

SAMPLING AND ESTIMATION DETAILS FOR THE MAINE PORTION OF
THE NATIONAL INVENTORY OF SOIL AND WATER CONSERVATION NEEDS

BU-183-M

Thomas M. Beetle

July, 1965

Abstract

This paper provides some details on the sampling and estimation procedures for each county in Maine. It is intended as a supplement to BU-180-M.

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The forest area in Maine presented a problem of access for mapping sample plots. Because of this problem and the homogeneity of land use, it was decided that a 400 acre sample unit size with a .8% rate would be used in land resource units B3a and B3b. Many of these areas were mapped and measured at a late date (1960 to 1962), and estimates for their soil conditions are not included in existing summary tables.¹ However, summaries compiled subsequent to this writing will include these estimates.

Blueberries, an important crop for Hancock County, have been estimated as a land use for that county.

Tables for each Soil Conservation District in Aroostook County have been compiled.

The four numbers under the county name in the following tables denote sample design, sample unit size, sampling rate, and estimation procedure according to the following code:

First
Number

1

Sample Design

Stratified within county

2

Stratified within land resource unit within county

3

Combination of Code 1 and Code 2

Second
Number

1

Sample Size

100 acres

2

250 acres

3

400 acres

Third
Number

Approximate sampling rate percentage

Fourth
Number

1

Estimation Procedure

Single expansion ratio for entire county

2

Separate expansion ratio for each land resource unit in the county

Water estimates are excluded from the River Basin estimates in all counties.

¹ See Description of Summary Tables for the National Inventory of Soil and Water Conservation Needs, BU-166-M, May, 1964.

ANDROSCOGGIN COUNTY, MAINE

2, 1, 2, 2

Adjusted Census Ac.
302,258

Adjusted Sample Ac.
6,617

Estimated Ac.
302,251

<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	58,247	15,830	207,039	7,234	12,798	1,104

River Basin - New England Drainage Basin

	<u>Estimated Ac.</u>
010000 - New England Drainage Basin	23,393
010400 - Kennebec River	13,510
010500 - Androscoggin River	264,244

Excluded Acreage:

Federal land 3,662

AROOSTOOK COUNTY, MAINE

2, 1*, 2**, 2

Adjusted Census Ac.
4,074,925
+ 276,628 (Measured)
4,351,553

Adjusted Sample Ac.
45,762

Estimated Ac.
4,074,933
+ 276,628 (Measured)
4,351,561

<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	294,274	38,560	3,712,811	6,878	9,466	12,951

River Basin - New England Drainage Basin

	<u>Estimated Ac.</u>
010100 - St. John River	1,407,231
010110 - Allagash River	398,816
010120 - Fish River	697,802
010130 - Aroostook River	959,402
010200 - St. Croix River	36,920
010300 - Penobscot River	55,380
010330 - Mattawankeg River	506,431

Excluded Acreage:

Federal land 3,647
Measured Data 276,628***

Notes:

In addition to the regular county tables, Aroostook County also had tables by Soil Conservation Districts 1, 2, 3, and Outside of SCD. Part of SCD 2 was completely measured.

*LRU B3b samples were 400 acres in size.

**LRU B3b was sampled at the .8% rate.

***This completely measured portion of SCD 2 was excluded from the above land use estimates, but summaries compiled subsequent to this writing will include this measured acreage.

CUMBERLAND COUNTY, MAINE

2, 1, 2, 2

<u>Adjusted Census Ac.</u>	<u>Adjusted Sample Ac.</u>			<u>Estimated Ac.</u>		
559,624	11,900			559,671		
<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	69,036	15,706	376,196	59,968	37,560	1,223
<u>River Basin</u> - New England Drainage Basin						<u>Estimated Ac.</u>
010000 - New England Drainage Basin						502,133
010500 - Androscoggin River						14,087
010600 - Saco River						42,228
<u>Excluded Acreage:</u>						
Federal land	4,216					

FRANKLIN COUNTY, MAINE

2, 1*, 2**, 2

<u>Adjusted Census Ac.</u>	<u>Adjusted Sample Ac.</u>			<u>Estimated Ac.</u>		
1,098,876	12,800			1,098,877		
<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	29,652	13,582	1,052,250	1,229	- -	2,164
<u>River Basin</u> - New England Drainage Basin						<u>Estimated Ac.</u>
010400 - Kennebec River						560,976
010410 - Dead River						287,110
010500 - Androscoggin River						248,627

Notes: *LRU B3a samples were 400 acres in size.
 **LRU B3a was sampled at the .8% rate.

HANCOCK COUNTY, MAINE

2, 1*, 2**, 2

<u>Adjusted Census Ac.</u>	<u>Adjusted Sample Ac.</u>			<u>Estimated Ac.</u>		
952,282	13,100			952,274		
<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Blueberries</u>	<u>Water</u>
<u>Estimated Ac.:</u>	67,456	7,714	786,698	41,091	48,997	322
<u>River Basin</u> - New England Drainage Basin						<u>Estimated Ac.</u>
010000 - New England Drainage Basin						779,527
010300 - Penobscot River						172,425

Excluded Acreage:
 Federal land 34,598

Notes: Land Use 5, normally urban, represents acres of blueberries in this county. The only urban is 7,942 acres classified under land capability unit 9.

*LRU's B3a and B3b samples were 400 acres in size.

**LRU's B3a and B3b were sampled at the .8% rate.

KENNEBEC COUNTY, MAINE

2, 1, 2, 2

<u>Adjusted Census Ac.</u>	<u>Adjusted Sample Ac.</u>			<u>Estimated Ac.</u>		
552,300	12,000			552,337		
<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	105,795	37,079	371,958	18,264	8,700	10,535
<u>River Basin</u> - New England Drainage Basin						<u>Estimated Ac.</u>
010000 - New England Drainage Basin						27,687
010400 - Kennebec River						472,896
010500 - Androscoggin River						41,219
<u>Excluded Acreage:</u>						
Federal land	1,313					

KNOX COUNTY, MAINE

2, 1, 2, 2

<u>Adjusted Census Ac.</u>	<u>Adjusted Sample Ac.</u>			<u>Estimated Ac.</u>		
228,941	4,977			228,941		
<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	26,164	7,795	180,520	5,835	8,139	476
<u>River Basin</u>						<u>Estimated Ac.</u>
010000 - New England Drainage Basin						228,465
<u>Excluded Acreage:</u>						
Federal land	2,739					

LINCOLN COUNTY, MAINE

2, 1, 2, 2

<u>Adjusted Census Ac.</u>	<u>Adjusted Sample Ac.</u>			<u>Estimated Ac.</u>		
292,427	6,127			292,431		
<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	26,563	5,624	251,468	6,913	1,098	759
<u>River Basin</u> - New England Drainage Basin						<u>Estimated Ac.</u>
010000 - New England Drainage Basin						268,256
010400 - Kennebec River						23,416

OXFORD COUNTY, MAINE

2, 1*, 2**, 2

<u>Adjusted Census Ac.</u>	<u>Adjusted Sample Ac.</u>			<u>Estimated Ac.</u>		
1,287,750	19,200			1,287,750		
<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	51,384	12,856	1,165,143	37,810	14,432	6,133
<u>River Basin</u> - New England Drainage Basin						<u>Estimated Ac.</u>
010500 - Androscoggin River						1,281,617
<u>Excluded Acreage:</u>						
Federal land	46,646					

Notes: *LRU B3a samples were 400 acres in size.

**LRU B3a was sampled at the .8% rate.

PENOBSCOT COUNTY, MAINE

2, 1*, 2**, 2

<u>Adjusted Census Ac.</u>	<u>Adjusted Sample Ac.</u>	<u>Estimated Ac.</u>
2,178,209	30,306	2,178,225

<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	146,162	49,224	1,933,764	17,417	17,633	14,045

<u>River Basin</u> - New England Drainage Basin	<u>Estimated Ac.</u>
010000 - New England Drainage Basin	30,425
010130 - Aroostook River	47,901
010200 - St. Croix River	23,274
010300 - Penobscot River	1,085,089
010310 - Penobscot River, West Branch	270,282
010320 - Penobscot River, East Branch	245,351
010330 - Mattawankeg River	204,736
010340 - Piscataquis River	118,958
010400 - Kennebec River	138,164

Excluded Acreage:
Federal land 2,912

Notes: *LRU's B3a and B3b samples were 400 acres in size.

**LRU's B3a and B3b were sampled at the .8% rate.

PISCATAQUIS COUNTY, MAINE

2, 1*, 2**, 2

<u>Adjusted Census Ac.</u>	<u>Adjusted Sample Ac.</u>	<u>Estimated Ac.</u>
2,526,456	24,500	2,526,404

<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	27,010	6,151	2,480,534	2,038	- -	10,670

<u>River Basin</u> - New England Drainage Basin	<u>Estimated Ac.</u>
010110 - Allagash River	461,327
010130 - Aroostook River	286,149
010300 - Penobscot River	32,605
010310 - Penobscot River, West Branch	512,475
010320 - Penobscot River, East Branch	171,364
010340 - Piscataquis River	561,110
010400 - Kennebec River	490,704

Excluded Acreage:
Federal land 264

Notes: *LRU's B3a and B3b samples were 400 acres in size.

**LRU's B3a and B3b were sampled at the .8% rate.

SAGadahoc COUNTY, MAINE

2, 1, 2, 2

<u>Adjusted Census Ac.</u>	<u>Adjusted Sample Ac.</u>			<u>Estimated Ac.</u>		
164,480	3,500			164,476		
<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	24,675	8,706	119,765	6,777	3,677	884
<u>River Basin - New England Drainage Basin</u>						<u>Estimated Ac.</u>
010000 - New England Drainage Basin						13,870
010400 - Kennebec River						60,416
010500 - Androscoggin River						89,306

SOMERSET COUNTY, MAINE

2, 1*, 2**, 2

<u>Adjusted Census Ac.</u>	<u>Adjusted Sample Ac.</u>			<u>Estimated Ac.</u>		
2,526,619	28,800			2,526,597		
<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	120,267	38,884	2,348,098	1,644	9,195	8,500
<u>River Basin - New England Drainage Basin</u>						<u>Estimated Ac.</u>
010100 - St. John River						373,516
010310 - Penobscot River, West Branch						373,984
010400 - Kennebec River						1,593,191
010410 - Dead River						177,406

Excluded Acreage:

Federal land 101

Notes: *LRU's B3a and B3b samples were 400 acres in size.

**LRU's B3a and B3b were sampled at the .8% rate.

WALDO COUNTY, MAINE

2, 1, 2, 2

<u>Adjusted Census Ac.</u>	<u>Adjusted Sample Ac.</u>			<u>Estimated Ac.</u>		
469,760	10,300			469,750		
<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	56,370	9,265	392,366	4,563	4,730	2,446
<u>River Basin - New England Drainage Basin</u>						<u>Estimated Ac.</u>
010000 - New England Drainage Basin						203,998
010300 - Penobscot River						149,453
010400 - Kennebec River						113,853

WASHINGTON COUNTY, MAINE

2, 1*, 2**, 2

<u>Adjusted Census Ac.</u>	<u>Adjusted Sample Ac.</u>			<u>Estimated Ac.</u>		
1,611,128	16,475			1,611,105		

<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	20,724	3,775	1,406,834	83,015	83,211	13,541

<u>River Basin</u> - New England Drainage Basin	<u>Estimated Ac.</u>
010000 - New England Drainage Basin	857,408
010200 - St. Croix River	635,759
010330 - Mattawankeg River	104,397

Excluded Acreage:
Federal land 22,818

Notes: *LRU's B3a and B3b samples were 400 acres in size.
**LRU's B3a and B3b were sampled at the .8% rate.

YORK COUNTY, MAINE

2, 1, 2, 2

<u>Adjusted Census Ac.</u>	<u>Adjusted Sample Ac.</u>			<u>Estimated Ac.</u>		
635,872	13,500			635,909		

<u>Land Use:</u>	<u>Cropland</u>	<u>Pasture</u>	<u>Forest</u>	<u>Other</u>	<u>Urban</u>	<u>Water</u>
<u>Estimated Ac.:</u>	82,220	14,753	470,976	32,149	29,502	6,327

<u>River Basin</u> - New England Drainage Basin	<u>Estimated Ac.</u>
010000 - New England Drainage Basin	207,226
010600 - Saco River	211,186
010700 - Piscataqua	211,170

Excluded Acreage:
Federal land 4,128