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Element E – Plan Update

Element E Requirements

E1. Was the plan revised to reflect changes in development? (Requirement 44 CFR § 201.6(d)(3))

E1-a. Does the plan describe the changes in development that have occurred in hazard-prone areas that have increased or decreased each community’s vulnerability since the previous plan was approved?

Assessing Changes in Development

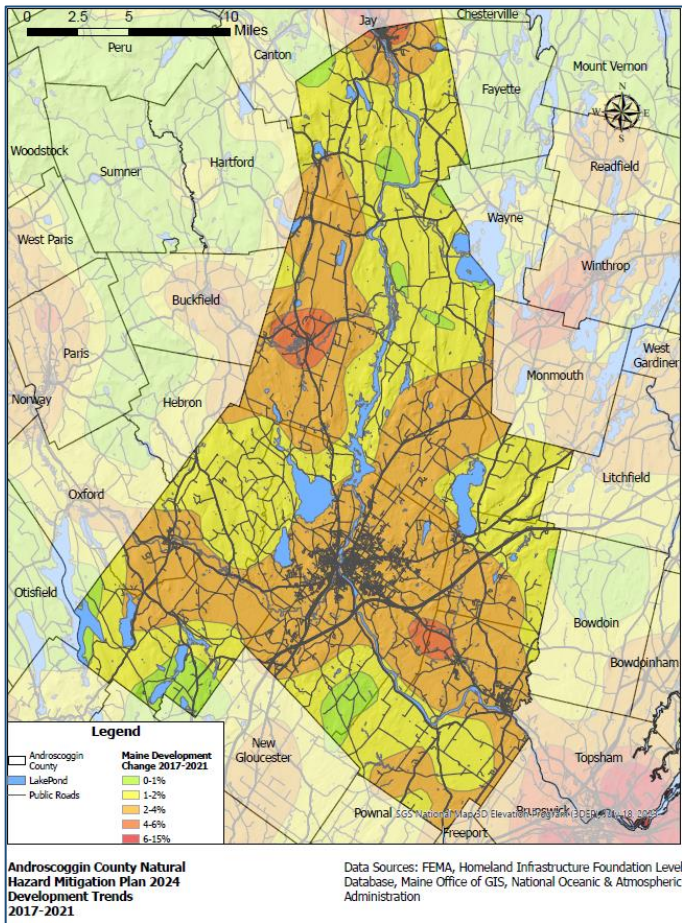
There have been no known development changes in hazard-prone areas that have affected any jurisdiction’s overall vulnerability. However, there are multiple programs to mitigate against unchecked development in hazard prone areas, such as community participation in NFIP through enforcement of Flood Insurance Rate Maps in local Floodplain Ordinances, development of local comprehensive plans, shoreland zoning ordinances and land use ordinances, as described in Element C of this Plan.

Changes in Population and Housing. Land uses in Androscoggin County range from densely populated urban areas to suburban residential areas to rural, farm areas, and forest land. Between 2010 and 2020, the County’s population grew from 107,702 to 111,139, for an increase of 3,437 or 3.2%. However, some communities experienced growth rates as high as 22.1%, while the towns of Leeds, Livermore Falls and Wales lost population. In a similar trend, housing units have increased in most jurisdictions. Between 2010 and 2020 housing units in Androscoggin County increased from 48,851 to 49,837. Housing units have increased in most jurisdictions in Androscoggin County, especially Leeds and Sabattus. Development has encroached on the wildland-urban interface, at the same time, development has not spilled into FEMA identified flood zones. A clear trend in the County is that nearly all of the population growth is occurring in the urban, suburban, and most rural communities. Although on-going changes are occurring in Androscoggin 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. Table 51 illustrates the changes in population and housing units for Androscoggin County.

Table 51: Change in Population in Androscoggin County between 2010 and 2020

Jurisdiction	2010 Population	2020 Population	Change in Population	2010 Housing Units	2020 Housing Units	Change in Housing Units
Auburn	23,055	24,061	4.4%	11,260	11,000	-2.3%
Durham	3,848	4,173	8.4%	1,498	1,660	10.8%
Greene	4,350	4,376	0.6%	1,759	1,958	11.3%
Leeds	2,326	2,262	-2.8%	889	1,053	18.4%
Lewiston	36,592	37,121	1.4%	16,355	16,579	1.3%
Lisbon	9,009	9,711	7.8%	4,108	4,179	1.7%
Livermore	2,095	2,127	1.5%	1,088	1,151	5.7%
Livermore Falls	3,187	3,060	-4.0%	1,661	1,494	-10.1%
Mechanic Falls	3,031	3,107	2.5%	1,425	1,341	-5.9%
Minot	2,607	2,766	6.1%	1,017	1,114	9.5%
Poland	5,376	5,906	9.9%	2,681	2,852	6.3%
Sabattus	4,876	5,044	3.4%	1,837	2,244	22.1%
Turner	5,734	5,817	1.4%	2,592	2,544	-1.8%
Wales	1,616	1,608	-0.5%	681	668	-1.9%

Source: [US Census](#)



Sentinel 2 Data Assessment. One other way used to assess changes in development pursued in this plan was the use of remote sensing data to estimate trends in land use changes and identify where these changes may intersect with hazard prone areas. Sentinel satellite imagery used to categorize land cover/land use type provide for change detection in global development at a 30-meter resolution over multiple years. This analysis can be replicated for any location on earth from 2017-2021. Based on this analysis as shown in Figure 42, there have been relatively large amounts of changes in development in parts of Lisbon, Livermore Falls and Turner, conversly according to the Sentinel 2 data Durham and Poland show little to no development in the last 5 years. Full size Sentinel 2 Data maps are located in the Jurisdictional Profiles for Lisbon, Livermore Falls, Turner, Durham and Poland, refer to Appendix A.

Figure 42: Changes in Development 2017-2021 using Sentinel 2 satellite data.



Figure 43: Androscooggin River at Great Falls, Lewiston, ME, May Day Flood 2023. Source: Bangor Daily News

Element E Requirements
E2. Was the plan revised to reflect changes in priorities and progress in local mitigation efforts? (Requirement 44 CFR § 201.6(d)(3))
E2-a. Does the plan describe how it was revised due to changes in community priorities?
E2-b. Does the plan include a status update for all mitigation actions identified in the previous mitigation plan?
E2-c. Does the plan describe how jurisdictions integrated the mitigation plan, when appropriate, into other planning mechanisms?

Changes in Priorities

Androscoggin County EMA requested each municipality review submitted projects as well as, to indicate if their actions have changed in priority, either by the addition of new actions and/or by changes in existing, uncompleted actions. Changes are indicated in the table of actions for each jurisdiction in Element C.

Status of Mitigation Projects. As part of Element C - Mitigation Strategy, there is a “Status” column in the table of local mitigation projects that describes the status of each strategy. All actions that are new are identified as such. Actions that have not been completed are included in the updated plan are identified by the phrase “Deferred, lack of funds.” Actions that have been completed are also included in the table, with completion information in the status column and highlighted in gray. The following planning mechanisms may be used by jurisdictions to achieve the goals, actions and projects as described in Element C.

- **Completed projects:** Information on municipal projects that have been completed or are underway have been integrated into other planning mechanisms. These projects were incorporated into municipal warrant items, budgets, municipal appropriations, bid documents and contracts for work.
- **Floodplain Management Ordinances:** As documented in Element C, all of Androscoggin County’s municipalities have joined the National Flood Insurance Program and the cities of Lewiston and Auburn have gone beyond the minimum standards to participate in the Community Rating System. These ordinances have already incorporated the general goals contained in this plan of minimizing loss and disruption of life, property, & the environment.
- **Shoreland zoning ordinances:** All jurisdictions in Androscoggin County have shoreland zoning ordinances as required by state law. Shoreland zoning ordinances contain requirements for locating structures outside of known flood hazard areas. As such, all of the jurisdictions in Androscoggin County have already incorporated into their shoreland zoning ordinances the general goals contained in this plan of minimizing loss and disruption of life, property, & the environment.
- **Subdivision review requirements:** Maine state law contains criteria that local officials must use in conducting subdivision reviews. One of the criteria contains a specific reference to FEMA’s Flood Boundary and Floodway Maps and Flood Insurance Rate Maps and requires elevation above the 100-year flood plain, this statutory requirement already incorporates floodplain management goals contained in the plan into the local subdivision review process.
- **Capital improvement plans:** Most municipalities have capital improvement plans; most of the smaller ones do not, but they do have local budgeting processes which are used to examine potential expenditures in detail and establish overall spending priorities. In either case, the budget review process is used to evaluate and recommend a course of action for projects contained in the hazard mitigation plan.

- **Local budgeting processes:** These processes are used to examine potential expenditures in detail and establish overall spending priorities. The budget review process is used to evaluate and recommend a course of action for actions contained in the hazard mitigation plan; this can include road maintenance planning efforts.



Figure 44: Miller Alley, Auburn, ME July 25, 2023. Source: City of Auburn.