))
	A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))

A. NARRATIVE DESCRIPTION

The York County Hazard Mitigation Plan is a multi-jurisdictional plan, completed under the direction of the York County Emergency Management Agency (YCEMA).

Local Participation

On August 15, 2018, YCEMA held a Disaster & Mitigation Planning Meeting which gave a preparedness overview, a discussion of disaster damages and recovery, as well as common mitigation procedures, and began our Hazard Mitigation Plan update procedures. In November 2019, YCEMA held a Local Directors Meeting and gave an update on the HMP and requested town input regarding town Mitigation Action Projects.

In the summer of 2020 and 2021, as the COVID-19 pandemic slowed in York County, YCEMA revisited the update to the plan. We added discussion of natural hazards to our weekly update calls with the towns to engage their participation. These weekly meetings were held every Tuesday for several months and YCEMA brought up the Hazard Mitigation Plan in three specific meetings. In January 2021, the planning team sent an email to all 29 Local Directors requesting their participation in updating the HMP. The email reminded the Directors of the purpose of the

HMP and requested updated mitigation actions that the Directors and towns had identified as potential problems in the future and would require mitigation work to prevent further damages.

In November 2021, and in February and March 2022, YCEMA began to hold our Local Directors meetings again to address the HMP update and discuss hazards related to recent storms. YCEMA informed the municipalities and public about the need to update the plan and how eligibility for future mitigation grants is tied to having a FEMA-approved plan. The February 2, 2022 meeting also included a summary of the update process, a poll regarding disasters and time allocated for an open discussion about hazard mitigation issues and concerns. In 2022, YCEMA also conducted surveys of the public regarding preparedness, sheltering, and Hazard Mitigation Plans. The Local Directors returned to their towns and briefed their town leadership on the HMP process and conducted risk assessments of their towns to update YCEMA on any new hazards in their areas. These discussions in the towns also sparked new mitigation action projects, which can be seen in Section 5.

The Sign-in sheets and Zoom participant lists can be found in Appendix A.

The draft updates of the plan were completed by April 28, 2022 for additional review by each of the 29 municipalities in York County and the State. YCEMA will take comments/requested revisions and will complete a final version of the plan so it can be submitted to the FEMA Region I office in Boston for review. Once the plan is APA (approved pending adoption) it will be sent to the York County Commission and to each municipal legislative body for adoption.

DOCUMENTATION OF LOCAL PARTICIPATION

08/15/18 – Disaster & Mitigation Planning Meeting
11/13/19 – Local Directors Meeting
06/11/20 – Local Directors/Community Update Zoom Meeting
06/14/21 – Local Directors/Community Update Zoom Meeting
07/08/21 – Local Directors/Community Update Zoom Meeting
11/18/21 – Local Directors/Community Update Zoom Meeting
02/02/22 – Local Directors/Community Update Zoom Meeting
03/16/22– Local Directors/Community Update Zoom Meeting

In the table below, the following serves as a key:

LED = Local Emergency Director
SBM = Select Board Member
DPW = Director of Public Works
PLC = Planning Committee
PC = Police Chief
FD = Fire Department

Municipality	08/15/18 – Disaster & Mitigation Planning Meeting	11/13/19 – Local Directors Meeting	06/11/20 – Local Directors/Community Update Zoom Meeting	06/14/21 – Local Directors/Community Update Zoom Meeting	07/08/21 – Local Directors/Community Update Zoom Meeting	11/18/21 – Local Directors/Community Update Zoom Meeting	02/09/22 – Local Directors/Community Update Zoom Meeting	03/16/22– Local Directors/Community Update Zoom Meeting	**TOTAL**
Acton			FD		FD				2
Alfred			FD/LED		FD				2
Arundel					FD				1
Berwick	DPW						LED/FD		2
Biddeford	DPW	LED/FD	LED			PLC	LED/FD	LED	6
Buxton		PLC/LED	LED/FD		LED/FD		FD/LED	LED/FD	5
Cornish					LED/SBM		LED/SBM	LED/SBM	3
Dayton	PLC	PLC/LED	LED					LED	4
Eliot		PLC	LED		PLC		FD	PLC	5
Hollis							FD		1
Kennebunk	PLC		FD			PLC	LED/FD		4
Kennebunkport	LED/PC	LED/PC	LED/PC/PLC			FD	PLC/PC/LED	PLC/PC/LED	6
Kittery	PLC/PC/LED		LED/FD	PLC			PLC/PC/LED		4
Lebanon									0
Limerick	LED	SBM							2
Limington	SBM				PLC				2
Lyman	PLC	PLC	LED/FD	FD		FD/PLC/LED	FD	LED/FD	7
Newfield			LED/PLC	LED			LED/PLC	LED	4
North Berwick		PLC							1
Ogunquit	PLC		PLC	PLC	LED		FD		5
Old Orchard Beach			LED/FD		FD				2
Parsonsfield					LED/SBM		LED/SBM	LED/SBM	3
Saco	DPW	PLC	LED/FD	FD	FD	PLC/FD	FD		7
Sanford	PLC		PLC/LED/FD		PLC		DPW/PLC/LED	PLC	5
Shapleigh	LED	LED	PLC						3
South Berwick	LED						PC		2
Waterboro	SBM	PLC	PLC						3
Wells	DPW/FD		LED/FD	LED/FD	LED/FD	LED/FD	LED/FD/PC		6
York			LED	LED	PC/PLC		LED/FD/PC/DPW	LED	5

A poll was conducted at the February 2022 Local Directors meetings to gather input. Below is a list of the questions and a summary of the results:

1. Top three disasters that occur most often in your community							
Coastal Erosion	**Coastal Storm**	**Dam Failure**	**Flood**	**Severe Fall/Winter Storm**	**Severe Spring/Summer Storm**	**Hurricane**	**Landslide**
12%	47%	0%	35%	94%	82%	6%	0%

2. Top three disasters that are/would be the most problematic for your community							
Coastal Erosion	**Coastal Storm**	**Dam Failure**	**Flood**	**Severe Fall/Winter Storm**	**Severe Spring/Summer Storm**	**Hurricane**	**Landslide**
12%	35%	41%	47%	41%	35%	41%	6%

The municipalities were also polled to rate the hazards to be included in the plan. The hazard rating scoring system is shown below. The results of this survey can be found in Section 4, page 4-3.

Task 1 – Natural Hazard Identification and Rating Survey

Purpose: The purpose of this survey is to determine the most frequently occurring natural hazards affecting your jurisdiction. Respondents were told to use the next five years as the time frame for estimating the likelihood of various hazards.

SEVERITY OF HAZARD RATING		
Rating Score	**Summary Description**	**Impact**
3	Severe	Multiple deaths, mass casualties, or millions of dollars in damages
2.5	High	Deaths or injuries; or $100,000 in damages
2	Moderate	Single death or several injuries; or $10,000 in damages
1.5	Low	Injuries; or $1,000s in damages
1	Slight	No deaths, single injury; or $100s in damages

LIKELIHOOD OF HAZARD RATING	
Rating	**Description**
A	Very likely
B	Possible
C	Very unlikely

POTENTIAL DISASTER TYPES			
Hazard Type	**Description**	**Severity of Hazard**	**Likelihood of Hazard**
Coastal Erosion	Wearing away of coastal soil by water, ice, or wind		
Coastal Storm	Violent weather (wind, rain)		
Earthquake	Event of 5.5 or more on Richter Scale		
Dam Failure	Loss of structural integrity of dams		
Flood	Overflow of water onto land areas		
Hurricane and tropical storm	Storm producing heavy rain and wind		
Landslide	Sliding down of a mass of earth, rocks, or buildings down a slope		
Severe Fall/Winter Storm	Violent weather (wind, ice, snow)		
Severe Spring/Summer Storm	Violent weather (wind, rain, hail, lightning)		
Tornado	Violent rotating column of air		
Urban fire	Burning of buildings		
Wildfire/forest fire	Burning of trees and underbrush		
Drought	Deficiency in precipitation over an extended period		
Other			

B. PEOPLE WHO WERE INVOLVED IN THE PLANNING PROCESS

YCEMA was responsible for completing the plan, with the assistance from the Hazard Mitigation Planning Team, which consisted of representatives from state, county and municipal government. The Planning Team provided materials and information to the Southern Maine Development and Planning Commission (SMPDC and participated in reviewing the plan.

York County Emergency Management Agency
Phone: 207-324-1578

Project Manager: Arthur W. Cleaves, Director

Other Contributing Staff: Victoria Raneses, Emergency Preparedness Coordinator
Laurie Ewing, Mitigation & Finance Manager
Megan Arsenault, Deputy Director
Roger Hooper, Chief Fire & EMS Administrator
David Francoeur, Division Chief of Logistics and Recovery
Diane Hartwig, Tech Hazards Coordinator

In addition to this agency, a number of different state and federal agencies and a regional planning commission contributed to the Plan:

- Maine Emergency Management Agency
  - Natural Hazards Planner: technical assistance and state review of the Plan
  - State Hazard Mitigation Officer: review and guidance on FEMA grants
- Maine State Office of the Fire Marshal
  - State Fire Marshal: Guidance for Maine Uniform Building and Energy Code
- Maine Forest Service
  - Forest Ranger Chief: Reported wildfire data for York County
- Maine Department of Transportation
  - Maine DOT GIS Services: Public Roads Database
- Maine Office of Geographic Information Systems
  - Community assets geodata
- Maine Office of the State Economist
  - State Economist/Analyst: Assistance with Census/American Community Survey data collection and municipal population projections
- Maine Geological Survey
  - Marine Geologist: Guidance/review of coastal flood/erosion hazard data resources
- National Oceanic and Atmospheric Agency (NOAA) National Weather Service (NWS)
  - Warning Coordination Meteorologist: Review of Hazard Profiles
- Maine Office of Tourism
  - Director, Maine Office of Tourism: Visitation data for York County communities
- Southern Maine Planning and Development Commission
  - Senior Planner: Coordination with Plan update, guidance on Capabilities, Mitigation Actions, Plan Integration
- U.S. Geological Survey

    - New England Water Science Center Data Section Chief: Suggest/review resources for riverine flooding
- Central Maine Power
    - Director of Community Relations: Provided statistics of power capabilities
- Kennebunk Light & Power District
    - General Manager: Provided statistics of power capabilities

Coordination meeting with Southern Maine Planning and Development Commission (SMPDC) April 1, 2022: A meeting was hosted with senior planners from SMPDC, Greater Portland Council of Governments (GPCOG) Director of Strategic Partnerships, Cumberland County EMA Director, York County EMA Planner, and Maine Emergency Management Agency (MEMA) State Hazard Mitigation Officer and Natural Hazards Planner. In this meeting, MEMA provided an overview of the Building Resilient Infrastructure and Communities grant program and discussed Hazard Mitigation Planning requirements for communities to be eligible for such programs. York County EMA updated the planning commissions regarding recent advances in the Plan and requested information from SMPDC regarding their communication with participating jurisdictions as it pertains to mitigation actions, capabilities, and plan integration.

On April 12 and 15, the planning team coordinated with the Senior Planner at SMPDC to discuss updates in the County that could be added into the HMP. SMPDC provided detail on development advances, sea level rise, and statistics relevant to solar projects in the County.

C. HOW THE PUBLIC WAS GIVEN AN OPPORTUNITY TO BE HEARD

As mentioned above, the planning team hosted several Zoom meetings to discuss the purpose of the hazard mitigation plan, present the plan inventory, and discuss potential goals and objectives of the plan with Local Directors, first responders, and hospital staff.

During the Local Directors meetings in February 2022, a poll was conducted regarding disasters, their frequencies, and potential impacts. The meetings concluded with an open discussion where the Directors were asked to share some of their answers with the group. The top three results were Severe Fall/Winter Storms, Sever Spring/Summer Storms, and Coastal Storms. A number of Directors stated that flooding had increased in severity over the years and that this was a cause for concern with older roads that tend to wash out in storms. Several towns added increasing the elevation of these roads to their Municipal Project Mitigation Actions List. A few directors added that drought was a new hazard affecting their communities. Copies of all Zoom participant lists are provided in Appendix A to show documentation of public involvement in the planning process.

In addition to the meetings listed above, in conjunction with student interns from the University of New England, YCEMA sent out three surveys to the public regarding preparedness, sheltering, and Hazard Mitigation. Advanced notice, reminders and a public notice were posted on YCEMA's website and social media to advertise these surveys. YCEMA received 497 responses from these surveys regarding preparedness of York County citizens and hazard mitigation needs in the towns.

Regular updates on the plan's progress were presented at the monthly meetings of the YCEMA. The monthly meetings typically have representation from most, if not all, of the county's cities and towns. Representatives of each municipality who attend these meetings then report back to officials in their own municipalities. The Sign-in sheets and Zoom participant lists can be found in Appendix A to show participation from the public.

To assist with the HMP update process, emergency preparedness, and mitigation goals, over the past five years, the York County EMA Director attended numerous city council and selectboard meetings at various towns. Director Art Cleaves has attended meetings in Alfred, Biddeford, Kennebunk, Kennebunkport, Kittery, Lebanon, Ogunquit, Old Orchard Beach, Sanford, Saco, Shapleigh, Waterboro, Wells, and York to discuss the town resistance to and resilience against disasters, the 2022 HMP update, and explained the importance of having a FEMA approved plan, which makes the towns eligible for disaster assistance and mitigation funding in the future. Meeting attendance provides the opportunity to explain various aspects of the plan, assist the municipality with identification of eligible mitigation action projects, and provide guidance on how to incorporate the HMP into their future municipal planning and development. For example, Director Cleaves attended the April 19, 2022 Biddeford City Council meeting[1] to give clarification and outline the benefits of the FEMA-4647 disaster declaration and Hazard Mitigation Grant Program eligibility from the October 2021 storm concerning the city's river wall. Director Cleaves met directly with the Biddeford Local Emergency Director and the Road Commissioner concerning their funding questions and strategy to mitigate future damage to the city. This recent example is typical for the type of informative interactions the Director has had with the towns surrounding mitigation actions and the HMP over the past five years. Other individuals the Director has met with include the Public Works Directors or Road Commissioners, Code Enforcement Officials, Town Planning Directors, Town or City Managers, as well as Fire Chiefs and Local Emergency Management Directors.

D. OPPORTUNITIES FOR ADDITIONAL COMMENTS

Since this is a multi-jurisdictional plan, the meetings and surveys offered a number of opportunities for neighboring jurisdictions, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning process. Additional opportunities for public involvement were given in the form of the York County EMA website, and social media. The public was given an opportunity to review and edit the Plan Update, however no public comments were received.

E. REVIEW AND INCORPORATION OF EXISTING PLANS AND STUDIES

The Planning Team reviewed the 2015 County Hazard Mitigation Plan, the latest version of the State Plan, and other county and local plans and incorporated them as appropriate. The Risk Assessment portion of this plan provides a more detailed summary of plans, studies and other materials that were used to identify and document various hazards.

This Plan builds from previous Plan Updates by incorporating a broad array of new resources, current discussions, and previous planning efforts to profile natural hazards, identify associated community risks, address local capabilities, and highlight mitigation actions to reduce observed

[1] Biddeford City Council Meeting Agenda, https://biddeford.granicus.com/AgendaViewer.php?view_id=1&clip_id=1253

long-term risks. The review and incorporation process was based on objectives for the current Plan Update to utilize best-available information to meet Plan objectives and provide a comprehensive assessment of hazards, vulnerabilities, capabilities, mitigation actions, and implementation strategies at local, county, state, and federal scales. State and federal authoritative data and reports are used throughout the Plan to support these objectives. Specific reports, plans, studies, reports, guidance, and technical information can be found in the section below, as well as referenced in Section 4 – Hazard Identification and Risk Assessment and throughout this document.

F. HOW THE PLANNING TEAM REVIEWED AND ANALYZED EACH SECTION OF PLAN AND WHETHER EACH SECTION WAS REVISED

This reviewed plan was developed incorporating information from:

- The 2015 County Hazard Mitigation Plan
- The 2010 County Hazard Mitigation Plan
- The 2005 County Hazard Mitigation Plan
- 2019 State Hazard Mitigation Plan[2]
- 2013 State Hazard Mitigation Plan
- 2020 Maine Climate Council "Maine Won't Wait" climate report[3]
- 2021 SMPDC Coastal Resilience Ordinance Review[4]
- 2021 SMPDC Comprehensive Economic Development Strategy[5]
- Disaster declarations since completion of the last Plan Update[6]
- NFIP Community Status Book Report[7] and preliminary FIRM database[8]
- Information from other plans and studies completed since the last Plan Update. Refer to footnotes and references in the text throughout the Plan

Each section of the 2015 version of the York County Hazard Mitigation Plan and FEMA Plan Review Tool was carefully reviewed to determine what specific information required updating. Each individual section was analyzed resulting in changes to the language, punctuation, and formatting in order to clarify the information. All data, specifications, census information and past disaster history was updated to ensure that the plan is current and up to date. The following is a general summary of the major changes made to the plan:

*Chapter 1: Overview – The general plan background was updated with the current Planning Team as well as the process used to review and update the plan. New information regarding the York County Community Action program was added and a new map used for the Regional Needs Assessment Corridor Identification. The employment/employer information was updated with current top employers and their respective employment figures. All

[2] Maine State Hazard Mitigation Plan: https://www.maine.gov/mema/sites/maine.gov.mema/files/inline-files/State%20Hazard%20Mitigation%20Plan%202019%20Update_10.8.2019.pdf
[3] Maine Won't Wait: https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/MaineWontWait_December2020.pdf
[4] SMPDC Coastal Resilience Ordinance Review: https://smpdc.org/vertical/Sites/%7B14E8B741-214C-42E2-BE74-5AA9EE0A3EFD%7D/uploads/Coastal_Resilience_Ordinance_Review_Report_SMPDC_Grant_Project.pdf
[5] SMPDC Comprehensive Economic Development Strategy: https://smpdc.org/vertical/sites/%7B14E8B741-214C-42E2-BE74-5AA9EE0A3EFD%7D/uploads/SMPDC-2021-CEDS.pdf
[6] FEMA Disaster Declarations Database: https://www.fema.gov/disaster/declarations
[7] Community Status Book Report: https://www.fema.gov/cis/ME.pdf
[8] Preliminary FEMA Map Products: https://hazards.fema.gov/femaportal/prelimdownload/

documentation regarding precipitation, temperatures, demographics, and the County profile was updated with current figures and statistics.

*Chapter 2: Pre-Requisites – The summary sheet and each Resolution of Adoption for the individual cities and towns were updated with the current year and any appropriate language changes.

*Chapter 3: Planning Process – The narrative explaining the process as well as (3) three charts documenting the multi-jurisdictional and public participation in the planning process were all updated to reflect the 2022 changes. The results of current polls, the people involved and opportunities for public interaction were all updated and included.

*Chapter 4: Risk Assessment – The Planning Team reviewed the potential hazards listed and profiled as well as the disaster history for York County including location and extent of damages to determine the probability of future occurrences and the risks, danger and damages associated with each type of disaster. All language, data, and charts were updated to reflect current information. With new data, drought was added as a new hazard that affects York County. Updated maps and charts summarizing Repetitive Loss Properties were added to this section. While reviewing and estimating potential losses, the critical resources currently available in York County that are required during an emergency were evaluated to determine any area of weakness or shortages. The County transportation network, infrastructure, sheltering services, and utilities were also reviewed and updated with current data. The overall process assisted in determining which areas within the County are priorities in regard to establishing future mitigation procedures and projects.

*Chapter 5: Mitigation Strategy – Several charts summarizing mitigation actions, economic business vitality, continuity of county and local government operations, efficient use of public funds for mitigation, public awareness and support were all reviewed and updated with actions taken since the 2015 update. A matrix of the mitigation goals, strategies and actions for York County was reviewed and updated accordingly. York County EMA worked with each individual city or town to review the Local Mitigation Project in York County listing, notate actions taken since the last update and to add any newly identified projects.

*Chapter 6: Plan Maintenance Procedures – York County EMA maintains continual communications with the Local Emergency Directors in regard to any disaster issues or requests the community may have. Monthly meetings are held at which information is shared in regard to hazard mitigation actions and procedures. This section was updated with current data from the 29 cities and towns within York County.

*Appendix A: Copies of Sign-in sheets, Zoom participation, and meeting agendas regarding public input were provided.

4. RISK ASSESSMENT

Risk Assessment
Requirement §201.6(c)(2): The plan shall include a risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.

In compliance with the Code of Federal Regulations, Section 201.6(c)(2), this section of the plan identifies, profiles, and assesses the vulnerability of York County to natural hazards. The risk assessment provides sufficient information to enable York County to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards. This plan includes detailed descriptions of all the potential hazards that could affect York County, along with an analysis of York County's vulnerability to those identified hazards. Specific information about numbers and types of structures, potential dollar losses, and an overall description of land use trends in York County are included in this analysis. Because this is a multi-jurisdictional plan, the risks that affect only certain regions of the County were assessed separately in the context of the affected region.

This section of the Plan contains the following subsections:

- Description of Natural Hazards
- Profiling Hazards
- Assessing Vulnerability
- Assessing Vulnerability: Estimating Potential Losses
- Assessing Vulnerability: Analyzing Development Trends
- Multi-Jurisdictional Risk Assessment
- Refer to Appendix A: Municipal Risk Assessment Maps for detailed location and asset vulnerability information

1. DESCRIPTION OF NATURAL HAZARDS AFFECTING THE JURISDICTION

Identifying Hazards	
Requirement §201.6(c)(2)(i): The risk assessment shall include a description of the type…of all natural hazards that can affect the jurisdiction.	
Element	B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))

The Maine Emergency Management Agency (MEMA) lists about 15 types of hazards on its website and profiles the nine most significant in the 2013 State Hazard Mitigation Plan. This comprehensive list of hazards was used as the basis for identifying hazards in York County. Beyond this state listing, there are other types of hazards listed at the FEMA website events such as tsunamis, which are particular to other regions of the country, and these events were eliminated from consideration.

In order to determine which of these many types of hazards to consider in a multi-jurisdictional mitigation plan for York County, three factors were taken into consideration:

1. **Likelihood of the hazard occurring in York County** - York County is simply not prone to certain events such as tsunamis, so these types of events are not included; and
2. **The ability of York County to mitigate each type of hazard** – The profiled hazards are within the authority of the County officials and/or the Communities' local authorities to mitigate.
3. **The severity of the hazard** - As measured by the potential number of deaths, injuries, and amount of damage in dollars that would be associated with each hazard.

The following tables show the criteria that was used to rate the likelihood and severity of **natural** hazards within the next five years:

SEVERITY OF HAZARD RATING		
Rating Score	**Summary Description**	**Impact**
3	Severe	Multiple deaths, mass casualties, or millions of dollars in damages
2.5	High	Deaths or injuries; or $100,000 in damages
2	Moderate	Single death or several injuries; or $10,000 in damages
1.5	Low	Injuries; or $1,000s in damages
1	Slight	No deaths, single injury; or $100s in damages

LIKELIHOOD OF HAZARD RATING	
Rating	**Description**
A	Very likely
B	Possible
C	Very unlikely

The hazard survey results are shown in the table below (The total score was derived by adding the two columns together in the Likelihood of Hazard column, A=3, B=2. C=1).

Hazard Type	Description	Severity of Hazard	Likelihood of Hazard	Total
Severe Fall/Winter Storm	Violent weather (wind, ice, snow)	38	58	96
Severe Spring/Summer Storm	Violent weather (wind, rain, hail, lightning)	45	57	102
Flood	Overflow of water onto land areas	54	58	112
Hurricane and tropical storm	Storm producing heavy rain and wind	41	49	90
Wildfire/forest fire	Burning of trees and underbrush; possibly homes in interface	54	56	110
Tornado	Violent rotating column of air	39	42	81
Coastal Storm	Violent weather (wind, rain)	43	47	90
Dam Failure	Loss of structural integrity of dams; failure would result in flood	35	42	77
Coastal Erosion	Wearing away of coastal soil by water, ice, or wind	31	44	75
Earthquake	Event of 5.5 or more on Richter Scale	31	29	60
Landslide	Sliding down of a mass of earth, rocks, or buildings down a slope	24	25	49
Drought	Deficiency in precipitation over an extended period	39	40	79

After considering the entire list of potential hazard types, four were identified as falling within the scope of the York County Hazard Mitigation Plan:

1. Flood (includes dam failure, coastal erosion, and landslide)
2. Severe Fall/Winter Storm
3. Severe Spring/Summer Storm (includes tornado, hurricanes, and tropical storms)
4. Wildfire (Urban Interface and forest fire)
5. Drought

The hazards profiled in this Plan, and the basis for their selection is further summarized in the table below:

Summary of Hazards Profiled in this Plan		
Hazard	**How Identified**	**Why Identified**
Flooding and Dams	Review of FEMA flood studies, FIRM maps, input from residents, review of past disaster declarations, identification of repetitive losses, review of SLOSH Maps, Committee knowledge existing Hazard Mitigation Plan, and State Plan.	Flooding is associated with the effects of hurricanes, ice and snow build-up in the headwaters and rivers, ice dams and spring runoff. Several repetitive loss properties and roadways are located in the County. The County contains major rivers and many streams and lakes. It also has dams with high and significant hazard potential requiring FERC or MEMA EAPs.
Severe Fall/Winter Storms	Review of past disaster declarations, inputs from residents, risk assessments, review of library historical data, Committee and local knowledge, records from 1998 and 2009 ice storms, existing Hazard Mitigation Plan, and State Plan.	York County is frequently hit with major northeaster blizzards. In 1998 and 2009, major ice storms hit the County, knocking out power in many locations for days. The County is subjected to a wide range of weather conditions. The impacts of winter storms include erosion and wind damage, road and culvert washouts.
Severe Spring/Summer Storms	Review of past disaster declarations, inputs from residents, risk assessments, Committee, and local knowledge records from the Patriot's Day (2006) and Mother's Day (2007) storms, existing Hazard Mitigation Plan, and State Plan.	The County is frequently hit with thunderstorms, heavy wind and rainstorms, hail, and lighting, and less frequently by hurricanes and tornadoes. Summer storms are often accompanied by high winds, road, and culvert washouts. Frequency of occurrence still remains low for a Hurricane, but is much more frequent for weak tropical storms, return interval frequency once a decade, but higher for tropical remnants. In 2008, two severe summer storms hit the County and caused widespread flooding among neighborhoods and roads.
Wildfires (Urban Interface and Forest)	Review of Maine Forest Service records, input from residents, risk assessments, Committee and local knowledge, existing Hazard Mitigation Plan, and State Plan.	Much of the County is covered with forests. Although there haven't been any significant fires in recent years, if conditions such as severe drought were to occur, there could be a greater potential for this hazard to occur.
Drought	Review of State EMA records, review of NOAA records	Recent droughts include D3 drought in the Fall of 2020 and D1 drought in Fall of 2017, with a D2 drought in the Fall of 2016. We have been a relatively high

		frequency drought over the past 5 years. The decade before had very limited drought. Severe, multi-year droughts also occurred in Maine in the 1960's, 1980's and from 2000 to 2003.

Rationale for excluding other natural hazards:

The following table identifies the hazards that were eliminated from further consideration in the Plan, due to a lack of historical evidence, lack of overall County-wide severity, or a low likelihood for the event to occur. Even though these potential hazards are not profiled in the Plan, there is no guarantee that they would not or could not occur and cause damage.

Hazards Not Profiled in this Plan

Hazard	How Identified	Reason for Non-Inclusion
Blight/Infestation	Review of State Entomological Office historical records, Inputs from residents	Though the County is heavily dependent on its forest industry, there are no historical records of major damage to these products that have caused serious economic conditions.
Earthquake	Review of U.S. Geological Survey's Earthquake Hazards Program, historical data, existing Hazard Mitigation Plan.	There has never been an earthquake greater than 5.5 and there has never been a death associated with earthquakes in York County. Since this does not mean such an event couldn't occur, we will continue to monitor but not profile this hazard
Subsidence/ Avalanche & Sinkhole	Review of Maine Geological Survey records	There aren't mountains in the County that can hold amounts of snow large enough to create avalanches. There have been no known cases of subsidence or sinkhole incidents in York County.
Extreme Heat/Cold	Historic occurrence, review of NOAA records	Though extreme temperatures have occurred in York County, the record indicates that they have not caused a substantial enough impact yet to be included in a hazard profile. This does not mean such an event couldn't occur, so YCEMA will continue to monitor the situation and evaluate/update the Plan as needed.

2. PROFILING HAZARDS

Profiling Hazards	
Requirement §201.6(c)(2)(i): (The risk assessment shall include a) description of the …location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.	
Elements	B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

This section outlines information regarding the history of and future potential for individual hazard types in York County. Each of the seven hazard categories assessed in this report is summarized in the sections that follow.

HAZARD #1 - FLOOD

1. General Definition

A temporary inundation of normally dry land as a result of: 1) the overflow of inland or tidal waters, 2) the unusual and rapid accumulation or runoff of surface waters from any source. Note: the nature of York County's geography, geology and hydrology is such that flooding is usually fast rising but of short duration.

2. Types

Coastal Flooding. The temporary inundation of beaches and other land areas by the sea, either as a result of coastal storms, hurricanes (see profile of hurricanes contained in this Assessment), or erosion or landslides (see profile of erosion/landslides contained in this Assessment). Coastal flooding comes with two significant components: still water and storm surge. Coastal flooding is a combination of many components to include high astronomical tidal cycles, storm surge, fresh water from heavy rain and large battery surf. The high winds associated with coastal storms exacerbate the flooding by pushing water towards the land and create large waves that cause significant erosion. A nor'easter or tropical cyclone can cause a storm surge along the coast of Maine. Fetch, or the distance the wind can blow toward the shore from out at sea, is a significant factor in coastal flooding depths. The shape of the ocean floor just offshore is another variable.

Dam Failure/Breach. The sudden release of water resulting from structural collapse or improper operation of the impounding structure. Dam breach can cause rapid downstream flooding, loss of life, damage to property, and the forced evacuation of people. A dam breach has a low probability of occurring, but a potentially high impact. During heavy rain events, dam failure and breach are more likely to occur due to stress on the structures, for example, overtopping. Dam failure and breach are different than the other types of flooding because it's due to man-made causes, but it is included under flooding because the results and impacts are the same as flooding.

Flash Flood. A flood event occurring with little or no warning where water levels rise rapidly due to heavy rains, ice jam release, or rapid snow melt. Unlike river flooding, flash flooding can occur almost any place, but is more common in hilly terrain. The fast majority of flash flood events occur in the summer months and are associated with thunderstorms that can drop up to 5" of rain in an hour.

Ice Jam. An accumulation of floating ice fragments that blocks the normal flow of a river. During a thaw or rainstorm, the rapid increase in discharge from snow melt and/or rainfall can rapidly lift and break up a thick ice cover and carry it downstream as an ice run. Ice runs can jam in river bends, shallows, bridges or against the sheet ice covering flatter reaches. The resulting ice jams can block flow so thoroughly that serious flooding may result within an hour of their formation.

Failure of an ice jam suddenly releases water downstream. Damages from ice jam flooding usually exceed those of clear water flooding because of higher than predicted flood elevations, rapid increase in water levels upstream and downstream, and physical damage caused by ice chunks. Moving ice masses can shear off trees and destroy buildings and bridges above the level of the flood waters.

Lacustrine. (Lake Flooding) occurs when the outlet for the lake cannot discharge the flood waters fast enough to maintain the normal pool elevation of the lake. During a base flood event, normal increases in water surface elevations on most Maine lakes and ponds range from 1 to 5 feet. However, in Maine there are some examples where the base flood event will reverse the flow of the outlet stream. In such instances, river and base flood elevations can rise more than 15 feet above normal pool. Maine's Mandatory Shoreland Zoning and floodplain management elevation requirements do much to mitigate for lake and pond development by imposing significant setbacks from the water's edge. While this type of flooding can impact older individual camps built near the water's edge, there are no records of major damages so this type of flood will not be further addressed in the Plan.

Riverine/Riparian. Periodic overbank flow of rivers and streams, usually the result of spring runoff, but can also be caused by major rainstorms.

Tsunami. A wave produced by a disturbance that displaces a large mass of water – usually a result of geologic activities such as earthquakes, volcanic eruptions, underwater landslides, or in rare geologic cases, meteor strikes. After such a disturbance, displaced water travels outward from its site of origin as a series of unusually large waves at great speeds (Komar, 1996). All areas with an elevation less than 100 feet and within a mile of the coast could be impacted by a tsunami. Based on information obtained from the Maine Geological Survey, the chances of a catastrophic event are minimal. Moreover, with the presence of the relatively shallow Georges Bank offshore, Maine remains protected from the full force of an Atlantic Ocean tsunami.

Urban. Overflow of storm sewer systems, usually due to poor drainage, following heavy rain or rapid snow melt (also made worse by king tides with heavy rain). The combined sanitary and storm water systems that some urban areas installed years ago cause flooding of sanitary

sewerage when riparian or coastal floods occur. Runoff is increased due to a large amount of impervious surfaces such as roof tops, sidewalks and paved streets.

3. Location of Hazard

York County has many areas that are susceptible to coastal and riverine flooding, which are further exacerbated by the wide-ranging weather variables as discussed in the climate section. Nine of its 29 cities and towns are located directly on the Atlantic Ocean, and all others have at least some frontage on ponds, rivers, streams, or wetlands. With a population of 198,934, the county also has a substantial amount of impervious surfaces, particularly along the coastline, where the majority of the county's population lives and where the density of human settlement is substantially higher. York County also receives a fairly high level of precipitation at all seasons of the year.

According to the 2020 update to Maine's Climate Future report; "a significant increase in extreme precipitation events (more frequent and intense storms) has been observed across Maine and other parts of the eastern U.S.[1] An extreme participation event for this analysis is defined as one in which two or more inches (five or more cm) of precipitation falls within a 24-hour period. Historical measurements show that extreme events vary across the state, occurring most often in the coastal zone and western mountains."

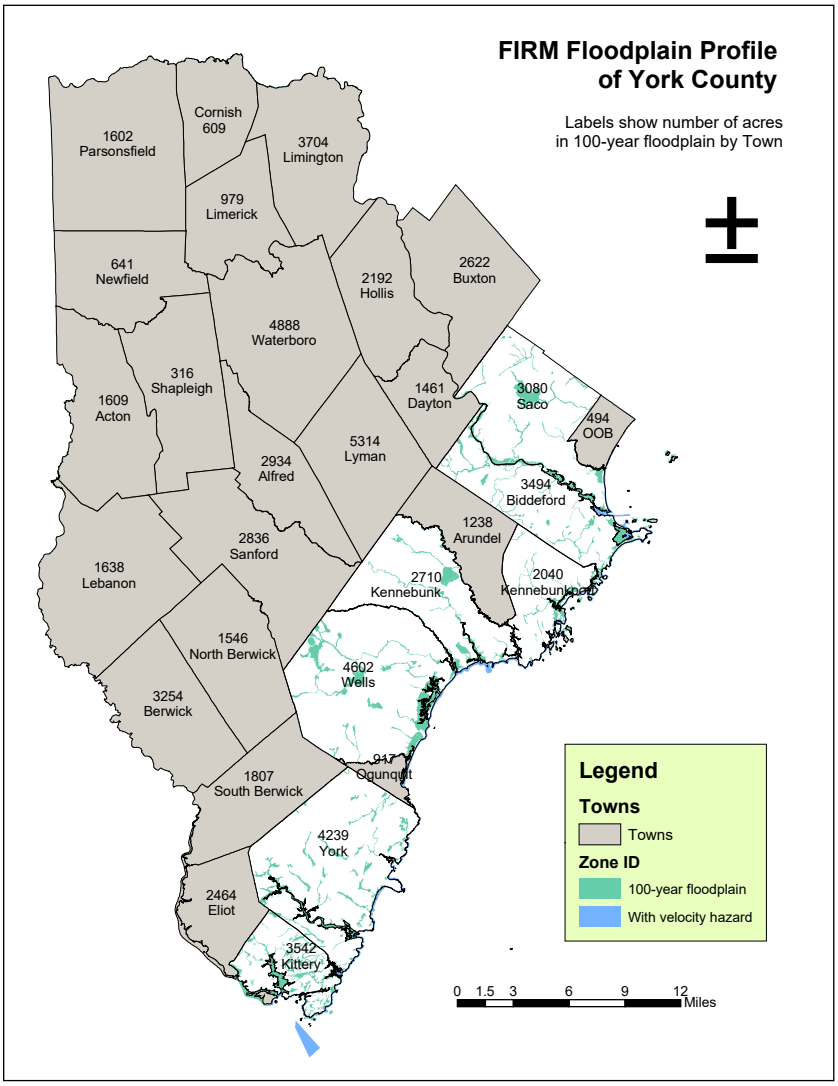
Flooding is common in the spring as snow melts, especially in years with large amounts of snowfall and/or with high levels of rainfall in the months of April and May. The majority of the flood damage in the County is caused by winter runoff in the springtime, which undercuts or overtops local roads. When York County has an above average snowfall for the winter and then warmer temperatures and rainfall suddenly arrive in the spring, the snowpack melts off more quickly than the watersheds can handle. This can cause local water bodies to overflow their boundaries and flood nearby road surfaces. Typically, the road damage is not major, although it can absorb the municipal road budget for an entire year and does happen in several towns every year. Less common and less damaging is flooding in the early winter (November and December) when early snowfall is melted by mild weather and rainfall.

Location of flooding along major river basins.
The Saco River Basin is generally described as embracing all of York County as well as most of Cumberland County and the southern portion of Oxford County. Several small rivers with small exclusive basins comprise this area. It includes small rivers like the Kennebunk, Mousam, Presumpscot, Royal, Ogunquit and the Maine portion of the Piscataqua and Salmon Rivers. Many of these smaller rivers such as the Mousam have experienced significant flooding in recent years.

Location of flood plains.
The locations of FIRM flood risk areas were documented. In total, of the 634,000 acres of land area in York County, 68,770 acres are rated as flood hazard areas by FIRM, or about 11 percent of the county's total land and water area. Most of the FIRM flood hazard areas (6,020 acres) are

[1] Maine's Climate Future, 2020 Update https://climatechange.umaine.edu/resource/maines-climate-future-2020-update-2/

classified as "A," or areas in the 100-year floodplain. The remaining 369 acres are classified as "VE," or areas in the 100-year floodplain with velocity hazards due to wave action. All VE areas are located either directly on the Atlantic Ocean or in tidal areas of major rivers such as the Saco, York, Mousam, and Piscataqua.



This map displays the locations of FIRM flood hazard areas and how much acreage of 100-year floodplain exist in each of the 29 cities and towns in York County. Refer to Municipal Maps in Appendix A incorporating preliminary FIRM Panels for all communities last issued 8 March 2022.

Of the roughly 500 places in York County's road network that have locally identified flood risks, about 80 percent are within the 100-year flood plain as defined by FEMA. However, there is no direct relationship between the amount of floodplain and the number of locations identified as flood risks. This is due to two factors: the fact that road locations vary; and the presence of existing mitigation measures in many locations.

For example, the Town of Wells has 428 acres located in floodplains, but just seven flood locations. The Town of Buxton, though, has 43 flood locations but just 244 acres of floodplain.

4. Extent of Hazard

Generous precipitation (about 46 inches a year) contributes to the flood potential. The low-pressure system over the Eastern Seaboard and the tendency of some storms to follow one another in rapid succession provide heavy, combined moisture. Water abundance is one of the County's most valuable natural resources and its primary hazard.

Flood damages to roads, bridges and ditches continue to be a common occurrence throughout York County. Most washouts are quickly repaired, but often are not mitigated. As a result, replacement culverts, ditching and fill are just as susceptible to future flood damages as they were before the storm event.

Extent (nature) of the Hazard from Coastal Flooding.
The gradual rise in the level of the sea is having a profound effect on the nature of coastal flooding. The Maine Geological Survey (MGS) and Southern Maine Planning & Development Commission (SMPDC) worked to generate a series of maps showing the potential impact of two feet of sea level rise on the York County coastline. Maps have been completed for Old Orchard Beach, Saco, Biddeford, Kennebunk, Kennebunkport, Wells, York, and Kittery. Based on analysis of Maine's longest operational tide gauge at Portland, ME, the MGS estimates that the ocean has risen along Maine's coast about seven and a half (7.5) inches since 1912. Analysis of tide gauges in Maine indicate that over about the last 30 years, that rate has almost doubled consistent with global sea level rise rates. The Maine Climate Council has adopted a scenario of planning for 1.5 feet of sea level rise by 2050 and 4 feet by 2100 (using a 2000 start time). In addition, sea levels will likely continue to rise beyond 2100.

From the SMPDC's "Tides, Taxes, and New Tactics" project report: in the Gulf of Maine, sea level rise has mirrored the global trend. Data from the Portland tide gauge show that local sea level has increased 7.5 inches since 1912, when the gauge first began collecting data. Since the early 1990s, sea level rise in Maine has accelerated from roughly 0.6 feet per century to about 1 foot per century. Nearly half of the documented sea level rise that has occurred over the past century in Maine has occurred since 1993, representing a rapid increase in the rate of change. That rise has increased the frequency of nuisance, or high tide, flooding, with southern Maine seeing 4 times as many nuisance flooding events over the last decade compared with the average of the past 100-years. In the future, the rate of sea level rise in Maine may accelerate faster than the global average due to regional conditions and global processes

Sea level in Maine has been rising in the long-term, but over the past few decades, the rate of rise has accelerated. That rise is increasing the frequency of nuisance or high tide flooding, with southern Maine seeing 4 times as many nuisance flooding events over the last decade compared with the average of the past 100-years. According to a recent assessment conducted as part of the Maine Climate Council process 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 under intermediate global greenhouse gas emissions scenarios, with higher sea level rise amounts possible. With that rate of sea level rise, not accounting for increased intensity and frequency of storms, Maine will see a 15-fold increase in coastal flooding by 2050. Those scenarios do not account for more intense rainfall that climate change is bringing to the region, which will exacerbate flood risk

As sea level rises in the future, normal high tides will be higher and storms, and accompanying storm surge, will be more impactful, causing extensive coastal flooding to roads, homes, and businesses. While future sea level rise will occur gradually over time, extreme storm events can cause damaging flooding episodically in the short-term.[2]

During the Patriot's Day storm of 2007, the surge on top of the high tide flooded the Ocean Park neighborhood of Old Orchard Beach, and the area of inundation matches the MGS scenario for flooding by the highest annual tide in the year 2100. In other words, by the year 2100, it is expected that Ocean Park flooding as serious as that seen during the Patriot's Day storm of 2007, will occur every year during the normal high spring tides at new moons, without any storm activity.

Along the Maine Coast, a sea level rise of one (1) foot means that a storm that had a 1% chance of occurring in any one year (the 100-year storm) will have a 10% chance of occurring in any one year (the 10-year storm). This would cause the future 10-year event to have the same impact as the current 100-year event. In addition, 1 foot of sea level rise will increase nuisance flooding of low-lying areas by ten to fifteen-fold over current levels. Work by the MGS estimates that 1.5 feet of sea level rise may inundate 43% of the protective dry beach and between 60% and 90% of Maine's dunes. As a result, more homes, businesses, public infrastructure such as roads, and entire communities will be subject to more devastating coastal storms, as well as coastal erosion and landslides, on a more frequent basis. There is also concern in the scientific community that global warming may be increasing the intensity of coastal storms.

Wave action generated by winter storms, particularly nor'easters, is the most threatening cause of coastal flooding. The Patriot's Day storm mentioned above was a nor'easter.

Hurricanes occur far less frequently than winter storms, but can be just as, if not more, devastating than a winter storm (see section on hurricanes below).

There have been several major mapping initiatives dating from the mid-2000s:

- **Hurricane Surge Inundation Maps.** Hurricane Surge Inundation Maps have been prepared for the coast by the US Army Corps of Engineers (see Hurricane section).
- **FEMA Multi-Hazard Flood Map Modernization (Risk Mapping) Program.** In the past, FEMA's National Flood Insurance Program (NFIP) remapping efforts have been limited by technology and funding. Congress has taken steps in the last few years to jump start this process. As a result, in the summer of 2010, digitized floodplain maps for York County were released as preliminary maps for community review. The State Planning Office initially anticipated that the maps would become final during the summer of 2011, however major concerns over the methodology used to create the maps has delayed the project indefinitely.

[2] SMPDC, "Tides, Taxes, and New Tactics," https://smpdc.org/vertical/Sites/%7B14E8B741-214C-42E2-BE74-5AA9EE0A3EFD%7D/uploads/Tides_Taxes_and_New_Tactics_Project_Final_Report_SMPDC_July_2021.pdf

- **LIDAR Mapping.** Detailed topographic maps were prepared for coastal York and Cumberland Counties, as well as portions of Oxford County in Western Maine, by a consortium of agencies including NOAA and the Army Corps of Engineers. The amount of LIDAR mapping was restricted to within a few hundred feet of the coast and was used to develop better coastal modeling. Some of these models are now being challenged by several communities as being too conservative. As of 2013, LIDAR data has been gathered for the first few hundred feet of the entire Maine coast, and for portions of Androscoggin, Oxford, and Kennebec Counties.

Coastal Erosion

York County beaches, in both developed and undeveloped areas, have been mapped extensively by the Maine Geological Service (MGS),[3] for its role in assisting the Department of Environmental Protection to administer the Sand Dune Act. All significant development activity in designated front or back dune areas must receive a Sand Dune permit from the DEP. Coastal Area Hazard Maps have been developed by DEP, based on FEMA flood map velocity zones, measured erosion rates, and designations of front and back dune areas, which predict areas of erosion damage that might be expected after ocean surges. These maps are available to emergency managers to show which oceanfront areas might be expected to receive the most damage from future storms. Emergency managers are unfortunately familiar with these areas, as they typically receive some damage each decade.

Extent of the Hazard from Dam Failure/breach.

Maine law, consistent with federal law, classifies the hazard potential of dams as High, Significant or Low. If they failed, High Hazard dams could cause loss of life; Significant Hazard dams could cause significant property damage and Low Hazard dams would generally cause damage only to the owner's property. Therefore, it's possible that a small (low head) dam located above a large community could be rated High Hazard while a structurally larger dam sited in an unpopulated area could be a Low Hazard potential. In York County, there are four (4) High Hazard dams and eleven (11) Significant Hazard dams, as shown in the following table.

York County High and Significant Hazard Dams

High Hazard Dams

MEMA ID	DAM NAME	OWNER	LOCATION	RIVER
14.0	Emery Mills	Sanford	Shapleigh	Mousam River
402.0	Estes Lake	KEI Power Management Inc.	Sanford	Mousam River
9.0	Mill Street	Sanford	Sanford	Mousam River
497.0	Skelton	Maine Hydro - NextEra Energy	Dayton / Buxton	Saco River

Significant Hazard Dams

MEMA ID	DAM NAME	OWNER	LOCATION	RIVER

[3]Maine Geological Survey Coastal Erosion Report, https://digitalmaine.com/cgi/viewcontent.cgi?article=1569&context=mgs_publications

13.0	Balch Pond	Acton / Newfield	Acton / Newfield	Little Ossipee River
175.0	Bell Marsh	Kittery Water District	York	Smelt Brook
175.1	Bell Marsh Dike	Kittery Water District	York	Smelt Brook
15.0	Boulter	Kittery Water District	York	Bass Cove Creek
16.1	Chases Pond	York Water District	York	Cape Neddick River
16.2	Chases Pond Dike	York Water District	York	Cape Neddick River
384.0	Ledgemere	Maine Renewables, LLC (div. Synergics)	Waterboro / Limerick	Little Ossipee River
17.0	Middle Pond	Kittery Water District	York	Cider Hill Creek
2.0	Old Falls	KEI Power Management Inc.	Kennebunk	Mousam River
12.0	River Street	Sanford	Sanford	Mousam River
835.0	Wadleigh	Wadlleigh Pond Association	Lyman	Swan Pond Creek

Maine dams were constructed incrementally over a period of 300 years. Businesses harnessed the abundant fast flowing rivers and rocky rapids for the development of energy and transportation. Many dams throughout the country are now aged, and in Maine the majority of these structures are nearly 100 years old and beyond the normal design life of civil engineering works. Many are low head dams constructed using local materials of stone, timber, and earth. Dam failure is not a frequent occurrence, but it can and does occur. No dam failures have been reported to the Maine Dame Safety Program in recent history, though occasional high flow warnings are dispatched when high flow or heavy rainfall events may cause flooding in downstream areas.

5. Previous occurrences

Historically, flooding has been the most common disaster type to affect York County. From 1970 to 2022, 22 of the 27 total federally declared disasters in the county have involved floods. These major flooding events affected each of the county's 29 cities and towns, with each receiving assistance at least twice during the period, and the average flood resulted in disaster relief funding to 15 towns.

Flood damages to roads, bridges and ditches continue to be the most common occurrence in York County, especially in heavy rain events (> 3-5" in 24 hours). Depending on the saturation level of the ground at the time of the event and the duration of the storm, the extent of damages can vary from a few overloaded culverts to major road washouts throughout the County.

The table below provides an historical summary of the flooding events affecting York County. Data source was MEMA – State of Maine Hazard Mitigation Plan. Where damages are provided, they reflect the total declaration amount for the State.

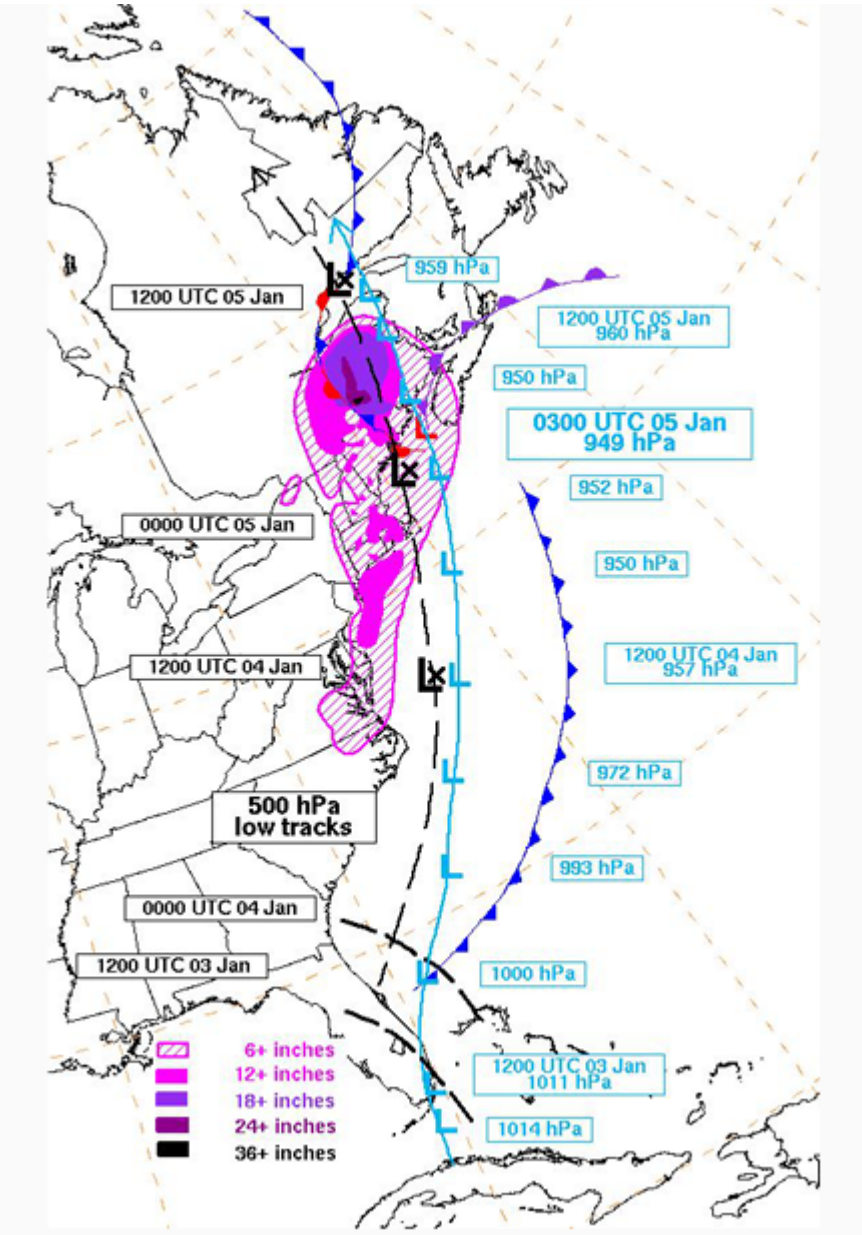
No	Year	Month	County	Damages	Declaration
1	1970	Feb 27	York	Severe Storms, Ice Jams & Flooding	Presidential FEMA-284-DR-ME
2	1972	Mar 7	York	Severe Storms & Flooding	Presidential FEMA-326-DR-ME
3	1978	Feb 17	York	High Winds, Tidal Surge & Coastal Flooding	Presidential

					FEMA-550-DR-ME
4	1987	Apr 1 (The "April Fool's Storm")	York	Major damage to homes, businesses, public buildings (town halls, fire stations, libraries) parks and recreation areas, agricultural equipment and livestock; the pollution closed clam beds downstream and severely damaged water and sanitation district facilities; erosion to river banks	Presidential FEMA-788-DR-ME
5	1991	August 18-21 (Hurricane Bob)	York	Hurricane Bob and flooding	Presidential FEMA-915-DR-ME
6	1992	Mar 27	York	Heavy rains and ice jams severely damaged gravel roads and culverts. Many small, rural communities could not cover the recovery costs.	Presidential FEMA-940-DR-ME
7	1993	Apr (The "Easter Flood")	York	Heavy rains, snow melt and ice jams damaged dirt roads and culverts damage, exceeding the annual road repair and maintenance budgets in a number of rural towns	Presidential FEMA-988-DR-ME
8	1996	Apr 16-17	York	Flooding and mudslides from heavy rains and snowmelt damaged roads, seawalls, several dams, 2 homes, and washed out culverts	Presidential FEMA-1114-DR-ME (addendum to 1106)
9	1996	Oct 20-21	York	Record breaking rains (in excess of 19 inches at Camp Ellis) from combined effects of a strong northeaster and Hurricane Lili. 1,000 structures were inundated, several dams breached, and roads, bridges and culverts were destroyed	Presidential FEMA-1143-DR-ME
10	1998	June 13 – July 1	York	Infrastructure damage from heavy rains to public roads and drainage systems in rural areas	Presidential FEMA-1232-DR-ME
11	1998	Oct 8-11	York	Inland and coastal flooding; erosion resulting from slow moving storm, heavy rains. In Kennebunk, the combination of astronomically high tides and the large waves generated by the storm undermined 230 feet of seawall on Great Hill Rd.	Presidential FEMA-1263-DR-ME

12	2001	Mar 5-31	York	Flooding from severe winter storms, record snowfall, high winds, heavy rains & run-off, ice jams. In York and Berwick, The coastal storm that brought heavy snow to much of western Maine dropped 2 to 5 inches of rain in the southwestern part of the state. Small rivers and streams overflowed their banks resulting in flooded roads and washouts. Melting snow also contributed to the runoff problem.	Presidential FEMA-1371-DR-ME
13	2005	Mar 29 – May 3	York	Severe storms, flooding, snow melt and ice jams	Presidential FEMA-1591-DR-ME
14	2006	May 13-25 (The "Mother's Day Storm")	York	Severe storms and flooding	Presidential FEMA-1644-DR-ME
15	2007	Apr 15-23 (The "Patriot's Day Storm")	York	Severe storms and inland and coastal flooding	Presidential FEMA-1693-DR-ME
16	2008	July 18 – August 16	York	Severe storms, flooding, and tornadoes	Presidential FEMA-1788-DR-ME
17	2008	Dec 11-29	York	Severe winter storm and flooding	Presidential FEMA-1815-DR-ME
18	2010	Feb 23 – Mar 2	York	Severe winter storms, flooding. Heavy rain resulted in county wide flooding of small rivers and streams in western York County. Road washouts were numerous with moderate to major damage occurring to roadways. Homes and businesses were also flooded.	Presidential FEMA-1891-DR-ME
19	2010	Mar 12 – Apr 1	York	Severe winter storms, flooding. Rainfall amounts ranged from 4 to 9 inches in southwest Maine which caused serious flooding. York County was especially hard hit with a million dollars' worth of damage due to flooding of small rivers and streams.	Presidential FEMA-1920-DR-ME
20	2017	Oct 29 – Nov 1	York	Severe storm and flooding	Presidential FEMA-4354-DR-ME
21	2018	Mar 2-8	York	Severe costal storm and flooding	Presidential FEMA-4367-DR-ME
22	2021	Oct 30-31	York	Low pressure storm which caused flash flooding and tributary flooding as a result of 4 to 6.5 inches of rain in a six-hour period.	Presidential FEMA-4647-DR-ME

Flash Flood, October 30-31, 2021. Knox, Waldo, and York counties dealt with flash flooding and tributary flooding when a low pressure system developed between Oct. 30 and Oct. 31, 2021 causing 4 to 6.5 inches of rain in a six-hour period. A stone embankment on the Saco River near the Pepperell Mill campus in Biddeford washed away into the river during the rainstorm causing millions of dollars' worth of damage. The embankment supports Biddeford's RiverWalk, which winds past the Pepperell Mill campus, and is located within a few feet of the brick chimney smokestack. The smokestack, which is no longer in use, is part of the Pepperell Mill complex. Kennebunk reported 6.88 inches of rain; Biddeford, 6.7 inches; Wells, 6.68 inches; Northport, 6.76 inches; Rockport, 5.60 inches; Belfast, 4.98 inches; and Rockland, 4.77 inches, according to rainfall amounts collected by the National Weather Service. The storm knocked out power to thousands of utility customers and cause significant flooding on many roads in York County.

Nor'easter, January 3-5, 2019. The first major winter storm of 2018 concluded as one of the strongest Nor'easters in modern-day records, impacting nearly the entire Eastern Seaboard. The storm hit Maine the hardest on January 4, 2018. The storm reached the 3rd highest water level at 13.79 ft at the Portland Tide Gage. It was a major coastal flood event for the county. The highest amounts of snow fell over north-central Maine where amounts ranged from 18 to 36+ inches.



Patriot's Day Storm, April 16, 2007. According to the Gulf of Maine Ocean Observing System website, the Patriot's Day Storm of 2007 will be long remembered for its meteorological significance and devastating power. Violent waves destroyed homes, businesses, coastal roads, and beaches, while forceful winds tore down power lines, leaving many residents in the dark for days. Portland had a peak wind of 59 mph measured on April 16th. An abnormally high spring tide plus a storm surge of 3 feet (2.72 feet at the Portland tide gauge, the closest gauge to York County just 10 miles north of the county line) produced a high tide of 13.28 feet (the 7th highest tide measured since the early 1900s).

The National Weather Service's models had predicted a large snowstorm the week before that didn't occur. Instead, the jet stream carried the storm's energy over New England, dropping five to eight inches of rain along the coast, resulting in a significant coastal flooding event. During

the Patriot's Day storm, there were four high tide cycles in which the water was near or above flood stage and the waves were greater than 10 feet in height. This combination caused a tremendous amount of damage. Rainfall in Southern Maine was near the 100 year recurrence interval at Sanford and Eliot. The worst flooding occurred on the smaller rivers in York County. Damage to infrastructure was severe (roads, bridges, waste water treatment plants, public buildings). Homes and businesses were also damaged. In York County, two people were killed when they attempted to cross a flooded road on foot and were swept away.

6. Probability of Future Occurrences

Based on the geography and history of York County, it can be expected that minor flooding will occur annually at some locations and that a major flood event causing significant damage to infrastructure and property will occur at least once every decade.

The gradual rise in the level of the sea is having a profound effect on the nature of coastal flooding. The sea has risen about six inches since 1900 and is conservatively projected by the Maine Geological Survey to rise by roughly two additional feet by 2100. Along the York County coast, if the 10-year and 100-year storm elevations are only one foot apart, a sea level rise of one (1) foot means that a storm that had a 1% chance of occurring in any one year (the 100-year storm) at the original elevation will have a 10% chance of occurring in any one year (the 10-year storm) at the new elevation. As a result, more homes, businesses, public infrastructure such as roads, and entire communities will be subject to more devastating coastal storms, as well as coastal erosion and landslides, on a more frequent basis. There is also concern in the scientific community that global warming may be increasing the intensity of coastal storms.

Probability of Dam Failure/Breach: Because most of Maine's dams were constructed 100 years ago the possibility of failure increases but is not predictable. Many dams throughout the County are now aged and beyond the normal design life of civil engineering works. Many are low head dams constructed using local materials of stone, timber, and earth. York County has four High Hazard dams and 11 Significant Hazard dams. Acknowledging this, the Maine Dam Safety Law requires regular inspections conducted by the Maine Dam Safety Program, maintenance, and publication of current Emergency Action Plans (EAPs).

HAZARD # 2 – SEVERE FALL/WINTER STORM

1. General Definition

Severe winter storms are characterized by low temperatures, strong winds, and large quantities of precipitation in the form of snow, rain, or sleet.

2. Types

Blizzard. Sustained winds or frequent gusts of 35 miles per hour (mph) or more with visibilities below ¼ mile due to heavy falling and blowing snow that persist for 3 hours or more, and temperatures of ten degrees Fahrenheit or colder. Blizzard conditions lead to potentially life-threatening traveling conditions.

Ice Storms. Super cooled rain that freezes on contact of the sub-freezing ground. The ice coating is at least ¼ inch of mean radial ice that weighs down trees and wires. The weight of the ice snaps trees branches and wires that cause widespread power outages.

Nor'easter. Nor'easters are extra-tropical coastal storms that can produce tremendous amounts of precipitation and strong winds that can cause coastal flooding damage. When the precipitation is in the form of snow, sleet, or freezing rain, it can damage overhead utility lines and become a highway driving hazard.

Sleet Storm. Frozen rain drops (ice pellets) which bounce when hitting the ground or other objects. Does not stick to objects, but in accumulated depths of two inches or more, produces hazardous driving conditions.

Heavy Snow Storm. A snowfall of six or more inches within 12 or nine inches or more in 24 hours, which disrupts or slows transportation systems and public safety departments' response capability.

3. Location/Previous occurrences

The entire county is subject to severe storms every winter. A winter storm event will often affect portions of the county differently. The northwestern portion of the county will generally get the most snow due to higher elevations found in that region. The middle-interior portion of the county will generally snow, but not usually as much as the northwestern portion. The coastal areas of the county will usually see more rain due to warmer temperatures near the ocean.

The National Climate Data Center (a division of NOAA) reported statistics on – winter events over the past ten years. Note: an "event" could be as little as a "dusting" of snow, or as severe as a blizzard. During a 12-year period (2010-2021), York County experienced a total of 115 winter events, an average of about 9.58 winter events per year. The number of events per year varies, as well as the severity, as there were as few as four in 2010 and as many as 16 in both 2017 and 2018. The tables below and their supporting text summarize the profile of these storms.

The National Climate Data Center (a division of NOAA) reports statistics on severe winter storms from 1996 to 2021. This data therefore illustrates 25 years of winter storm history for York County.

During the 25-year period, York County experienced a total of **366** winter events with an average of about 14.56[4] severe winter storms per year. The tables below and their supporting text summarize the profile of these storms.

[4] Note: 2021 is an incomplete year at the time of review, so this is an average of 1996 to 2020.

FALL/WINTER STORMS IN YORK COUNTY, 1996-2021				
STORM TYPE	# STORMS	% TOTAL	# DEATHS	PROPERTY DAMAGE COST
Blizzard	10	3%	0	$0
Cold/Wind Chill	26	7%	0	$0
Extreme Cold/Wind Chill	13	4%	0	$0
Heavy Snow	224	61%	0	$0
Ice Storm	6	2%	1	$24.9M
Winter Storm	36	10%	0	$0
Total	**366**		**1**	**$24.9M**

Of the 366 total storms from 1996-2021, 234 were classified as snowstorms, with 224 being heavy snow and 10 being blizzard conditions. While these storms were the most frequent, they did not do a great deal of damage.

The only fall/winter storms from 1996-2021 that caused major damage were two ice storms in January 1998 and 2008, which caused property damage of $18 million and $6.9 million respectively. There was one fatality recorded as a result of a March 2001 ice storm. Though these were the only major ice storms of the period, they were by far the most hazardous severe storm events in the county.

Nearly all of the severe storms in York County occurred in the period between December and March, as 333 of the 366 occurred during this four-month period. The most likely months for winter storms were January and February, during 54 percent of all winter storms occurred. During December and January, all property damages from severe storms occurred.

FALL/WINTER STORMS IN YORK COUNTY, 1996-2021				
MONTH	# STORMS	% OF TOTAL	# DEATHS	PROPERTY DAMAGE COST
January	118	32%	0	$18M
February	82	22%	0	$0
March	65	18%	1	$0
April	15	4%	0	$0
May	2	1%	0	$0
October	2	1%	0	$0
November	14	4%	0	$0
December	68	19%	0	$6.9M
Total	**366**		**1**	**$24.9M**

Another consideration in assessing past winter storms is the time of day they occurred. Winter storms were more likely to occur during the AM hours, as 61% of storms arrived in York County between midnight and noon. Afternoon storms were somewhat less likely to occur, and evening storms were the least likely.

4. Extent

Average seasonal snowfall amounts generally increase north and westward from the coastal region. Total seasonal snowfall averages between 50 and 80 inches in the Coastal Division, and between 60 to 90 inches in the Southern Interior Division.

The snowfall season in York County usually runs from November to April and sometimes in May. Occasionally an early season storm can bring snow in the first weeks of October even along the coast. January is usually the snowiest month averaging around 20 inches with December usually averaging out to be the second snowiest month (avg. 17 in.). The snowpack makes an important contribution to both surface and groundwater supplies, and years with a low snowpack can lead to water shortages by late summer. Melting of the snowpack in April and May is often gradual enough to prevent serious flooding, although there have been times when a quick melt has led to disastrous conditions.

During the winter months, York County often has heavy snowfall, or snow combined with high winds, freezing rain or ice storms. Nor'easters, the most severe form, can occur during the winter, spring, and fall. They rarely develop during the summer. Precipitation amounts can exceed several inches of water equivalent (20-30 inches of snow or more), while wind speeds can be equal to or greater than those for hurricanes that reach Maine.

While the Fujita and Saffir-Simpson Scales characterize tornadoes and hurricanes respectively, there is no widely used scale to classify extent of snowstorms. The Northeast Snowfall Impact Scale (NESIS) developed by Paul Kocin and Louis Uccellini of the National Weather Service[5] characterizes and ranks high-impact Northeast snowstorms. These storms have large areas of 10-inch snowfall accumulations and greater. NESIS has five categories: Extreme, Crippling, Major, Significant, and Notable. The index differs from other meteorological indices in that it uses population information in addition to meteorological measurements. Thus, NESIS gives an indication of a storm's societal impacts. This scale was developed because of the impact Northeast snowstorms can have on the rest of the country in terms of transportation and economic impact.

Category	NESIS Value	Description
1	1-2.499	Notable
2	2.5-3.99	Significant
3	4-5.99	Major
4	6-9.99	Crippling
5	10.0+	Extreme

The NOAA NESIS website[6] indicates that, from 1996 to 2021, York County received greater than 10 inches of snow during one out of two total Extreme Events, six out of ten total Crippling Events, thirteen out of twenty-three Major Events, and many Significant and Notable Events.

5. Probability of Future Occurrences

[5] Kocin and Uccellini, 2004: https://www.ncdc.noaa.gov/monitoring-content/snow-and-ice/rsi/docs/kocin-and-uccellini-2004.pdf
[6] Northeast Snowfall Impact Scale: https://www.ncdc.noaa.gov/snow-and-ice/rsi/nesis

Using history as the predictor of future severe winter storms, York County is assumed to be at risk for about seven such storms each winter. More importantly, the county should expect one especially damaging storm at least once every 10 years, similar to the ice storm of January 5, 1998, and December 2008. The greatest amount of future severe winter storms can be expected to occur in January or February, with significant numbers also expected in December and March.

The time of day at which storms occur is also important, as overnight storms allow for the closure of schools and businesses, whereas storms during the day force people to travel home during storm conditions. Based on experience, storms are most likely overnight or during the morning, but afternoon storms are still somewhat likely.

HAZARD #3 – SEVERE SPRING/SUMMER STORM

1. Definition

A violent weather phenomenon producing damaging wind gusts of 58 mph or greater and/or 1" of hail or greater that can cause injuries, and destruction of property, crops, and livestock. The storm could also produce thunderstorms, including heavy rains and lightning.

2. Types

Hurricane. An intense tropical cyclone, formed in the atmosphere over warm ocean areas, in which wind speeds reach seventy-four miles per hour or more and blow in a large spiral around a relatively calm center called the "eye". Storms produce damage and destruction from heavy rain causing inland flooding, coastal flooding due to storm surge, and high winds causing building damage, plus widespread infrastructure damage due to downed trees.

Lightning. An electrical discharge that results from the buildup of positive and negative charges within a thunderstorm. When the buildup becomes strong enough, lightning appears as a "bolt." This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning reaches a temperature approaching 50,000 degrees Fahrenheit in a split second. The rapid heating and cooling causes thunder.

Thunderstorm. A thunderstorm is formed from an instability due to hot unstable air and a catalyst or lifting boundary such as a warm or cold front or a sea-breeze front. All thunderstorms have lightning and can occur singly, in clusters, or in lines.

Tornado. A violently rotating column of air extending downward from a thunderstorm to the ground. The distinctive slender, funnel shaped cloud, with wind velocities of up to 200 miles + per hour at the central core, destroys everything along its narrow ground path.

The Fujita Tornado Scale

F Scale	EF Rating	Character	Estimated winds	3 Second Gust (mph) [Enhanced Scale]	Description
Zero (F0)	0	Weak	40-72 mph	65-85	Light Damage. Some damage to chimneys; branches broken off trees, shallow-rooted trees uprooted, sign boards damaged.
One (F1)	1	Weak	73-112 mph	86-110	Moderate damage. Roof surfaces peeled off; mobile homes pushed foundations or overturned; moving autos pushed off road.
Two (F2)	2	Strong	113-157 mph	111-135	Considerable damage. Roofs torn from frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light objects become projectiles.
Three (F3)	3	Strong	158-206 mph	136-165	Severe damage. Roofs and some walls torn from well- constructed houses; trains overturned; most trees in forested area uprooted; heavy cars lifted and thrown.
Four (F4)	4	Violent	207-260 mph	166-200	Devastating damage. Well- constructed houses leveled; structures with weak foundation blown some distance; cars thrown; large missiles generated.
Five (F5)	5	Violent	260-318 mph	Over 200	Incredible damage. Strong frame houses lifted off foundations, carried considerable distances, and disintegrated; auto-sized missiles airborne for several hundred feet or more; trees debarked.

3. Location

The entire County is vulnerable to one or more severe summer storms each year, usually in the form of thunderstorms. The effects are usually more common in the interior and western region, and less frequent along the Atlantic coast where the cooling effects of the ocean tend to suppress thunderstorm conditions.

Location of Hurricanes. The low-lying coastal area in York County (towns of Kittery, York, Ogunquit, Wells, Kennebunk, Kennebunkport and the cities of Saco and Biddeford) would be the most susceptible to land falling hurricanes in this region.

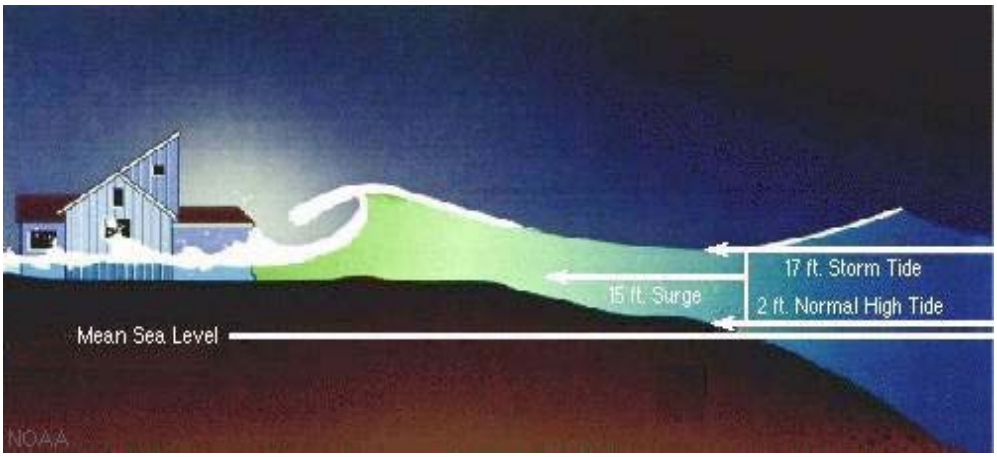
Hurricane Surge Inundation Maps. The U.S. Army Corps of Engineers revised the Hurricane Surge Inundation Maps for Maine in 2020 based on the SLOSH (Sea, Lake, and Overland Surges from Hurricanes) Model prepared by the National Weather Service. The Hurricane Surge Inundation Maps show, for each hurricane category, the areas that would be inundated from the worst-case combination of hurricane landfall location, forward speed, and direction at each location along the coast. These maps are available in digital format.

MEMA and County EMA offices will maintain respective sets of the 2020 version of the "Hurricane Storm Surge Inundation Maps" for the entire coastal region, including the tidal rivers of Maine. These maps will continue to be used as a disaster response planning tool, and are the basis for predesignated hurricane evacuation zones and routes used to inform coastal communities of potential storm surge extent for different category storms, as the evacuation zones are another gage of location/extent used at a functional level to plan evacuations.

According to NOAA, tropical storm season lasts from June 1 to November 30, and an average of 10 tropical storms develop along the eastern seaboard each year. On average, six of these 10 become hurricanes. These storms generally develop in the Gulf of Mexico or the Caribbean Sea and typically lose strength as they travel northward towards Maine.
In York County, hurricanes and tropical storms generally are limited to the months of August and September, as the climate in Southern Maine is not nearly as conducive to such storms in the late spring and early fall as in areas to the south.

4. Extent

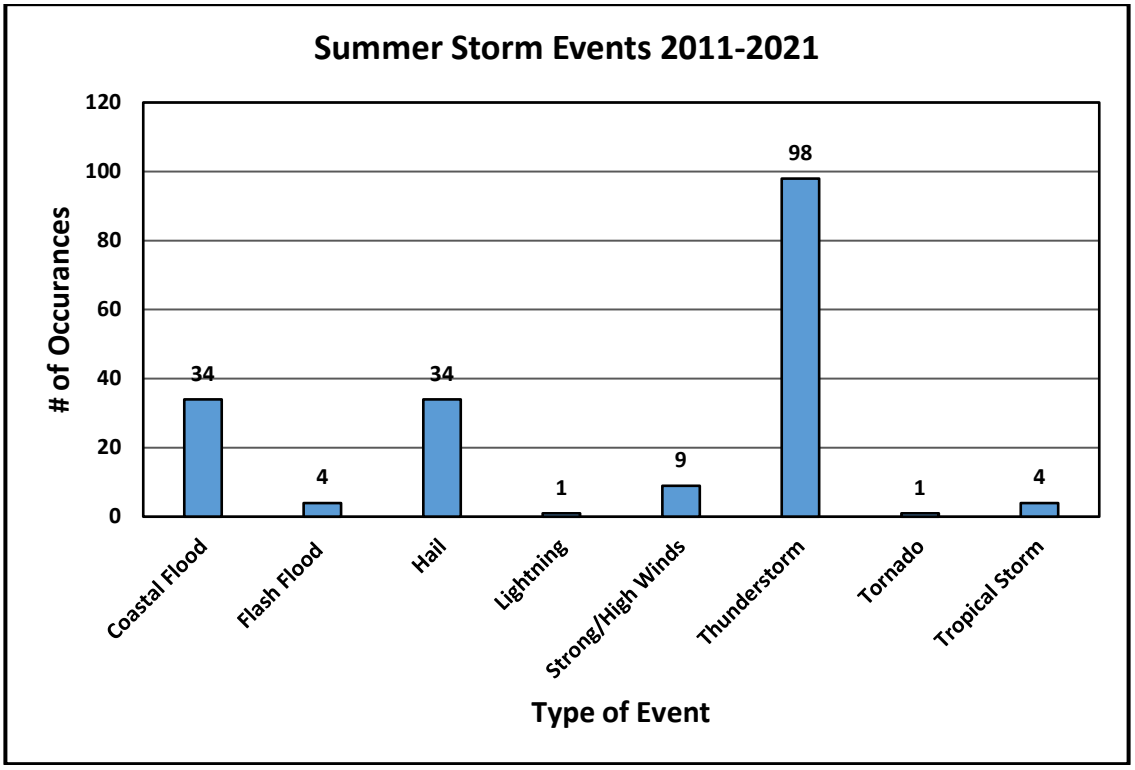
The National Climate Data Center reports data on summer storm events. Every few years between May and November, tropical storms reach York County usually with winds of less than 74 miles per hour, in the "post hurricane stage." When it comes to hurricanes in York County, wind speeds do not tell the whole story. Storm surge, water that is pushed toward the shore by the force of the swirling winds with low barometric pressure, has the greatest potential for loss of life. This advancing surge combines with the normal tides to create the hurricane storm tides which can increase the mean water level 15 feet or more. While hurricanes produce storm surges, and a threat to York County's coastal residents and businesses, they also produce inland flooding. As previously described in the flood section, the major rivers provide ample opportunity for flooding in any of its 16 counties, including York County. Intense rainfall is not directly related to the wind speed of tropical cyclones, or hurricanes. In fact, some of the greatest rainfall amounts have occurred from weaker storms that drifted slowly or stalled over an area.



The currents created by the tide combine with the action of the waves to severely erode beaches and coastal highways. Many buildings withstand hurricane force winds until their foundations, undermined by erosion, are weakened and fail.

Saffir-Simpson Hurricane Wind Scale		
Category	Sustained Winds	Types of Damage
1	74-95 mph 64-82 kt 119-153 km/h	**Very dangerous winds will produce some damage:** Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
2	96-110 mph 83-95 kt 154-177 km/h	**Extremely dangerous winds will cause extensive damage:** Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
3	111-129 mph 96-112 kt 178-208 km/h	**Devastating damage will occur:** Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
4	130-156 mph 113-136 kt 209-251 km/h	**Catastrophic damage will occur:** Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5	>157 mph >137 kt >252 km/h	**Catastrophic damage will occur:** A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

See graph below for the types of spring/summer storm events that have affected the County. Thunderstorms, hail, and coastal flooding occurred most frequently, followed by flash flooding, strong winds, and tropical storms.



Out of a total of 185 events, 49 or 26% of the spring/summer storm events reported since 2011 resulted in private property damage (see table below). Since 2010, the amount of property damage due to severe storms has exceeded $6 million (some of that damage occurred in other counties). According to the data below, flooding events tend to cause the most property damage.

Severe Spring/Summer Storm Damage 2012-2021

Location	Date	Type	Property Damage Cost
Coastal York	6/2/2012	Coastal Flood	5.00K
Coastal York	6/3/2012	Coastal Flood	3.50K
Coastal York	6/4/2012	Coastal Flood	3.50K
Coastal York	6/5/2012	Coastal Flood	2.50K
Coastal York	10/29/2012	Coastal Flood	1.50K
Coastal York	12/27/2012	Coastal Flood	40.00K
York	10/29/2012	Heavy Rain	30.00K
Coastal York	10/29/2012	High Wind	251.00K
Coastal York	5/25/2013	Coastal Flood	7.50K
Coastal York	12/15/2013	Coastal Flood	25.00K
Coastal York	11/24/2013	Strong Wind	0.50K
Coastal York	11/24/2013	Strong Wind	0.50K

Interior York	11/24/2013	Strong Wind	0.50K
Coastal York	1/3/2014	Coastal Flood	15.00K
Coastal York	7/12/2014	Coastal Flood	0.50K
Coastal York	8/14/2014	Coastal Flood	1.00K
York	7/15/2014	Thunderstorm	1.40M
Coastal York	1/27/2015	Coastal Flood	100.00K
Coastal York	2/15/2015	Coastal Flood	5.00K
Coastal York	4/20/2015	Coastal Flood	125.00K
Coastal York	9/30/2015	Coastal Flood	75.00K
Coastal York	10/29/2015	Coastal Flood	2.00K
Coastal York	2/9/2016	Coastal Flood	125.00K
Coastal York	4/7/2016	Coastal Flood	100.00K
Coastal York	10/18/2016	Coastal Flood	1.50K
Coastal York	11/16/2016	Coastal Flood	10.00K
Coastal York	5/25/2017	Coastal Flood	10.00K
Coastal York	1/4/2018	Coastal Flood	750.00K
Coastal York	3/2/2018	Coastal Flood	100.00K
Coastal York	3/2/2018	Coastal Flood	110.00K
Coastal York	3/3/2018	Coastal Flood	1.50M
Coastal York	3/3/2018	Coastal Flood	380.00K
Coastal York	3/4/2018	Coastal Flood	100.00K
Coastal York	3/5/2018	Coastal Flood	115.00K
Coastal York	3/8/2018	Coastal Flood	50.00K
Coastal York	11/27/2018	Coastal Flood	50.00K
Coastal York	12/14/2019	Coastal Flood	130.00K
York	12/14/2019	Flash Flood	200.00K
Coastal York	10/16/2019	High Wind	5.00K
Coastal York	9/22/2020	Coastal Flood	50.00K
York	6/28/2020	Flash Flood	2.00K
York	6/28/2020	Flash Flood	20.00K
York	7/14/2020	Hail	200.00K
York	7/14/2020	Thunderstorm	5.00K
York	7/14/2020	Thunderstorm	3.00K
York	8/22/2020	Thunderstorm	2.00K
Coastal York	1/16/2021	Coastal Flood	150.00K
Coastal York	2/2/2021	Coastal Flood	5.00K
York	5/26/2021	Thunderstorm	5.00K

Source: NWS – Gray

The majority of the damages are usually attributed to flooding and hail and largely affect personal property. Flooding damages the structures located in the flooded area and hailstorms produce widespread damage to buildings and cars.

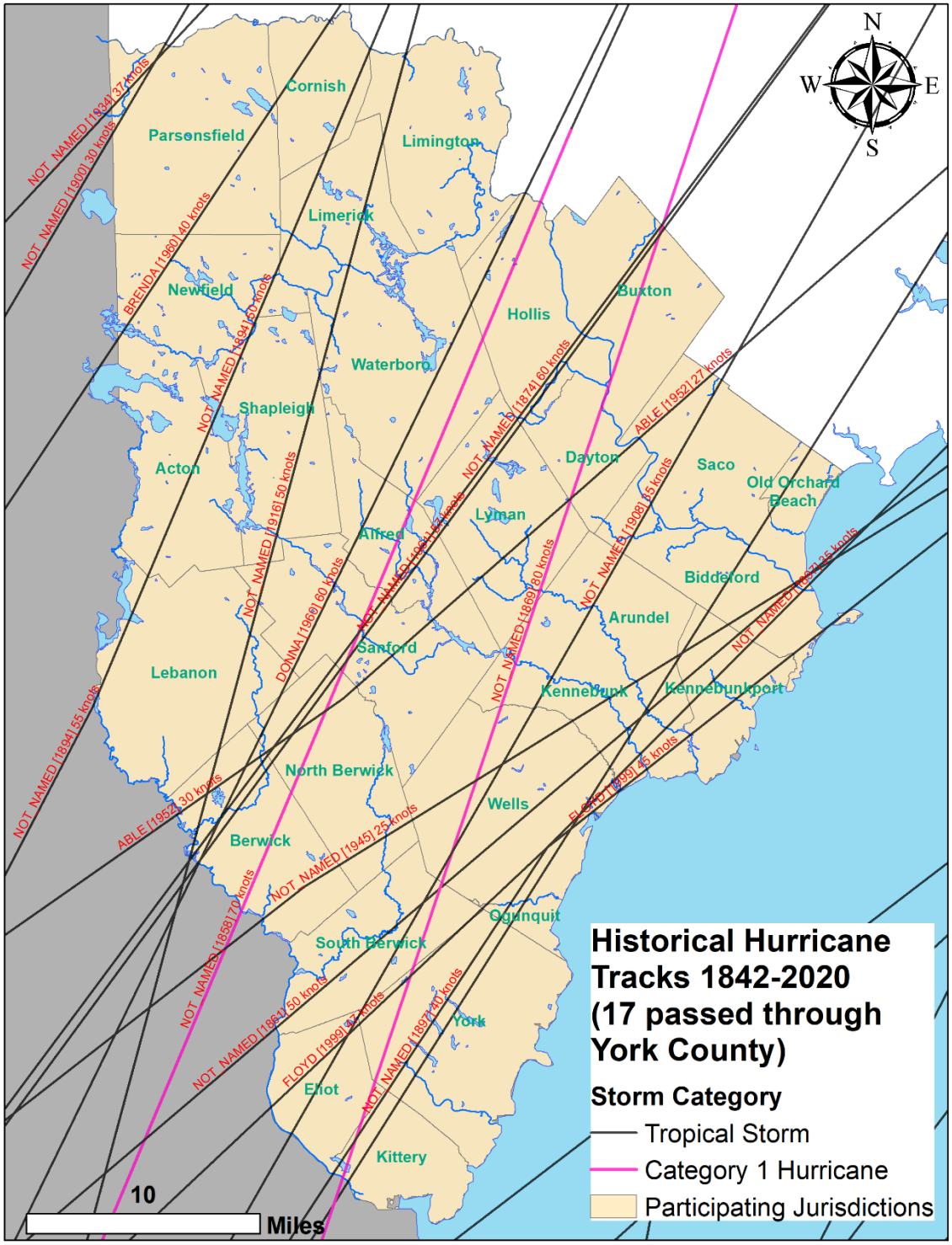
5. Previous Occurrences of Hurricanes and Tropical Storms

The National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center maintains maps and data for the entire country regarding hurricanes going back as far as 1851. For this analysis, data has only been collected as far back as 1951.

The Coastal Services Center reports that there have been 17 hurricanes, extra-tropical storms, tropical storms, and tropical depressions that have either passed through York County or within 100 miles of the county since 1951. Of these, four actually passed through the county, and the remaining 13 came within 100 miles. Of the 17 total storms, only four reached the hurricane level: Carol in 1954, Donna in 1960, Gloria in 1985-which was a Category 1, and Bob in 1991. The table and map below illustrate the history of hurricane and other tropical storm activity in York County. The Town of Alfred is the county's geographic center point on the map

HURRICANES AND TROPICAL STORMS IN AND NEAR YORK COUNTY 1950-2021						
#	**YEAR**	**DATE**	**NAME**	**MAX SPEED**	**CATEGORY**	**MILES FROM ALFRED, MAINE**
1.	1952	09/02	Able	35	Tropical Depression	1
2.	**1954**	**08/31**	**Carol**	**98**	**Hurricane, Category 2**	50
3.	1959	10/01	Gracie	35	Extra tropical Storm	37
4.	1960	07/30	Brenda	52	Tropical Storm	30
5.	**1960**	**09/12**	**Donna**	**103**	**Hurricane, Category 2**	**15**
6.	1961	09/26	Esther	40	Tropical Storm	40
7.	1961	09/15	Not Named	40	Tropical Storm	2
8.	1971	08/28	Doria	52	Tropical Storm	60
9.	1979	09/06	David	46	Extra tropical Storm	70
10.	**1985**	**09/27**	**Gloria**	**86**	**Hurricane, Category 1**	**40**
11.	1988	08/30	Chris	23	Tropical Depression	25
12.	**1991**	**08/19**	**Bob**	**98**	**Hurricane, Category 2**	**35**
13.	1996	07/14	Bertha	69	Tropical Storm	27
14.	1999	09/17	Floyd	57	Tropical Storm	15
15.	2004	08/31	Hermine	35	Tropical Storm	30
16.	2007	06/05	Barry	35	Extra tropical Storm	25
17.	2011	08/27-29	Irene	65	Tropical Storm	5

The following map has been updated to February 14, 2022:



In addition to these storms, York County has also been affected by hurricanes that have traveled more than 100 miles away. One example of this was Hurricane Edna in 1954, which traveled well off the coast, but produced more than seven inches of rain in York County.

6. Probability of Future Occurrences

York County will continue to be affected by all types of severe spring/summer storms. Over the past 50 years, York County has experienced a significant tropical storm about once every three to four years and a hurricane about once every 12 years on average. Given the county's location on the Atlantic coast, it will remain at risk for future hurricane events, and there is no reason to assume that the frequency of hurricanes and tropical storms in the region will diminish in the future. To the contrary, NOAA has predicted an increase in hurricanes in the future due to climate change. While these hurricanes rarely reach the County, the remnants of nearby hurricanes in the Atlantic Ocean often affect the Maine coastline with storm surges, coastal storms, flooding, high winds.

Also, based on past storm events, it is very likely that future hurricanes and tropical storms in York County will only occur from mid-July through early October; a period of less than three months out of the year.

HAZARD #4 – WILDFIRE (URBAN INTERFACE AND WILDFIRE)

1. Definition

Wildland fires are defined as those fires that burn vegetative cover: grass, brush, timer, or slash (Clayton 1985). Wildfire is a natural phenomenon initially finding its origin in lightning. However, humans have become the greatest cause of fires in Maine. Wildland urban interface fires are created where homes meet with highly volatile forest fuels.

2. Location

Despite being a heavily forested area, York County has not experienced major wildfire events since 1947. The Maine Forest Service maintains data on wildfires throughout the state, and reports on the number of wildfires and amount of acreage burned by year for every town in York County. While these data provide a good base for understanding the scale of wildfires in the county, they are not necessarily comprehensive, as they only represent fires that are reported to the Forest Service. However, the Forest Service does estimate that about 90 percent of fires are in fact reported.

3. Previous Occurrences

The tables below document wildfires in York County for the years 2010 through 2021. Between 2010 and 2015, there were 234 wildfires in York County with a total number of 155 acres burned. The three most common causes of wildfire in during this time were railroad, debris, and machines. From 2016 to 2021, there were 315 wildfires in York County with a total of 533.83 acres burned. The three most common causes of wildfire in during this time were debris burning, equipment use, and campfire. The Maine Forest Service no longer collects data by town, only by county. Similar to previous years' reports, the number of acres burned seems to be underreported, as many towns show a large number of incidents, but zero acres burned.

2010-2015 York County Forest Fire Statistics (Acres burned)

Fire County	CAUSE	# of Fires	2010	2011	2012	2013	2014	2015
YORK	CAMPFIRE	20	1.65	1.1	10.8	2.6	7.25	0.7
YORK	CHILDREN	14	0.6	0.51	0.6	0.75	0.45	1.2
YORK	DEBRIS	48	5.66	1.56	8.45	6.15	3.12	
YORK	DEBRIS BURN	9						5.35
YORK	EQUIPMENT USE	4						1.05
YORK	INCEN	21	2.56	1.12	1.5	0.34	0.01	
YORK	LIGHTNING	11		0.1		0.28	0.13	7.7
YORK	MACH	27	0.34	1.17	7.2	1.27	6	
YORK	MISC	19	2.9	0.5	10.82	8.5	1.1	
YORK	MISCELLANEOUS	3						1.8
YORK	POWERLINE	1						1.5
YORK	RAILROAD	50	0.16	1.06			32.71	0.1
YORK	SMOKE	6		0.5	3	0.9	0.3	
YORK	STRUCTURE	1						0.2

2016-2021 York County Wildfire Statistics (Acres Burned)

Fire County	Cause	# Wildfires	2016	2017	2018	2019	2020	2021
York	Arson	12	42.1	0	0	0.1	34.1	0.7
York	Campfire	40	15.24	1	2	0.7	3.5	0.4
York	Children	7	2.1	0.1	0.4	0	0.1	0.2
York	Debris Burning	99	9.07	6.3	322.1	3.7	8.7	24.6
York	Equipment Use	57	8.4	0.1	2.5	0.7	4	2.9
York	Fireworks	6	0	0	0	0	0.5	0.2
York	Lightning	7	0.9	0.2	0	0	7.5	0.1
York	Miscellaneous	35	1.41	1.1	0.2	0.2	4.7	2.5
York	Powerline	22	0.5	0	0.3	0.5	0.4	3.3
York	Railroad	7	6.31	0	0	0	0	0
York	Smoking	16	0.3	0.3	0	0	1.4	1.1
York	Structure	7	0	3	0	0.2	0.9	0

Source: Maine Forest Service

Wildfires are unpredictable events, and often depend on a mixture of weather conditions, human irresponsibility, and bad luck; a lack of past wildfire damage does not necessarily predict future immunity. In 2002, there were large fires in Biddeford and Arundel. In the summer of 2002, following an extended drought, Biddeford had two large fires, each of which claimed about 10 acres, and Arundel had a 20-acre fire, the largest in the county in many years.

4. Extent

Looking further back, the wildfire of record in York County were the fires of 1947 that burned over 200,000 acres in Maine, including large sections of York County, with the worst damage occurring in Shapleigh, Waterboro, Hollis, and Dayton. The fires consumed large areas of

forestland as well as many homes and public buildings. This event was the product of a sustained drought and could certainly be repeated if weather conditions were similar.

Fire Size Class Code, National Wildfire Coordinating Group[7]	
Value	Description
A	≤ 0.25 Acres
B	0.26 to 9.9 Acres
C	10.0 to 99.9 Acres
D	100 to 299 Acres
E	300 to 999 Acres
F	1,000 to 4,999 Acres
G	5,000 to 9,999 Acres
H	10,000 to 49,999 Acres
I	50,000 to 99,999 Acres
J	100,000 to 499,999 Acres
K	500,000 to 999,999 Acres
L	1,000,000 + Acres

Locations of Areas of Risks

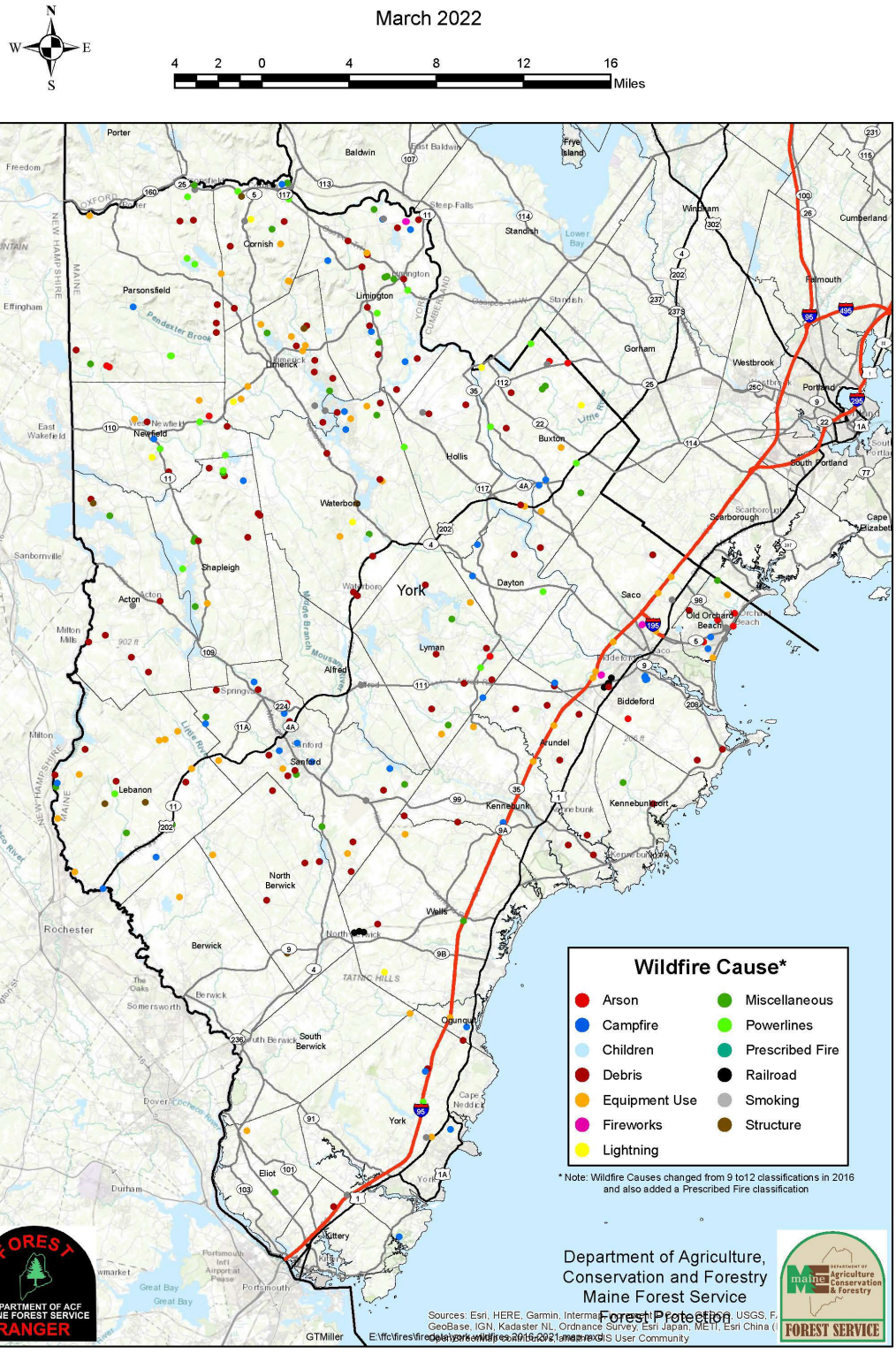
Typically, the type of fire that occurs is urban, concentrated in the county's more densely populated areas, especially Old Orchard Beach and Kittery. Heavily settled and developed areas raises the risk of fire damage substantially, as the value of properties is much higher in built-up areas than in rural areas. A related issue is that of the risk posed by wildfires to the county's key public facilities (airports, communication towers, dams, EMS locations, hospitals, and schools). Many of these facilities are located in mostly rural, forested areas, and the proximity of such facilities to wildfire fuel sources poses a concern for exposure to future wildfires if drought conditions were persistent.

[7] Fire Size Class: https://www.nwcg.gov/data-standards/approved/fire-size-class

Wildfire Occurrence Map

Wildfire Starts from 2016 - 2021 By Cause
York County

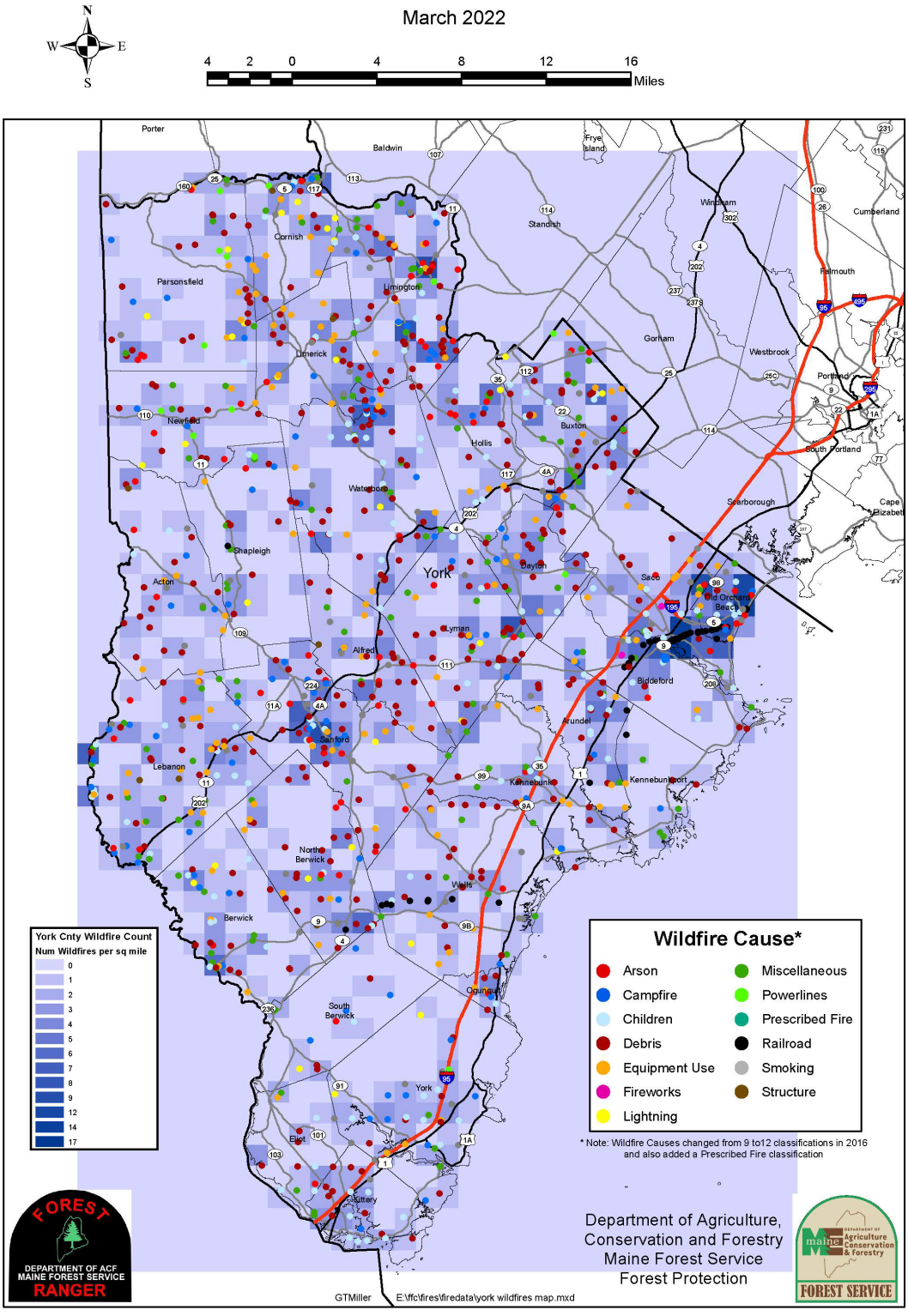
March 2022

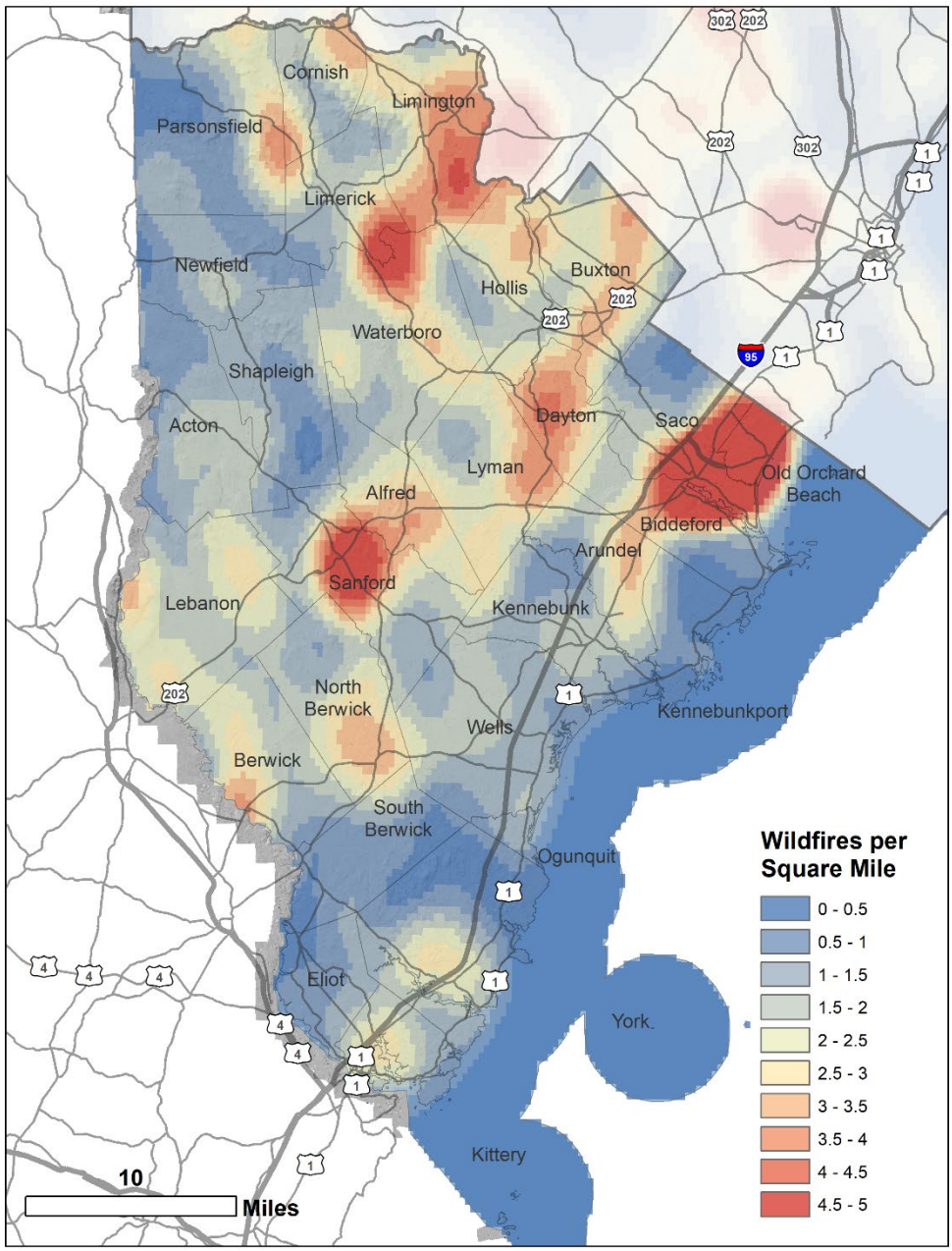


Wildfire Occurrence Map

Wildfire Starts from 1990 - 2020 By Cause
Number of Wildfires per Square Mile

March 2022





Wildfire occurrence map 1992-2018.

5. Probability of Future Occurrences

While parts of York County are located in a heavily forested area, its recent history shows that major wildfires have not been a problem. The typical recent wildfire in York County has burned less than 10 acres and caused relatively little property damage. By comparison, the last major wildfire was the one of record in 1947, more than sixty years ago, so at this time, the probability is low. However, the probability of wildland/urban risk depends on conditions such as prolonged drought. Since the extreme drought in 2016 and further droughts in Maine during 2020-2022, drought conditions are being monitored very closely.

Due to the devastation of past wildfires, the dense forest cover of York County and the high number of structures built in the wild land-urban interface, the county's future wildfire risk must therefore be seen as elevated to at least a moderate level.

HAZARD #5 - DROUGHT

1. General Definition

Drought is a deficiency in precipitation over an extended period. It is a part of normal climate variability in many climate zones. The duration of droughts varies widely. Drought can develop quickly and last only for a matter of weeks, exacerbated by extreme heat and/or wind, but more commonly drought can persist for months or years.

Meteorological drought is based on the degree of dryness (rainfall deficit) and the length of the dry period.

Hydrologic drought is based on the impact of rainfall deficits on the water supply such as stream flow, reservoir and lake levels, and ground water table decline.

Agricultural drought is based on the impacts to agriculture by factors such as rainfall deficits, soil water deficits, reduced groundwater, or reservoir levels needed for irrigation.

Socioeconomic drought is based on the impact of drought conditions (meteorological, agricultural, or hydrological drought) on supply and demand of some economic goods. Socioeconomic drought occurs when the demand for an economic good exceeds supply as a result of a weather-related deficit in water supply.

2. Location

Due to the fact that drought classification is relative to average local precipitation, surface and ground water levels, the entire county is susceptible to drought. Most of York County was affected by severe drought conditions in 2002, 2016, 2020, and 2021.

3. Previous Occurrences

Recent droughts include D3 drought in the Fall of 2020 and D1 drought in Fall of 2017, with a D2 drought in the Fall of 2016. We have been a relatively high frequency drought over the past 5 years. The decade before had very limited drought. Severe, multi-year droughts also occurred in Maine in the 1960's, 1980's, and from 2000 to 2003.

4. Extent

This chart describes Drought Severity Categories and Historic Impacts:

Category	Historically observed impacts
D0	Crop growth is stunted; planting is delayed
	Fire danger is elevated; spring fire season starts early
	Lawns brown early; gardens begin to wilt
	Surface water levels decline
D1	Irrigation use increases; hay and grain yields are lower than normal
	Honey production declines
	Wildfires and ground fires increase
	Trees and landscaping are stressed; fish are stressed
	Voluntary water conservation is requested; reservoir and lake levels are below normal capacity
D2	Specialty crops are impacted in both yield and fruit size
	Producers begin feeding cattle; hay prices are high
	Warnings are issued on outdoor burns; air quality is poor
	Golf courses conserve water
	Trees are brittle and susceptible to insects
	Fish kills occur; wildlife move to farms for food
	Water quality is poor; groundwater is declining; irrigation ponds are dry; outdoor water restrictions are implemented
D3	Crop loss is widespread; Christmas tree farms are stressed; dairy farmers are struggling financially
	Well drillers and bulk water haulers see increased business
	Water recreation and hunting are modified; wildlife disease outbreak is observed
	Extremely reduced flow to ceased flow of water is observed; river temperatures are warm; wells are running dry; people are digging more and deeper wells

5. Probability of Future Occurrences

York County has experienced three major droughts in the past 20 years. While there are widely accepted recurrence levels for flooding, there is not extensive historical data for drought events. Most USGS ground water monitoring stations in Maine have been installed within the past 40 years. It is difficult to determine probability of occurrence for future drought events because the global hydrological cycle is exhibiting significant variability, especially in the geographic distribution and intensity of precipitation, the availability of water resources and prolonged periods of drought.

3. ASSESSING VULNERABILITY

Assessing Vulnerability: Overview	
Requirement §201.6(c)(2)(ii): (The risk assessment shall include a) description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.	
Elements	B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))

Vulnerability of York County to each hazard.

Flooding. York County can expect to experience flooding of some roadways and infrastructure every year. The coastal section of the county is at most risk with the dual threat of both heavy rainfall events and storm surge/sea level rise off the ocean.

Severe Fall/Winter Storms. Using history as the predictor of future severe winter storms, York County is assumed to be at risk for about seven such storms each winter. More importantly, the county should expect one especially damaging storm at least once every 10 years, similar to the ice storm of January 5, 1998, and December 2008. The greatest amount of future severe winter storms can be expected to occur in December or January, with significant numbers also expected in February and March.

Severe Spring/Summer Storms. The entire County is vulnerable to severe summer storm damage, with the coastline having added vulnerability due to storm surges and coastal storms. Hail and thunderstorms occurred most frequently, followed by lightning, strong winds, and flooding. Severe summer storm events often cause property damage. 26% of the summer storm events reported since 2012 resulted in property damage. The Patriot's Day Storm in 2007 that affected the entire County caused the most damage ($9.5 million). Of all the summer storm events that resulted in property damage, flooding is the most costly, followed by winds, storm surge, and lightning.

Wildfire. York County is located in a heavily forested area. While its recent history shows that major wildfires have not been a problem looking further back into the past, York County has in fact been affected by wildfires. The fires of 1947 burned over 200,000 acres in Maine, including large sections of York County. This event was the product of a sustained drought and could certainly be repeated if another drought occurs.

Due to the devastation of past wildfires, the dense forest cover of York County and the high number of structures built in the wildland-urban interface, the entire region's future wildfire risk must therefore be seen as a low probability but with a high impact if it did occur.

Drought. Due to the fact that drought classification is relative to average local precipitation, surface and ground water levels, the entire county is susceptible to drought. Most of York

County was affected by severe drought conditions in 2002, 2016, 2020, and 2021. While there are widely accepted recurrence levels for flooding, there is not extensive historical data for drought events. Most USGS ground water monitoring stations in Maine have been installed within the past 40 years. It is difficult to determine probability of occurrence for future drought events because the global hydrological cycle is exhibiting significant variability, especially in the geographic distribution and intensity of precipitation, the availability of water resources and prolonged periods of drought.

Impacts of each hazard on York County.

Flooding. The typical damages resulting from flooding in York County include extensive damage to roads and their respective drainage systems. Historically, flood damages have included partial or complete road washouts and severe erosion of roadside ditches~~,~~ resulting in damages to town and personal vehicles. These damages can absorb the municipal road budget for an entire year and does happen in several towns every year. For example, this situation occurred after Tropical Storm Irene hit York County in August of 2011. DR-4032 was declared to assist with the damages totaling $2,437,188 to roads, bridges and structures which resulted from the flooding created by the excessive wind and rain.

Severe flooding, such as occurred with the Patriot's Day storm in 2007, can cause loss of life, property damage, disruption of communications, transportation, electric service and community services, crop and livestock damage, health issues from contaminated water supplies, and loss and interruption of business. Ironically, firefighting efforts can be compromised if fire fighters and equipment are responding to a flood emergency.

Severe Fall/Winter Storms. The damage impacts of severe winter storms include road closures and loss of electrical power and communication services for extended periods of time. These conditions can impede the response time of ambulance, fire, police, and other emergency services, especially to remote or isolated residents. If severe and prolonged enough, it could result in loss of income to businesses and individuals due to business closures. Roof collapses, both residential and commercial, are rare but they can occur when snow loads become extreme.

Loss of electrical power and communication services can occur when utility lines yield under the weight of ice and snow. These conditions can impede the response time of ambulance, fire, police, and other emergency services, especially to remote or isolated residents.

Both DR-4108 and DR-4208 were disaster declarations to assist the municipalities with the excess costs associated with the severe winter storms. The storms created a tremendous amount of snow debris which had to be cleared from highways, roads, businesses and residences. The snow removal costs combined with the extra expenses for sand and salt, additional emergency and municipal personnel, as well as the other extra storm related costs, creates budget short falls for Maine cities and towns. Although these storms are not frequent, they do have a substantial impact on York County communities.

Severe Spring/Summer Storms. The damages from summer storms typically involve the washout of roads, coastal erosion, downed utility lines, and debris clearance. If severe enough, this could result in the loss of income to businesses and individuals due to business closures.

Wildfire. The impacts of wildfires could include the destruction of woodland forest stands of trees and other vegetation, which when located on steep slopes and/or near watercourses can increase erosion and pollution to water bodies. Loss of income from wildfires can occur for private property owners with the state tree growth program and for the logging and paper industries. In York County, nearly all structures are located in the wildland/urban interface and can be damaged and destroyed from wildfires. Temporary road closures may be warranted when wildfires are closed to roadways or cross over roadways.

Drought. The impact of droughts could include the destruction of crops, drying up of ponds and smaller bodies of water, and increasing the chance of wildfires to occur in dense forest cover of York County and the high number of structures built in the wildland-urban interface. If severe enough, it could also result in the loss of income to businesses and individuals due to business closures.

Identifying Structures

A. Vulnerability of existing buildings, infrastructure, and critical facilities

Flooding:

- **Buildings.** Areas near the coast and immediately surrounding waterbodies are the most vulnerable. In particular, the Camp Ellis neighborhood in Saco, which has lost 30 structures and 2 entire streets in the last 100 years due to coastal erosion. Shore Road in York and Beach Avenue in Kennebunk have had to build new seawalls to replace ones destroyed during severe coastal flooding over the last few years.
- **Infrastructure.** Roads and their associated storm drainage systems are the most vulnerable category of infrastructure. Much of the county is rural in nature, and is served by a network of rural roads that do not have proper storm drainage systems. These roads are very vulnerable to flooding caused by heavy downpours and/or the blockage of drainage systems by ice or debris.
- **Critical facilities**. Due to the varied topography within the County and the availability of higher elevation sites within all municipalities, nearly all critical facility structures are located outside of floodplains. Possible exceptions include some wastewater treatment plants, due to the need to locate these facilities at lower elevations.

Severe Fall/Winter storms:

- **Buildings.** All buildings in York County are vulnerable to winter storms. Damages can include burst water pipes during power outages, interior water damages due to ice dams forming on roofs, and occasionally, roof collapses due to heavy snow loads.
- **Infrastructure.** Roads and their associated storm drainage systems are the most vulnerable category of infrastructure. They can become temporarily blocked due

to heavy snow falling over a short period of time, or ice which can build on their surfaces. Water main breaks due to cold weather can also occur. Roads and their storm drainage systems can become blocked due to heavy snow and ice and debris such as tree limbs.

- **Critical facilities**. All critical facilities in York County are vulnerable to winter storms in the same manner that individual buildings are vulnerable. However, some of the critical facilities throughout the County have back-up generator systems which allow heating systems to continue operating during a power outage.

Severe Spring/Summer storms:

- **Buildings.** Buildings are not that vulnerable to summer storm damage except for tornados and hurricanes. Most of the damage that does occur during a summer storm is from strong winds that knock down branches and trees.
- **Infrastructure.** Roads are frequently blocked during and after severe summer storms due to strong winds, lightning strikes, hurricanes or tornados that knock down branches, limbs, and trees across roadways. Electric and communication infrastructure are also vulnerable to power outages due to strong winds, lightning strikes, or tornados.
- **Critical facilities**. All critical facilities in York County are most vulnerable to power outages; however, some of the critical facilities throughout the County have back-up generator systems which allow systems to continue operating during a power outage.

Wildfire

- **Buildings.** Buildings are most at risk from wildfires in the areas where denser development is encroaching into forested areas, the wildland/urban interface. The towns in this area and hence at greatest risk are Buxton, Hollis, Limerick, Waterboro, Dayton, Lyman, Alfred, and Arundel,
- **Infrastructure.** While fires would not necessarily damage roads, it could hamper the use of critical rural roads for emergency vehicles and the general public. Rural power lines, as well as high concentration of power lines within urban areas would also be vulnerable either to wildfires or wildfire/urban interface.
- **Critical Facilities.** Many critical facilities are often located within or near urban areas which would make them very vulnerable to damage during a wildfire/urban interface fire. Throughout the rural parts of the County there are schools, fire/rescue departments, and other critical facilities that would be vulnerable to wildfire.

Drought

- **Buildings.** Buildings in York County are not directly vulnerable to droughts, but buildings in the wildland/urban interface are vulnerable to wildfires resulting from dry conditions.

- **Infrastructure.** Power, phone and cable lines are not directly vulnerable to droughts but can be damaged by wildfires resulting from dry conditions. Roads and drainage system are much less vulnerable, although roads can be blocked by fires and emergency fire-fighting vehicles.
- **Critical facilities.** Critical facilities are not directly vulnerable to droughts, but any that are located in the wildland/urban interface may be vulnerable to wildfires resulting from dry conditions.

B. Vulnerability of future buildings, infrastructure, and critical facilities

Flooding:

- **Buildings.** All of the municipalities in York County are in the flood insurance program, and 90% have municipal shoreland zoning ordinances that prohibit the construction of residential, commercial and industrial structures in floodplains. Unlike other parts of the country, The FEMA floodplain maps for York County are in the process of being revised with the intent to prevent future development from being built in areas vulnerable to flooding.
- **Infrastructure.** Future roads and their associated storm drainage systems would seem to be the most likely category of infrastructure that would be vulnerable to flooding. However, State and local road construction standards generally ensure that new roads are properly constructed with adequate storm drainage systems. Most if not all roads in the public domain must be designed by a registered professional engineer. Therefore, flooding of future roads is not likely to be a serious issue in York County.
- **Critical facilities**. Because of the requirements of the Flood Insurance Program, (all participating jurisdictions participate in NFIP), as well as shoreland zoning requirements and a greater awareness of flooding in all communities, future critical facilities will continue to be located outside floodplain areas. The exception may be wastewater treatment plants, due to the need to locate these facilities at lower elevations.

Severe Fall/Winter storms:

- **Buildings.** New buildings in York County will be less vulnerable to winter storms. Damages may include burst water pipes, but many newer buildings will be better insulated than older ones, thus being better able to retain heat during longer periods of time when there is a power outage. There will be less ~~I~~ interior water damage due to ice dams forming on roofs because the roofs of newer buildings generally are properly vented, which allows the roofs to remain cold. Roof collapses due to heavy snow loads will be very rare because newer roofs are designed to withstand heavy snow loads.
- **Infrastructure.** Roads will continue to be the most vulnerable category of infrastructure. New roads can be just as easily blocked on a temporary basis due to heavy snowfall, ice building up on the road surface, and debris such as tree

limbs accumulating on the road surface during a storm event. Widespread power outages will continue to be a problem during major ice storms.

- **Critical facilities**. Future critical facilities in York County will be vulnerable to winter storms in the same manner that individual buildings will be vulnerable. However, some of them will have back-up generator systems which will allow heating systems to continue operating during a power outage."

Severe Spring/Summer storms:

- **Buildings.** Buildings likely to receive the most serious damage are those located closer to the coast due to hurricanes and tropical storms. Buildings in interior parts of the county are not that vulnerable to summer storm damage except for tornados. The most frequent damage likely to occur during a summer storm is from strong winds that knock down branches and trees.
- **Infrastructure.** There will continue to be roads blocked during and after severe summer storms due to strong winds, lightning strikes, or tornados that knock down branches, limbs, and trees across roadways. Roads and their associated storm drainage systems, and lines are the most vulnerable categories of infrastructure from hurricanes and tropical storms. Power outages due to strong winds, lightning strikes, hurricanes or tornados will continue to be problematic.
- **Critical facilities**. All critical facilities in York County are most vulnerable to power outages, however, some of the critical facilities throughout the County will have back-up generator systems which allow systems to continue operating during a power outage.

Wildfire

- **Buildings.** York County's vast acreage of forest will continue to be cause for concern, continued growth in the region will create increased risks for wildland/urban interface. Another concern is the aging population particularly in rural areas that depend on volunteer fire departments. Recruiting new volunteers is becoming increasingly more difficult.
- **Infrastructure.** As long as there is the potential for wildfires, accessible roads will always be needed. As long as power lines continue to be built above ground, they will remain vulnerable to damage due to wildfires.
- **Critical Facilities.** York County's vast acreage of forest will continue to be cause for concern. Critical facilities will continue to be built as the region continues to develop and grow, and continued growth in the region will create increased risks for wildland/urban interface.

Drought

- **Buildings.** Future buildings in York County may not be directly vulnerable to droughts, but if located in the wildland/urban interface, may be vulnerable to wildfires resulting from dry conditions.
- **Infrastructure.** Future power, phone and cable lines may not be directly vulnerable to droughts, but if located in the wildland/urban interface, might be

damaged by wildfires resulting from dry conditions. Future roads and drainage systems are much less vulnerable, although roads can be blocked by fires and emergency fire-fighting vehicles.

- **Critical facilities.** Future critical facilities may not be directly vulnerable to droughts, but any that are located in the wildland/urban interface may be vulnerable to wildfires resulting from dry conditions.

Estimating Potential Losses

This section assesses the vulnerability of York County to future disasters, as well as the potential for losses resulting from disasters. Since this is a regional plan, specific inventories of the *number, type,* and *value* of buildings in hazard areas in each municipality have not been calculated. Instead, the planning team has made estimates on these factors for the purposes of understanding the potential losses from different types of hazard events.

As an outgrowth of this plan the York County EMA hopes to work with local EMA directors to conduct detailed inventories of structures at risk. In fact, Action 1.1.1 in the Implementation Plan (a high-priority action) reads: "Conduct detailed local inventories of hazard-prone areas."

Location of Critical Resources

Ensuring that key public buildings and infrastructure remain intact during disasters gives a place the ability to mitigate against potential damage from hazards. As a county with more than 211,972 people living in 29 different cities and towns, York County has a substantial network of public buildings and infrastructure to maintain.

This section discusses the location of these critical resources. Data on hospitals, EMS locations, emergency shelters, and infrastructure comes from either the State of Maine Office of Geographic Information Systems (OGIS) or from information collected locally. Many different types of public structures must be protected in case of disasters. These include emergency shelters, hospitals, EMS facilities, public works facilities, prisons, and municipal buildings. In addition, many types of public infrastructure must also be protected from disasters, including roads, bridges, electrical and communication lines, railroads, and airports. The locations and risk factors for each of these building and infrastructure types are described below.

Emergency shelters

York County EMA records list a total of 89 emergency shelters in the county, with a total capacity of 13,319 persons and a total storm capacity of 25,970 persons. These facilities are located in many different types of buildings, including schools, hospitals, fire stations, commercial buildings, and private businesses.

One concern with shelters is the presence of backup generators to provide heat and electricity during severe winter storm events. Severe winter storms in Maine often result in the widespread loss of electricity for several days. Therefore, having backup generators to provide heat for displaced families is critical during such storms. The York County EMA lists just 31 shelters in the county that have backup generators, and these facilities can provide temporary shelter for up to 4,293 residents. Comparing this figure with the year-round population of about 211,972

people, there is just one winter shelter slot per 49 residents. Another concern is that 10 of the county's 29 cities and towns do not have any shelters with generators. The housing displaced persons during times of extended power outages in the winter is a concern for York County and therefore, access to power and heat is a priority in a shelter environment.

The table below displays town-by-town emergency shelter data for York County.

Town	Facility	Address	Capacity	Storm Cap	Generator	Pets
Acton	Acton Elementary School	700 Milton Mills Road	150	300	No	No
Alfred	Alfred Elementary School	Route 202/111	120	240	No	Yes
Alfred	Alfred Public Safety Building	77 Kennebunk Rd	15	30	Yes	Yes
Alfred	Keywood Manor Community Center	1 Pinecone Drive	21	42	Yes	Yes
Arundel	Mildred L. Day Memorial School	600 Limerick Rd.	160	320	No	No
Berwick	Vivian E. Hussey Primary School	20 Blackberry Hill Rd.	135	270	No	No
Berwick	Berwick Town Hall	Sullivan Square	160	320	No	No
Berwick	Berwick Noble 6 Grade School	8 Noble Lane	425	850	Yes	Yes
Berwick	Berwick Fire Department	10 School Street	40	80	Yes	No
Berwick	Berwick Academy	31 Academy Street	250	500	No	No
Biddeford	Biddeford Primary School	320 Hill St.	100	200	No	Yes
Biddeford	Biddeford High, Steven White Gym	Maplewood Ave	145	290	No	Yes
Biddeford	Biddeford Middle School	335 Hill St.	100	200	No	Yes
Biddeford	Biddeford Community Center	Alfred St.	75	150	No	Yes
Biddeford	University of New England	11 Hills Beach Rd.	500	1000	No	No
Buxton	Bonnie Eagle Middle School	P.O. Box 38	500	1000	Yes	Yes
Buxton	Buxton Municipal Building	Portland Road	62	124	Yes	Yes
Cornish	Cornish Fire Dept	35 School St	35	35	Yes	No
Cornish	Cornish Elementary School	School Street	60	120	No	Yes
Cornish	Cornish Town Hall	P.O. Box 346	40	40	No	Yes
Dayton	Dayton Town Hall	Route 35	40	40	Yes	No
Dayton	Dayton Consolidated School	21 Clarks Mills Road	35	70	No	Yes
Eliot	Eliot Elementary	State Road (Rte103)	130	260	No	No
Eliot	Marshwood Jr. High School	Depot Road	425	850	No	No
Goodwins Mills	Goodwins Mills Fire Dept	481 Goodwins Mills	20	20	Yes	No
Hiram	Sacopee Valley High School	115 South Hiram Road	200	400	No	Yes
Hiram	South Hiram Elementary School	213 So. Hiram Road	80	160	No	Yes
Hollis	Hollis Community Building	34 Town Farm Rd.	50	100	No	No
Hollis	Hollis Elementary School	Rt. 35 Hollis	113	226	No	No
Kennebunk	Kennebunk High School	89 Fletcher St.	300	600	Yes	No
Kennebunk	Kennebunk Middle School	60 Thompson Rd.	180	360	Yes	No

Kennebunk	Kennebunk Town Hall	1 Summer Street	100	200	Yes	No
Kennebunk	KFD Washington Hose	159 Port Rd.	20	40	Yes	No
Kennebunkport	Kennebunkport Fire Department	32 North St.	20	40	Yes	No
Kennebunkport	Consolidated School	25 School St.	187	374	No	No
Kittery	Traip Academy	Williams Ave.	425	850	No	No
Kittery	Shapleigh School	Manson Road	150	300	Yes	No
Kittery	Mitchell Elementary School	Kittery Point	75	150	No	No
Lebanon	Lebanon Elementary School	P.O. Box 159	500	1000	Yes	No
Lebanon	Hanson School	P.O. Box 159	45	90	Yes	No
Limerick	St. Mathews Parish	19 Dora Lane	100	200	No	No
Limerick	H.B. Emery, Jr., Elementary School	908 Cape Road	112	224	No	No
Limington	Limington Municipal Building	Sokokis Ave.	21	42	Yes	No
Lyman	Lyman Elementary School	39 Schoolhouse Rd.	50	100	No	Yes
Newfield	Line Elementary School	Route 11	20	40	No	Yes
Newfield	Newfield Public Safety Bldg.	Route 11	13	26	Yes	Yes
North Berwick	Noble Jr. High School	693 Route 9	425	850	No	No
North Berwick	Noble High School	46 Cranberry Meadow Road	500	1000	Yes	No
North Berwick	North Berwick Primary	P.O. Box 609	187	374	No	Yes
North Berwick	Mary Hurd Elementary School	P.O. Box 609	93	186	No	Yes
North Berwick	Community Center	Community Center Rd.	30	60	No	No
Ogunquit	Dunaway Community Center	10 Cottage St.	200		Yes	No
Old Orchard Beach	Loranger Middle School	148 Saco Ave	135	270	No	Yes
Old Orchard Beach	Old Orchard Beach High School	E. Emerson Cummins Blvd.	162	324	No	Yes
Old Orchard Beach	OOB Legion Post 57	14 Imperial st.	50	100	Yes	Yes
Parsonsfield	Parsonsfield Town Hall	P.O. Box 30	20	40	No	No
Porter	Porter Municipal Bldg.	Main Street	20	40	No	No
Saco	Saco Community Center	99 Franklin St.	200	400	Yes	No
Saco	First Parish Church	12 Beach St.	41	80	No	No
Saco	Bayview Fire Station	Ferry Rd./Bayview	25	50	Yes	No
Saco	Burn's School	Middle St.	120	240	No	No
Saco	Saco Middle School	40 Buxton Rd.(Rte 112)	240	480	No	No
Saco	Greek Orthodox church	186 Bradley St.	70	140	No	No
Sanford	Sanford Memorial Gym	Main Street	250	500	Yes	Yes
Sanford	Sanford High School	52 Sanford HS Blvd	250	500	No	No
Sanford	Sanford Jr. High School	Main Street	120	240	No	No
Sanford	Nasson Community Center	475 Main Street	250	500	No	No

Shapleigh	Shapleigh Fire Dept.	506 Shapleigh Coner RD	20	40	Yes	No
Shapleigh	Shapleigh Memorial School	467 Shapleigh Corner Road	113	226	No	Yes
So. Berwick	Marshwood High School	260 Rte. 236	250	500	No	No
So. Berwick	Marshwood High School Field House	Route 236	250	500	No	No
So. Berwick	Community Center	Norton Street	14	28	Yes	No
So. Berwick	Marshwood Middle School	49 Academy Street	200	400	No	No
So. Berwick	Town Hall	180 Main Street	30	30	Yes	Yes
So. Berwick	Central School	197 Main Street	100	200	No	No
Waterboro	Massabesic High School	West Road	150	300	No	No
Waterboro	Waterboro Fire Dept.	John Smith Way	50	50	No	No
Waterboro	Massabesic Jr. High School	West Road	100	200	No	No
Waterboro	Waterboro Elementary School	Route 5	120	240	No	No
Wells	Wells/Ogunquit School (Ward Gym)	1470 Post Road Rt,1	187	374	No	No
Wells	Wells Elementary School	Sanford Rd.(109)	425	850	Yes	No
Wells	Messiah Christian Church	2700 Post Road	171	342	No	Yes
Wells	Wells/Ogunquit High School	P.O. Box 579 Sanford Rd.	150	300	No	Yes
York	York High School	286 Long Sands Rd.	427	854	No	Yes
York	York Middle School	Organug Rd.	180	360	No	No
York	Coastal Ridge Elementary	2 Ridge Rd.	337	675	No	No
York	Village Elementary	124 York St.	81	162	No	No
York	York Senior Center	41 Main St.	20	40	Yes	Yes
York	York Beach Fire Department	Railroad Ave., P.O. Box 70	52	52	Yes	No
TOTAL	**89 Locations**		**13,319**	**25,970**	**31**	**30**

Hospitals

York County is served by two health care systems. Maine Health operates Southern Maine Healthcare's acute care hospital in Biddeford. This hospital is accessible directly from I-95 and US Route 1. Southern Maine Healthcare also operates an outpatient and emergency care facility in Sanford. York Hospital, independently operated in affiliation with Massachusetts General Hospital, operates a 66-bed acute care hospital in York. Each of these facilities provide 24/7 emergency care and are located near major highways. Biddeford and Sanford locations are near regional airports. All of these hospitals are located in built-up locations.

There are a total of 216 licensed acute care beds in York County. 150 at Southern Maine Healthcare in Biddeford and 66 at York Hospital in York. Compared with the county's population, this only represents one bed for about every 925 year-round residents. There are several more hospitals located in close proximity to York County's boundaries. Such as; Maine

Medical Center (Level 1 Trauma Center) and Mercy Hospital in Portland. Frisbie Memorial Hospital in Rochester, NH, Wentworth-Douglas Hospital in Dover, NH, and Portsmouth Regional Hospital in Portsmouth, NH (also a Level 1 Trauma Center).

EMS Locations

There are 38 fire and EMS agencies serving York County's 29 communities. Of that number, 16 are fire-based EMS, six are EMS only, and two are private or semi-private ambulance services. LifeFlight of Maine bases one rotary wing air ambulance and crew at the Sanford Regional Airport. All local ground ambulances are staffed 24/7 with at least a basic EMT and a driver on-duty 24-hours a day (Newfield is the exception, with no on-duty staffing). Nearly all of the EMS agencies are staffed on a per diem basis. Mutual aid is strong between communities and across county and state lines.

Public Safety Agencies

TOWN/CITY		911 PSAP	Comms & Dispatch Center	Law Enforcement Agency	Emergency Medical Service	Fire Dept
1	Acton	Sanford	Sanford RCC	Sheriff's Office	Acton FD	Acton FD
2	Alfred	Biddeford	Biddeford RCC	State Police	Alfred FD	Alfred FD
3	Arundel	Biddeford	Biddeford RCC	Sheriff's Office	Arundel FD	Arundel FD
4	Berwick	Sanford	Sanford RCC	Berwick PD	Stewarts Amb	Berwick FD
5	Biddeford (City)	Biddeford	Biddeford RCC	Biddeford PD	Biddeford FD	Biddeford FD
6	Buxton	Scarborough	Buxton PD	Buxton FD	Buxton FD	Buxton FD
7	Cornish	Augusta	Augusta RCC	Sheriff's Office	Sacopee EMS	Cornish FD
8	Eliot	York	Kittery PD	Eliot PD	Stewarts Amb	Eliot FD
9	Dayton	Biddeford	Biddeford RCC	State Police	Goodwins Mills FD	Goodwins Mills FD
10	Hollis	Biddeford	Biddeford RCC	State Police	Hollis FD	Hollis FD
11	Kennebunk	Sanford	Sanford RCC	Kennebunk PD	Kennebunk FD	Kennebunk FD
12	Kennebunkport	York	Kennebunkport PD	Kennebunkport PD	Kennebunkport EMS	Kennebunkport FD
13	Kittery	York	Kittery PD	Kittery PD	Stewarts Amb	Kittery FD
14	Lebanon	Sanford	Sanford RCC	State Police	Lebanon FD	Lebanon FD
15	Limerick	Sanford	Sanford RCC	Sheriff's Office	Limerick FD	Limerick FD
16	Limington	Augusta	Augusta RCC	Sheriff's Office	Limington FD	Limington FD
17	Lyman	Biddeford	Biddeford RCC	State Police	Goodwins Mills FD	Goodwins Mills FD
18	Newfield	Sanford	Sanford RCC	Sheriff's Office	Newfield EMS	Newfield FD
19	North Berwick	Sanford	Sanford RCC	North Berwick PD	North Berwick EMS	North Berwick FD
20	Old Orchard Beach	Scarborough	Scarborough PD	Old Orchard Beach PD	Old Orchard Beach FD	Old Orchard Beach FD
21	Ogunquit	York	Wells PD	Ogunquit PD	Ogunquit FD	Ogunquit FD
22	Saco (City)	Biddeford	Saco PD	Saco PD	Saco FD	Saco FD

23	Sanford (City)	Sanford	Sanford RCC	Sanford PD	Sanford FD	Sanford FD
24	Shapleigh	Sanford	Sanford RCC	Sheriff's Office	Shapleigh EMS	Shapleigh FD
25	South Berwick	Sanford	Sanford RCC	South Berwick PD	York EMS	South Berwick FD
26	Parsonsfield	Augusta	Augusta	Sheriff's Office	Sacopee EMS	Kezar Falls FD
26	Waterboro	Biddeford	Biddeford RCC	Sheriff's Office	Waterboro FD	Waterboro FD
28	Wells	York	Wells PD	Wells PD	Wells EMS	Wells FD
29	York	York	York PD	York PD	York EMS	York FD

Significant staffing shortages exist within the fire and EMS workforce. Many of the EMS workforce are employed by several agencies. According to the Maine Bureau of EMS, there were 35,377 emergency medical calls for service in York County in 2019.

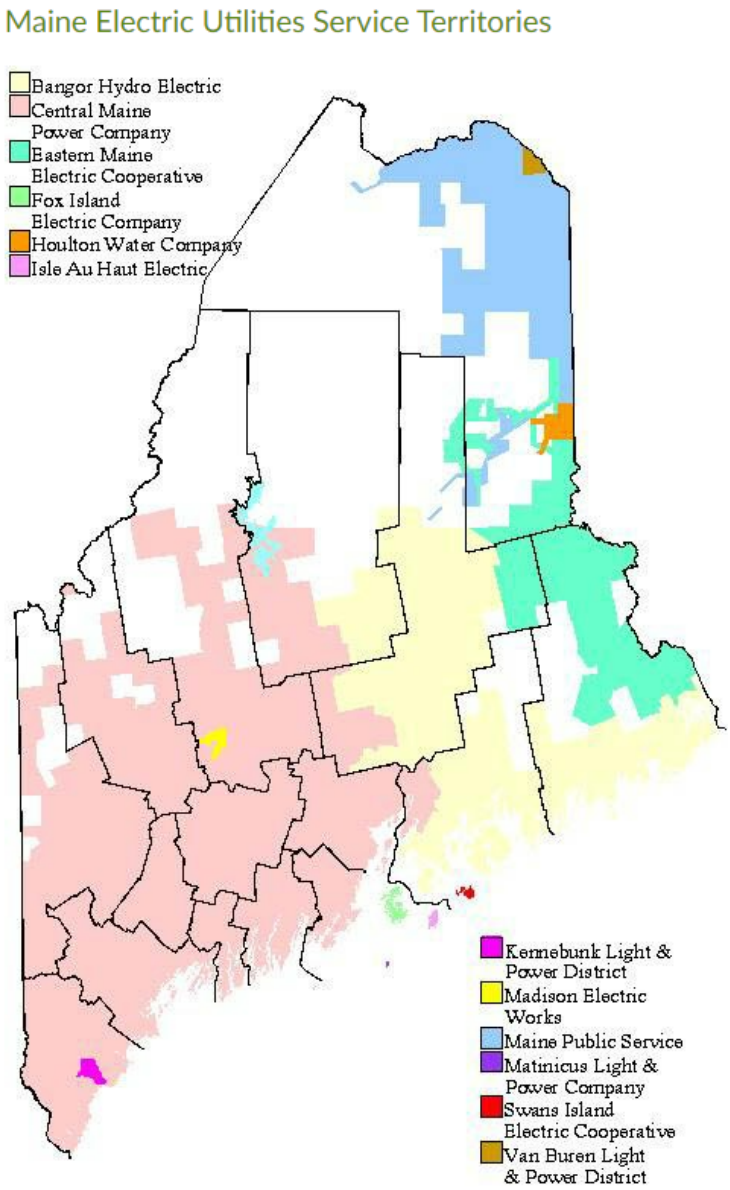
Water and Wastewater Treatment Plants

Of the 29 cities and towns in York County, 15 have public sewer and water service. An additional five towns have public water service but no public sewer systems, bringing the total of towns with public water service to 20. The remaining nine towns have neither public water nor public sewer services. The table below lists towns by category.

Water and Sewer		Water Only	No Public Water or Sewer
Berwick	Sanford	Alfred	Acton
Biddeford	South Berwick	Arundel	Buxton
Eliot	Wells	Cornish	Dayton
Kennebunk	York	Parsonsfield	Hollis
Kennebunkport		Waterboro	Lebanon
Kittery			Limington
Limerick			Lyman
North Berwick			Newfield
Ogunquit			Shapleigh
Old Orchard Beach			
Saco			

Among the 15 cities and towns served by sewer, 14 have their own wastewater treatment facilities, while the Town of Eliot is served by the facility in Kittery. For the 20 cities and towns with public water supplies, there are just 12 water treatment plants. Many cities or towns are served by regional water utilities, such as the Biddeford & Saco Water Company (Biddeford, Old Orchard Beach, Saco) and the KKW Water District (Arundel, Kennebunk, Kennebunkport, Ogunquit, Wells).

Other Utilities



Power

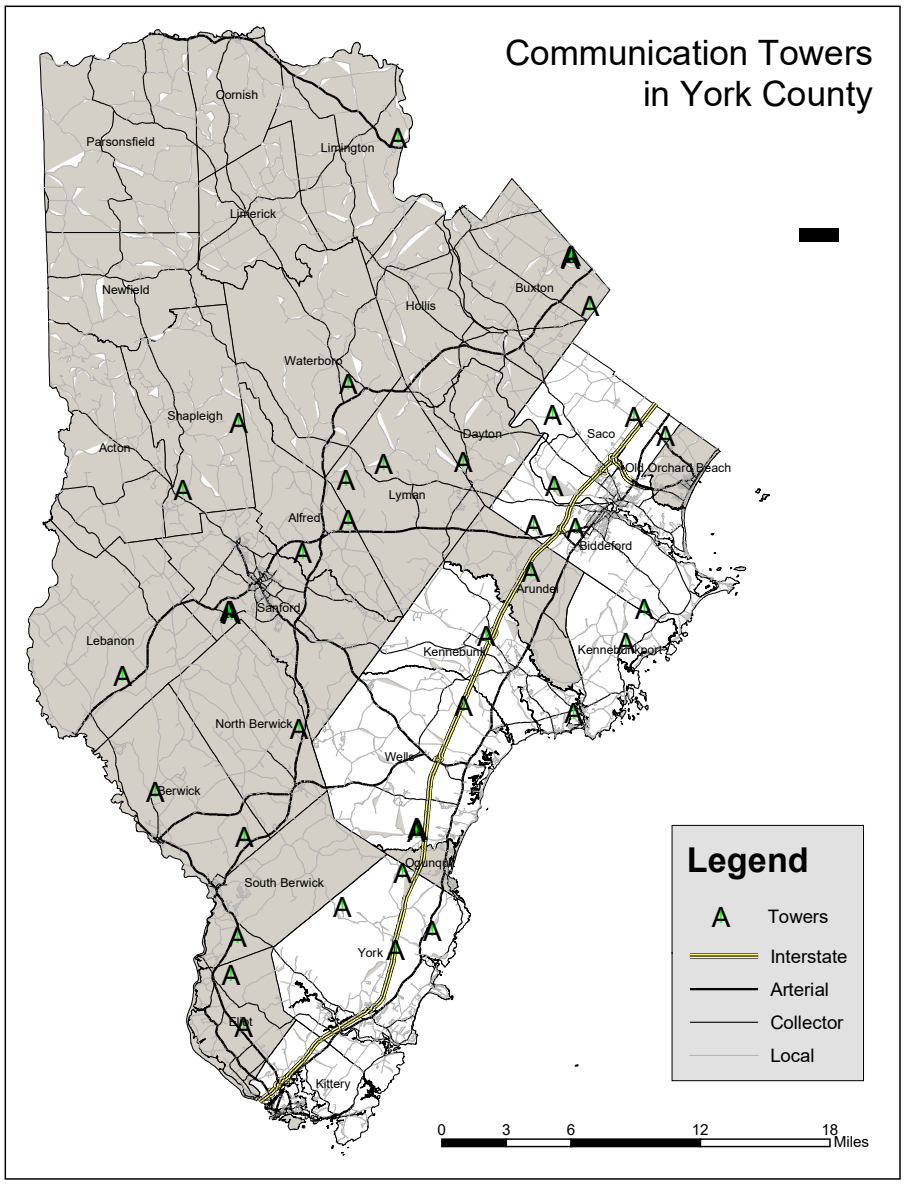
York County citizens are largely served by Central Maine Power Company and the Kennebunk Light & Power District. According to Central Maine Power Company, there are 119,814 customers, 100,467 structures, 39,627 transformers, and 36 substations in York County. According to Kennebunk Light & Power District, 7,300 metered accounts, 2 substations, 6,000 poles (structures), 126 line miles of primary conductors, and at an estimate 5,000 transformers out in the field.

A natural gas pipeline traverses the county from Saco to Eliot.

According to SMPDC, as of March 2021, there were a total of 12 solar projects in York County.

Telecommunications
Data regarding the inventory of telephone transmission lines were not disclosed by Fairpoint, so the total line length is assumed to be the same as the electrical lines for the purposes of this plan.

In addition to these lines, there are 44 communication towers in the county, which include TV towers, radio towers, and cellular towers. These towers are shown in the map below:



Transportation Network

York County's transportation network includes roads, bridges, airports, rail lines and waterways. There are no major port facilities in the county, but there are major ports just beyond the county's borders, in Portland, ME and Portsmouth, NH. Though none of the airports in York County have scheduled commercial air service, the county is served by Portland International Jetport in South Portland, ME and Pease International Tradeport in Portsmouth, NH. All of these facilities are located within 10 miles of the York County border.

In total, there are 3,321.90 miles of roadway in York County.

York County Roads Data 2022							
	Miles:						
Municipality	Townway	Tnwy summer	Tnwy winter	State aid	State hwy	Toll hwy	Private
Acton	38.58	0.21	0.00	9.42	6.01	0.00	44.61
Alfred	43.29	0.00	0.00	0.28	9.14	0.00	25.14
Arundel	38.91	0.00	0.00	3.68	7.58	6.59	31.98
Berwick	49.21	3.78	0.00	5.97	11.07	0.00	31.42
Biddeford	78.95	0.00	0.00	28.25	8.44	6.34	30.06
Buxton	78.78	0.00	0.10	27.28	5.89	0.00	25.07
Cornish	25.56	0.99	0.00	2.15	12.12	0.00	17.24
Dayton	25.62	0.00	0.00	5.89	5.83	0.00	13.06
Eliot	32.40	0.00	0.00	15.35	5.57	0.00	34.29
Hollis	41.54	0.00	0.00	26.78	6.41	0.00	19.34
Kennebunk	70.66	0.00	0.00	29.41	5.30	10.13	50.37
Kennebunkport	40.49	0.00	0.00	8.12	0.00	0.00	36.76
Kittery	44.04	0.00	3.06	13.51	14.82	12.38	33.62
Lebanon	75.20	0.00	0.00	5.84	8.33	0.00	44.94
Limerick	35.75	1.31	0.00	2.83	12.05	0.00	45.27
Limington	44.44	2.82	0.00	9.97	15.13	0.00	42.39
Lyman	45.56	0.00	0.00	13.35	6.72	0.00	53.97
Newfield	30.51	1.55	0.00	4.23	10.43	0.00	25.92
North Berwick	64.72	0.00	0.00	1.90	9.61	0.00	12.64
Ogunquit	13.39	0.00	3.12	1.34	2.33	2.59	12.56
Old Orchard Beach	42.00	0.00	0.00	9.91	0.11	0.00	18.69
Parsonsfield	56.54	0.00	0.00	19.97	3.82	0.00	20.42
Saco	91.77	0.00	0.00	25.58	14.95	15.20	27.45
Sanford	115.73	0.00	6.42	23.29	22.16	0.00	28.78
Shapleigh	55.82	5.78	0.00	3.53	9.65	0.00	31.92
South Berwick	61.67	0.00	0.00	3.20	5.77	0.00	12.89
Waterboro	51.97	3.63	0.00	11.29	15.44	0.00	73.50
Wells	102.12	0.15	0.00	10.60	19.91	17.28	50.98
York	104.94	0.00	0.00	24.82	13.30	20.49	86.95

	Maintenance responsibility:		
Municipality	**"Local"**	**"State"**	**"Private"**
Acton	38.792	15.428	44.610
Alfred	43.294	9.424	25.138
Arundel	38.911	17.848	31.976
Berwick	52.986	17.038	31.424
Biddeford	78.952	43.023	30.062
Buxton	78.778	33.273	25.069
Cornish	26.545	14.273	17.243
Dayton	25.619	11.717	13.058
Eliot	32.402	20.917	34.287
Hollis	41.535	33.191	19.340
Kennebunk	70.660	44.844	50.372
Kennebunkport	40.492	8.123	36.758
Kittery	44.037	43.763	33.617
Lebanon	75.198	14.172	44.941
Limerick	37.055	14.883	45.266
Limington	47.261	25.104	42.391
Lyman	45.562	20.074	53.969
Newfield	32.062	14.661	25.918
North Berwick	64.717	11.508	12.638
Ogunquit	13.388	9.369	12.564
Old Orchard Beach	41.996	10.016	18.695
Parsonsfield	56.544	23.796	20.418
Saco	91.773	55.730	27.449
Sanford	115.729	51.863	28.781
Shapleigh	61.604	13.180	31.918
South Berwick	61.672	8.975	12.890
Waterboro	55.592	26.735	73.500
Wells	102.269	47.796	50.975
York	104.935	58.607	86.945
Total	**1,620.36**	**719.33**	**982.21**

The municipalities are responsible for maintaining 1,620.36 miles of roadway, while the State maintains 719.33 miles and 982.21 miles are privately owned.

Major road facilities in York County include Interstate 95 (Maine Turnpike), which runs along the coast, U.S. Route 1, which parallels I-95, and U.S. Route 202, which runs northeasterly through the heart of the county from Lebanon to Buxton. In addition, several major state highways serve the county, including:

- Route 4 (Alfred to South Berwick)
- Route 9 (Wells to Berwick)
- Route 25 (Limington to Parsonsfield)
- Route 109 (Wells to Acton)
- Route 111 (Biddeford to Alfred)
- Route 236 (Kittery to Berwick)

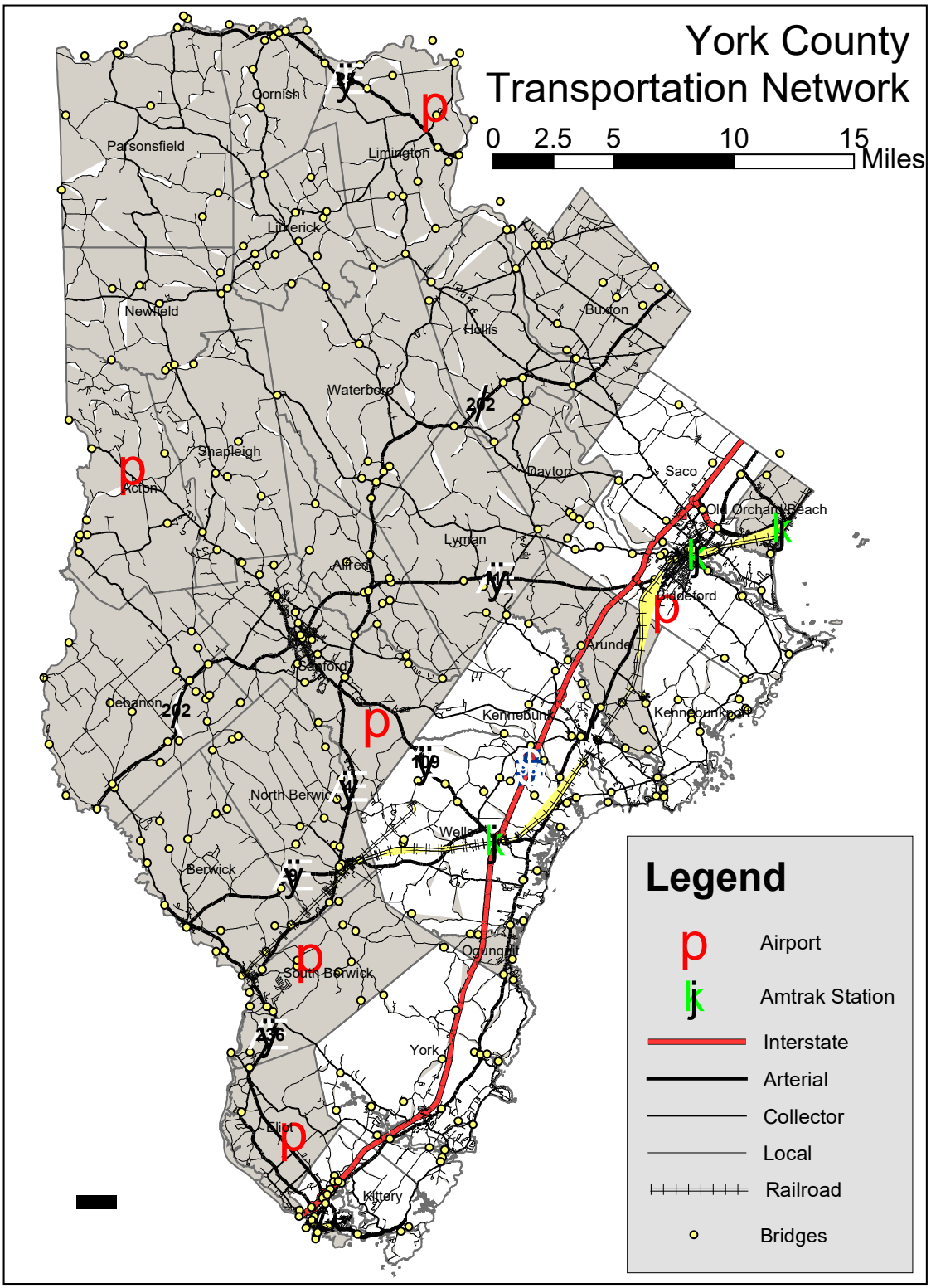
The Pan Am Rail railroad line runs north to south through York County. It is primarily a freight line, but it also carries the Amtrak Downeaster line, which connects Portland to Boston. There are three Amtrak stations on this line in York County: year-round stations in Saco and Wells and a seasonal (May to October) station in Old Orchard Beach. Finally, York County contains six airports, two of which are public (Biddeford, Sanford) and four of which are private (Acton, Eliot, Limington, South Berwick). As mentioned above, none of these airports offer scheduled commercial service.

There are a number of bus transit lines located in York County:

- The Biddeford/Saco/Old Orchard Beach ShuttleBus operates four lines: two local routes within the three towns, a local route to Portland, and an express commuter bus to Portland. This program also operates a summer trolley service within Old Orchard Beach.
- York County Community Action Corporation (YCCAC) operates two lines
    - Sanford Transit, a line within the town between Springvale and South Sanford.
    - Wheels to Access Vocation and Education (WAVE), which runs from Springvale to Wells and is designed to serve students and working people who do not have means to get to jobs.
- COAST (Cooperative Alliance for Seacoast Transportation) provides service between Berwick and the Dover and Somersworth, NH areas.
- The Coastal Explorer system includes several local seasonal trolley lines between Kennebunk and York.

In addition to these regularly scheduled transit services, YCCAC operates York County Community Transportation, a fleet of buses and vans that serve senior citizens, low-income populations and special needs populations in the region. This program has had an agreement in place for several years with YCEMA to provide evacuation assistance during and after disaster events.

The map on the next page shows the county's transportation network.


York County
Transportation Network
0 2.5 5 10 15
Miles
Cornish
Parsonsfield
Limington
Limerick
Newfield
Hollis
Buxton
Waterboro
202
Shapleigh
Acton
Dayton
Saco
Old Orchard Beach
Lyman
Alfred
Biddeford
Arundel
Sanford
Lebanon
202
Kennebunk
Kennebunkport
109
North Berwick
Wells
Berwick
Ogunquit
South Berwick
236
York
Eliot
Kittery
Legend
Airport
Amtrak Station
Interstate
Arterial
Collector
Local
Railroad
Bridges

NESEC Hazus Flood and Hurricane Impact Analysis Reports

In 2016, the North East States Emergency Consortium (NESEC) completed quantitative reports on the potential impacts of major flooding, hurricane, and earthquake events. Results of these reports are summarized in this report, and the full NESEC reports are provided as an appendix (the earthquake report is provided only as an annex because this hazard is not profiled for York County). Reports were generated using Hazus, a software program provided by FEMA for modeling large hazards, community vulnerabilities, and losses associated with impacts. Hazus report summaries are provided after presentation of the loss models developed by the Planning Team.

The purpose of Hazus Impact Analysis Reports is to provide emergency managers and other government decision makers with an estimate of the potential impact of moderate to large hazardous events affecting a region. Hazus was developed by FEMA to aid in the calculation, mapping, and communication of model disaster data. These reports provide a rough estimate of potential damage and other human and economic impacts resulting from hypothetical natural disaster scenarios. Each Hazus model uses inventory information (buildings, infrastructure, and population), hazard extent and intensity data, and damage functions to estimate the impacts of disasters. Estimated impacts vary by model, but include building damages, economic losses, displaced households, casualties, debris, and the loss of function for essential facilities.

Flooding: The Flood Impact Analysis Report was generated based on the impacts of a major flooding event that probabilistically has a 1 in 500 (0.2%) chance of occurring in a year. This model differs from historic data in that there may be no comparable event in recorded history for York County.

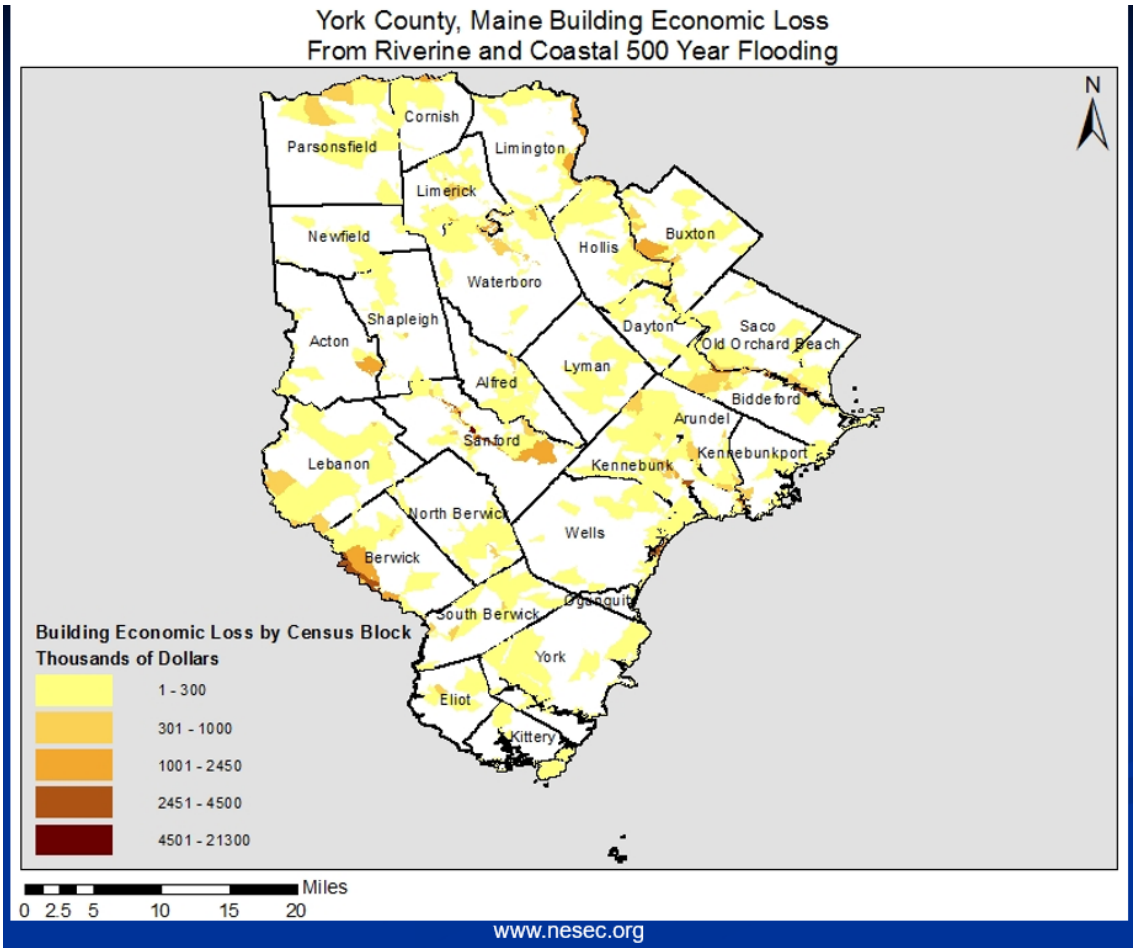
Hazus-MH™ Flood Impact Report

Executive Summary[1]

Hazus-MH™ Flood estimates that the 500 Year Riverine and Coastal Flood Events combined will have the following impacts in York County. Please note that this flood report estimates damage caused directly by the flood, and does not include damage caused by collateral impacts such as hazardous materials releases.[2]

Estimated Direct Economic Losses for Buildings[3]		
Building Damage (Structural, Non-Structural)		$107,747,000
Building Contents Damage		$134,979,000
Business Interruption (Income Losses)		$1,282,000
Total Building-Related Losses		**$244,008,000**
Losses Range		($122,004,000 - $244,008,000)
Estimated Displaced People[4]		
Number of Displaced People		5,021 People
Number of People Needing Short Term Shelter		2,167 People
Estimated Debris Generated		
Finishes		6,844 Tons
Structures		3,690 Tons
Foundations		3,064 Tons
Total Debris		**13,598 Tons**

1. **Note:** *Minor discrepancies between the values in this report and those in the Hazus Summary Report tables are due to rounding.*
2. **Disclaimer:**
   This rapid estimate of social and economic impacts was produced using Hazus-MH loss estimation methodology software which is based on current scientific and engineering knowledge and assumptions. There are limitations and uncertainties inherent in HAZUS and in all other loss estimation techniques. Therefore, there may be significant differences between the modeled and mapped results contained in this report and the actual losses following a specific earthquake. Hazus-MH appears to overestimate losses for earthquakes less than 6.0 in urban areas.
3. **Note:**
   Values are in 2014 dollars.
4. **Note:**
   Not all displaced people will seek public shelter. The number of people seeking public shelter will vary by state and region. These numbers are based on data from the 2010 Census.



Severe Summer Storm/Hurricane: The Hurricane Impact Analysis Report was generated based on the impacts of a hypothetical Category 2 hurricane that makes landfall off the coast of Maine. It is important to note that this event does not necessarily represent the greatest impact a hurricane could have on York County, Maine. Though the chances for a severe hurricane occurring in the Northeast are low to moderate, any hurricane that tracks along the East Coast has the potential to negatively impact Maine. This model differs from historic data in that is no comparable event in recorded history for York County.

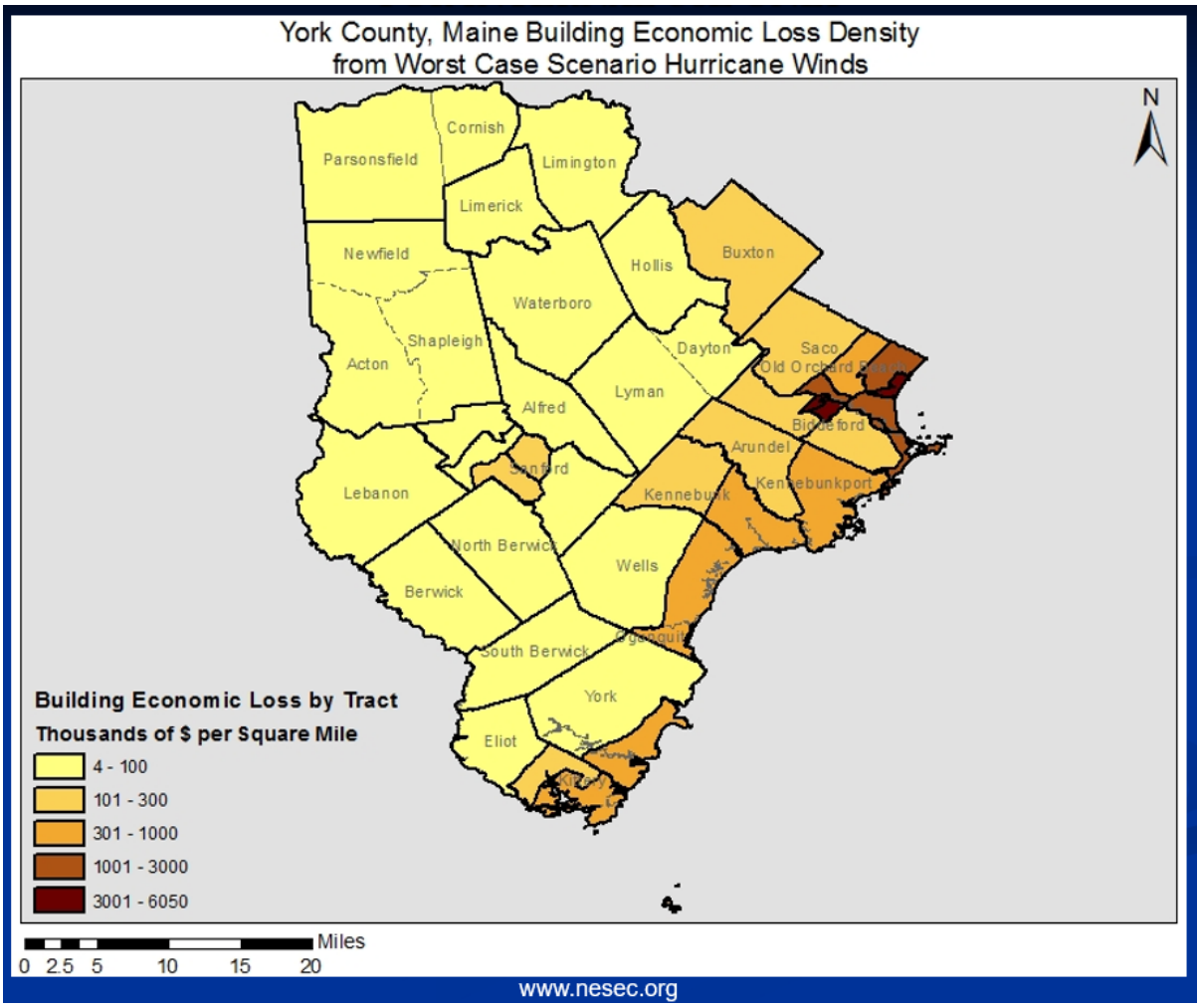
Hazus-MH™ Hurricane Impact Report

Executive Summary[1]

Hazus-MH™ Hurricane estimates that the Maine Worst Case Hurricane Scenario that has the parameters of the 1938 Hurricane but makes landfall in Maine will have the following impacts in York County. Please note that this hurricane report estimates damage caused directly by the hurricane, and does not include damage caused by collateral impacts such as hazardous materials releases.[2]

Estimated Direct Economic Losses for Buildings[3]		
Building Damage (Structural, Non-Structural)		$96,717,000
Building Contents Damage		$34,955,000
Business Interruption (Income Losses)		$5,389,000
Total Building-Related Losses		**$137,061,000**
Losses Range		($68,530,500 - $274,122,000)
Estimated Displaced Households & People[4]		
Number of Displaced Households		66 Households
Number of People Needing Short Term Shelter		15 People
Estimated Debris Generated		
Reinforced Concrete and Steel		0 Tons
Brick, Wood, Glass, Plaster and Other		8,975 Tons
Eligible Tree Debris		23,525 Tons
Other Tree Debris		147,229 Tons
Total Debris		**179,729 Tons**

1. ***Note:*** *Minor discrepancies between the values in this report and those in the Hazus Summary Report tables are due to rounding.*
2. ***Disclaimer:***
   This rapid estimate of social and economic impacts was produced using Hazus-MH loss estimation methodology software which is based on current scientific and engineering knowledge and assumptions. There are limitations and uncertainties inherent in HAZUS and in all other loss estimation techniques. Therefore, there may be significant differences between the modeled and mapped results contained in this report and the actual losses following a specific earthquake. Hazus-MH appears to overestimate losses for earthquakes less than 6.0 in urban areas.
3. ***Note:***
   Values are in 2014 dollars.
4. ***Note:***
   Not all displaced people will seek public shelter. The number of people seeking public shelter will vary by state and region. These numbers are based on data from the 2010 Census.


York County, Maine Building Economic Loss Density
from Worst Case Scenario Hurricane Winds
N
Parsonsfield
Cornish
Limington
Limerick
Newfield
Hollis
Buxton
Waterboro
Shapleigh
Acton
Dayton
Saco
Old Orchard Beach
Lyman
Alfred
Biddeford
Arundel
Sanford
Kennebunkport
Lebanon
Kennebunk
North Berwick
Wells
Berwick
South Berwick
York
Eliot
Building Economic Loss by Tract
Thousands of $ per Square Mile
4 - 100
101 - 300
301 - 1000
1001 - 3000
3001 - 6050
Miles
0 2.5 5 10 15 20
www.nesec.org

Plan Review	
Requirement §201.6(d)(3): A local jurisdiction must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit it for approval within 5 years in order to continue to be eligible for mitigation project grant funding.	
Element	D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))

Analyzing Development Trends

Land use within York County ranges from densely populated urban areas to suburban residential areas to rural, farm areas, and forest land. The largest community in the County is Biddeford, 2020 population of 22,552. At least 23, or 79%, of the communities in the County have enacted a comprehensive plan since 2000. All 29 communities are participants in the National Flood Insurance Program. About 90% of the communities have local shoreland zoning ordinances that are consistent with State law, while the remaining communities follow State imposed shoreland regulations. 28 of the 29 cities and towns have enacted town-wide zoning ordinances.

Between 2010 and 2020, the County's population grew from 197,131 to 211,972, for a gain of 14,841 people, or 7.5%. However, some communities experienced growth rates as high as 77%, while others experienced very little growth. A clear trend in the County is that nearly all of the residential growth is occurring in the suburban and rural communities, while little growth is occurring in the major cities. Although on-going changes are occurring in York County, growth has been monitored in a manner that protects the hazard prone areas from further development which could affect the vulnerability of the community.

The following table documents the rate of growth for all municipalities in York County.

Municipality	Total Population 2010 Census	Total Population 2020 Census	Change in number	Percent Change
Acton	2,447	2,671	224	9.2%
Alfred	3,019	3,073	54	1.8%
Arundel	4,022	4,264	242	6.0%
Berwick	7,246	7,950	704	9.7%
Biddeford	21,277	22,552	1,275	6.0%
Buxton	8,034	8,376	342	4.3%
Cornish	1,403	1,508	105	7.5%
Dayton	1,965	2,129	164	8.3%
Eliot	6,204	6,717	513	8.3%
Hollis	4,281	4,745	464	10.8%
Kennebunk	10,798	11,536	738	6.8%

Kennebunkport	3,474	3,629	155	4.5%
Kittery	9,490	10,070	580	6.1%
Lebanon	6,031	6,469	438	7.3%
Limerick	2,892	3,188	296	10.2%
Limington	3,713	3,892	179	4.8%
Lyman	4,344	4,525	181	4.2%
Newfield	1,522	1,648	126	8.3%
North Berwick	4,576	4,978	402	8.8%
Ogunquit	892	1,577	685	76.8%
Old Orchard Beach	8,624	8,960	336	3.9%
Parsonsfield	1,898	1,791	(107)	-5.6%
Saco	18,482	20,381	1,899	10.3%
Sanford	20,798	21,982	1,184	5.7%
Shapleigh	2,668	2,921	253	9.5%
South Berwick	7,220	7,467	247	3.4%
Waterboro	7,693	7,936	243	3.2%
Wells	9,589	11,314	1,725	18.0%
York	12,529	13,723	1,194	9.5%
Total York County	**197,131**	**211,972**	**14,841**	**7.5%**

Communities with reported new developments. Several municipalities in York County have seen population growth as well as physical project developments. For example, in Biddeford, there have been several real estate development projects since 2015. Most recently, there have been several projects in the Mill redevelopment: 148 units and 31 hotels rooms were completed at 17 Lincoln Street, 30 units at 28 Pearl Street, and 27 units at 24 Pearl Street. Biddeford also currently has three ongoing projects to build at least 24 lots. In York, from 2020 to 2021, nine residential subdivisions and 30 non-residential sites were given planning permits to build. Of the nine residential developments, 314 units and lots were constructed.

Solar development. In 2019, the Maine Legislature passed legislation to encourage the development of solar and other small renewable energy projects in the State.[8] The Maine Net Energy Billing program allows municipalities to offset their electricity bills using the output from small renewable generators such as solar farms. In York County, Kennebunkport, Kittery, Ogunquit, Old Orchard Beach and Waterboro have partnered under the Southern Maine Solar

[8] Maine Public Utilities Commission, https://www.maine.gov/mpuc/regulated-utilities/electricity/renewable-programs

Collaborative (SMSC) to participate in a shared, voluntary, cooperative initiative to implement a joint procurement process for a master Net Energy Billing Contract Agreements with solar developers. York and Wells have installed roof-top solar on municipal properties and are exploring larger municipal solar efforts on underutilized land.[9]

Code adoption. On April 19, 2021, Maine passed LD1530 which established standards for municipalities to follow regarding tiny homes, which are structures no larger than 400 square feet constructed on a frame or chassis and designed for use as permanent living quarters. The bill allows municipalities to set rules for tiny homes that are less restrictive than state law, allows tiny homes on undeveloped and developed housing lots, allows municipal inspection of certain features of tiny homes and provides for tiny homes to be assessed for property tax purposes after 180 days in certain circumstances. The Maine Uniform Building and Energy Code (MUBEC)[10] was updated to reflect this bill and municipalities in York County adopted this zoning/building code change.

Tracking Recent Development. Hazard Mitigation Plans must include an assessment of changes in regional development that may impact the vulnerability of people and property to hazards. Assessing vulnerability in York County is a high priority because of the proximity of its communities to riverine and coastal hazards. A remote method of tracking development in a community is to use the State of Maine's E911 Addresses Feature. Developed to support emergency services, this database provides an authoritative, frequently updated record of addressable structures and other landmark locations for the entire state[11].

Though this resource is authoritative, it has limited use for tracking changes in development over time due to variable improvements in record keeping over several years. Changes in development reported here are therefore assumed to be a best estimate, where the true amount of recent development is likely to be less than reported. This is especially true for rural areas where address reporting is limited. Use of data from 2019 onwards is preferred because record keeping trends stabilize at that time. The earliest records of addressable structures in this database are from 2008. There is no guarantee that new addresses represent new residential structures.

Region	Number of addressable structures		Change in addressable structures	% change in addressable structures
	2019	***2022***		
York County	122,122	123,054	932	**0.76%**
				% of total addressable structures
Special Flood Hazard Areas (SFHA)	6,566	6,616	50	*5.36%*
Zone A	*5,958*	*6,003*	*45*	*4.83%*
Zone V	*608*	*613*	*5*	*0.54%*
Hurricane Evacuation Zones (HEZ)	38,030	38,320	290	*31.12%*

[9] SMPDC, "Regional Sustainability and Resilience Program," https://smpdc.org/vertical/Sites/%7B14E8B741-214C-42E2-BE74-5AA9EE0A3EFD%7D/uploads/Regional_Sustainability_and_Resilience_Program_Work_Plan_Final_042320(1).pdf
[10] Maine Uniform Building and Energy Code (MUBEC), Chapter 5, page 7, https://www.maine.gov/dps/fmo/building-codes/mubec-rule
[11] Maine E911 Addresses Feature: https://maine.hub.arcgis.com/datasets/c1de8b6877114e109980972b4250a883_0/about

Wildland-Urban Interface (WUI)	109,564	110,400	836	*89.70%*

According to this study, only a small percentage of development in York County has occurred in flood-prone areas. However, more development has occurred in Hurricane Evacuation Zones and Wildland-Urban Interface areas with a statistically heightened risk of wildfires[12]. As this table demonstrates, the total estimated number of addressable structures in York County has increased by 0.76% from January 2019 to April 2022. Of this increase in development, 50 (5.36%) of these new addresses are located in special flood hazard areas (SFHAs) and 290 (31.12%) of new addresses are located in hurricane evacuation zones (HEZs). There was a further 836 (89.7%) increase in addressable structures over this time period. Though the increase of addresses in HEZs appears to be large, 1) according to NWS the probability of a Category 1 or 2 hurricane making landfall in coastal Maine is low, and 2) predesignated evacuation zones far exceed the smaller areas where storm surge is truly expected to cause damage (refer to Municipal Base Maps). Currently there are no examples of municipal ordinances based on development in HEZs or WUIs in Maine. As a Home Rule state, Maine municipalities reserve the right to develop multi-hazard ordinances and are encouraged by the state to implement mitigation actions that would improve standards of construction and development to reduce overall risks of storm-related flooding, wind damage, and wildfire. All jurisdictions in York County mitigate development in floodplains by participating in NFIP and enforcing local floodplain ordinances, as shown by lower levels of development in SFHAs.

Statewide measures are being taken in response to development in HEZs. The Maine Emergency Management Agency has recently published an online dashboard to help local residents identify if their home is located in a Hurricane Evacuation Zone. In the unlikely event that a hurricane makes landfall along coastal Maine, residents will be able to prepare by learning the evacuation routes available to them, how to receive information on evacuation orders, and finding other resources to help reduce their overall risk[13].

Communities often engage in fire safety/educational programs based in part on the potential risk of wildfires in Maine. Refer to the list of Mitigation Actions in Section 5 for some examples provided by participating jurisdictions.

[12] Spyratos, Vassilis, Patrick S. Bourgeron, and Michael Ghil. "Development at the wildland–urban interface and the mitigation of forest-fire risk." *Proceedings of the National Academy of Sciences* 104.36 (2007): 14272-14276.*:* *https://www.pnas.org/doi/pdf/10.1073/pnas.0704488104*

[13] Maine Hurricane Evacuation Dashboard: https://storymaps.arcgis.com/stories/4fb502bf0ea6467693ff4191a1859e92

4. Multi-Jurisdictional Risk Assessment

York County is a county of more than 211,972 people living in 991 square miles located in the southern most area of the State of Maine. The county was incorporated in 1636 and the county seat is located in the Town of Alfred. There are 29 municipalities within the county: 3 cities and 26 towns. All municipalities contributed to the risk assessment analyses completed for the York County Hazard Mitigation Plan.

The following hazards were identified as the same general risks for which all areas of the County are subjected:

- Flooding
- Severe fall/winter and spring/summer storms
- Wildfires (although all areas are at risk from wildfires, less densely developed areas like Parsonsfield face extensive acreage losses due to the lack of roads to provide forest land access. In addition, the resources of small municipal fire departments for fighting wildfires are extremely limited, due to the small population base).
- Drought

The following hazards were identified as primarily affecting the coastal communities of Old Orchard Beach, Saco, Biddeford, Kennebunkport, Kennebunk, Wells, Ogunquit, York, and Kittery.

- Coastal Flooding
- Coastal Erosion
- Severe Spring/Summer Storms

Hurricane winds and flooding in York County will primarily affect the coastal communities which are susceptible to hurricane storm surge.

5. MITIGATION STRATEGY

Mitigation Strategy	
Requirement: §201.6(c)(3): (The plan must include) a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment. This section shall include: (i) For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.	
Element	C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))
	C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))
	C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))
	D2: Was the plan revised to reflect progress in local mitigation efforts?
	D3: Was the plan revised to reflect changes in priorities?

Existing Authorities, Policies, Programs and Resources

Below is a summary of existing authorities, policies, programs, and resources available to accomplish hazard mitigation in the communities of York County. See also the table that follows this summary.

- **Town Manager, Administrator, Administrative Assistant to the Selectmen:** Some towns in York County have a town manager, others have an administrator whose duties may vary from those of a town manager, and still others have an administrative assistant to the selectmen who may serve as staff to the selectmen but may not have the powers of a town manager to hire staff. In the table below, "TM" indicates town manager
- **Staff Resources:** Staff resources, where available, usually consist of a planner or community development director. No towns in York County have staff resources devoted exclusively to hazard mitigation.
- **Public Works or Road Commissioner:** Some of the larger towns have a public works director, but most have a road commissioner. The road commissioner might also be the town manager or board of selectmen.
- **Flood Hazard Ordinance:** All of the towns that are in the National Flood Insurance Program (NFIP) have a flood hazard ordinance in effect. All municipalities in York County participate in NFIP.
- **Shoreland Zoning:** All towns are required to have a shoreland zoning ordinance, whether adopted by the municipality or imposed by the Maine Department of Environmental Protection.
- **Form of Government:** In the following table, the letters "CMM" indicates a city council/mayor or city manager, "ST" indicate the selectmen/town meeting form of government.
- **Resources:** In addition to staffing or other expertise, funding resources are from local taxes and/or grants that are funded by taxes or private donations.
- **Expansion/Improvements:** All jurisdictions in York County could expand and improve their existing capabilities if additional funds, beyond their existing tax bases, became available to address the hazard mitigation projects listed in Chapter 5 – Mitigation Strategy Project List.
- **Building Code:** The Maine Uniform Building and Energy Code (MUBEC) applies to all towns within the State of Maine. Enforcement of MUBEC is required for municipalities with populations meeting or exceeding 4,000 residents based on the US Census Bureau's most recent decennial census. Municipalities with populations below this threshold may also adopt MUBEC. MUBEC is made up of the following codes and

standards: 2015 International Residential Code (IRC), International Building Code (IBC), International Existing Building Code (IEBC), International Energy Conservation Code (IECC)

- **Culvert Sizing Design Guidance:** approved by the Maine Department of Transportation Environmental Office in 2015, this guidance replaces older practices to ensure new culverts withstand larger peak flows currently experienced in streams and rivers. This design guidance is implemented for state/public roads and strongly encouraged for local county and municipal roads.[1]
- **Tree Care and electricity transmission/distribution lines:** Central Maine Power implements tree pruning and removals within rights of ways to reduce potential service interruptions during and after severe summer or winter storms.[2]
- **Other Regional Planning Capabilities:** SMPDC[3] provides regional planning support within York County. The purpose of SMPDC is to strengthen local municipal self-government while combining total resources for meeting regional challenges beyond individual capacities; to serve as a mutual forum to identify, study, and bring into focus regional challenges and opportunities; provide organizational support to enable communication and coordination among governments and agencies concerned with regional issues and opportunities; to act as an advocate where membership directs; and to exercise such powers as the member municipalities may delegate.

[1] www.maine.gov/mdot/edi/docs/CulvertSizing52115.pdf
[2] www.cmpco.com/wps/portal/cmp/outages/weareready/treecare/
[3] https://smpdc.org/about

Town	Management Type	Staff involved in local planning	Public Works or Road Commissioner	EMA Director	Flood Ordinance	Shoreland Ordinance	Form of Government
Acton	SB	X	RC	X	X	X	ST
Alfred	SB	X	RC	X	X	X	ST
Arundel	TM	X	DPW & RC	X	X	X	ST
Berwick	TM	X	RC	X	X	X	ST
Biddeford	CM	X	DPW	X	X	X	CMM
Buxton	SB	X	DPW	X	X	X	ST
Cornish	SB	X	RC	X	X	X	ST
Dayton	SB	X	RC	X	X	X	ST
Eliot	TM	X	DPW	X	X	X	ST
Hollis	SB	X	RC	X	X	X	ST
Kennebunk	TM	X	DPW & RC	X	X	X	ST
Kennebunkport	TM	X	RC	X	X	X	ST
Kittery	TM	X	DPW	X	X	X	CMM
Lebanon	SB	X	RC	X	X	X	ST
Limerick	SB	X	RC	X	X	X	ST
Limington	SB	X	RC	X	X	X	ST
Lyman	SB	X	RC	X	X	X	ST
Newfield	SB	X	RC	X	X	X	ST
North Berwick	TM	X	RC	X	X	X	ST
Ogunquit	TM	X	DPW & RC	X	X	X	ST
Old Orchard Beach	TM	X	DPW	X	X	X	CMM
Parsonsfield	SB	X	RC	X	X	X	ST
Saco	CM	X	DPW	X	X	X	CMM
Sanford	CM	X	DPW	X	X	X	CMM
Shapleigh	SB	X	RC	X	X	X	ST
South Berwick	TM	X	DPW & RC	X	X	X	CMM
Waterboro	TM	X	DPW	X	X	X	ST
Wells	TM	X	RC	X	X	X	ST
York	TM	X	DPW	X	X	X	ST

CM = City Manager
DPW = Director, Public Works
RC = Road Commissioner
ST = Select Board/Town Meeting
TM = Town Manager
CMM = Councilors/Mayor/Manager
SB = Select Board

A. GENERAL GOALS OF THE PLAN

Through conducting the risk assessment for York County, five key goals of hazard mitigation were identified. These goals respond to the types of losses typically caused by hazards and the usual obstacles to enacting successful hazard mitigation strategies. Although the exact objectives for each hazard category will differ, the overarching goals will remain the same.

The five natural hazard mitigation goals and the reasons for their selection are listed below.

Goal #1: Minimize Damage, Injury, and Loss of Life

York County is at a relatively high risk for extensive damage from disasters due to its combination of extreme weather, substantial development in coastal and floodplain areas, heavy forest cover, and old infrastructure. Large-scale disasters in the past have caused widespread property damage, injury, and loss of life in the county. It is therefore a goal of this hazard mitigation plan to reduce these impacts from future events.

Goal #2: Protect Economic Vitality of Businesses

About 78,236 people work in York County and many of its businesses are vulnerable to substantial damage from hazards. The county's economic health could be greatly damaged by a major disaster. Thus, ensuring that businesses suffer as little economic loss as possible is the second goal of the plan.

Goal #3: Ensure Continuity of County and Local Government Operations

The governments of York County and its 29 towns provide the nearly 211,972 citizens (as well as thousands of seasonal visitors/residents) public safety, human services, and in many communities, water supplies. Since residents and visitors need these basic governmental services to ensure their health and well-being, it is imperative to protect these services from the effects of disasters.

Goal #4: Make Efficient Use of Public Funds for Hazard Mitigation

The State of Maine and the majority of municipal governments in the state are presently facing budget difficulties, thus raising the importance of efficiency in public spending. With this in mind, it is necessary that local and county funds used for hazard mitigation be invested wisely and efficiently.

Goal #5: Raise Public Awareness of and Support for Hazard Mitigation

Many of the mitigation measures against damage from hazards need to be done by individual residents and property owners and will not come as a result of major public investments. Also, the larger public investments that will be needed cannot be undertaken without the support of the public. Raising public awareness will thus be needed for all types of mitigation, large or small.

B. MITIGATION ACTIONS BY GOAL AND OBJECTIVE

In this section the above goals are used to define objectives and specific mitigation actions that respond to each of the five hazard types considered in the mitigation plan. For each goal of the mitigation plan, objectives and specific recommended actions are put forth. Each action is analyzed for its likely effectiveness against a number of criteria to address goals of the plan (Table 1).

The objectives and action steps are organized under each of the five major goal headings. This section concludes with a matrix that displays all of the recommended actions, organized by goal, objective, and hazard type, and includes responsible parties and implementation status (Table 2).

The analysis of each of the mitigation actions was accomplished by using a scoring system with five criteria:

1. Life / Safety – Will it protect lives and/or property from hazard losses?
2. Population Benefited – How many people will benefit from the action?*
3. Probability Community Acceptance – Will the community accept the action or will it face resistance?
4. Probability Funding – How likely will it be to get funding?
5. Feasibility of Implementation – How easy will it be to implement?

For each action, each of these criteria was given a score of 1 to 3 by the planning team, with 3 being the best and 1 being the worst. The total scores for each action were added. The range of scores was from 5 to 15 with a median score of 11.2.

***Use of a cost-benefit analysis.** Local knowledge of the number of persons who could benefit from actions/projects were provided by Local Emergency Directors and others. Most York County communities have tight budget constraints, in virtually all cases involving expenditure of local funds, there will be a very rigorous, line-by-line analysis of cost effectiveness during the budget review process and public discussion.

TABLE 1 - York County Hazard Mitigation Plan: Mitigation Actions Analysis Worksheet

GOAL 1: MINIMIZE DAMAGE, INJURY AND LOSS OF LIFE										
Obj #	**Objectives**	**Action no.**	**Mitigation Actions**	**Life Safety**	**Population Benefited**	**Probability Community Accepts**	**Probable Funding**	**Feasibility of Implement**	**Total Score**	**STATUS**
1.1.	**Discourage future residential and commercial development in hazard-prone areas**	1.1.1.	Conduct detailed local inventories of hazard-prone areas	3	2	2	1	2	10	Revised after DR-354/DR-4367
		1.1.2.	Educate property owners and developers about risks of developing structures in hazard-prone areas	3	3	2	1	3	12	Community meetings held 2017, 2018, and 2019 about development in hazard areas
1.2.	**Improve emergency evacuation routes and plans**	1.2.1.	Develop local evacuation routes and plans	3	3	2	3	3	14	Met with city/towns to establish evacuation zones based on 2016 maps
		1.2.2.	Develop regional evacuation plan	3	3	3	2	3	14	Will develop *after* each city/town has established its evacuation zones
1.3.	**Improve functionality of emergency shelter system**	1.3.1.	Equip more facilities for emergency shelter use – currently researching for adequate facilities and funding required to equip 2 shelters	2	3	3	2	3	13	As planned – we assist locals with locating supplies or equipment needed for emergency shelters; maintained stocks of cots and blankets
1.4.	**Improve post-disaster reporting systems**	1.4.1.	Create countywide post-disaster reporting system	3	3	3	3	3	15	Developed with use of First Responders and CERT Teams
		1.4.2.	Establish volunteer corps of citizen reporters	2	3	3	1	3	12	Planned - can accomplish with First Responders and CERT Teams

GOAL 2: PROTECT ECONOMIC VITALITY OF BUSINESSES										
Obj #	**Objectives**	**Action no.**	**Mitigation Actions**	**Life Safety**	**Population Benefited**	**Probability Community Acceptance**	**Probability Funding**	**Feasibility of Implementation**	**Total Score**	**STATUS**
2.1.	**Ensure that infrastructure is fully restored as quickly as**	2.1.1.	Create and maintain database of critical infrastructure	3	3	3	3	3	15	Completed - We worked with *SMPDC to maintain this data.

	possible after disasters occur	2.1.2.	Enact plans for restoring functionality of priority infrastructure	3	3	3	3	3	15	Completed – We ensured that city/towns have COOP Plans.
		2.1.3.	Offer support services to businesses affected by hazards	3	3	3	3	3	15	Completed - We assisted with any services needed
2.2.	**Encourage owners of commercial properties and businesses to enact mitigation measures**	2.2.1.	Document long-term economic benefits of mitigation	3	3	2	1	3	12	Continued education through LED's; developed public-private partnerships with 14 towns and counting
		2.2.2.	Create and distribute how-to guide for hazard mitigation	3	3	2	1	2	11	Completed - information is available, disbursed locally and added to our website
2.3.	**Ensure that all workers and customers can access businesses**	2.3.1.	Identify high priority commuter routes for protection	3	3	2	1	3	12	Completed – worked with York County communities on evacuation routes
		2.3.2.	Ensure that key transportation routes remain open	3	3	2	2	3	13	Completed – we worked with locals and monitored these routes at all times
		2.3.3.	Maintain a business information hotline for post-disaster periods	2	2	1	1	1	7	No funding – We partner with 211 ME for this service
2.4.	**Maintain security during and after hazard events**	2.4.1.	Develop property security plans for all hazard types	3	3	3	2	3	14	In the planning stages – we educate locals regarding hazards and coordinate with towns
		2.4.2.	Coordinate with local, county and state law enforcement officials	3	3	3	3	3	15	As planned – we continually work with all local authorities, including the Maine State Police

GOAL 3: ENSURE CONTINUITY OF COUNTY AND LOCAL GOVERNMENT OPERATIONS

Obj #	**Objectives**	**Action no.**	**Mitigation Actions**	**Life Safety**	**Population Benefited**	**Probability Community Acceptance**	**Probability Funding**	**Feasibility of Implementation**	**Total Score**	**STATUS**

3.1.	**Enact strict mitigation standards for key public facilities**	3.1.1.	Identify key public facilities	3	3	3	2	2	13	Completed – we worked with SMPDC to maintain this data.
		3.1.2.	Develop minimum standards for public buildings	3	3	3	2	2	13	Defer – State/City/Town responsibility to develop standards or codes
		3.1.3.	Seek financial assistance for public facility mitigation	3	3	3	2	2	13	As planned – continually assist municipalities with funding possibilities; communities applying for BRIC
3.2.	**Develop formal arrangements for sharing of facilities and equipment in case of disasters**	3.2.1.	Create electronic database of countywide inventory of facilities and equipment	3	3	3	2	3	14	Planned – working with LEPC and SMPDC to develop
		3.2.2.	Identify inventory items most at risk for each hazard type	3	3	3	2	3	14	Planned – will identify during development of database
		3.2.3.	Institute procedures for sharing facilities and equipment	3	3	3	2	3	14	Completed – existing MOU's and will develop more
3.3.	**Encourage municipalities to develop, adopt and implement local hazard mitigation plans**	3.3.1.	Provide each municipality with annexes and appendix data from countywide plan	3	3	3	3	3	15	Completed – each city/town adopts and has a copy of the county plan; and updated all community response plans
		3.3.2.	Assist localities with collection of inventory data	3	3	3	3	3	15	Defer to City/Town; local responsibility

GOAL 4: MAKE EFFICIENT USE OF PUBLIC FUNDS FOR MITIGATION

Obj #	Objectives	Action no.	Mitigation Actions	Life Safety	Population Benefited	Probability Community Acceptance	Probability Funding	Feasibility of Implementation	Total Score	STATUS

4.1.	**Protect critical public facilities and services from hazard damage**	4.1.1.	Use critical facilities inventory to identify potential mitigation projects for each hazard type	3	3	2	2	2	12	Discussed at LEPC meetings; planned inventory database; identify ELTS facilities
		4.1.2.	Identify potential funding sources for mitigation projects	3	2	2	1	1	9	Planned after specific projects are identified and costs estimated
		4.1.3.	Establish a central procurement resource for conducting mitigation projects in York Co.	2	1	1	1	1	6	Deferred due to lack of funding
4.2.	**Prioritize hazard mitigation activities by benefit-cost ratios**	4.2.1.	Estimate public costs of mitigation projects	3	2	2	2	2	11	Defer to local Public Works Dept./Rd. Comm.; included in Section 5
		4.2.2.	Estimate potential damage without mitigation measures	3	2	2	1	2	10	Defer to local authorities
		4.2.3.	Compare ratio of public costs to potential damage avoided for potential mitigation projects	3	2	2	2	2	11	Planned - need to be developed over the next few years
4.3.	**Use public funds to limit development of buildings and facilities in hazard-prone locations**	4.3.1.	Identify properties that have suffered repetitive hazard damage	3	3	2	1	2	11	Documented and updated after each disaster event; DR-4367 and DR-4354
		4.3.2.	Acquire high-risk properties in hazard areas	3	2	2	1	2	10	Deferred – local issue and funding dependent
		4.3.3.	Purchase development rights to prevent further development in hazard areas	3	2	2	1	2	10	Deferred – local issue and funding dependent
		4.3.4.	Offer financial incentives to build on sites that are clear of vegetation	1	1	1	1	1	5	Deferred – local issue and funding dependent
4.4.	**Preserve invaluable cultural and historic resources in hazard-prone areas**	4.4.1.	Identify cultural and historic resources in hazard areas	2	2	2	1	2	9	Completed – local authorities and SMPDC identified these resources
		4.4.2.	Enact mitigation projects on properties of cultural and historic importance	3	2	2	1	2	10	Deferred – local initiative and funding dependent
GOAL 5: RAISE PUBLIC AWARENESS OF AND SUPPORT FOR MITIGATION										

Obj #	Objectives	Action no.	Mitigation Actions	Life Safety	Population Benefited	Probability Community Acceptance	Probability Funding	Feasibility of Implementation	Total Score	STATUS
5.1.	**Encourage property owners to undertake voluntary mitigation measures**	5.1.1.	Create and distribute how-to guide for hazard mitigation (same as 2.2.2.)	3	2	1	1	2	9	Completed - information is available, disbursed locally and added to our website; held a series of meetings with locals
5.2.	**Improve visibility and knowledge of evacuation routes and emergency shelters**	5.2.1.	Develop distinctive and uniform signage for evacuation routes	3	2	2	2	2	11	Completed in coastal areas; planned inland improvements
		5.2.2.	Notify residents about locations of nearby emergency shelters and preferred evacuation routes	3	2	2	1	2	10	Defer to locals or 211ME to provide this information in an emergency
5.3.	**Educate children about hazard mitigation**	5.3.1.	Develop hazard mitigation educational materials aimed at children	3	2	2	1	2	10	Completed - information is available, disbursed locally and added to our website

5. MITIGATION STRATEGY – PROJECT LIST

C. PRIORITIZED LOCAL MITIGATION PROJECTS IN YORK COUNTY

Projects listed in priority order: Most municipalities in the County identified one or more action items consistent with the County-wide goals, objectives, and actions, to mitigate hazards at the local level. The jurisdictions, as well as the specific actions they will pursue, are listed in numerical priority order in the following table. The time frames for this five-year plan begin when permitting and funding have been obtained.

Criteria for prioritizing implementation: Each municipality developed a list of local projects separately. Local officials did not use formal, written criteria for the identification of local projects to implement. Local officials relied on common sense, local knowledge of the frequency and extent of local damages, local knowledge of which projects were of the highest priority, based on frequency and severity of damages, local knowledge of the weather, the geography and topography of the community, and the technical and financial abilities of their respective communities to address hazards and mitigate the impacts of hazards.

Use of a cost-benefit analysis: Many of the jurisdictions included in this Plan are small towns run by *part time staff and/or volunteers*. They do not have staff, resources, or funding to prepare cost-benefit analyses for the projects included in this Plan. However, in virtually all cases involving expenditure of local funds for implementation, there will be a very rigorous, line-by-line analysis of cost effectiveness during the budget review process and subsequent public discussion *through regular and special meetings*. This review is at least equal to a formal benefit-cost calculation because each expenditure item will be carefully scrutinized rather than simply being plugged into a formula. Nevertheless, MEMA and the County EMA have made it clear to local officials that a formal cost benefit analysis will have to be prepared in the event they apply for mitigation funding.

Status of completed, deleted, or deferred projects: The following table of projects contains a status column that identifies the completed, deleted, or deferred mitigation projects. For deferred projects, the "status" column lists the reason or reasons that no changes occurred – most commonly, the lack of available funding.

Funding Sources: The major sources of funding of Mitigation Action projects are through local taxes and grants, which are funded by taxes, State and Federal government programs, and/or private donors. Major projects are usually funded by local taxes as much their budgets allow; however, YCEMA and relevant agencies will partner with communities needed alternative funding sources. Some examples of alternative sources include:

- FEMA Hazard Mitigation Assistance (HMA) grant funds
- MEMA Pre-Disaster Mitigation (PDM) grant funds/Hazard Mitigation Grant Program (HMGP) funds/Flood Mitigation Assistance (FMA) grant funds
- MaineDOT local road assistance funds
- Maine Department of Environmental Protection (DEP) culvert grants
- Community Development Block Grant (CDBG) funds
- American Rescue Plan funding for municipalities and York County

Timeline: It is anticipated that all mitigation actions will be implemented, administered, and completed by local officials within the specific amount of time listed under the column "TIMELINE" within the current 5-year planning cycle unless funds are unavailable.

CITY/TOWN		PROJECT LIST - IN PRIORITY ORDER	COST	TIMELINE	RESPONSIBLE AGENT	PROJECT STATUS
Acton	1	All roads in general: survey all culverts - upgrade & resize where necessary including ditching	$150,000	8 mths	Town Mgr	New Project
	2	Peacock Rd. - Ditching, stone ditch and upgrade culverts	$16,000	4 wks	Town Mgr	Completed
	3	Sanborn Rd. - Ditching, stone ditch	$10,000	2 wks	Town Mgr	Completed
	4	Sam Page Rd. - Ditching, stone ditch	$10,000	2 wks	Town Mgr	Completed
Alfred	1	Brackett Hill Rd. - rebuild road base 10,000' X 18' & ditch	$400,000	4 mths	Road Commissioner	Still deferred; lack of funding
	2	Federal Street-Corner of Gile Road - upgrade 4' culvert	$35,000	1 wk	Road Commissioner	New Project
	3	Mouse Lane - upgrade 1,000' of underdrain, ditch & rebuild road base with fabric	$100,000	2 wks	Road Commissioner	New Project
	4	Mountain Rd. - rebuild road base 3,000'	$200,000	3 wks	Road Commissioner	New Project
	5	Carpenter Rd. - ditch 2,500' and add (2) 18" X 30' cross culverts	$9,000	3 wks	Road Commissioner	Completed
	6	Deshon Hill Rd. - ditch 450', upgrade and upsize culverts (12" to 18")	$7,000	2 wks	Road Commissioner	Completed
	7	Federal Street - ditching and upgrade culverts	$10,000	2 wks	Road Commissioner	Planning Phase
	8	Gore Rd. - ditching and upgrade culverts	$10,000	2 wks	Road Commissioner	Planning Phase
	9	Witchers Mills Rd. - ditching and upgrade culverts	$10,000	2 wks	Road Commissioner	Planning Phase
Arundel	1	Downing Rd at Duck Brook - slip line existing 12' 8" X 8' X 55' arch pipe to increase flow capacity	$55,000	4 wks	Road Commissioner	Completed
	2	Continue monitoring community wildfire risk to better inform land use planning as a mitigation action	Dependent on budget	Varied	Fire Department	Ongoing
	3	Continue to monitor road stream crossings for potential drainage issues requiring improved infrastructure, townwide	Dependent on town budget	Varied	Road Commissioner	Ongoing
Berwick	1	Elevate or acquire flood damaged homes	TBD	TBD	Town Mgr. Contractors	Ongoing; no eligible applicants
	2	Wilson St. - upsize existing underground drainage system between Wilson St. and Salmon Falls River	$100,000	4 mths	Road Commissioner	Deferred; still lack funding
	3	Little River Rd. - upsize existing twin 24" x 30' culverts with 60" x 40' elliptical pipe.	$12,000	2 wks	Road Commissioner	Deferred; still lack funding
	4	Adeline Rd. - Add 36" x 40' overflow pipe at brook crossing tying into natural swale	$6,000	2 wks	Road Commissioner	Deferred; still lack funding

Biddeford	1	Granite Point Rd. - elevate road way for 500', expand retaining wall to protect from overflow	$500,000	2 yrs.	Public Works	Planning Phase
	2	Fortunes Rock Rd. - elevate road, raise retaining wall and upgrade culverts	$1,000,000	2 yrs.	Public Works	Planning Phase
	3	Route 111@Maine Turnpike; H&H study to address storm water flooding events, mitigate as needed	$150,000	2 yrs.	MDOT, MTA & Public Works	MTA doing study; seeking funding
Buxton	1	Haynes meadow road culvert replace with large box culvert	$100,000	4 wks	Director	New Project; Planning
	2	Dunnell road replacement and upgrade	$150,000	6 wks	Director	New Project; Planning
	3	Rankin road culverts replaced and upgraded	$100,000	4 wks	Director	New Project; Planning
	4	Skip road culvert replace and upsize	$45,000	2 wks	Director	New Project; Planning
	5	Patten Farm Rd. - upsize existing 6' X 7' X 24' bridge with 10' X 6' X 24' box culvert with headwall	$62,000	6 wks	Road Commissioner	Completed
	6	Back Nippen Rd. - upsize 48" culvert with 60" culvert, elevate roadway 2', geotextile on slopes and rip rap	$14,000	4 wks	Road Commissioner	Completed
	7	Town Farm Rd. - repave roadway and upgrade culverts	$56,000	2 mths	Road Commissioner	Completed
	8	Elden Rd. - ditching, regrade 1525' X 18' roadway and pave. Remove 8 trees, upgrade culverts in roadway and driveways, rip rap pipes	$35,000	2 mths	Road Commissioner	Completed
	9	Henry Hill Rd. - upsize existing culvert & elevate road	$65,000	6 wks	Road Commissioner	Completed
Cornish	1	High Rd. (Rt 25 to School St.) - Drainage project to include 18 catch basins and underdrain	$100,000	6 mths	Road Commissioner	Engineering study complete; project still lacks funding
	2	Roland Day Rd. - elevate 1000' x 3' x 19' and add (3) 24" x 40' culverts	$45,000	4 wks	Road Commissioner	Deferred; seeking funds
	3	Maple St. - Town Hall erosion	$10,000	3 mths	Road Commissioner	New Project
Dayton	1	Hollis Rd. - upgrade/increase # culverts, rip rap, repave	$80,000	8 wks	Road Commissioner	Planning Phase
	2	Hight Rd. - upsize 18' culvert to 24", install rip rap, regrade road	$50,000	5 wks	Road Commissioner	Planning Phase
	3	Dennet Rd. - upsize 18" culvert to 24", install rip rap	$50,000	5 wks	Road Commissioner	Planning Phase
	4	Murch Rd. - upsize culvert, install rip rap, upgrade road surface	$80,000	8 wks	Road Commissioner	Planning Phase
	5	Buzzel Rd - 6 to 8' culvert arch, rip rap	$162,000	8 wks	Road Commissioner	New Project
Eliot	1	Spinney Creek Road: 3 new storm drain basins with covers & grates, all new drainage pipe, and re-do outfall	$75,000	2 wks	Public Works	New Project
	2	Hobbs Circle: 1 new storm drain basin with cover & grate and re-do outfall	$10,000	4 days	Public Works	New Project

	3	Pleasant Street: 700ft riverside embankment erosion repair with erosion stone	$150,000	4 wks	Public Works	New Project
	4	Pleasant St. - Stabilize river bank. Rip rap 30' x 100' x 5' of river bank	$5,000	2 wks	Road Commissioner	Repaired but needs additional work
Hollis	1	Remove Trees and cleaning drainage ditch on Whitten Lane for the DOT Rt. 202 upgrade project	$30,000	Summer 2022	Road Commissioner	New Project
	2	Grind Muddy Brook Road, grade with concrete and pave	$300,000	2022-2023	Road Commissioner	New Project
	3	Tree trimming & ditching as needed to prep for road resurfacing on: Clarks Mills Rd., Wakefield Rd., Pine Crest Development, Landry Drive, Forest Lane, Dennet Road, Crest Wood Circle	Varied	2022-2026	Road Commissioner	New Project
	4	Cape Rd. - upsize 36" culvert to 48", elevate road bed approximately 5', shape slopes, repave roadway	$186,000	4 mths	Road Commissioner	Completed
	5	Burnham Lane - upgrade 4 existing culverts with one 72" culvert, elevate roadway	$53,000	2 mths	Road Commissioner	Completed
	6	Saco Rd. - elevate roadway 2'-3'	$88,000	2 mths	Road Commissioner	Planning Phase
	7	Sand Pond Rd. - elevate 500' X 32" X 22', ditch & line 1200', add (3) 24" X 30' culverts and repave	$25,000	6 wks	Board of Selectmen	Planning Phase; seeking funding
	8	Clark Mills Rd./Glaude Ave. - ditch 700' , reshape and line ditch	$7,000	2 wks	Board of Selectmen	Still deferred
	9	Hailey Rd. - elevate 300' x 3' x 19', upsize 24" culvert to 36" x 30', rip rap intake and outflow & repave	$45,000	4 wks	Board of Selectmen	Still Deferred for lack of funds
	10	Salmon Falls Rd. - upgrade 5 existing culverts	$30,000	2 wks	Board of Selectmen	New Project
Kennebunk	1	Parson Road Bridge replacement	$550,000	2-3 yrs	Public Works	New Project
	2	Boothby Road culvert and elevate road	$500,000	1 yr	Public Works	New Project
	3	Western Ave Culvert and elevate road	$300,000	1-2 yrs	Public Works	New Project
	4	Brown Street Railroad Bridge - increase height/replace	$3,000,000	1-3 yrs	Public Works	New Project
	5	Scottsman Brook Route 1/Main St. - 800' culvert locations	$1,200,000	8 wks	Public Works, Contractor	90% complete; seeking funds for remaining work
	6	Alfred Rd. - culvert and drainage	$400,000	6 wks	Public Works	Deferred until funding available
	7	Gooches Beach - upgrade 1,550' wooden sea wall	$2,325,000	10 wks	Public Works	Partially complete - 700' left: seeking funds
	8	Woodhaven - 4000' underground drainage	$480,000	6 wks	Public Works	Still deferred until funding available

	9	Bayberry Ave. - 6000' underground drainage and catch basins	$720,000	6 wks	Public Works	Still deferred until funding available
	10	Cole Rd. - drainage	$350,000	4 wks	Public Works	New Project; seeking funds
	11	Emmons Rd. - bridge reconstruction and elevation	$1,000,000	8 wks	Public Works	New Project: seeking funds
Kennebunkport	1	Dyke Rd. - elevate 2100' X 3' X 24' and repave	$135,000	8 wks	Public Works	Completed
	2	Kings Hwy. - elevate 2100' X 3' X 21' and repave	$115,000	8 wks	Public Works	Completed
	3	Pier Rd. - stabilize head of cove 200' X 10'	$34,000	4 wks	Public Works	Completed
	4	Pier Rd. Causeway - elevate 25' X 3' X 24' and repave	$18,000	4 wks	Public Works	Still Planning until funding available
	5	Ocean Ave. - elevate 2 sections of road 500' X 3'	$100,000	4 wks	Public Works	Planning Phase
	6	Goose Rocks Rd. - upsize existing 48" X 40' culvert to 72" X 60' elliptical pipe	$24,000	2 wks	Public Works	Planning Phase; seeking funding
	7	Arundel Rd. - elevate road 300' X 3' X 22', repave and add 8' X 50' culvert	$30,000	4 wks	Public Works	Planning Phase; seeking funding
Kittery	1	Intersection of Government and Walker St. - upsize culvert	$30,000	2 wks	Public Works	Completed
	2	Payne Rd. - elevate 700' section of road	$100,000	4 wks	Public Works	Planning Phase - seeking funds
	3	Paine Road - increase elevation by an average of 3' over 13000 linear feet of roadway	$1,500,000	Unknown	Public Works	New Project - seeking funds
	4	Seapoint Road elevation improvement - increase elevation by an average of 6' over 500 linear feet of roadway	$500,000	Unknown	Public Works	New Project - seeking funds
	5	Fort Foster Park - prone to severe weather erosion and damage; should have work done to combat future sea level rise	$1,500,000	Unknown	Public Works	New Project - seeking funds
Lebanon	1	Poplar Hill Rd. - ditch 30,000' and line 2,000' of ditch; upsize (2) 24" X 40' culverts	$85,000	6 wks	Road Commissioner	Still in Planning Phase; seeking funding
	2	Dickson Rd. - ditch 30,000' and line 2,000' of ditch; upsize (2) 24" X 40' culverts	$73,000	6 wks	Road Commissioner	Still in Planning Phase; seeking funding
	3	Shapleigh Rd. - ditch 15,000, upsize 24" X 40' culvert	$33,000	4 wks	Road Commissioner	Still in Planning Phase; seeking funding
	4	Orrills Hill Rd. - upsize culvert	$30,000	2 wks	Road Commissioner	Planning Phase
	5	Union School Rd./Lower Guinea Rd. - upsize culvert	$20,000	2 wks	Road Commissioner	Planning Phase
	6	Upsize culverts - various locations	$15,000	3 wks	Road Commissioner	Planning Phase
Limerick	1	Identify all culverts in town with GPS and identify status	$2,000	2 wks	Road Commissioner	Planning Phase - seeking funding
Limington	1	Mill Turn Rd. - ditch 1,900' with fabric, rip rap including check dams	$23,000	2 wks	Road Commissioner	Planning Phase

	2	River Rd. - ditch 2,000', mitigate with fabric, rip rap including check dams	$26,000	2 wks	Road Commissioner	Planning Phase
	3	Tucker Rd. - Rt. 25 to Lipaline Dr. - ditch, mitigate with fabric, rip rap and upgrade culverts	$11,000	1 wk	Road Commissioner	New Project
	4	Tucker Rd. - from Sage Rd. 1,800' - ditch, rip rap and upgrade culverts	$10,000	1 wk	Road Commissioner	New Project
	5	Boothby Rd.-from Axelsen Rd. to Beaver Berry Rd. - ditch, fabric, rip rap and clear culverts	$15,000	2 wks	Road Commissioner	New Project
	6	Boothby Rd. and Axelsen Rd. intersection - upgrade large culvert, fabric, rip rap	$175,000	2 wks	Road Commissioner	New Project
	7	Douglas Rd. to Merrifield Farm Rd - remove berms, ditch, fabric, rip rap, check dams where needed and upgrade culverts	$13,000	3 wks	Road Commissioner	New Project
	8	Doles Ridge Rd. - from Rt. 117 in 1,800' - ditch, remove berms, fabric, rip rap, check dams and clear all culverts	$8,000	3-4 days	Road Commissioner	Planning Phase
	9	Moody Rd. - from Rt. 117 to Rt. 11 - ditch, fabric, rip rap, check dams and clear all culverts	$15,000	2 wks	Road Commissioner	New Project
	10	Hanscomb School Rd. - remove berms, ditch where needed, rip rap, check dams and fabric as needed. upgrade one cross culvert.	$15,000	8 days	Road Commissioner	New Project
	11	Allen Hill Rd. - from Rt. 11 to Moody Rd. - ditch, rip rap, fabric and upgrade 4 15' X 30' culverts	$18,000	2 wks	Road Commissioner	New Project
	12	Richardson Rd. - ditch, rip rap, fabric and upgrade 4 15' X 30' culverts	$11,000	2 wks	Road Commissioner	New Project
	13	Sedgley Rd. - from Jo Joy Rd. to Limerick line - ditch, remove berms, rip rap, check dams and fabric	$20,000	2 wks	Road Commissioner	New Project
	14	Whaleback Rd. -upgrade 10' x 70' steel culvert, riprap intake and outflow, stabilize banks with geotextile and riprap, ditch 1800' with fabric, riprap and check dams	$95,000	4 wks	Road Commissioner	Completed
	15	Moody Rd. - 850' ditch with fabric, riprap and check dams	$11,000	1 wk	Road Commissioner	Completed
	16	Hanscomb School Rd. - 1200' ditch with fabric, riprap with check dams	$15,000	2 wks	Road Commissioner	Completed
Lyman	1	Old North Berwick Rd. - elevate road, upgrade culverts and ditch	$200,000	6 wks	Public Works	Planning Phase
	2	Clarks Wood Rd. - ditching	$15,000	3 wks	Public Works	Planning Phase
Newfield	1	Lewis Rd. - ditch 600' to include blasting of ledge	$10,000	2 wks	Road Commissioner	Still in Planning Phase - seeking funding
North Berwick	1	Complete all road surveys - upgrade & upsize culverts including ditching	$200,000	10 mths	Road Commissioner	New Project
	2	Hartford Lane - ditch and line 2,000' and add/check dams	$20,000	4 wks	Road Commissioner	Completed

	3	Dyer St. - upgrade underdrain-increase size of storm drainage from 24" to 36" pipes	$25,000	6 wks	Road Commissioner	Completed
	4	Little River Rd. - upgrade 36" culvert with 42" culvert; elevate roadway by 8"	$17,000	3 wks	Road Commissioner	Completed
	5	Fox Farm Hill Rd. - upgrade 18" culvert with 24", ditch, install stone ditch, upgrade (6) driveway pipes - upsizing 12" to 18"	$35,000	5 wks	Road Commissioner	Completed
	6	Lebanon Rd. - upgrade 30" culvert with 42" culvert	$10,000	2 wks	Road Commissioner	Completed
	7	Estes Hill Rd. - ditch and line 2,500' and add/check dams	$25,000	4 wks	Road Commissioner	Discontinued Road - work not needed
Ogunquit	1	Perkins Cove Bridge Rehabilitation	$3,000,000	Varied	Public Works	New Project
	2	Harbor Dredge Project	$2,000,000	Varied	Public Works	New Project
	3	Harbor Slipway and Cradle Replacement	$50,000	Varied	Public Works	New Project
	4	Construction Of Municipal Building	$12,000,000	Varied	Public Works	New Project
	5	Fire Training Site Rehabilitation	$500,000	Varied	Public Works	New Project
	6	Main Beach Parking Lot Resurfacing	$275,000	Varied	Public Works	New Project
	7	Foot Bridge Beach Parking Area Resurfacing	$250,000	Varied	Public Works	New Project
	8	Sterns Road Sidewalks and Reconfiguration	$200,000	Varied	Public Works	New Project
	9	River Road Basin Replacement	$190,000	Varied	Public Works	New Project
	10	Dana Road Basin Replacement	$100,000	Varied	Public Works	New Project
	11	Perkins Cove Sea Wall Repairs	$3,000,000	Varied	Public Works	New Project
	12	Berwick Road Sidewalks	$175,000	Varied	Public Works	New Project
	13	Shore Road Reconstruction (State)	State funds	Varied	State	New Project
	14	Captain Thomas Rd. - upsize 36" X 40' to 60" X 40' and 24" X 40' to 36" X 40' culverts, raise roadway 2-3', repave	$100,000	2 mths	Public Works	Planning Phase – still seeking funding
	15	Kings Highway - upgrade foot bridge with 6' X 40' span	$12,000	4 wks	Public Works	Deferred Action – still seeking funding
Old Orchard Beach	1	Ross Rd. - elevate and widen 700' X 2' X 24', upsize existing 24" culvert with (2) 48" X 40' culverts and repave	$145,000	6 wks	Public Works	In process
	2	Walnut St. - ditch and line 2,000', upgrade sub soil	$22,000	3 wks	Public Works	In process
	3	Drainage Structure (french drain) at (11) different locations - cost is the same for each site	$50,000	12 wks	Public Works	Deferred Action – still seeking funding
	4	West Grand Ave. - install 3,000' underground stormwater system and add (12) catch basins	$500,000	12 wks	Public Works	In process
	5	West Grand Ave. area - conduct hydrologic and hydraulic analysis to assess means to mitigate stormwater related flooding	$28,000	16 wks	Public Works	In process
	6	Milliken St. area - conduct hydrologic and hydraulic analysis to assess means to mitigate stormwater related to flooding	$24,000	16 wks	Public Works	In process

	7	Tripoli Ave. - stormwater improvements	$187,500	16 wks	Public Works	In process
	8	Tunis Ave. - stormwater improvements	$359,500	6 mths	Public Works	In process
	9	Hampton Ave. - stormwater improvements	$187,500	16 wks	Public Works	In process
	10	Roanoke Ave. - stormwater improvements	$187,500	16 wks	Public Works	In process
	11	Puffin St. - drainage system	$48,100	2 mths	Public Works	In process
Parsonsfield	1	Road Between the Ponds - remove pavement, widen road width, upgrade culverts, ditch and repave. Removal of trees and resetting of telephone poles required.	$75,000	6 wks	Road Commissioner	New Project
	2	Lombard Hill Rd - Ditch and line 2,000'	$20,000	3 wks	Road Commissioner	Still Planning Phase - seeking funding
	3	Middle Rd - add gravel, regrade, ditch and line 3,000'	$45,000	3 wks	Road Commissioner	Still Planning Phase - seeking funding
	4	Hasty Rd - ditch and line 2,000'	$20,000	3 wks	Road Commissioner	Still Planning Phase - seeking funding
	5	Devereux Rd - ditch and line 2,000' & upsize culvert to 18' X 36'	$22,000	3 wks	Road Commissioner	Still Planning Phase - seeking funding
	6	Pendexter Rd - upsize culvert to 42" X 36'; raise road elevation 10", add cross culverts as needed, ditch	$25,000	4 wks	Road Commissioner	Still Planning Phase - seeking funding
	7	Benson Rd - add (3) 18" X 32' culverts	$4,000	2 wks	Road Commissioner	Still Planning Phase - seeking funding
	8	Mudget Meadow Rd - upsize (4) culverts to 18" X 36'	$5,000	2 wks	Road Commissioner	Still Planning Phase - seeking funding
	9	Chase Rd - ditch and line 1,000' & add 18" X 36' culvert	$11,000	2 wks	Road Commissioner	Still Planning Phase - seeking funding
	10	Milliken Rd - ditch and line 1,000' & upsize culvert to 42" X 36'	$14,000	2 wks	Road Commissioner	Still Planning Phase - seeking funding
	11	Cross Rd - ditch and line 2,000' & upsize (3) culverts to 18" X 36'	$23,000	3 wks	Road Commissioner	Still Planning Phase - seeking funding
	12	New County Rd - ditch and line 1,000' & upsize culvert to 42" X 36' and add (4) 18" X 36'	$13,000	2 wks	Road Commissioner	Still Planning Phase - seeking funding
	13	Mountain Rd - ditch and line 1,000' & upsize (3) culverts to 18" X 36'	$13,000	2 wks	Road Commissioner	Still Planning Phase - seeking funding
	14	Maplecrest Rd - ditch and line 1,000' & upsize (3) culverts to 18" X 36'	$13,000	2 wks	Road Commissioner	Still Planning Phase - seeking funding
	15	Dearborn Rd - ditch and line 500' & add 18" X 36' culvert	$6,000	1 wk	Road Commissioner	Still Planning Phase - seeking funding
	16	West Rd - add 18" X 36' culvert	$1,500	1 wk	Road Commissioner	Still Planning Phase - seeking funding
	17	Lost Mile Rd - ditch and line 500'	$5,000	1 wk	Road Commissioner	Still Planning Phase - seeking funding
	18	Dutch Rd - ditch and line 1,000'	$10,000	2 wks	Road Commissioner	Still Planning Phase - seeking funding

	19	Chick Rd - ditch and line 1,500'	$15,000	2 wks	Road Commissioner	Still Planning Phase - seeking funding
	20	Stacey Lane - ditch and line 500'	$5,000	1 wk	Road Commissioner	Still Planning Phase - seeking funding
	21	Arthur Morrill Rd - ditch and line 500'	$5,000	1 wk	Road Commissioner	Still Planning Phase - seeking funding
	22	Bob Day Rd - ditch and line 1,000'	$10,000	2 wks	Road Commissioner	Still Planning Phase - seeking funding
	23	Smith Rd - ditch and line 1,000'	$10,000	2 wks	Road Commissioner	Still Planning Phase - seeking funding
	24	Pratt Rd - ditch and line 1,000'	$10,000	2 wks	Road Commissioner	Still Planning Phase - seeking funding
	25	Woodward Rd - ditch and line 500'	$5,000	1 wk	Road Commissioner	Still Planning Phase - seeking funding
	26	Hobbs Swamp Rd - ditch and line 500'	$5,000	1 wk	Road Commissioner	Still Planning Phase - seeking funding
	27	Stagecoach Rd - ditch and line 500'	$5,000	1 wk	Road Commissioner	Still Planning Phase - seeking funding
	28	Kezar Mountain Road - regravel road, ditch and line 5,000' rt & lt & upsize (3) culverts to 18" X 36'	$35,000	4 wks	Road Commissioner	Still Planning Phase - seeking funding
	29	Long Pond Rd - removal of roughly 200 lf of ledge, widen road, reshape ditches, pave widened portion	$55,000	8 wks	Road Commissioner	Still Planning Phase - seeking funding
	30	Joe Berry Rd - regravel, reshape and ditch 1,800' of roadway	$35,000	4 wks	Road Commissioner	Still Planning Phase - seeking funding
Saco	1	York County Emergency Shelter - install french drain 500' & install redundant sump pump in basement	$18,000	3 wks	Public Works	Completed
	2	Route 1 - clean & improve 1,000' ditch line S of Route 1	$3,000	1 wk	Public Works	Deferred Action –still seeking funding
	3	Heath Rd. - install underground drainage 18" X 500', rip rap	$15,000	4 wks	Public Works	Completed
	4	Ocean Park Rd. - upgrade aging undersized drainage system to remove barrier to natural flow volumes	$250,000	8 wks	Public Works	Completed
	5	Cleveland St. and Summer St. – mitigate current surface flooding by upsizing pipe system/improve channel flow	$100,000	4 wks	Public Works	Completed
Sanford	1	Gowan Park Drive – upsize (2) 24” X 40’ cmps to 36” X 40’ cmps, elevate 500’ X 3’ X 24’ and repave	$32,000	4 wks	Public Works	Still Planning Phase - seeking funding
	2	Walnut Brook/Twombly Rd – upsize and realign existing 18” X 40’ culvert with 30” X 150’ culvert	$22,000	3 wks	Public Works	Completed
	3	Rosenfield Development – install (10) catch basins & 2,000’ X 24”, 48’ X 1,200’ underground drainage	$205,000	8 wks	Public Works	Removed from list – deemed impractical
	4	North St – install (10) catch basins & upsize 12” X 600’ to 18” X 600’ underground drainage	$127,000	8 wks	Public Works	Still deferred – seeking funding
	5	Cottage Street (North Ave to Island Ave) upgrade culverts	$25,000	4 wks	Public Works	Design Phase

	6	Mousam Way Trail – upgrade granite culvert to either box culvert or metal arch	$35,000	4 wks	Public Works	Planning Phase
	7	Stiles Ave/Howard St - upsize twin 36" X 150' rcp with 50" x 150' rcp	$29,000	3 wks	Public Works	Still Planning Phase - seeking funding
	8	Deering Neighborhood Rd - upsize 18" to 36" x 150' culvert and repave 8' X 40'	$21,000	3 wks	Public Works	Completed
	9	Sam Allen Rd - upsize culvert to either box culvert or pipe arch	$35,000	2 wks	Public Works	Completed
	10	Whiches Mills Rd - upsize and realign existing 50" x 40' culvert with 60" x 60' culvert	$14,000	2 wks	Public Works	Still Planning Phase - seeking funding
	11	Sacopee Rd - site 1: upsize existing 48" X 40' culvert with 6' X 4' X 40' box culvert	$30,000	4 wks	Public Works	Completed
	12	Sacopee Rd - upsize existing 18" X 40' cmp with 24" X 40' culvert & add additional 18" X 40" culvert approx. 500' from existing pipe	$4,000	2 wks	Public Works	Completed
	13	Horace Mills Rd/Sam Allen Rd - install (2) 18" X 40' culverts, ditch 800'	$4,800	2 wks	Public Works	Still Planning Phase - seeking funding
	14	Bernier Rd - bridge upgradement	$250,000	8 wks	Public Works	New Project
	15	Pioneer Avenue Drainage - upgrade existing spiral PVC culvert with HDPE	$250,000	4 wks	Public Works	New Project
	16	Bradeen Street Drainage - upgrade storm drains and increase culvert from 8" to 12" minimum	$225,000	4 wks	Public Works	New Project
	17	Hay Brook Bridge on Bernier Road	$250,000	8 wks	Public Works	New Project
Shapleigh	1	Culvert program - upsize & resize culverts, add lead-in ditching and stonework where necessary	$120,000	11 mths	Road Commissioner	New Project
South Berwick	1	Clarks Lane (Quamphagan Brook Watershed) - perform H & H study to correct runoff flooding to driveways near Marshwood High School	$30,000	3 wks	Contractor	Still Planning Phase - seeking funding
	2	Thrurrell Rd - elevate 800' X 22' X 8' stabilize banks and add relief culverts as needed, repave	$100,000	8 wks	Public Works	Still deferred; lack of funds
	3	Emery's Bridge Rd @ White Marsh - upsize culvert and raise road bed	$600,000	n/a	Public Works	Still deferred; lack of funds
	4	Lower Main St - upgrade drainage system	$100,000		Public Works	Planning Phase
	5	Belle Marsh Rd - ditch 1,000'	$2,500	1 wk	Public Works	Still Planning Phase - seeking funding
	6	Pond Road by Love's Brook - elevate road 2' X 1,000' to reduce flooding hazard		n/a	Public Works	Completed with 406 mitigation from DR1693
	7	Hopper Sands Rd along Great Works River - buy out house and restore site	$150,000	5 mths	Town Manager	Still deferred; lack of funds
Waterboro	1	Survey culverts and improve ditching & stonework; upsize & upgrade old culverts	$254,000	1 year	Road Commissioner	New Project

	2	Chadborn Hill Rd - ditch and line 300' or roadway	$3,000	1 wk	Road Commissioner	Completed
	3	Chadborn Hill Rd - reset lower and rip rap intake and outfall (3) 15" X 40' culverts	$2,500	1 wk	Road Commissioner	Completed
Wells	1	Coles Hill Rd - install 48" X 40' smoothbore overflow culvert, or as determined by H&H study	$6,000	1 wk	Public Works	Still Planning Phase; seeks funding
	2	Post Rd @ Cozy Corner @ Merriland River - upgrade existing concrete structure with a wider taller structure, raise Rt. 1 and Rt. 9 travel way	$1,200,000	1 year	Public Works & Contractor	Planning Phase - seeking funding
	3	Bragdon Rd @ Merriland River - upsize culvert and elevate roadway	$35,000	4 wks	Public Works	Planning Phase
	4	Deerwood Park - improve drainage and create retention structures	$281,482	4 mths	Public Works	HMGP 1953 Completed 2012
	5	Furbish Rd - elevate roadway	$125,000	4 mths	Public Works	Planning Phase
	6	Bald Hill Rd - upsize culverts and elevate roadway	$56,000	4 mths	Public Works	Completed
	7	Wire Rd - improve drainage	$20,000	4 wks	Public Works	Planning Phase
York	1	Payne Rd - upsize culverts on Kittery/York line	$100,000	2 mths	Public Works	New Project
	2	Sentury Hill/York St - drainage improvement	$100,000	3 mths	Public Works	Still in Planning Phase
	3	Greenleaf Parsons Rd - upsize existing culvert with larger box style culvert	$200,000	1 mth	Public Works	Capital Plan FY23
	4	Pine Hill Rd at Teeny Brook - upsize culvert	$25,000	2 wks	Public Works	Completed
	5	Shore Rd (Keyes Pond to Ogunquit) - line drainage system, upgrade and upsize capacity	$75,000	2 wks	Public Works	Still in Planning Phase
	6	Winterbrook Drive Development - drainage improvements, upsize system and crossings	$225,000	3 mths	Public Works	Still in Planning Phase - Partially Funded
	7	Long Beach Ave/Sea Rose Lane - outfall culvert upgradement - Outflow J	$500,000	6 mths	Public Works	Completed
	8	Long Beach Ave/Anchorage Motel Drainage Improvement - Outflow L	$350,000	6 mths	Public Works	Completed
	9	Mitchell/Ridge Rd - drainage system upgrade	$450,000	6 mths	Public Works	Completed
	10	Main Street/Bayhaven - Drainage improvement	$750,000	3 mths	Public Works	Completed
	11	York Village Square - drainage improvements, upsize system and crossings	$175,000	1 mth	Public Works	KACTS Project MDOT Plan 2021-2023
	12	Rte. 91/Bean Hollow Crossing pipe - upgrade and enlarge pipe and drainage improvements	$125,000	3 mths	Public Works	Completed
	13	Seabury Rd - culvert enlargement and improve drainage near Carwin Lane	$20,000	2 wks	Public Works	Town Funded

	14	Broadway Ave Drainage System Improvements - Outflow G2 in Town Plan	$900,000	6 mths	Public Works	Still in PE Stage
	15	York St (cont. Long Beach Ave) - drainage system upgrade - Outflow P in town plan	$450,000	6 mths	Public Works	Town Funded - 2015 Construction
	16	Birch Hill Rd @ Shorey's Swamp - upgrade box culvert with (2) 4' culverts	$290,000	1 mth	Public Works	Completed
	17	Orchard Farm/Greenacre Drive Development - drainage improvements, upsize culverts and crossings	$125,000	3 mths	Public Works	Completed
	18	Little River Drainage Canal - cleaning of debris Rt. 95 to the sea - flows into Outflow O	$50,000	1 mth	Public Works	Completed
	19	Pine Hill Rd @ Jade Lane - drainage improvement	$50,000	2 wks	Public Works	Completed
	20	Shore Rd (near Cliff House) - upsize culvert from 18" to 30"	$8,000	1 wk	Public Works	Completed
	21	Agamenticus Ave (South Side) - install collection pool and new 18" culvert to divert water coming down hill	$19,000	2 wks	Public Works	Completed
	22	York Beach Square (Commercial District drainage system upgrade) - Penstock 2 separate projects - Outfall G1 in town plan	$2,500,000	6 mths	Public Works	Completed
	23	Long Beach Ave (northern end by Cutty Sark Motel) - drainage system upgrade - Outflow 1 in town plan	$350,000	8 mths	Public Works	Completed
	24	Ridge Rd (at Spring Point Estates) upgrade and size culverts - flows into Outflow K	$25,000	2 wks	Public Works	Completed
	25	Barrel Lane (between Rt. 1A & Rt. 103) Drainage System Upgrade - Outflow R in Town Plan	$280,000	6 mths	Public Works	Completed
	26	Roaring Rock Road - Upsize to 12" X 200' with 36" X 200' culvert	$35,000	6 wks	Public Works	Completed
	27	York St/Raydon Rd - upsizing of existing culvert cross culvert system	$25,000	1 wk	Public Works	Completed
	28	Reserve St/Sea Rose - parallel drainage system upgrade	$150,000	1 mth	Public Works	Completed
	29	North Berwick Rd - add additional 4' culvert	$10,000	1 wk	Public Works	Completed
	30	Logging Road - drainage improvements; enlarged culvert system	$25,000	3 mths	Public Works	Completed
	31	Birch Hill Rd/Emos Way - upsize 2' to 3' and add additional 2' overflow with present 3' culvert	$10,000	1 wk	Public Works	Completed

Identification and Analysis of Mitigation Actions: National Flood Insurance Program (NFIP Compliance	
Requirement §201.6(c)(3)(ii): (The mitigation strategy) must also address the jurisdiction's participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.	
Elements	**A.** Does the new or updated plan describe the jurisdiction's participation in the NFIP?
	B. Does the mitigation strategy identify, analyze and prioritize actions related to continued compliance with the NFIP?

D. ALL MUNICIPALITIES WITHIN YORK COUNTY PARTICIPATE IN NFIP. BELOW ARE THE CID # AND PROGRAM DATES.

Municipality	CID #	Program Date	CRS Class & Current Effective Date
Acton, Town of	230190	6/5/1985	
Alfred, Town of	230191	7/16/1990	Class 8 – 10/1/1993
Arundel, Town of	230192	4/1/1987	
Berwick, Town of	230144	8/5/1991	
Biddeford, City of	230145	5/15/1984	
Buxton, Town of	230146	7/5/1982	
Cornish, Town of	230147	3/18/1980	
Dayton, Town of	230148	12/28/1998	
Eliot, Town of	230149	6/5/1989	
Hollis, Town of	230150	7/19/1982	
Kennebunk, Town of	230151	1/19/1983	
Kennebunkport, Town of	230170	4/18/1983	
Kittery, Town of	230171	7/5/1984	
Lebanon, Town of	230193	9/13/2002	
Limerick, Town of	230194	2/1/1985	
Limington, Town of	230152	4/1/1982	
Lyman, Town of	230195	5/15/1991	
Newfield, Town of	230196	6/5/1985	
North Berwick, Town	230197	2/1/1985	
Ogunquit, Town of	230632	7/5/1983	Class 8 – 5/1/2003
Old Orchard Beach, Town of	230153	7/5/1984	Class 7 – 5/1/2020
Parsonsfield, Town of	230154	12/18/1979	
Saco, City of	230155	1/5/1984	Class 8 – 10/1/1999
Sanford, Town of	230156	3/4/1985	
Shapleigh, Town of	230198	8/5/1985	
South Berwick, Town	230157	6/5/1985	Class 7 – 10/1/2015
Waterboro, Town of	230199	2/1/1985	
Wells, Town of	230158	7/5/1983	Class 10 – 10/1/2011
York, Town of	230159	12/15/1983	Class 7 – 10/1/2017

CRS data source: Table 3 – FEMA October 2021 Community Rating System Report

All 29 municipalities in York County participate in the National Flood Insurance Program (NFIP). Seven communities go beyond the NFIP's minimum standards for floodplain management and participate in the Community Rating System (CRS). Discounts may be available on flood insurance premiums for policy holders in those communities.

York County Flood Insurance Information as of May 2021:

- Number of Policies: 3,300
- Total Coverage: $874,431,000
- Total Premium: $3,094,842
- Claims since 1978: 2,227
- Total Paid to Claims since 1978: $21,266,828

All communities in York County participate in NFIP through enforcement of municipal floodplain ordinances, regulating construction in Special Flood Hazard Areas, and identification of non-compliant structures. The following communities, due to their coastal proximity, strictly enforce their floodplain ordinances and management planning: Old Orchard Beach, Saco, Biddeford, Kennebunkport, Sanford, Kennebunk, Wells, Ogunquit, York, and Kittery. Seven communities participate in the Community Rating System.

Since only FEMA has the authority to implement Flood Insurance Rate Map (FIRM) changes, the communities and the county will identify updates, errors, or omissions and recommend needed changes based on continued sea level rise and changes in the county.

E. REPETITIVE LOSS PROPERTIES

Assessing Vulnerability: Addressing Repetitive Loss Properties	
Requirement §201.6(c)(2)(ii): (The risk assessment) must also address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged (by) floods.	
Element	B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))

The NFIP maintains a file of repetitive loss properties (properties that have experienced more than one flood loss). The FEMA definition of Repetitive Loss Property is: a repetitive loss property is a structure covered by a contract for flood insurance made available under the NFIP that:

(a) Has incurred flood-related damage on 2 occasions, in which the cost of the repair, on average, equaled or exceeded 25 percent of the market value of the structure at the time of each flood event; and

(b) At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage.

The following table is a summary of the repetitive loss properties by each municipality.

York County Repetitive Loss Properties 2021						
City or Town	Residential		Non-Residential		Total Properties	Total Losses
	# of properties	# of losses	# of properties	# of losses		
ACTON	2	8	0	0	2	8
ARUNDEL	1	2	0	0	1	2
BERWICK	1	2	1	2	2	4
BIDDEFORD	4	8	0	0	4	8
BUXTON	1	2	0	0	1	2
DAYTON	1	2	0	0	1	2
KENNEBUNK	19	57	2	6	21	63
KENNEBUNKPORT	6	13	4	20	10	21
KITTERY	2	5	1	3	3	8
OGUNQUIT	2	5	6	18	8	23
OLD ORCHARD BEACH	7	18	1	2	8	20
SACO	16	49	1	3	17	52
SANFORD	2	5	1	3	3	8
SOUTH BERWICK	4	13	0	0	4	13
WELLS	12	28	0	0	12	28
YORK	13	27	8	26	21	53
TOTALS:	**93**	**244**	**25**	**83**	**118**	**315**

York County Severe Repetitive Losses 2021						
City or Town	Residential		Non-Residential		Total Properties	Total Losses
	# of properties	# of losses	# of properties	# of losses		
KENNEBUNK	2	9	0	0	2	9
KENNEBUNKPORT	0	0	2	15	2	15
OLD ORCHARD BEACH	1	2	0	0	1	2
SACO	1	4	0	0	1	4
SOUTH BERWICK	2	9	0	0	2	9
WELLS	2	9	0	0	2	9
YORK	4	14	3	11	7	25

Source: NFIP Program

6. PLAN MAINTENANCE PROCEDURES

Monitoring, Evaluating and Updating the Plan	
Requirement §201.6(c)(4)(i): (The plan shall include a plan maintenance process that includes) a section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.	
Elements	A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))

A. MONITORING THE PLAN

During the five year life cycle of the Plan, the York County EMA will monitor its progress through monthly meetings with local officials, after any severe storm event, or after a federally declared disaster. Prior to the start of the update process, the York County EMA will distribute a survey form to each of the 29 Local EMA Directors in the county. This form will ask each director to comment on how their community has or has not implemented the Plan's objectives. The EMA will take the individual municipal results and compile an Evaluation Summary that will be distributed to the officials and the Local Emergency Directors of each community. The EMA also intends to work with MEMA officials and SMPDC in periods following disasters to better understand how the region can mitigate future damages to roads, critical facilities, residential structures and businesses.

B. EVALUATING THE PLAN

Between the third and fourth year of the five-year planning cycle, the York County EMA will convene a meeting of the Hazard Mitigation Planning Team to review the effectiveness of the risk assessment and strategy sections of the Plan to determine if this information should be updated or modified, and if additional hazards should be profiled. The Planning Team will also review the County EMA's status report on implementation, as well as each mitigation action to determine its continued relevance to changing situations and land developments in the County, as well as changes in Federal or State policy, and to ensure that each action is addressing current and expected conditions.

C. UPDATING THE PLAN

At the beginning of the fourth year of implementation of this Plan, the County EMA will convene a meeting of the local EMA Directors, who will serve as liaisons to other municipal staff and officials. Based on the evaluation of the Plan, proposed updates will be prepared for the following five-year period. The County EMA and the County Hazard Mitigation Planning Team will rely on EMA Directors for input, as well as public input obtained through public workshops, meetings, social media, mailings, and phone-in meetings. Proposed changes to the Plan will be submitted to the Maine Emergency Management Agency for initial review and then to the Federal Emergency Management Agency for review and approval pending adoption.

Incorporation into Existing Planning Mechanisms	
Requirement §201.6(c)(4)(ii): (The plan shall include a) process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, where appropriate.	
Elements	C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))

A. Identification of local planning mechanisms.

County government is very limited in scope and authority in the State of Maine and does not have the staff or fiscal capabilities to control planning or development within municipalities. In Maine, most government authority is derived from State statutes and rules and with municipal "Home Rule" ordinances.

Municipalities in York County have already incorporated strategies recommended by or consistent with this Plan into local planning mechanisms as discussed below. By adopting this plan, each community, as well as York County, is agreeing to continue implementation of strategies aimed at mitigating hazards identified in this Plan. Participating jurisdictions have a variety of planning and regulatory mechanisms for managing land use at the local level, thereby minimizing the exposure of future development to natural hazards.

There are a total of 29 municipalities in the County. Available planning mechanisms at the municipal level involving hazard mitigation include:

- Local flood plan management – All communities in York County are in the NFIP and have adopted ordinances for managing development in flood-prone areas
- Shoreland zoning – All communities in York County are required to have a shoreland zoning ordinance, whether adopted by the municipality or imposed by the Maine DEP
- Local comprehensive plans (most of the municipalities have adopted comprehensive plan although updates are more difficult for smaller communities with fewer resources)
- Capital improvement plans (some of the larger municipalities have capital improvement plans; most of the smaller ones do not)
- Road maintenance planning efforts
- Emergency management and mitigation planning
- Fire prevention planning and coordination, including participation in mutual aid agreements, training and exercises
- Grant writing (some of the County's municipalities have been active in applying for grants to address municipal priorities).

There were very few ordinance-related mitigation measures identified by the York County Hazard Mitigation Team. The majority of the mitigation measures that were identified, and all of the actions selected by individual communities are either structural, public educational, or emergency planning measures.

B. Process for incorporating mitigation strategies and related information into local planning mechanisms.

County government does not have the authority to control local planning mechanisms. However, the County EMA Director can provide information to local units of government, as well as technical assistance.

Following approval of the Plan by FEMA, the County EMA will send a copy to all municipalities in the County with a recommendation that local comprehensive planning efforts, municipal road maintenance planning efforts, emergency management programs and local fire prevention programs will be utilized to their greatest extent to complete the community's mitigation measures.

The County EMA Office will assist the municipal officers in implementing their selected mitigation measures. The County EMA Office will also continue to assist municipalities with the completion of FEMA Hazard Mitigation Assistance (HMA) grant applications for cost beneficial projects.

C. Explanation of how local governments incorporated strategies and other information.

In addition to the planning mechanisms described on the previous page, the County EMA and all municipal EMAs have continued to encourage local governments to integrate the requirements of this Plan into their planning mechanisms and advise their respective jurisdictions on pending hazard events, such as winter storms, as well as posted public service announcements on its website as well as in public locations such as municipal offices.

The County EMA has notified municipal EMAs and local officials of hazard mitigation workshops such as those related to the Pre-Disaster and Hazard Mitigation Grant programs, and workshops with hazard mitigation content such as those sponsored by Maine's Local Roads Center that deal with the use of geo-textiles.

For information of hazard events, posted public announcements and/or workshops, visit York County's EMA website at: https://www.yorkcountymaine.gov/emergency-management

The cities of Biddeford and Saco, and the Town of Old Orchard Beach are working cooperatively to address the impacts of sea level rise informed by the Risk Assessment and Mitigation Strategy component of this Plan. They have formed the Sea Level Adaptation Working Group (SLAWG) for the purpose of developing and implementing regional climate change adaptation strategies, to respond to rising sea levels and to become more resilient to coastal storms.

The Regional Sustainability and Resilience Program[1] was established in 2019 when the towns of Kittery, Kennebunk, Kennebunkport, Ogunquit, Wells, and York sought to create a regional program to support their individual sustainability and coastal resiliency efforts to further the

[1] Regional Sustainability and Resilience Program: https://www.kennebunkmaine.us/DocumentCenter/View/10791/Regional-Sustainability-and-Resilience-Program--PowerPoint-SB-Mtg-2020-09-08

goals in this Plan. Managed by the Southern Maine Planning and Development Commission (SMPDC), the two-year pilot program works to foster more sustainable and resilient communities by leveraging regional collaboration to enhance the effectiveness of local government action.

According to FEMA's October 2021 Community Rating System reports, there are seven towns in York County that participate in the National Flood Insurance Program's Community Rating System (CRS). CRS is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. These communities must continue to implement its credited activities to keep its CRS classification.

Community Number	Community Name	Current Class
230191	Alfred, Town of	8
230632	Ogunquit, Town of	8
230153	Old Orchard Beach, Town of	7
230155	Saco, City of	8
230157	South Berwick, Town of	7
230158	Wells, Town of	10
230159	York, Town of	7

D. CONTINUED PUBLIC INVOLVEMENT

Continued Public Involvement	
Requirement §201.6(c)(4)(iii): (The plan maintenance process shall include a) discussion on how the community will continue public participation in the plan maintenance process.	
Elements	A5. Is there a discussion on how the communities will continue public participation in the planning process?
	A6. Is there a description of the method and schedule for keeping the plan current…monitoring, evaluating, updating…

A. Public participation.

York County is committed to involving the public directly in the continued reshaping and updating of the Hazard Mitigation Plan. The Hazard Planning Team is responsible for reviewing and updating the Plan. Although the members of the Planning Team represent the public to some extent, all meetings will continue to be open to the public for opportunities to comment on and provide meaningful input on the Plan.

Copies of the Plan will be issued to the municipal Emergency Management Directors and kept on hand at all participating municipal offices in the County. The County EMA Office will post the Plan on its website. The Plan will include the address and phone number of the York County EMA Office that is responsible for keeping track of public comments on the Plan.

The York County EMA Office will also provide a public comment period at each meeting of the Hazard Mitigation Team. The purpose of the public comment period is to provide a public forum for input. The York County EMA Office will be responsible for providing public notice for each meeting of the Hazard Planning Team, for hosting the meeting, and for including information about the public comment period.

In York County, hazard mitigation is more than a written plan. It is woven into the overall efforts to have more resilient communities through a variety of means:

- Having and maintaining an active presence through its website and social media
- Maintaining and updating its communications systems
- Working with its Regional Planning Commission
- Sharing its meeting space with local officials
- Continuing to work with other counties in outreach efforts
- Working with student interns to survey our communities

B. Keeping the plan current.

See discussion on page 6-1 for monitoring, evaluating, and updating the plan.

York County, Maine Hazard Mitigation Plan 2022

APPENDIX A

1. 08/15/18 – Disaster & Mitigation Planning Meeting and Sign-in Sheet

2. 11/13/19 – Local Directors Meeting and Sign-in Sheet

3. 06/11/20 – Local Directors/Community Update Meeting and Zoom Participant list

4. 06/14/21 – Local Directors/Community Update Meeting and Zoom Participant list

5. 07/08/21 – Local Directors/Community Update Meeting and Zoom Participant list

6. 11/18/21 – Local Directors/Community Update Meeting and Zoom Participant list

7. 02/09/22 – Local Directors/Community Update Meeting and Zoom Participant list

8. 03/16/22 – Local Directors/Community Update Meeting and Zoom Participant list

9. University of New England – Emergency Preparedness Survey

10. Municipal Risk Assessment Maps: Flood, Storm Surge, Wildfire Risks and Community Assets

York County Emergency Management Agency
149 Jordan Springs Road
Alfred, Maine 04002
(207) 324-1578
(207) 324-4997 Fax

YORK COUNTY EMA
DISASTER & MITIGATION PLANNING
EMA MEETING/TRAINING ROOM
August 15, 2018

1. Welcome
2. York County EMA Updates
3. Preparedness Overview
4. Disaster Damages and Recovery
5. Common Mitigation Procedures
6. Hazard Mitigation Plan Updates
7. HMP Utilization
8. Grant Funding Opportunities Local Emergency Director Updates & Issues
9. Question and Answer Period
10. Adjourn meeting

Director

David Francoeur, CEM-ME
Chief Planning and Recovery

Blain A. Cote, CEM-ME
Chief Operations

8.15.18

EVENT Name: DISASTER + MITIGATION PLANNING Sign In Sheet 1 of 2

	Date	Name (Please Print)	Signature	Representing	Travel Time (Round Trip in Mins)	Time In	Time Out
1	8/15/18	Anne Fuchs		MEMA	3 hrs	8:30a	
2	8/15/18	Mike Ward		Limerick emg	30 min	8:48	
3	"	Jay Clement		US Army Corps of Engineers	40 min	9:40	
4	"	Colin Greenan		" "	2hrs	9:40	
5		PAUL GREEN		Town of Wells DPW	30 min	9:44	
6	"	CAROL MURRAY		" " "	30 min	9:44	
7	8/15	CRAIG SANFORD		KENNEBUNKPORT	40	9:45	
8	8/15	DAVID R. BEUTOOS		TOWN OF WATERBORO	15 Min	9:47	
9	8/15	Jason R Hall		Town of Ogunquit	20 min	9:50	
10	8/15	Robert Perschy		Town of Berwick PW	30 min	9:50	
11	"	DAVID RICCIO		TOWN OF OGUNQUIT	30 MIN	9:50	
12		ROGER HOOPER		CUMBERLAND	15 m	8:50	
13	08/15	Roger E Green		Wells Fire	20	0950	
14	8/15	Patrick Fox		City of Saco	30 min	9:50	

Federal Employees Please Note: Signing this roster confirms that you are aware that the value of any meals received in conjunction with this event must be deducted from your per diem expense reimbursement request.

Art Cleaves
Director

David Francoeur, CEM-ME
Chief Planning and Recovery

Blain A. Cote, CEM-ME
Chief Operations

8.15.18

EVENT Name: DISASTER + MITIGATION PLANNING Sign In Sheet 2 of 2

	Date	Name (Please Print)	Signature	Representing	Travel Time (Round Trip in Mins)	Time In	Time Out
1	8/15/18	Darcy Rogers		Shapleigh EMA	20 min	9:53	14:30
2	8/15/18	Jeff Demers		Biddeford	20 MIN	9:58	
3	8/15	GARY EATON		KITTERY	90	9:55	
4	8/15	Nancy LeBrun		Sanford	10 min	9:55	
5	8/15	Bill Tower		SANFORD	10 min	9:55	
6	8/15	STAN HACKETT		LIMINGTON	30 MIN	9:45	
7	8/15	Marcus Tate		FEMA		9:00	
8	8/15	CHRIS OSTERRIEDER		TOWN OF KENNEBUNK	20 MIN	10:00	
9	8/15	BILL SCHMID		FEMA			
10	8.15	Laurie Ewing		YCEMA			
11	8-15	Blain Cote		SBEMA	40	1000	
12							
13							
14							

Federal Employees Please Note: Signing this roster confirms that you are aware that the value of any meals received in conjunction with this event must be deducted from your per diem expense reimbursement request.

York County Emergency Management Agency
149 Jordan Springs Road
Alfred, Maine 04002
(207) 324-1578
(207) 324-4997 Fax

YORK COUNTY EMA
LOCAL DIRECTORS MEETING
EMA MEETING/TRAINING ROOM
November 13, 2019

1. Welcome
2. York County EMA Updates
3. RAVE Overview – Blain Cote
4. Winter Storm Preparedness
5. Hazard Mitigation Plan Update – Laurie Ewing
6. Local Emergency Director Updates & Issues
7. Questions and/or Concerns
8. Next meeting date
9. Adjourn meeting

Arthur W. Cleaves
EMA Director

YORK COUNTY EMA
Government Building
149 Jordan Springs Road
Alfred, ME 04002

Date: 11.13.19 | EVENT: Local Directors Meeting | SIGN-IN SHEET | 1 OF 2

	Date	Name (Please Print)	Signature	Representing	Travel Time (Round Trip in Mins)	Time In	Time Out
1	11/13	Michael Ward	Michael Ward	Limerick	40 mi	12:40	
2	11/13	Roby Fecteau		Biddeford	20	12:40	
3	11/13	Tim Gagne		Biddeford	20	12:40	
4	11/13	DICK GAUDREAU		YCEMA	15	12:40	
5	11/13	George Rami's		MFS	120	1240	
6	11/13	CRAIG SANFORD	C. A. L	KENNEBUNKPORT	30	12:45	
7	11/13	BILL CATANESE		YCEMA	40	12:45	
8	11/13	DonaW Dunn A		VWS	1hr	12:46	
9	11/13	Steve Jacobs		YCEMA			
10	11/113	Darren Rogers		Shapleigh EMA	20 min	12:44	
11	11/13	Roger Harper		~~Shapl~~ YCE	1 m.	1247	
12	11/13	Rev. Shirley Bowen	Rev Shirley Bowen	YCEMA	1 hr	12:47	
13	11/13	Bill Roberts	Bill Roberts	Buxton	35	1254	
14	11/13	Marlon Shapiro		ARC			

Federal Employees Please Note: Signing this roster confirms that you are aware that the value of any meals received in conjunction with this event must be deducted from your per diem expense reimbursement request.

Arthur W. Cleaves
EMA Director

YORK COUNTY EMA
Government Building
149 Jordan Springs Road
Alfred, ME 04002

Date: 11.13.19 | EVENT: Local Directors Meeting | SIGN-IN SHEET | 2 OF 2

	Date	Name (Please Print)	Signature	Representing	Travel Time (Round Trip in Mins)	Time In	Time Out
1	11/13	Steve Connell		MAD		1Pm	
2	11/13	GLAZEBROOK, DAVID		PNSY	90	1300	
3	11/13	PJ Tangney		Dayton	90	1250	1500
4	11/13	Laurie Ewing	Laurie Ewing	YCEMA			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							

Federal Employees Please Note: Signing this roster confirms that you are aware that the value of any meals received in conjunction with this event must be deducted from your per diem expense reimbursement request.

York County Emergency Management Agency
149 Jordan Springs Road
Alfred, Maine 04002
(207) 324-1578
(207) 324-4997 Fax

YORK COUNTY EMA
LOCAL DIRECTORS/COMMUNITY UPDATE
MEETING HELD VIA ZOOM
June 11, 2020

1. Welcome
2. York County EMA Updates
3. Covid19 Updates

   FEMA Reimbursements
4. MECDC Update – Adam Hartwig
5. MEDHS Update – Amanda Luciano
6. Local Hospital Updates: York Hospital & SMHC
7. Current EMA Activity and Training:

   York County HMP Update
   Training Sessions Postponed
   PPE Requests
   Special Team Missions
8. Questions and/or Concerns
9. Next meeting date
10. Adjourn meeting

Topic	Name (Original Name)	City/Town/Organization	Join Time	Leave Time	Total Mins.
	Megan Arsenault- York County EMA	YCEMA	6/11/2020 13:57	6/11/2020 14:41	44
EMA Updates	John Brady	Kennebunk	6/11/2020 13:57	6/11/2020 14:41	38
Covid19 Updates	K Boisvert	Sanford	6/11/2020 13:57	6/11/2020 14:41	44
FEMA Reimbursement	lindseylacourse	FEMA	6/11/2020 13:57	6/11/2020 14:41	44
Hospital Updates	Chief Szeniawski York PD	York	6/11/2020 13:57	6/11/2020 14:41	44
YC HMP Updates	Laura Fish	Waterboro	6/11/2020 13:57	6/11/2020 14:41	44
PPE Requests	Alex Hammerle	Sanford	6/11/2020 13:57	6/11/2020 14:41	44
Training	Chris Carpenter	Alfred	6/11/2020 13:57	6/11/2020 14:41	44
	csanford	Kennebunkport	6/11/2020 13:57	6/11/2020 14:41	44
	arthur.blanck	Kennebunkport	6/11/2020 13:57	6/11/2020 14:41	44
	Robert’s iPad	Newfield	6/11/2020 13:57	6/11/2020 14:41	43
	Lynne/KFR	Kennebunk	6/11/2020 13:57	6/11/2020 14:41	43
	12079671650	Kennebunkport	6/11/2020 13:57	6/11/2020 14:41	43
	David Riccio Ogunquit (David Riccio)	Ogunquit	6/11/2020 13:57	6/11/2020 14:41	43
	Fire Chief Mark Dupuis	Wells	6/11/2020 13:57	6/11/2020 14:41	26
	Diana Asanza		6/11/2020 13:57	6/11/2020 14:41	43
	Jay Muzerol	Eliot	6/11/2020 13:57	6/11/2020 14:41	43
	David OBrien	Kittery	6/11/2020 13:57	6/11/2020 14:41	19
	John Duross	Saco	6/11/2020 13:57	6/11/2020 14:41	43
	Alex Hammerle	Sanford	6/11/2020 13:57	6/11/2020 14:41	43
	andrea thompson (andrea)	Waterboro	6/11/2020 13:57	6/11/2020 14:41	42
	Roby Fecteau	Biddeford	6/11/2020 13:57	6/11/2020 14:41	42
	jflaker		6/11/2020 13:57	6/11/2020 14:41	40
	Nathan Schools	Buxton	6/11/2020 13:57	6/11/2020 14:41	42
	Matt Duross	Goodwins Mills/Lyman	6/11/2020 13:57	6/11/2020 14:41	41
	Jarrett Clarke	YC Commissioner/Alfred	6/11/2020 13:57	6/11/2020 14:41	41
	Michelle Rumney	Shapleigh	6/11/2020 13:57	6/11/2020 14:41	41
	Anat		6/11/2020 13:57	6/11/2020 14:41	41
	Fred LaMontagne	Old Orchard Beach	6/11/2020 13:57	6/11/2020 14:41	26
	Jessa Berna		6/11/2020 13:57	6/11/2020 14:41	39
	Thomas Baran	YCSO	6/11/2020 13:57	6/11/2020 14:41	39
	Chief LaMontagne	Old Orchard Beach	6/11/2020 13:57	6/11/2020 14:41	39
	12076716478		6/11/2020 13:57	6/11/2020 14:41	39
	Leticia vanVuuren	FEMA	6/11/2020 13:57	6/11/2020 14:41	36
	Michelle Rumney		6/11/2020 13:57	6/11/2020 14:41	36
	karen		6/11/2020 13:57	6/11/2020 14:41	34
	Dr PJ Tangney	Dayton	6/11/2020 13:57	6/11/2020 14:41	34
	srbenotti	Sanford	6/11/2020 13:57	6/11/2020 14:41	18
	Port zoom		6/11/2020 13:57	6/11/2020 14:41	11

York County Emergency Management Agency
149 Jordan Springs Road
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YORK COUNTY EMA
LOCAL DIRECTORS/COMMUNITY UPDATE
MEETING HELD VIA ZOOM
June 14, 2021

1. Welcome

2. York County EMA Updates

3. Covid19 Updates

   PPE Inventory
   Testing Updates

4. MECDC Update – Adam Hartwig

5. MEDHS Update – Amanda Luciano

6. Local Hospital Updates: York Hospital & SMHC

7. Current EMA Activity and Training:

   PPE Requests via State of Maine
   Special Team Updates
   HMP Update – Chapter 5 Project List
   Training Opportunities

8. Questions and/or Concerns

9. Next meeting date

10. Adjourn meeting

Topic	Name (Original Name)	City/Town/Organization	Join Time	Leave Time	Total Mins.
EMA Updates	Art Cleaves	YCEMA	6/14/2021 9:25	6/14/2021 10:44	80
Covid19 Updates	Kerri Malinowski# DEP	SOM-DEP	6/14/2021 9:25	6/14/2021 10:09	44
PPE/Testing	Diane Hartwig	YCEMA	6/14/2021 9:26	6/14/2021 10:44	79
CDC Updates	12072406645		6/14/2021 9:27	6/14/2021 10:44	78
Hospital Updates	Megan Arsenault- York County EMA	YCEMA	6/14/2021 9:29	6/14/2021 10:44	76
Special Teams	12074383834		6/14/2021 9:29	6/14/2021 10:44	75
HMP - Chapter 5	iPad		6/14/2021 9:30	6/14/2021 10:43	73
Training	Nicole Pestana	York	6/14/2021 9:30	6/14/2021 10:44	74
	Mark Dupuis	Wells	6/14/2021 9:30	6/14/2021 10:44	74
	David Pendleton	Saco	6/14/2021 9:30	6/14/2021 10:44	74
	Seth Thompson	Kittery	6/14/2021 9:30	6/14/2021 10:44	74
	David Francoeur	YCEMA	6/14/2021 9:30	6/14/2021 10:44	74
	Lee Jackson	Ogunquit	6/14/2021 9:30	6/14/2021 10:44	74
	Matt Duross	Goodwins Mills/Lyman	6/14/2021 9:30	6/14/2021 10:44	74
	Matthew Fournier	SOM-DEP	6/14/2021 9:30	6/14/2021 10:44	74
	Adam Hartwig	MECDC	6/14/2021 9:30	6/14/2021 9:59	29
	Greg O'Brien MDEP	SOM-DEP	6/14/2021 9:30	6/14/2021 10:44	74
	Matthew Demers		6/14/2021 9:30	6/14/2021 10:25	55
	Laurie Ewing	YCEMA	6/14/2021 9:31	6/14/2021 10:44	74
	12026170118		6/14/2021 9:31	6/14/2021 10:44	73
	US0582		6/14/2021 9:32	6/14/2021 10:28	56
	17346804808		6/14/2021 9:34	6/14/2021 10:44	70
	Robert	Newfield	6/14/2021 9:39	6/14/2021 9:49	11
	12074381481		6/14/2021 9:57	6/14/2021 10:44	47

York County Emergency Management Agency
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YORK COUNTY EMA
LOCAL DIRECTORS/COMMUNITY UPDATE
MEETING HELD VIA ZOOM
July 8, 2021

1. Welcome

2. York County EMA Updates – Hurricane Elise

3. Covid19 Updates

   Vaccination Updates
   Testing Updates
   Current Covid19 issues

4. MECDC Update – Adam Hartwig

5. MEDHS Update – Amanda Luciano

6. Local Hospital Updates: York Hospital & SMHC

7. Current EMA Activity and Training:

   Special Team Updates
   HMP Update – Project Lists needed
   PPE Issues

8. Questions and/or Concerns

9. Next meeting date

10. Adjourn meeting

Topic	Name (Original Name)	City/Town/Organization	Join Time	Leave Time	Total Mins.
YC EMA Updates	Megan Arsenault- York County EMA	YCEMA	7/8/2021 11:00	7/8/2021 11:18	19
Hurricane Elise	donny	NWS	7/8/2021 11:00	7/8/2021 11:18	18
Covid19 Updates	Iphone		7/8/2021 11:00	7/8/2021 11:14	15
Vaccine/Testing	Jerry Beaulieu	Arundel	7/8/2021 11:00	7/8/2021 11:18	18
CDC Update	Rev. Shirley Bowen	Seeds of Hope	7/8/2021 11:00	7/8/2021 11:13	13
Hospital Update	odavis	York	7/8/2021 11:00	7/8/2021 11:18	18
Special Teams	Mark Dupuis	Wells	7/8/2021 11:00	7/8/2021 11:18	18
HMP Update	David Francoeur	YCEMA	7/8/2021 11:00	7/8/2021 11:18	18
PPE	Jorge Descart - York Hospital	York Hospital	7/8/2021 11:00	7/8/2021 11:18	18
	Michael Schmitz	SMHC	7/8/2021 11:00	7/8/2021 11:18	18
	Lee Jackson		7/8/2021 11:00	7/8/2021 11:18	18
	Chris Carpenter	Alfred	7/8/2021 11:00	7/8/2021 11:18	18
	John Duross	Saco	7/8/2021 11:00	7/8/2021 11:16	17
	Dave Glazebrook	PNSY/Eliot	7/8/2021 11:00	7/8/2021 11:18	18
	Fred LaMontagne	Old Orchard Beach	7/8/2021 11:00	7/8/2021 11:18	18
	Dick Gaudreau (YCEMA)	YCEMA	7/8/2021 11:00	7/8/2021 11:18	18
	Alex Hammerle - Director of Facilities	Sanford	7/8/2021 11:00	7/8/2021 11:18	18
	odavis		7/8/2021 11:01	7/8/2021 11:18	17
	Art Cleaves	YCEMA	7/8/2021 11:01	7/8/2021 11:18	17
	Laurie Ewing	YCEMA	7/8/2021 11:01	7/8/2021 11:18	17
	Linda Corliss	YC HR	7/8/2021 11:02	7/8/2021 11:18	17
	Russell Osgood	Ogunquit	7/8/2021 11:03	7/8/2021 11:18	16
	Rick Smith	Acton	7/8/2021 11:05	7/8/2021 11:18	14
	Nathan's iPhone	Buxton	7/8/2021 11:08	7/8/2021 11:18	10
	Mat Cama	Cornish/Parsonsfield	7/8/2021 11:11	7/8/2021 11:18	8
	Emil	Limington	7/8/2021 11:11	7/8/2021 11:18	8
	Rod Hooper	YCEMA	7/8/2021 11:14	7/8/2021 11:18	4
	12076084199		7/8/2021 11:16	7/8/2021 11:18	2

York County Emergency Management Agency
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YORK COUNTY EMA
LOCAL DIRECTORS/COMMUNITY UPDATE
MEETING HELD VIA ZOOM
November 18, 2021

1. Welcome

2. York County EMA Updates

3. Covid19 Updates

    Outbreak Updates
    Vaccination Updates
    Testing Updates
    Current Covid19 issues

4. MECDC Update – Adam Hartwig

5. MEDHS Update – Amanda Luciano

6. Local Hospital Updates: York Hospital & SMHC

7. Current EMA Activity and Training:

    Special Team Updates
    HMP Update – Input from Local Directors
    PPE Issues

8. Questions and/or Concerns

9. Next meeting date

10. Adjourn meeting

Topic	Name (Original Name)	City/Town/Organization	Join Time	Leave Time	Total Mins.
	Megan Arsenault - York County EMA	YCEMA	11/18/2021 8:55	11/18/2021 10:17	82
EMA Updates	Andrew Seiler	Saco	11/18/2021 8:56	11/18/2021 10:17	81
Outbreaks	12074381481		11/18/2021 8:58	11/18/2021 10:17	80
Vaccine/Testing	Caitlin Lipert	YCEMA	11/18/2021 8:58	11/18/2021 10:17	79
MECDC	David Pendleton	Saco	11/18/2021 8:58	11/18/2021 10:17	79
Hospital Updates	Lee Jackson		11/18/2021 8:58	11/18/2021 10:17	79
Special Teams	Greg.Pargellis	Kennebunk	11/18/2021 8:58	11/18/2021 10:17	79
HMP Update - LED s	Greg O'Brien MDEP	SOM-DEP	11/18/2021 8:58	11/18/2021 10:17	79
	Hartwig# Adam	MECDC	11/18/2021 8:58	11/18/2021 9:16	18
	Faith Staples	MEMA	11/18/2021 8:58	11/18/2021 10:17	79
	Matt Fournier - MEMA	MEMA	11/18/2021 8:58	11/18/2021 10:17	79
	12074383834		11/18/2021 8:58	11/18/2021 10:17	79
	Tammy’s iPhone	Media	11/18/2021 8:59	11/18/2021 10:00	62
	Matt Duross	Goodwins Mills/Lyman	11/18/2021 8:59	11/18/2021 10:16	78
	Francis.Patno		11/18/2021 8:59	11/18/2021 10:17	78
	Art	YCEMA	11/18/2021 8:59	11/18/2021 10:17	78
	Laurie Ewing	YCEMA	11/18/2021 9:00	11/18/2021 10:17	78
	Rod Hooper	YCEMA	11/18/2021 9:00	11/18/2021 10:14	74
	CookN	Biddeford	11/18/2021 9:00	11/18/2021 9:17	17
	Mark Dupuis	Wells	11/18/2021 9:01	11/18/2021 10:17	76
	12074686434		11/18/2021 9:01	11/18/2021 9:17	16
	David Francoeur	YCEMA	11/18/2021 9:01	11/18/2021 10:17	76
	John Everett	Kennebunkport	11/18/2021 9:03	11/18/2021 10:17	74
	Bill.Snyder	Kennebunk	11/18/2021 9:17	11/18/2021 9:28	11
	Bill.Snyder		11/18/2021 9:28	11/18/2021 9:46	19
	Bill.Snyder		11/18/2021 9:46	11/18/2021 10:17	31

York County Emergency Management Agency
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YORK COUNTY EMA
LOCAL DIRECTORS/COMMUNITY UPDATE
MEETING HELD VIA ZOOM
February 2, 2022

1. Welcome

2. York County EMA Updates – Winter Storm

3. Covid19 Updates

    Outbreak Updates
    Vaccination & Pop-up Clinic Updates
    Testing Updates
    Current Covid19 issues

4. MECDC Update – Adam Hartwig

5. MEDHS Update – Amanda Luciano

6. Local Hospital Updates: York Hospital & SMHC

7. Current EMA Activity and Training:

    Special Team Updates
    HMP Update:
        Community Issues/Feedback
        Input from Local Directors
        Chapter 5 – Project Lists
    EMA Office renovations

8. Questions and/or Concerns

9. Next meeting date

10. Adjourn meeting

Topic	Name (Original Name)	City/Town/Organization	Join Time	Leave Time	Total Mins.
EMA Updates	Megan Arsenault- York County EMA	YCEMA	2/2/2022 14:00	2/2/2022 14:20	20
Winter Storm	Justin Arnott - National Weather Service	NWS	2/2/2022 14:01	2/2/2022 14:20	19
Covid19 Updates:	Gary's iPhone	Kittery	2/2/2022 14:01	2/2/2022 14:20	19
Outbreaks	Robert	Newfield	2/2/2022 14:01	2/2/2022 14:19	18
Vaccine/Testing	Nicole Pestana	York	2/2/2022 14:01	2/2/2022 14:20	19
MECDC	Jeremy Redlon	Buxton	2/2/2022 14:01	2/2/2022 14:20	19
Hospital Updates	Chief Craig Sanford	Kennebunkport	2/2/2022 14:01	2/2/2022 14:20	19
Special Teams	Mark Dupuis	Wells	2/2/2022 14:01	2/2/2022 14:20	19
HMP Updates:	cbalentine	York	2/2/2022 14:01	2/2/2022 14:20	19
Comm. Issues	Jo-Ann Putnam	Wells	2/2/2022 14:01	2/2/2022 14:20	19
LED Input	Art Cleaves	YCEMA	2/2/2022 14:01	2/2/2022 14:20	19
Chapter 5 Lists	Matthew E. Hill# P.E.	Sanford	2/2/2022 14:01	2/2/2022 14:20	19
EMA Office Reno	Jorge Descart	York Hospital	2/2/2022 14:01	2/2/2022 14:19	18
	Joe Thornton - Scarborough PSAP	PSAP	2/2/2022 14:01	2/2/2022 14:20	19
	Roger Hooper	YCEMA	2/2/2022 14:01	2/2/2022 14:20	19
	William Guindon - MEMA	MEMA	2/2/2022 14:01	2/2/2022 14:20	19
	Chief Rowe	Kennebunk	2/2/2022 14:01	2/2/2022 14:20	19
	roby.fecteau	Biddeford	2/2/2022 14:01	2/2/2022 14:20	19
	Scott Gagne	Biddeford	2/2/2022 14:01	2/2/2022 14:20	19
	Dylan M	Lyman	2/2/2022 14:01	2/2/2022 14:11	11
	Jeff Howes	Central Maine Power	2/2/2022 14:01	2/2/2022 14:20	19
	Caitlin Lipert	YCEMA	2/2/2022 14:01	2/2/2022 14:20	19
	Sgt. Baez	South Berwick	2/2/2022 14:01	2/2/2022 14:20	19
	Matt Duross	Goodwins Mills/Lyman	2/2/2022 14:01	2/2/2022 14:20	19
	Bryan Laverriere (blaverriere)		2/2/2022 14:01	2/2/2022 14:20	19
	Robert Martin	Saco	2/2/2022 14:01	2/2/2022 14:20	19
	firechief@townofogunquit.org	Ogunquit	2/2/2022 14:01	2/2/2022 14:20	19
	Jodine Adams	Sanford	2/2/2022 14:01	2/2/2022 14:20	19
	Mat Cama	Parsonsfield/Cornish	2/2/2022 14:01	2/2/2022 14:20	19
	Laurie Ewing	YCEMA	2/2/2022 14:01	2/2/2022 14:20	19
	12079671650		2/2/2022 14:01	2/2/2022 14:20	19
	Nathan Schools	Buxton	2/2/2022 14:02	2/2/2022 14:20	18
	Diane Hartwig	YCEMA	2/2/2022 14:02	2/2/2022 14:20	18
	Bob Arnold# Sanford	Sanford	2/2/2022 14:02	2/2/2022 14:14	12
	Lt John Lizanecz York Police	York	2/2/2022 14:03	2/2/2022 14:20	17
	Chris Young	Hollis	2/2/2022 14:04	2/2/2022 14:20	16
	ajhammerle	Sanford	2/2/2022 14:04	2/2/2022 14:20	16
	Victoria Raneses	YCEMA	2/2/2022 14:04	2/2/2022 14:20	16
	Dean Lessard	York	2/2/2022 14:04	2/2/2022 14:20	16
	Capt Congdon	MESP	2/2/2022 14:05	2/2/2022 14:20	15
	dplante	Berwick	2/2/2022 14:05	2/2/2022 14:14	9
	Bob MacKenzie - Chief at Kennebunk# ME PD	Kennebunk	2/2/2022 14:06	2/2/2022 14:20	14
	RichardSDeRochemont	YC Facilities	2/2/2022 14:07	2/2/2022 14:20	14
	Dick Gaudreau (YCEMA)	YCEMA	2/2/2022 14:07	2/2/2022 14:20	13
	Eliot Fire Chief	Eliot	2/2/2022 14:08	2/2/2022 14:20	12
	David Francoeur	YCEMA	2/2/2022 14:09	2/2/2022 14:20	11

York County Emergency Management Agency
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YORK COUNTY EMA
LOCAL DIRECTORS/COMMUNITY UPDATE
MEETING HELD VIA ZOOM
March 16, 2022

1. Welcome

2. York County EMA Updates

3. Covid19 Updates

   Sanford CVC – Staffing
   Testing Updates
   Current positivity rates

4. MECDC Update – Adam Hartwig

5. MEDHS Update – Amanda Luciano

6. Local Hospital Updates: York Hospital & SMHC

7. Current EMA Activity and Training:

   Special Team Updates
   HMP Update – Project Lists needed
   Training Opportunities

8. Questions and/or Concerns

9. Next meeting date

10. Adjourn meeting

Topic	Name (Original Name)	City/Town/Organization	Join Time	Leave Time	Total Mins.
	Megan Arsenault- York County EMA	YCEMA	3/16/2022 12:56	3/16/2022 13:59	64
EMA Updates	Dave Glazebrook	PNSY/Eliot	3/16/2022 12:56	3/16/2022 13:43	47
Covid19 Updates	Mat Cama	Cornish/Parsonsfield	3/16/2022 13:00	3/16/2022 13:59	59
Sanford CVC	Amanda	YCEMA	3/16/2022 13:00	3/16/2022 13:59	59
Hospital Updates	Nicole Pestana	York	3/16/2022 13:00	3/16/2022 13:59	59
CDC Update	PJ Tangney	Dayton	3/16/2022 13:00	3/16/2022 13:59	59
Special Teams	Chief Craig Sanford	Kennebunkport	3/16/2022 13:00	3/16/2022 13:38	38
HMP Update	Alex Hammerle Director of Facilities	Sanford	3/16/2022 13:00	3/16/2022 13:59	59
Training	Frank DeMers	YCEMA	3/16/2022 13:00	3/16/2022 13:59	59
	Nathan Schools	Buxton	3/16/2022 13:00	3/16/2022 13:29	29
	David Francoeur	YCEMA	3/16/2022 13:00	3/16/2022 13:22	22
	Art	YCEMA	3/16/2022 13:00	3/16/2022 13:59	59
	Diane Hartwig	YCEMA	3/16/2022 13:00	3/16/2022 13:59	59
	Victoria Raneses	YCEMA	3/16/2022 13:00	3/16/2022 13:59	59
	Laurie Ewing	YCEMA	3/16/2022 13:00	3/16/2022 13:59	59
	Rod Hooper	YCEMA	3/16/2022 13:00	3/16/2022 13:59	59
	Adam Hartwig	MECDC	3/16/2022 13:00	3/16/2022 13:59	59
	roby.fecteau	Biddeford	3/16/2022 13:00	3/16/2022 13:59	59
	Matt Duross	Goodwins Mills/Lyman	3/16/2022 13:01	3/16/2022 13:59	59
	Caitlin Lipert	YCEMA	3/16/2022 13:01	3/16/2022 13:59	59
	Rev. Shirley Bowen	Seeds of Hope	3/16/2022 13:01	3/16/2022 13:58	57
	12079671650	Kennebunkport	3/16/2022 13:01	3/16/2022 13:16	15
	Peter Rogers	MEMA	3/16/2022 13:02	3/16/2022 13:27	26
	Maj Gen Doug Farnham	MESP	3/16/2022 13:06	3/16/2022 13:30	24
	12079671650	Kennebunkport	3/16/2022 13:18	3/16/2022 13:38	20
	Robert & Wendy Elliott	Newfield	3/16/2022 13:27	3/16/2022 13:59	33
	David Francoeur	YCEMA	3/16/2022 13:33	3/16/2022 13:59	26

Emergency Preparedness Survey

The York County Emergency Management Agency wants to hear from you! We are collecting information from York County residents on how ready you are for an emergency. We are committed to helping you be as prepared as possible. This survey will let you tell us where you might need additional emergency preparedness information. The collected data will be used to develop messaging and information around emergency preparedness. It will take about 10 minutes to complete. Thank you for taking the time out to do this!

* Required

1. What town do you live in?

Mark only one oval.

- Biddeford
- Saco
- Kennebunk
- Alfred
- Acton
- Arundel
- Berwick
- Buxton
- Cornish
- Dayton
- Eliot
- Hollis
- Kittery
- Kennebunkport
- Lebanon
- Limerick
- Limington
- Lyman
- Newfield
- North Berwick
- Ogunquit
- Old Orchard Beach
- Parsonsfield
- Sanford
- Shapleigh
- South Berwick
- Waterboro
- Wells
- York

2. How many people live in your household?

Mark only one oval.

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5
- ◯ 6
- ◯ 7
- ◯ 8
- ◯ 9+
- ◯ Other: _____

3. How many years have you lived in York County?

Mark only one oval.

- ◯ less than 1
- ◯ 2-5
- ◯ 5-8
- ◯ 8-10
- ◯ over 10 years
- ◯ Other: _____

4. Have you ever experienced an emergency situation?

Mark only one oval.

- Yes
- No
- I don't know

5. Do you feel like you are an at-risk community member in case of an emergency?

Mark only one oval.

- Yes
- No
- I don't know

6. Do you know who your local EMA Director is?

Mark only one oval.

- Yes
- No

Accessibility and Shelter

7. Do you have access to safe sheltering in case of emergency?

Mark only one oval.

- Yes
- No
- I don't know

8. Where is your sheltering location?

9. What would be a reason that might prevent you from evacuating if asked to do so?

Emergency Preparedness

For the next few scenarios, please rate your own/ your household's preparedness from 1 (Not Prepared at All) to 5 (Fully Prepared)

10. Winter Storms *

Mark only one oval.

	1	2	3	4	5	
Not Prepared at All	◯	◯	◯	◯	◯	Fully Prepared

11. Heat-Related Disaster *

Mark only one oval.

	1	2	3	4	5	
Not Prepared at All	◯	◯	◯	◯	◯	Fully Prepared

12. Hurricanes *

Mark only one oval.

	1	2	3	4	5	
Not Prepared at All	◯	◯	◯	◯	◯	Fully Prepared

13. Tornadoes *

Mark only one oval.

	1	2	3	4	5	
Not Prepared at All	◯	◯	◯	◯	◯	Fully Prepared

14. Lightning *

Mark only one oval.

	1	2	3	4	5	
Not Prepared at All	◯	◯	◯	◯	◯	Fully Prepared

15. Power Outages *

Mark only one oval.

	1	2	3	4	5	
Not Prepared at All	◯	◯	◯	◯	◯	Fully Prepared

16. Flooding *

Mark only one oval.

	1	2	3	4	5	
Not Prepared at All	◯	◯	◯	◯	◯	Fully Prepared

17. Pandemic/Biological Hazards *

Mark only one oval.

	1	2	3	4	5	
Not Prepared at All	◯	◯	◯	◯	◯	Fully Prepared

18. Technological Hazards (pollution, toxic waste) *

Mark only one oval.

	1	2	3	4	5	
Not Prepared at All	◯	◯	◯	◯	◯	Fully Prepared

19. Fires *

Mark only one oval.

	1	2	3	4	5	
Not Prepared at All	◯	◯	◯	◯	◯	Fully Prepared

Winter Storms

The following questions will ask about your preparedness in case of winter storms

20. Do you have an emergency supply kit in your car (jumper cables, sand, flashlight, warm clothes, blankets, bottled water, full tank of gas?) *

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Other: _____

21. Do you have adequate access to winter storm warnings? *

Mark only one oval.

- Yes
- No
- Other: _____

22. Do you have adequate access to winter clothes? *

Mark only one oval.

- Yes
- No
- Other: _____

Power Outages

The following questions will ask about your preparedness in case of power outages

23. Do you have adequate access to emergency information in case of a power outage? *

Mark only one oval.

- Yes
- No

24. Where do you get your information when the power goes out? *

Mark only one oval.

- Radios
- Word of Mouth
- Internet News
- Social Media
- Other: _____

Flooding

The following questions will ask about your preparedness in case of flooding

25. Does your household have an emergency plan in place in case of a flood? *

Mark only one oval.

- Yes
- No
- Other: _____

26. Do you know the evacuation routes in your area? *

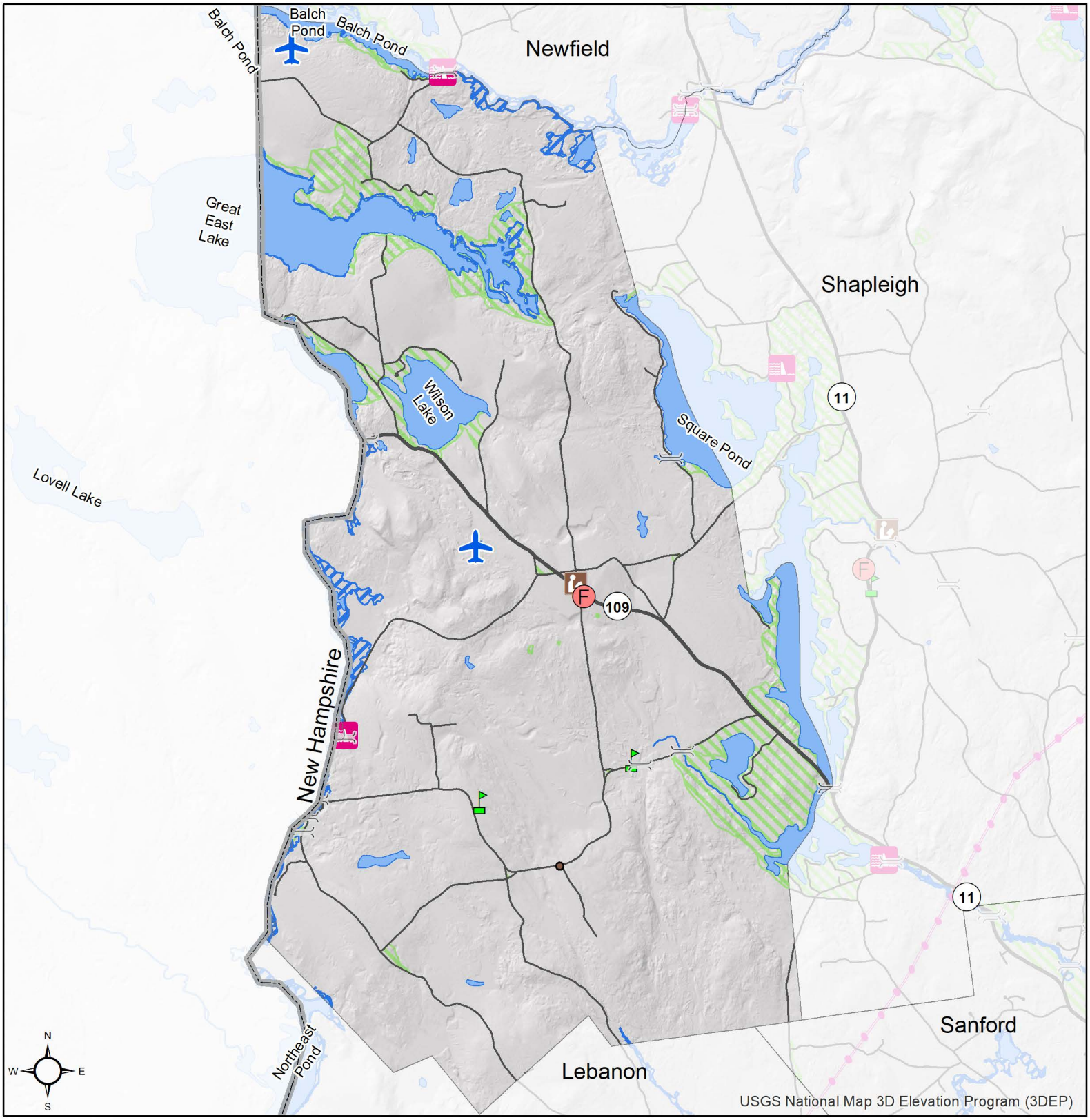
Mark only one oval.

- Yes
- No
- Other: _____

27. If services are cut off in your area, do you have the supplies to sustain yourself/ your family? *

Mark only one oval.

- Yes
- No
- Other: _____



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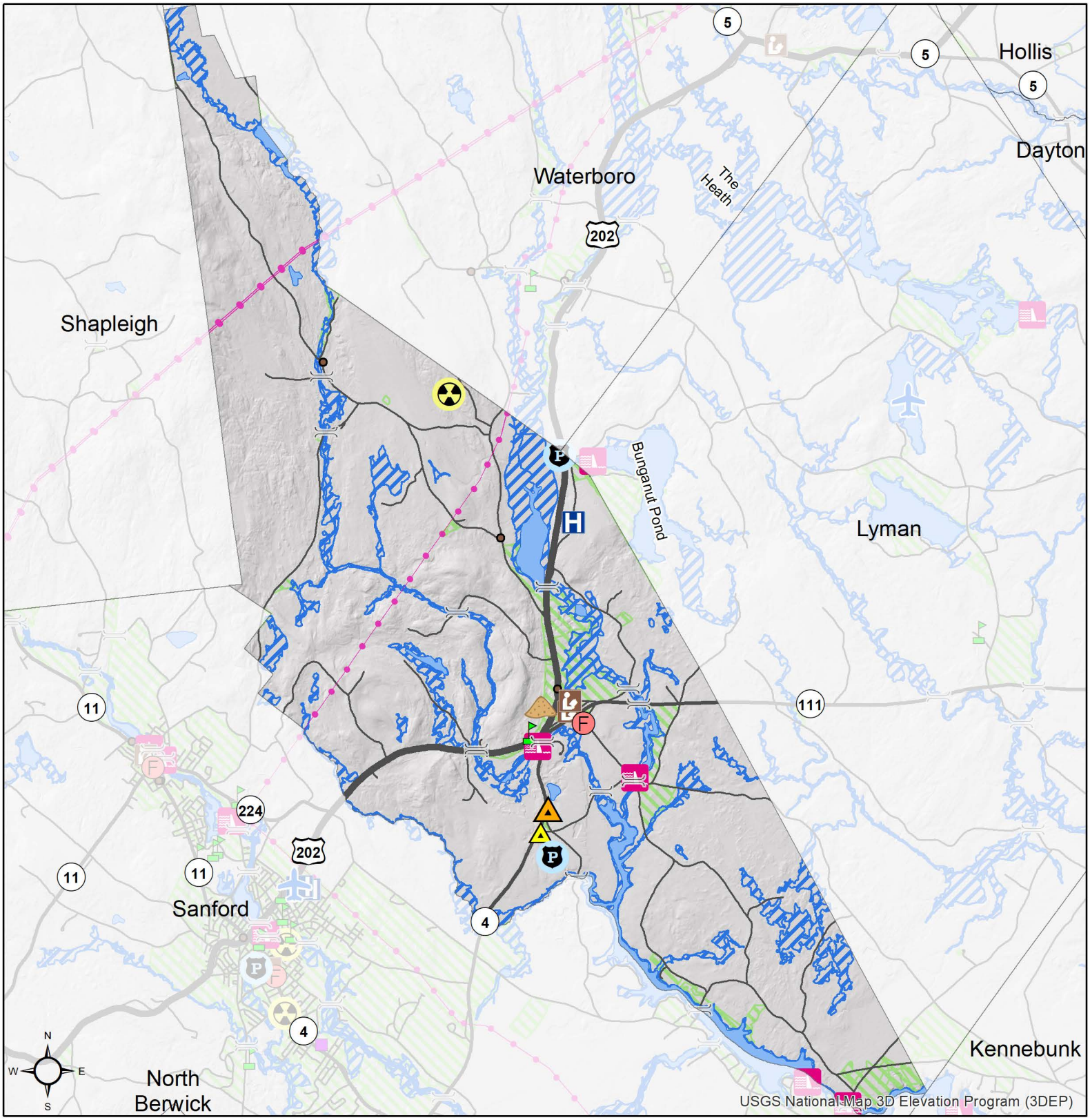
- Wildfire Risk (Wildland Urban Interface)
- Urban Area
- 100 Year Flood Zone
- 100 Year Flood Zone with Storm Waves
- Hurricane Evacuation Zones: A B C

0 1.25 2.5 5 Miles

Town of Acton
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



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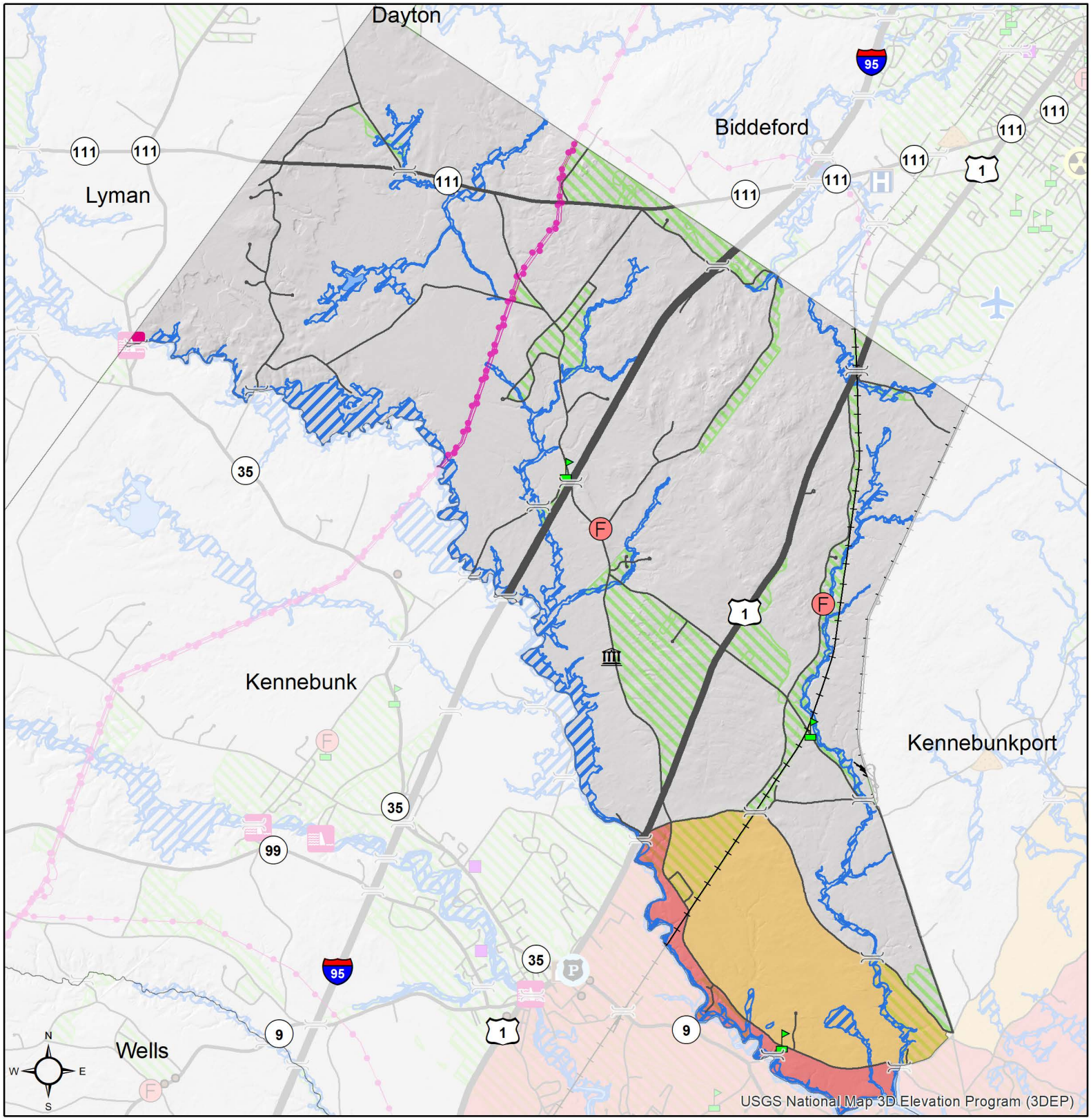
0 1.25 2.5 5 Miles

Town of Alfred
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



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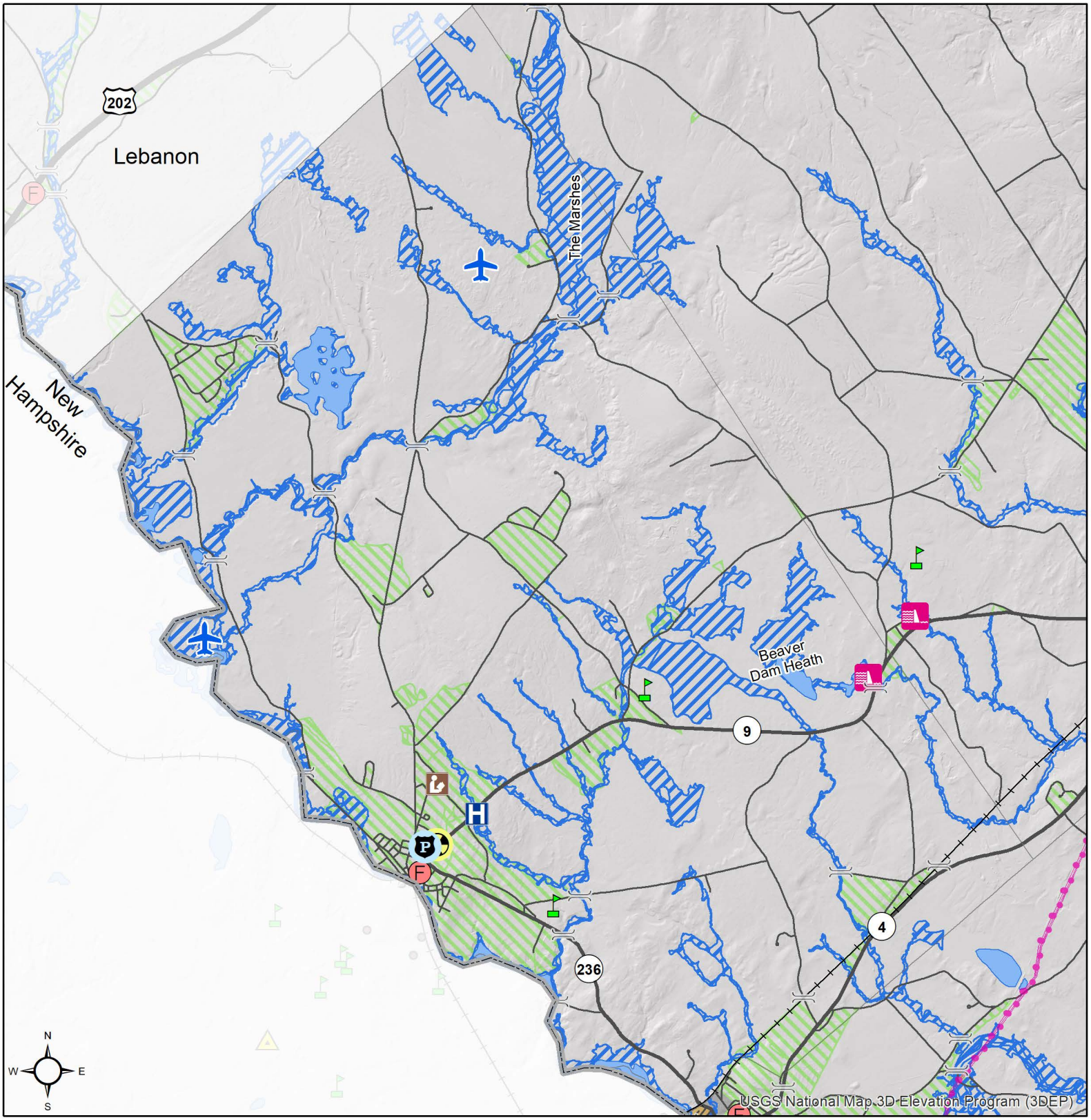
0 1 2 4 Miles

Town of Arundel
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



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0 1 2 4 Miles

Town of Berwick
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

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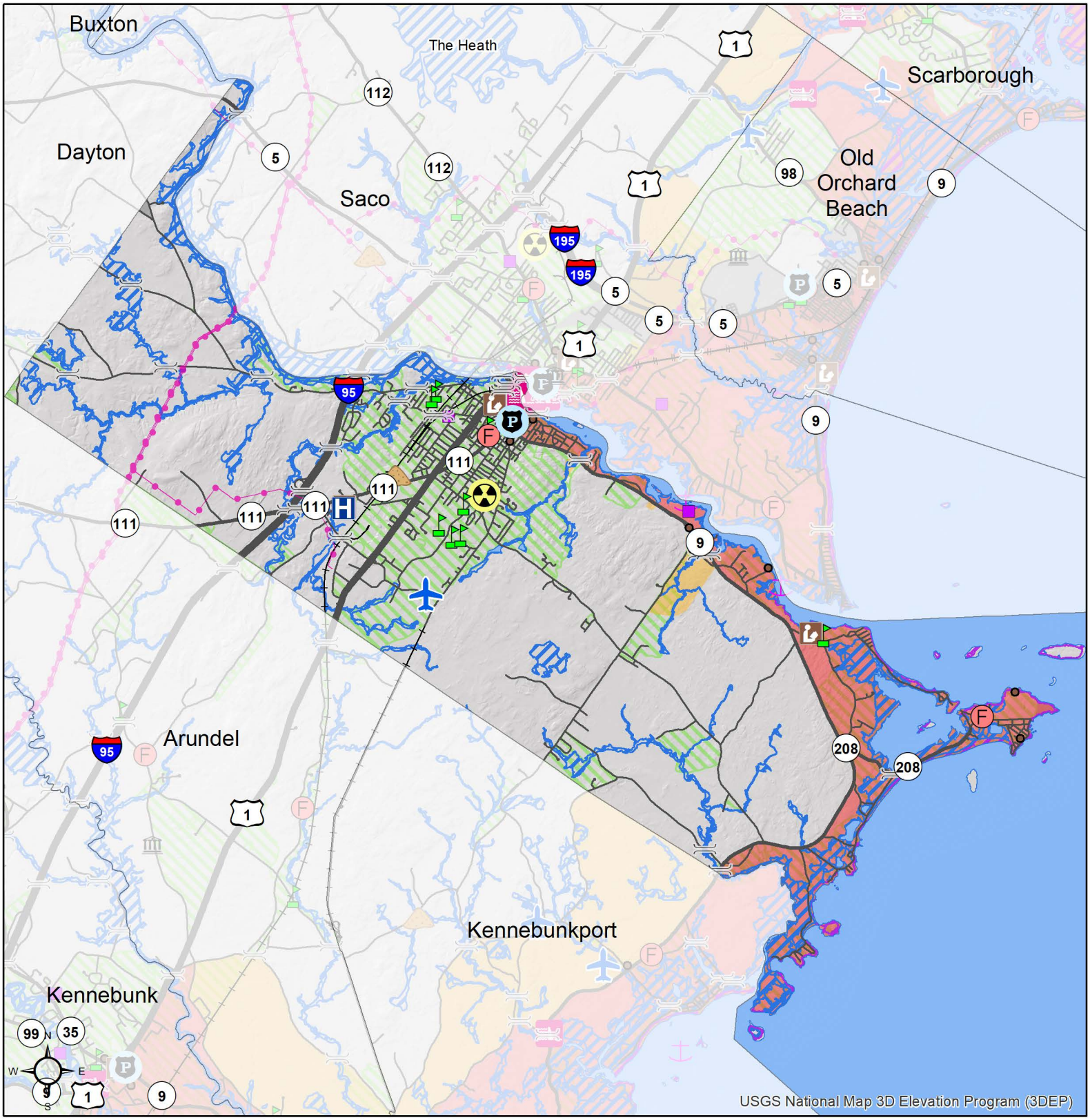

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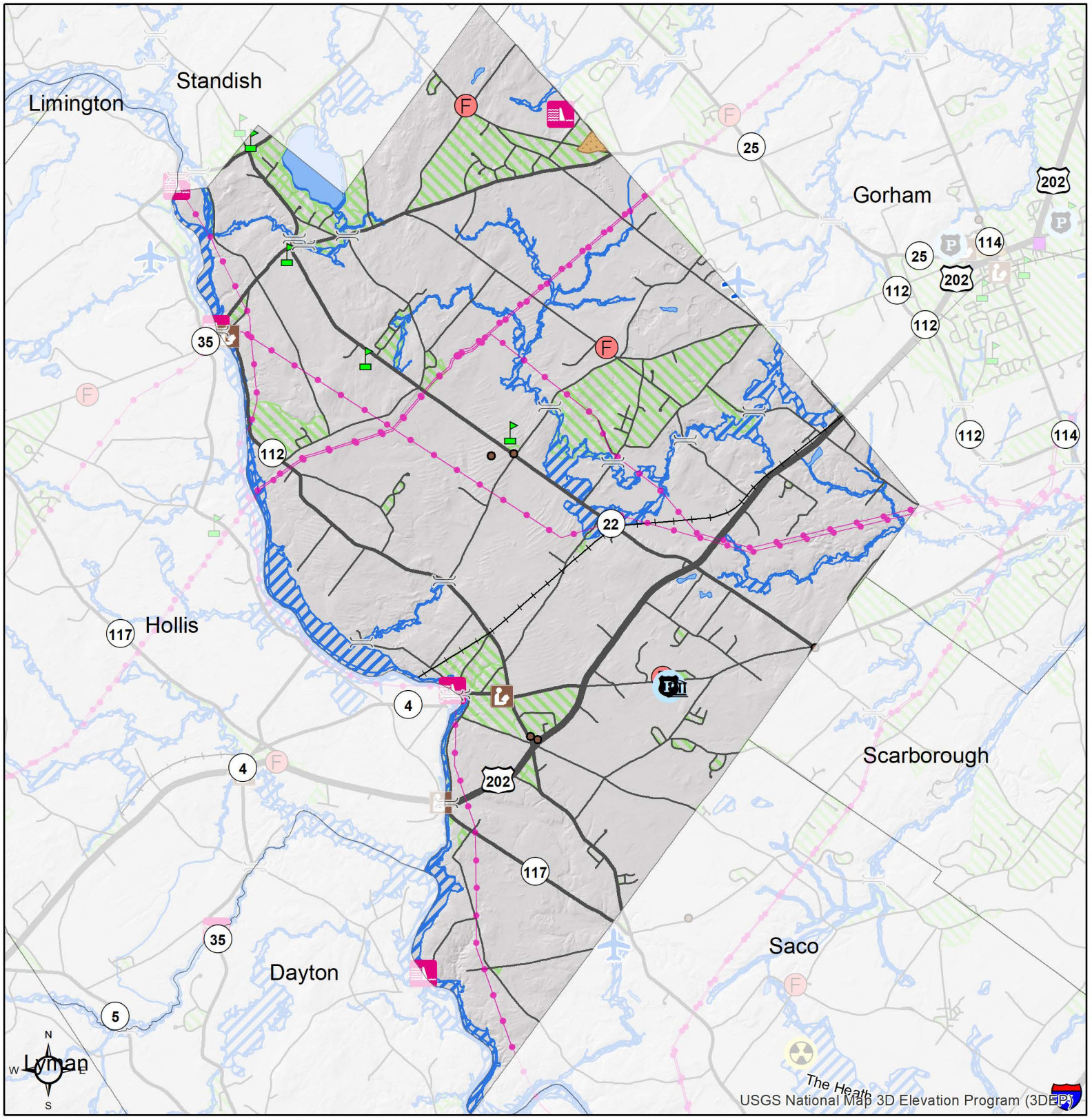
- Hurricane Evacuation Zones: A B C

0 1.25 2.5 5 Miles

City of Biddeford
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



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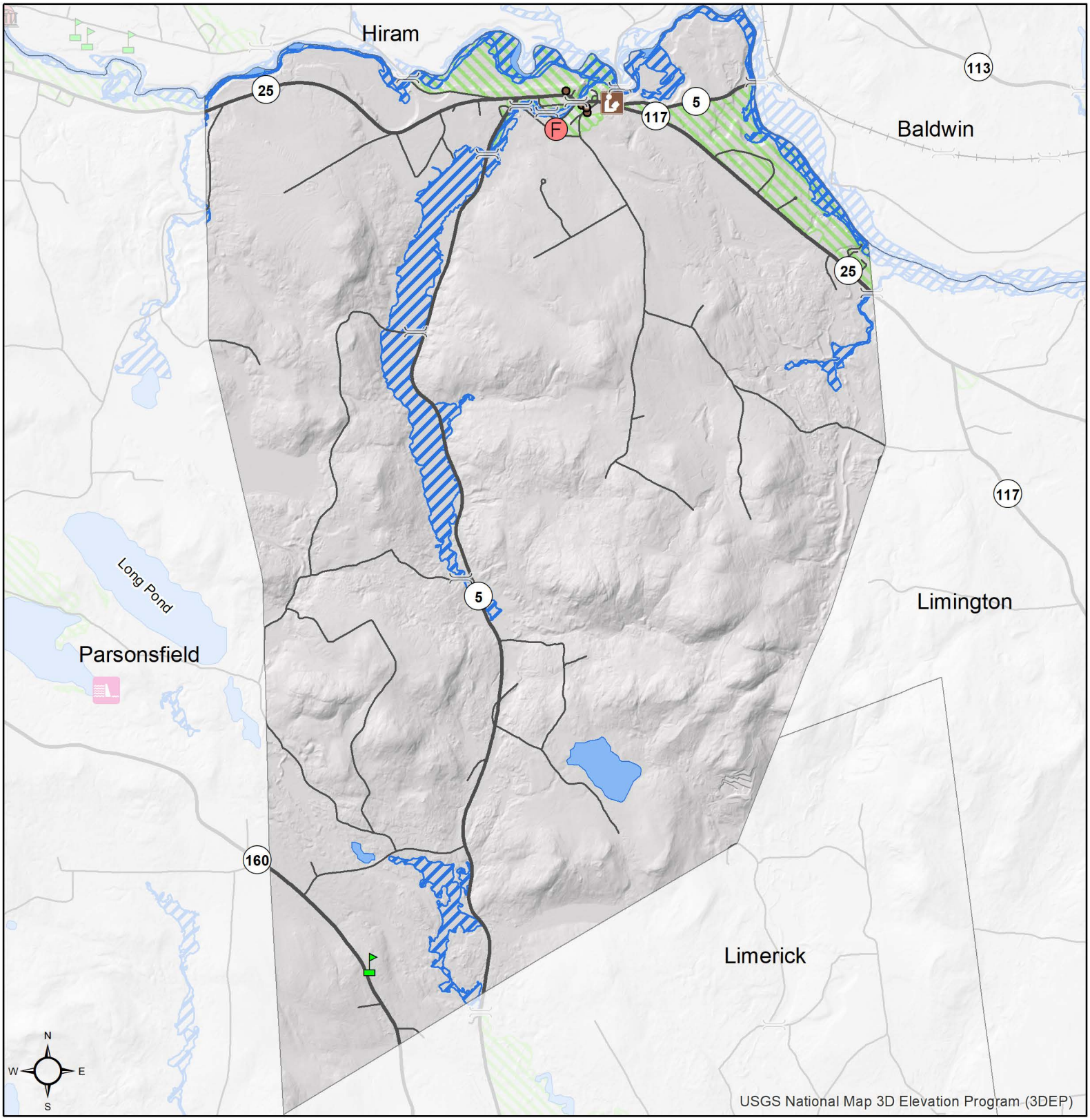
0 1.25 2.5 5 Miles

Town of Buxton
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



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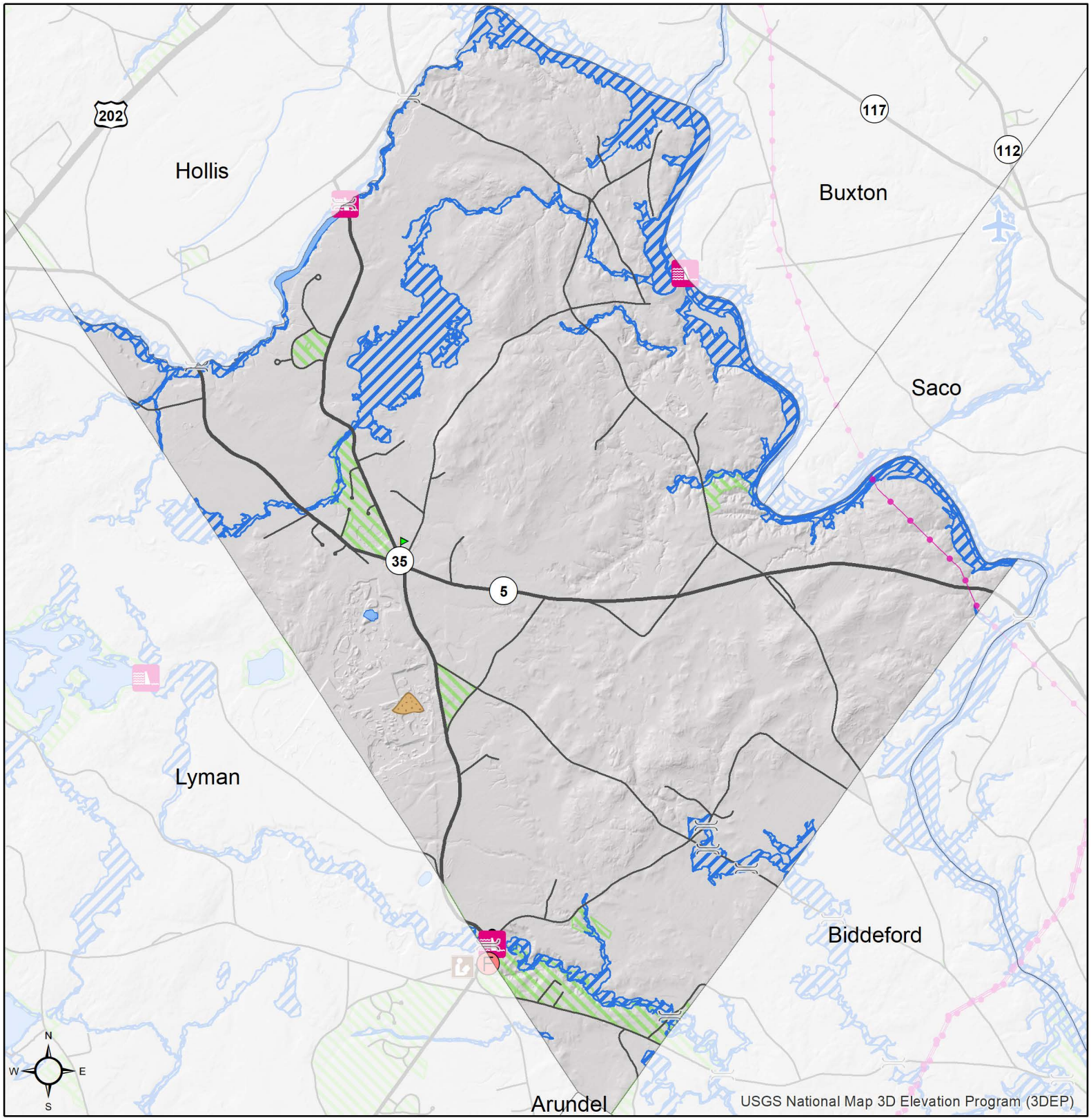
Hurricane Evacuation Zones: A B C

0 0.75 1.5 3 Miles

Town of Cornish
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



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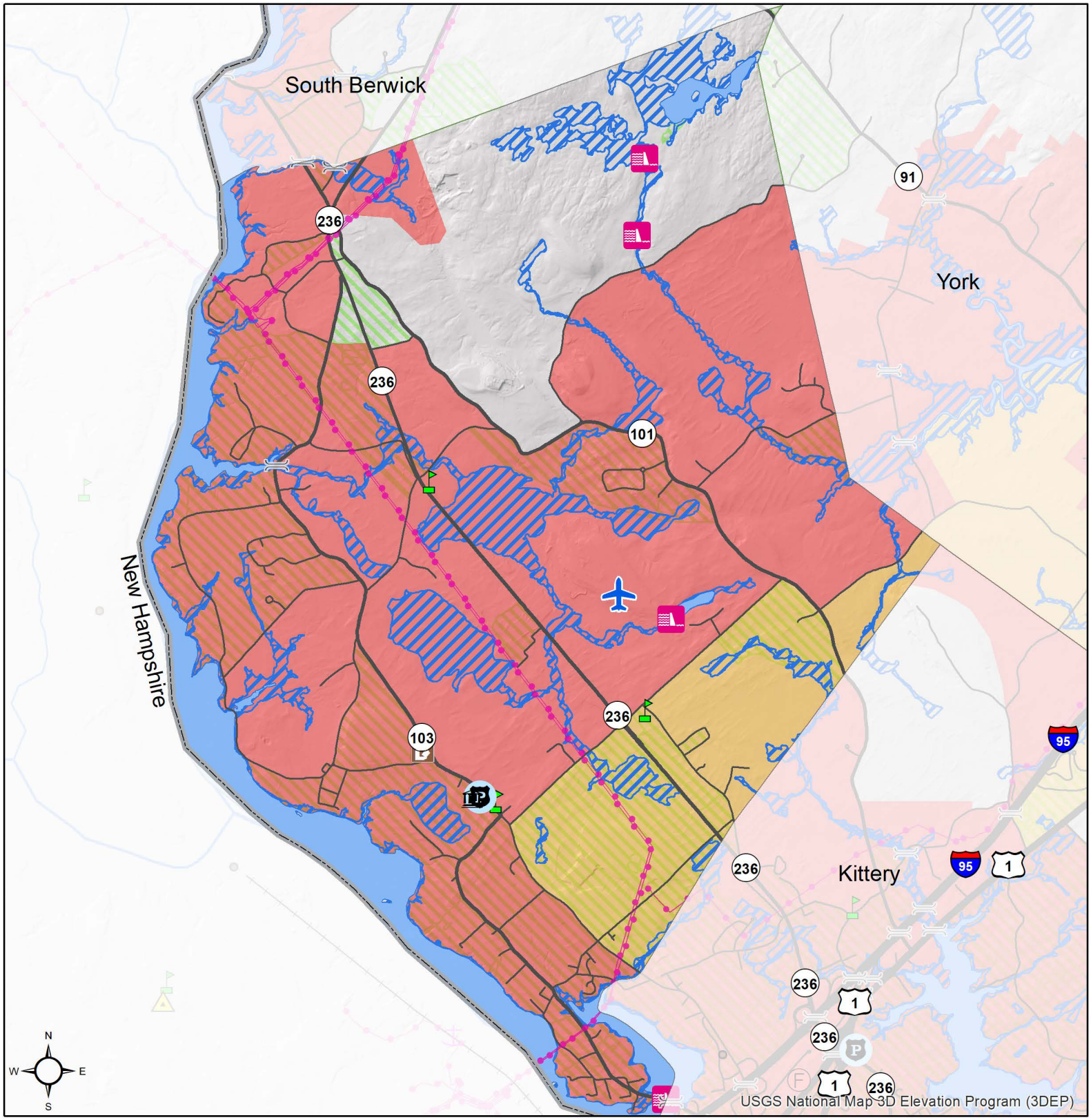
0 0.75 1.5 3 Miles

Town of Dayton
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



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0 0.75 1.5 3 Miles

Town of Eliot
York County
Hazard Mitigation Plan

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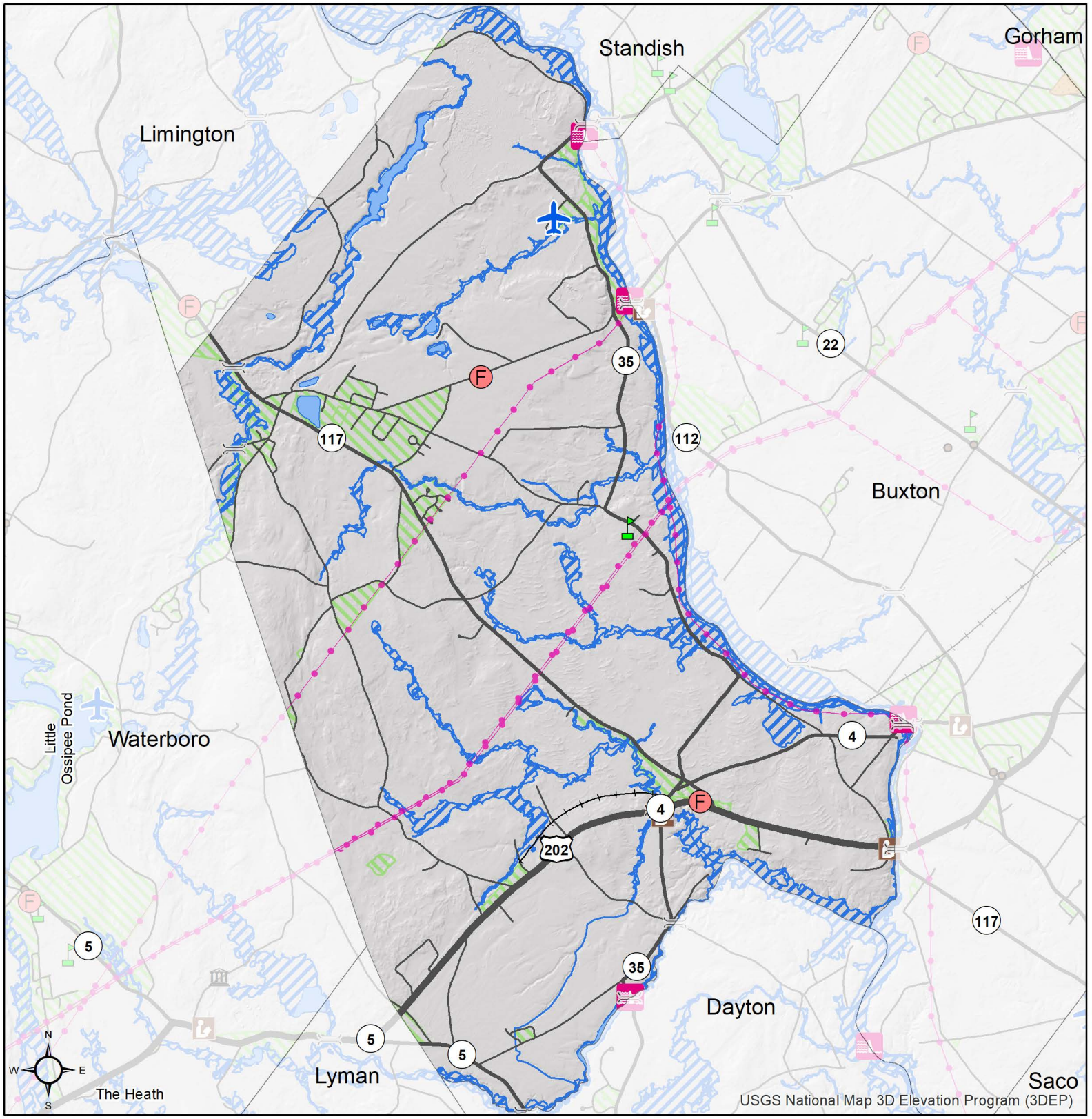

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0 1 2 4
Miles

Town of Hollis
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

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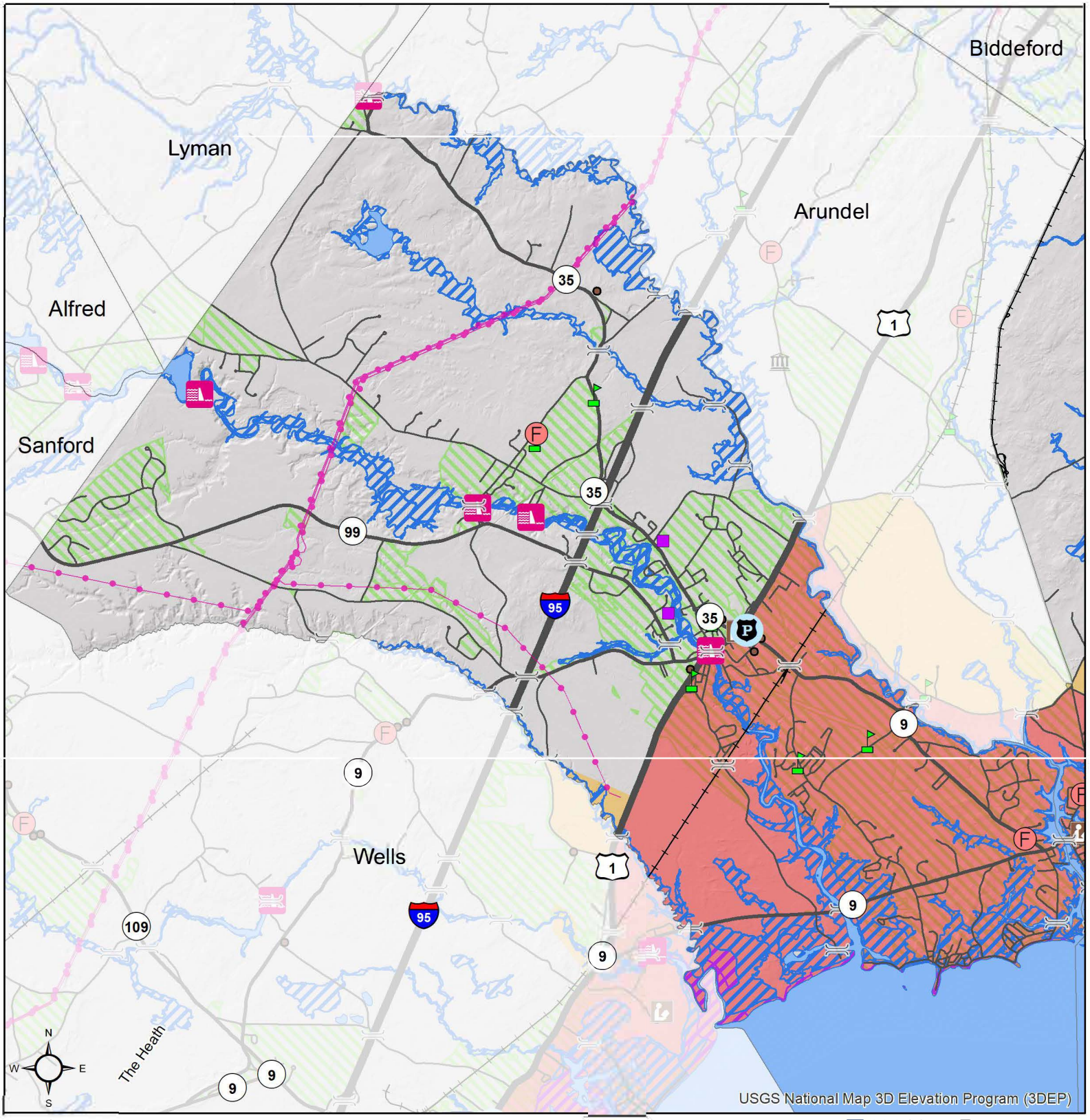

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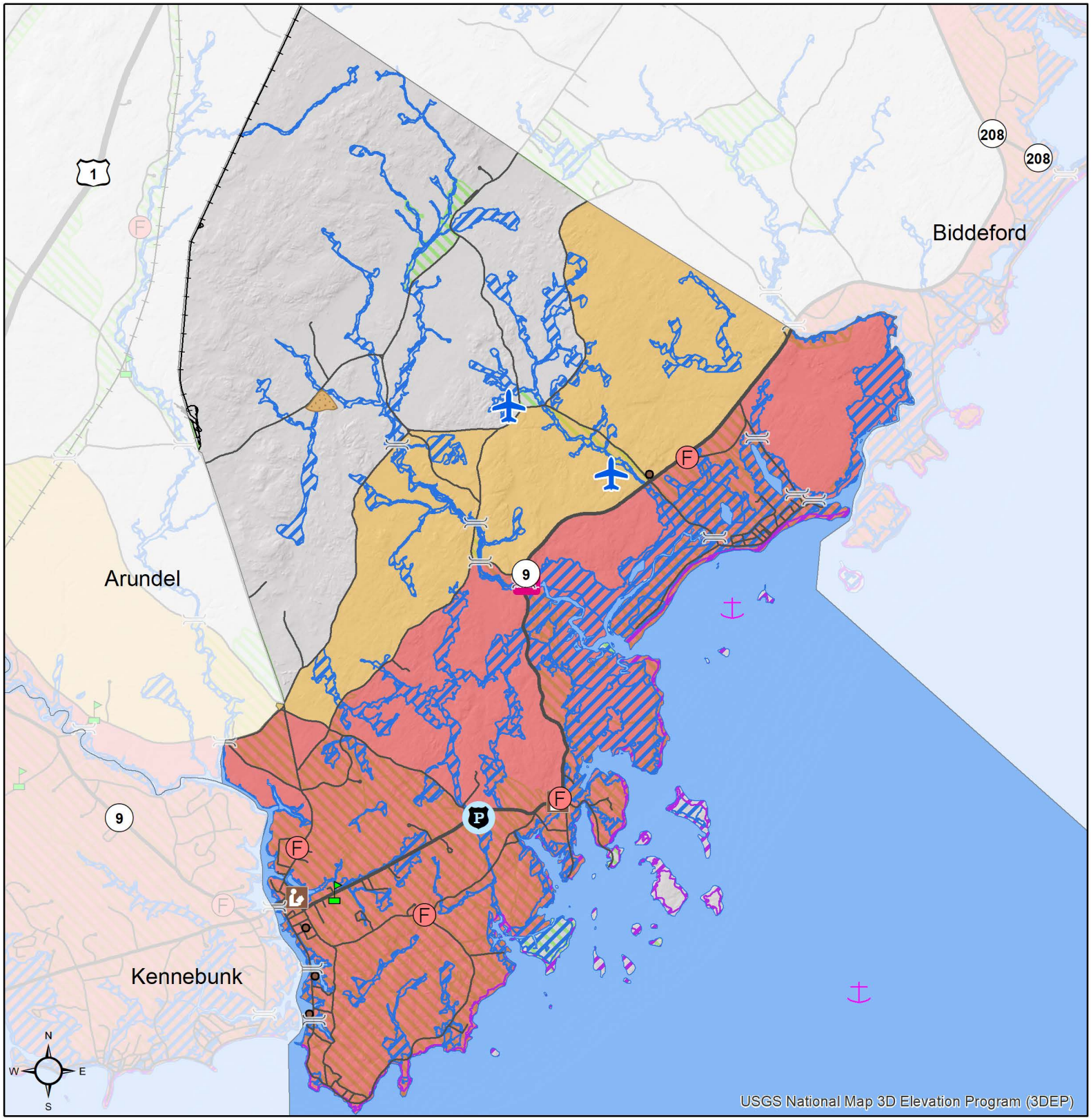
0 1 2 4 Miles

Town of Kennebunk
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



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0 0.75 1.5 3
Miles

Town of Kennebunkport
York County
Hazard Mitigation Plan

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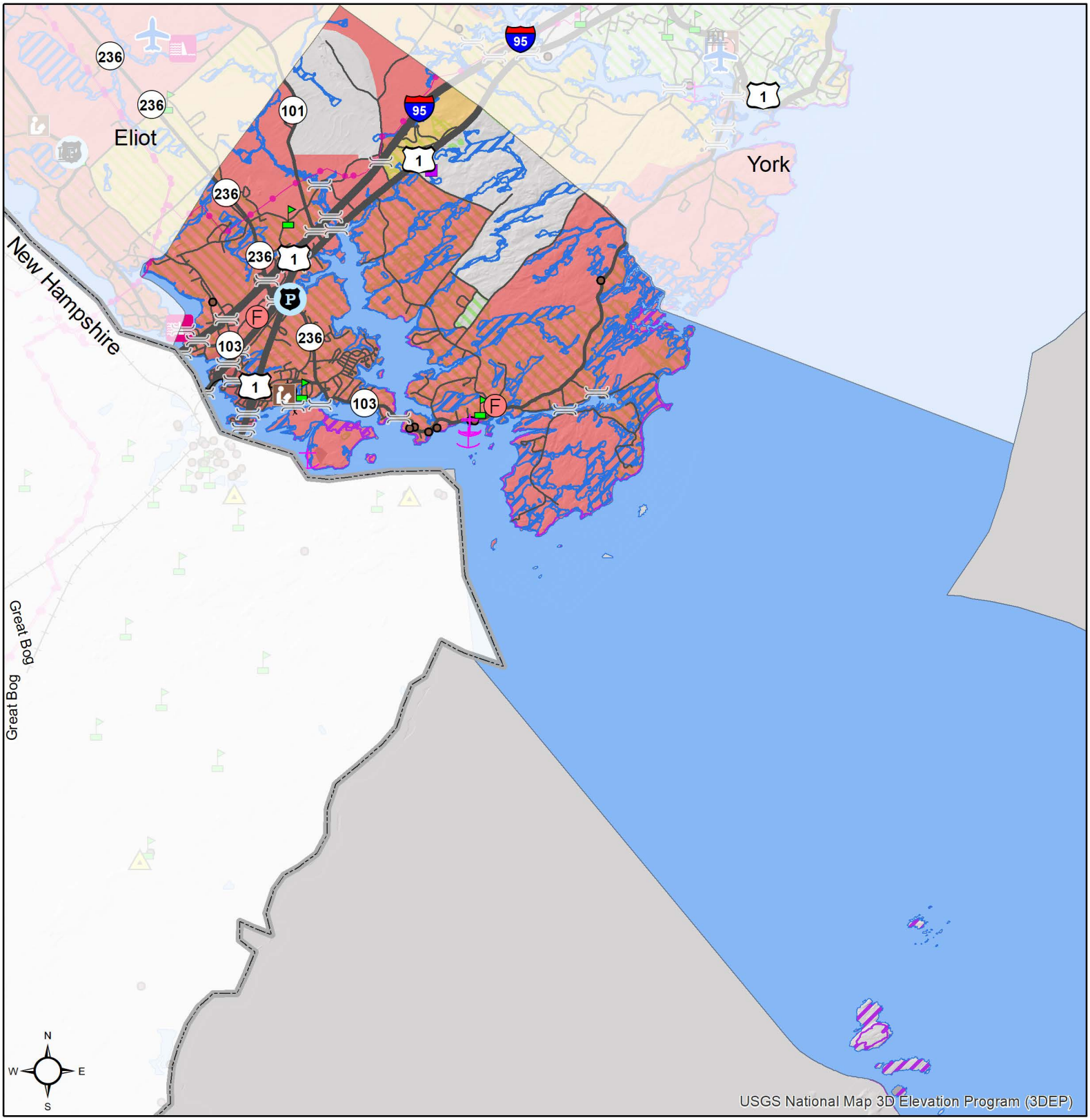

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0 1.25 2.5 5 Miles

Town of Kittery
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

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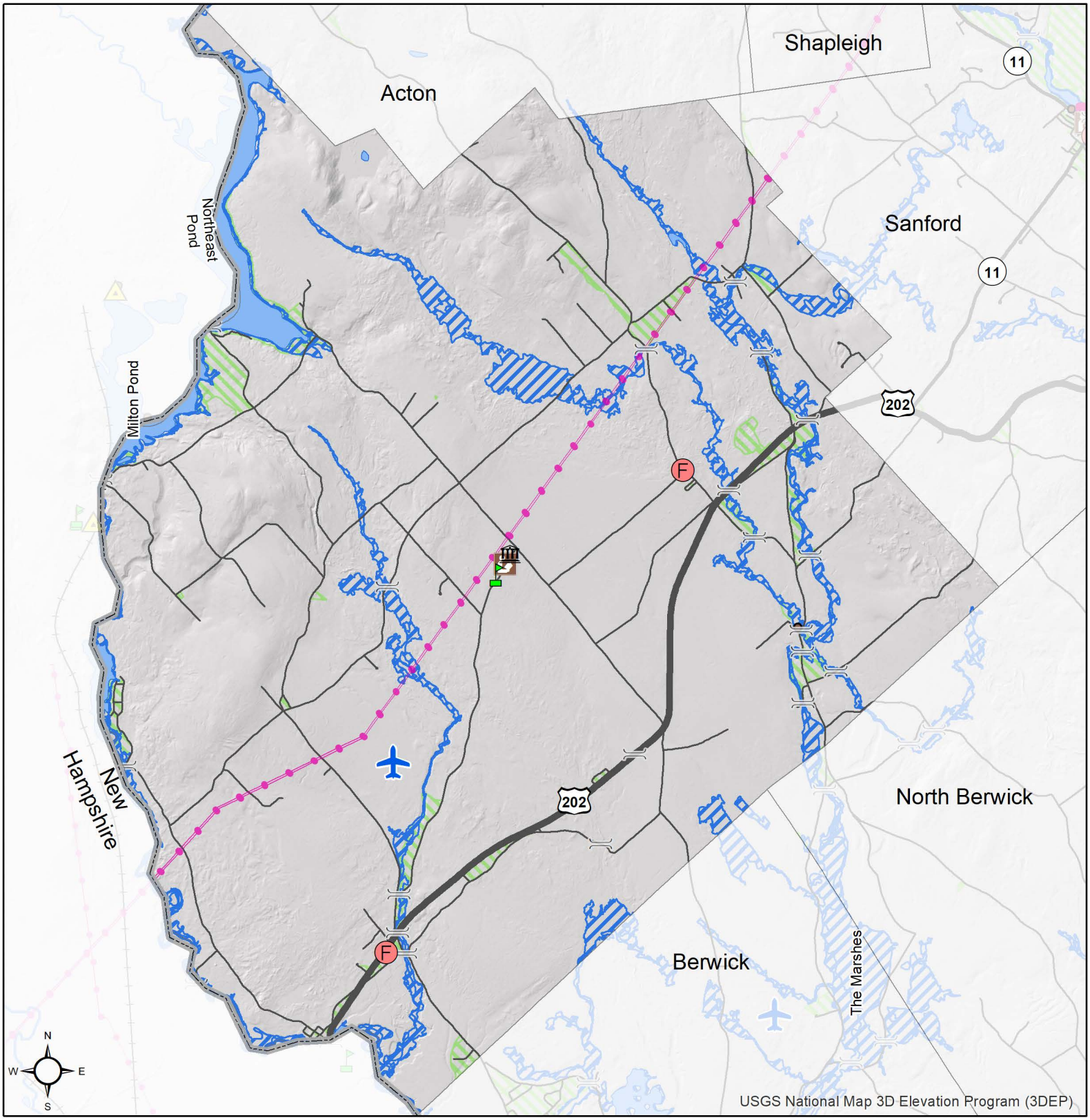

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0 1.25 2.5 5 Miles

Town of Lebanon
York County
Hazard Mitigation Plan

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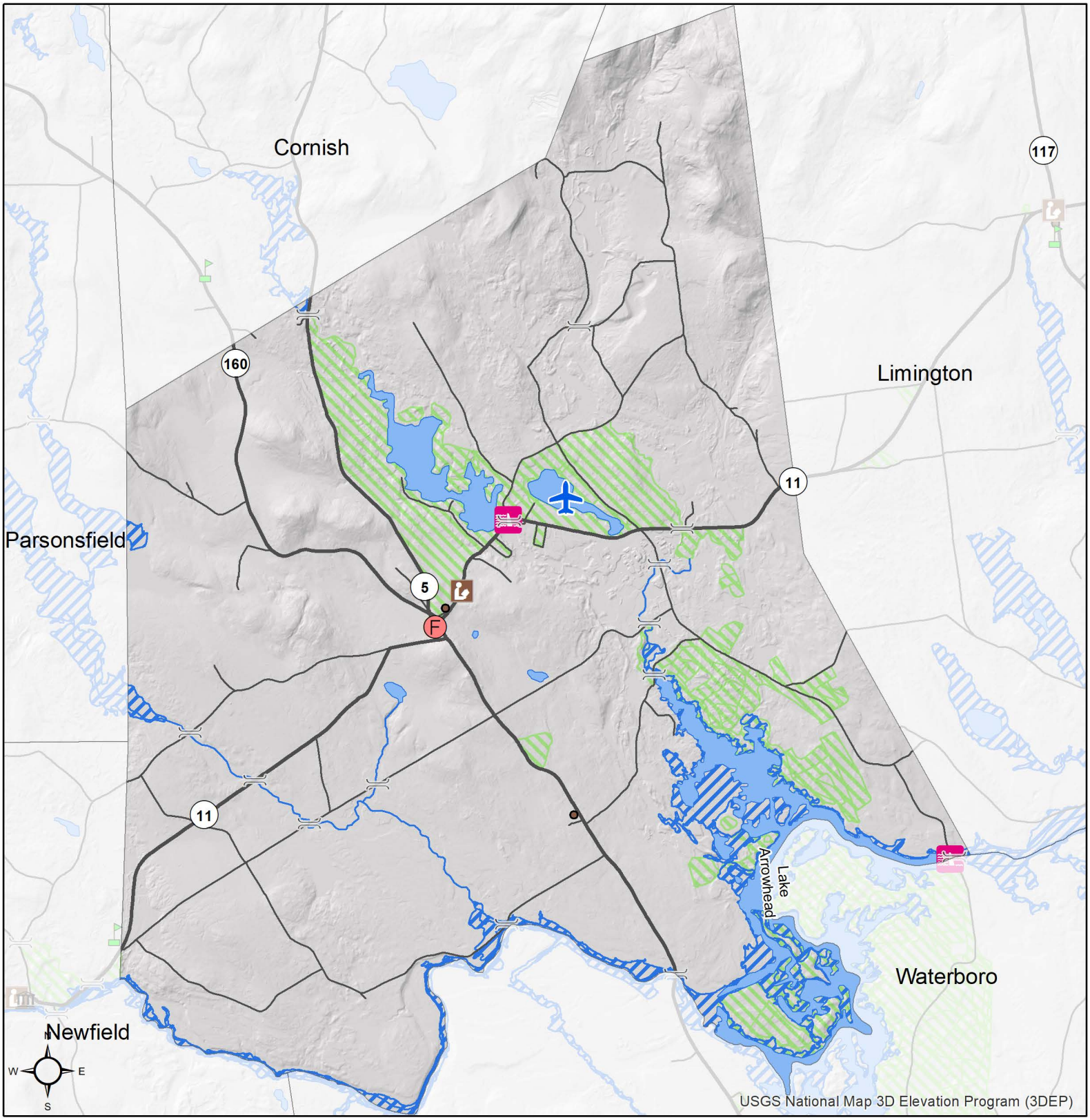

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0 0.75 1.5 3
Miles

Town of Limerick
York County
Hazard Mitigation Plan

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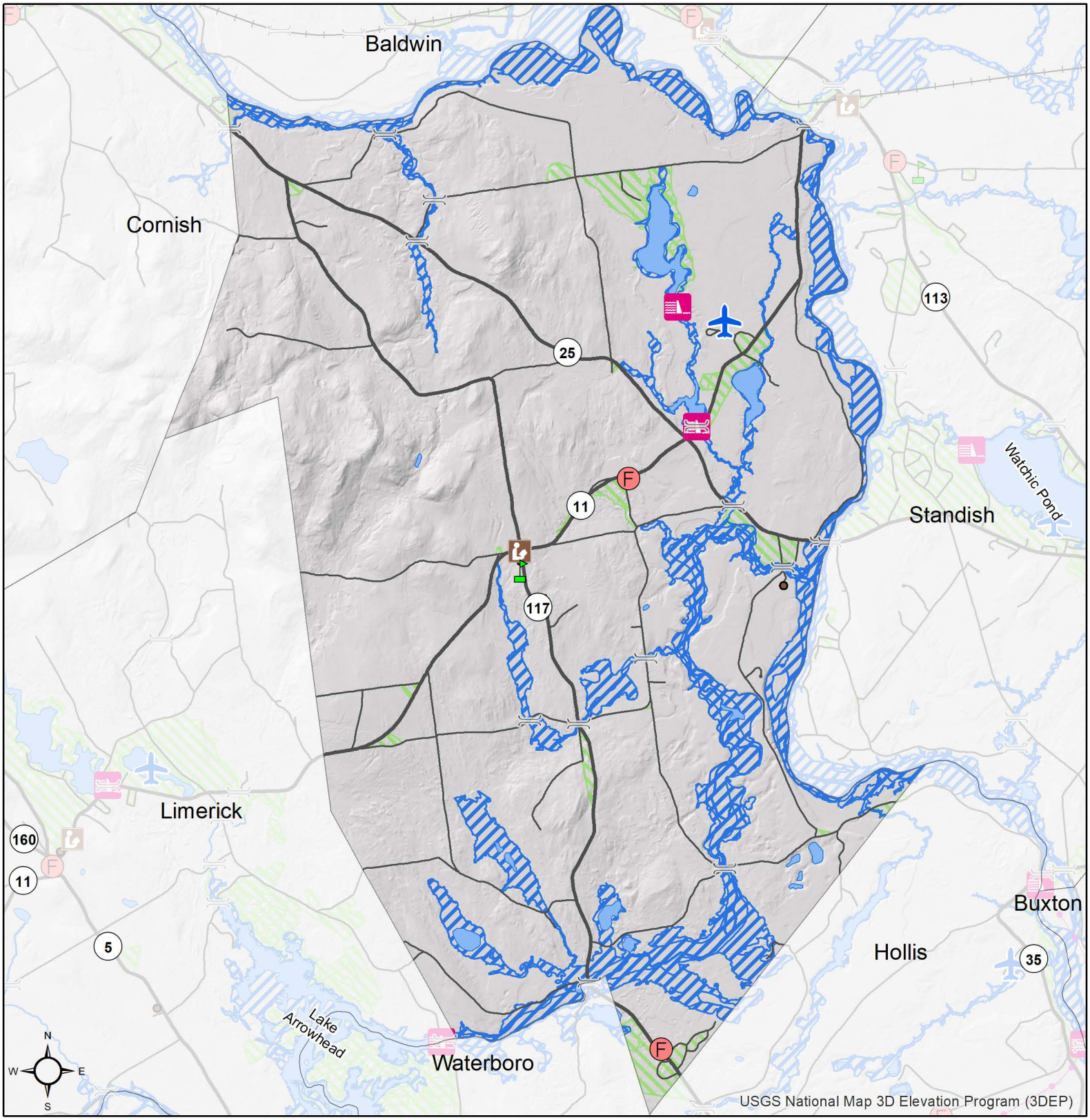

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0 1 2 4
Miles

Town of Limington
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

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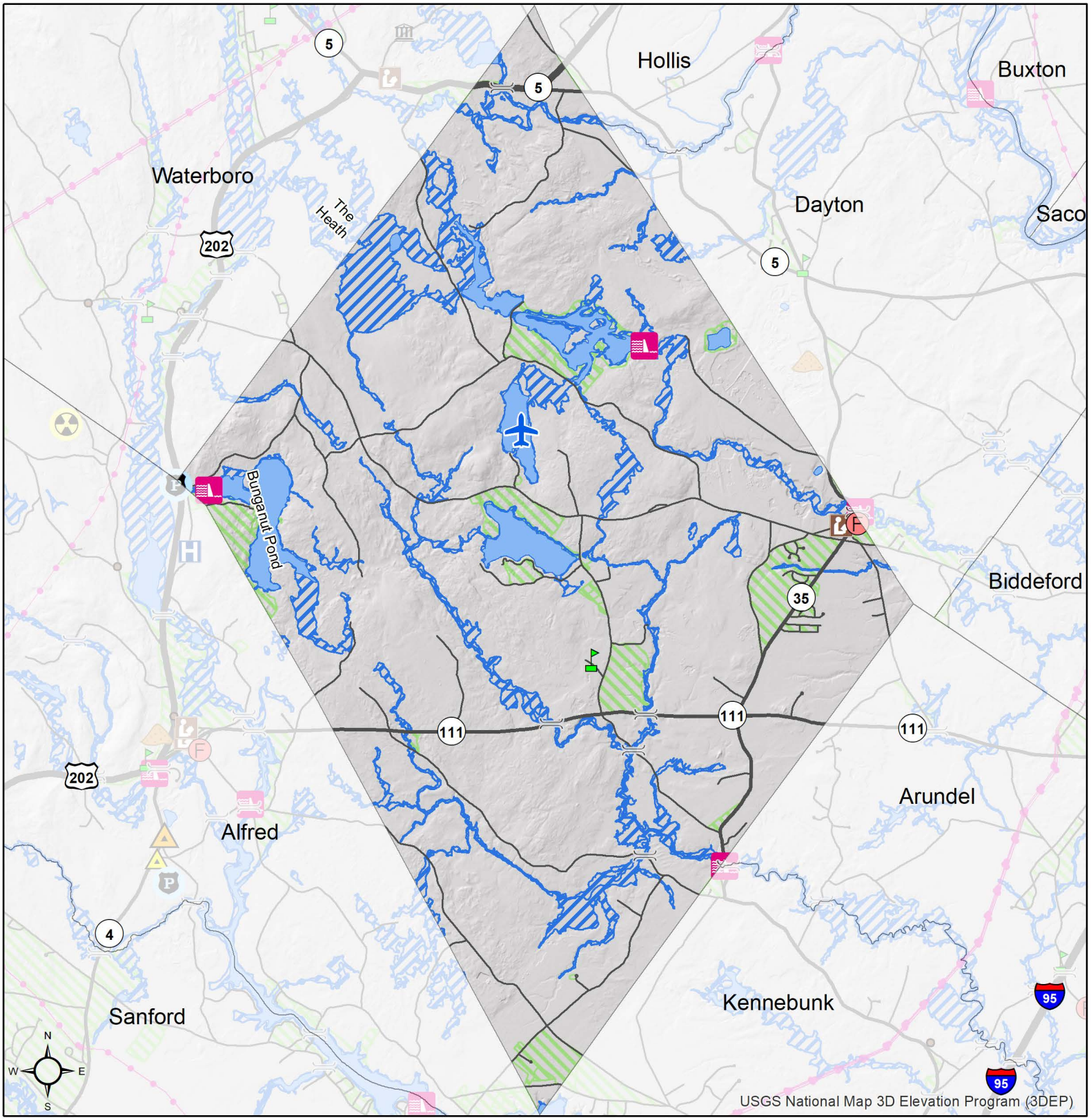

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0 1.25 2.5 5 Miles

Town of Lyman
York County
Hazard Mitigation Plan

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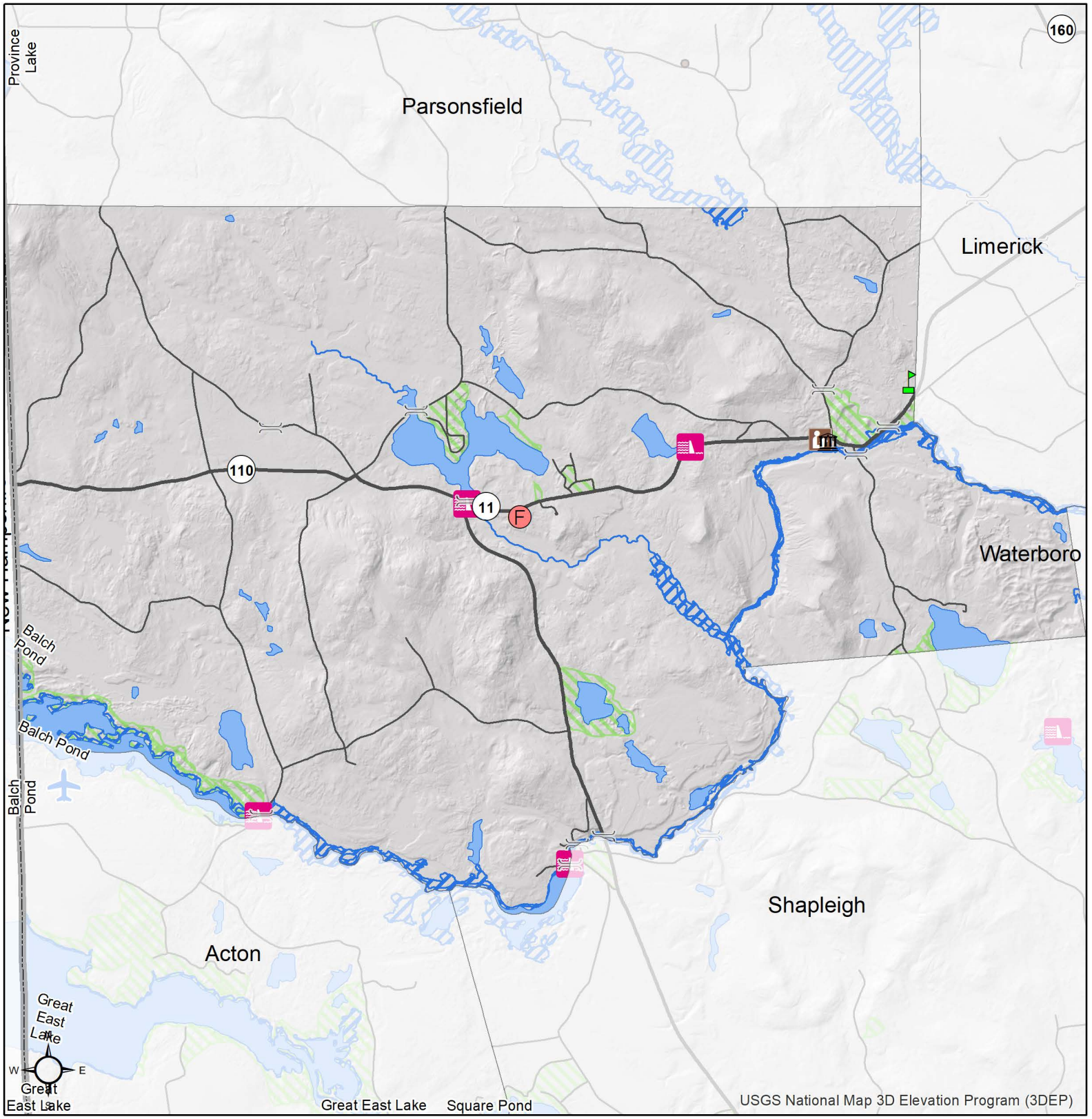

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0 1 2 4 Miles

Town of Newfield
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

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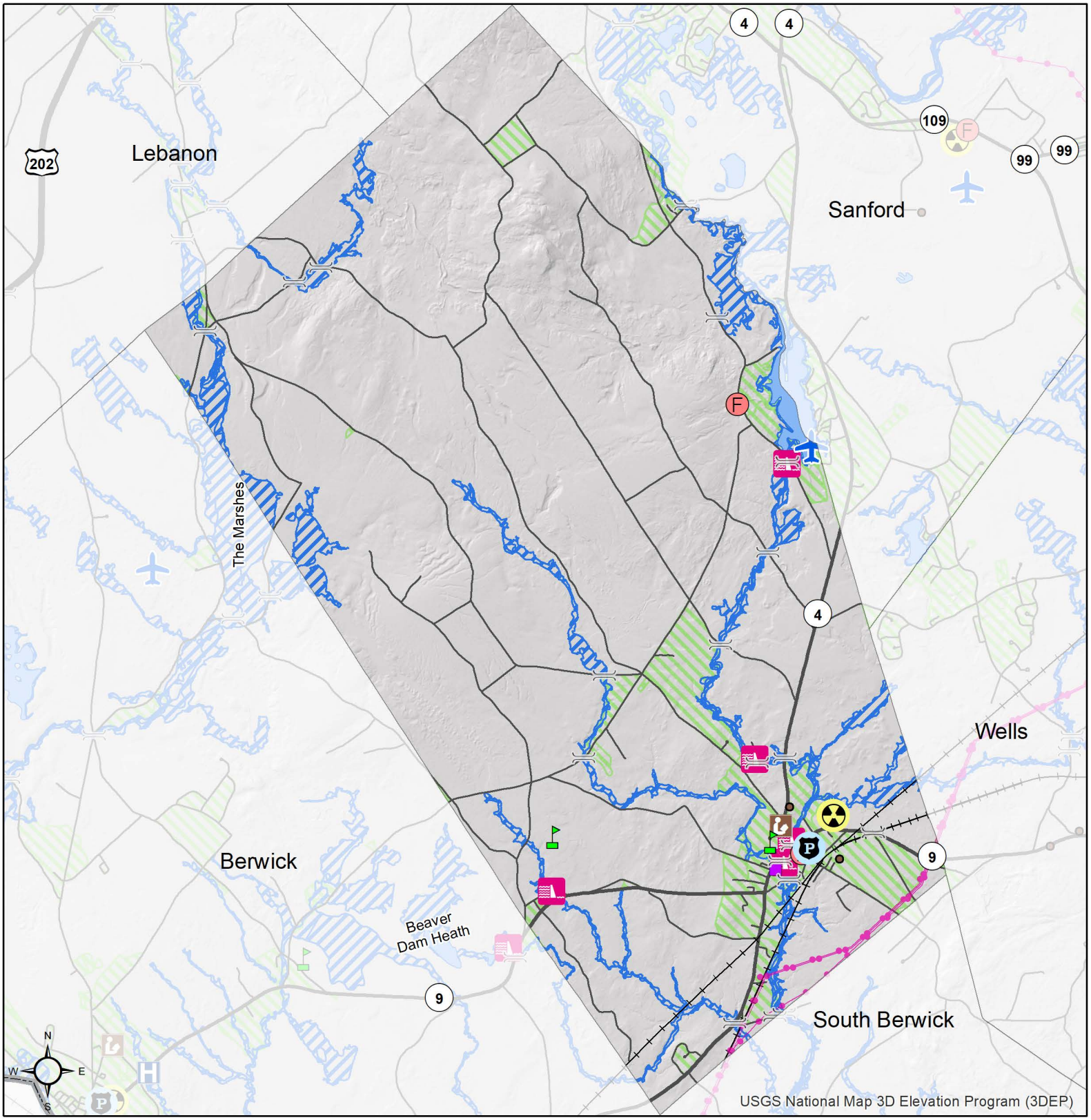

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Town of North Berwick
York County
Hazard Mitigation Plan

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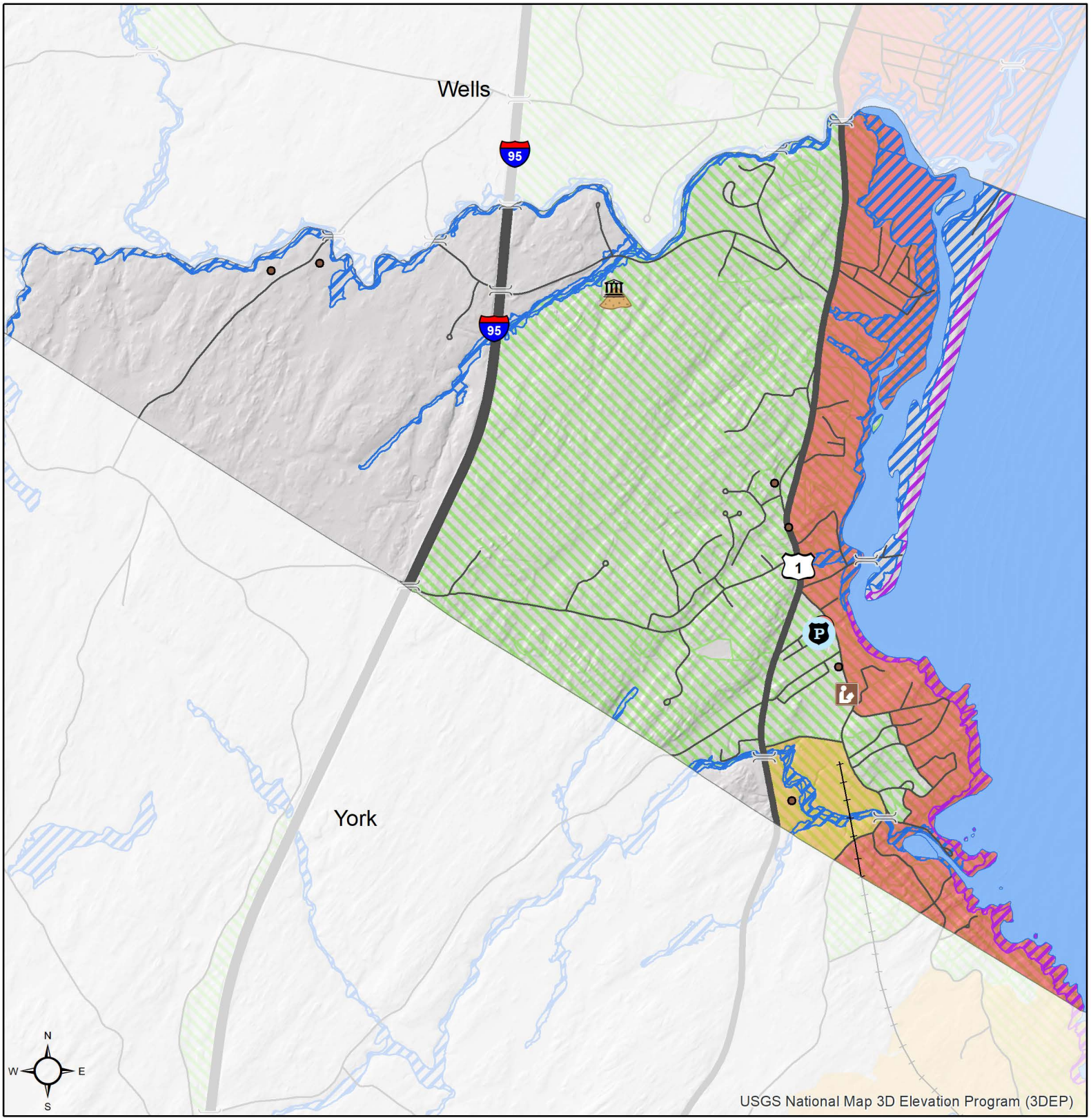

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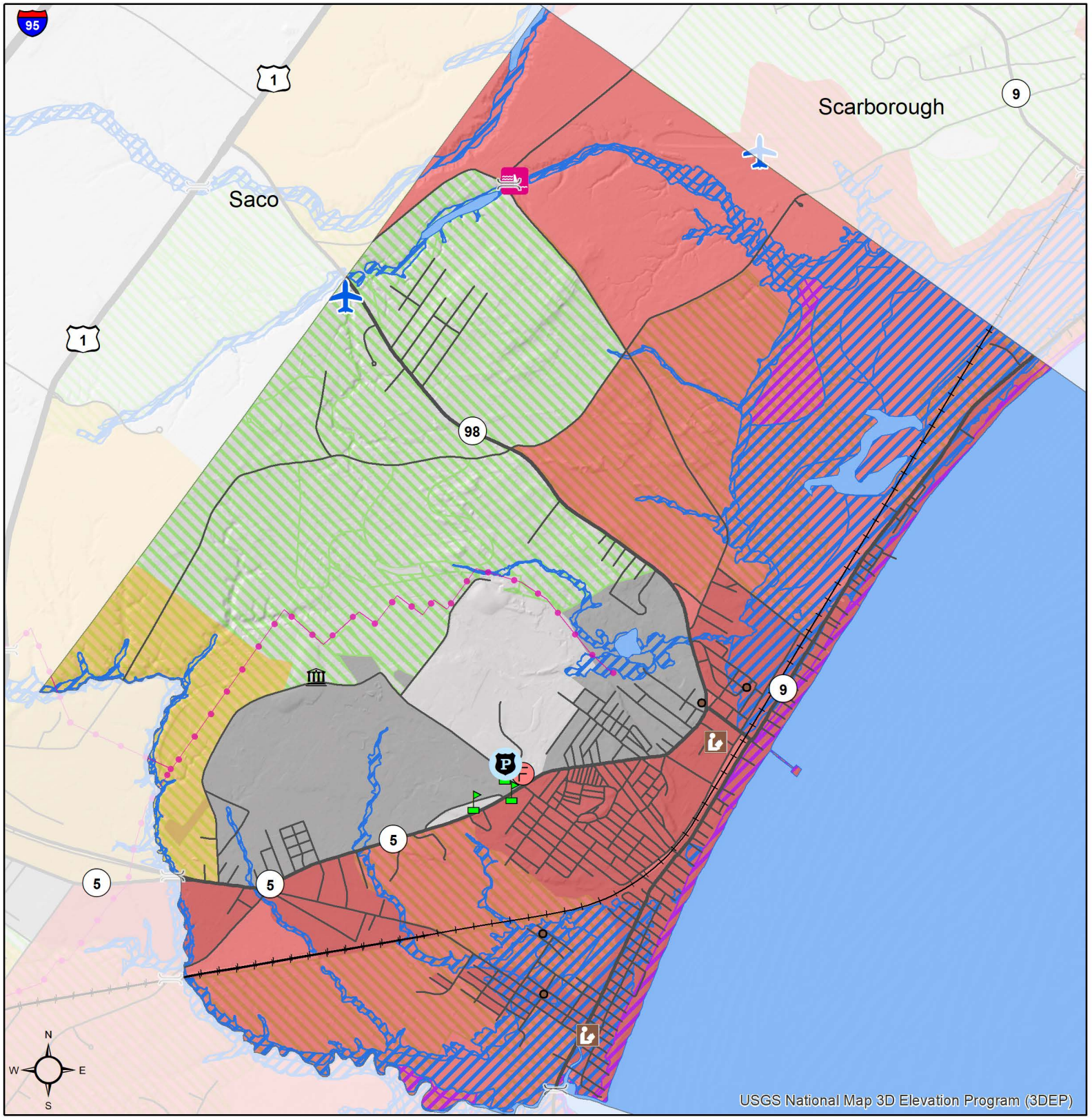
- Wildfire Risk (Wildland Urban Interface)
- Urban Area
- 100 Year Flood Zone
- 100 Year Flood Zone with Storm Waves
- Hurricane Evacuation Zones: A B C

0 0.425 0.85 1.7 Miles

Town of Ogunquit
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



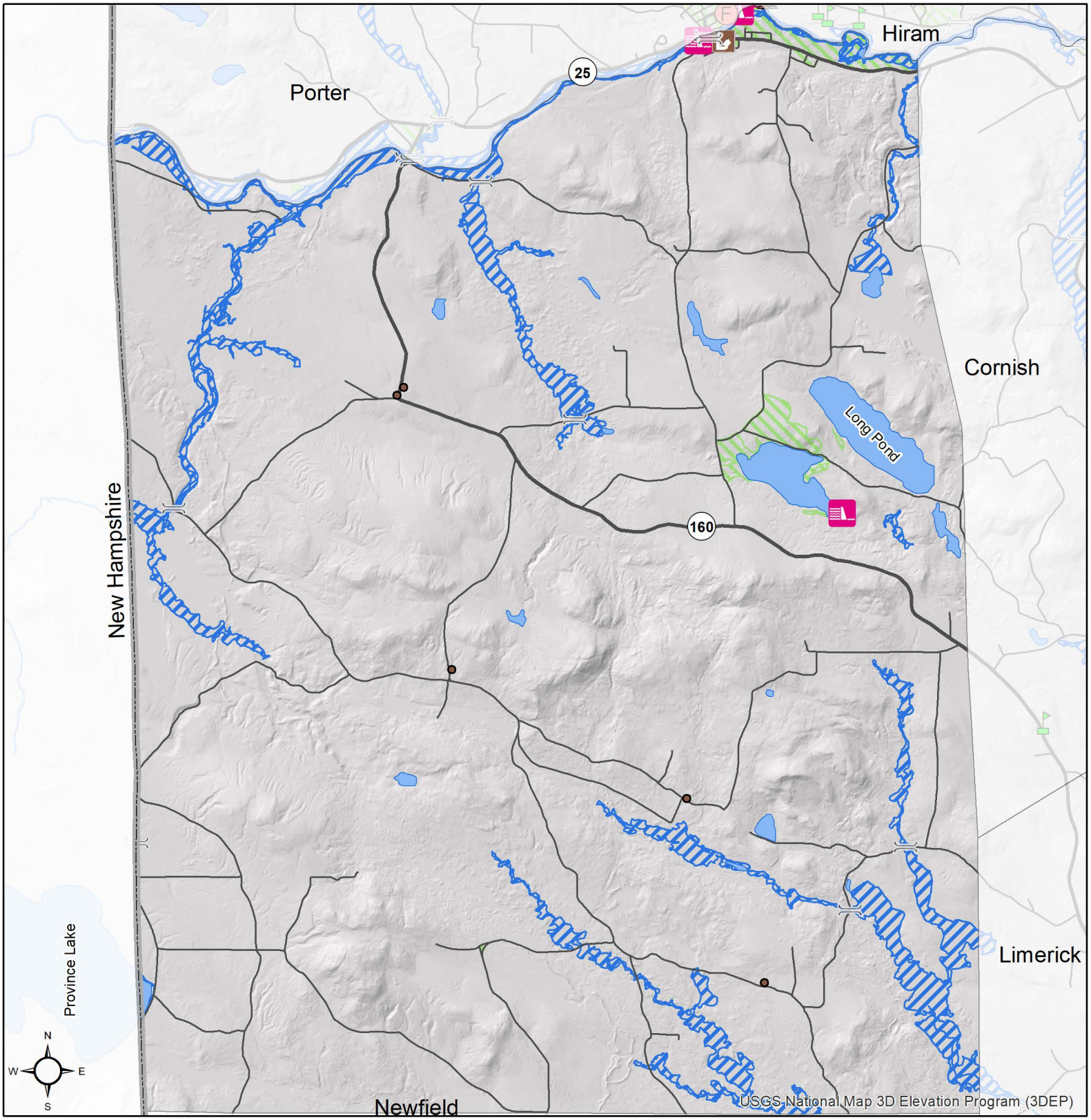
County EMA
Municipal EMA
Town Office
Police Station
Fire Station
Hospital
Bridge
Dam
Public Road
Ferry Terminal
Rail
Transmission Lines
School
Library
Seaport
Airport
Nursing Home
Historic Features
Hazardous Materials
Salt & Sand Storage
Wildfire Risk (Wildland Urban Interface)
Urban Area
100 Year Flood Zone
100 Year Flood Zone with Storm Waves
Hurricane Evacuation Zones: A B C

0 0.475 0.95 1.9 Miles

Town of Old Orchard Beach
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



County EMA
Municipal EMA
Town Office
Police Station
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Hospital
Bridge
Dam
Public Road
Ferry Terminal
Rail
Transmission Lines
School
Library
Seaport
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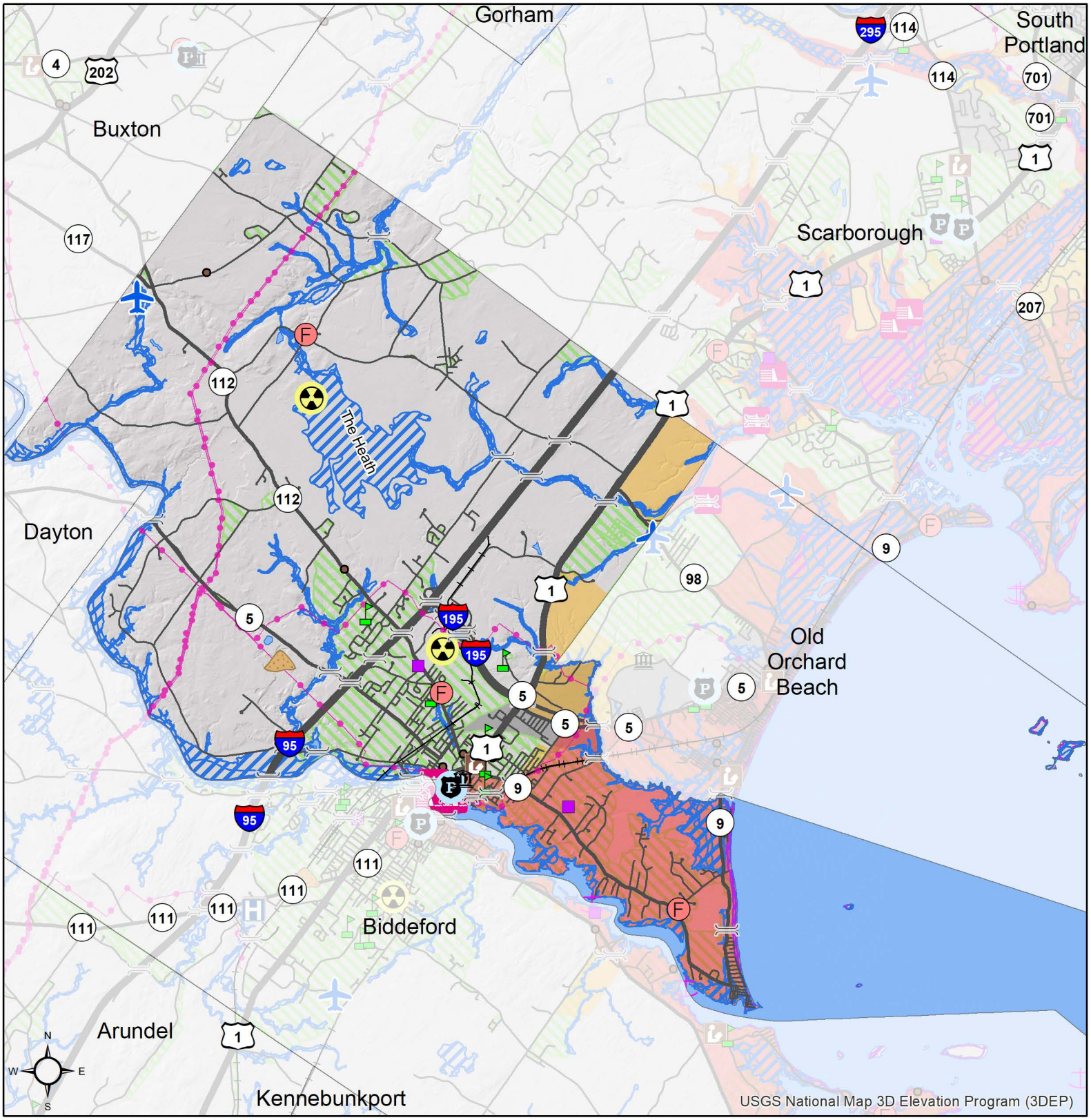
Historic Features
Hazardous Materials
Salt & Sand Storage
Wildfire Risk (Wildland Urban Interface)
Urban Area
100 Year Flood Zone
100 Year Flood Zone with Storm Waves
Hurricane Evacuation Zones: A B C

0 1 2 4
Miles

Town of Parsonsfield
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



- County EMA
- Municipal EMA
- Town Office
- Police Station
- Fire Station
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- Bridge
- Dam
- Public Road
- Ferry Terminal
- Rail
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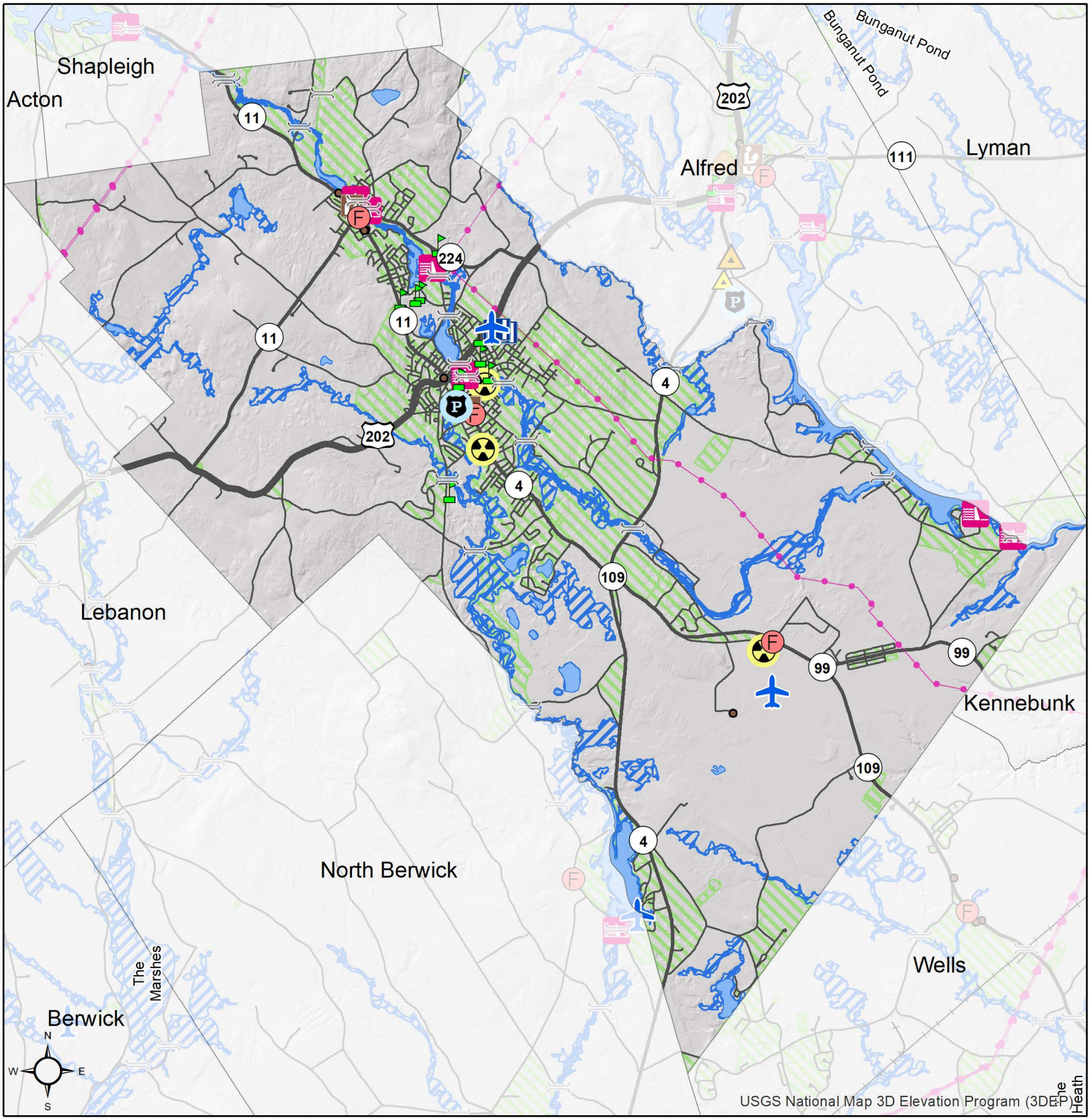
- Historic Features
- Hazardous Materials
- Salt & Sand Storage
- Wildfire Risk (Wildland Urban Interface)
- Urban Area
- 100 Year Flood Zone
- 100 Year Flood Zone with Storm Waves
- Hurricane Evacuation Zones: A B C

0 1.25 2.5 5 Miles

City of Saco
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



County EMA
Municipal EMA
Town Office
Police Station
Fire Station
Hospital
Bridge
Dam
Public Road
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Rail
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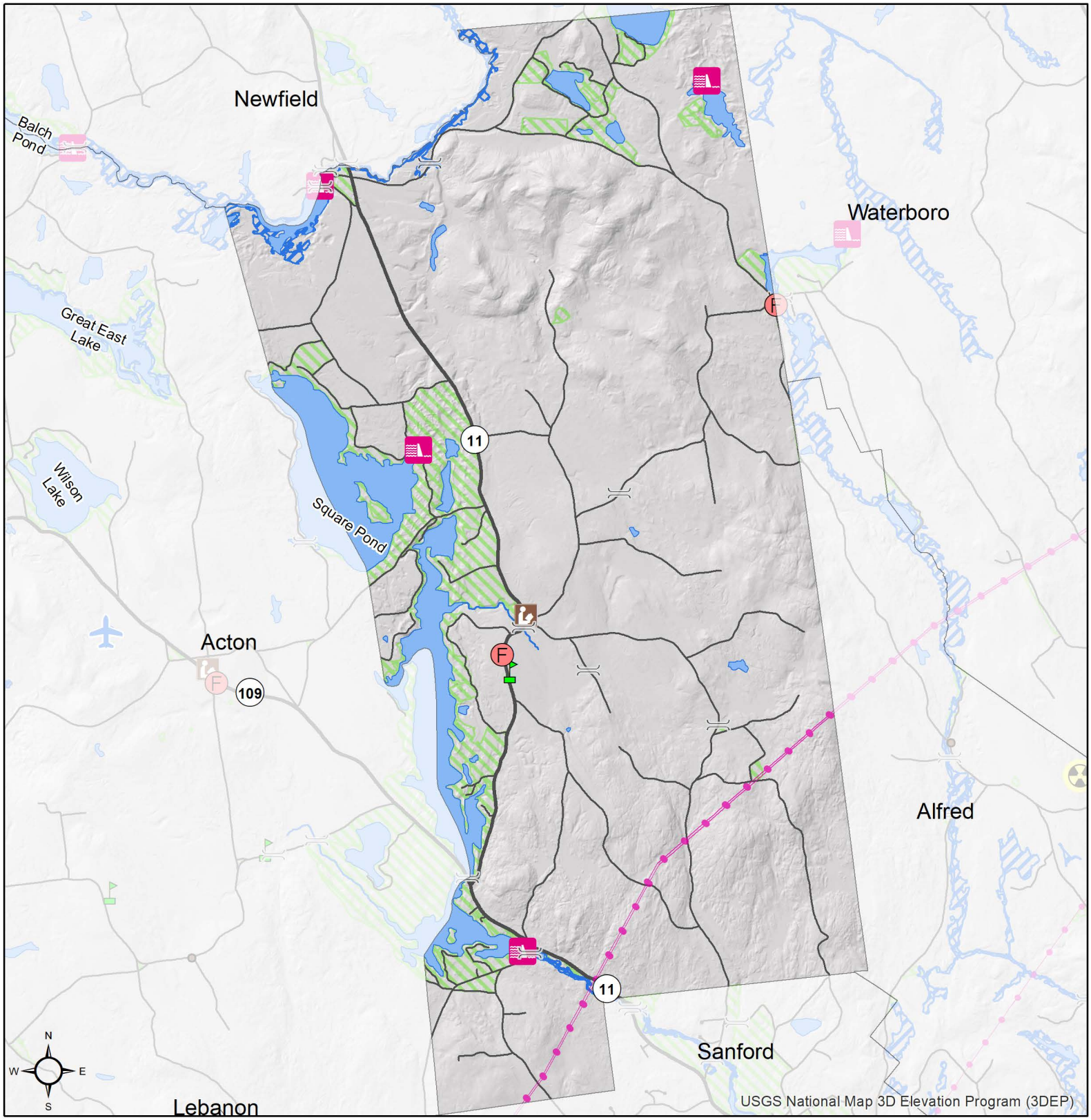
School
Library
Seaport
Airport
Nursing Home
Historic Features
Hazardous Materials
Salt & Sand Storage
Wildfire Risk (Wildland Urban Interface)
Urban Area
100 Year Flood Zone
100 Year Flood Zone with Storm Waves
Hurricane Evacuation Zones: A B C

0 1.25 2.5 5 Miles

City of Sanford
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



County EMA
Municipal EMA
Town Office
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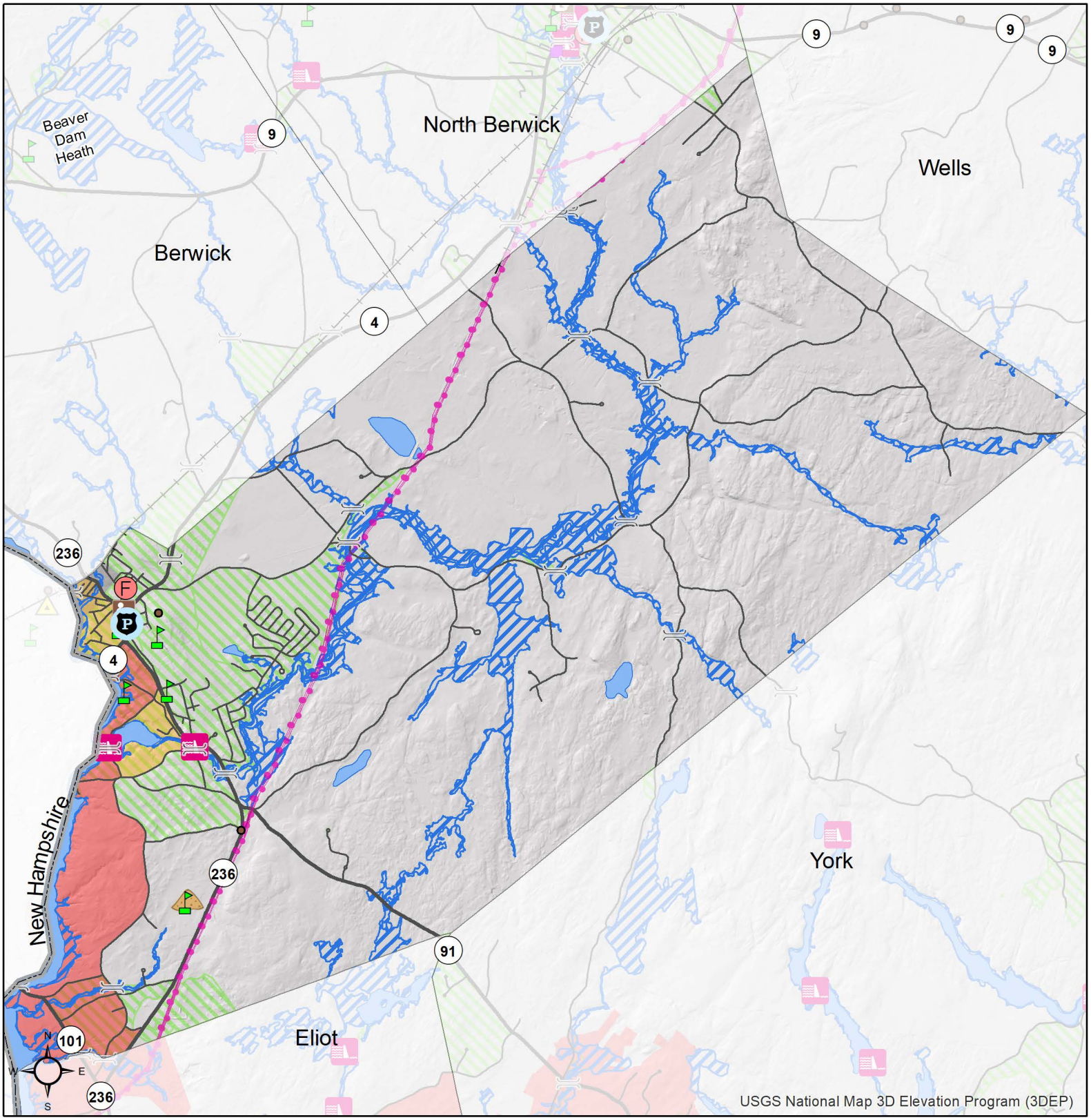
Public Road
Ferry Terminal
Rail
Transmission Lines
School
Library
Seaport
Airport
Nursing Home
Historic Features
Hazardous Materials
Salt & Sand Storage
Wildfire Risk (Wildland Urban Interface)
Urban Area
100 Year Flood Zone
100 Year Flood Zone with Storm Waves
Hurricane Evacuation Zones: A B C

0 1.25 2.5 5 Miles

Town of Shapleigh
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



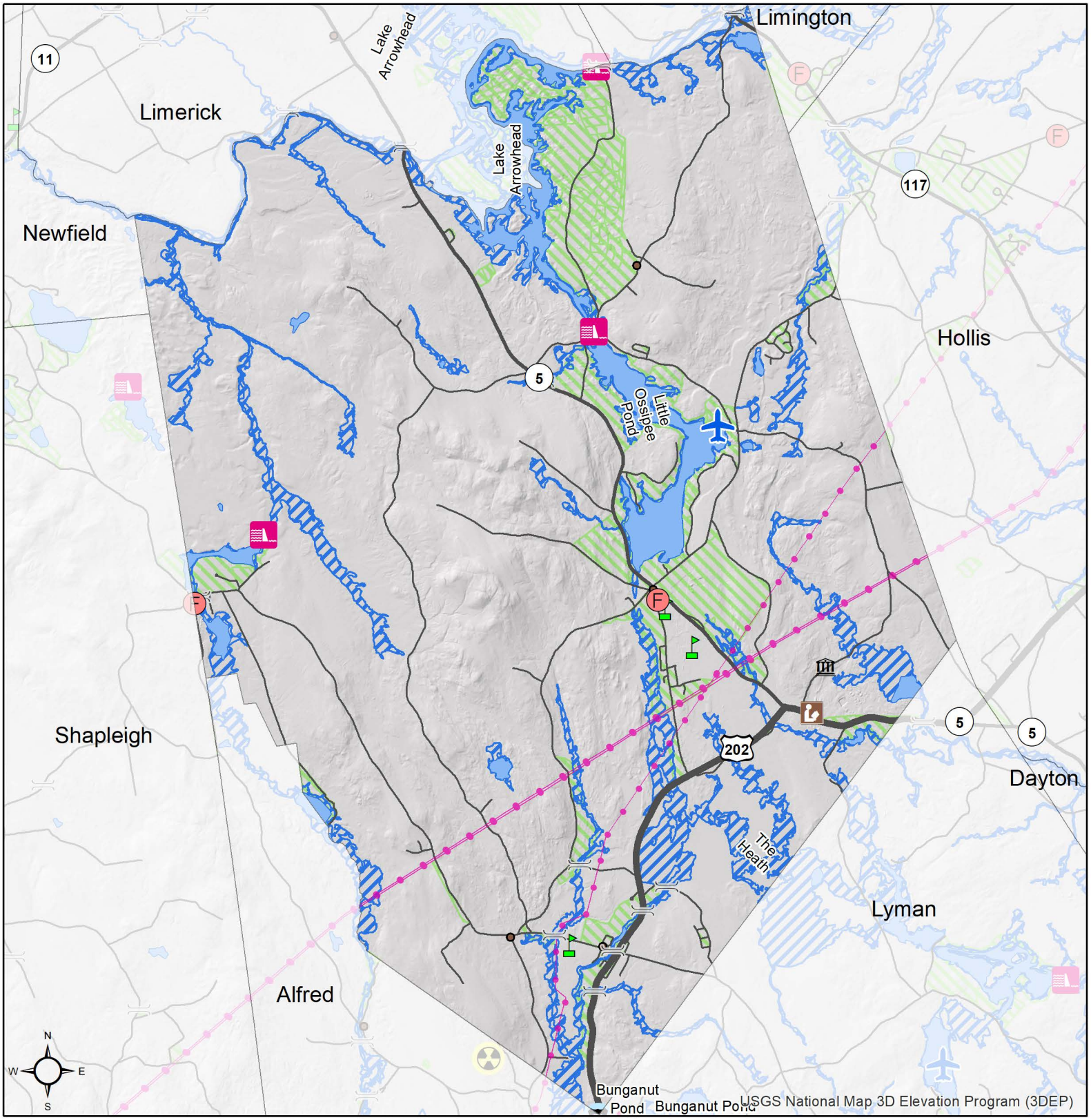
- County EMA
- Municipal EMA
- Town Office
- Police Station
- Fire Station
- Hospital
- Bridge
- Dam
- Public Road
- Ferry Terminal
- Rail
- Transmission Lines
- School
- Library
- Seaport
- Airport
- Nursing Home
- Historic Features
- Hazardous Materials
- Salt & Sand Storage
- Wildfire Risk (Wildland Urban Interface)
- Urban Area
- 100 Year Flood Zone
- 100 Year Flood Zone with Storm Waves
- Hurricane Evacuation Zones: A B C

0 1 2 4 Miles

Town of South Berwick
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



- County EMA
- Municipal EMA
- Town Office
- Police Station
- Fire Station
- Hospital
- Bridge
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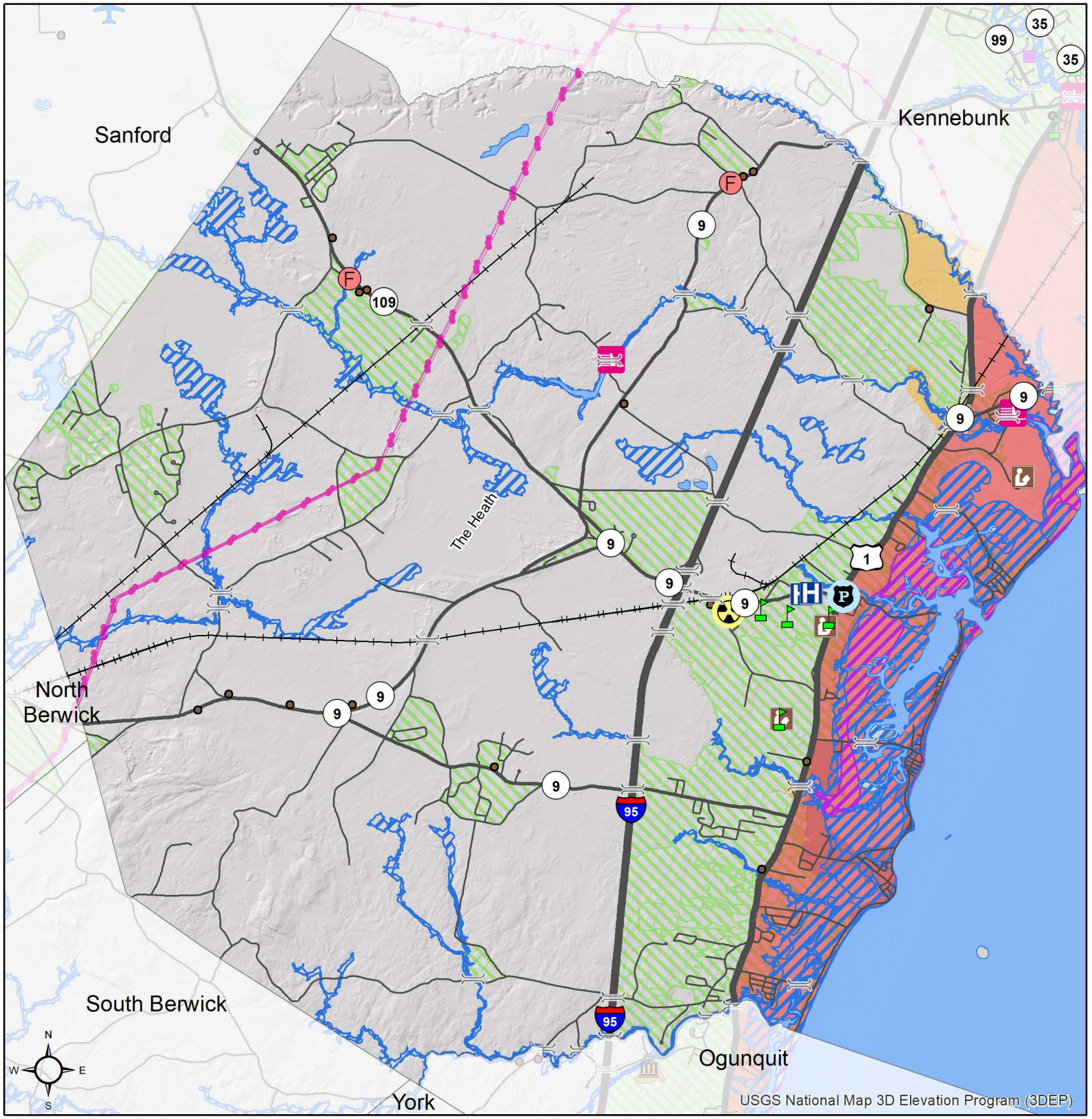
- Public Road
- Ferry Terminal
- Rail
- Transmission Lines
- School
- Library
- Seaport
- Airport
- Nursing Home
- Historic Features
- Hazardous Materials
- Salt & Sand Storage
- Wildfire Risk (Wildland Urban Interface)
- Urban Area
- 100 Year Flood Zone
- 100 Year Flood Zone with Storm Waves
- Hurricane Evacuation Zones: A B C

0 1.25 2.5 5 Miles

Town of Waterboro
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



County EMA
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Rail
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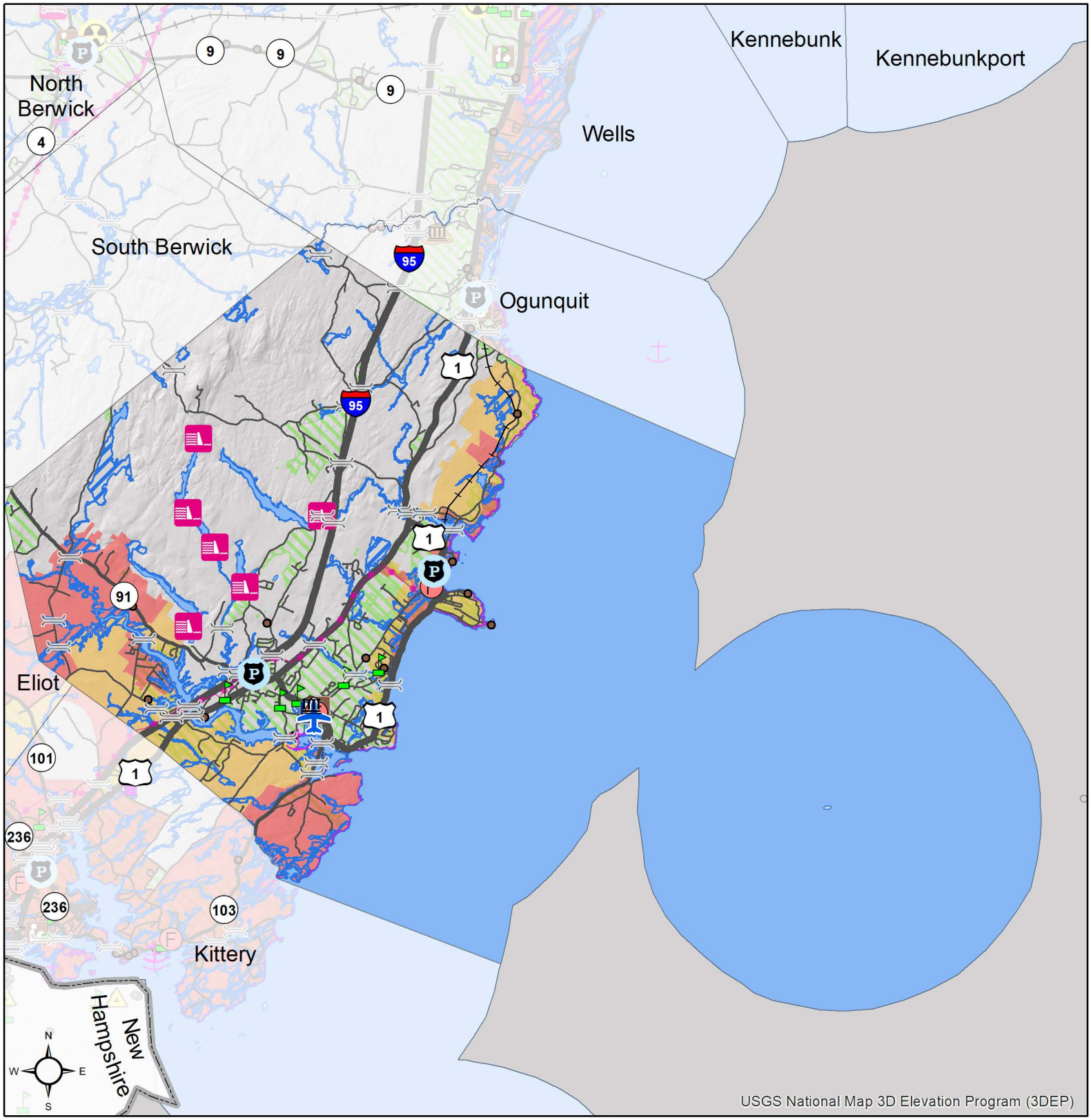
School
Library
Seaport
Airport
Nursing Home
Historic Features
Hazardous Materials
Salt & Sand Storage
Wildfire Risk (Wildland Urban Interface)
Urban Area
100 Year Flood Zone
100 Year Flood Zone with Storm Waves
Hurricane Evacuation Zones: A B C

0 1 2 4
Miles

Town of Wells
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive



- County EMA
- Municipal EMA
- Town Office
- Police Station
- Fire Station
- Hospital
- Bridge
- Dam
- Public Road
- Ferry Terminal
- Rail
- Transmission Lines
- School
- Library
- Seaport
- Airport
- Nursing Home
- Historic Features
- Hazardous Materials
- Salt & Sand Storage
- Wildfire Risk (Wildland Urban Interface)
- Urban Area
- 100 Year Flood Zone
- 100 Year Flood Zone with Storm Waves
- Hurricane Evacuation Zones: A B C

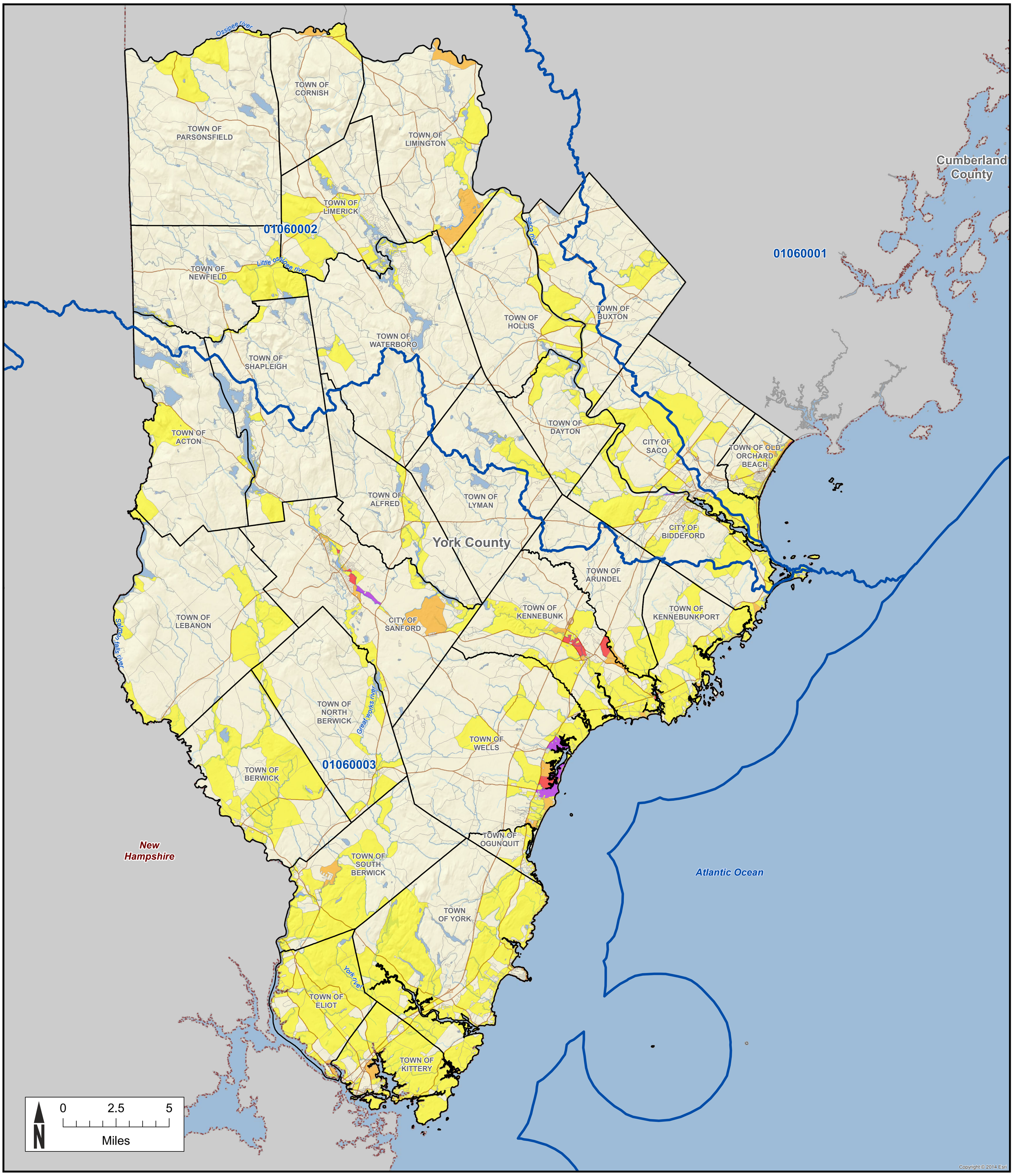
0 2.25 4.5 9 Miles

Town of York
York County
Hazard Mitigation Plan

Produced by Maine Emergency Management Agency

Data sources: Maine Office of GIS, U.S. Geological Survey, FEMA National Flood Insurance Program, Homeland Infrastructure Foundation Level Data, 2020 Maine Hurricane Evacuation Study, National Park Service, Forest Service Research Data Archive

Flood Risk Map: York County, Maine



MAP SYMBOLOGY

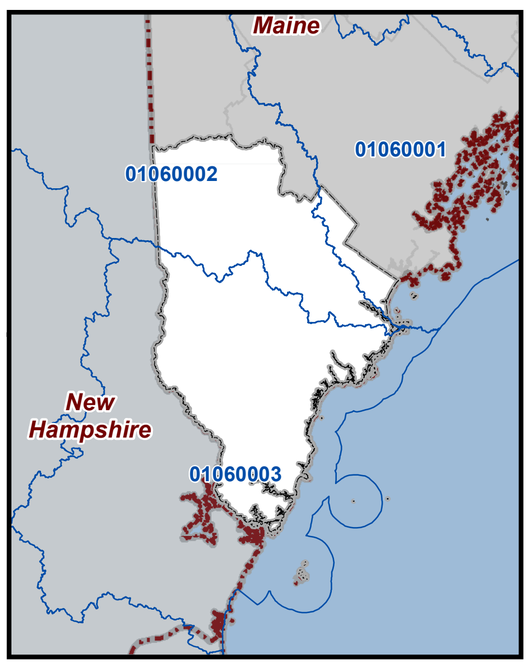
Base Data

- Major Roads
- State Boundary
- Rivers and Streams
- Watershed Boundary
- Corporate Limits
- County Boundary

Flood Risk

- Very Low
- Low
- Medium
- High
- Very High

WATERSHED LOCATOR



Flood Risk Assessment Map

FRM FLOOD RISK MAP

YORK COUNTY, ME

FEMA

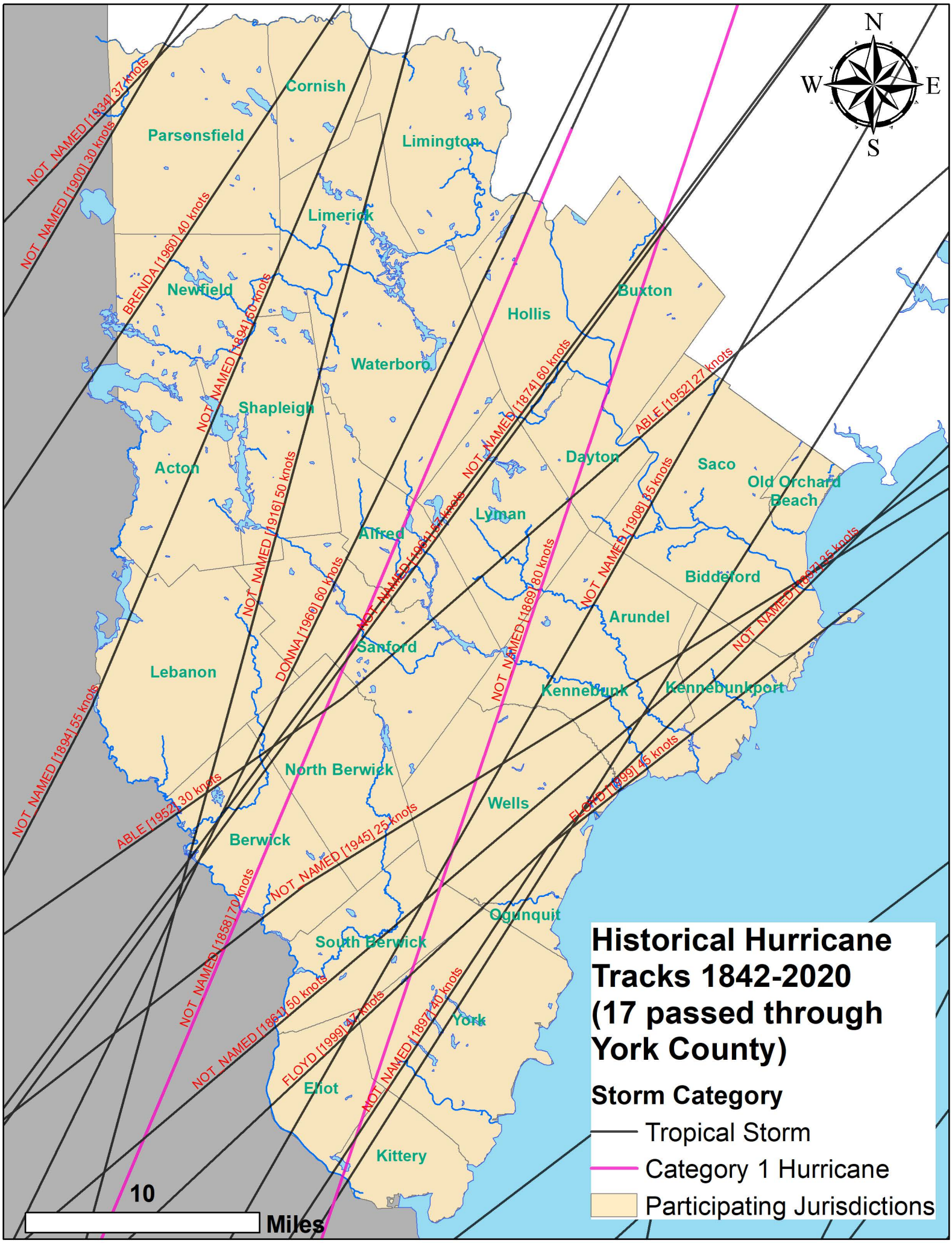
HUC-8 Code

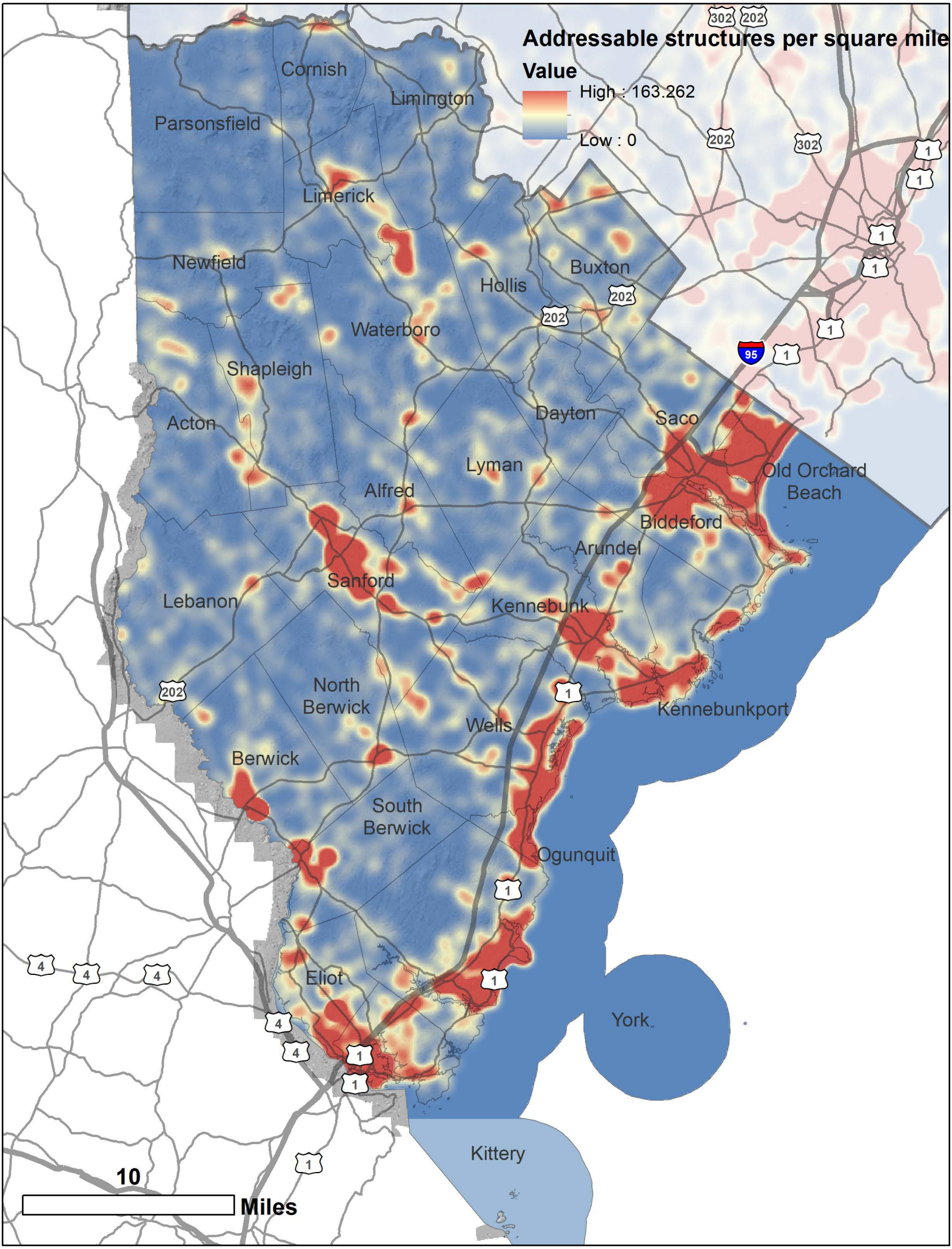
01060001, 01060002, 01060003

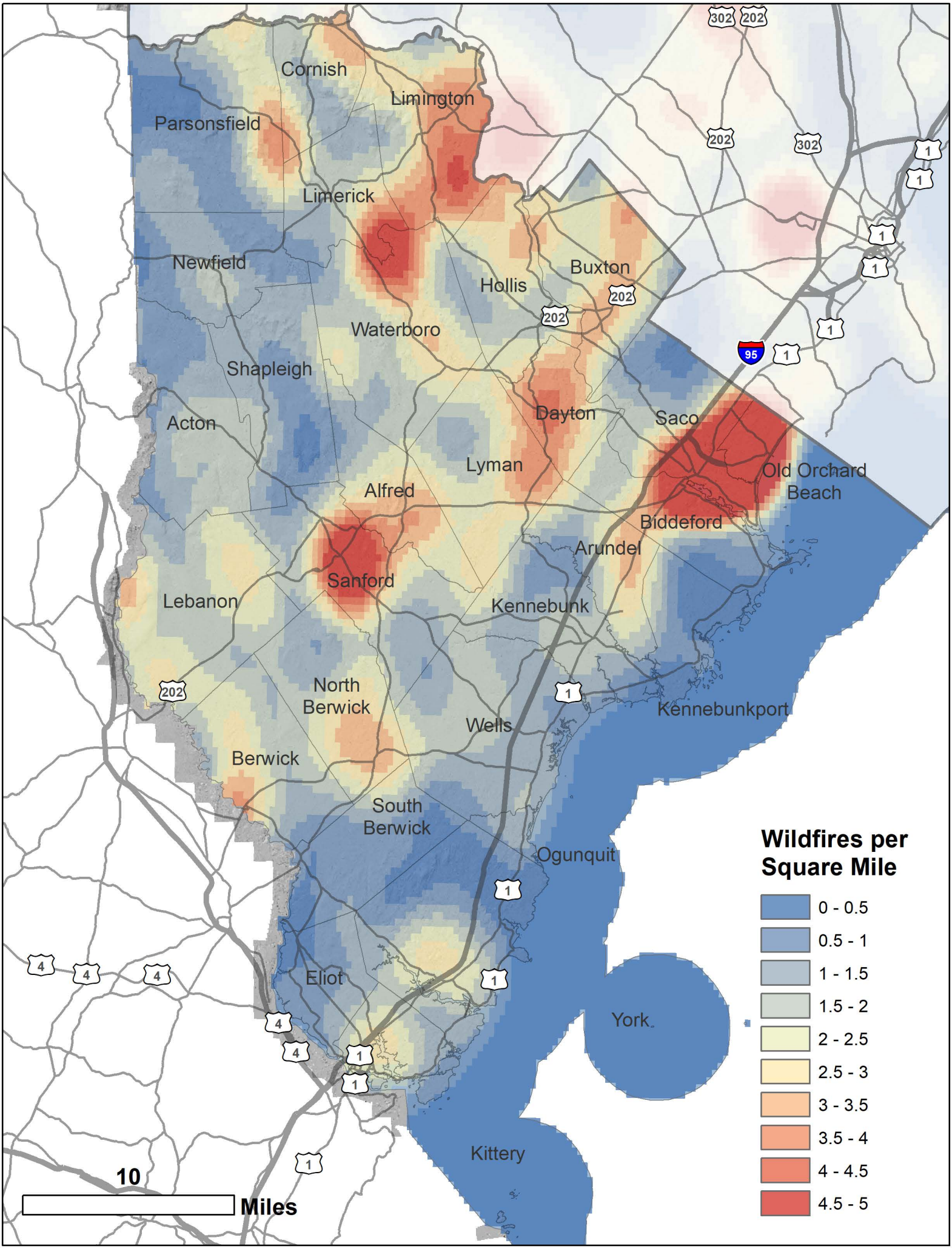
For more information about data used for this non-regulatory map, please consult the York County, Maine Flood Risk Database and Flood Risk Report.

RELEASE DATE

4/14/2014


N
W
E
S
Historical Hurricane Tracks 1842-2020 (17 passed through York County)
Storm Category
Tropical Storm
Category 1 Hurricane
Participating Jurisdictions
10
Miles
Cornish
Parsonsfield
Limington
Limerick
Newfield
Buxton
Hollis
Waterboro
Shapleigh
Acton
Dayton
Saco
Old Orchard Beach
Lyman
Alfred
Biddeford
Arundel
Sanford
Lebanon
Kennebunk
Kennebunkport
North Berwick
Wells
Berwick
Ogunquit
South Berwick
York
Eliot
Kittery
NOT_NAMED [1934] 37 knots
NOT_NAMED [1900] 30 knots
BRENDA [1960] 40 knots
NOT_NAMED [1894] 50 knots
NOT_NAMED [1916] 50 knots
DONNA [1960] 60 knots
NOT_NAMED [1894] 55 knots
ABLE [1952] 30 knots
NOT_NAMED [1858] 70 knots
NOT_NAMED [1861] 50 knots
FLOYD [1999] 40 knots
NOT_NAMED [1874] 60 knots
NOT_NAMED [1961] 67 knots
NOT_NAMED [1869] 80 knots
NOT_NAMED [1945] 25 knots
NOT_NAMED [1897] 40 knots
ABLE [1952] 27 knots
NOT_NAMED [1908] 85 knots
NOT_NAMED [1897] 35 knots
FLOYD [1999] 45 knots


Addressable structures per square mile
Value
High : 163.262
Low : 0
Cornish
Limington
Parsonsfield
Limerick
Newfield
Hollis
Buxton
Waterboro
Shapleigh
Acton
Dayton
Saco
Lyman
Alfred
Old Orchard Beach
Biddeford
Arundel
Sanford
Lebanon
Kennebunk
North Berwick
Kennebunkport
Wells
Berwick
South Berwick
Ogunquit
Eliot
York
Kittery
10
Miles


Cornish
Limington
Parsonsfield
Limerick
Newfield
Buxton
Hollis
Waterboro
Shapleigh
Acton
Dayton
Saco
Lyman
Old Orchard Beach
Alfred
Biddeford
Arundel
Sanford
Lebanon
Kennebunk
North Berwick
Kennebunkport
Wells
Berwick
South Berwick
Ogunquit
Eliot
York
Kittery
302
202
95
1
4
10
Miles
Wildfires per Square Mile
0 - 0.5
0.5 - 1
1 - 1.5
1.5 - 2
2 - 2.5
2.5 - 3
3 - 3.5
3.5 - 4
4 - 4.5
4.5 - 5

York County, Maine Hazard Mitigation Plan 2022

APPENDIX B

YORK COUNTY HAZARD MITIGATION PLAN RESOLUTION OF ADOPTION:

1. York County Commissioners
2. Town of Acton
3. Town of Alfred
4. Town of Arundel
5. Town of Berwick
6. City of Biddeford
7. Town of Buxton
8. Town of Cornish
9. Town of Dayton
10. Town of Eliot
11. Town of Hollis
12. Town of Kennebunk
13. Town of Kennebunkport
14. Town of Kittery
15. Town of Lebanon
16. Town of Limerick
17. Town of Limington
18. Town of Lyman
19. Town of Newfield
20. Town of North Berwick
21. Town of Ogunquit
22. Town of Old Orchard Beach
23. Town of Parsonsfield
24. City of Saco
25. City of Sanford
26. Town of Shapleigh
27. Town of South Berwick
28. Town of Waterboro
29. Town of Wells
30. Town of York

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, the **York County Commissioners** hereby adopt the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Acton** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Alfred** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Arundel** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Berwick** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the City of Biddeford** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Buxton** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
Mark Blier	Mark Blier	Selectman	6/29/2022
David Field	David G Field	Selectmen	6/29/2022
Chad Poitras	Chad Poitras	Selectmen	6/29/22
Nathan Schools	Nathan Schools	Local EMA Directo	6/29/2022

City/Town Office Address: 185 Portland Road, Buxton, ME 04093

Contact person Chief Nathan Schools, Local EMA Director

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Cornish** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Dayton** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Eliot** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Hollis** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Kennebunk** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Kennebunkport** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Kittery** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Lebanon** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Limerick** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Limington** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Lyman** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Newfield** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of North Berwick** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Ogunquit** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Old Orchard Beach** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Parsonsfield** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the City of Saco** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the City of Sanford** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Shapleigh** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of South Berwick** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
_____	_____	_____	_____
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Waterboro** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of Wells** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____

YORK COUNTY, MAINE

HAZARD MITIGATION PLAN

RESOLUTION OF ADOPTION

Whereas, natural and man-made disasters may occur at any time, we recognize that to lessen the impacts of these disasters we will save resources, property and lives in York County;

And whereas the creation of a Hazard Mitigation Plan is necessary for the development of a risk assessment and effective mitigation strategy;

And whereas, the 26 towns and 3 cities of York County are committed to the mitigation goals and measures as presented in this plan;

Therefore, **the Town of York** hereby adopts the 2022 York County Hazard Mitigation Plan.

AUTHORIZING SIGNATURES

Print name	Signature	Title	Date
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City/Town Office Address: _____

Contact person_____