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Scoping of Flood Hazard Mapping Needs for Lincoln County, Maine

By Robert W. Dudley and Charles W. Schalk

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Contents

CONVERSION FACTORS AND ABBREVIATIONS

Multiply	By	To obtain
Length		
inch (in.)	25.4	millimeter (mm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
Area		
square foot (ft^2)	0.09290	square meter (m^2)
square mile (mi^2)	2.590	square kilometer (km^2)
Volume		
cubic foot (ft^3)	0.02832	cubic meter (m^3)
Slope		
foot per mile (ft/mi)	0.1894	meter per kilometer (m/km)
Velocity and Flow		
foot per second (ft/s)	0.3048	meter per second (m/s)
cubic foot per second (ft^3/s)	0.02832	cubic meter per second (m^3/s)

OTHER ABBREVIATIONS USED IN REPORT

BAD	Best Available Data
BFE	Base Flood Elevation
CAC	Community Assistance Contact
CAV	Community Assistance Visit
DFIRM	Digital Flood Insurance Rate Map
FEMA	Federal Emergency Management Agency
FHBM	Flood Hazard Boundary Map
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
GIS	Geographic Information System
LOMC	Letter of Map Change
MEGIS	Maine Office of Geographic Information Systems
MFMP	Maine Floodplain Management Program
MNUSS	Mapping Needs Update Support System
NFIP	National Flood Insurance Program
USGS	United States Geological Survey

Scoping of Flood Hazard Mapping Needs for Lincoln County, Maine

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Section 1. Introduction

This report was prepared by the U.S. Geological Survey (USGS) Maine Water Science Center as the deliverable for scoping of flood hazard mapping needs for Flood Insurance Study revision in Lincoln County, Maine, under Federal Emergency Management Agency (FEMA) Inter-Agency Agreement Number HSFE01-06-X-0020. This section of the report explains the objective of the task and the purpose of the report.

Background

The Federal Emergency Management Agency (FEMA) developed a plan in 1997 to modernize the FEMA flood mapping program. FEMA flood maps delineate flood hazard areas in support of the National Flood Insurance Program (NFIP). FEMA's plan outlined the steps necessary to update FEMA's flood maps for the nation to a seamless digital format and streamline FEMA's operations in raising public awareness of the importance of the maps and responding to requests to revise them. The modernization of flood maps involves conversion of existing information to digital format and integration of improved flood hazard data as needed. To determine flood mapping modernization needs, FEMA has established specific scoping activities to be done on a county-by-county basis for identifying and prioritizing requisite flood-mapping activities for map modernization. The U.S. Geological Survey (USGS), in cooperation with FEMA and the Maine Floodplain Management Program (MFMP) State Planning Office, began scoping work in 2006 for Lincoln County. Scoping activities included assembling existing data and map needs information for communities in Lincoln County, documentation of data, contacts, community meetings, and prioritized mapping needs in a final scoping report (this document), and updating the Mapping Needs Update Support System (MNUSS) database with information gathered during the scoping process.

The average age of the FEMA floodplain maps in Lincoln County, Maine is at least 17 years. Many of these studies were published in the mid- to late-1980s, and some towns have partial maps that are more recent than their study. However, in the ensuing 15–20 years, development has occurred in many of the watersheds, and the characteristics of the watersheds have changed with time. Therefore, many of the older studies may not depict current conditions nor accurately estimate risk in terms of flood heights or flood mapping.

Scope of Work

The following is the scope of work as defined in the FEMA/USGS Statement of Work:

Task 1: Collect data from a variety of sources including community surveys, other Federal and State Agencies, National Flood Insurance Program (NFIP) State Coordinators, Community Assistance Visits (CAVs) and FEMA archives. Lists of mapping needs will be obtained from the MNUSS database, community surveys, and CAVs, if available. FEMA archives will be inventoried for effective FIRM panels, FIS reports, and other flood-hazard data or existing study data. Best available base map information, topographic data, flood-hazard data, and hydrologic and hydraulic data will be identified. Data from the MFMP database also will be used.

Task 2: Contact communities in Lincoln County to notify them that FEMA and the State have selected them for a map update, and that a project scope will be developed with their input. Topics to be reviewed with the communities include (1) Purpose of the Flood Map Project (for example, the changes that have prompted the map update); (2) The community's mapping needs; (3) The community's available mapping, hydrologic, hydraulic, and flooding information; (4) target schedule for completing the project; and (5) The community's engineering, planning, and geographic information system (GIS) capabilities.

On the basis of the collected information from Task 1 and community contacts/meetings in Task 2, the USGS will develop a draft project scope for the identified mapping needs of the communities in Lincoln County. The draft project scope will summarize available information, evaluate effective FIS data in the new project, and identify other data and data sources needed to complete the project. The draft project scope will establish prioritized mapping needs according to census and waterbody criteria and estimate schedules and associated costs for completion of the components of flood mapping.

The following subject areas are documented in this report as set forth in the statement of work: available flood-mapping-related data and documented mapping needs, community meetings and contacts, scope and prioritization of mapping needs, and project methods. Scoping-level time and costs for identified mapping needs will be provided as a document separate from this report. The appendix section of this report provides a community by community summary of information obtained and used in the scoping process for all 18 communities in Lincoln County that have Flood Insurance Rate Maps (FIRMs), Flood Insurance Studies (FISs), or Flood Hazard Boundary maps (FHBMs) (table 1). Three communities have FHBMs rather than FIRMS or FISs. Two communities, Westport and Whitefield, are not in the program.

Lincoln County contains 16 islands that are part of towns but have their own community identifier (CID). These islands and the towns to which they belong are appended to table 1; most of the islands are part of the town of Bristol. The rest of this report will regard these islands as part of the towns to which they belong unless specific flood-related information is on file for them.

Table 1. Organized communities and unorganized territories in Lincoln County, Maine.

[CID, Community identification number; FIRM, flood insurance rate map; FHBM; flood hazard boundary map; *, Community has a published flood insurance study; NSFHA, no specific flood hazard area; --, not applicable; NIP, not in program]

Community name	CID	Area, in square miles	Population, 2000 census (or governing town)	Population density, per square mile	Map type	Effective map date
Alna, Town of	230083	21.0	675	32.1	FIRM	01-Mar-05
Boothbay Harbor, Town of	230213	22.5	2,334	104	FIRM	17-Jun-86
Boothbay, Town of	230212	22.5	2,960	132	FIRM	03-Jun-86*
Bremen, Town of	230214	18.2	782	43.0	FHBM	04-Feb-87
Bristol, Town of	230215	36.2	2,644	73.0	FIRM	04-Jan-02*
Damariscotta, Town of	230216	13.8	2,041	148	FIRM	30-Sep-88*
Dresden, Town of	230084	30.5	1,625	53.3	FIRM	06-Jul-98*
Edgecomb, Town of	230217	18.2	1,090	59.9	FIRM	18-Jul-78
Hibberts Gore Township	230712	0.75	1	1.33	--	NSFHA
Jefferson, Town of	230085	58.5	2,388	40.8	FIRM	18-Oct-88*
Monhegan Island Plantation	230511	0.86	75	87.2	--	NSFHA
Newcastle, Town of	230218	29.8	1,748	58.7	FIRM	01-Apr-03
Nobleboro, Town of	230219	22.8	1,626	71.3	FIRM	15-Nov-89*
Somerville, Town of	230512	22.8	509	22.3	FIRM	19-Aug-91*
South Bristol, Town of	230220	13.1	897	68.5	FIRM	16-Jul-90*
Southport, Town of	230221	5.41	684	126	FIRM	17-May-88*
Waldoboro, Town of	230086	72.7	4,916	67.6	FIRM	03-Apr-85*
Westport, Town of	230222	8.92	745	83.5	FHBM (NIP)	03-Jan-75
Whitefield, Town of	230087	47.5	2,273	47.9	FHBM (NIP)	26-Jul-74
Wiscasset, Town of	230223	24.8	3,603	145	FIRM	16-Apr-91*
Bar Island	230916	--	Bristol	--	FIRM	04-Jan-02
Haddock Island	230918	--	Bristol	--	FIRM	04-Jan-02
Hungry Island	230917	--	Bremen	--	FIRM	NSFHA
Indian Island	230919	--	Bristol	--	FIRM	04-Jan-02
Jones Garden Island	230925	--	Bristol	--	FIRM	04-Jan-02
Killick Stone Island	230927	--	Bristol	--	FIRM	04-Jan-02
Louds Island	230915	--	Bristol	--	FIRM	04-Jan-02
Marsh Island	230921	--	Bristol	--	FIRM	04-Jan-02
Polins Ledges Island	230929	--	Bristol	--	FIRM	NSFHA
Ross Island	230922	--	Bristol	--	FIRM	04-Jan-02
Thief Island	230920	--	Bristol	--	FIRM	04-Jan-02
Thrumcap Island	230928	--	Boothbay	--	FIRM	NSFHA
Webber Dry Ledge Island	230930	--	Bristol	--	FIRM	NSFHA
Western Egg Rock Island	230926	--	Bristol	--	FIRM	04-Jan-02
Wreck Island	230924	--	Bristol	--	FIRM	04-Jan-02
Wreck Island Ledge	230923	--	Bristol	--	FIRM	NSFHA

Description of Lincoln County

Lincoln County in midcoast Maine (fig. 1) encompasses an area of 474 square miles (mi^2) and comprises 18 towns, Monhegan Island Plantation, and Hibberts Gore Township (table 1, fig. 1). The population in Lincoln County reported by the 2000 census was approximately 33,620 people. The population for the 2000 census represents an 11-percent increase over the population reported in the 1990 census (30,360 people) and a 31-percent increase over the population reported in the 1980 census (25,690 people) (University of Maine, 2004).

Lincoln County contains or borders 916 mapped ponds and lakes ranging in surface area from less than 0.1 acre to 4,660 acres (7.28 mi^2) for a total surface area of 12,330 acres (19 mi^2), from GIS analysis. Mean pond size is 13.5 acres; Damariscotta Lake in Jefferson, Nobleboro, and Newcastle is the largest waterbody. Adams Pond and Knickerbocker Lake in Boothbay and Little Pond in Damariscotta and Newcastle serve as water-supply sources for undisclosed numbers of people (Maine Department of Health and Human Services, 2006). Lincoln County includes approximately 690 mi of rivers and streams and about 510 mi of coastline, including islands in the Atlantic Ocean (fig. 2). Major rivers include Eastern, Sheepscot, Damariscotta, and Medomak, all flowing roughly north to south across the county. The drainage area of Sheepscot River is about 285 mi^2.

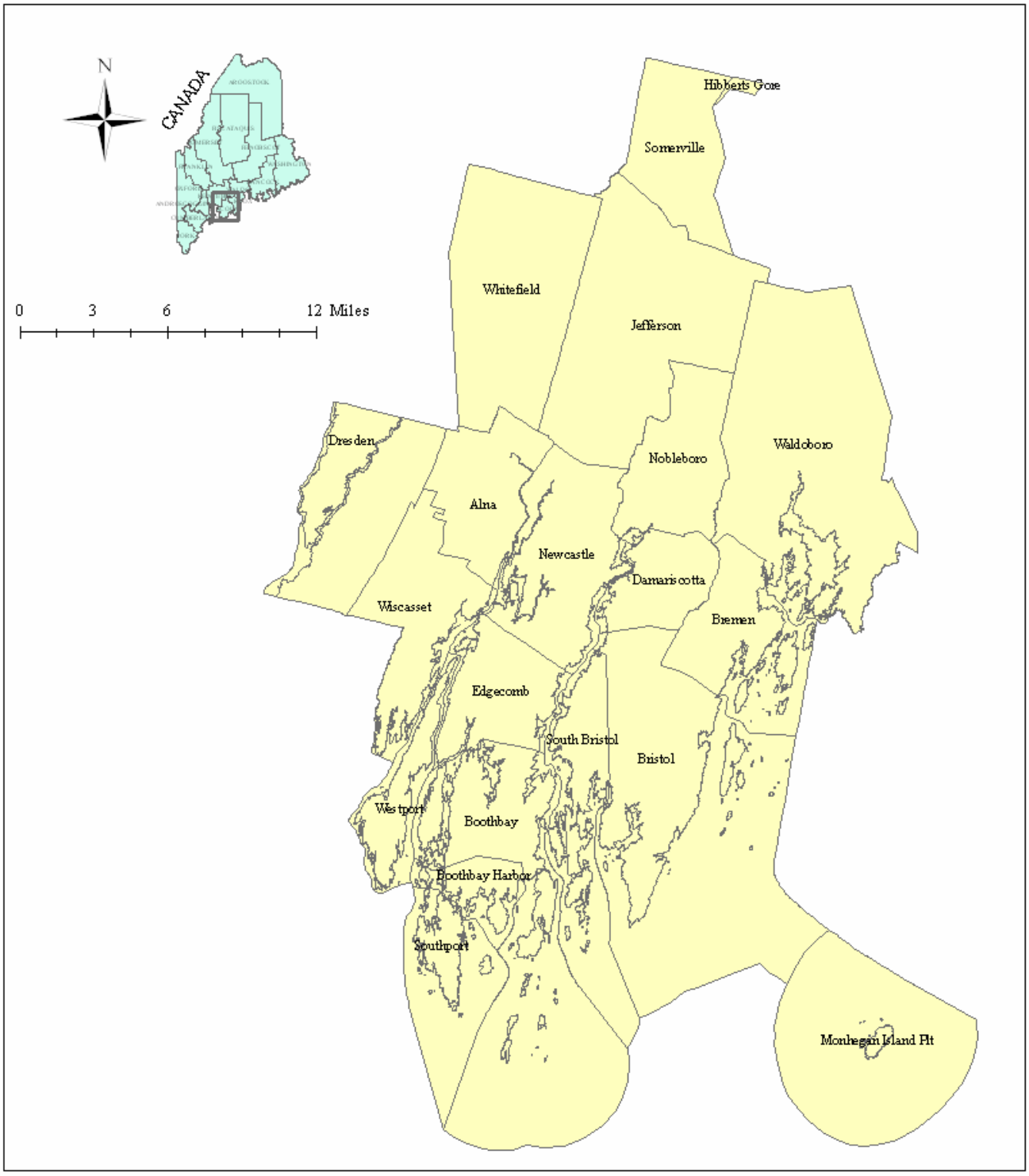

Figure 1. Communities in Lincoln County, Maine.

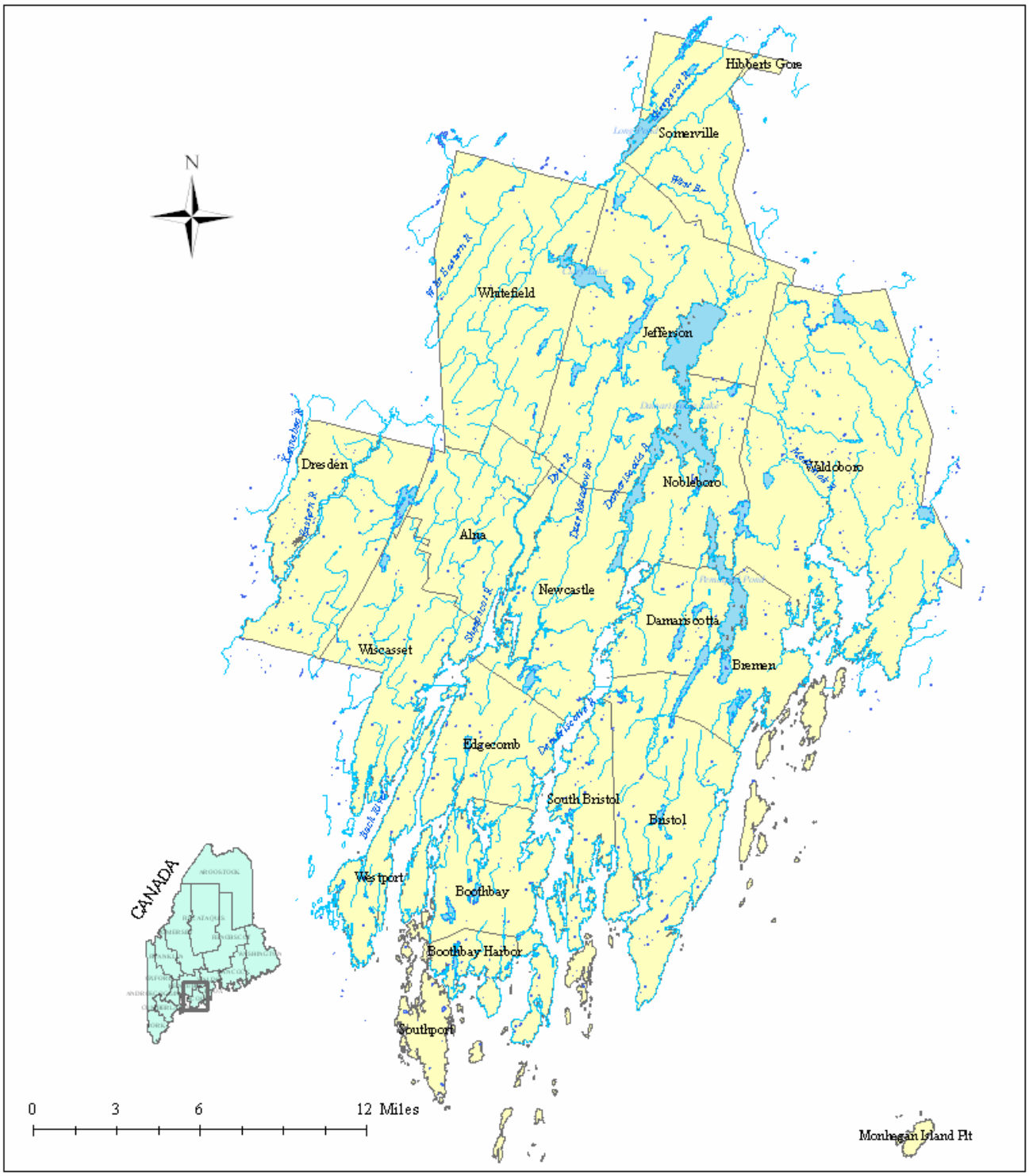

Figure 2. Hydrology of Lincoln County, Maine.

Section 2. Available Flood-Mapping Data and Mapping Needs

Flood-mapping data and mapping needs were compiled as part of this effort by means of state and community contacts, community scoping meetings, and manual and on-line data searches. This report is a comprehensive compilation of data acquired for scoping tasks relating to Lincoln County.

Community FISs and FIRMs

Lincoln County includes 11 communities that have FIRMs with active FIS reports, 4 communities that have FIRMs without FIS reports, and 3 communities that have FHBMs with only unnumbered A-zones (two of which are not in the program) (table 1). Monhegan Island Plantation, Hibberts Gore Township, and several islands have no specific flood hazard areas identified.

The effective FIS map dates of communities in the program range from July 18, 1978 (Edgecomb) to March 1, 2005 (Alna). Seventeen percent of the maps in Lincoln County are 20 years old or older; 67 percent are 10 years or older. The oldest FIRM is 28 years old, the most recent is 2 years old, and the average age is approximately 17 years. It is important to note that the effective map date is the date the map was last revised or the date on which an FHBM was converted to a FIRM. Some revisions were minor adjustments and did not affect entire map panels. As a result, much of the information depicted on the county's floodplain maps is likely to be older than 17 years.

State of Maine Best Available Data (BAD) for Unnumbered A-Zones

The MFMP has developed, over several years, a data set that tabulates information about the best available data (base flood elevations) for water bodies designated as unnumbered "A" zones on flood maps for communities throughout the State. The base flood elevations tabulated in this data set are derived from hydrologic and(or) hydraulic studies of water bodies that may be published in FISs for adjacent communities or published as part of flood studies not directly related to FEMA FISs (e.g. Army Corps of Engineer projects, Natural Resources Conservation Service projects, and Letter of Map Changes). These data are used in this report as part of the prioritization of mapping needs for a community (see section: Scope and Prioritization of Mapping Needs in Lincoln County). These data are documented in the appendix of this report on a community-by-community basis. Information about these data is available from the MFMP web site at: *http://www.state.me.us/spo/flood/bad/,* accessed on September 8, 2006.

Letters of Map Change (LOMCs)

A Letter of Map Change (LOMC) is a letter issued by FEMA in response to a request to revise or amend an effective National Flood Insurance Program (NFIP) map to remove a property or reflect changed flooding conditions on the effective map. LOMCs may include Letters of Amendments (LOMAs), Letters of Map Revisions (LOMRs), and Letters of Map Revision based on Fill (LOMR-F) as defined below:

- LOMAs: A LOMA is an official amendment, by letter, to an effective NFIP map. A LOMA establishes the property location in relation to the Special Flood Hazard Area (SFHA). There is no appeal period for LOMAs, and the letter becomes effective the date that it is sent.

- LOMRs: A LOMR is an official revision, by letter, to an effective NFIP map. A LOMR may change flood-insurance risk zones, floodplain and(or) floodway boundary delineations, planimetric features, and(or) Base Flood Elevations (BFEs). The effective date of a LOMR

depends on the type of change requested. For example, some LOMRs are effective on the date that the letter is issued and others become effective following an appeal period (typically 30 to 90 days or 6 months).

- LOMR-F: A Letter of Map Revision based on Fill (LOMR-F) may be filed as a special case of the LOMR. A LOMR-F provides FEMA's determination concerning whether a structure or parcel has been elevated on fill above the BFE and excluded from the SFHA. A LOMR-F is an official revision, by letter, to an effective NFIP map. The letter becomes effective on the date that it is sent.

In addition to the categories above, *conditional* LOMAs, LOMRs, and LOMR-Fs may be issued by FEMA to comment on a proposed project or change. The letter does not revise an effective NFIP map, but indicates whether the project, if built as proposed, would be recognized by FEMA.

LOMCs in Lincoln County

The presence and number of LOMCs in a community can be an indication of increasing development in a community and(or) problematic flood hazard boundaries. LOMCs are used in this report as part of the prioritization of mapping needs for a community (see section: Scope and Prioritization of Mapping Needs in Lincoln County). LOMC data for Lincoln County are summarized in table 2. A Geographic Information System (GIS) digital data set representing georeferenced locations of LOMCs in Lincoln County was created as part of the scoping effort and uploaded to the Watershed Information System (WISE, a software package used by FEMA to catalogue scoping needs) database.

Table 2. Summary of letters of map change (LOMCs) in Lincoln County, Maine.
[CID, Community Identification number; NSFHA, no specific flood hazard; NIP, not in program; LOMC, letter of map change; --, not applicable]

Community name	CID	Current map date	Map age (years)	Number of LOMCs
Alna, Town of	230083	01-Mar-05	2	5
Boothbay Harbor, Town of	230213	17-Jun-86	21	9
Boothbay, Town of	230212	03-Jun-86*	21	14
Bremen, Town of	230214	04-Feb-87	20	0
Bristol, Town of	230215	04-Jan-02*	5	7
Damariscotta, Town of	230216	30-Sep-88*	19	2
Dresden, Town of	230084	06-Jul-98*	9	1
Edgecomb, Town of	230217	18-Jul-78	29	0
Hibberts Gore Township	230712	NSFHA	--	--
Jefferson, Town of	230085	18-Oct-88*	19	3
Monhegan Island Plantation	230511	NSFHA	--	--
Newcastle, Town of	230218	01-Apr-03	4	3
Nobleboro, Town of	230219	15-Nov-89*	18	2
Somerville, Town of	230512	19-Aug-91*	16	2
South Bristol, Town of	230220	16-Jul-90*	17	4
Southport, Town of	230221	17-May-88*	19	6
Waldoboro, Town of	230086	03-Apr-85*	22	4
Westport, Town of	230222	03-Jan-75	32 (NIP)	0
Whitefield, Town of	230087	26-Jul-74	33 (NIP)	1
Wiscasset, Town of	230223	16-Apr-91*	16	0

Community Flood Ordinances

The MFMP provides all participating communities (92 percent of the State's communities) with model floodplain management ordinances, guidance and review, and maintains all community flood ordinances on file. The contact for community flood ordinances is the MFMP:

Brigitte Ndikum-Nyada
Planning and Research Associate
Maine Floodplain Management Program
State Planning Office
184 State Street, 38 SHS
Augusta, ME 04333
Tel: 207-287-8932
Fax: 207-287-6489

Mapping Needs Update Support System (MNUSS)

In accordance with section 575 of the National Flood Insurance Reform Act of 1994 (Federal Emergency Management Agency, 1994), FEMA assesses "…the need to revise and update all floodplain areas and flood risk zones identified, delineated, or established based on an analysis of all natural hazards affecting flood risks." FEMA initiated the Mapping Needs Assessment (MNA) process, which identifies and prioritizes flood hazard mapping needs for communities nationwide. As part of this effort, FEMA developed the Mapping Needs Update Support System (MNUSS), which is an interactive, web-based software application that maintains an inventory of needs for future map updates. In particular, MNUSS stores information on the following two types of update needs:

- Map Maintenance Needs: Includes changes to base map information, such as the addition of new roads, changes to corporate limits, and incorporation of LOMCs.

- Flood Data Update Needs: Includes changes to flood hazard areas as a result of changes in hydrologic and hydraulic conditions, changes to Base Flood Elevations (BFEs), and(or) changes in the floodplain delineation.

Mapping needs may be viewed and entered into MNUSS by a variety of parties, including FEMA, state NFIP coordinators, study contractors, Cooperating Technical Partners (CTPs), and other Federal agencies, such as the U.S. Army Corps of Engineers (USACE) and the USGS. All potential entries are reviewed and approved by the FEMA MNUSS controller prior to entry into the system.

MNUSS entries for Lincoln County are summarized in table 3. MNUSS records exist for six towns, including Boothbay Harbor, Bremen, Bristol, South Bristol, Southport, and Waldoboro. Of the 83 MNUSS entries on record, 30 (36 percent) appear to be placeholders (one per community or island), 22 (27 percent) appear to be duplicate entries, and 31 (37 percent) appear to be unique entries.

Of the unique MNUSS entries, eight (about 26 percent) are not valid (asking for reference marks that are no longer included on the maps), 12 (about 39 percent) will be addressed by the DFIRM process (mislabeled roads and so forth), and 11 (about 35 percent) are valid entries that require restudy in the future. All of the 11 unique MNUSS entries that could affect base flood elevations (BFEs) are expected to increase the BFE by more than 5 ft.

For the scoping process, existing entries in MNUSS were retrieved by USGS and reviewed with the MFMP and community representatives. The review process resulted in the identification of duplicate, outdated, missing, and(or) erroneous entries. Two of the placeholder entries will be modified to reflect MFMP's assessment that the towns of Newcastle and Edgecomb need flood-insurance studies. These findings will provide the basis for updates to MNUSS upon completion of the scoping report. Existing MNUSS entries are compiled in Appendix C.

Table 3. Summary of entries in the Mapping Needs Update Support System (MNUSS) for Lincoln County, Maine.

[CID, Community Identification number; MFMP, Maine Floodplain Management Program; BFE, base flood elevation; DFIRM, digital flood insurance rate map; FIS, flood insurance study; --, not applicable]

CID	Community name	Number	MFMP comment	Anticipated BFE change
230083	Alna, Town of	0	--	--
230213	Boothbay Harbor, Town of	4	Requires restudy	Increased by greater than 5 feet
230212	Boothbay, Town of	0	--	--
230214	Bremen, Town of	1	DFIRM	--
230215	Bristol, Town of	1	DFIRM	--
230215	Bristol, Town of	2	Requires restudy	Increased by greater than 5 feet
230216	Damariscotta, Town of	0	--	--
230084	Dresden, Town of	0	--	--
230217	Edgecomb, Town of	0	FIS needed	--
230712	Hibberts Gore Township	0	--	--
230085	Jefferson, Town of	0	--	--
230511	Monhegan Island Plantation	0	--	--
230218	Newcastle, Town of	0	FIS needed	--
230219	Nobleboro, Town of	0	--	--
230512	Somerville, Town of	0	--	--
230220	South Bristol, Town of	2	Requires restudy	Increased by greater than 5 feet
230220	South Bristol, Town of	8	DFIRM	--
230221	Southport, Town of	2	DFIRM	--
230221	Southport, Town of	3	Requires restudy	Increased by greater than 5 feet
230086	Waldoboro, Town of	8	Not valid	--
230222	Westport, Town of	0	--	--
230087	Whitefield, Town of	0	--	--
230223	Wiscasset, Town of	0	--	--

Community Assistance Visits (CAVs) and Community Assistance Contacts (CACs)

CAVs and CACs provide assistance to communities regarding the administration and enforcement of their floodplain management ordinances. A CAV is a scheduled visit (on the date opened) to an NFIP community for the purpose of conducting a comprehensive assessment of the community's floodplain management program. A CAC is used to establish a contact with a community for the purpose of determining if any problems or issues exist and to offer the community assistance if necessary. CACs can be conducted by means of a telephone call or brief visit. "Date opened" refers to the date that the visit or call was initiated, whereas "date closed" refers to the date that the results of the assistance call or visit is finalized. CAV and CAC data for Lincoln County are presented in table 4.

Table 4. Summary of Community Assistance Visits (CAVs) and Community Assistance Contacts (CACs) in Lincoln County, Maine.

[CID, Community Identification number; FEMA, Federal Emergency Management Agency; --, no close date]

CID	Community name	Date opened	Agency	Type	Date closed
230213	Boothbay Harbor	October 10, 2003	FEMA	CAV	--
230213	Boothbay Harbor	March 22, 1991	STATE	CAC	March 27, 1991
230213	Boothbay Harbor	July 29, 1998	STATE	CAC	August 25, 1998
230212	Boothbay	July 5, 2001	STATE	CAC	--
230214	Bremen	September 26, 1995	STATE	CAC	--
230215	Bristol	June 6, 1992	STATE	CAV	September 9, 1992
230216	Damariscotta	August 1, 2000	STATE	CAC	December 15, 2000
230084	Dresden	September 28, 1993	STATE	CAV	October 13, 1993
230084	Dresden	September 23, 1992	STATE	CAC	September 29, 1992
230084	Dresden	August 20, 2003	STATE	CAC	--
230085	Jefferson	July 17, 1992	STATE	CAC	--
230218	Newcastle	September 19, 2003	STATE	CAC	--
230219	Nobleboro	August 27, 1993	STATE	CAC	--
230512	Somerville	August 28, 1996	STATE	CAC	August 4, 1997
230220	South Bristol	July 6, 1993	STATE	CAV	November 23, 1993
230220	South Bristol	September 19, 2003	FEMA	CAV	October 5, 2004
230221	Southport	September 14, 1999	STATE	CAV	--
230221	Southport	September 15, 2005	STATE	CAC	--
230086	Waldoboro	September 6, 1991	STATE	CAC	October 10, 1991
230086	Waldoboro	September 9, 1998	STATE	CAC	August 6, 1999
230223	Wiscasset	March 15, 1994	STATE	CAC	March 29, 1994
230223	Wiscasset	September 23, 2004	STATE	CAC	--

GIS Data

Most GIS data in Maine reside with the Maine Office of GIS (MEGIS) as the agency acts as a central repository for these data. Although not every community shares their GIS data with MEGIS, many data sets are shared and served over the Internet. Data can be accessed on the MEGIS web site at: http://apollo.ogis.state.me.us/. Community-specific data that is not shared with MEGIS are documented as part of the community scoping-meeting process (see interview data in Appendix B). All data served by MEGIS are referenced to North American Datum 1983 (NAD83), Universal Transverse Mercator (UTM) Zone 19, in meters, and are available to FEMA.

Base Map Data

Base map layers maintained by MEGIS include features such as roads, streams, and political boundaries. Base map data layers have been acquired from a variety of sources including the USGS data and represent many of the feature types found on USGS topographic maps. More recently developed data were derived from various sources providing improved base map accuracy. Existing coverages maintained by MEGIS can be linked to or viewed at the following URL: http://apollo.ogis.state.me.us/

Nearly all of Lincoln County has detailed digital orthophotography available at 1-ft resolution; the 1-ft (each image pixel representing a planimetric square 1 ft on a side) imagery data set is a true-color mosaic of high-resolution digital orthophotographs produced from aerial photos collected over areas of southwest Maine in spring 2003 (fig. 3). Much of the remainder of the county is covered by 2-ft resolution digital orthophotographs produced from aerial photos collected over southwest Maine in spring 2003. A small part of the county, including Hibberts Gore and Monhegan Island Plantations, are covered by 1-meter resolution grayscale aerial photography. Community-specific aerial photographs are documented as part of the community scoping-meeting process (see Appendix B).

The following towns indicated during the interview process that they have or will acquire base-map data in some form:

Boothbay – plans to acquire aerial photography in the future.

Boothbay Harbor – 1991, black and white, coastal areas only, unknown scale.

Bremen – 2005, black and white, 10 panels, high detail. Frequent updates.

Somerville – recently, but no details.

Waldoboro – 2003 or so, color.

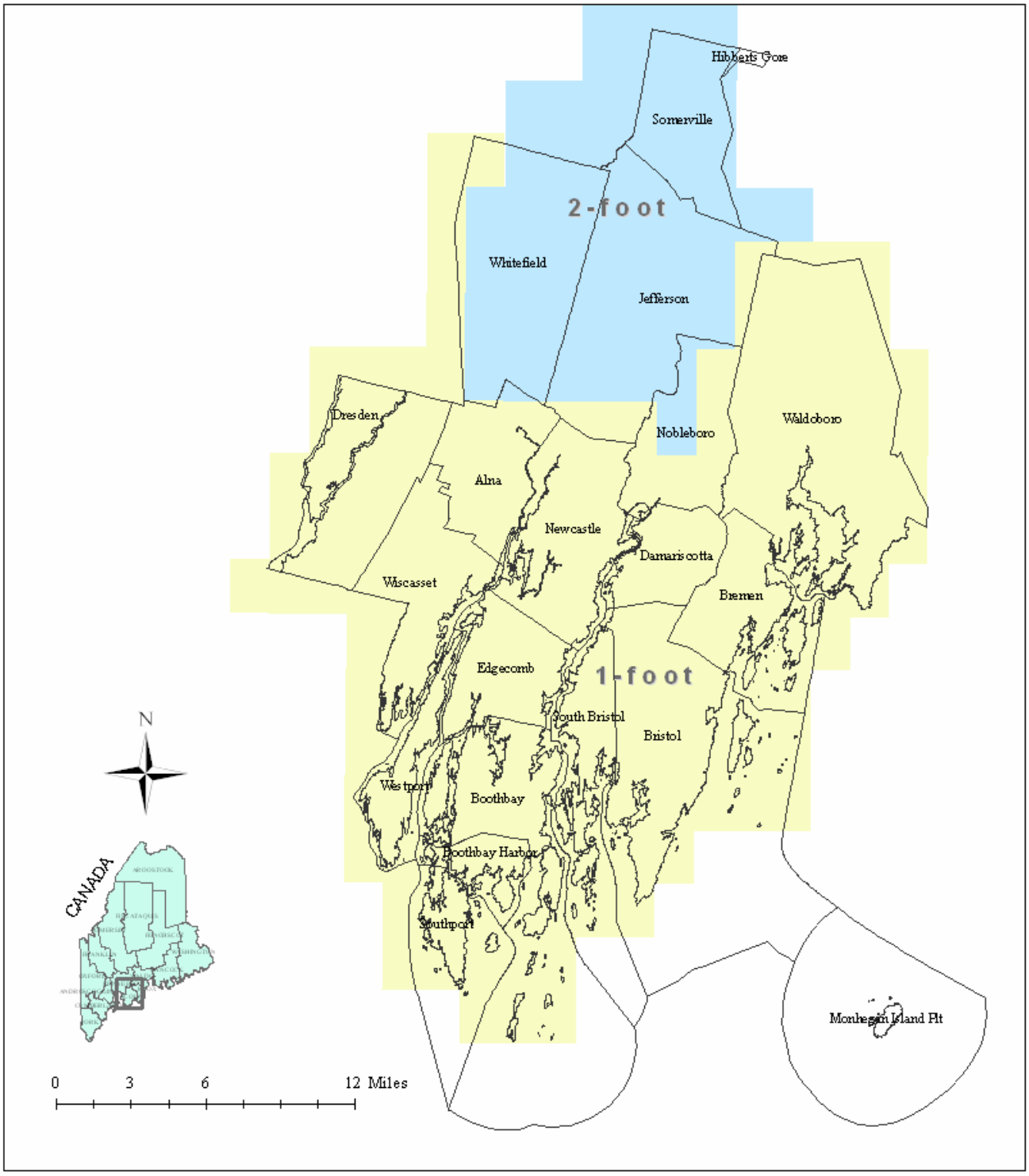

Figure 3. Orthophotography indices for Lincoln County, Maine. Indices indicate coverage of 1-foot (yellow; each image pixel representing a planimetric square 1 foot on a side), 2-foot (blue), and 1-meter (white) orthophotography archived and served through the internet by the Maine Office of Geographic Information Systems (MEGIS).

Topographic Data

Digitally scanned USGS 7.5-minute quadrangles provide topographic data for the entire state of Maine with 10- and 20-ft contour intervals, variable by location. Digital Elevation Models (DEM) also are available through the USGS National Elevation Dataset (NED). The NED has been developed by merging the highest-resolution, best quality elevation data available across the United States into a seamless raster format. NED horizontal datum for Maine is NAD83 and vertical datum is North American Vertical Datum 1988 (NAVD88). The NED is continually updated as best available DEM data become available. DEM data with 30 meter (m) resolution (each raster pixel represents a planimetric square 30 meters on a side) are available for the entire state of Maine. DEM data with 10-m resolution (1/3 arc second) are available for the entire state of Maine except for extreme northern Somerset and Oxford Counties. DEM data can be downloaded through the USGS Seamless Data Distribution Web site at *http://seamless.usgs.gov/web site/seamless/viewer.ph.*

As part of the map modernization process, the State Planning Office and the Maine Geological Survey completed an assessment of topographic changes in coastal areas by coastal erosion (Dickson, 2003). This report is available online at *http://www.state.me.us/doc/nrimc/mgs/explore/marine/firms/contents.htm.*

The Maine Department of Transportation (MDOT) routinely collects detailed topographic data for highway projects. The data are typically limited to an area within 300 ft of the centerline of the highway. The scope, scale, and accuracy of the data are project specific and depend on the flight level of the survey. MDOT does not maintain any kind of searchable database cataloging these data. The MDOT Survey and Photogrammetric Group is willing to search their files for available data if they are provided a GIS shapefile of an area of interest. The primary contact for topographic data from the MDOT Survey and Photogrammetric Group is Tim Liseige, Photogrammetric and Control Engineer, (207) 624-3493, *tim.liseige@maine.gov*.

Four MDOT projects, dated 1957–77, intersect streams that have been identified as needing updated flood-insurance studies for Lincoln County (in section *Prioritization of Waterbodies in Lincoln County*). One MDOT project, dated 1969, intersects a coastal zone in South Bristol that has been identified as needing updated flood-insurance studies. Details about the studies and affected waterbodies are shown in table 5. Lengths of affected streams and coastal zones that overlap with MDOT projects were not computed.

Table 5. Maine Department of Transportation mapped projects that intersect streams in Lincoln County identified as needing updated flood-insurance studies.

Community	Description	Project	Waterbody	Date
Dresden	Route 27	S-0163(4)	Eastern River	5/6/1971
Nobleboro, Waldoboro	U.S. Route 1	26-1(34)	Medomak River, Oyster Creek	11/11/1964
Newcastle	Newcastle project	None	Sherman Lake, Marsh River	11/1/1957
South Bristol	Route 130	160(503)	Atlantic Ocean	5/2/1969
Wiscasset	U.S. Route 1	26-1(42)&(511)	Back River, Sheepscot River	6/1/1977

Community-specific topographic data are documented as part of the community scoping-meeting process (see Appendix B). In Lincoln County, however, no municipalities indicated during the interview process that they have topographic data.

Hydrography Data

MEGIS, in cooperation with the USGS, is currently enhancing Maine's 1:24,000 digital hydrography data to create National Hydrography Dataset (NHD) high-resolution data (spatial data describing hydrologic features). The NHD data are partitioned into the following layers: streams, ponds, rivers, coast, and National Wetlands Inventory (NWI) data. Progress in this effort is ongoing—the current status of these data can be determined by contacting MEGIS at (207) 624-8800 or by visiting their web site *http://apollo.ogis.state.me.us/.* NHD data are available for download from the NHD geodatabase at *http://nhdgeo.usgs.gov/viewer.htm.*

Community-specific hydrography data are documented as part of the community scoping-meeting process (see Appendix B). The following towns indicated during the interview process that they have hydrography data available in some form:

Boothbay – some, but no details.

Boothbay Harbor – for small areas, BFEs were established during land development.

Damariscotta – town center waterfront, done by Pine Tree Engineering, Brunswick, Maine.

South Bristol – expecting a hydraulic study for a new bridge on Rt 129 in the next few years.

Waldoboro – some, in local areas.

Westport Island – a few years ago, in relation to water supply for the island.

Community GIS Contact Information

GIS contact information obtained through community scoping meetings is provided in Appendix B for each community as part of the interview data. The towns of Boothbay, South Bristol, and Waldoboro indicated that they have or are developing GIS resources.

Community Meetings and Contacts

A community scoping meeting was held for Lincoln County at the Damariscotta Town Office on Thursday, December 7, 2006, from 10:00 a.m. to 2:00 p.m. An invitation letter (with agenda) specifying the time and place and purpose of the meeting was mailed to at least two community officials in every municipality. The letters were addressed to the community code enforcement officer and to the community manager or first select person. Example copies of the letter and meeting agenda are attached to this report in Appendix D. All communities participated either by meeting, mail, or phone.

The goals of these meetings were to:

- Inform the communities of the nature and the intent of the flood map update process, and
- Solicit community input and discuss the flood-prone areas that communities would like to include as a part of the flood map update.

Robert Dudley, USGS Maine Water Science Center, and Tom Marcotte, MFMP, conducted the meeting. Seven representatives from USGS and MFMP were on hand to conduct the interviews. Twenty-two representatives from 15 communities were provided an overview of the Map Modernization program, the map production schedule, and the technical process.

The latter part of the meeting involved breaking out into small groups of community representatives with group leaders from USGS and MFMP. The group leaders administered and

assisted with the completion of map needs interview forms (example attached, Appendix D). Community representatives were provided copies of their community's flood maps and were encouraged to document problem areas, concerns, and so forth, as necessary. Community representatives were asked to explain and prioritize their needs if possible. The marked-up flood maps reside with the MFMP.

MNUSS entries were reviewed with community representatives for verification. The town of South Bristol disagreed with one of its MNUSS records; the other towns had few comments about the MNUSS data.

During the scoping meetings, MFMP's Best Available Data (BAD) were reviewed with each community representative if BAD data existed for that community. The review was done to make the community aware of the information if they were not already aware of it, and to solicit input on BAD if any additional information was available to the community that was not listed in the State Planning Office's BAD database.

The following three subject areas encompass the data gathered from the scoping meeting process and completion of interview forms: (1) community contact information, (2) areas of the existing flood maps where there are significant problems (poor mapping or development pressures) or changes to hydrologic/hydraulic conditions, and (3) community mapping resources. Communities that did not attend the meetings sent this information to USGS by mail or communicated their needs by telephone. The data from the scoping meetings were entered into the WISE scoping tool and are reported for each community in Appendix B as part of the interview data.

Scope and Prioritization of Mapping Needs in Lincoln County

Two prioritization schemes are presented in this section. The first scheme uses criteria provided by FEMA and MFMP to rank *communities* in Lincoln County having the greatest need for updated mapping on the basis of risk, as quantified in census block-group data. This ranking meets the goals of the map modernization process as described in FEMA's mid-course adjustment (Federal Emergency Management Agency, 2006). The second scheme uses the results of the first, plus additional information about waterbodies according to community and MFMP representatives, to rank *flood hazards* (waterbodies) in Lincoln County having the greatest need for updated mapping. This ranking can be used by FEMA to maximize the benefit of any future engineering studies.

Prioritization of Towns in Lincoln County

USGS staff (Robert Dudley, Charles Schalk) met with MFMP staff (Lou Sidell, Tom Marcotte) in July 2006 as an initial kick-off meeting for the scoping process. An action item resulting from that meeting involved MFMP staff arriving at a list of criteria that should be considered for prioritizing potential mapping needs of towns in the county. MFMP decided that the 8 criteria identified by FEMA during their midcourse adjustment were adequate for assessment of priority by town and(or) census block. These 8 criteria are based on block-group data provided by the U.S. Census Bureau and are used to compute census block group risk scores. Table 6 lists the criteria and their data source.

Table 6. Maine Floodplain Management Program criteria for prioritization of community-based flood mapping needs in Lincoln County.

[FIA, Federal Insurance Administration]

Criterion	Data source
Population density	Census block group data
Housing unit density	Census block group data
Claims density	FIA Claims dataset
Repetitive losses claims density	FIA Claims dataset
Repetitive loss properties density	FIA Claims dataset
Policies density	County distribution
Disasters	County distribution
Population growth from 1990-2000	County distribution

Scores for each of the criteria listed in table 6 were calculated and normalized for each census block group included in Lincoln County. The normalization process encompassed two steps. First, the calculated value for each block group was compared with the range of values calculated for all block groups in the State of Maine. In this way, scores calculated for Lincoln County would be scaled consistently with those calculated for every other county in Maine. Second, the logarithm of the calculated and scaled value for each block group was taken to place the scaled values in the range of 0 to 10. This was to equalize the weight of each of the scoring criteria. After the data had been normalized, the maximum census block group risk score for each town was recorded.

Results of the community-based flood mapping assessment on the basis of census block groups are shown in table 7. The communities of Boothbay, Bristol, and Boothbay Harbor scored highest. After reviewing the results, MFMP determined them to be reasonable; however, MFMP felt that on the basis of the type of maps (unnumbered A zones only), the important waterbodies bordering the towns, and the degree of development in the towns, Edgecomb and Newcastle should be given some priority in mapping needs. Scoring results by census block group are provided in Appendix E.

Table 7. Maine Floodplain Management Program criteria for prioritization of community-based flood mapping needs in Lincoln County.

[CID, community identification number; CBG, census block group]

Community	CID	Maximum CBG risk score
Boothbay, Town of	230212	34.89
Bristol, Town of	230215	34.55
Boothbay Harbor, Town of	230213	34.17
Southport, Town of	230221	32.48
Damariscotta, Town of	230216	31.54
Bremen, Town of	230214	30.47
South Bristol, Town of	230220	30.38
Nobleboro, Town of	230219	29.39
Jefferson, Town of	230085	29.22
Waldoboro, Town of	230086	28.99
Wiscasset, Town of	230223	28.63
Alna, Town of	230083	28.08
Newcastle, Town of	230218	27.79
Dresden, Town of	230084	27.70
Hibberts Gore TWP	230712	27.60
Somerville, Town of	230512	27.60
Monhegan PLT	230511	27.50
Edgecomb, Town of	230217	27.32
Whitefield, Town of	230087	25.56
Westport Island, Town of	230222	25.14

Prioritization of Waterbodies in Lincoln County

Many towns and(or) census blocks in Lincoln County are separated from neighboring towns and(or) census blocks by bodies of water that may need new or revised studies. In cases such as these, ranking the waterbodies in order of priority can promote most efficient use of limited resources for study in Lincoln County. When a waterbody that serves as a boundary among several towns receives funding for study, then all of the towns that have that waterbody as a boundary can benefit from the results of the study.

Mapping needs for waterbodies were grouped into one of four different types of studies required to create or update flood hazard zones.

- Baseline–DFIRM only: The most economical method of creating a countywide DFIRM is through digitizing flood-hazard information from the effective FIRMs and FISs onto new mapping. This baseline option is currently being undertaken by MEGIS and other FEMA contractors.

- Redelineation: Existing hydrologic and hydraulic studies of the water body are adequate and the water body requires only the redelineation of the base flood elevations using updated topographic data.

- Limited Detailed Study: Automated tools are used to produce digital information or flood mapping for the water body in question has already been studied in detail and requires limited technical reworking of the hydrologic and(or) hydraulic analysis or the water body in question has not been studied in detail but it is expected that approximate methods would suffice to adequately map the flood hazard.

- Detailed Study: Can be performed to develop the digital information, including field surveyed cross-sections and structures. Because this is the most expensive type of study that FEMA can perform, the scope of the detailed study may be limited.

Note that Detail and Limited Detail studies are also assumed to need redelineation using updated topographic data, incorporating results from the new hydrologic and(or) hydraulic analyses.

USGS staff (Robert Dudley, Charles Schalk) met with MFMP staff (Lou Sidell, Tom Marcotte) on December 22, 2006, to review interview data and marked-up maps and to arrive at an initial list of mapping needs by waterbody for the county. The mapping needs derived through these meetings were entered into the WISE scoping application. During this meeting, the criteria listed in table 8 were identified as necessary to the ranking of waterbodies and the type of study needed for each waterbody was identified. Descriptions of these criteria are provided in the text following table 8.

Table 8. Maine Floodplain Management Program criteria and qualitative weight for prioritization of waterbody-based flood mapping needs in Lincoln County.
[MFMP, Maine Floodplain Management Program; LOMC, Letter of Map Change]

Community prioritization criteria	Weight	Range	Score
Ranking from census block-centered analysis	3	27.3 – 34.6	One-eighth of value; theoretical maximum = 10 points
Community and(or) MFMP priority	1	1 - 3	1 = highest = 10 points 2 = medium = 6 points 3 = lowest = 3 points
Connectivity	1	1 – 4	One point per connected community
Map age, in years	1	2 – 28	0.3 point per year
Map type	1	b, c, d, e	b = unnumbered A-Zone : 10 points c = map with elevations : 6 points d = map with elevations and floodways: 3 points e = map with coastal velocity zones: 3 points
Number of LOMCs	1	0 – 2	0.5 point per LOMC
Presence of best available data	1	Yes / No	Yes = 10, No = 0

In most cases, towns identified their highest waterbody mapping priorities during the scoping meeting. In some cases, priority was indicated by MFMP during the December 22 meeting on the basis of historically documented mapping needs of the towns. Higher priority was given to A-zone waterbodies with existing BAD where maps could be created or greatly improved by simply collecting improved topographic information and redelineating existing detailed base flood elevations. Higher priority was given to waterbodies that had been historically documented as a mapping need in either the MFMP's Database or MNUSS or both. Historical documentation of a mapping need is indicative of an ongoing need that has been known to be a need in the past. Priority was ranked from 1 (highest) to 3 (lowest). Many towns indicated more than three waterbodies that need to be addressed; in these cases, all waterbodies ranked as lowest priority were given a priority ranking of 3.

Higher priority was given to waterbodies with high connectivity, where connectivity is a measure of the number of neighboring communities that are adjacent to or would otherwise benefit from improved mapping of a particular water body. For example, an A-zone river reach that connected to a detailed study upstream or spanned multiple communities or a lake that bordered multiple communities would receive higher priority than a pond contained within the corporate limits of a single community.

Map age was calculated as the difference between December 2006 and the effective date of the map, in years. Several towns in Lincoln County still operate with the "flat maps," or FHBMs that had been converted to FIRMs by letter.

Type of map also was included as a criterion. Maps that do not include studies and contain no BFEs are (b). Maps with BFEs but no delineated floodways are (c). Maps with BFEs and floodways are (d). Maps that include coastal velocity zones are (e). Highest scores were assigned to those maps with least amount of detail (b, then c, then d and e).

Because the number of LOMCs issued for a community is indicative of flooding issues, LOMCs were included in the scoring criteria. LOMCs that were included in the scoring were (a) those that contained coordinate information and could be plotted with some degree of certainty on a map, and (b) those determined from the map to relate to a particular waterbody. Other LOMCs (those that could not be located or assigned to a particular waterbody) were not included in the scoring.

As described above, the presence of BAD is helpful to prioritize the mapping needs of waterbodies. Waterbodies for which BAD were available were given a score of 10, whereas those for which BAD were not available were given a score of 0. BAD that required engineering investigation to determine its validity received a score of 5.

Summing the scoring criteria produced a waterbody-based prioritized list of mapping needs involving redelineation, limited detail study, or detail study for each community that responded to the survey (table 9, fig. 4). For example, the redelineation of Damariscotta River in Newcastle scored as follows:

Census-block ranking (* 3)	= 3.4 * 3 = 10.3
Community/MFMP priority	= 10 (highest priority)
Connectivity	= 4
Map age (scaled by years)	= 1.2
Map type	= 10
Number of LOMCs (* 0.5)	= 0.5
Presence of BAD	= 10
Sum	= 46.0

The high priority given to Edgecomb and Newcastle by MFMP (previous section) were verified in the ranking of waterbodies, as waterbodies in Edgecomb and Newcastle ranked highest. Note that many towns identified Damariscotta and Sheepscot Rivers as needing attention; detailed studies on these two rivers would no doubt produce the highest return on investment by FEMA.

Table 9. Prioritized waterbody-based flood mapping needs in Lincoln County requiring redelineation, limited detail study, or detail study.

Rank	Waterbody	Community identifying need	CID	Study type	Score
1	Sheepscot River/ Cod Cove	Edgecomb	230217	Detail Study	51.85
2	Sheepscot River/ Cod Cove	Edgecomb	230217	Detail Study	47.85
3	Damariscotta River	Newcastle	230218	Detail Study	46.04
4	Damariscotta River	Edgecomb	230217	Detail Study	43.85
5	Back River	Westport Island	230222	Detail Study	42.25
6	Sheepscot River	Newcastle	230218	Detail Study	40.54
7	Unnamed Stream to Webber Pond	Bremen	230214	Detail Study	39.46
8	Jewett Cove, Sheepscot River	Westport Island	230222	Detail Study	38.25
9	Damariscotta River/Days Cove	Damariscotta	230216	Detail Study	36.34
10	Penny Lake (wetland)	Boothbay Harbor	230213	Detail Study	33.53
11	Back River/Montsweag Bay	Wiscasset	230223	Redelineation	33.49
12	Oyster Creek	Nobleboro	230219	Detail Study	33.20
13	Pinkham Pond Stream	Alna	230083	Detail Study	32.07
14	Sheepscot River	Somerville	230512	Limited Detail Study	32.02
15	Kennebec River	Dresden	230084	Redelineation	31.96
16	Medomak River	Waldoboro	230086	Detail Study	31.95
17	Sheepscot River	Wiscasset	230223	Detail Study	30.49
18	The Gut	South Bristol	230220	Detail Study	30.39
19	Muddy Pond	Damariscotta	230216	Detail Study	30.34
20	Duck Puddle Pond	Nobleboro	230219	Detail Study	30.20
21	West Harbor Pond	Boothbay Harbor	230213	Detail Study	29.53
22	Trout Brook (western branch)	Alna	230083	Detail Study	29.07
23	Atlantic Ocean	Bristol	230215	Detail Study	28.97
24	Back Meadow Brook	Damariscotta	230216	Detail Study	28.34
25	Medomak Pond	Waldoboro	230086	Detail Study	27.95
26	Eastern River	Dresden	230084	Detail Study	27.46
27	Atlantic Ocean	South Bristol	230220	Limited Detail Study	26.89
28	Unnamed Pond	Boothbay Harbor	230213	Detail Study	26.03
29	Sherman Lake / Marsh River	Newcastle	230218	Detail Study	25.54
30	Station Brook	Alna	230083	Detail Study	25.07
31	Atlantic Ocean	Bristol	230215	Detail Study	24.47
32	Dresden Bog	Dresden	230084	Redelineation	22.96
33	Nequasset Brook	Dresden	230084	Detail Study	22.96

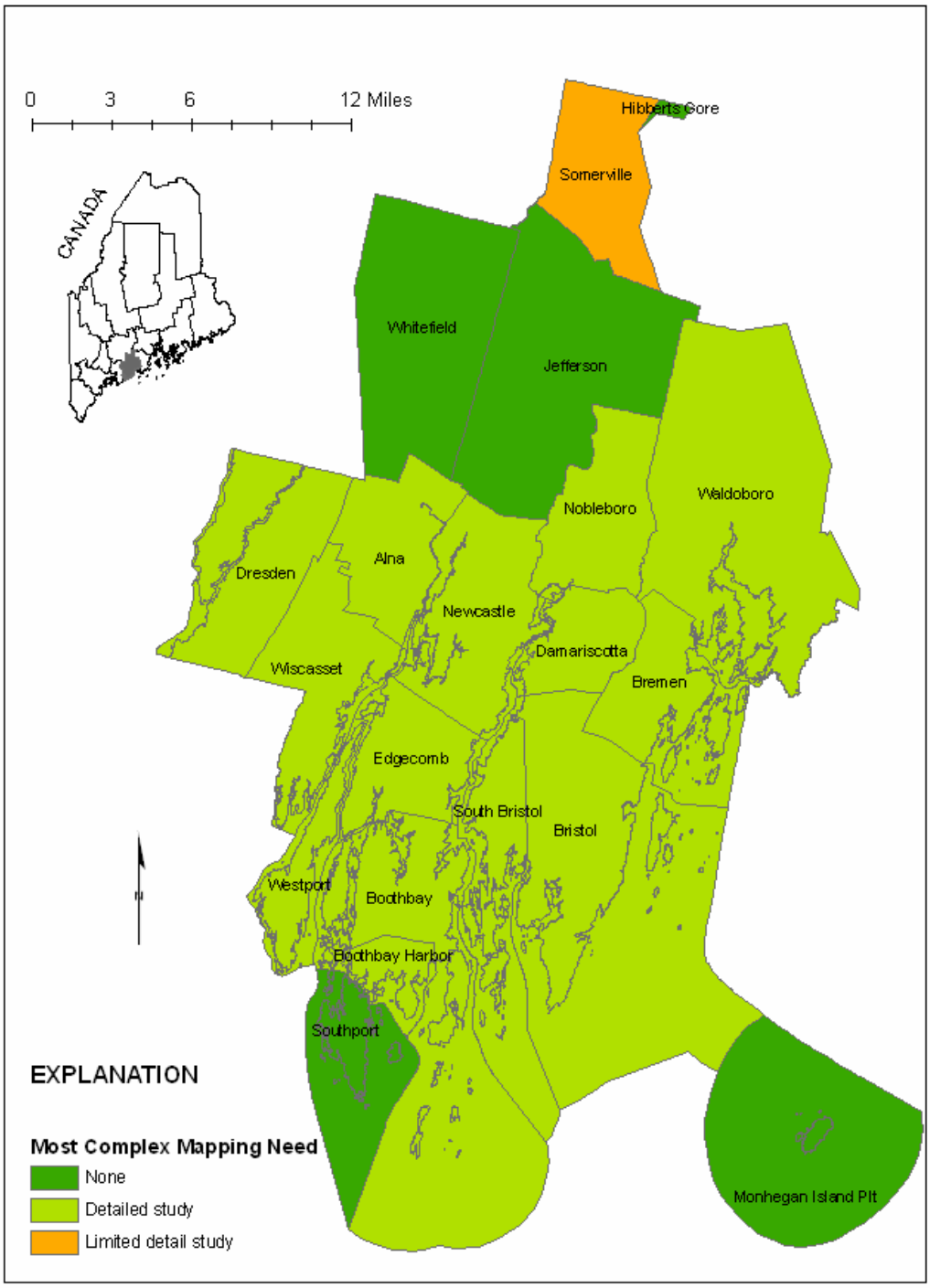

Figure 4. Communities in Lincoln County identifying mapping needs by waterbody.

Project Time and Costs for Identified Mapping Needs

The USGS Maine Water Science Center will provide scoping-level time and cost estimates for the identified study needs for each water body listed in table 9. The time and cost estimates will include costs for hydrologic, hydraulic, and topographic data collection; analyses; and mapping, depending on the identified type of study needed for each water body. Detailed information about each waterbody being scoped, including spatial limits and affected length, will be included in the time and cost estimates. The time and cost estimates will be submitted to the cooperating agencies (FEMA, MFMP) as a separate document as set forth in the scope of work.

Project Alternatives

Costs can be reduced by cutting back on the level of effort for the hydrologic and hydraulic (H&H) analyses and(or) reducing the number of DFIRM panels.

Alternative H&H options that would help FEMA to reduce costs include reducing the study scope from a detailed study to a limited detail study or redelineation of current flood information only. Reducing the number of DFIRM panels by altering the mix of panel scales would lower the total panel count and reduce the estimated DFIRM production cost.

Section 3. Options for Future Mapping and DTM Preparation

Mapping Requirements

This section provides an assessment of the costs and benefits of utilizing the data cataloged in the previous section for the preparation of Digital Flood Insurance Rate Maps (DFIRMs) for Lincoln County. Options are presented for using these data sets in various combinations and supplementing them with new data sets.

DFIRMs are produced from three broad categories of geospatial data: (1) Base Map, (2) Digital Terrain Model (DTM), and (3) Flood-Insurance Risk Zones. The spatial accuracy of each of these three categories is fixed by the specifications contained in the Guidelines and Specifications for Flood Hazard Mapping Partners, April 2003 (Guidelines and Specifications). Proposed DFIRM panels for Lincoln County are presented in fig. 5.

- Base Maps: Base maps are acquired from MEGIS and will be used by FEMA as a "backdrop" to the flood-insurance risk zones shown on the DFIRMs.

- Digital Terrain Models (DTMs): DTMs are used in conjunction with hydrologic and hydraulic models to interpret the limits of flood-insurance risk zones. DTMs represent terrain with irregularly-spaced spot elevations (x, y, z) and breaklines that indicate changes in ground slope at features such as the toe or top of channel banks or ridge lines. These data sets are generally photogrametrically compiled by a mapping contractor from stereo photos and utilized in the form of a Triangulated Irregular Network (TIN) or a Digital Elevation Model (DEM). A DEM uses a regular grid, or raster, spacing of (x, y, z) points to represent the land surface. Each grid cell is assigned an average elevation to represent the elevation of the ground that is covered by the grid cell. A DEM represents the terrain surface with a mesh of regularly spaced points, whereas a TIN uses contiguous triangular planes.

- Flood-Insurance Risk Zones: Geographic boundaries produced by FEMA and provided in digital format.

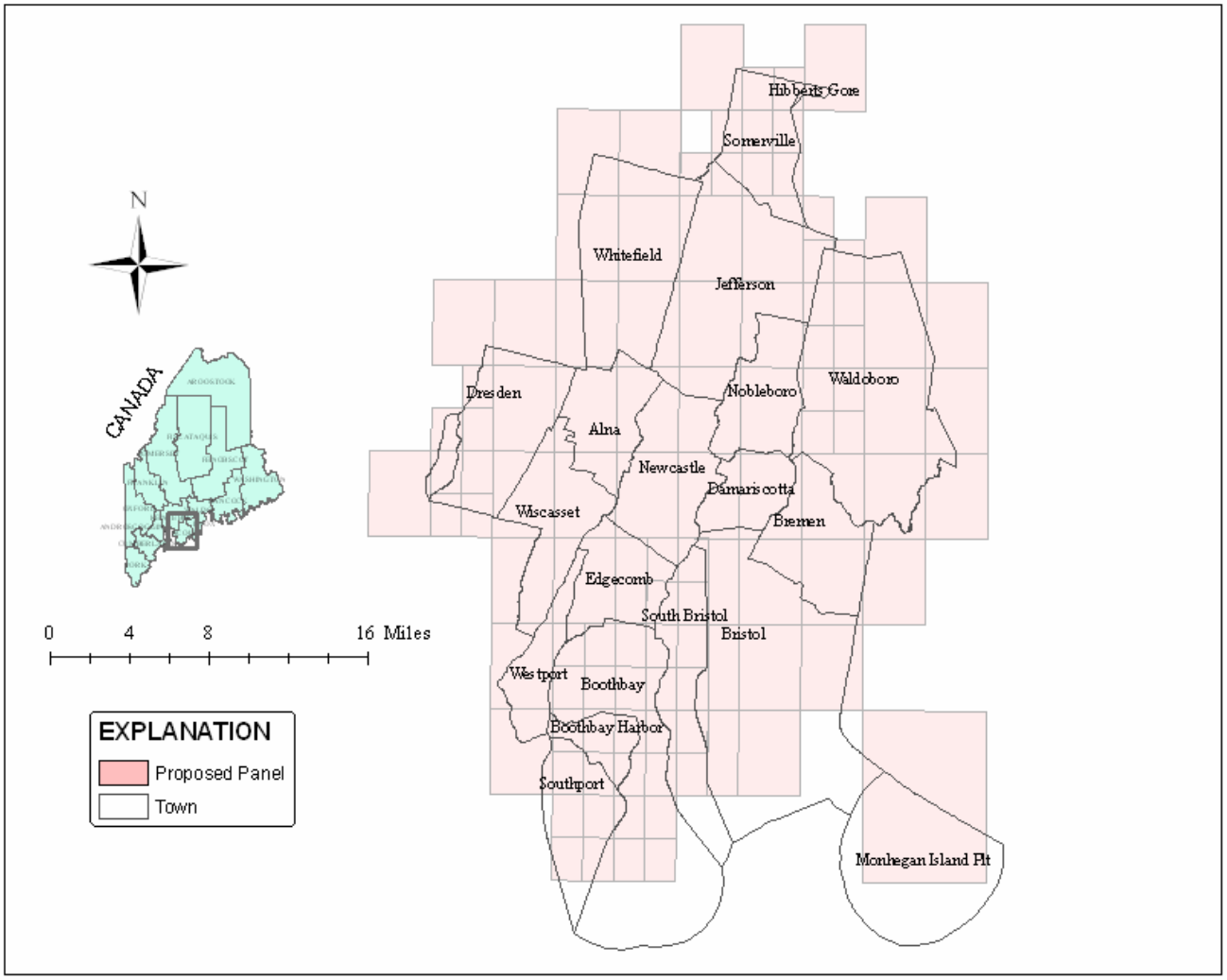

Figure 5. Proposed digital flood insurance rate map panels for Lincoln County.

Base Map

Base maps are defined in the Guidelines and Specifications as the "map of the community that depicts cultural features (roads, railroad, bridges, dams, and culverts), drainage features, and corporate limits." Depending on the source of the base map, the specific features found on DFIRMs may include the following data and features:

- Roads: centerlines, edge-of-pavement, right-of-way, names.
- Railroads: names.
- Bridges: names.
- Flood Control Structures: headwall, dam, levee, names.
- Airport Boundaries: names.
- Rivers: centerlines, banks, names.

- Streams: names.
- Lakes: names.
- Political Boundaries: county, municipality, special districts, wards, military reservations, Native American lands, names.
- Land Use: parks, individual land parcels, names.

The Guidelines and Specifications specify "absolute horizontal accuracy" for base map features to establish horizontal accuracy for the position of the digital data set to its actual location on the earth's surface. The horizontal accuracy is specified as a statistical error distribution at the 95-percent confidence level and is specified in the Guidelines and Specifications as a function of finished map scale, as shown in table 10:

Table 10. Flood Insurance Rate Map (FIRM) Horizontal Accuracy.

FIRM map scale	Absolute horizontal accuracy at the 95-percent confidence level, in feet
1 in = 500 feet	19.0
1 in = 1,000 feet	38.0
1 in = 2,000 feet	45.6

MEGIS can provide digital mapping data for Lincoln County for DFIRM production.

Digital Terrain Models (DTMs)

FEMA typically develops DTMs for the production of DFIRMS as they are not widely available at the accuracies required by FEMA. The DTMs are used in conjunction with hydrologic and hydraulic models to interpret flood boundaries and can be used by the community for many other purposes other than flood management.

Guidelines and Specifications identify the following four types of DTMs: (1) Digital contours, (2) Digital Elevation Models (DEMs), (3) Mass points and breaklines, and (4) Triangulated Irregular Networks (TIN). Each of these models can be created from the other and their use is application dependent.

Under FEMA guidelines, the allowable DTMs are as follows:

- Digital contours: continuous, nonintersecting lines of equal elevation separated by a specified elevation interval.
- Digital Elevation Model (DTM): x, y, and z coordinates of regularly spaced points that form a grid.
- Mass Points and Breaklines: x, y, and z coordinates of irregularly spaced points.
- Triangulated Irregular Network (TIN): contiguous triangles with x, y, and z values at the vertices and faces with slope and aspect.

The Guidelines and Specifications specify what is referred to as "absolute vertical accuracy" for DTMs, which relates the elevation of the land surface in the digital data set to its actual elevation relative to a specific vertical datum. The National Standard for Spatial Data Accuracy (NSSDA) is specified as a statistical error distribution at the 90- and 95-percent confidence level as a function of the specified contour interval as shown in table 11:

Table 11. National Standard for Spatial Data Accuracy (NSSDA).

NSSDA contour interval	NSSDA 90-percent confidence interval	NSSDA 95-percent confidence interval
2 feet	1 foot	1.2 feet
4 feet	2 feet	2.4 feet

Contouring and DEMs are not printed on DFIRMS so their vertical accuracy is not labeled on the DFIRMS, but it is recorded in the metadata of elevation datasets used for hydrologic and hydraulic modeling.

Neither USGS nor MEGIS has elevation data suitable for hydraulic modeling by detailed methods and communities were contacted to find topographic or elevation data suitable for hydraulic modeling (e.g. 2-foot or 4-foot contours) (approximate and limited-detailed studies can often be done with less rigorous topographic standards). Community specific topographic data will be used if it meets FEMA standards. New elevation data will be developed as necessary.

DTM development options include (1) obtaining countywide DTM data that covers all communities and (2) obtaining DTM data only for selected floodplain areas as needed to support a detailed study, limited detailed study, restudy or re-delineation of flood hazard areas. Obtaining DTM data on a countywide basis is expensive; most of the acquired data would be outside of the floodplain and not needed for hydraulic analysis. If FEMA obtains new DTM data for selected areas as needed, keeping in mind that is most cost effective to consolidate areas, where possible, and optimizes flights, the unit costs could be reduced.

Flood-Insurance Risk Zones

Flood-insurance risk zones are created by FEMA to set insurance rates and manage the floodplain. Flood-insurance risk zone accuracy requirements are not specified in the Guidelines and Specifications but can be described in terms of the combined accuracies of the base map, DTM, and the hydrology and hydraulic simulation models.

FEMA flood insurance rate 100- and 500-year flood zones are being converted to digital data layers by MEGIS for each community participating in the National Flood Insurance Program (NFIP) in Maine. These datasets were developed by direct digitization of FIRM maps using data registration techniques that produced the best-fit registration to community boundaries or other suitable features.

The most common comment by community representatives was that a better base map is needed to allow easier determination of where the risk zone boundaries are relative to the existing features such as roads and buildings.

Section 4. References Cited

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Maine Department of Health and Human Services, 2006, web page *http://www.maine.gov/dhhs/eng/water/forms/County%20Lists/July2006/Lincoln.htm*, accessed October 23, 2006.

University of Maine, 2004, Maine census data, population totals: Fogler Library, University of Maine, accessed on October 23, 2006, at *http://www.library.umaine.edu/census/*

Appendices

Appendix A: Community Contacts and Best Available Data: Lincoln County

Alna, Town of

CID 230083 Community Profile

Map Type: Unnumbered A-zone **Current FIRM/FIS Map Date:** 3/1/2005

Participating=Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies=3 **No. Claims Since 1978=** 0 **All LOMCs:** 5

Billie Willard 207-586-5313
Selectmen
Town of Alna
1568 Alna Rd.
Alna ME 04535

Merle West, CEO 207-882-7216
1098 West Alna Rd
Alna ME 04535

Best Available Data:

Mapping Status: really a 1/3/75 map - converted by letter 3/1/05

Mapping Needs:

ND, No Data

Boothbay Harbor, Town of

CID 230213 Community Profile

Map Type: Coastal **Current FIRM/FIS Map Date:** 6/17/1986

Participating= Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies= 72 **No. Claims Since 1978=** 19 **All LOMCs:** 9

Carlo Pilgrim 207-633-3671
Town Manager
Town of Boothbay Harbor
11 Howard St.
Boothbay Harbor ME 04538

Dabney Lewis, CEO 207-633-3671
11 Howard St.
Boothbay Hbr. ME 04538

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Boothbay, Town of

CID 230212 Community Profile

Map Type: Coastal **Current FIRM/FIS Map Date:** 6/3/1986

Participating=Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies=51 **No. Claims Since 1978=** 17 **All LOMCs:** 14

John Anderson 207-633-2051
Town Manager
Town of Boothbay
PO Box 106
Boothbay ME 04537

Marian Cadrette-Anderson, 207-633-2192
P.O. Box 334
Boothbay ME 04537

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Bremen, Town of

CID 230214 Community Profile

Map Type: Unnumbered A-zone **Current FIRM/FIS Map Date:** 2/4/1987

Participating=Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies=15 **No. Claims Since 1978=** 1 **All LOMCs:** 0

Karl Berger 207-529-5945
Selectmen Chair
Town of Bremen
PO Box 171
Bremen ME 04551

Roger Grover, CEO 207-529-5945
PO Box 171
Bremen ME 04551

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Bristol, Town of

CID 230215 Community Profile

Map Type: Coastal **Current FIRM/FIS Map Date:** 1/4/2002

Participating= Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies= 60 **No. Claims Since 1978=** 10 **All LOMCs:** 7

Kristine Poland 207-563-5270
Administrator
Town of Bristol
PO Box 147
Bristol ME 04539

Merle West, CEO 207-563-5271
PO Box 147
Bristol ME 04539

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Damariscotta, Town of

CID 230216 Community Profile

Map Type: No Floodways **Current FIRM/FIS Map Date:** 9/30/1988

Participating=Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies=9 **No. Claims Since 1978=** 3 **All LOMCs:** 2

Gregory Zinser 207-563-5168
Town Manager
Town of Damariscotta
27 Church St
Damariscotta ME 04543

Neiland Campbell, Sr., CEO 207-586-6176
553 N. Newcastle Rd.
Newcastle ME 04553

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Dresden, Town of

CID 230084 Community Profile

Map Type: No Floodways **Current FIRM/FIS Map Date:** 7/6/1998

Participating=Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies=5 **No. Claims Since 1978=** 7 **All LOMCs:** 1

John Ottum 207-737-4335
Selectmen
Town of Dresden
PO Box 30
Dresden ME 04342

Bruce Engert, CEO 207-633-2113
58 Roads End
Boothbay Harbor ME 04538

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Edgecomb, Town of

CID 230217 Community Profile

Map Type: Unnumbered A-zone **Current FIRM/FIS Map Date:** 7/18/1978

Participating= Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies= 4 **No. Claims Since 1978=** 0 **All LOMCs:** 0

Joanna Cameron 207-882-7018
Selectmen
Town of Edgecomb
PO Box 139
Edgecomb ME 04556

Dabney Lewis, CEO 207-633-3671
11 Howard St.
Boothbay Harbor ME 04538

Best Available Data: Damariscotta River (South Bristol FIRM, 7/16/90)
Sheepscot River (Wiscasset FIRM 4/16/91, Boothbay FIRM 6/3/86)

Mapping Status:

Mapping Needs: priority-xds-detailed data bordering town

ND, No Data

Hibberts Gore TWP

CID 230712 Community Profile

Map Type: **Current FIRM/FIS Map Date:**

Participating= Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies= ND **No. Claims Since 1978=** ND **All LOMCs:** 0

Fred Todd
Manager
Land Use Regulatory Commission
SHS 22
Augusta ME 04333

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Jefferson, Town of

CID 230085 Community Profile

Map Type: No Floodways **Current FIRM/FIS Map Date:** 10/18/1988

Participating=Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies=9 **No. Claims Since 1978=** 0 **All LOMCs:** 3

Rosa Sinclair 207-549-7401
Selectmen
Town of Jefferson
PO Box 77
Jefferson ME 04348

Neiland Campbell, Sr., CEO 207-586-6176
553 N. Newcastle Rd.
Newcastle ME 04553

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Monhegan PLT

CID 230511 Community Profile

Map Type: **Current FIRM/FIS Map Date:**

Participating= Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies= 4 **No. Claims Since 1978=** 4 **All LOMCs:** 0

Fred Todd
Manager
Land Use Regulatory Commission
SHS 22
Augusta ME 04333

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Newcastle, Town of

CID 230218 Community Profile

Map Type: Unnumbered A-zone **Current FIRM/FIS Map Date:** 4/1/2003

Participating= Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies= 7 **No. Claims Since 1978=** 1 **All LOMCs:** 3

Jim Brinkler 207-563-3105
Selectmen
Town of Newcastle
PO Box 386
Newcastle ME 04553

Neiland Campbell, Sr., CEO 207-586-6176
553 N. Newcastle Rd.
Newcastle ME 04553

Best Available Data: Damariscotta Lake BFE 57.8' NGVD per Nobleboro FIS 11/89, Sheepscot Riv per Wiscasset FIRM, Damariscotta Riv per Damariscotta FIS, Salt Bay per Nobleboro FIRM

Mapping Status:

Mapping Needs: 1/03 Do XDS if money allows in future

ND, No Data

Nobleboro, Town of

CID 230219 Community Profile

Map Type: No Floodways **Current FIRM/FIS Map Date:** 11/15/1989

Participating=Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies=3 **No. Claims Since 1978=** 0 **All LOMCs:** 2

Richard Spear 207-562-8816
Selectmen
Town of Nobleboro
192 U.S. Hwy 1
Nobleboro ME 04555

Kenneth Morang, Jr., CEO 207-563-5270
76 Morang Cove Rd
Nobleboro ME 04555

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Somerville, Town of

CID 230512 Community Profile

Map Type: No Floodways **Current FIRM/FIS Map Date:** 8/19/1991

Participating=Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies=13 **No. Claims Since 1978=** 2 **All LOMCs:** 2

David Stanley 207-549-3828
Selectmen
Town of Somerville
665 Patricktown Rd
Somerville ME 04348

Mike Dostie, CEO 207-549-7353
116 Frye Rd
Somerville ME 04348

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

South Bristol, Town of

CID 230220 Community Profile

Map Type: Coastal **Current FIRM/FIS Map Date:** 7/16/1990

Participating=Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies=27 **No. Claims Since 1978=** 4 **All LOMCs:** 4

Chester Rice 207-563-3977
Selectmen
Town of South Bristol
470 Clarks Cove Rd.
Walpole ME 04573

Glenn Estabrook 207-563-3977
324 St Rt 129
Walpole ME 04573

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Southport, Town of

CID 230221 Community Profile

Map Type: Coastal **Current FIRM/FIS Map Date:** 5/17/1988

Participating=Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies=36 **No. Claims Since 1978=** 10 **All LOMCs:** 6

Gerald Gamage 207-633-3318
Selectmen
Town of Southport
PO Box 149
Southport ME 04576

Henry Berne, CEO 207-633-3318
PO Box 158
West Southport ME 04576

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Waldoboro, Town of

CID 230086 Community Profile

Map Type: Floodways **Current FIRM/FIS Map Date:** 4/3/1985

Participating=Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies=8 **No. Claims Since 1978=** 1 **All LOMCs:** 4

Lee Smith 207-832-5369
Town Manager
Town of Waldoboro
PO Box J
Waldoboro ME 04572

John Black, CEO 207-832-5369
P.O. Box J
Waldoboro ME 04572

Best Available Data: Goose River, Back River Cove: Bfe 10' (Friendship FIS 7/16/90)

Mapping Status:

Mapping Needs:

ND, No Data

Westport Island, Town of

CID 230222 Community Profile

Map Type: Unnumbered A-zone **Current FIRM/FIS Map Date:** 1/3/1975

Participating= No **LURC:** No **Ordinance Date:**

Total No. NFIP Policies= ND **No. Claims Since 1978=** ND **All LOMCs:** 0

George Richardson 207-882-8477
First Selectman
Town of Westport Island
6 Fowles Point Rd.
Westport Island ME 04578

Gary Richardson, CEO 207-882-8477
1595 Main Rd
Westport ME 04578

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Whitefield, Town of

CID 230087 Community Profile

Map Type: Unnumbered A-zone **Current FIRM/FIS Map Date:** 7/26/1974

Participating= No **LURC:** No **Ordinance Date:**

Total No. NFIP Policies= ND **No. Claims Since 1978=** ND **All LOMCs:** 1

Gwyn Dixon 207-549-5175
Selectmen
Town of Whitefield
PO Box 58
Whitefield ME 04353

Arthur Strout, CEO 207-549-5175
PO Box 57
Windsor ME 04363

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Wiscasset, Town of

CID 230223 Community Profile

Map Type: No Floodways **Current FIRM/FIS Map Date:** 4/16/1991

Participating=Yes **LURC:** No **Ordinance Date:**

Total No. NFIP Policies=1 **No. Claims Since 1978=** 0 **All LOMCs:** 0

Andrew Gilmore 207-882-8200
Town Manager
Town of Wiscasset
51 Bath Rd.
Wiscasset ME 04578

Stuart Wyman, CEO 207-882-8200
51 Bath Rd
Wiscasset ME 04578

Best Available Data:

Mapping Status:

Mapping Needs:

ND, No Data

Appendix B: Community Scoping Interview Data: Lincoln County

SCOPING INTERVIEW DATA FOR: **Alna**

CID: 230083 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 3rd Saturday March

Community Representative Interviewed
Merle West
CEO & LPI
Email: **Tel:** (207) 586-5313 **Fax:**
Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community
Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
Yes. Many areas have the flat maps which are very inaccurate.

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
Yes. Indicated on Station Brook along Alna Road.

Note any significant changes in hydraulic structures (bridges, culverts, dams)
No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
No

Community Resources
Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
No

Do you have dedicated GIS capabilities (if so, provide contact information)?
No

Notes
Detailed studies requested for Pinkham Pond stream and western branch of Trout Brook.

Need to add E-911 road names to the maps for accuracy.

SCOPING INTERVIEW DATA FOR: **Boothbay**

CID: 230212 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 1st Monday May

Community Representative Interviewed
Marian Anderson
CEO
Email: buildingcode@town.boothbay.me **Tel:** (207) 633-2192 **Fax:** (207) 633-6620
Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community
Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
No

Note any significant changes in hydraulic structures (bridges, culverts, dams)
No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
No

Community Resources
Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
Yes. Future acquisition planned.

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
Yes. Some.

Do you have dedicated GIS capabilities (if so, provide contact information)?
Yes. Coordinating with Boothbay Region Water District.

Notes
Awaiting more information. Took maps and MNUSS records to evaluate at home.

Would like more road names on maps.

SCOPING INTERVIEW DATA FOR: **Boothbay Harbor**

CID: 230213 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 1st Monday May

Community Representative Interviewed
Dabney Lewis, Harry Pinkham,
CEO, EMA, EMA
Email: dabney@boothbayharbor.org **Tel:** (207) 633-3671 **Fax:** (207) 633-7712
Floodplain Management Community Contact (if different from above)
Dabney Lewis

Known problems with flood maps for your community
Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
Yes. The Meadows area (A), panel 2B (#1 priority). Unnamed pond (D), panel 2B (beaver issues) (#3 priority). Road (E), panel 2B (#2 priority).

Note any significant changes in hydraulic structures (bridges, culverts, dams)
No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
Yes. Panel 2b: Areas B and C need elevations for Penny Lane (priority 1). Areas F and G are priority 2.

Community Resources
Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
Yes. 1991 aerial photography, B&W, coast only, unknown scale.

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
Yes. Areas H and I on panel 2B. BFEs were established for development.

Do you have dedicated GIS capabilities (if so, provide contact information)?
No. May have it soon. Contact John Ziegra, Boothbay region Water District, Boothbay, ME, 04537, 207-633-4723.

Notes
Note LOMAs along the coast. Coast Guard keeps track of tide levels in town.

SCOPING INTERVIEW DATA FOR: **Bremen**

CID: 230214 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: Last Saturday March

Community Representative Interviewed
Karl Berger
Board of Selectmen
Email: **Tel:** (207) 529-5945 **Fax:**
Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community
Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
Yes. Map 6, Rial Herald Road, border of Bristol and Bremen - #1 priority. Map 4, #2 priority.

Note any significant changes in hydraulic structures (bridges, culverts, dams)
Yes. Culvert change on Medomak Rd, about 2005 - might not affect elevations.

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
No

Community Resources
Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
Yes. Continually updated, last in 2005. B&W, high detail, 10 panels.

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
No

Do you have dedicated GIS capabilities (if so, provide contact information)?
No

Notes
Need updates to road names.

SCOPING INTERVIEW DATA FOR: **Bristol**

CID: 230215 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 3rd Monday March

Community Representative Interviewed
Merle West
CEO, LPI, HO
Email: **Tel:** (207) 563-5271 **Fax:** (207) 563-6103
Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community
Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
No

Note any significant changes in hydraulic structures (bridges, culverts, dams)
Yes. Culvert installed in 2005 at Fish Point.

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
No

Community Resources
Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
No

Do you have dedicated GIS capabilities (if so, provide contact information)?
No

Notes
Very high "V" (coastal) zones may be accurate, but restudy would be needed to confirm this.

Road name problems.

SCOPING INTERVIEW DATA FOR: **Damariscotta**

CID: 230216 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 2nd weekend June

Community Representative Interviewed
Greg Zinser, Dick McLean
Town manager, Selectmen chair
Email: scotty@midcoast.com **Tel:** (207) 563-5168 **Fax:** (207) 563-6862
Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community
Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
Yes. Back Meadow Rd and Biscay Road, by Back Meadow Brook. Miles Hospital (Days Cove) inside 100-yr zone? Could use base elevation for Muddy Pond.

Note any significant changes in hydraulic structures (bridges, culverts, dams)
No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
Yes, Biscay Rd, probably not in a flood zone.

Community Resources
Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
Downtown waterfront, done by Pinetree Engineering, Brunswick

Do you have dedicated GIS capabilities (if so, provide contact information)?
No

Notes
Unofficial high water marks by Belknap Hdwre, 50-yr record, in a diary

Inaccuracy of road names a concern, as is age of map. Some subsidence and

SCOPING INTERVIEW DATA FOR: **Dresden**

CID: 230084 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: June

Community Representative Interviewed
Bruce Engert, Rick Lang
CEO, alt CEO/LPI
Email: engertbbh@verizon.net **Tel:** (207) 737-4335 **Fax:**
Floodplain Management Community Contact (if different from above)
Bruce Engert, 58 Roads End, Boothbay Harbor, ME, 04538

Known problems with flood maps for your community
Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
Yes. Kennebec R near Court House Rd, panel 5, #1 priority. Raised roadbed on Bog Road near Dresden Bog.

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
Yes. Pond near Hunter Rd off Rt 197, #2 priority. Rt 127 flood near Eastern R (panel 15). Parts of upper reaches of Nequasset Bk (panel 15) (#3 and #4 priorities).

Note any significant changes in hydraulic structures (bridges, culverts, dams)
Yes. Bog Rd culvert (panel 10), Indian Rd sleeved culverts (panel 10), Calls Hill Rd culvert (panel 15)

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
Some development along Alexander Rd near Eastern River. Hunter Rd potential subdivision may provide better topographic data.

Community Resources
Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
No

Do you have dedicated GIS capabilities (if so, provide contact information)?
No

Notes
Work closely with Lincoln Co EMA.

SCOPING INTERVIEW DATA FOR: **Edgecomb**

CID: 230217 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 3rd Saturday May

Community Representative Interviewed
Dabney Lewis
CEO
Email: dabney@boothbayharbor.org **Tel:** (207) 633-3671 **Fax:** (207) 633-7712

Floodplain Management Community Contact (if different from above)
Edgecomb Planning Board chair or Selectman Chair Joanna Cameron (PO Box 139, Edgecomb, ME, 04556, 207-882-7018)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
No

Note any significant changes in hydraulic structures (bridges, culverts, dams)
Yes. Wiscasset Ridge area

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
Yes. Davis Island (priority 1), Cod Cove (priority 2), River Road (priority 3)

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
No

Do you have dedicated GIS capabilities (if so, provide contact information)?
No

Notes
MFMP comments that FIS is needed for Edgecomb.

SCOPING INTERVIEW DATA FOR: **Jefferson**

CID: 230085 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 2nd Saturday March

Community Representative Interviewed
Neiland Campbell
CEO/LPI
Email: neil@tidewater.net **Tel:** (207) 586-6176 **Fax:** (207) 549-7709
Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community
Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
No

Note any significant changes in hydraulic structures (bridges, culverts, dams)
No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
No

Community Resources
Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
No

Do you have dedicated GIS capabilities (if so, provide contact information)?
No

Notes
No comments or mark-ups

SCOPING INTERVIEW DATA FOR: **Newcastle**

CID: 230218 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: Last Monday March

Community Representative Interviewed
Alan Pooley, Jim Brinkler,
Planning board, selectman, CEO
Email: pooley@tidewater.net **Tel:** (207) 563-6557 **Fax:**

Floodplain Management Community Contact (if different from above)
Alan Pooley, 207-563-6557. Neil Campbell, 207-563-3441. Jim Brinkler, 207-563-3105.

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
Yes. No details.

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
Yes. Panel 1: along Dyer Neck Road. Panel 2: Between Rt 1 and RR tracks. Near Rt 1 downtown. Panels 1-2: Old Sheepscot Rd (now called Old County Road), flooding sources Deer Meadow Brook and marshy trib of Marsh River; could

Note any significant changes in hydraulic structures (bridges, culverts, dams)
Yes. Dam that created Sherman Lake is gone, now an estuary. Culvert on Lynch Rd was replaced (both panel 2).

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
Yes. Just west of Newcastle Village, #1 priority. Near Sheepscot Village, #2 priority. Both need elevations.

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
No

Do you have dedicated GIS capabilities (if so, provide contact information)?
No

Notes
Damariscotta Lake Watershed Assn has some high water data for the Lake. Power company allows Lake levels to change sometimes.

MFMP comments that FIS is needed for Newcastle.

SCOPING INTERVIEW DATA FOR: **Nobleboro**

CID: 230219 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 3rd Saturday March

Community Representative Interviewed
Stanley Waltz
CEO, shoreland zone officer
Email: townofnobleboro@tidewater.net **Tel:** (207) 563-8816 **Fax:**
Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community
Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
Yes. Large flooded area 0.2 mi west of East Neck Rd on the south side of Upper Cross Rd (priority 1). WNW of Palmer Hill.

Note any significant changes in hydraulic structures (bridges, culverts, dams)
No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
Yes, The west shore of Duck Puddle Pond.

Community Resources
Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
Yes. B&W, 1"=400', April 16, 1977.

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
No

Do you have dedicated GIS capabilities (if so, provide contact information)?
No

Notes
Ridgewood Power & Light, Damariscotta Lake Watershed Assn collect high water marks.

Work with Newcastle and Jefferson to manage boundary areas.

SCOPING INTERVIEW DATA FOR: **Somerville**

CID: 230512 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: March

Community Representative Interviewed
Michael Dostie
CEO
Email: mowertoolman@aol.com **Tel:** (207) 549-7353 **Fax:**
Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community
Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
Yes. Beaver problem, Coopers Mills Rd, Panel 5.

Note any significant changes in hydraulic structures (bridges, culverts, dams)
Yes. Installed 4-ft culvert and 2 overflows at Coopers Mills Rd in response to beaver problem.

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
No

Community Resources
Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
Yes, recently (no details)

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
Not sure.

Do you have dedicated GIS capabilities (if so, provide contact information)?
No

Notes
#1 priority - adjustment of western town boundary during mapping.

SCOPING INTERVIEW DATA FOR: **South Bristol**

CID: 230220 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 1st Tuesday March

Community Representative Interviewed
Glenn Estabrook
CEO
Email: **Tel:** (207) 563-3977 **Fax:**

Floodplain Management Community Contact (if different from above)
Frank King, Ralph Norwood (planning board), Lynette Naler (planning board)

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
Yes. Along Shipyard Rd and West Side Road.

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
Yes. Bridge on Rt 129 entering Rutherford Island (priority 1). Rt 129 on Rutherford Island affected by high water during storm surge at several locations not mapped in flood zone (priority 2). Sand Cove Rd covered by

Note any significant changes in hydraulic structures (bridges, culverts, dams)
No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
No

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
Next few years, MDOT to do a new bridge on Rt 129.

Do you have dedicated GIS capabilities (if so, provide contact information)?
Yes. Retired man doing some local work.

Notes
Communication problem: LOMAs being issued without town being notified. Town requests physical mailings to all planning board members from county planning office.

Town disagrees with notes on MNUSS record 100000000010109. Town depends on

SCOPING INTERVIEW DATA FOR: **Southport**

CID: 230221 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: 1st Monday March

Community Representative Interviewed
Henry Berne
CEO
Email: hberne@gwi.net **Tel:** (207) 633-3169 **Fax:**
Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community
Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
No

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
No

Note any significant changes in hydraulic structures (bridges, culverts, dams)
No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
No

Community Resources
Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
Maybe - will check.

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
No

Do you have dedicated GIS capabilities (if so, provide contact information)?
No

Notes
High water marks are collected in Cozy Harbor. No comments on MNUSS records. No markings on maps.

SCOPING INTERVIEW DATA FOR: **Waldoboro**

CID: 230086 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: June

Community Representative Interviewed
John W. Black
CEO
Email: ceo@waldoboromaine.org **Tel:** (207) 832-5369 **Fax:** (207) 832-6061
Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community
Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
No.

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
No.

Note any significant changes in hydraulic structures (bridges, culverts, dams)
P22, culverts over small streams. Anticipated culvert change on Back Bk (Zone A). Dam removed on Medomak R (Zone A5), needs restudy. P15, 2 culverts in A Zones. P10, 3 culverts in A Zones. P8, 2 culverts in A Zones. P6, culverts enlarged 1980s in A6 Zone, Medomak Pond. P30, Zone A culvert.

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
Possibly.

Community Resources
Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
Yes. 2003? Color.

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
Yes, in local areas.

Do you have dedicated GIS capabilities (if so, provide contact information)?
Yes, being developed.

Notes
Some road-labeling issues. MNUSS records were reviewed; those requesting ERMs were deemed not valid by MFMP.

SCOPING INTERVIEW DATA FOR: **Westport Island**

CID: 230222 **Council Govt:** **Annual Town Meeting Date:**
Town Govt: March

Community Representative Interviewed
Ruth Nelson
Planning board vice chair
Email: rjnelson@prexar.com **Tel:** (207) 882-6829 **Fax:**

Floodplain Management Community Contact (if different from above)
Gary Richardson (CEO), George Richardson (1st selectman), 207-882-8477 for both

Known problems with flood maps for your community

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
Yes. Area north of Ferry Rd (#1 priority), Jewett Cove area (#2 priority)

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
No

Note any significant changes in hydraulic structures (bridges, culverts, dams)
No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
Yes. 300 acres could be developed. Need better definition of low areas for potential flooding; Map 5 between Rt 144 and Sheepscot R.

Community Resources

Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
Yes. * years ago, related to water supply for the island

Do you have dedicated GIS capabilities (if so, provide contact information)?
No

Notes
Work closely with Wiscasset.

Note that official name is Westport Island.

SCOPING INTERVIEW DATA FOR: **Wiscasset**

CID: 230223 **Council Govt:** **Annual Town Meeting Date:**
Town Govt:

Community Representative Interviewed
Stuart Wyman
CEO
Email: wiscasset@wiscasset-me.gov **Tel:** (207) 882-8200 **Fax:** (207) 882-8228
Floodplain Management Community Contact (if different from above)

Known problems with flood maps for your community
Do you have specific areas that don't flood (1% chance) but are currently in the floodplain?
Yes. P5, Back River/Montsweag Bay, steep area along shore yet shown in floodplain, highest priority (confirmed with phone call)

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain?
Yes. P10, Sheepscot R near Water St, shows no floodplain but shore is gradual and some flooding occurs at high tide.

Note any significant changes in hydraulic structures (bridges, culverts, dams)
No

Do you have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale?
No

Community Resources
Do you have aerial photography (or plans for any) (flight date, scale, color/bw)?
No

Do you have any topographic data (or plans for collecting) (digital terrain, contour maps)?
No

Do you have any data related to hydrologic/hydraulic studies (or plans for such studies)?
No

Do you have dedicated GIS capabilities (if so, provide contact information)?
No

Notes

Appendix C: Existing MNUSS Data Entries: Lincoln County

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

BOOTHBAY HARBOR, TOWN OF

CID 230213 MNUSS Summary

MNUSS NeedID 100000000010192 **Date of Need:** 8/4/1997

unnamed

Panel: 2302130002B

Need Desc: Changes to BFEs **Length:** 0.31 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: NEED FLOOD HAZARD AREAS DETERMINED FOR UNNAMED STREAMS ALONG RT 27.

MFMP Comments: Requires Restudy

MNUSS NeedID 100000000010192 **Date of Need:** 8/4/1997

unnamed

Panel: 2302130002B

Need Desc: Changes to BFEs **Length:** 0.31 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: NEED FLOOD HAZARD AREAS DETERMINED FOR UNNAMED STREAMS ALONG RT 27.

MFMP Comments: Requires Restudy

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

BOOTHBAY HARBOR, TOWN OF

CID 230213 MNUSS Summary

MNUSS NeedID 100000000010192 **Date of Need:** 8/4/1997

unnamed

Panel: 2302130002B

Need Desc: Changes to BFEs **Length:** 0.31 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: NEED FLOOD HAZARD AREAS DETERMINED FOR UNNAMED STREAMS ALONG RT 27.

MFMP Comments: Requires Restudy

MNUSS NeedID 100000000010112 **Date of Need:** 4/26/1999

Atlantic Ocean

Panel: 2302130001B

Need Desc: Changes to coastal elevations **Length:** 3.18 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 10 to 21 feet, while stillwater elevation is 9.8 feet. This is b/c the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower bfes more than 5 feet.

MFMP Comments: Requires Restudy

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

BOOTHBAY HARBOR, TOWN OF

CID 230213 MNUSS Summary

MNUSS NeedID 100000000010112 **Date of Need:** 4/26/1999

Atlantic Ocean

Panel: 2302130003B

Need Desc: Changes to coastal elevations **Length:** 3.18 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 10 to 21 feet, while stillwater elevation is 9.8 feet. This is b/c the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower bfes

MFMP Comments: Requires Restudy

MNUSS NeedID 100000000010112 **Date of Need:** 4/26/1999

Atlantic Ocean

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Anticipated BFE Change: Increased By Greater Than 5 feet

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MFMP Comments: Requires Restudy

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

BOOTHBAY HARBOR, TOWN OF

CID 230213 MNUSS Summary

MNUSS NeedID 100000000010112 **Date of Need:** 4/26/1999

Atlantic Ocean

Panel: 2302130002B

Need Desc: Changes to coastal elevations **Length:** 3.18 **mi**

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MFMP Comments: Requires Restudy

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Atlantic Ocean

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MFMP Comments: Requires Restudy

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

BOOTHBAY HARBOR, TOWN OF

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MFMP Comments: Requires Restudy

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Anticipated BFE Change: Increased By Greater Than 5 feet

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MFMP Comments: Requires Restudy

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

BOOTHBAY HARBOR, TOWN OF

CID 230213 MNUSS Summary

MNUSS NeedID 100000000010112 **Date of Need:** 4/26/1999

Atlantic Ocean

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Need Desc: Changes to coastal elevations **Length:** 3.18 **mi**

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Location of Floodplain:

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MFMP Comments: Requires Restudy

MNUSS NeedID 100000000010112 **Date of Need:** 4/26/1999

Atlantic Ocean

Panel: 2302130003B

Need Desc: Changes to coastal elevations **Length:** 3.18 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFEs are too high, ranging from 10 to 21 feet, while stillwater elevation is 9.8 feet. This is b/c the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower bfes more than 5 feet.

MFMP Comments: Requires Restudy

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

BREMEN, TOWN OF

CID 230214 MNUSS Summary

MNUSS NeedID 100000000025855

Date of Need: 8/29/2001

Panel: 230214 B

Need Desc: Align map panels

Length: 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes: The community was converted by letter 2/2/87. However, panel 0011 is still labeled as a FHBM. It needs to be labeled as a FIRM. All 10 other panels are correct.

MFMP Comments: DFIRM

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

BRISTOL, TOWN OF

CID 230215 MNUSS Summary

MNUSS NeedID 100000000010242 **Date of Need:** 11/11/1997

Panel: 2302150015C

Need Desc: Add LOMCs (per panel) **Length:** 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

MNUSS NeedID 100000000010110 **Date of Need:** 4/26/1999

Atlantic Ocean

Panel: 2302150015B

Need Desc: Changes to coastal elevations **Length:** 14.5 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFE's are too high, ranging from 10 to 43 feet, while stillwater elevation is 10 feet. Runup elev. were determined using Stone and Webster methodology. New elevations need to be computed which will lower BFEs more than 5 feet.

MFMP Comments: Requires Restudy

BRISTOL, TOWN OF

CID 230215 MNUSS Summary

MNUSS NeedID 100000000010110 **Date of Need:** 4/26/1999

Atlantic Ocean

Panel: 2302150015B

Need Desc: Changes to coastal elevations **Length:** 14.5 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFE's are too high, ranging from 10 to 43 feet, while stillwater elevation is 10 feet. Runup elev. were determined using Stone and Webster methodology. New elevations need to be computed which will lower BFEs more than 5 feet.

MFMP Comments: Requires Restudy

MNUSS NeedID 100000000010110 **Date of Need:** 4/26/1999

Atlantic Ocean

Panel: 2302150015B

Need Desc: Changes to coastal elevations **Length:** 14.5 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFE's are too high, ranging from 10 to 43 feet, while stillwater elevation is 10 feet. Runup elev. were determined using Stone and Webster methodology. New elevations need to be computed which will lower BFEs more than 5 feet.

MFMP Comments: Requires Restudy

BRISTOL, TOWN OF

CID 230215 MNUSS Summary

MNUSS NeedID 100000000010110 **Date of Need:** 4/26/1999

Atlantic Ocean

Panel: 2302150005B

Need Desc: Changes to coastal elevations **Length:** 14.5 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFE's are too high, ranging from 10 to 43 feet, while stillwater elevation is 10 feet. Runup elev. were determined using Stone and Webster methodology. New elevations need to be computed which will lower BFEs more than 5 feet.

MFMP Comments: Requires Restudy

MNUSS NeedID 100000000010110 **Date of Need:** 4/26/1999

Atlantic Ocean

Panel: 2302150005B

Need Desc: Changes to coastal elevations **Length:** 14.5 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFE's are too high, ranging from 10 to 43 feet, while stillwater elevation is 10 feet. Runup elev. were determined using Stone and Webster methodology. New elevations need to be computed which will lower BFEs more than 5 feet.

MFMP Comments: Requires Restudy

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

BRISTOL, TOWN OF

CID 230215 MNUSS Summary

MNUSS NeedID 100000000010110 **Date of Need:** 4/26/1999

Atlantic Ocean

Panel: 2302150005B

Need Desc: Changes to coastal elevations **Length:** 14.5 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFE's are too high, ranging from 10 to 43 feet, while stillwater elevation is 10 feet. Runup elev. were determined using Stone and Webster methodology. New elevations need to be computed which will lower BFEs more than 5 feet.

MFMP Comments: Requires Restudy

SOUTH BRISTOL, TOWN OF

CID 230220 MNUSS Summary

MNUSS NeedID 100000000010109 **Date of Need:** 12/9/1996

Atlantic Ocean

Panel: 2302200020B

Need Desc: Changes to coastal elevations **Length:** 3.8 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFE's are too high, ranging from 10-26 feet, while stillwater elevation is 9.9 feet. This is because runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs

MFMP Comments: Requires Restudy

MNUSS NeedID 100000000010109 **Date of Need:** 12/9/1996

Atlantic Ocean

Panel: 2302200015B

Need Desc: Changes to coastal elevations **Length:** 3.8 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFE's are too high, ranging from 10-26 feet, while stillwater elevation is 9.9 feet. This is because runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires Restudy

SOUTH BRISTOL, TOWN OF

CID 230220 MNUSS Summary

MNUSS NeedID 100000000010109 **Date of Need:** 12/9/1996

Atlantic Ocean

Panel: 2302200015B

Need Desc: Changes to coastal elevations **Length:** 3.8 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFE's are too high, ranging from 10-26 feet, while stillwater elevation is 9.9 feet. This is because runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs

MFMP Comments: Requires Restudy

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Atlantic Ocean

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Need Desc: Changes to coastal elevations **Length:** 3.8 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Run up BFE's are too high, ranging from 10-26 feet, while stillwater elevation is 9.9 feet. This is because runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires Restudy

SOUTH BRISTOL, TOWN OF

CID 230220 MNUSS Summary

MNUSS NeedID 100000000010109 **Date of Need:** 12/9/1996

Atlantic Ocean

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Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

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MFMP Comments: Requires Restudy

MNUSS NeedID 100000000010109 **Date of Need:** 12/9/1996

Atlantic Ocean

Panel: 2302200020B

Need Desc: Changes to coastal elevations **Length:** 3.8 **mi**

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Location of Floodplain:

Need Notes: Run up BFE's are too high, ranging from 10-26 feet, while stillwater elevation is 9.9 feet. This is because runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires Restudy

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

SOUTH BRISTOL, TOWN OF

CID 230220 MNUSS Summary

MNUSS NeedID 100000000010164 **Date of Need:** 8/4/1997

Panel: 2302200015B

Need Desc: Add streets to panel **Length:** 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

MNUSS NeedID 100000000010164 **Date of Need:** 8/4/1997

Panel: 2302200020B

Need Desc: Add streets to panel **Length:** 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

SOUTH BRISTOL, TOWN OF

CID 230220 MNUSS Summary

MNUSS NeedID 100000000010164 **Date of Need:** 8/4/1997

Panel: 2302200005B

Need Desc: Add streets to panel **Length:** 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

MNUSS NeedID 100000000010164 **Date of Need:** 8/4/1997

Panel: 2302200010B

Need Desc: Add streets to panel **Length:** 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

SOUTH BRISTOL, TOWN OF

CID 230220 MNUSS Summary

MNUSS NeedID 100000000036669 **Date of Need:** 10/27/2004

Panel: 2302200005B

Need Desc: Add streets to panel **Length:** 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes: During Sept. 19, 2003 CAV, FEMA rep noted need for update of street names on FIRM.

MFMP Comments: DFIRM

MNUSS NeedID 100000000036669 **Date of Need:** 10/27/2004

Panel: 2302200010B

Need Desc: Add streets to panel **Length:** 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes: During Sept. 19, 2003 CAV, FEMA rep noted need for update of street names on FIRM.

MFMP Comments: DFIRM

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

SOUTH BRISTOL, TOWN OF

CID 230220 MNUSS Summary

MNUSS NeedID 100000000036669 **Date of Need:** 10/27/2004

Panel: 2302200015B

Need Desc: Add streets to panel **Length:** 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes: During Sept. 19, 2003 CAV, FEMA rep noted need for update of street names on FIRM.

MFMP Comments: DFIRM

MNUSS NeedID 100000000036669 **Date of Need:** 10/27/2004

Panel: 2302200020B

Need Desc: Add streets to panel **Length:** 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes: During Sept. 19, 2003 CAV, FEMA rep noted need for update of street names on FIRM.

MFMP Comments: DFIRM

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

SOUTHPORT, TOWN OF

CID 230221 MNUSS Summary

MNUSS NeedID 100000000010219 **Date of Need:** 11/6/1997

Panel: 2302210004B

Need Desc: Add LOMCs (per panel) **Length:** 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

MNUSS NeedID 100000000010219 **Date of Need:** 11/6/1997

Panel: 2302210003B

Need Desc: Add LOMCs (per panel) **Length:** 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: DFIRM

SOUTHPORT, TOWN OF

CID 230221 MNUSS Summary

MNUSS NeedID 100000000010138 **Date of Need:** 4/27/1999

Atlantic Ocean

Panel: 2302210003B

Need Desc: Changes to coastal elevations **Length:** 6.3 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFE's are too high, ranging from 14 to 26 feet, while the stillwater elevation is 10 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires Restudy

MNUSS NeedID 100000000010138 **Date of Need:** 4/27/1999

Atlantic Ocean

Panel: 2302210004B

Need Desc: Changes to coastal elevations **Length:** 6.3 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFE's are too high, ranging from 14 to 26 feet, while the stillwater elevation is 10 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lo

MFMP Comments: Requires Restudy

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

SOUTHPORT, TOWN OF

CID 230221 MNUSS Summary

MNUSS NeedID 100000000010138 **Date of Need:** 4/27/1999

Atlantic Ocean

Panel: 2302210004B

Need Desc: Changes to coastal elevations **Length:** 6.3 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

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MFMP Comments: Requires Restudy

MNUSS NeedID 100000000010138 **Date of Need:** 4/27/1999

Atlantic Ocean

Panel: 2302210003B

Need Desc: Changes to coastal elevations **Length:** 6.3 **mi**

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Location of Floodplain:

Need Notes: Runup BFE's are too high, ranging from 14 to 26 feet, while the stillwater elevation is 10 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lo

MFMP Comments: Requires Restudy

SOUTHPORT, TOWN OF

CID 230221 MNUSS Summary

MNUSS NeedID 100000000010138 **Date of Need:** 4/27/1999

Atlantic Ocean

Panel: 2302210003B

Need Desc: Changes to coastal elevations **Length:** 6.3 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFE's are too high, ranging from 14 to 26 feet, while the stillwater elevation is 10 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires Restudy

MNUSS NeedID 100000000010138 **Date of Need:** 4/27/1999

Atlantic Ocean

Panel: 2302210002B

Need Desc: Changes to coastal elevations **Length:** 6.3 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFE's are too high, ranging from 14 to 26 feet, while the stillwater elevation is 10 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lo

MFMP Comments: Requires Restudy

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

SOUTHPORT, TOWN OF

CID 230221 MNUSS Summary

MNUSS NeedID 100000000010138 **Date of Need:** 4/27/1999

Atlantic Ocean

Panel: 2302210002B

Need Desc: Changes to coastal elevations **Length:** 6.3 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFE's are too high, ranging from 14 to 26 feet, while the stillwater elevation is 10 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires Restudy

MNUSS NeedID 100000000010138 **Date of Need:** 4/27/1999

Atlantic Ocean

Panel: 2302210002B

Need Desc: Changes to coastal elevations **Length:** 6.3 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFE's are too high, ranging from 14 to 26 feet, while the stillwater elevation is 10 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires Restudy

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

SOUTHPORT, TOWN OF

CID 230221 MNUSS Summary

MNUSS NeedID 100000000010138 **Date of Need:** 4/27/1999

Atlantic Ocean

Panel: 2302210004B

Need Desc: Changes to coastal elevations **Length:** 6.3 **mi**

Anticipated BFE Change: Increased By Greater Than 5 feet

Location of Floodplain:

Need Notes: Runup BFE's are too high, ranging from 14 to 26 feet, while the stillwater elevation is 10 feet. This is because the runup elevations were determined using Stone and Webster methodology. Runup needs to be computed using current methodology which will lower BFEs more than 5 feet.

MFMP Comments: Requires Restudy

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

WALDOBORO, TOWN OF

CID 230086 MNUSS Summary

MNUSS NeedID 100000000010167

Date of Need: 8/4/1997

Panel: 2300860030B

Need Desc: Add an ERM

Length: 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: Not Valid

MNUSS NeedID 100000000010167

Date of Need: 8/4/1997

Panel: 2300860006B

Need Desc: Add an ERM

Length: 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: Not Valid

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

WALDOBORO, TOWN OF

CID 230086 MNUSS Summary

MNUSS NeedID 100000000010167 **Date of Need:** 8/4/1997

Panel: 2300860008B

Need Desc: Add an ERM **Length:** 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: Not Valid

MNUSS NeedID 100000000010167 **Date of Need:** 8/4/1997

Panel: 2300860010B

Need Desc: Add an ERM **Length:** 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: Not Valid

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

WALDOBORO, TOWN OF

CID 230086 MNUSS Summary

MNUSS NeedID 100000000010167

Date of Need: 8/4/1997

Panel: 2300860015B

Need Desc: Add an ERM

Length: 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: Not Valid

MNUSS NeedID 100000000010167

Date of Need: 8/4/1997

Panel: 2300860021B

Need Desc: Add an ERM

Length: 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: Not Valid

EXISTING MNUSS ENTRIES FOR LINCOLN COUNTY

WALDOBORO, TOWN OF

CID 230086 MNUSS Summary

MNUSS NeedID 100000000010167 **Date of Need:** 8/4/1997

Panel: 2300860022B

Need Desc: Add an ERM **Length:** 0 **mi**

Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: Not Valid

MNUSS NeedID 100000000010167 **Date of Need:** 8/4/1997

Panel: 2300860025B

Need Desc: Add an ERM **Length:** 0 **mi**

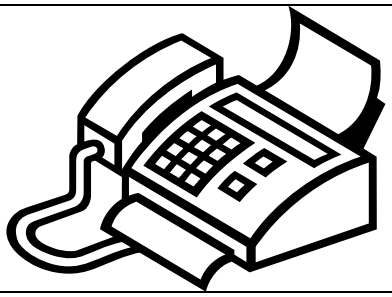
Anticipated BFE Change: Not Applicable

Location of Floodplain:

Need Notes:

MFMP Comments: Not Valid

Appendix D: Attachments



To: Tom Marcotte, CFM
State Planning Office
Floodplain Management Program
184 State Street, 38 State House Station
Augusta, Maine 04333-0038

Fax Number: (207) 287-6489

FAX back date: ____/____ /2006

Sign-up FAX From:

Community Name:

_____

Primary Community Contact For Floodplain Management:

Name:_____Ph #:_____

Regarding: Attendance at Flood Map Modernization Scoping Meeting

Comments:

The following community official(s) will attend the scoping meeting indicated below:

Lincoln County: Damariscotta Town Office, 21 School St. December 7th 2006

From 11:00 A.M. to 3:00 P.M.

Name:	**Title and Phone Number**
1) _____ ,	_____
2) _____ ,	_____
3) _____ ,	_____
4) _____ ,	_____

STATE OF MAINE
EXECUTIVE DEPARTMENT
MAINE STATE PLANNING OFFICE
38 STATE HOUSE STATION
AUGUSTA, ME 04333

USGS
science for a changing world

FEMA

, Code Enforcement Officer
Town of
Street
, Maine 04

November 14, 2006

Dear

Subject: Important Meeting on Updating Your Community's Flood Maps

Flooding has caused more than $150,000,000 in damages to Maine's cities and towns during the past twenty years. Coastal and riverine floods impact the lives of our citizens almost annually. Recently completed County Hazard Mitigation Plans identify flooding as the foremost natural hazard in the majority of our sixteen counties.

When the National Flood Insurance Program (NFIP) was established in 1968 it provided for a three part approach to reducing damage from flooding. The first part was the establishment of a flood insurance program overseen by the Flood Insurance Administration (FIA). The second part was the identification and mapping of the flood hazard. The third part was a requirement for communities that wanted to participate in the NFIP to adopt and enforce floodplain management regulations designed to control development in flood prone areas. Of the three parts of the NFIP the second component, mapping the hazard, is the glue that holds the program together. Communities cannot control development if they do not know what areas of their municipality are threatened by flooding. Flood insurance cannot be provided equitably unless insurance agents are able to determine the level of risk for a specific property.

Nationwide the current Flood Insurance Rate Maps (FIRM) are aging and some states, such as Maine, have maps that are on average more than twenty years old. Congress realized that this was a problem and in 2004 provided funding to FEMA to begin a comprehensive updating of the maps. This updating effort is called "Flood Map Modernization", Map Mod for short.

Maine has actively participated in Map Mod since its inception. To date we have remapping projects underway in York, Cumberland and Oxford counties and have met with community officials to discuss their flood mapping needs in Kennebec and Somerset counties. During this fall and winter we will be gathering information on mapping issues and concerns in Penobscot, Lincoln and Hancock counties. These meetings are designed to give municipal officials a chance to share with us any problems they have with their FIRMs and are called "Scoping Meetings" by FEMA.

Thursday, December 7th from 11:00 AM to 3:00 PM we will meet with officials from Lincoln County communities at the Damariscotta Town Office, located at 21 School St.

During the Scoping Meeting we will meet with communities and review their current FIRM and discuss possible changes to the map to improve floodplain management at the local level.

We have attached three documents to this letter. One document is a **FAX-Back** form to allow you to sign up for the meeting. We ask that you reply to us by **November 29th.** The second document is a brief overview of the Map Mod process which can also be seen at our web-site www.maine.gov/spo/flood and the third document is the agenda for the meeting.

In preparation for the Scoping Meeting, we would like your community to identify flood mapping issues to be considered for study or review. It will be helpful to have the flooding issues prioritized and for you to be able to locate the areas of concern on the flood maps. In addition, it will also be beneficial to bring a brief narrative describing the reasons you would like to request that changes be made to the maps. This information will help us help you at the meeting and assist us in finalizing the scope of work necessary to update the maps. If your community is unable to attend the Scoping Meeting, this information may also be sent to the lead scoping agency working in collaboration with the Maine Floodplain Management Program and FEMA: USGS, 196 Whitten Road, Augusta, ME 04330.

If you have any questions regarding the Scoping Meeting or need additional information please feel free to contact Tom Marcotte at the State Planning Office (207-287-8051), Rob Dudley at USGS (207-622-8201 ext. 115) or Chuck Schalk at USGS (207-622-8201 ext. 111).

Thank you for your assistance with Map Mod.

Tom Marcotte, CFM
Maine Floodplain Management Program

G. Fred Vanderschmidt IV. CFM
FEMA Region I

Rob Dudley, P.E.
USGS Maine Water Science Center

Lincoln County Community Interview Form
FEMA Map Modernization Program
December 7, 2006

Community: _____ Effective FIS/FIRM Date: _____

CID#: 230 __ __ __ GOVT: ☐ Town OR ☐ Council

If Town Government, Date of Annual Town Meeting: _____

Community Representative(s) attending meeting:

Name(s): _____

Title(s): _____

Tel: _____ Email(s): _____

Fax: _____

Floodplain Mgt Community Contact (and contact info if different from above): _____

_____

Known problems with flood maps for your community (note FIRM panel numbers)

(Note: Most base-map issues such as street names, roads, corporate boundaries, and spatial issues will be fixed when new digital FIRMS are produced) PLEASE PROVIDE ADDITIONAL INFORMATION FOR ANY YES ANSWERS BELOW and HIGHLIGHT areas of concern on the MAPS provided.

Do you have specific areas that don't flood (1% chance) but are currently in the floodplain? ☐ Yes ☐ No

_____

_____

_____

Do you have specific areas that flood (1% chance) but are not mapped in the floodplain or not mapped at all?
☐ Yes ☐ No

_____

_____

_____

Have any changes in hydraulic structures (bridges, culverts, dams) taken place that would change the maps since the effective maps were issued?
☐ Yes ☐ No

_____

_____

_____

Do you currently have (or are you proposing) high-development areas where you need new or restudied flood elevations or improved map scale? ☐ Yes ☐ No

_____

_____

_____

_____

_____

Lincoln County Community Interview Form

Community resources:

Do you have aerial photography or plans for any (flight date, scale, color/black & white)? ☐ Yes ☐ No

Do you have topographic data or plans for collecting any (digitail terrain, contour maps)? ☐ Yes ☐ No

Do you have any other data like special hydrologic/hydraulic studies (or plans for studies)? ☐ Yes ☐ No

Do you have dedicated GIS capabilities? ☐ Yes ☐ No (Provide GIS contact info if different from front page)

Do you know if someone in your community keep a record of high-water marks? Who? (fire/police/public works?)
☐ Yes ☐ No

Does your community work with neighboring communities to manage flood sources along town boundaries?
☐ Yes ☐ No List communities here:

Interviewer: Review MNUSS entries and BAD with town representative ☐ Done and all OK, or ☐ Done and see notes

Interviewer: Has the town representative indicated the flood map priorities on the provided map? ☐ Yes ☐ No

NOTES:

Appendix E: Census Block-Group Data

[CID, Community identification number]

Census block group	CID	Community name	Area, in square miles	Population density	Population density score	Population growth	Population growth score
230159751001	230512	Somerville	23.52	21.69	5.20	11.14	5.86
230159751002	230085	Jefferson	33.07	50.98	5.78	13.12	6.17
230159751003	230085	Jefferson	25.57	27.45	5.36	13.12	6.17
230159751004	230087	Whitefield	19.20	64.57	5.94	17.71	6.73
230159751005	230087	Whitefield	28.33	36.46	5.55	17.71	6.73
230159752001	230086	Waldoboro	37.17	57.31	5.86	6.85	4.94
230159752002	230086	Waldoboro	20.28	79.99	6.08	6.85	4.94
230159752003	230086	Waldoboro	15.23	76.43	6.05	6.85	4.94
230159753001	230219	Nobleboro	15.87	62.27	5.91	11.75	5.96
230159753002	230219	Nobleboro	7.46	85.49	6.13	11.75	5.96
230159753003	230216	Damariscotta	7.68	142.78	6.47	12.70	6.11
230159753004	230216	Damariscotta	6.90	136.76	6.45	12.70	6.11
230159754001	230083	Alna	21.39	31.55	5.45	18.21	6.79
230159754002	230218	Newcastle	32.57	53.67	5.81	13.65	6.24
230159754004	230217	Edgecomb	20.78	52.45	5.80	9.77	5.61
230159755001	230084	Dresden	33.16	49.01	5.75	22.00	7.14
230159755002	230223	Wiscasset	12.28	132.25	6.42	7.91	5.21
230159755003	230223	Wiscasset	7.68	156.74	6.54	7.91	5.21
230159755004	230223	Wiscasset	7.75	100.12	6.23	7.91	5.21
230159755005	230222	Westport	12.82	58.11	5.87	12.37	6.06
230159756001	230214	Bremen	17.23	45.38	5.70	16.02	6.54
230159756002	230215	Bristol	13.98	55.95	5.84	13.67	6.24
230159756003	230215	Bristol	1.74	0.00	0.00	13.67	6.24
230159756004	230215	Bristol	17.06	71.56	6.01	13.67	6.24
230159756005	230215	Bristol	3.78	168.93	6.59	13.67	6.24
230159757001	230220	South Bristol	16.30	55.02	5.83	8.73	5.40
230159758001	230212	Boothbay	3.41	213.94	6.75	11.78	5.96
230159758002	230212	Boothbay	8.80	113.16	6.32	11.78	5.96
230159758003	230212	Boothbay	8.51	66.61	5.96	11.78	5.96
230159758004	230212	Boothbay	6.20	107.53	6.28	11.78	5.96
230159759001	230213	Boothbay Harbor	1.63	342.29	7.07	0.00	0.00
230159759002	230213	Boothbay Harbor	0.90	775.06	7.62	0.00	0.00
230159759003	230213	Boothbay Harbor	2.43	228.90	6.79	0.00	0.00
230159759004	230213	Boothbay Harbor	0.99	528.12	7.36	0.00	0.00
230159760001	230221	Southport	5.18	132.16	6.42	6.05	4.70
230159761001	230511	Monhegan Island	0.81	92.63	6.18	0.00	0.00
Minimum			0.81	0.00	0.00	0.00	0.00
Maximum			37.17	775.06	7.62	22.00	7.14
Mean			13.82	124.26	5.98	10.40	5.10
Median			12.55	73.99	6.03	11.78	5.96

Census block group	CID	Community name	Area, in square mile	Housing units density	Housing units density score	Claims density	Claims density score
230159751001	230512	Somerville	23.52	12.29	4.03	0.00	0.00
230159751002	230085	Jefferson	33.07	22.41	4.54	0.00	0.00
230159751003	230085	Jefferson	25.57	26.83	4.69	0.00	0.00
230159751004	230087	Whitefield	19.20	26.35	4.67	0.00	0.00
230159751005	230087	Whitefield	28.33	15.81	4.24	0.00	0.00
230159752001	230086	Waldoboro	37.17	23.14	4.56	0.00	0.00
230159752002	230086	Waldoboro	20.28	42.85	5.08	0.00	0.00
230159752003	230086	Waldoboro	15.23	41.43	5.05	0.00	0.00
230159753001	230219	Nobleboro	15.87	44.24	5.11	0.00	0.00
230159753002	230219	Nobleboro	7.46	52.26	5.25	0.00	0.00
230159753003	230216	Damariscotta	7.68	81.61	5.62	0.00	0.00
230159753004	230216	Damariscotta	6.90	75.91	5.56	0.00	0.00
230159754001	230083	Alna	21.39	14.72	4.19	0.00	0.00
230159754002	230218	Newcastle	32.57	27.02	4.69	0.06	1.88
230159754004	230217	Edgecomb	20.78	27.53	4.71	0.00	0.00
230159755001	230084	Dresden	33.16	22.29	4.53	0.03	1.15
230159755002	230223	Wiscasset	12.28	53.83	5.27	0.00	0.00
230159755003	230223	Wiscasset	7.68	74.14	5.54	0.00	0.00
230159755004	230223	Wiscasset	7.75	49.29	5.20	0.00	0.00
230159755005	230222	Westport	12.82	39.78	5.02	0.00	0.00
230159756001	230214	Bremen	17.23	34.70	4.90	0.00	0.00
230159756002	230215	Bristol	13.98	30.34	4.79	0.00	0.00
230159756003	230215	Bristol	1.74	0.00	0.00	0.00	0.00
230159756004	230215	Bristol	17.06	59.08	5.35	0.00	0.00
230159756005	230215	Bristol	3.78	214.40	6.43	0.00	0.00
230159757001	230220	South Bristol	16.30	57.17	5.32	0.00	0.00
230159758001	230212	Boothbay	3.41	252.33	6.57	0.00	0.00
230159758002	230212	Boothbay	8.80	53.85	5.27	0.00	0.00
230159758003	230212	Boothbay	8.51	33.72	4.88	0.00	0.00
230159758004	230212	Boothbay	6.20	68.35	5.47	0.00	0.00
230159759001	230213	Boothbay Harbor	1.63	264.52	6.61	0.00	0.00
230159759002	230213	Boothbay Harbor	0.90	493.32	7.13	1.11	4.89
230159759003	230213	Boothbay Harbor	2.43	223.13	6.46	0.00	0.00
230159759004	230213	Boothbay Harbor	0.99	581.64	7.27	1.01	4.79
230159760001	230221	Southport	5.18	176.21	6.27	0.00	0.00
230159761001	230511	Monhegan Island	0.81	218.62	6.45	0.00	0.00
Minimum			0.81	0.00	0.00	0.00	0.00
Maximum			37.17	581.64	7.27	1.11	4.89
Mean			13.82	98.20	5.19	0.06	0.35
Median			12.55	46.76	5.15	0.00	0.00

Census block group	CID	Community name	Area, in square miles	Repetitive loss density	Repetitive loss density score	Repetitive loss property density	Repetitive loss property density score
230159751001	230512	Somerville	23.52	0.00	0.00	0.00	0.00
230159751002	230085	Jefferson	33.07	0.00	0.00	0.00	0.00
230159751003	230085	Jefferson	25.57	0.00	0.00	0.00	0.00
230159751004	230087	Whitefield	19.20	0.00	0.00	0.00	0.00
230159751005	230087	Whitefield	28.33	0.00	0.00	0.00	0.00
230159752001	230086	Waldoboro	37.17	0.00	0.00	0.00	0.00
230159752002	230086	Waldoboro	20.28	0.00	0.00	0.00	0.00
230159752003	230086	Waldoboro	15.23	0.00	0.00	0.00	0.00
230159753001	230219	Nobleboro	15.87	0.00	0.00	0.00	0.00
230159753002	230219	Nobleboro	7.46	0.00	0.00	0.00	0.00
230159753003	230216	Damariscotta	7.68	0.00	0.00	0.00	0.00
230159753004	230216	Damariscotta	6.90	0.00	0.00	0.00	0.00
230159754001	230083	Alna	21.39	0.00	0.00	0.00	0.00
230159754002	230218	Newcastle	32.57	0.00	0.00	0.00	0.00
230159754004	230217	Edgecomb	20.78	0.00	0.00	0.00	0.00
230159755001	230084	Dresden	33.16	0.00	0.00	0.00	0.00
230159755002	230223	Wiscasset	12.28	0.00	0.00	0.00	0.00
230159755003	230223	Wiscasset	7.68	0.00	0.00	0.00	0.00
230159755004	230223	Wiscasset	7.75	0.00	0.00	0.00	0.00
230159755005	230222	Westport	12.82	0.00	0.00	0.00	0.00
230159756001	230214	Bremen	17.23	0.00	0.00	0.00	0.00
230159756002	230215	Bristol	13.98	0.00	0.00	0.00	0.00
230159756003	230215	Bristol	1.74	0.00	0.00	0.00	0.00
230159756004	230215	Bristol	17.06	0.00	0.00	0.00	0.00
230159756005	230215	Bristol	3.78	0.00	0.00	0.00	0.00
230159757001	230220	South Bristol	16.30	0.00	0.00	0.00	0.00
230159758001	230212	Boothbay	3.41	0.00	0.00	0.00	0.00
230159758002	230212	Boothbay	8.80	0.00	0.00	0.00	0.00
230159758003	230212	Boothbay	8.51	0.00	0.00	0.00	0.00
230159758004	230212	Boothbay	6.20	0.00	0.00	0.00	0.00
230159759001	230213	Boothbay Harbor	1.63	0.00	0.00	0.00	0.00
230159759002	230213	Boothbay Harbor	0.90	0.00	0.00	0.00	0.00
230159759003	230213	Boothbay Harbor	2.43	0.00	0.00	0.00	0.00
230159759004	230213	Boothbay Harbor	0.99	0.00	0.00	0.00	0.00
230159760001	230221	Southport	5.18	0.00	0.00	0.00	0.00
230159761001	230511	Monhegan Island	0.81	0.00	0.00	0.00	0.00
Minimum			0.81	0.00	0.00	0.00	0.00
Maximum			37.17	0.00	0.00	0.00	0.00
Mean			13.82	0.00	0.00	0.00	0.00
Median			12.55	0.00	0.00	0.00	0.00

Census block group	CID	Community name	Area, in square miles	Policies density	Policies density score	Disasters	Disasters score	Final census block group score
230159751001	230512	Somerville	23.52	0.30	4.43	10	5.88	25.40
230159751002	230085	Jefferson	33.07	0.00	0.00	10	5.88	22.36
230159751003	230085	Jefferson	25.57	0.55	4.90	10	5.88	27.00
230159751004	230087	Whitefield	19.20	0.00	0.00	10	5.88	23.23
230159751005	230087	Whitefield	28.33	0.00	0.00	10	5.88	22.41
230159752001	230086	Waldoboro	37.17	0.00	0.00	10	5.88	21.24
230159752002	230086	Waldoboro	20.28	0.39	4.65	10	5.88	26.63
230159752003	230086	Waldoboro	15.23	0.26	4.33	10	5.88	26.26
230159753001	230219	Nobleboro	15.87	0.06	3.22	10	5.88	26.08
230159753002	230219	Nobleboro	7.46	0.13	3.81	10	5.88	27.02
230159753003	230216	Damariscotta	7.68	0.13	3.78	10	5.88	27.87
230159753004	230216	Damariscotta	6.90	0.72	5.12	10	5.88	29.11
230159754001	230083	Alna	21.39	0.09	3.53	10	5.88	25.83
230159754002	230218	Newcastle	32.57	0.09	3.52	10	5.88	28.03
230159754004	230217	Edgecomb	20.78	0.05	3.01	10	5.88	25.01
230159755001	230084	Dresden	33.16	0.12	3.73	10	5.88	28.18
230159755002	230223	Wiscasset	12.28	0.08	3.42	10	5.88	26.21
230159755003	230223	Wiscasset	7.68	0.00	0.00	10	5.88	23.17
230159755004	230223	Wiscasset	7.75	0.00	0.00	10	5.88	22.53
230159755005	230222	Westport	12.82	0.00	0.00	10	5.88	22.82
230159756001	230214	Bremen	17.23	0.75	5.15	10	5.88	28.18
230159756002	230215	Bristol	13.98	0.14	3.86	10	5.88	26.62
230159756003	230215	Bristol	1.74	0.00	0.00	10	5.88	12.13
230159756004	230215	Bristol	17.06	1.41	5.63	10	5.88	29.12
230159756005	230215	Bristol	3.78	7.67	6.95	10	5.88	32.10
230159757001	230220	South Bristol	16.30	1.41	5.64	10	5.88	28.07
230159758001	230212	Boothbay	3.41	11.14	7.24	10	5.88	32.40
230159758002	230212	Boothbay	8.80	0.00	0.00	10	5.88	23.44
230159758003	230212	Boothbay	8.51	1.06	5.41	10	5.88	28.10
230159758004	230212	Boothbay	6.20	0.64	5.03	10	5.88	28.63
230159759001	230213	Boothbay Harbor	1.63	0.00	0.00	10	5.88	19.56
230159759002	230213	Boothbay Harbor	0.90	17.82	7.61	10	5.88	33.13
230159759003	230213	Boothbay Harbor	2.43	2.06	5.93	10	5.88	25.07
230159759004	230213	Boothbay Harbor	0.99	14.14	7.43	10	5.88	32.73
230159760001	230221	Southport	5.18	6.18	6.79	10	5.88	30.06
230159761001	230511	Monhegan Island	0.81	4.94	6.61	10	5.88	25.12
Minimum			0.81	0.00	0.00	10.00	5.88	12.13
Maximum			37.17	17.82	7.61	10.00	5.88	33.13
Mean			13.82	2.01	3.63	10.00	5.88	26.13
Median			12.55	0.14	3.83	10.00	5.88	26.44