Town of Machiasport

ACTION PLAN

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Town of Machiasport

ACTION PLAN

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PLANNING FOR THE ORDERLY GROWTH OF THE MACHIASPORT AREA

I AREA INVOLVED AND ITS PROBLEMS

Within a 25-mile radius of Machiasport there exist a number of small towns relatively unspoiled esthetically and uncommercialized in comparison to the rest of the east coast of the United States. The architecture of the towns is typically colonial New England. With forests and fields stretching back into the hinterlands, the shoreline is only sporadically dotted with summer camps and a few year round homes. In any major refinery development in the area, the four towns of Machiasport, Machias, East Machias and Roque Bluffs would be immediately involved. All of the surrounding towns, including but not limited to Whitneyville, Marshfield, Jonesboro and Cutler, undoubtedly would feel the impact and must be included in any study. The chart below gives a quick summation of the population and land area of the four principal towns. The annexed map pinpoints location of the general area.

TOWN	1960	1966	LAND AREA IN SQUARE MILES
East Machias	1,198	971	33.7
Machias	2,614	2,328	15.2
Machiasport	980	1,368	21.7
Roque Bluffs	152	135	10.3

In its natural setting it constitutes a pretty picture. Viewed economically, on the other hand, the scene is just about reversed. The entire economy is depressed and is typical of Washington County as a whole. The entire county, indeed, is one

of the most depressed in all of New England. The effective buying income in 1967 was $1,969 per capita. This is 15% below the state average of $2,303 and 33% below the New England average of $2,939. Approximately 52% of the households in the county have an imcome of less than $5,000, compared to 37% for the state. About one-third of the households, or 2,650, have an income within the poverty class (under $3,000). The unemployment average during 1967 for Washington County was 1,100 people, which was 11.5% of the work force. This compares to unemployment in the United States of 3.8% and the Maine average of 3.9% for the same period. A further noteworthy aspect of the area is the lack of community and recreational facilities. There is little evidence of residential construction activity, which is to be expected. However, most of the existing housing units are quite old and there is little available housing in the immediate area. There is no shopping center in the vicinity. Recreational facilities are at a minimum, largely consisting of public beaches, two theaters and a bowling alley. There are no golf courses, no nearby skiing facilities, no community building, no YMCA, no public parks and no tennis courts. No zoning or subdivision, urban renewal programs, or sewer and water study programs exist. No treatment facilities are in being and all raw sewage is simply discharged into the Machias River or surrounding tidal waters. The public water supply is managed by the Machias Water Company. The distribution system is concentrated in the village serving two-thirds of the population, which stood at 2,328 in 1966. Average demand today, at 185,000 gallons per day, represents 30% of capacity.

The sewerage system, which serves 90% of the population, is a combined storm water and sanitary waste system. There is currently no treatment facility, and all sewage is discharged into the Machias River. Thus a sewage treatment plant would have to be constructed which would treat wastes both from the new town and the existing village area. This phase of the planning would have to consider whether it would be feasible to incorporate the Machiasport refinery and industrial complex into this new system or to have separate facilities. Two major considerations of this planning effort would be the geographical separation of the town and the industrial complex and the types of discharges, and the necessary treatment thereto, that can be expected from the refinery and associated industrial activity. In any case, it is extremely important that proper planning be undertaken to ensure that proper treatment is provided to avoid any pollution of tidal waters.

II PROPOSED REFINERY ACTIVITIES

In September of 1968 the Occidental Petroleum Company announced their intentions to construct a refinery and a petrochemical complex at Machiasport. As they would be using foreign oil, they applied in October to the Foreign Trade Zone Board in order to have Machiasport designated as a free trade zone and subsequently filed for import quotas for 100,000 barrels per day. As a result of the hearings held in February, 1968,

The Nixon Administration announced the establishment of a Special Oil Import Policy Review Board to be headed by Secretary of Labor Schultz. The Secretary's report was eventually filed in late 1969. No action, however, has resulted. During this period, the Atlantic World Port announced their intentions to operate a similar oil refinery complex at Machiasport and also applied for the special federal considerations. In the same period the Atlantic Richfield Co. (ARCO) announced that they had options on two 3,500-acre sites in the area with intended purpose of operating from the St. Regis Paper Company for the 100,000 barrel per day refinery, with domestic crude from their oil fields on the Alaskan North Slope and, therefore are not in need of any federal rulings. ARCO participated last year with the Humble Oil & Refining Company in the Manhattan Project to determine the feasibility of bringing oil through the Northwest Passage. This project was completed and various reports concluded that it was an outstanding success. There also appears to be, at this time, several other firms with an interest in this area, with one in particular seeking options on some 7,500 acres of land. It would therefore appear that there will be some sort of oil refinery and petrochemical development in this area.

III THE NEED FOR THE STUDY

In all of the announcements by the various oil companies no definitive action has been forthcoming. Each firm, for their

own individual reasons, has placed various conditions upon their finalization of construction plans. Unfortunately any future announcements will leave the relatively small communities of the area that are already lacking in fiscal and human resources, totally unable to cope with the situation which may be thrust upon them. The need for planning and the obvious lack of definition concerning the project will require a staged or sequential effort. It is also anticipated that due to availability of financial resources the study will have to be undertaken on a staged effort.

In general, it would seem that the approach to this needed study would be a series of overlapping phases. Initially, an overall economic impact study would be in order. This would flow naturally into a definition of the overall land development policy. From these two general efforts studies concerned with detailed planning and design of facilities and programs should evolve. A certain amount of this planning effort should be conducted well before any definitive action is taken that is now being contemplated by the oil companies involved.

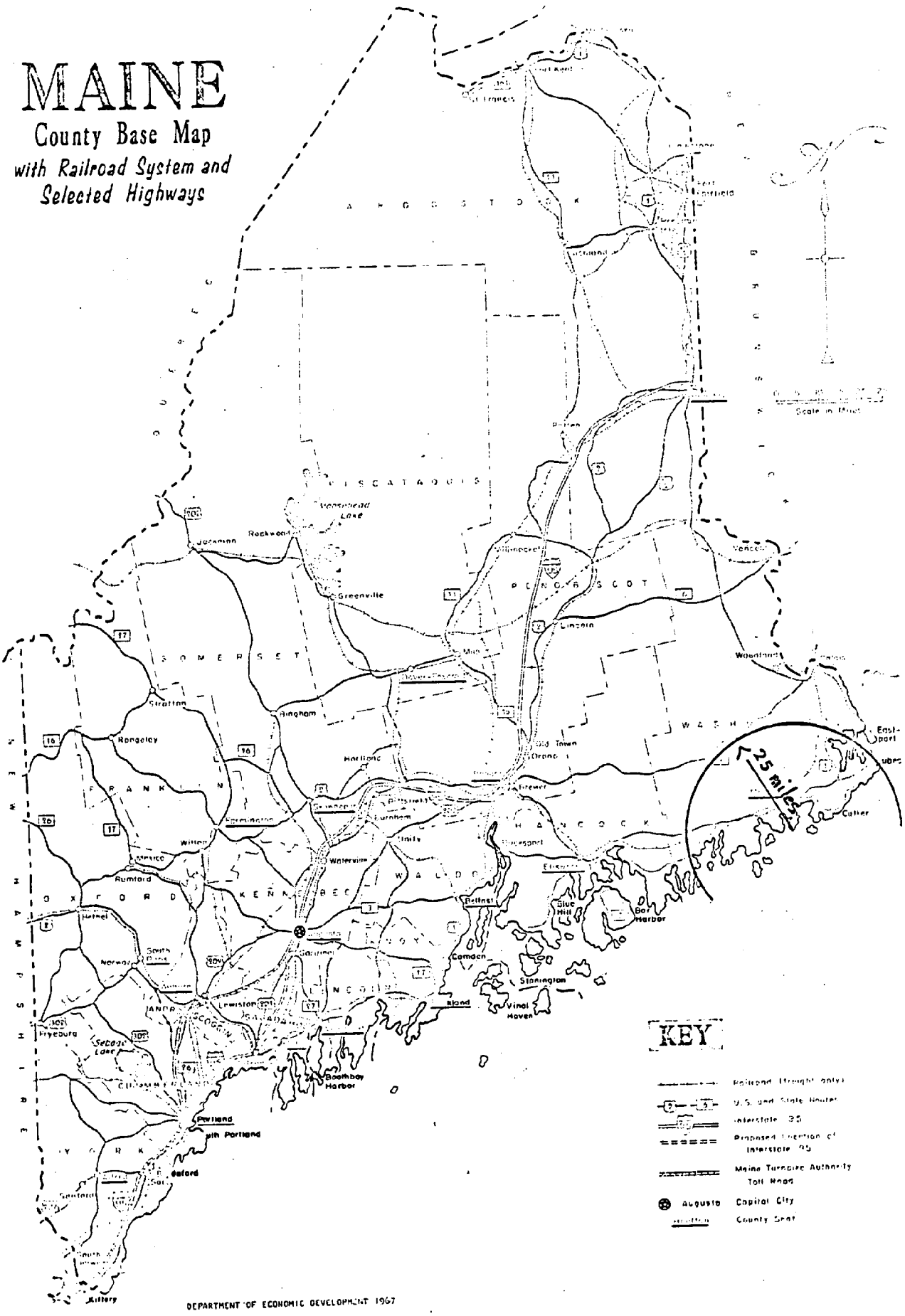
In defining the various stages it should be clearly noted that each of the separate phases would be separately financed as money becomes available. The initial study would be funded by a private group whereas additional studies might well be financed by federal, state and private grants or some combination of the three. It should be noted that the Eastern Maine

Development District (EMDD) has an application pending with the Economic Development Administration (EDA) for the entire study effort. EDA has stated that they cannot expend funds on this project until a firm action is forthcoming from one of the oil companies.

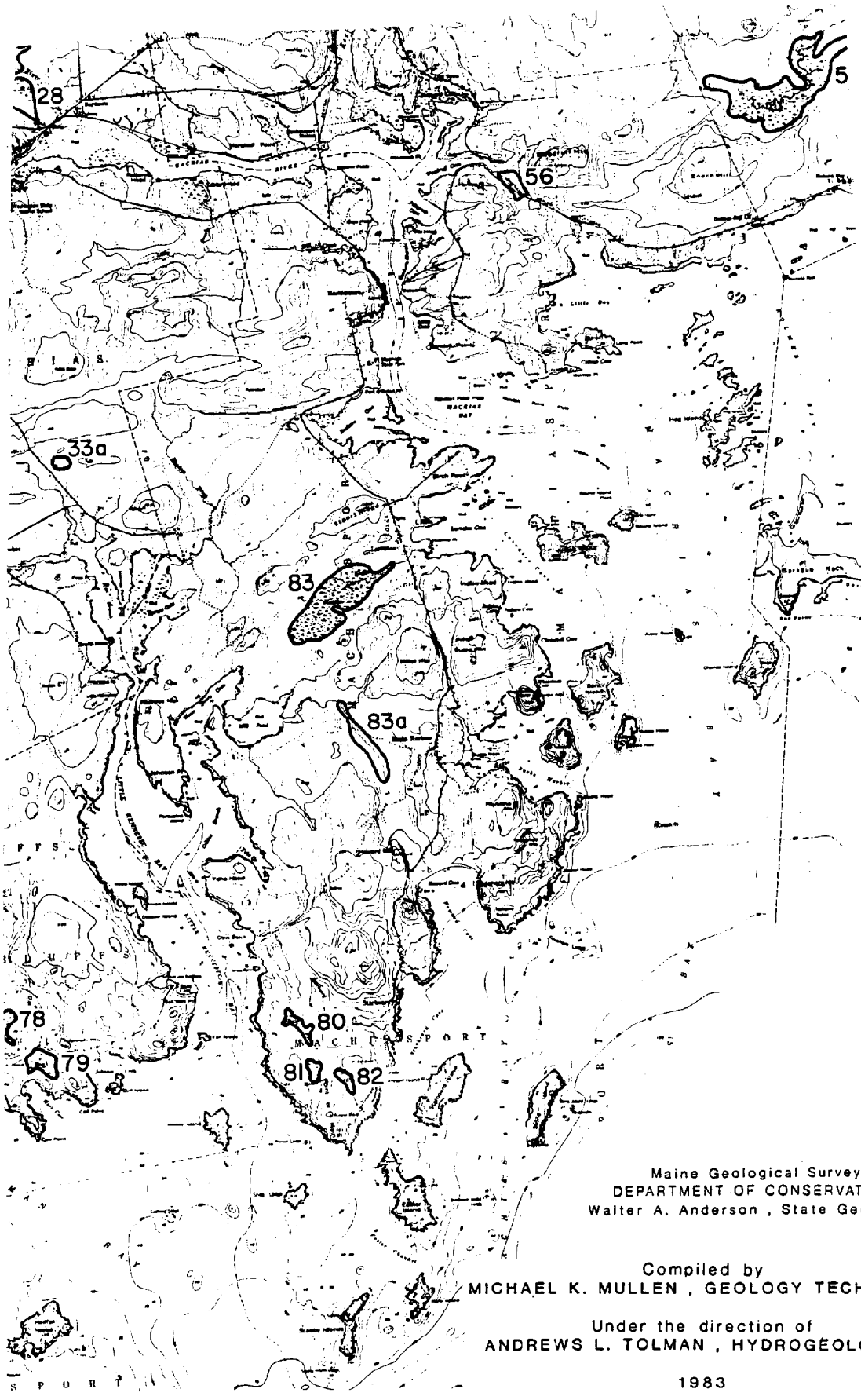
MAINE

County Base Map

with Railroad System and Selected Highways



DEPARTMENT OF ECONOMIC DEVELOPMENT 1967



Maine Geological Survey
DEPARTMENT OF CONSERVATION
Walter A. Anderson , State Geologist

Compiled by
MICHAEL K. MULLEN , GEOLOGY TECHNICIAN

Under the direction of
ANDREWS L. TOLMAN , HYDROGEOLOGIST

1983

FRESH-WATER WETLANDS

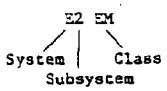
MAP 25

0 1 2 3
Miles

0 1 2 3 4 5
Kilometers

Key to Abbreviations of the National Wetlands Inventory

Example of Symbols



Systems	Subsystems	Classes**
E - Estuarine	1 - Subtidal	AB - Aquatic Bed
	2 - Intertidal	BB - Beach/Bar
M - Marine	1 - Subtidal	EM - Emergent
	2 - Intertidal	FL - Flat
L - Lacustrine	1 - Limnetic	FO - Forested
	2 - Littoral	ML - Moss/Lichen
P - Palustrine*	None	OW - Open Water
R - Riverine	1 - Tidal	RB - Rock Bottom
	2 - Lower Perennial	RF - Reef
	3 - Upper Perennial	RS - Rocky Shore
	4 - Intermittent	SB - Streambed
	5 - Unknown Perennial	SS - Scrub/Shrub
		UB - Unconsolidated Bottom

*The majority of wetlands in this inventory are of the Palustrine system, therefore, the "P" has been omitted. Wetlands classified within other systems are represented by the appropriate symbols.

**Many wetlands exhibit characteristics of several classes. They are represented by using the appropriate class symbols separated by a slash (e.g. FO/SS).

Key to abbreviated portions of soil names

c - clay or clayey
cb - cobbly
ex - extremely
f - fine
g - gravelly
r - rocky
st - stony
v - very

Note: Soil names with asterisks are not listed in 38 MRSA §406 as "wetland soils".

Key to "Regulations" abbreviations

FW - Regulated under the "Freshwater Wetlands Act"
SA - Regulated under the "Stream Alteration Act"
GP - Regulated under the "Great Ponds Act"

WETLAND NUMBER	MAINE INLAND FISHERIES AND GAME WETLAND TYPE(S)	NATIONAL WETLANDS INVENTORY CLASSIFICATION(S)	SOIL TYPE(S)	REGULATIONS
56	---	SS/EM	PEAT AND MUCK	SA
80	---	FO	N/C	FW
81	---	SS, FO/SS	N/C	FW
82	---	SS	N/C	FW
83	---	SS, FO/SS	N/C	FW

HYDROGEOLOGIC DATA FOR SIGNIFICANT SAND AND GRAVEL AQUIFERS

IN PARTS OF
WASHINGTON COUNTY, MAINE
PARTS OF

MAP 24 — MAP 25

Compiled by

Thomas K. Weddle, Senior Geologist
Craig D. Neil, Geologist
E. Melanie Lanctot, Water Resource Analyst
Maine Geological Survey

Preliminary aquifer boundaries mapped by

Sarah B. Miller, Geologist
Maine Geological Survey

Published by

Maine Geological Survey
DEPARTMENT OF CONSERVATION
Walter A. Anderson, State Geologist

Prepared in cooperation with

U.S. GEOLOGICAL SURVEY
AND
MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

1988

SIGNIFICANT SAND AND GRAVEL AQUIFERS
(yields greater than 10 gal/min)

Additional information concerning this study and the hydrogeology of this area is presented in Open-File Report #88-7a

Cartography by Susan S. Tolman

Approximate boundary of surficial deposits with significant saturated thickness where potential ground water yield is moderate to excellent; dashed where inferred.

Surficial deposits with moderate to good potential ground water yield; yields generally greater than 10 gal/min to a properly constructed well. Deposits consist primarily of glacial sand and gravel, but can include sandy till and alluvium in areas; yields may exceed 50 gal/min in deposits hydraulically connected with surface water bodies, or in extensive deposits where subsurface data is unavailable.

Surficial deposits with good to excellent potential ground water yield; yields generally greater than 50 gal/min to a properly constructed well. Deposits consist primarily of glacial sand and gravel, but can include sandy till and alluvium in areas; yield zones are based on subsurface data where available, and may vary from mapped extent in areas where data is unavailable.

SURFICIAL DEPOSITS WITH LESS FAVORABLE AQUIFER CHARACTERISTICS
(yields less than 10 gal/min)

Areas with moderate to low or no potential ground water yield (includes areas underlain by till, marine deposits, eolian deposits, alluvium, swamps, or thin glacial sand and gravel deposits); yields in surficial deposits generally less than 10 gal/min to a properly constructed well.

GEOLOGIC AND WELL INFORMATION

50 Depth to bedrock, in feet

≥13 Penetration depth of boring; ≥ symbol refers to minimum depth to bedrock based on boring depth or refusal

60 Depth to water level in feet below natural ground surface (observed in well, spring, test boring, pit, or seismic line)

150 Minimum thickness of sand or gravel in feet (observed in well, test boring, or pit)

Gravel pit

4gpm Yield (flow) of well or spring in gallons per minute (gpm)

Spring

Drilled overburden well

Dug well

OW24-5 Observation well (project well if labeled; nonproject well if unlabeled)

T824-5 Test boring (project boring if labeled; nonproject boring if unlabeled)

Driven point

Test pit

Drilled well

Potential point source of ground water contamination

Bedrock outcrop

A——A' Location of hydrogeologic section

Major surface water drainage basin boundary; surface water divides generally correspond to ground water divides. Horizontal direction of ground water flow generally is away from divides and toward surface water bodies.

SEISMIC LINE INFORMATION

Profiles for 12-channel seismic lines are shown in Figures 7-11, see Table 14 (Open-File Report 88-7a) for additional information on single-channel seismic lines.

Length of seismic lines as shown on the map are not to scale. See Figure 7-11 for scale on 12-channel lines. All single-channel lines ranged from 70 to 310 feet long.

53 Depth to bedrock, in feet below land surface

≥53 Depth to bedrock (based on calculations) exceeds depth shown

120 Depth to water level, in feet below land surface

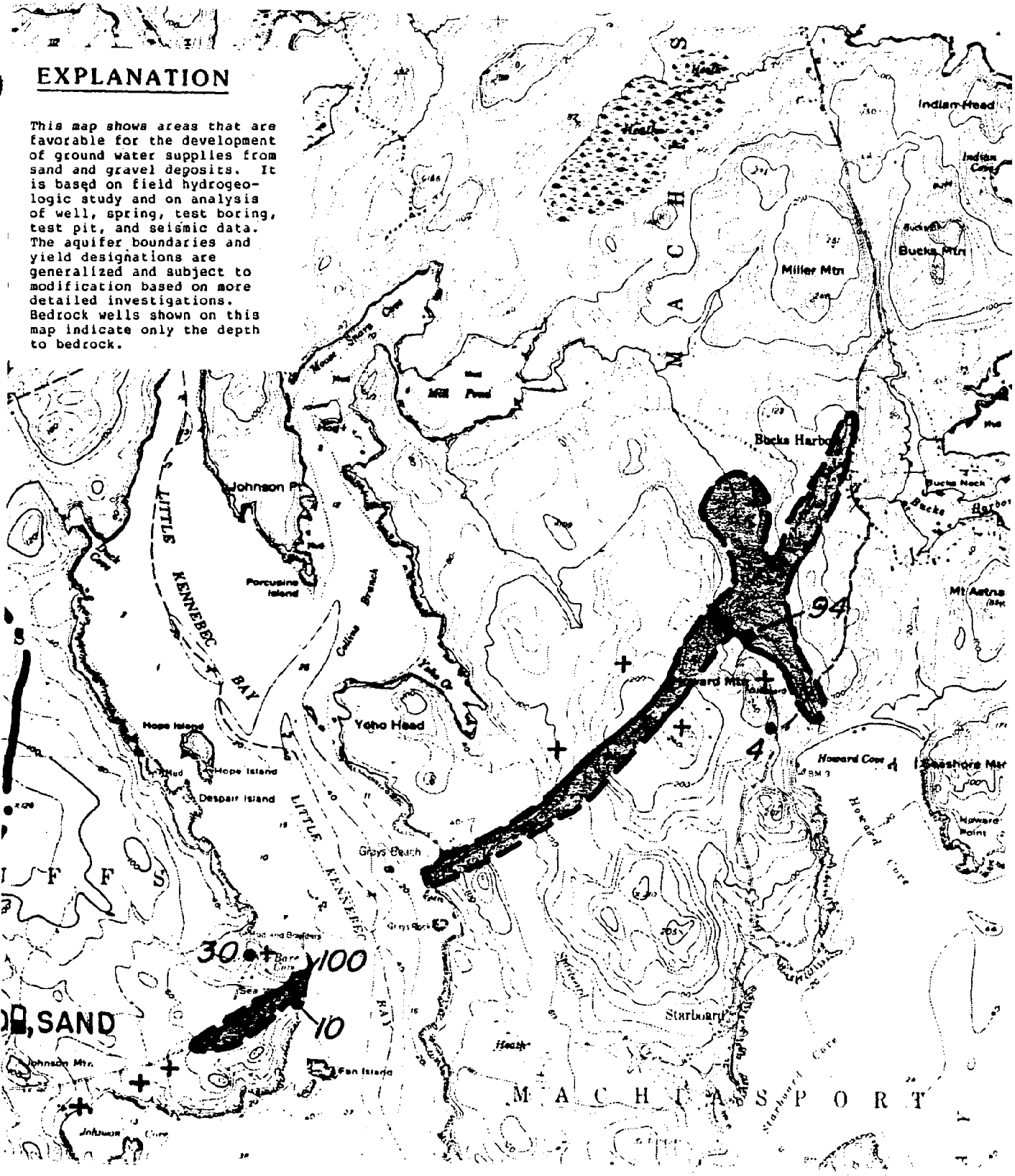
WTG-8 *28,70* 12-channel seismic line, with depth to bedrock and depth to water level shown at the middle of the line.

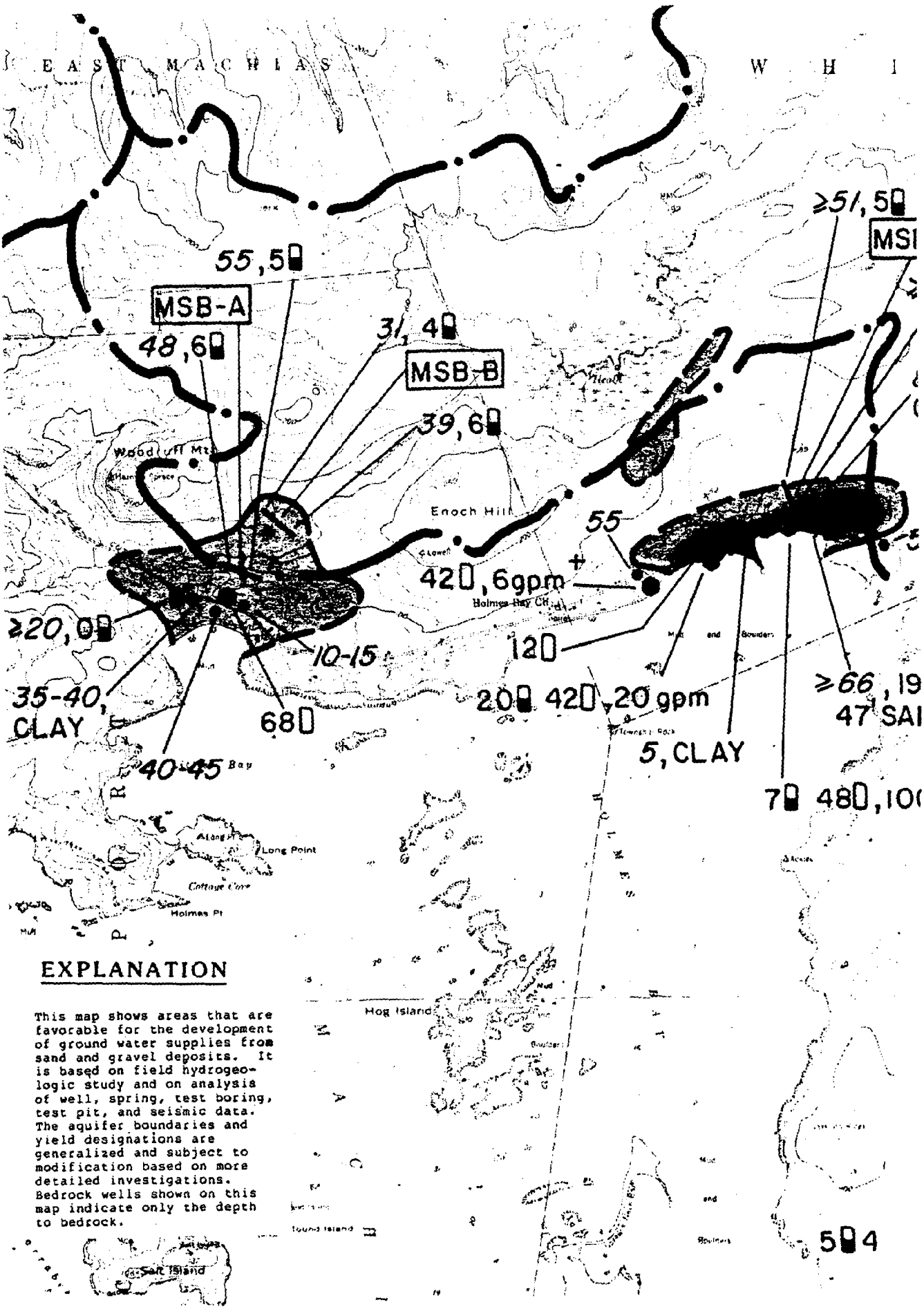
55,50 / *48,60* MSB-A Single-channel seismic line, with depth to bedrock and depth to water level shown at each end of the line.

If the 3-digit identifier for the line ends in a number (ex: GRL-3, WTG-8), the line is a 12-channel line. If the identifier ends with a letter (ex: WLU-F, WTG-A), the line is a single-channel line.

Seismic lines are identified by both quadrangle and type. Quadrangle (see location index on Figure 1) codes are as follows:

CUT = Cutler
GRL = Gardner Lake
MSB = Machias Bay
WLU = West Lubec
WTG = Whiting


EXPLANATION
This map shows areas that are favorable for the development of ground water supplies from sand and gravel deposits. It is based on field hydrogeologic study and on analysis of well, spring, test boring, test pit, and seismic data. The aquifer boundaries and yield designations are generalized and subject to modification based on more detailed investigations. Bedrock wells shown on this map indicate only the depth to bedrock.
Indian Head
Miller Mtn
Bucks Mtn
Bucks Harbor
Johnson Point
Porcupine Island
LITTLE KENNEBEC BAY
Yoho Head
Hope Island
Despair Island
Howard Mtn
Howard Cove
Seashore Mtn
Gray's Beach
LITTLE KENNEBEC BAY
Starboard
Fan Island
Johnson Mtn
30
100
10
94
41
SAND
MACHIASPORT



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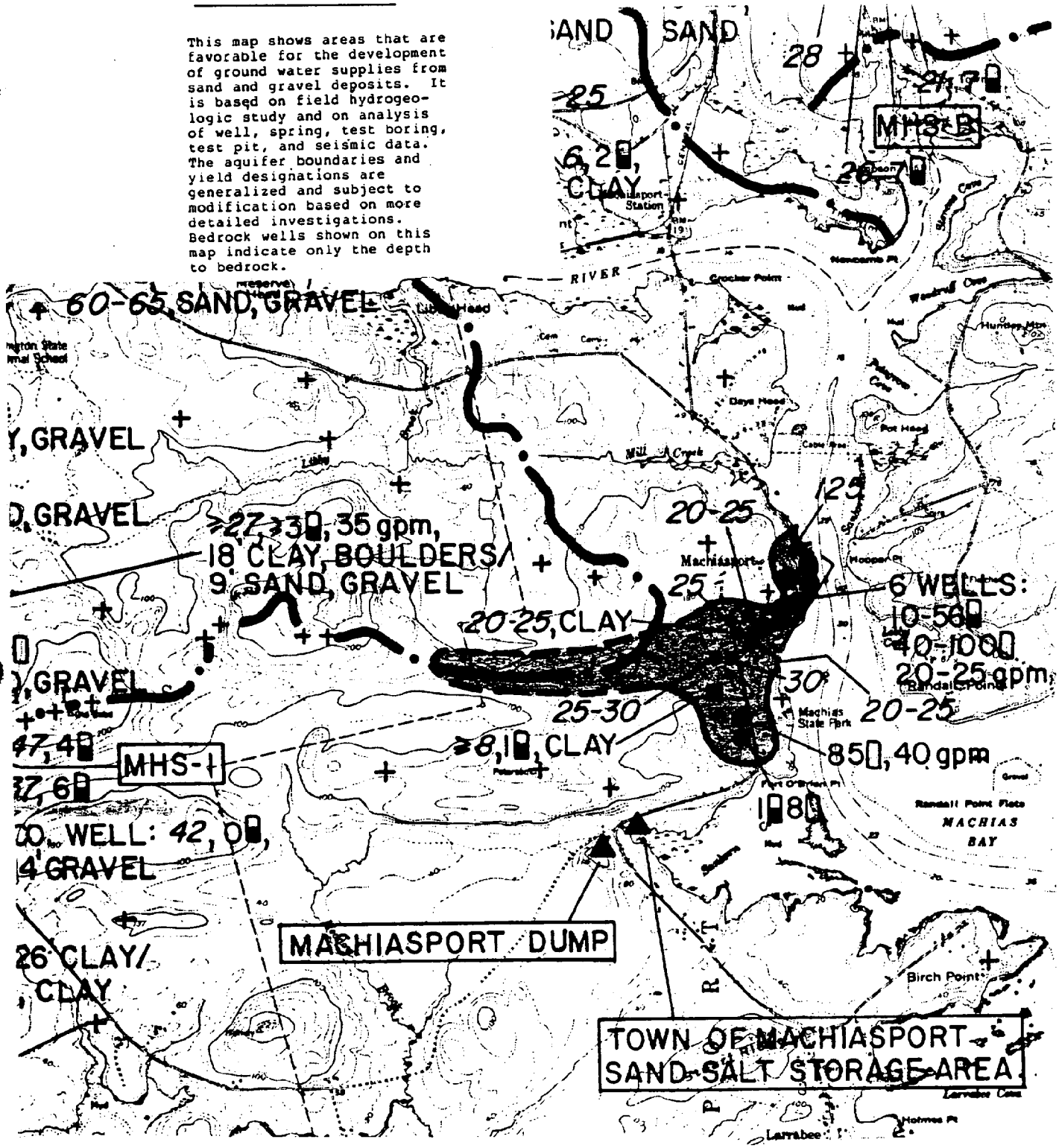


MINIMAL AQUIFER PROTECTION ORDINANCE

1. The following uses are prohibited in the town spring aquifer area.

   a. disposal of solid wastes, other than brush and stumps
   b. storage and/or transmission of petroleum or other refined petroleum products
   c. the disposal of liquid or leachable wastes except one or two family residential sub-surface waste disposal systems
   d. the rendering impervious of more than 10% of any lot

2. The following will be permitted only with conditions attached to their approval.

   a. storage of road salt, provided that the salt is kept under cover and on a pad
   b. septic tank, sewage disposal field, or any enlargement or alteration thereof for one and two family residential dwellings
   c. manure pile and manure storage pit
   d. animal feed lot
   e. the flooding or mining of land
   f. cemetary
   g. spraying or spreading of chemical fertilizers or pesticides after approval by the U.S. Department of Agriculture, and the Soil Conservation Service.

In considering an application for an aquifer area use permit, the Planning Board will evaluate the immediate and long-range impact of the proposed use upon the maintenance of safe and healthful conditions. In making such and evaluation, the Board will consider such factors as:

1. The amount and type of wastes to be generated by the proposed use and the adequacy of the proposed disposal system.
2. The capability of the land and water to sustain such use without dregradation.
3. Topography and drainage of the site and susceptibility to flooding.
4. The need of a particular location for the proposed use.

The Board may consult with aquifer experts prior to making its decision.

MACHIASPORT, MAINE DRAFT

AQUIFER PROTECTION ORDINANCE

Section I: Purpose

It is the intent of this Ordinance to protect the groundwater resources of Jonesboro from contaminents which can reasonably be expected to accompany certain adverse uses of the land and thereby to preserve the quantity, and quality of this resource for present and future use by individuals, corporations, public bodies, and others.

Section II: Scope and Authority

A. Within the boundaries of the Aquifer Protection Areas, comprising aquifers, recharge areas, and certain adjacent protective strips, as set forth in this Ordinance, no land shall be used, treated or sprayed except in conformity with the provisions of this Ordinance.

B. This Ordinance is adopted pursuant to Title 30, M.R.S.A., Section 4962: Article VIII - A of the Maine State Constitution and Title 30, M.R.S.A., Section 1917.

Section III: Definitions

Animal Feedlot: A plot of land on which 25 livestock or more per acre are kept for the purposes of feeding.

Aquifer: Geologic formation composed of rock or sand and gravel that contains significant amounts of potentially producible potable water.

Groundwater: All water found beneath the surface of the ground. In this Ordinance the term refers to the slowly moving subsurface water present in aquifers and recharge areas.

Leachable Wastes: Waste materials including solid wastes, sludge, and agricultural wastes that are capable of releasing water borne contaminants to the surrounding environment.

Mining of Land: The removal of geologic materials such as topsoil, sand and gravel, metallic ores, or bedrock to be crushed or used as building stone.

Non-Conforming Use: Any building or land lawfully occupied by a use at the time of passage of the Ordinance or amendment thereto which does not conform after the passage of this Ordinance or amendment thereto with the regulations of the district in which it is situated.

Recharge Area: Areas composed of porous sand and gravel, or other areas, that collect precipitation or surface water and carry it to aquifers.

Sludge: Residual materials produced by water and sewage treatment processes and domestic septic tanks.

Structure: Anything constructed or erected, except a boundary wall or fence, the use of which requires location on the ground or attachment to something on the ground. For the purposes of this Ordinance, buildings are structures.

Solid Wastes: Useless, unwanted, or discarded solid material with insufficient liquid content to be free flowing. This includes but is not limited to rubbish, garbage, scrap materials, junk, refuse, inert fill material and landscape refuse.

Section IV: Regulations

A. Establishment and Delineation of Aquifer Protection Areas: For the purposes of this Ordinance, there are hereby established certain Aquifer Protection Areas, consisting of aquifers and/or aquifer recharge areas, which are delineated on a map at a scale of 1 inch to 1,000 feet entitled "Water Protection AReas: Town of Jonesboro". This map is an integral part of this Ordinance and shall be filed at the Town Office and at the County Registry of Deeds of Washington County. As delineated on the Map, the Aquifer Protection Areas comprise the following elements:

1. Aquifers, together with:

   a. the surface of the land lying above them , and
   b. a surrounding protective strip, approximately 250 feet in width, so drawn that its bounds can be definitly established upon the site.

2. Recharge areas, defined by the extent of the sand and gravel deposits and wetlands within them that drain into the aquifer, together with:

   a. a surrounding protective strip, approximately 100 feet in width so drawn that its bounds can be definitly established upon the site.
   b. the shorelands, to a constant depth, of any stream that flows into the recharge area.

Where the bounds as delineated are in doubt or in dispute, the burden of proof shall be upon the owner(s) of the land in question to show where they should properly be located. At the request of the owner(s), the Town may engage a professional geologist or soil scientist to determine more accurately the location and extent of an aquifer or recharge area, and may charge the owner(s) for all or part of the cost of the investigation.

B. Use Regulations: Within the Water Protection Areas, these regulations shall apply:

2. Prohibited Uses

a. disposal of solid wastes, other than brush and stumps
b. storage and/or transmission of petroleum or other refined petroleum products
c. the disposal of liquid or leachable wastes except one or two family residential sub-surface waste disposal systems
d. the rendering impervious of more than 10% of any lot

3. Conditional Uses

The following uses are permitted by Conditional-Use Permit: that is, subject to the approval of the Planning Board, with such conditions as they may attach to their approval. The Code Enforcement Officer shall issue the Conditional-Use Permit.

a. storage of road salt, provided that the salt is kept under cover and on a pad
b. septic tank, sewage disposal field, or any enlargement or alteration thereof for one and two family residential dwellings
c. manure pile and manure storage pit
d. animal feedlot
e. the flooding or mining of land
f. cemetery
g. spraying or spreading of chemical fertilizers or pesticides after approval by the U.S. Department of Agriculture, and the Soil Conservation Service.

4. Non-Conforming Uses

A non-conforming use may be continued and/or expanded by not more than a 25% increase in the original structure, floor space, bulk or size, or land area as existing at the effective date of this Ordinance and may be replaced or repaired, with the approval of the Planning Board, if the Board believes that the continued or expanded use will not be more detrimental to the protected areas. A non-conforming use which has been discontinued for 18 months may not be resumed.

5. Allowed Uses

Any use which is neither prohibited or permitted by Conditional-Use permit is allowed.

C. Space Standards

1.	Minimum Lot Size:	4 acres	
2.	Minimum Frontage:	200 feet	
3.	Maximum Building Height:	35 feet	
4.	Minimum Setback - front:	50 feet	
	- side:	25 feet	- except 15 feet on one side only for all non-conforming grandfathered lots of record.
	- rear:	50 feet	

5. Minimum land area per dwelling unit or mobile home: 4 acres
6. Maximum lot coverage with impervious surfaces: 10%

D. Variance in Space Standards

There shall be no variances granted in this Ordinance exceeding a 15% reduction in minimum lot size or minimum land area per dwelling unit or mobile home.

Section V. Administration and Enforcement and Violations

A. Use Permits: No use shall be conducted within an Aquifer Protection Area until the use has been approved by the Planning Board and a Use Permit has been issued.

The application for a Use Permit shall be submitted to the Planning Board and accompanied by a site plan showing the location and dimensions of all significant structures and uses present and proposed. A reasonable fee established by the Planning Board may be required to accompany the application to cover processing costs. In the event that the Planning Board determines to hold a public hearing on an application, it shall hold such hearing within 30 days of receipt by it of a completed application, and shall cause notice of the date, time and place of such hearing to be given to the person making the application and to be published in a newspaper of general circulation in the municipality at least two times, the date of the first publication to be at least seven days prior to the hearing.

The Planning Board shall, within 30 days of a public hearing or within 60 days of receiving a completed application, if no hearing is held, or within such other time limit as may be otherwise mutually agreed to issue an order denying or granting approval of the application. Both the approval and the denial of an application for a Use Permit by the Planning Board shall be in writing and shall state the reason for that decision. A copy shall be given to the applicant.

In considerating an application for a Conditional-Use Permit, the Planning Board shall evaluate the immediate and long-range impact of the proposed use on the groundwater and the possible effects of the proposed use upon the maintenance of safe and healthful conditions. The applicant shall, based upon information from the Washington County Soil and Water Conservation District, a licensed soils scientist or other recognized professional, provide the Board with the following informations:

1. The amount and type of wastes to be generated by the proposed use and the adequacy of the proposed disposal system.

2. The capability of the land and water to sustain such use without degradation.

3. Topography and drainage of the site and susceptibility to flooding.

4. The need of a particular location for the proposed use.

5. The compatibility of the proposed use with adjacent land-uses.

The Planning Board, in approving an application for a conditional use, may impose such reasonable restrictions concerning the setback of the structure from an aquifer or recharge area, the quantity of potential pollutants to be permitted within the Water Protection Area, and like matters, as it deems advisable in order to protect the purity of the groundwater.

B. Code Enforcement Officer: It shall be the duty of the Code Enforcement Officer to enforce the provisions of this Ordinance.

C. Violations: It shall be the duty of the Code Enforcement Officer to warn any person, firm, or corporation of violations of this Ordinance by them and to inform them of their right to seek a variance or other relief. Either the Code Enforcement Officer or the Municipal Officers shall institute or cause to be instituted, in the name of the Town, any and all actions, legal and equitable, that shall be appropriate or necessary for the enforcement of the provisions of this Ordinance.

Section VII. Appeals

Appeals may be made to the Board of Appeals.

Section VII. Validity and Conflict With Other Ordinances

A. Validity: Should any section or provision of this Ordinance be declared by the courts to be invalid, such decision shall not invalidate any other section or provision of this Ordinance.

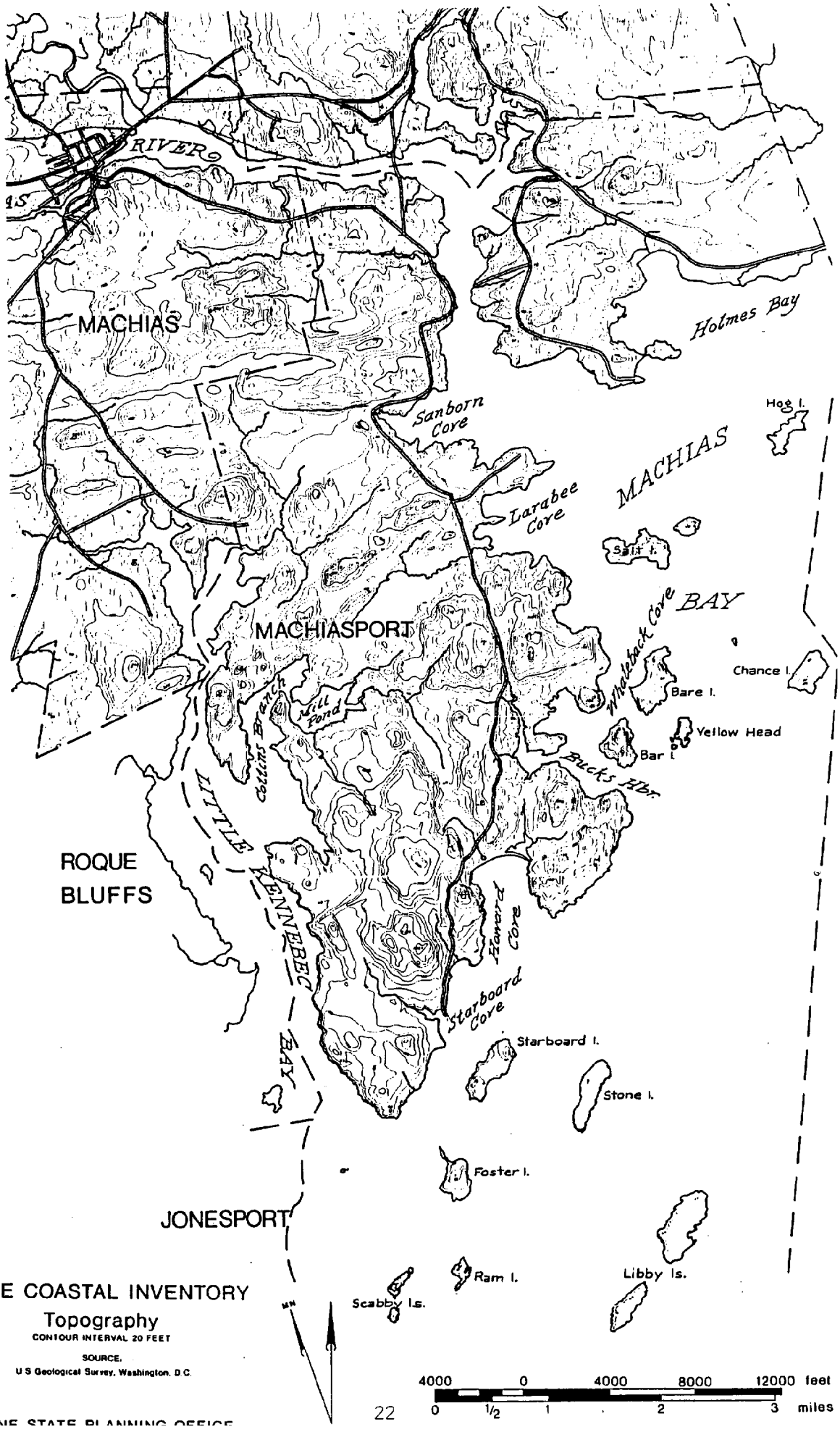
B. Conflict with Other Ordinances: This Ordinance shall not repeal, annul, or in any way impair or remove the necessity of compliance with any other ordinance, law, regulation or by-law. Where this Ordinance imposed a higher standard for the promotion and protection of health, safety and welfare, the provision of this Ordinance shall prevail

Section VIII. Amendments

A. This Ordinance may be amended by a majority vote of the Town Meeting. Amendments may be initiated by a majority vote of the Planning Board, by request of the Selectmen, or by petition of 10% of the vote cast in the last gubernatorial election in the town.

Section IX. Effective Date

A. This Ordinance shall become effective upon the date of adoption by the Town.



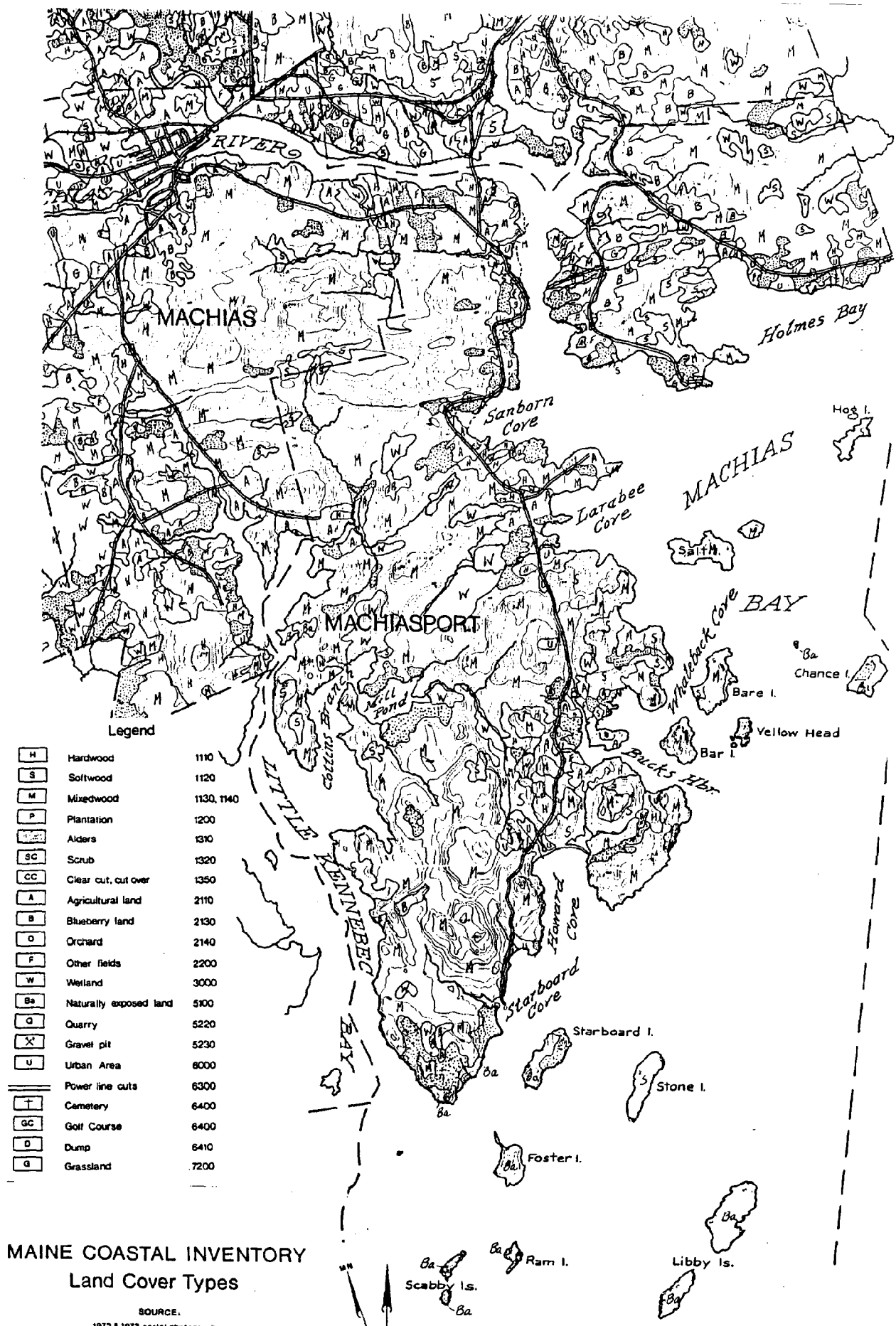
MAINE COASTAL INVENTORY

Topography

CONTOUR INTERVAL 20 FEET

SOURCE:
U S Geological Survey, Washington, D.C.

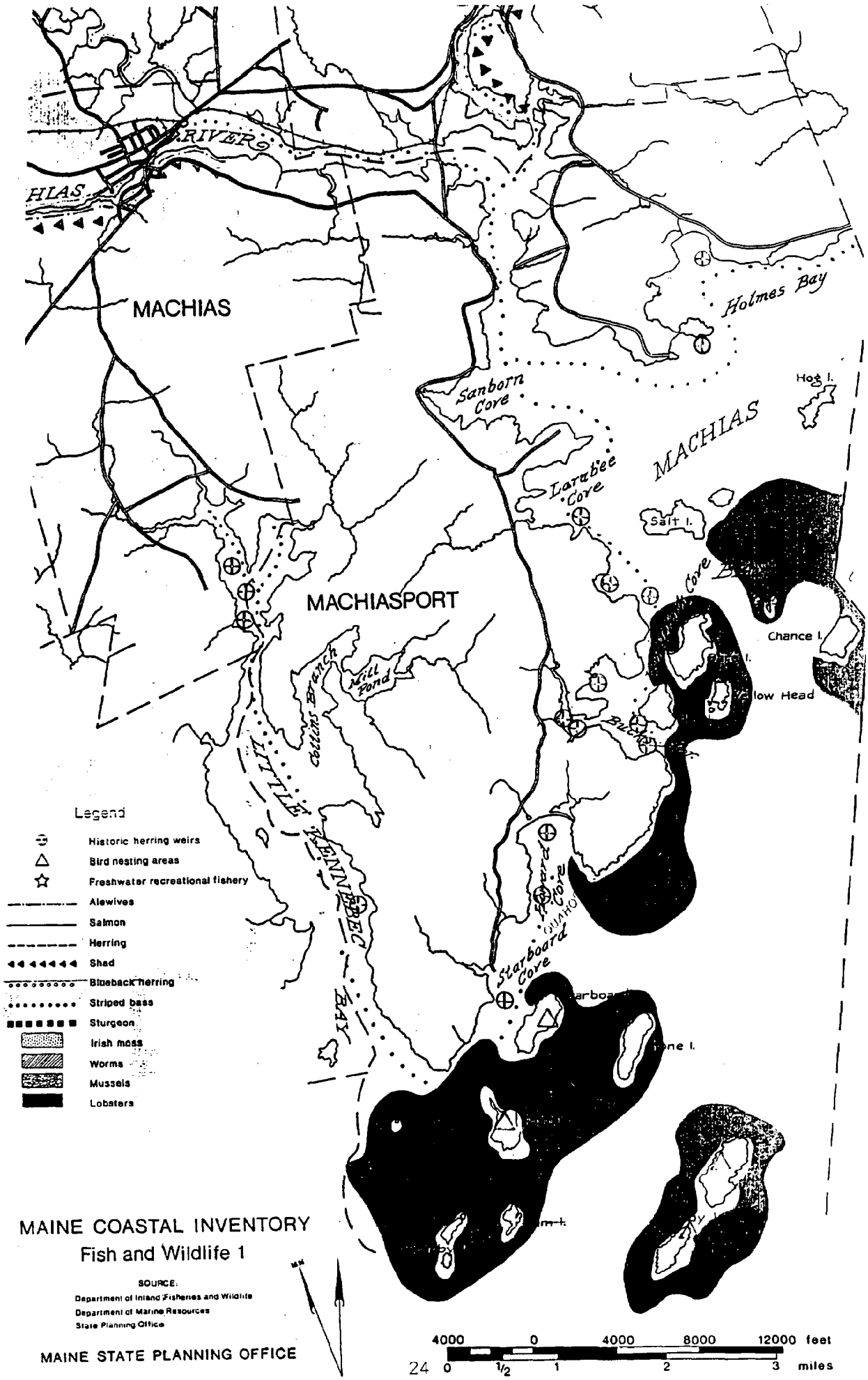
MAINE STATE PLANNING OFFICE



MAINE COASTAL INVENTORY
Land Cover Types

SOURCE:
1972 & 1973 aerial photography
Compiled by Lee Massingill & Linda Wright - UMO

MAINE STATE PLANNING OFFICE

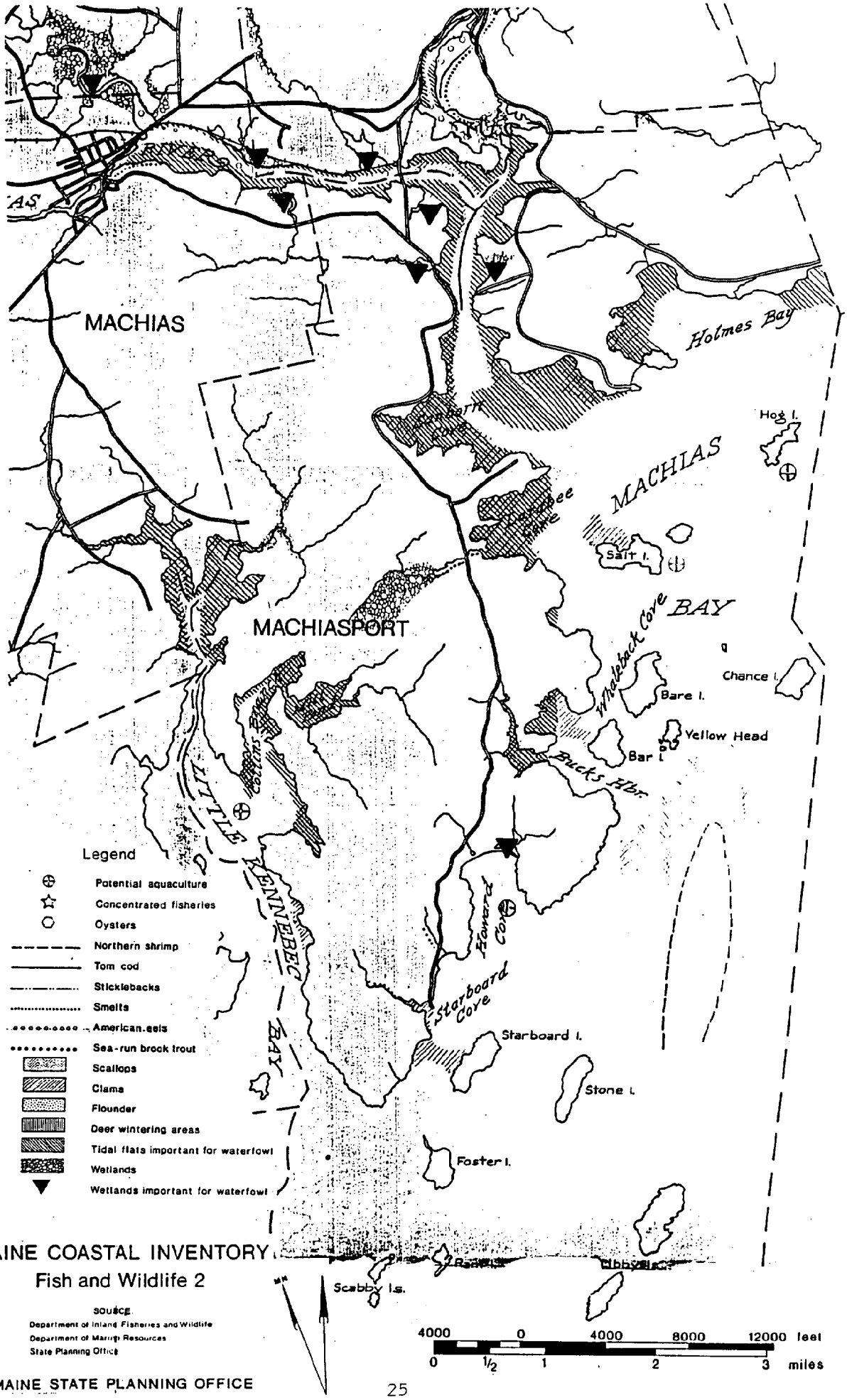


MAINE COASTAL INVENTORY

Fish and Wildlife 1

SOURCE:
Department of Inland Fisheries and Wildlife
Department of Marine Resources
State Planning Office

MAINE STATE PLANNING OFFICE



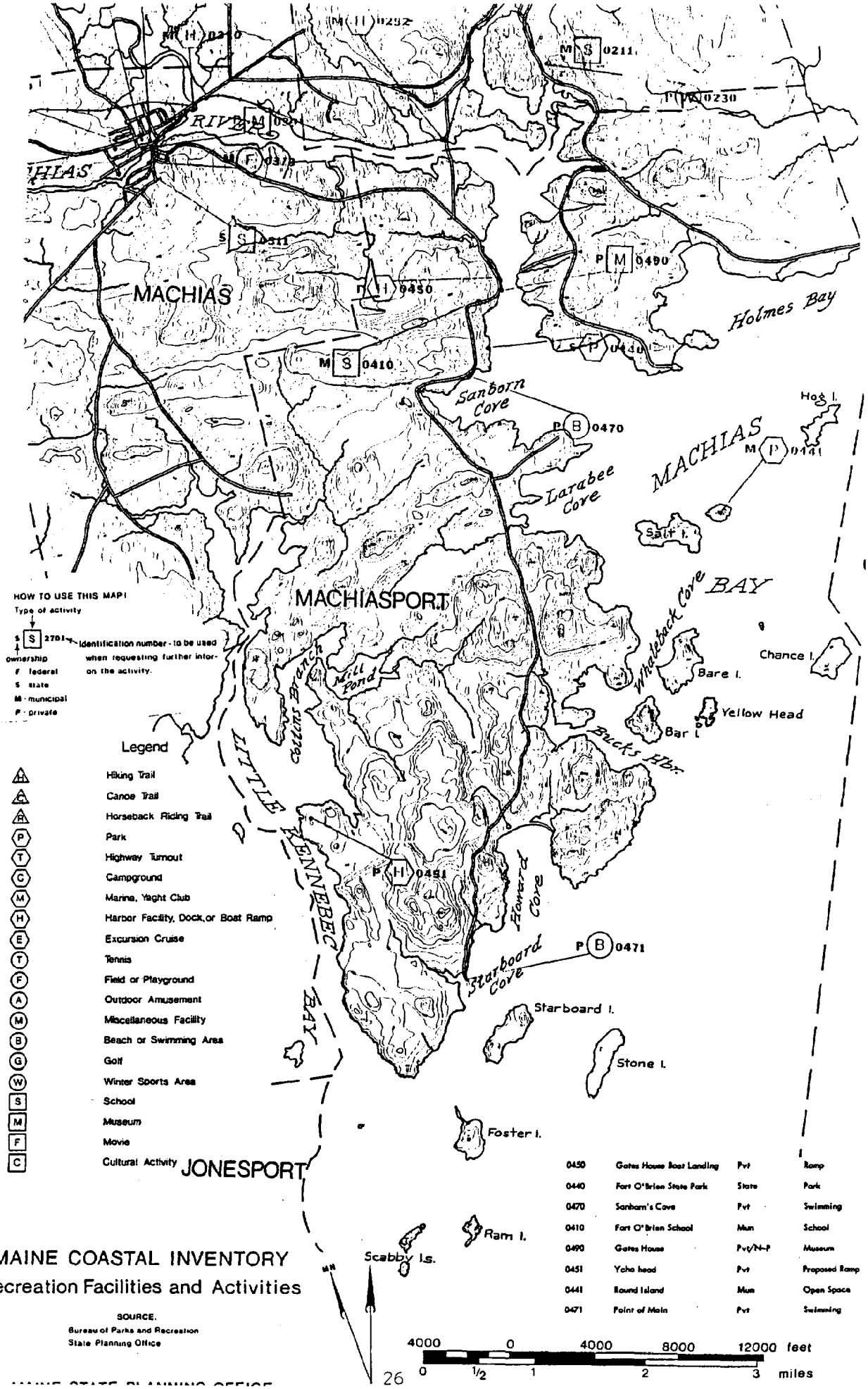
MAINE COASTAL INVENTORY

Fish and Wildlife 2

SOURCE

Department of Inland Fisheries and Wildlife
Department of Marine Resources
State Planning Office

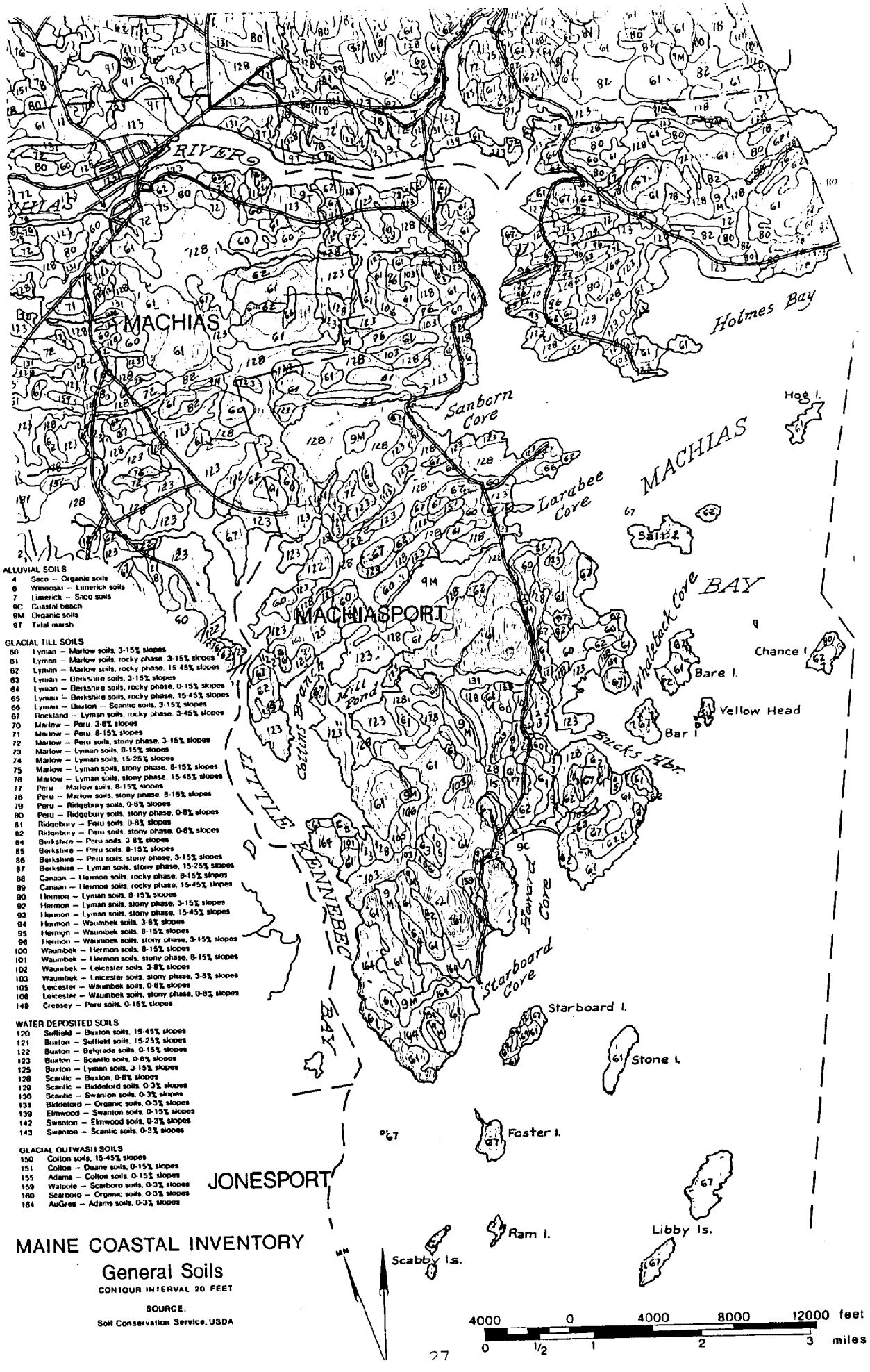
MAINE STATE PLANNING OFFICE



MAINE COASTAL INVENTORY

Recreation Facilities and Activities

SOURCE:
Bureau of Parks and Recreation
State Planning Office



ALLUVIAL SOILS
4 Saco – Organic soils
6 Winooski – Limerick soils
7 Limerick – Saco soils
9C Coastal beach
9M Organic soils
9T Tidal marsh

GLACIAL TILL SOILS
60 Lyman – Marlow soils, 3-15% slopes
61 Lyman – Marlow soils, rocky phase, 3-15% slopes
62 Lyman – Marlow soils, rocky phase, 15-45% slopes
63 Lyman – Berkshire soils, 3-15% slopes
64 Lyman – Berkshire soils, rocky phase, 0-15% slopes
65 Lyman – Berkshire soils, rocky phase, 15-45% slopes
66 Lyman – Buxton – Scantic soils, 3-15% slopes
67 Rockland – Lyman soils, rocky phase, 3-45% slopes
70 Marlow – Peru, 3-8% slopes
71 Marlow – Peru, 8-15% slopes
72 Marlow – Peru soils, stony phase, 3-15% slopes
73 Marlow – Lyman soils, 8-15% slopes
74 Marlow – Lyman soils, 15-25% slopes
75 Marlow – Lyman soils, stony phase, 8-15% slopes
76 Marlow – Lyman soils, stony phase, 15-45% slopes
77 Peru – Marlow soils, 8-15% slopes
78 Peru – Marlow soils, stony phase, 8-15% slopes
79 Peru – Ridgebury soils, 0-8% slopes
80 Peru – Ridgebury soils, stony phase, 0-8% slopes
81 Ridgebury – Peru soils, 0-8% slopes
82 Ridgebury – Peru soils, stony phase, 0-8% slopes
84 Berkshire – Peru soils, 3-8% slopes
85 Berkshire – Peru soils, 8-15% slopes
86 Berkshire – Peru soils, stony phase, 3-15% slopes
87 Berkshire – Lyman soils, stony phase, 15-25% slopes
88 Canaan – Hermon soils, rocky phase, 8-15% slopes
89 Canaan – Hermon soils, rocky phase, 15-45% slopes
90 Hermon – Lyman soils, 8-15% slopes
92 Hermon – Lyman soils, stony phase, 3-15% slopes
93 Hermon – Lyman soils, stony phase, 15-45% slopes
94 Hermon – Waumbek soils, 3-8% slopes
95 Hermon – Waumbek soils, 8-15% slopes
96 Hermon – Waumbek soils, stony phase, 3-15% slopes
100 Waumbek – Hermon soils, 8-15% slopes
101 Waumbek – Hermon soils, stony phase, 8-15% slopes
102 Waumbek – Leicester soils, 3-8% slopes
103 Waumbek – Leicester soils, stony phase, 3-8% slopes
105 Leicester – Waumbek soils, 0-8% slopes
106 Leicester – Waumbek soils, stony phase, 0-8% slopes
149 Cressey – Peru soils, 0-15% slopes

WATER DEPOSITED SOILS
120 Suffield – Buxton soils, 15-45% slopes
121 Buxton – Suffield soils, 15-25% slopes
122 Buxton – Belgrade soils, 0-15% slopes
123 Buxton – Scantic soils, 0-8% slopes
125 Buxton – Lyman soils, 3-15% slopes
128 Scantic – Buxton, 0-8% slopes
129 Scantic – Biddeford soils, 0-3% slopes
130 Scantic – Swanton soils, 0-3% slopes
131 Biddeford – Organic soils, 0-3% slopes
139 Elmwood – Swanton soils, 0-15% slopes
142 Swanton – Elmwood soils, 0-3% slopes
143 Swanton – Scantic soils, 0-3% slopes

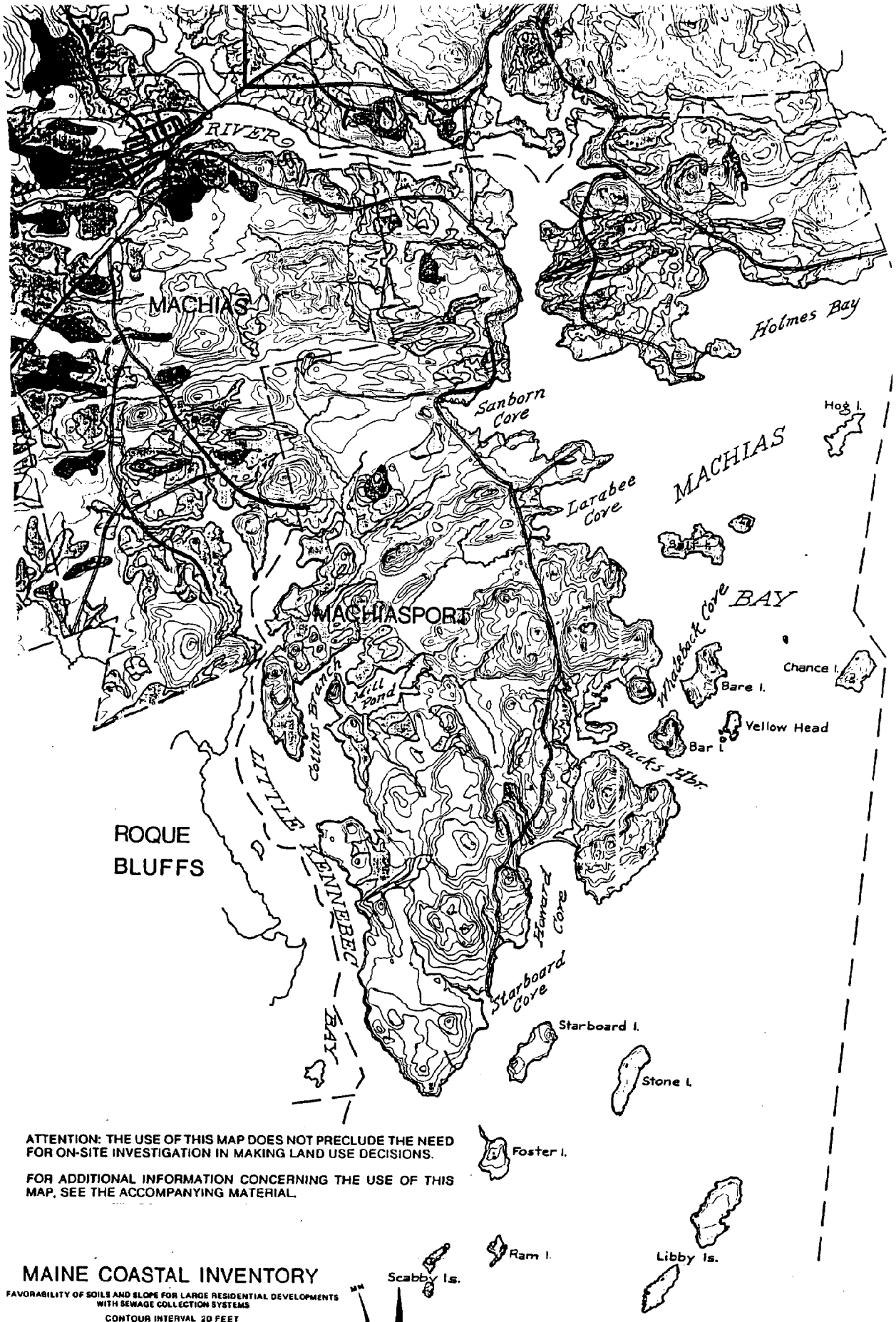
GLACIAL OUTWASH SOILS
150 Colton soils, 15-45% slopes
151 Colton – Duane soils, 0-15% slopes
155 Adams – Colton soils, 0-15% slopes
159 Walpole – Scarboro soils, 0-3% slopes
160 Scarboro – Organic soils, 0-3% slopes
164 AuGres – Adams soils, 0-3% slopes

MAINE COASTAL INVENTORY

General Soils

CONTOUR INTERVAL 20 FEET

SOURCE:
Soil Conservation Service, USDA



ATTENTION: THE USE OF THIS MAP DOES NOT PRECLUDE THE NEED FOR ON-SITE INVESTIGATION IN MAKING LAND USE DECISIONS.

FOR ADDITIONAL INFORMATION CONCERNING THE USE OF THIS MAP, SEE THE ACCOMPANYING MATERIAL.

MAINE COASTAL INVENTORY

FAVORABILITY OF SOILS AND SLOPE FOR LARGE RESIDENTIAL DEVELOPMENTS WITH SEWAGE COLLECTION SYSTEMS

CONTOUR INTERVAL 20 FEET

SOURCE:

Maine State Planning Office interpretation of Soils and Slope Coastal Inventory Maps using the "Soil Suitability Guide for Land Use Planning in Maine," Cooperative Extension Service, University of Maine at Orono, Miscellaneous Publication 667 (Rev.).

FAVORABILITY OF SOILS AND SLOPE FOR LARGE RESIDENTIAL DEVELOPMENTS WITH SEWAGE COLLECTION SYSTEMS

HOW TO USE THIS MAP:

This map groups different soils and slopes into three categories and rates their favorability for accommodating large residential developments having sewage collection systems (sewers). These ratings reflect average conditions related to slope and soils characteristics which influence the costs, technical requirements, and environmental impact associated with such development. The smallest sized areas mapped are approximately 20 acres. This map is therefore general, and detailed information for any particular site may show smaller areas having a different favorability.

SOME APPROPRIATE USES FOR THIS MAP:

- Identifying areas where detailed studies can be focused when searching for suitable sites for the location of large scale developments.
- Identifying broad areas most likely to come under development pressure because of their favorable soil and slope conditions for development.
- Comparing relative differences in the abilities of soil and slope conditions in various areas of the coast to support extensive new development.
- Comparing the relative differences in costs that would likely be associated with the location of extensive new development in various coastal areas.
- Presenting overviews of the resources in coastal areas for public distribution and publication.

DEFINITION OF LARGE RESIDENTIAL DEVELOPMENTS WITH SEWAGE COLLECTION SYSTEMS:

These are large, dense subdivisions on tracts of land 20 acres or more, having lots as small as 20,000 square feet. Associated development includes the siting of single family dwellings with basements (or other structures with similar foundation requirements that are three stories or less in height), and the installation and maintenance of underground utilities, including sewer lines.

FACTORS DETERMINING RATINGS:

Pertinent soil characteristics include slope, depth to bedrock, depth to seasonal high water table, the rockiness or stoniness of the soil surface, the potential for frost damage, and the impact of these characteristics on the cost of development and maintenance.

IMPORTANT:

Not considered in determining the favorability ratings are the potential conflicts between development activities and other activities for which the site may be suited, e.g. floodwater storage; natural, historic, prehistoric, cultural, scientific and recreational values, etc.

Use of this map does not preclude the need for on-site investigation to determine a site's suitability for accommodating a specific development proposal.

Legend

MOST FAVORABLE:

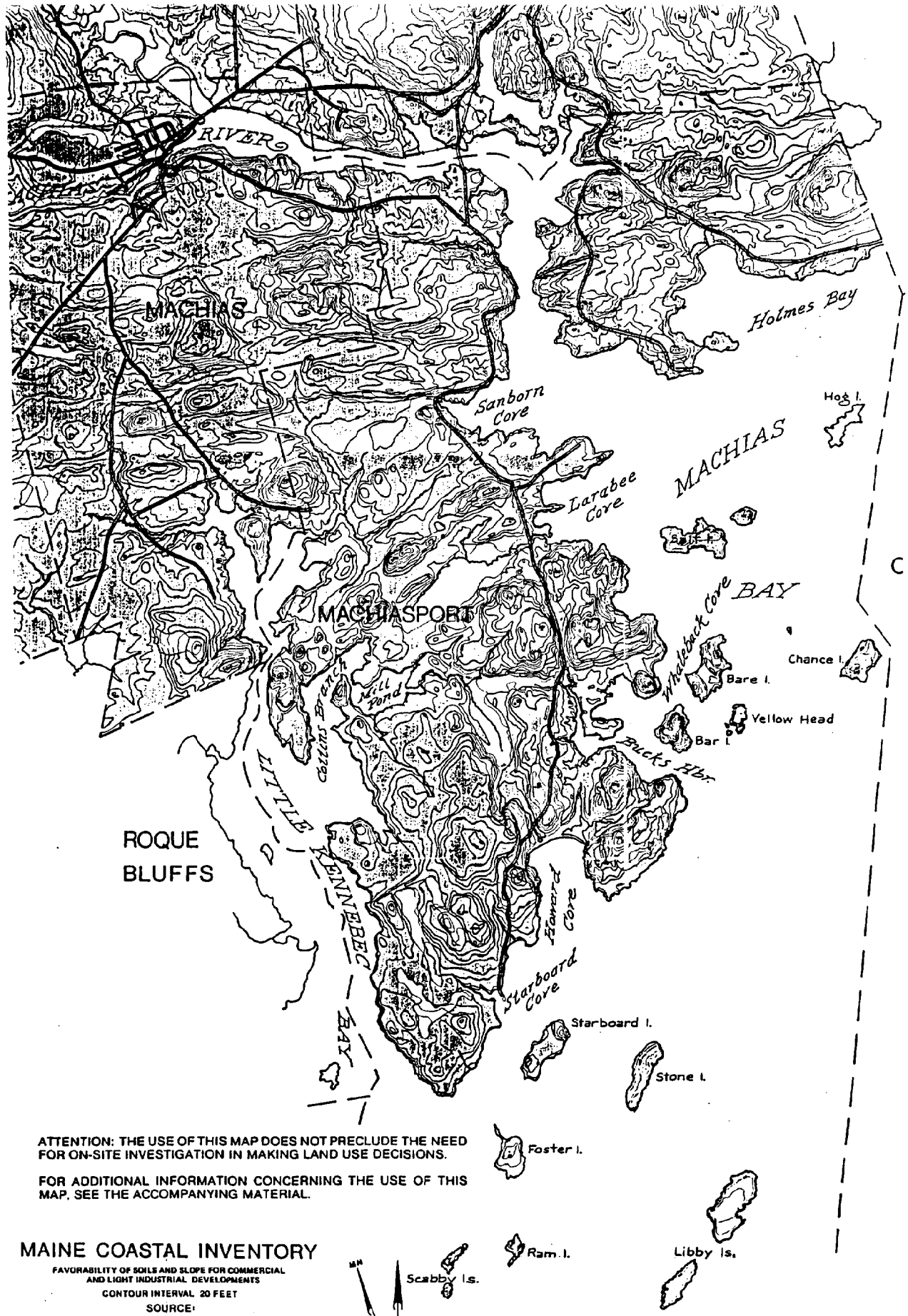
Those areas most favorable for supporting large developments. Slopes are generally level to gently sloping and the soils usually deep and well drained. Standard designs and proper installation methods should give satisfactory results for structures. In general the costs of development and/or maintenance in these areas will be minimal.

INTERMEDIATE:

Those areas with moderately steep slopes or soils having limitations for development. These soil limitations are most commonly due to shallowness to bedrock or a seasonally high water table. Although the disadvantages of the site may be offset by special design and construction techniques; the costs of initial development and the cost of maintenance over the life of the development will usually be higher than in areas rated "most favorable."

LEAST FAVORABLE:

Those areas least favorable for the proposed land use because of one or more soil or slope limitations such as steep slopes, high water tables, and shallow or poorly drained soils. These conditions are so restrictive that development approaches being impractical. The cost of development is generally high due to the special engineering design and construction techniques required, and the costs of maintenance may be prohibitive. Development of areas with a "Least Favorable" rating may, if improperly developed, have a significant impact on the environment through the alteration of natural drainage patterns (including aquifer recharge areas), erosion due to disturbed highly erodable soils or steep slopes and water quality degradation in areas of rapidly permeable soils.



ATTENTION: THE USE OF THIS MAP DOES NOT PRECLUDE THE NEED FOR ON-SITE INVESTIGATION IN MAKING LAND USE DECISIONS.

FOR ADDITIONAL INFORMATION CONCERNING THE USE OF THIS MAP, SEE THE ACCOMPANYING MATERIAL.

MAINE COASTAL INVENTORY

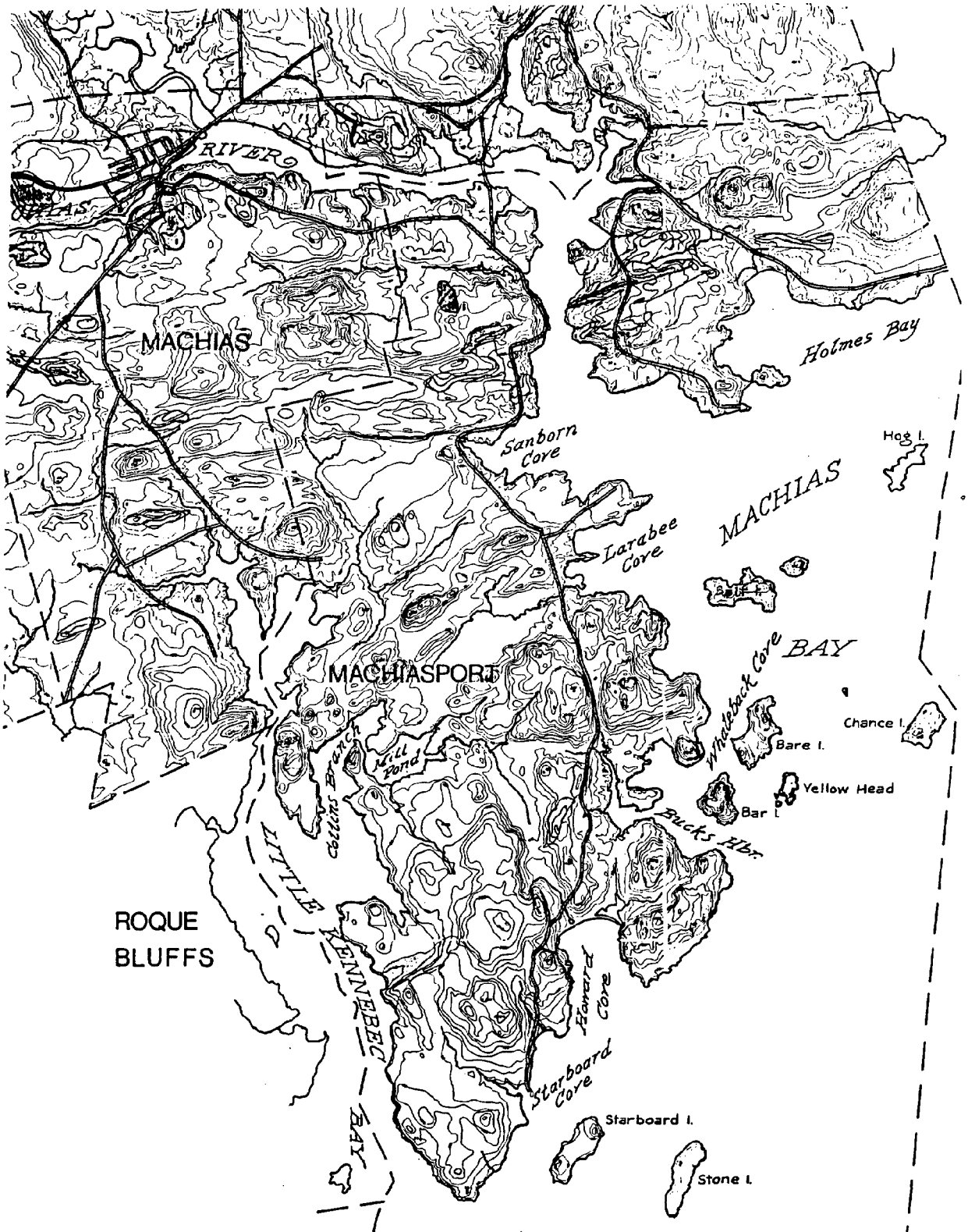
FAVORABILITY OF SOILS AND SLOPE FOR COMMERCIAL AND LIGHT INDUSTRIAL DEVELOPMENTS

CONTOUR INTERVAL 20 FEET

SOURCE:

Maine State Planning Office interpretation of Soils and Slope Coastal Inventory Maps using the "Soil Suitability Guide for Land Use Planning in Maine," Cooperative Extension Service, University of Maine at Orono, Miscellaneous Publication 687 (Rev.).

MAINE STATE PLANNING OFFICE



ATTENTION: THE USE OF THIS MAP DOES NOT PRECLUDE THE NEED FOR ON-SITE INVESTIGATION IN MAKING LAND USE DECISIONS.

FOR ADDITIONAL INFORMATION CONCERNING THE USE OF THIS MAP, SEE THE ACCOMPANYING MATERIAL.

MAINE COASTAL INVENTORY

FAVORABILITY OF SOILS AND SLOPE FOR LARGE RESIDENTIAL DEVELOPMENTS WITH SUBSURFACE SEWAGE DISPOSAL

CONTOUR INTERVAL 20 FEET

SOURCE:

Maine State Planning Office Interpretation of Soils and Slope Coastal Inventory Maps using the "Soil Suitability Guide For Land Use Planning in Maine" Cooperative Extension Service, University of Maine at Orono, Miscellaneous Publication 667 (Rev.).

MAINE STATE PLANNING OFFICE

FAVORABILITY OF SOILS AND SLOPE FOR LARGE RESIDENTIAL DEVELOPMENTS WITH SUBSURFACE SEWAGE DISPOSAL

HOW TO USE THIS MAP:

This map groups different soils and slopes into three categories and rates their favorability for accommodating large residential developments with subsurface sewage disposal systems. These ratings reflect average conditions related to slope and soils characteristics which influence the costs, technical requirements, and environmental impact associated with such development. The smallest sized areas mapped are approximately 20 acres. This map is therefore general, and detailed information for any particular site may show smaller areas having a different favorability.

SOME APPROPRIATE USES FOR THIS MAP:

- Identifying areas where detailed studies can be focused when searching for suitable sites for the location of large scale developments.
- Identifying broad areas most likely to come under development pressure because of their favorable soil and slope conditions for development.
- Comparing relative differences in the abilities of soil and slope conditions in various areas of the coast to support extensive new development.
- Comparing the relative differences in costs that would likely be associated with the location of extensive new development in various coastal areas.
- Presenting overviews of the resources in coastal areas for public distribution and publication.

DEFINITION OF LARGE RESIDENTIAL DEVELOPMENTS WITH SUBSURFACE SEWAGE DISPOSAL:

These are large, dense subdivisions on tracts of land 20 acres or more, having lots as small as 20,000 square feet. Associated development includes the siting of single family dwellings with basements (or other structures with similar foundation requirements that are three stories or less in height), and individual subsurface sewage disposal systems which are in continuous use.

FACTORS DETERMINING RATINGS:

Pertinent soil characteristics include: slope, drainage, depth to bedrock, depth to seasonal high water table, permeability, rockiness or stoniness of the soil surface, the potential for damage by frost, the impact of these characteristics on the cost of development and maintenance, and the immediate impact on the public's general health, safety, and welfare.

IMPORTANT:

Not considered in determining the favorability ratings are the potential conflicts between development activities and other activities for which the site may be suited, e.g. floodwater storage; natural, historic, prehistoric, cultural, scientific and recreational values, etc.

Use of this map does not preclude the need for on-site investigation to determine a site's suitability for accommodating a specific development proposal.

Legend

MOST FAVORABLE:

Those areas most favorable for supporting large developments. Slopes are generally level to gently sloping and the soils usually deep and well drained. Standard designs and proper installation methods should give satisfactory results for structures. In general the costs of development and/or maintenance in these areas will be minimal.

INTERMEDIATE:

Those areas with moderately steep slopes or soils having limitations for development. These soil limitations are most commonly due to shallowness to bedrock or a seasonally high water table. Although the disadvantages of the site may be offset by special design and construction techniques; the costs of initial development and the cost of maintenance over the life of the development will usually be higher than in areas rated "most favorable."

LEAST FAVORABLE:

Those areas least favorable for the proposed land use because of one or more soil or slope limitations such as steep slopes, high water tables, and shallow or poorly drained soils. These conditions are so restrictive that development approaches being impractical. The cost of development is generally high due to the special engineering design and construction techniques required, and the costs of maintenance may be prohibitive. Development of areas with a "Least Favorable" rating may, if improperly developed, have a significant impact on the environment through the alteration of natural drainage patterns (including aquifer recharge areas), erosion due to disturbed highly erodable soils or steep slopes and water quality degradation in areas of rapidly permeable soils.

FAVORABILITY OF SOILS AND SLOPE FOR COMMERCIAL AND LIGHT INDUSTRIAL DEVELOPMENTS

HOW TO USE THIS MAP:

This map groups different soils and slopes into three categories and rates their favorability for accommodating large commercial and light industrial developments. These ratings reflect average conditions related to slope and soils characteristics which influence the costs, technical requirements, and environmental impact associated with such development. The smallest sized areas mapped are approximately 20 acres. This map is therefore general, and detailed information for any particular site may show smaller areas having a different favorability.

SOME APPROPRIATE USES FOR THIS MAP:

- Identifying areas where detailed studies can be focused when searching for suitable sites for the location of large scale developments.
- Identifying broad areas most likely to come under development pressure because of their favorable soil and slope conditions for development.
- Comparing relative differences in the abilities of soil and slope conditions in various areas of the coast to support extensive new development.
- Comparing the relative differences in costs that would likely be associated with the location of extensive new development in various coastal areas.
- Presenting overviews of the resources in coastal areas for public distribution and publication.

DEFINITION OF COMMERCIAL AND LIGHT INDUSTRIAL DEVELOPMENT:

Commercial and/or light industrial buildings and associated parking lots located together to form large shopping centers or industrial parks on tracts of land generally 20 acres or more. Buildings are without basements and have foundation requirements which do not exceed those of ordinary 3 story dwellings.

FACTORS DETERMINING RATINGS:

Pertinent soil characteristics include: slope, depth to bedrock, drainage, the rockiness or stoniness of the soil surface, the potential for frost damage, the textural stability of the soil, and the impact of these characteristics on the cost of development and maintenance.

IMPORTANT:

Not considered in determining the favorability ratings are the potential conflicts between development activities and other activities for which the site may be suited, e.g. floodwater storage; natural, historic, prehistoric, cultural, scientific and recreational values, etc.

Use of this map does not preclude the need for on-site investigation to determine a site's suitability for accommodating a specific development proposal.

Legend

MOST FAVORABLE:

Those areas most favorable for supporting large developments. Slopes are generally level to gently sloping and the soils usually deep and well drained. Standard designs and proper installation methods should give satisfactory results for structures. In general the costs of development and/or maintenance in these areas will be minimal.

INTERMEDIATE:

Those areas with moderately steep slopes or soils having limitations for development. These soil limitations are most commonly due to shallowness to bedrock or a seasonally high water table. Although the disadvantages of the site may be offset by special design and construction techniques; the costs of initial development and the cost of maintenance over the life of the development will usually be higher than in areas rated "most favorable."

LEAST FAVORABLE:

Those areas least favorable for the proposed land use because of one or more soil or slope limitations such as steep slopes, high water tables, and shallow or poorly drained soils. These conditions are so restrictive that development approaches being impractical. The cost of development is generally high due to the special engineering design and construction techniques required, and the costs of maintenance may be prohibitive. Development of areas with a "Least Favorable" rating may, if improperly developed, have a significant impact on the environment through the alteration of natural drainage patterns (including aquifer recharge areas), erosion due to disturbed highly erodable soils or steep slopes and water quality degradation in areas of rapidly permeable soils.

MACHIAS REGION STUDY

PHASE I:
ENVIRONMENTAL PLANNING CRITERIA

Financial Assistance Provided By
Atlantic Worldport, Inc.

Study Objectives

This report documents the findings of a first phase environmental planning study of the Machias Region. The objectives of the Study were:

1. To initiate the first step of a comprehensive planning program by providing a broad overview of the land and water resources of the Machias Region.

2. To develop broad environmental planning criteria which would assist town officials and concerned public agencies to plan wisely for the future growth of the Region.

The Study Area

The original proposal for this study, written in June, 1970, identified the watersheds of the Machias, East Machias, and Chandler Rivers as the land area which should be studied in terms of natural resources. These watersheds, which total approximately 750 square miles in area, were further divided into four "impact zones." These zones were defined in terms of the relative intensity of development which could be expected if a major industrial complex were to locate in the Machias Bay area. The Study Area for this first phase of work is approximately the same as "Impact Zone I" as originally defined. The Study Area includes Machias, Little Machias, Cutler, and Little Kennebec Bays, and the watershed of the Machias and East Machias Rivers as far north as, and including, Gardner and Hadley Lakes. The approximate area of this Zone is 200 square miles.

Findings

Budgetary constraints, and a lack of readily usable, detailed natural resources data have necessitated a broad level of analysis and criteria development. Future phases of the Study would provide detailed criteria which cannot at this time be developed.

Several basic findings have, however, emerged from this first phase study. First, it is clear that the Area enjoys a natural environment of high quality and great beauty. The inland and coastal waters are especially valuable, and have considerable potential as recreational resources.

A. Title: ENVIRONMENTAL IMPACT MAP

B. Source: Slope map, Soils map, basic topographic and watershed interpretation

C. Legend:

D. Interpretation:

The basic intent and structure of the Environmental Impact criteria have already been described. General characteristics and planning implications of the Major Watershed Systems have also been documented. The intent here will be to explain the rating system which was used to evaluate the sensitivity of the sub-watersheds of each major Watershed System.

Two kinds of information are provided on the following pages. First, the impact rating of each of the five Land Use Types is given for both "controllable" and "uncontrollable" sub-watersheds. Second, the "Relative Environmental Importance" of the sub-watersheds within each major Watershed System is indicated by listing the sub-watersheds in rank order.

1. Impact Ratings:

The intent of the impact ratings is to identify the relative probable impact of the five land use types on each of the sub-watersheds. Ratings are given as "High," "Medium" or "Low" impact. It was found that the most convenient way to assign impact ratings was first to divide the sub-watersheds of each major Watershed System into two groups: "controllable" and "uncontrollable."

The impacts of large-scale development on "controllable" watersheds will not necessarily be less than impacts on "uncontrollable" watersheds. The "controllable" watersheds, however, by definition offer the possibility of localizing many of the adverse effects of development. (Cf. definitions - p. 26) In view of this fact, most of the impact ratings assigned to "con-

trollable" watersheds are lower than the ratings for "uncontrollable" watersheds.

For the "uncontrollable" watersheds, the impact ratings vary according to the relation of the particular sub-watershed to the overall water system. Factors considered include: proximity to sensitive downstream areas, special importance (visual quality, water supply, etc.), self-cleansing ability of related lake, river, or bay.

14

The five Land Use Types have already been defined. (Cf. p. 16) In identifying the relative probable impact of each Land Use Type on each sub-watershed, general kinds of impacts were considered. These included: soil erosion, soil compaction, stripping of vegetation, reduction of ground-water recharge capability, grading, paving, increased storm-water run-off, salt and oil pollution of runoff, discharge of wastes, and visual disruption. Recreation will, of course, have the lowest impact (some soil compaction and erosion); Heavy Industry the highest (mass grading, large areas of ground coverage, discharge of industrial wastes, soil erosion, high visual impact, etc.).

It should be clearly understood that this approach to impact evaluation depends upon "best professional judgment." A more sophisticated approach would entail the development of models which could evaluate various potential impacts with some degree of mathematical accuracy.

2. Relative Environmental Importance:

All sub-watersheds within each of the major Watershed Systems have been rank-ordered according to an estimate of their "relative environmental importance." A numerical "Importance Index" which would assign a specific value to each sub-watershed would be desirable, but is far beyond the scope of this phase. In order to determine relative environmental importance, four major factors were considered:

1. Infiltration Score -- All possible soil type/slope combinations were given a "score" indicating their relative effectiveness in allowing precipitation to infiltrate the soil. Soil type/slope units were then mapped, and area in acres of each unit measured. Each of these units was given a value by multiplying the area in acres by the infiltration score for the type of unit. A total "Infiltration Score" was then derived for each sub-watershed by summing the values for all soil/slope units within the particular sub-watershed.

   The "Infiltration Score" thus derived indicates the relative importance of sub-watersheds in terms of groundwater storage. High capability for groundwater storage will also often mean a relatively high streamflow during critical summer low flow periods.

2. Area of Sub-Watershed -- Area in acres was also considered as a separate, important variable. A large sub-watershed will obviously contribute more water to the overall water system than a small one.

3. Proximity to Important or Sensitive Downstream Systems -- especially lakes and bays. A watershed which is relatively remote from a sensitive downstream system will have less impact on that system than will a watershed directly related to the particular system. This is generally true because of the capacity of streams to cleanse themselves to some degree of sediments and organic wastes. Thus, the longer the reach of a stream before confluence with a pollution-sensitive water body, the lower the level of possible adverse impact.

4. Special Importance of Sub-Watershed -- For water supply, visual amenity, recreational potential.

SUMMARY OF IMPACT RATINGS AND RELATIVE ENVIRONMENTAL IMPORTANCE OF SUB-WATERSHED

I. Machias River

A. Impacts on Uncontrollable Sub-Watersheds

1	2	3	4	5
L	L	L	M	H

Land Use categories 1, 2, and 3 will not greatly influence water quantity or quality in the Machias River because of the large volume of water in the river from sources outside the Study Area. Categories 4 and 5, however, could have a high impact on water quality of the lower reaches of the River, and on the estuary.

B. Impacts on Controllable Sub-Watersheds

1	2	3	4	5
L	L	M	M	M

If proper measures are employed to make use of the opportunity for control of pollution, major damaging effects on the system as a whole could be avoided. By proper measures we mean: (1) treatment plants at outlets of polluted streams and removal of toxic wastes; (2) septic systems employed only where suitable by state standards, and sewer systems in all other cases.

C. Relative Environmental Importance of Sub-Watersheds

1. U- 9; High infiltration, proximity to estuary
2. C- 2; High infiltration, proximity to river
3. C-10; High infiltration, large area

4. C- 4; High infiltration, large area, lakes in watershed
5. C-11; High infiltration, large area
6. C- 8; High infiltration
7. C- 7; High infiltration
8. C- 6; High infiltration
9. C-12; Proximity to estuary
10. C- 1; Low infiltration, small area
11. C- 5; Low infiltration, small area
12. C- 3; Low infiltration, small area, remote

II. East Machias River

A. Impacts on Uncontrollable Sub-Watersheds (main stem)

1	2	3	4	5
L	L	M	M	H

Because these watersheds have influence on the estuary, large amounts of industrial pollutants would cause severe damage.

B. Impacts on Controllable Sub-Watersheds (main stem)

1	2	3	4	5
L	L	M	M	M

Proper control measures should be instituted to insure against major damaging effects on water systems.

C. Impacts on Uncontrollable Sub-Watersheds (Hadley Lake)

1	2	3	4	5
L	M	M	H	H

1	2	3	4	5
L	M	H	H	H

The importance of the estuary as a wildlife and marine habitat and its influence on the bay proper, as well as its relatively low self cleansing ability make it particularly sensitive to development and related pollution.

B. Impacts on Controllable Sub-Watersheds

1	2	3	4	5
L	L	M	M	M

Proper control measures should be instituted to insure against major damaging effects.

C. Relative Environmental Importance of Sub-Watersheds

1. U-25; Large Area; Iligh Infiltration; Proximity to Estuary
2. U-32; Large Area; Moderate Infiltration; Proximity to Estuary
3. U-29; High Infiltration; Proximity to Estuary
4. U-28; Iligh Infiltration; Proximity to Estuary
5. U-30; Proximity to Estuary
6. C- 2; High Infiltration
7. C-31; High Infiltration
8. C-26; High Infiltration
9. C-27; Small Area

IV. Bay Proper

A. Impacts on Uncontrollable Sub-Watersheds

1	2	3	4	5
L	M	H	H	H

Because of the importance of Hadley Lake for recreation the impacts of development would be particularly damaging in land use categories 4 and 5.

D. Impacts on Controllable Sub-Watersheds (Hadley Lake)

1	2	3	4	5
L	L	M	M	M

Proper control measures should be instituted to insure against major damaging effects.

E. Impacts on Gardner Lake

Because Gardner Lake is unique as a major source of controllable water supply, as well as recreation potential, all development above low density residential should be avoided.

F. Relative Environmental Importance of Sub-Watersheds

1. U-15; Large Area; Erosion Potential; Hadley Lake
2. U-13; Large Area; High Infiltration; Hadley Lake
3. C-14; Large Area; High Infiltration; Hadley Lake
4. U-18; Large Area; High Infiltration; Proximity to Estuary
5. U-19; Small Area; Hadley Lake
6. U-16; Small Area; Hadley Lake
7. C-20; Medium Area; Moderate Infiltration
8. C-23; Medium Area; Remote
9. C-17; Small Area; Low Infiltration
10. U-22; Small Area; Low Infiltration

III. Estuary

A. Impacts on Uncontrollable sub-Watersheds

Low self-cleansing ability and environmental importance as marine habitat make the Bay highly sensitive to the more polluting land uses.

B. Impacts on Controllable Sub-Watersheds

1	2	3	4	5
L	L	M	M	M

Proper control measures should be instituted to insure against major damaging effects.

C. Relative Environmental Importance of Sub-Watersheds

1. U-34, 36, 40, 41, 35; Proximity to Bay, Low self-cleansing ability
2. U-32, 42; Proximity to Bay, Higher self-cleansing ability
3. C-37, 48; High Infiltration
4. C-39; High Infiltration
5. C-38; Low Infiltration, Small Area

V. Middle River

A. Development above medium density residential should be avoided because:

1. High infiltration rates -- good ground water supply source
2. Kames within watershed
3. Extensive wetlands -- important for water storage and wildlife
4. Flows directly into estuary

B. Relative Environmental Importance of Sub-Watersheds

1. U-45; High Infiltration, Lakes
2. U-47; High Infiltration; Proximity to Estuary; Wetland
3. U-46; High Infiltration; Large Area; Wetland

4. U-44; High Infiltration
5. C-43; High Infiltration; Remote

VI. Holmes Brook

A. Development above medium density residential should be avoided because:

1. good source of ground water
2. large controllable resource
3. flows directly into Bay

B. Relative Environmental Importance of Sub-Watersheds

1. U-50; High Infiltration; Large Area; Proximity to Bay
2. C-74; High Infiltration; Large Area
3. C-49; Moderate Infiltration; Small Area; Remote

VII. Little Kennebec Bay

A. Impacts on Uncontrollable Sub-Watersheds

1	2	3	4	5
L	M	H	H	H

The Bay is sensitive because of its intricate configuration and low self-cleansing ability. Land use categories 3, 4, and 5 could have high impacts.

B. Impacts on Controllable Sub-Watersheds

1	2	3	4	5
L	L	M	M	M

Proper control measures should be instituted to insure against major environmental damage.

C. Relative Environmental Importance of Sub-Watersheds

1. U-51; Large Area; Proximity to Bay
2. U-52; Large Area; Proximity to Bay
3. U-54; High Infiltration; Large Area
4. U-53: Proximity to Ocean
5. C-57; High Infiltration; Large Area
6. C-58; Moderate Infiltration; Large Area
7. C-55; High Infiltration; Small Area
8. C-56; Moderate Infiltration; Small Area

VIII. Little Machias Bay

A. Impacts on Uncontrollable Sub-Watersheds (Bay System)

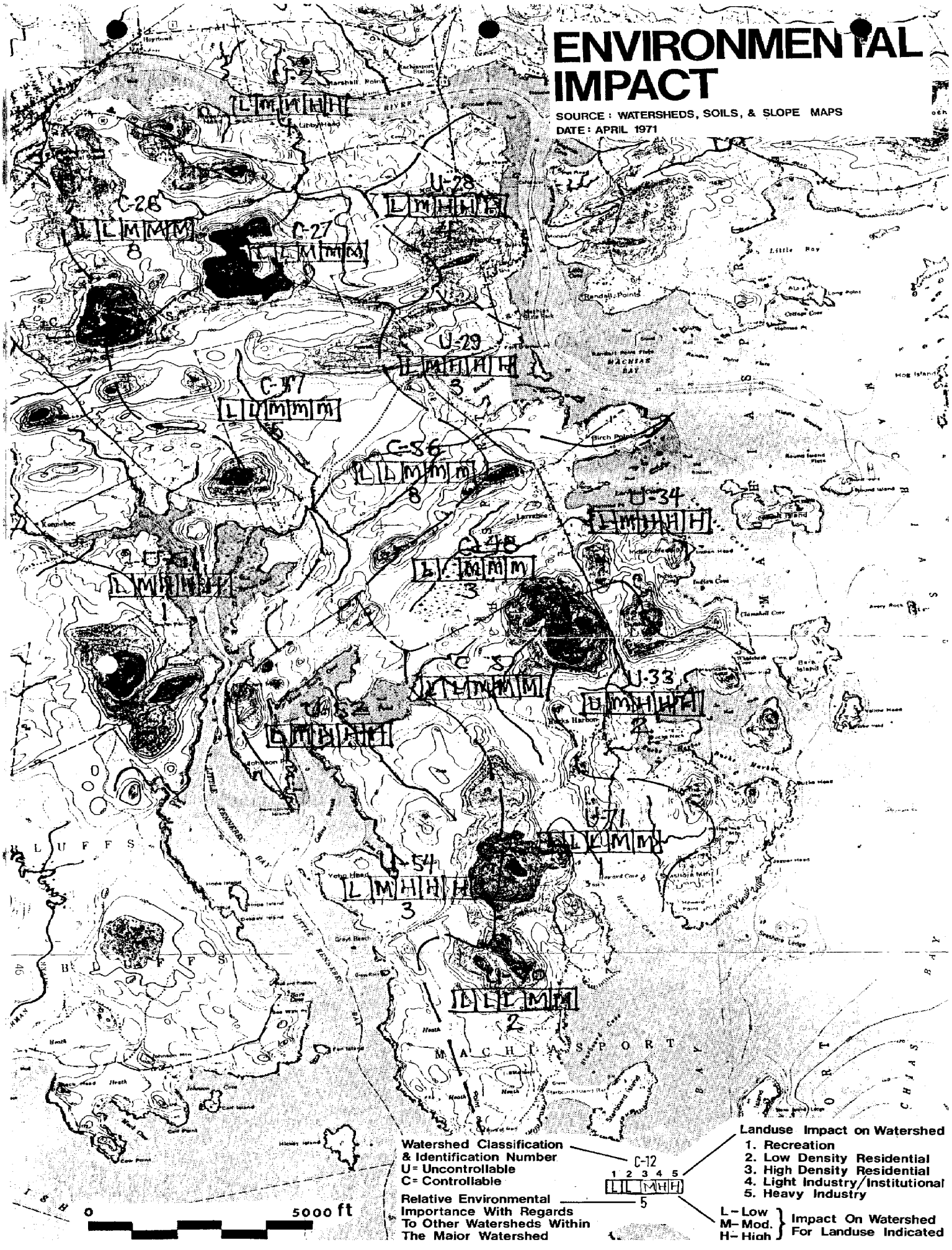
1	2	3	4	5
L	M	H	H	H

The Bay system is sensitive because of low self-cleansing ability.

B. Impacts on Controllable Sub-Watersheds (Bay System)

1	2	3	4	5
L	L	M	M	M

Proper control measures should be instituted to insure protection of Bay system from major environmental damage.


ENVIRONMENTAL IMPACT
SOURCE : WATERSHEDS, SOILS, & SLOPE MAPS
DATE : APRIL 1971
U-28
L M H H H
C-26
L L M M M
8
C-27
L L M M M
9
U-29
L M H H H
3
C-57
L L M M M
5
C-56
L L M M M
8
U-34
L M H H H
C-48
L M M M
3
U-32
L M H H H
1
C-8
L L M M M
U-33
L M H H H
2
U-52
L M H H H
U-71
L L M M
U-54
L M H H H
3
L U F F S
B U F F S
M A C H I A S P O R T
0
5000 ft
Watershed Classification & Identification Number
U= Uncontrollable
C= Controllable
C-12
1 2 3 4 5
L L M H H
5
Relative Environmental Importance With Regards To Other Watersheds Within The Maior Watershed
Landuse Impact on Watershed
1. Recreation
2. Low Density Residential
3. High Density Residential
4. Light Industry/Institutional
5. Heavy Industry
L - Low
M - Mod.
H - High
Impact On Watershed For Landuse Indicated

How The Atlantic World Port At Machiasport, Maine Will Serve The National Interest

A Proposal
Made by Governor Kenneth M. Curtis of Maine
Through the
New England Regional Commission

NEW ENGLAND REGIONAL COMMISSION
U.S. POST OFFICE AND COURT HOUSE BUILDING
BOSTON, MASSACHUSETTS 02109

Introduction

The New England Regional Commission is a Federal-State body responsible for promoting the overall economic development of the New England Region. The Commission, established under title V of the Public Works and Economic Development Act of 1965, is composed of a Federal Cochairman and the Governors of the six New England States.

At its June 1968 meeting the Commission adopted unanimously a resolution endorsing the establishment of an Atlantic World Port at Machiasport, Maine, and authorizing financial assistance to the project. The Commission resolution stated that

> "(a) the establishment of a foreign trade zone in Machias, Maine, and (b) the development within the zone of a major industrial complex, which is designed, in part, to increase substantially the supply of scarce heating fuels for New England consumers, can offer substantial economic benefits for the entire New England Region . . .",

and reserved up to $500,000 to assist in providing the public facility improvements necessary to carry out the planned industrial development complex. The project, which envisages a foreign trade zone at Portland and a subzone at Machiasport, was developed and sponsored by Governor Kenneth M. Curtis of Maine.

We believe that the establishment of an Atlantic World Port and the development of the industrial complex planned within the Port offers great potential for revitalizing a historically depressed area of the Region and, at the same time, bringing important economic benefits to New England and the Nation as a whole. We are pleased to present in the following pages a brief description of the project by Governor Curtis.

John Linnehan
Federal Co-Chairman

John W. King
Governor of New Hampshire
State Co-Chairman

Machiasport, Maine

The Atlantic World Port

...A Brief Description

Concept

To establish a foreign trade zone at Portland and a subzone at Machiasport, Maine, and to build an oil refinery with a capacity of 300,000 barrels daily in the subzone. Legally, a foreign trade zone is outside the customs territory of the United States. The oil refinery will be built and operated by Occidental Petroleum Corporation of Los Angeles.

Objective

To maximize production of low-pollutant, low sulphur content, heavy fuel oil for industrial consumers in New England and No. 2 heating oil for New England homeowners long plagued by annual shortages and constantly increasing prices, and to make products for the U. S. armed forces and for the export market.

Physical Facilities

The oil refinery, with 300,000 b/d capacity, would be the largest plant of its type in the world ever designed and built as an integral unit. Oil storage tanks with a capacity of some 16 million barrels also will be built, creating one of the largest oil storehouses in the nation.

Machiasport

Machiasport harbor is a large natural harbor with 90 feet of water. This depth, combined with a four-mile turnaround area, a hard sand bottom and a mile-wide entrance channel, makes Machiasport an ideal port.

With twice the depth of New York harbor, it can accommodate the largest tankers afloat or on the drawing boards. U. S. flag tankers will be used to ship all products sold to the United States from the zone.

Port Facilities

Special oil handling port facilities at Machiasport will be built by Occidental Petroleum in full consultation with the State Department of Sea and Shore Fisheries and the Water Improvement Commission.

Crude Oil Supply

Low sulphur crude oil will be supplied by Occidental from its prolific Libyan oil fields, along with substantial quantities of crude oil from Venezuela.

Marketing

Refined products from the Machiasport plant will be marketed in New England by seven large, non-integrated, independent deepwater ocean terminal operators and several smaller independent marketers.

Satellite Plants

The core refinery almost certainly will attract power plants and petrochemical facilities to the zone. A number of other industries, attracted by the prospect of low-cost power and deep water, have expressed interest in locating in the zone. These include pulp and paper mills, aluminum operations, other metal and ore reduction plants and shipbuilding facilities.

Marine Foundation

The refinery company has agreed to establish a non-profit marine resources foundation in New England, which will receive large annual contributions for use in pure and applied research and development of marine and ocean resources for the benefit of the entire nation. On the basis of the quota applied for, these contributions will total approximately $7.3 million annually.

Federal Action Needed

Three separate Federal Government approvals must be obtained before the project can get under way.

The State of Maine must obtain approval of its application to establish a foreign trade zone. This application is under review by the staff of the Foreign Trade Zone Board, which consists of the Secretaries of the Commerce, Army and Treasury Departments.

The Interior Department must issue a license permitting the import of crude oil to the foreign trade zone.

Now under review by the Interior Department is Occidental's application for an oil import quota of 100,000 barrels daily which would allow the refinery to ship 90,000 b/d of home heating oil to New England, along with 10,000 b/d of gasoline. No license or approval is necessary to ship low sulphur heavy fuel to the U. S. customs territory.

The Atlantic World Port

...How It Will Serve the Nation

The Machiasport project is deeply responsive to national, regional and state economic, social and defense objectives. Several different and important categories of positive factors combine to make the project one of outstanding significance.

National Security

The size of the refinery, plus its domestic location, will give U. S. armed forces an added measure of supply security in the event of emergency. The plant's location in Maine will help achieve another strategic goal — that is, the dispersal of the nation's refining capacity, now heavily concentrated along the U. S. side of the Gulf of Mexico. Defense authorities have warned that just two nuclear bombs, one on Houston and one on Baton Rouge, could destroy 35 per cent or more of our total present refinery capacity.

According to Defense Department studies, the Machias area is one of the few areas in the United States that would remain relatively free of radioactive contamination in the event of a full-scale nuclear attack on our East Coast.

The refinery would provide an enormous quantity of reserve storage capacity. In an emergency situation this could prove of vital strategic value.

While the refinery normally will operate on foreign crude oil, in the event of an emergency (such as the last two Middle East crises,) it could run on domestic crudes. Obviously less difficulty would be encountered in obtaining crudes from alternative foreign or domestic sources than, for example, to obtain alternative sources of imported residual fuel oil. At present East Coast refineries produce only 7 per cent residual fuel oil and Gulf Coast refineries only 4 per cent. The U. S. East Coast is therefore almost totally dependent on imports for this product. It would be difficult for U. S. refineries to supply such fuels if imported supplies were, for any reason, cut off. The Machiasport refinery would reduce New England's dependence on imported residual fuel by more than 30 per cent.

Balance of Payments

The $140 million investment required for the refinery and related facilities would be made in the United States rather than abroad. This would be a case of reversing the trend toward exporting our refining capacity. The refinery alone should generate exports valued at $30 million or more annually, directly contributing to U. S. foreign exchange earnings.

Investment in and exports from projected satellite plants will further assist the U. S. balance of payments.

Defense Department oil purchases for Europe can be made from the refinery without causing domestic product shortages. These purchases should enable the military establishment to spend some $20 million in this country which might otherwise be spent in Europe for oil (jet fuel, marine diesel, gasoline.)

The refinery's production of large scale volumes of low-sulphur heavy fuel oil will enable the industry to save a substantial part of the huge foreign investment outflow otherwise needed to desulphurize currently available residual fuel oil in the Caribbean or elsewhere overseas.

Pollution Control

The Machiasport refinery would produce 75,000 barrels per day of 1 per cent sulphur maximum guaranteed heavy fuel oil. This volume is sufficient to cover just under 30 per cent of the total heavy fuel oil requirements of the six New England states and some 90 per cent of the volume of heavy fuel sold in New England independent non-integrated terminal operations. Availability of such a large volume of low-pollution heavy fuel locally should ensure a rapid conversion to these fuels throughout New England. Health benefits of inestimable value will accrue to the area as a result.

The deep water port of Machiasport is located far from heavily traveled sea lanes and densely populated areas, thus minimizing the danger of sea pollution from collision or oil spills involving tankers approaching or departing from the area.

Apart from these natural advantages, Occidental Petroleum plans to spend several million dollars to equip the refinery and dock area with finest pollution control equipment available to ensure that there will be no damage to plant or animal life from either air or water pollution. It will be a model project from this standpoint with even the rainwater which falls on the area collected and treated to ensure no contaminants find their way into the sea. All water returned to the ocean will be cool and so pure it will be drinkable. It will cost more to do it this way, but it can and will be done.

Consumer Interest

New England is the only region in the United States that depends primarily on oil for industrial use and home heating. Approximately 70 per cent of the homes in the six states are dependent on heating oil. This means that the overall demand pattern for oil is radically different in this region than that in any other section of the country. Heavy fuel oil and middle distillates each comprises about 34 per cent of the total demand; gasoline accounts for only 32 per cent. The projected refinery is specifically designed to meet the special requirements of the area by maximizing output of heavy fuel oil and No. 2 heating oil.

Despite New England's dependence on heavy fuel and heating oil, there is at present no refinery in the area, nor is there an oil pipeline into the area. As a result, this is the highest cost energy region in the nation. Consumers pay higher prices to import refined products from other areas in the U. S. and from abroad. In the other 44 states, there are 291 refineries.

Substantial savings, which will be passed on to the refinery's customers, will result from the combination of low cost foreign crude oils and utilization of the largest tankers now afloat. New England consumers will be benefitted directly by some $22 million in No. 2 heating oil purchases and $4 million in gasoline purchases. The refinery will price the 90,000 barrels daily of No. 2 heating oil, for which application has been made for a quota, at least 10 per cent lower than prices paid by independent buyers during the last heating season. Gasoline will be priced to be sold in the unbranded market at approximately 2½ cents lower than major company postings.

Since 1964 there has been a constant upward spiral of heating oil prices in New England. Retail prices in Boston, for example, advanced from 15.9 cents per gallon in March, 1964, to 17.7 cents per gallon in March, 1968. The supply of large volumes of heating oil at sharply lower prices will bring about a downward trend in the whole price structure for heating oil in the six-state area. The eventual saving to consumers of home heating oil might well approach $50 million to $60 million annually. At the very least, the inflationary price trend of the past several years will be arrested.

Direct savings to consumers purchasing 10,000 barrels daily of gasoline for which quota the refinery has applied, will total some $4 million. This is a relatively small volume of gasoline, but it will enable unbranded dealers to continue to offer low price fuel to New England motorists because they will be assured of a dependable source of continuous supplies. The unbranded dealers are vulnerable at present because many of the major companies which supplied unbranded gasoline to them in the past no longer do so. This vulnerability may explain, at least in part, the recent 1 cent per gallon price increases by major companies in New England. This price raise, instituted at the very time that the Administration was striving to curb inflation, will cost New England motorists approximately $42 million per year, based on today's consumption. The Machiasport refinery, by offering a small but secure supply of unbranded gasoline, can help to stabilize gasoline prices.

The low-priced products will be offered by the refinery on an equitable basis to non-integrated independent terminal operators, thus increasing the economic viability of these firms. This should assure the creation and maintenance of vigorous competition in the area.

These independents now account for 40 to 45 per cent of the heating oil sales in New England. The 90,000 barrels daily heating oil quota requested will cover about 75 per cent of the independents heating oil needs. Until now they have had to depend for supplies from the same major companies against which they must compete.

A large and secure independent supply source located in New England itself will radically change the competitive structure in the area. The very small independent distributors with a few trucks will be able to shop for a price. The deep water terminal operators in turn will be able to offer a low competitive price to win such distributors' business without worrying about the availability of supplies from the entrenched major oil firms. Accordingly the lower prices initiated by the Machiasport refinery should be extended by the forces of competition to the whole New England area.

Saving for Taxpayers

Taxpayers generally as well as New England consumers will benefit from operation of the Machiasport refinery. It will be able to make refined products available to the U. S. military for use in New England and to cover certain European requirements at prices lower than those now paid. Savings on military purchases are estimated at a total of at least $6.5 million annually.

Consumer and taxpayer savings combined will amount to about 77 cents per barrel for each barrel of the oil import quota which Occidental is seeking.

Another indirect but significant saving to taxpayers may be expected from the selective development of specialized ports such as Machiasport. For many years the U. S. Army Corps of Engineers has been deeply concerned about the fact that proposals for deeper and deeper channels for existing U. S. ports are meeting with insurmountable physical and economic limitations.

Yet, as President Johnson has noted, the nation must double its transportation facilities every 20 years. Providing a 45-foot depth in the New York-New Jersey channel would cost an estimated $320 million. A similar depth in the Delaware River to Philadelphia would cost $300 million. A substantial share of the burden of such expenditures would fall on the Federal Government — that is, the U. S. taxpayer. Development of specialized ports on a regional basis offers the most practical alternative to costly channel deepening. In fact, developing deep water ports like Machiasport may offer the only means for this country ever to be able to benefit from the economies made possible by the giant ships already making their appearance.

Maritime Interests

Since product shipments to the U. S. customs territories will be carried in U. S. flag tankers, the Machiasport project will give a major stimulus to the nation's commercial fleet. (The refinery will use some 10 to 16 T-2 equivalents per week.) This stimulus is badly needed, for the U. S. merchant fleet has been declining since World War II. Between 1961 and 1966 it declined, in absolute terms, from 9.1 million dwt to 8.5 million dwt. During the same period its position in the world went down from a 15.8 per cent share to only 8.5 per cent. Moreover, the average age of the U. S. fleet is 15 years compared to the world average of 7.5 years.

Marine Foundation

Occidental has agreed to establish a non-profit marine resources foundation in New England, which will receive large annual contributions for use in pure and applied research and development of marine and ocean resources for the benefit of the entire nation. As contemplated, the annual amount would be approximately $7,300,000. This contribution, 20 cents per barrel of import quota, is in addition to the 77 cents per barrel savings to consumers and taxpayers.

Employment for a Depressed Area

The foreign trade zone will be located in the heart of one of the most severely depressed areas along the entire eastern seaboard — Washington County, Maine. During the last decade unemployment in Washington County has been triple the national average. Some 30 per cent of the families in the county have incomes under $3,000 annually.

During both the construction and operational phases, the projected industrial complex will provide literally thousands of jobs. The operation force for the refinery alone will be close to the 350 mark. In addition, some 300 to 500 ancillary jobs will be created. Many additional employment opportunities will be provided by other industries attracted to the area.

Both Foster Wheeler Corporation, who will build the refinery, and Occidental Petroleum Corporation have agreed to initiate a comprehensive training program designed to upgrade the ability of local labor so that the maximum economic impact will accrue to the immediate area. Local contractors and suppliers will also be used to the fullest possible extent. By the time the refinery opens, it is expected that some 85 per cent or more of the work force will consist of locally trained personnel. It might be cheaper or easier to bring in experienced people but if the vicious cycle of unemployment, economic stagnation and out-migration of talented youth is to be broken, it must and will be done this way.

for additional copies:

Department of Economic Development
State House
Augusta, Maine 04330
Phone: (207) 623-4511

TOWN OF MACHIASPORT
TOWN-OWNED RIVER AND BAY PROPERTIES
MANAGEMENT PROPOSALS

TOWN OF MACHIASPORT

TOWN-OWNED RIVER AND BAY PROPERTIES

MANAGEMENT PROPOSALS

Machiasport owns several parcels of waterfront land, all with indefinite boundaries. Although various proposals for management or development of these parcels have been made, the boundaries need to be established before going ahead on specific site plans. During the past year, using funds provided by the State Planning Office through the Federal Coastal Zone Management Program, the town contracted with a surveyor to run out the lines and set monuments for each parcel. Then the Selectmen and the Washington County Regional Planning Commission met to discuss alternative management proposals for the parcels. At the time of the 1980 town meeting, the survey work had not progressed to the point where alternative management proposals could be prepared. Soon after the meeting the parcels were evaluated and discussed by the Selectmen among themselves and with others in town. The Selectmen then authorized the Commission staff to prepare a preliminary plan for the Sanborn Cove lot. This report discusses the proposals for each site and the plan for Sanborn Cove.

1. The Town Garage Lot

This parcel which is located at the head of Sanborn Cove, contains 1.6 acres, more or less. This lot is the site

of the town's garage, road-sand stockpile, and open storage of various town items.

Each of these activities has the potential of polluting the cove, and care should be taken to assure that they do not. Pollution could occur from careless oil-changes or from leaching of salt from the road-sand into the ground water.

It appears that the present use for this lot is appropriate for the future, with improvements being made as needed.

2. Town Pier Lot

This parcel was found to include the actual site of the boat launching ramp and very little additional land. This is the site of the pier for which a feasibility study was completed last year. It is also adjacent to the Erosion Control Project which will be studied next year, and lands owned by the Machiasport Historical Society.

Although the town parcel is quite small, the town and the Society are negotiating for conveyance of some of the Society's land to the town so that it will have a clear right to undertake the contemplated project.

Detailed recommendations for a crib-type landing are contained in the report published last year. Detailed recommendations for Erosion Control, Historic Preservation, and recreation uses will be developed next year.

Each of these proposed projects were considered as part of this study. They appear to completely compatible.

3. The Sanborn Cove Lot

The Town of Machiasport recently was given the "Sanborn Lot", a parcel of land at the end of Fort O'Brien Point adjacent

to the Fort O'Brien Elementary School property, both of which front on the west shore of Machias Bay just south of the Fort O'Brien State Park.

The town property consists of 4.5 acres with 1070' along the normal high water mark. It is approachable from the water but has no road access. To eliminate the need for a costly and environmentally degrading entrance road the existing school parking area could serve both purposes. The majority of use would be during non-school periods.

Suggested development would be primarily in the form of a trail system. A roofed shelter would be the only permanent structure.

The land behind the school will be laid out to best encourage the interpretation of the existing environmental and natural resources. These may include various landforms, vegetative types, the effects of tidal action, estuarine communities, biological and ecological factors, etc. This trail will be mostly educational for school classes or other interested groups.

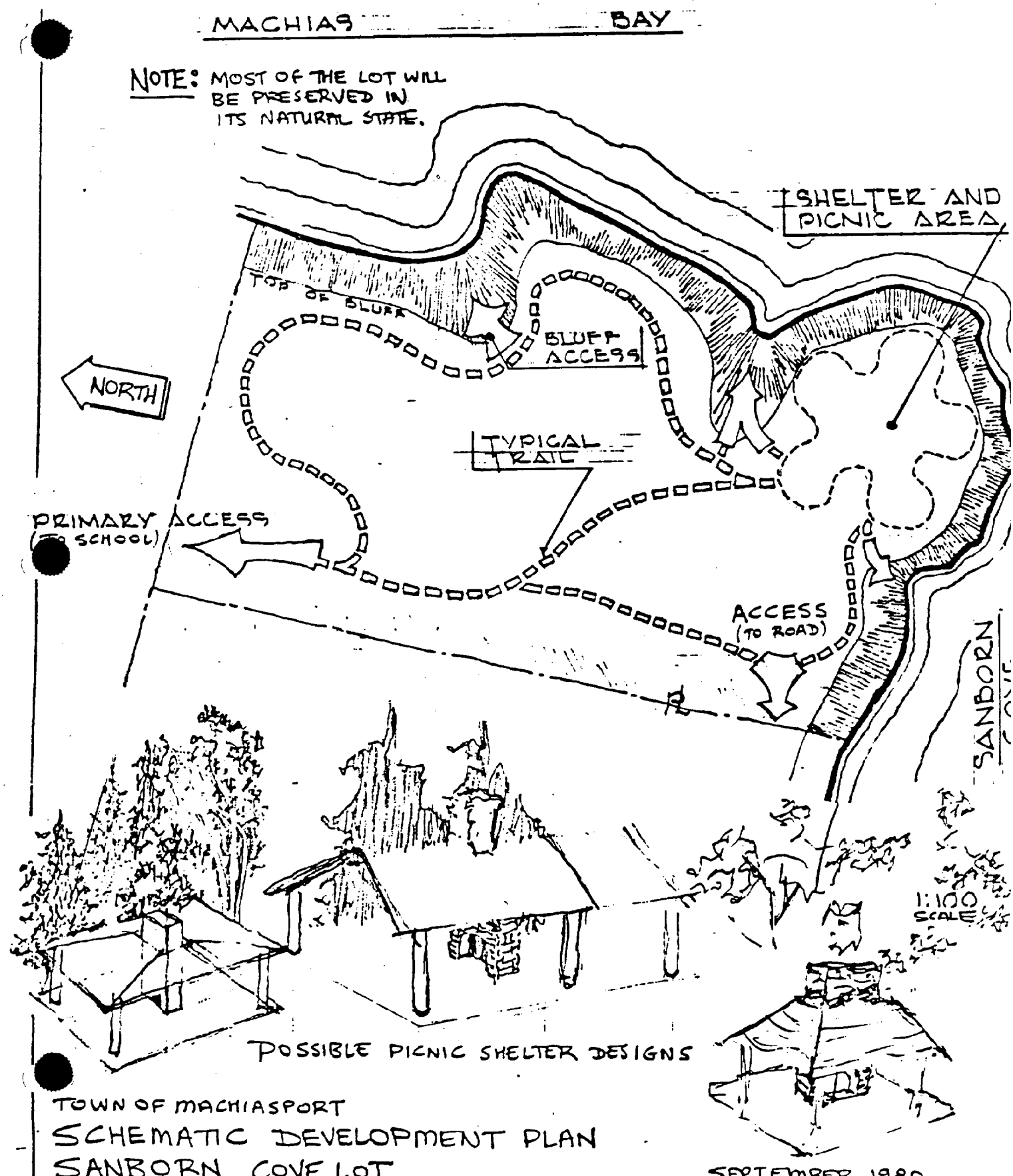
Access to the town property could be by a path originating at the school. Secondary approach may use an easement over private property on the west boundary.

The trail system here will be informal but will be laid out to compliment the natural influences. There would also be fixed access routes to the water from the top of a 40' bluff extending along the south and much of the

east faces. These routes are necessary to reduce, to the extent possible, erosion from human and natural sources.

In addition to the trails approximately 10 picnic tables and grills will be placed on a scenic promantory overlooking the bay. A shelter could also be located at this site and would consist of a roofed platform with two fireplaces on a central chimney. This may be useful to picnickers but also for presentations or nature talks during inclement weather.

NOTE: The town solid waste facility site was also surveyed as a part of the project in order to verify the distance from its boundaries to water bodies and streams and ensure that it was in conformance with regulations in this regard. The town is continuing with operating plans for this 13.5 acre facility independent of this report.



TOWN OF MACHIASPORT

SCHEMATIC DEVELOPMENT PLAN SANBORN COVE LOT

SEPTEMBER, 1980

PIER STUDY

FOR

MACHIASPORT, MAINE

AUGUST, 1979

BY

THE EDWARD C. JORDAN CO., INC.

PORTLAND, MAINE

20991-00

I. SUMMARY

A. PROJECT DESCRIPTION

The town of Machiasport has been utilizing a floating dock structure to accommodate its local clamming and fishing operations. This type of structure is seasonal in use and vulnerable to damage from tides, ice and storm conditions. The town has determined that a municipal pier with the capability for handling truck traffic, available on a year-round basis to serve the public and potential commercial fishing traffic, is needed. The town has requested that a study be made of the engineering feasibility and costs of constructing such a pier at the site of the previous town pier.

B. SITE DESCRIPTION (See Drawing Nos. 1 and 2)

The pier site is currently used by small commercial vessels and pleasure craft. Existing marine facilities include a recently-installed concrete boat launching ramp, a series of floats attached to pilings, and the remains of previous piers. The land site consists of a sloped area facing two historic buildings (the Miller Store and the Gates Home) which have been selected for preservation.

Autos and small trucks presently have access to the site by a gravel road which loops from the paved road to the pier site and back up between the buildings. Parking is limited and informal.

C. MACHIASPORT PIER

This report addresses the type of structure that the town of Machiasport has requested be investigated, i.e., a pile-supported fixed pier capable of

handling heavy truck traffic and berthing forces from commercial fishing vessels in the 60-ft range. The feasibility of constructing this type of structure on the proposed site has been investigated and verified from a structural standpoint.

It should be noted, however, that the extreme tidal ranges combined with winter ice problems require a stronger, and therefore, more expensive structure than would otherwise be required for this size pier. In weighing this higher initial cost (see Section IV, Cost Estimate; A, Fixed Pier) against the anticipated type and volume of use (see Appendix A; Part I, Preliminary Economic Assessment), it would appear that funding could not at this point be justified. For this reason we have added a brief study of a bulkhead as a more achievable method of upgrading port facilities.

D. BULKHEAD

Construction of a sheet-pile bulkhead would provide docking facilities for the small craft which presently utilize the site. At the same time the fill for the bulkhead would enable the parking area to be expanded to serve the Historical Society buildings, as well as fishing interests. Estimated cost of the bulkhead (see Section IV, Cost Estimate; B, Bulkhead Alternative) would be less than that projected for the fixed pier. If a fixed pier became fundable at a later date, it would be possible to modify the bulkhead to accept installation of such a pier.

WORKSHEET NO. 19

COST ANALYSIS — PRELIMINARY ESTIMATE

EDWARD C. JORDAN COMPANY, INC.

PROJECT MACHIASPORT PIER — SHEET NO. SUMMARY 2

LOCATION MACHIASPORT, MAINE — JOB NO. 20991.00

CLIENT — DATE 7/21/75

QUANTITIES BY — PRICES BY AJM — EXTENSIONS BY — CHECKED BY

DESCRIPTION	CSI SEC NO.	QUANTITY	UNIT	MATERIAL UNIT	MATERIAL TOTAL	LABOR UNIT	LABOR TOTAL	TOTAL COST UNIT	TOTAL COST TOTAL
SCHEME 3									
SUPERSTRUCTURE: PRECAST DECK (SHEET 9 OF 9)									67521
PLUS BASE COST									169114
SUBTOTAL									236635
O.H., PROFIT, CONTINGENCY ALLOWANCE									102365
TOTAL SCHEME 3 =									339000

WORKSHEET NO. 5

COST ANALYSIS **PRELIMINARY ESTIMATE**

EDWARD L. WOSTENHOLM COMPANY, INC.

PROJECT MACHIASPORT PIER — SHEET NO. — OF

LOCATION MACHIASPORT, ME. — JOB NO. SUMMARY 1

CLIENT — DATE 7/31/79

QUANTITIES BY — PRICES BY AJM — EXTENSIONS BY — CHECKED BY

DESCRIPTION	C31 SEC NO.	QUANTITY	UNIT	MATERIAL UNIT	MATERIAL TOTAL	LABOR UNIT	LABOR TOTAL	TOTAL COST UNIT	TOTAL COST TOTAL
ABUTMENT		1 OF 9			7018		14639		21657
MID-SPAN BENT		2 OF 9			12560		5365		17925
OUTER PILE BENT		3-9			57656		40631		98287
RAMP & PLATFORM		4 OF 9			3174		1404		4578
FLOAT		5 OF 9			3004		1104		4108
MISCELLANEOUS		6 OF 9			5822		1718		7540
									159114
MOBILIZATION & DEMOBILIZATION									15000
	BASE COST								169114
SCHEME 1									
SUPERSTRUCTURE: STEEL STRINGERS, TIMBER									
DECK (SHT 7 of 9)									182790
PLUS BASE COST									169114
	SUBTOTAL								351904
	O.H. @ 23%								80938
	PROFIT 10%								35190
	CONTINGENCY ALLOWANCE								35190
TOTAL COST SCHEME 1									503222
					SAY				503000
SCHEME 2									
SUPERSTRUCTURE: C.I.P. CONC DECK (SHT 8 of 9)									134340
PLUS BASE COST									169114
	SUBTOTAL								303454
	O/H, PROF & CONTINGENCY (AS ABOVE)								130546
TOTAL COST SCHEME 2 =									434000

B. BULKHEAD ALTERNATIVE (See Drawing No. 6)

While further investigation would be required, existing information indicates that a sheet-pile bulkhead could be designed and built to provide access for smaller vessels at all tide levels. Although the anticipated bulkhead design could not provide for berthing of large vessels, the possibility could be kept open for bulkhead modification to accept attachment of a pier with suitable berthing facilities for such vessels at a later date, should demand warrant it.

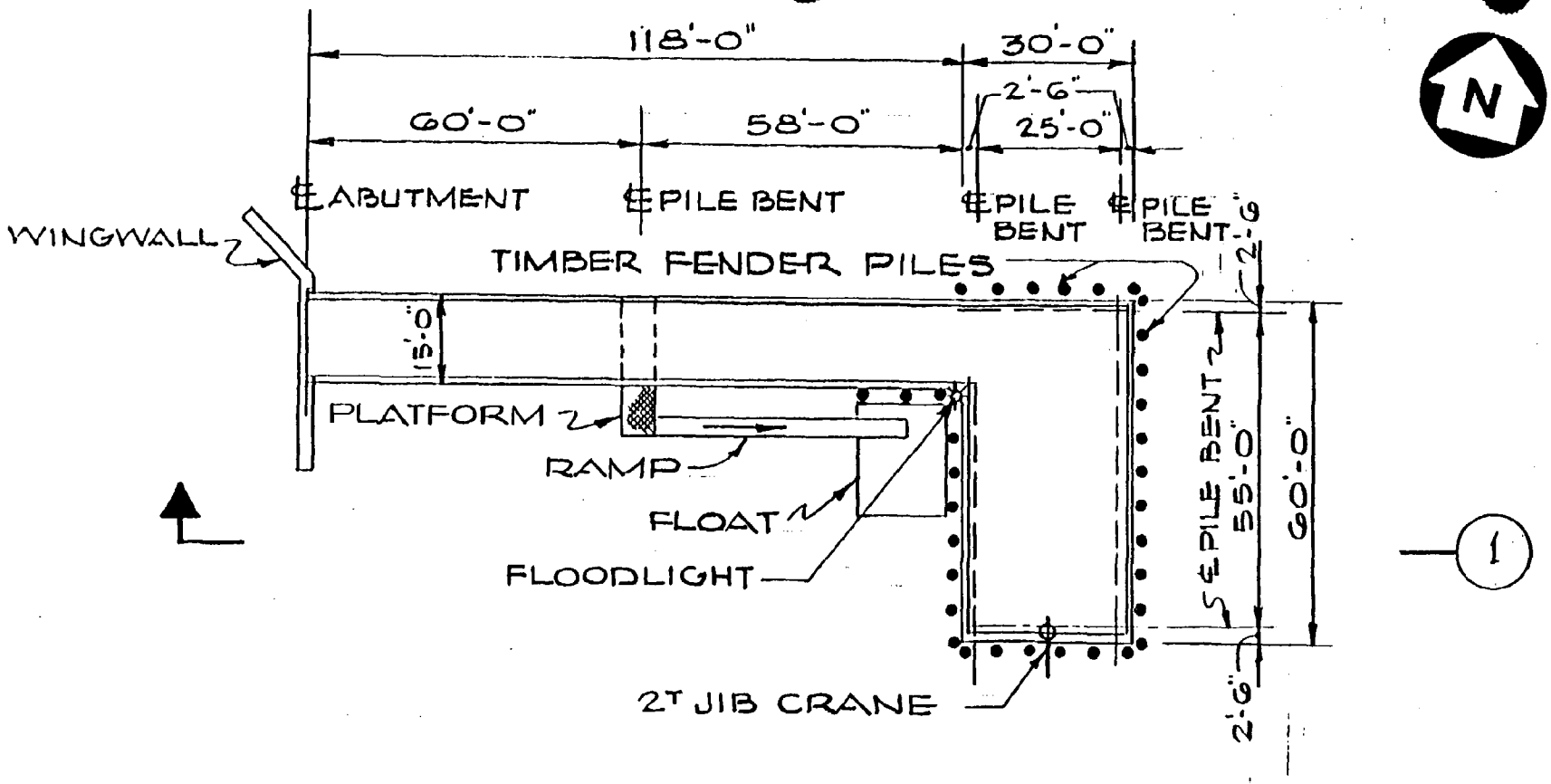
Chief advantages of the bulkhead alternative are that it could provide access for small vessels, more parking area than presently exists and be built at a lower cost than a pier.

In the cost summary provided below, costs are based on prices as of July 31, 1979. For escalation we would recommend using 10 percent per year.

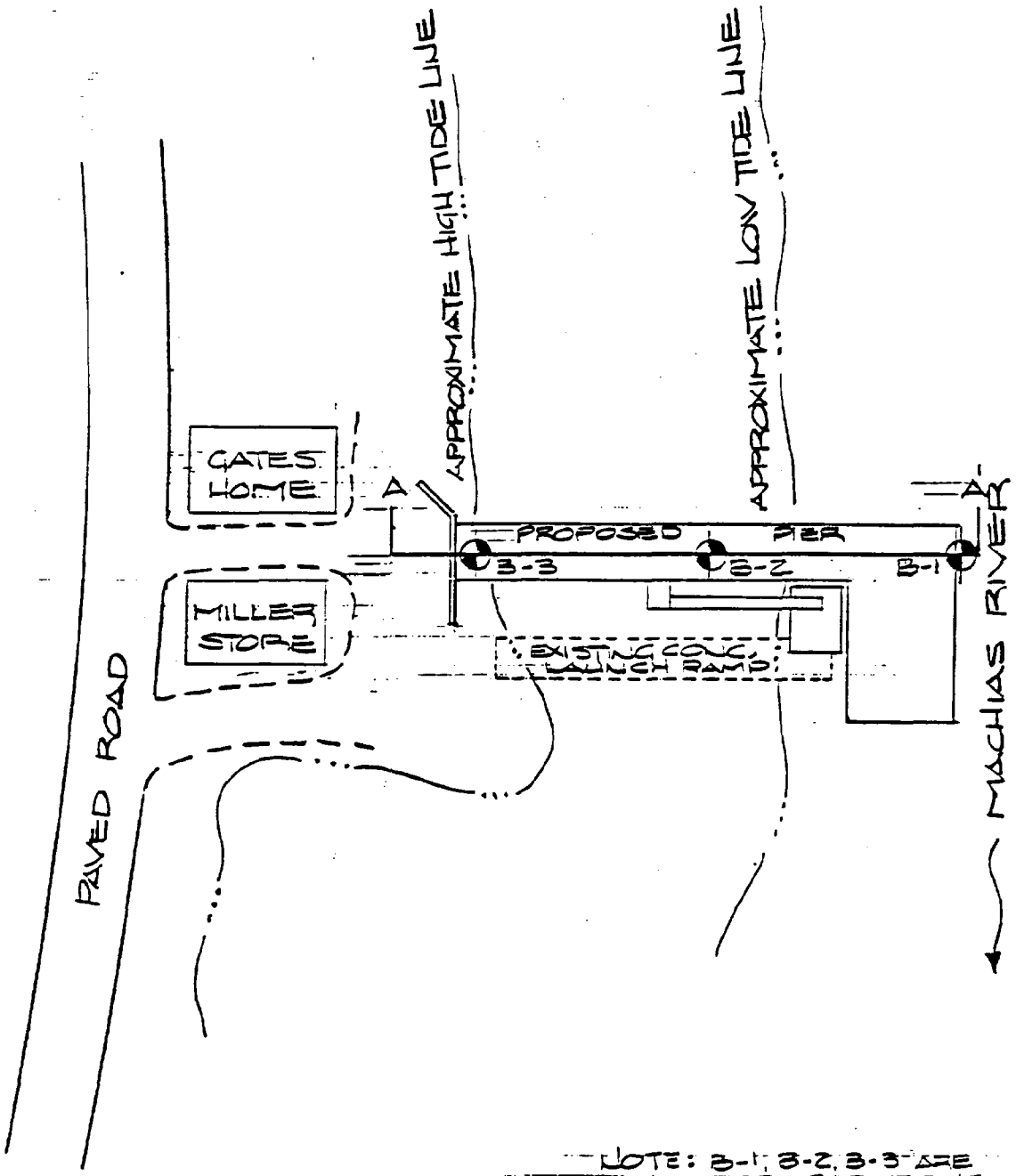
Preliminary Cost Summary:

Bulkhead (see following worksheet)	$165,000
Land Acquisition and Site Development Cost (road, parking, etc.)	35,000
	200,000
Technical Services	26,400
	$226,400

A cost reduction could be made by reducing the size of the bulkhead or by utilizing timber cribbing. Design and comparative costs for these alternatives have not been investigated.

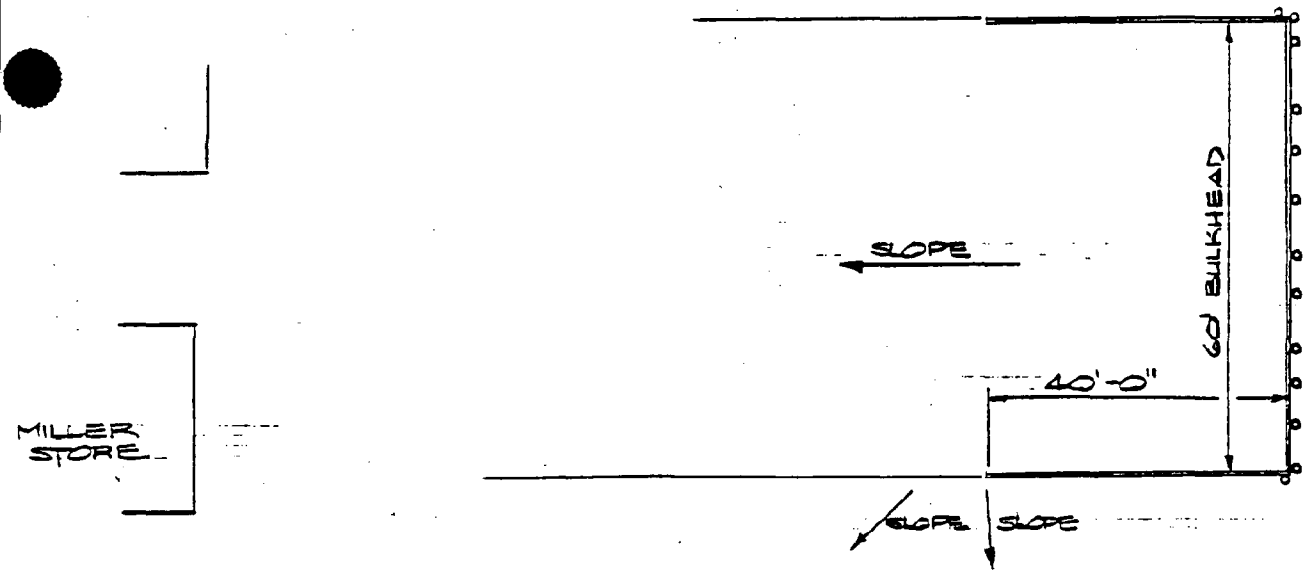


CLIENT: TOWN OF MACHIASPORT, MAINE	PROJECT: MACHIASPORT PIER	SHEET NO
EDWARD C. JORDAN CO., INC. ENGINEERING, PLANNING, ARCHITECTURE PORTLAND, BANGOR, AND PRESQUE ISLE, MAINE	TITLE: PIER PLAN	DRAWING NO: 4
	SCALE: 1" = 30' JOB NO: 2099100	REV NO

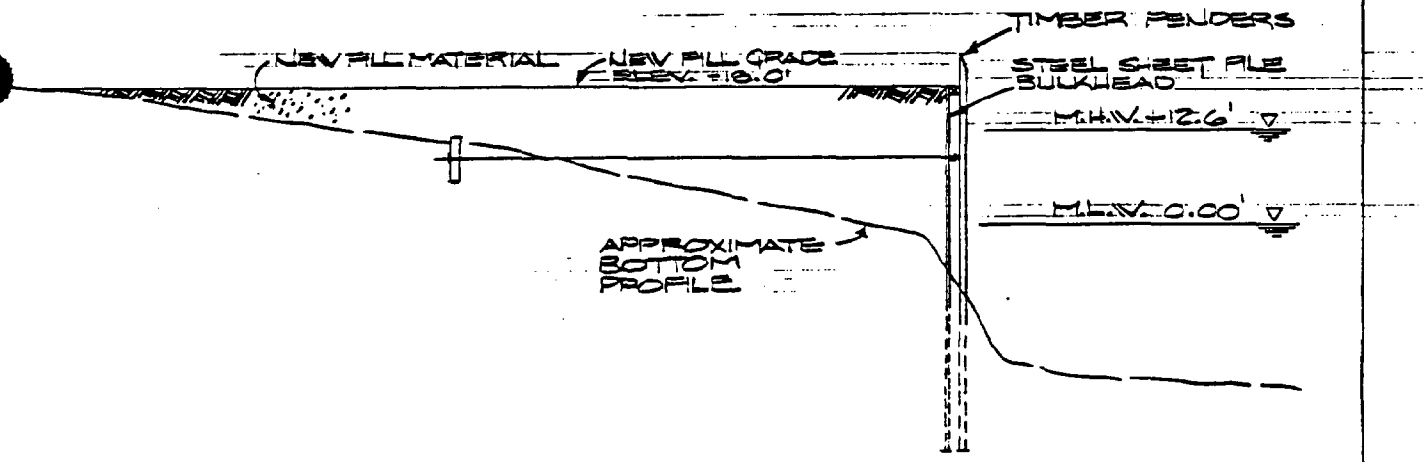


NOTE: B-1, B-2, B-3 ARE BORING LOCATIONS. SEE DWG 3 FOR INTERPRETIVE SUB-SURFACE PROFILE A-A'

CLIENT: TOWN OF MACHIASPORT, MAINE	PROJECT: MACHIASPORT PIER	SHEET NO.
EDWARD C. JORDAN CO., INC. ENGINEERING, PLANNING, ARCHITECTURE PORTLAND, BANGOR, AND PRESQUE ISLE, MAINE	TITLE: SITE PLAN	DRAWING NO. 2
	SCALE: U.S. JOB NO. 2099100	REV. NO.

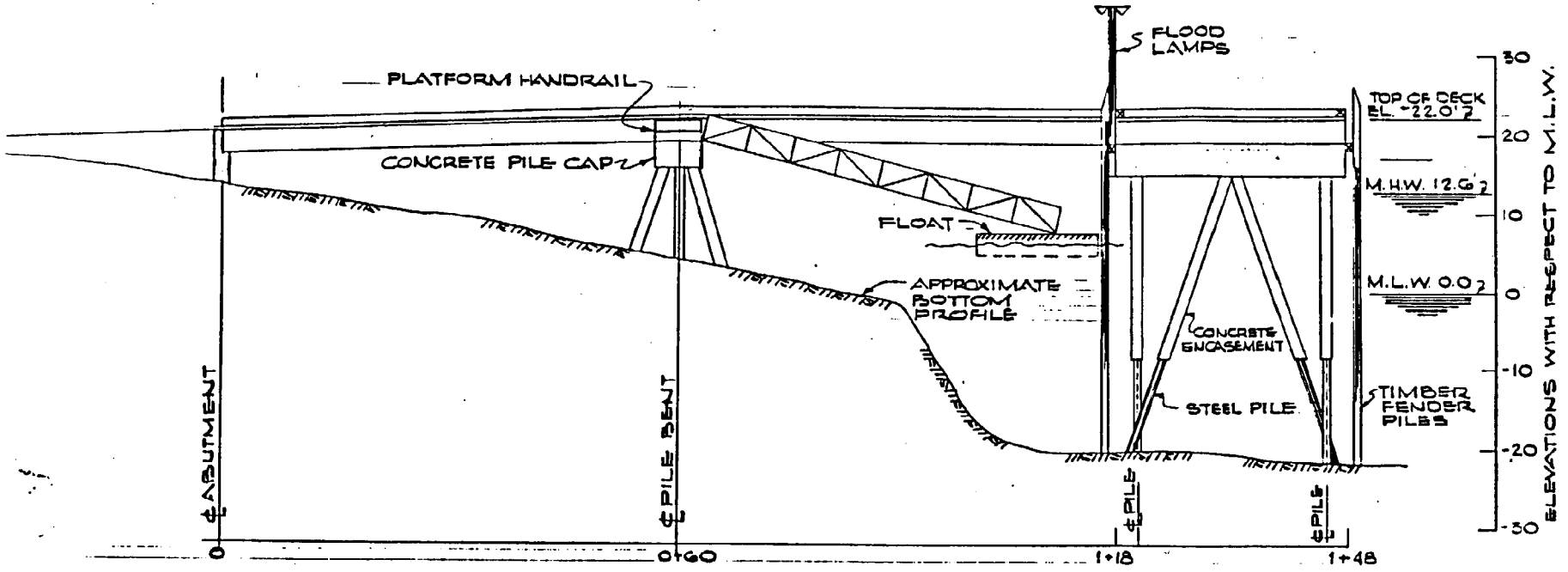


PLAN



PROFILE

CLIENT: TOWN OF MACHIASPORT, MAINE	PROJECT: MACHIASPORT PIER	SHEET NO.
		DRAWING NO. 6
EDWARD C. JORDAN CO., INC. ENGINEERING, PLANNING, ARCHITECTURE PORTLAND, BANGOR, AND PRESQUE ISLE, MAINE	TITLE: BULKHEAD ALTERNATIVE PLAN & PROFILE	
	SCALE 1" = 25' = JOB NO. 2099100	REV. NO.



SECTION (1)

CLIENT: TOWN OF MACHIASPORT, MAINE	PROJECT: MACHIASPORT PIER	SHEET NO.
EDWARD C. JORDAN CO., INC. ENGINEERING, PLANNING, ARCHITECTURE PORTLAND, BANGOR, AND PRESQUE ISLE, MAINE	TITLE: PIER CROSS-SECTION	DRAWING NO. 5
	3/4" = 1'0" 2099100	

DESIGN AND COST ESTIMATES FOR A WATERFRONT MANAGEMENT PLAN FOR MACHIASPORT, MAINE

NOVEMBER 1981

Conducted with funds from Coastal Zone Management Program

Maine State Planning Office

New England Coastal Oceanographic Group

Cutler, Maine 04626

I. INTRODUCTION

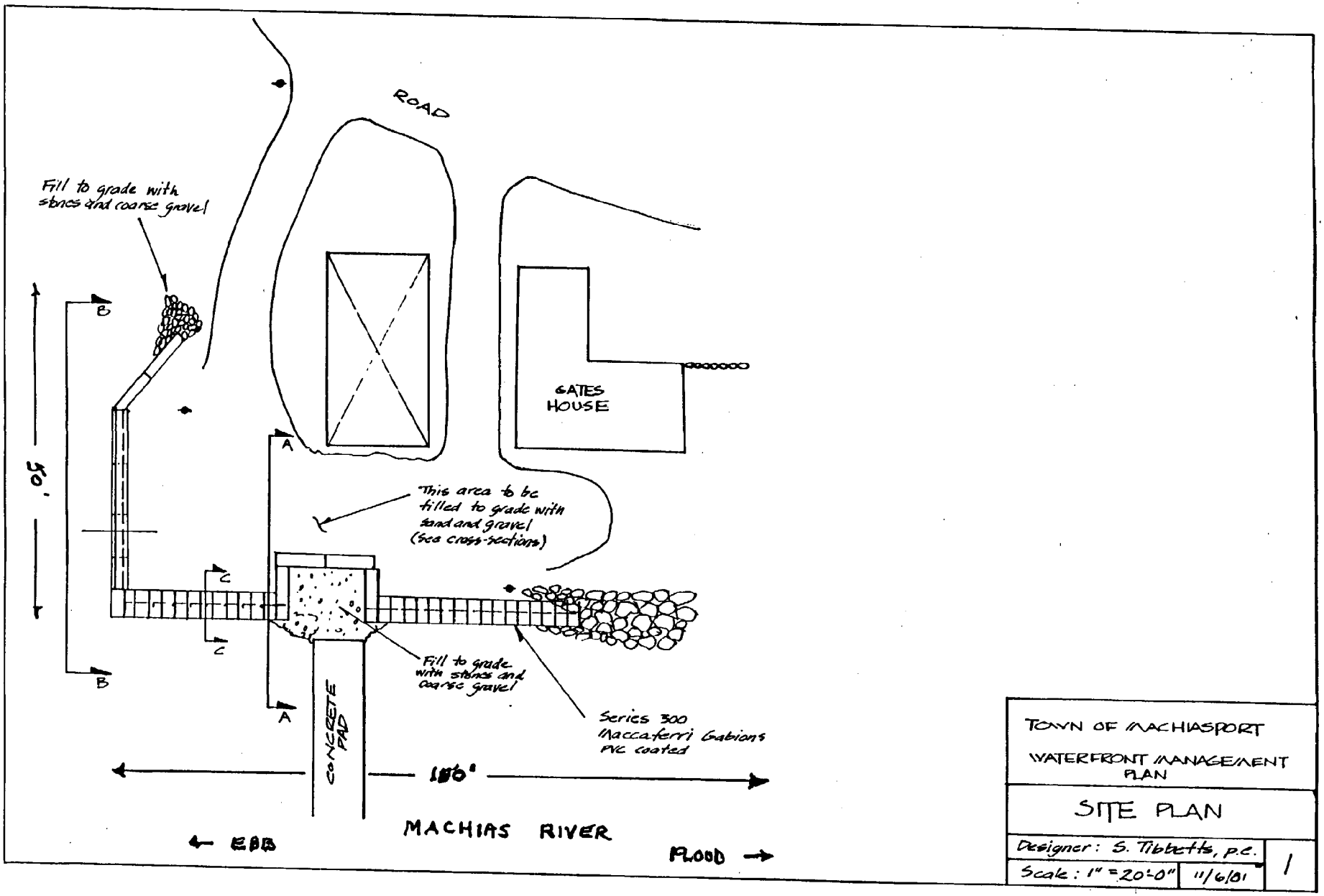
A. Background and Statement of the Problem

A public dock and access ramp for Machiasport exist at the site of a former crib pier long since destroyed. This general area has been customarily used for local clamming and boat launching, principally for fishermen. During the summer a series of seven floats are attached to several driven pilings. These floats are removed to protect them from winter storms and ice flows. The 18-foot wide cement launch ramp is used year-round as is the adjacent area for parking vehicles while clamming in the lower flats. The entire parking area, save about 10 feet near Miller's Store and the Gates House, are rountinely flooded at spring high tides and even less space exists at storm tides. The area to the southeast of the town ramp is gradually being eroded leaving less useable vehicle turning and parking area. Any vehicles not moved in time become trapped or flooded.

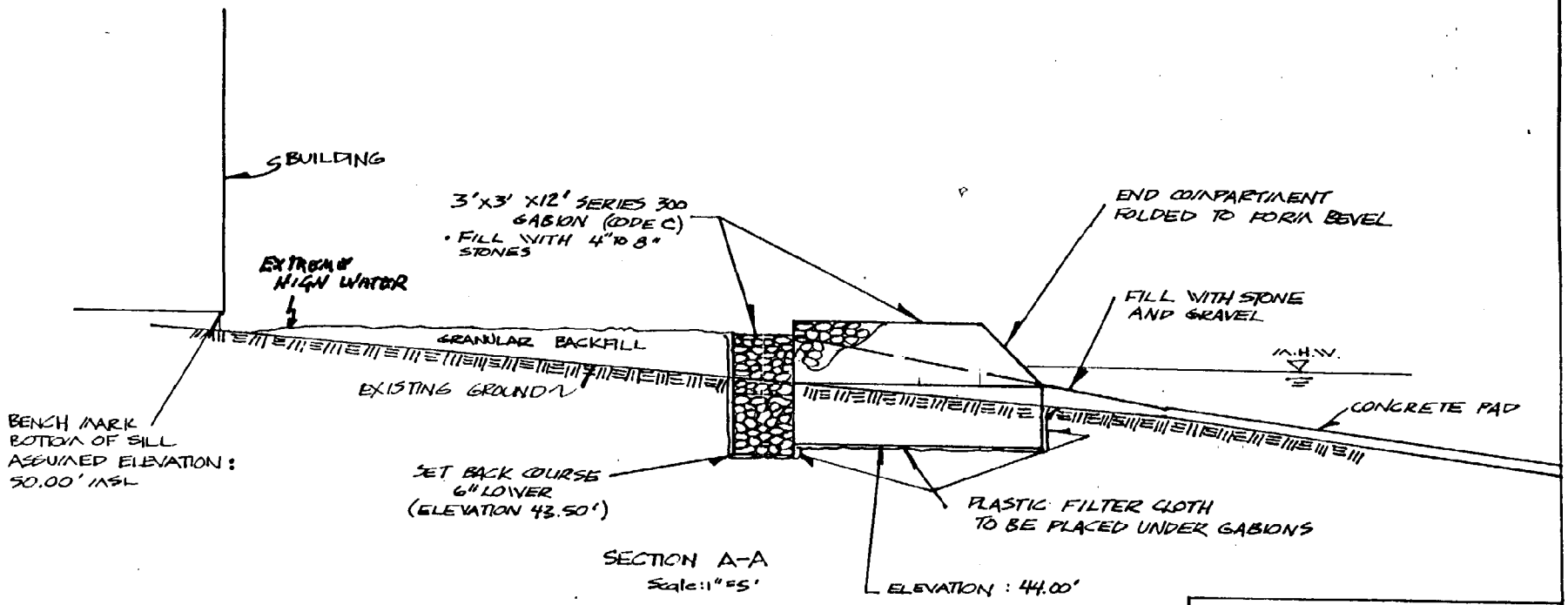
B. Project Description and Objectives

In an effort to find an inexpensive solution to this problem, the Selectmen of Machiasport advertised for a design study. This report presents the studied candidate solutions and the recommended design and necessary materials. The design objectives were:

1) to develop a simple and inexpensive plan to increase the waterfront area height above sea level while permiting use of the public ramp, and
2) to provide protection against continued water erosion of the area used by the local fishermen.

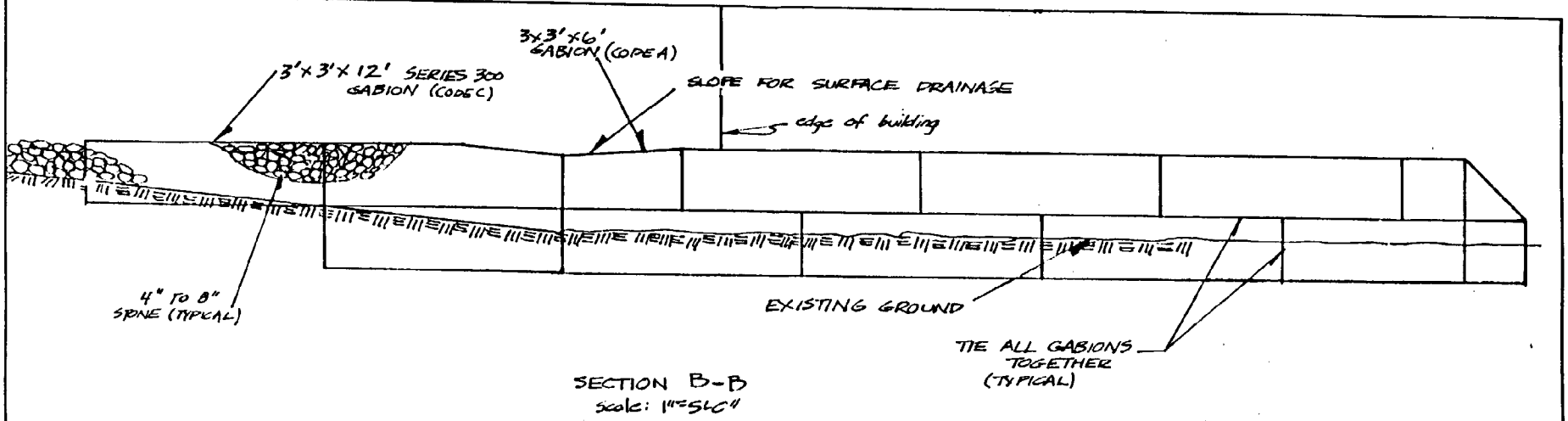


TOWN OF MACHIASPORT WATERFRONT MANAGEMENT PLAN		
SITE PLAN		
Designer: S. Tibbetts, P.E.		1
Scale: 1" = 20'-0"	11/6/81	

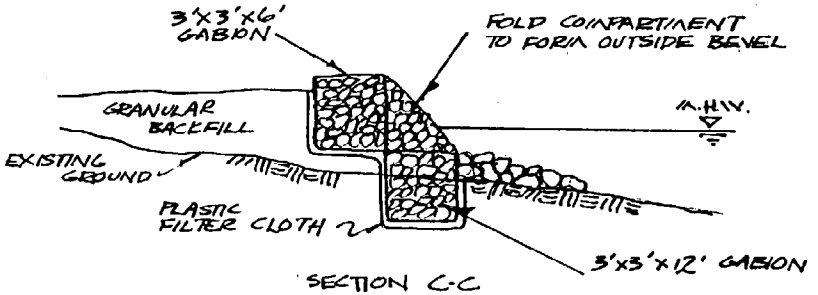


SECTION A-A
Scale: 1"=5'

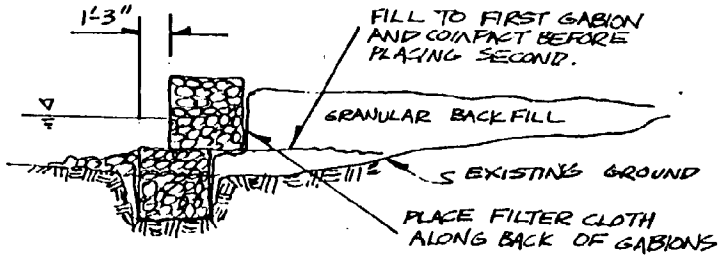
TOWN OF MACHIASPORT WATERFRONT MANAGEMENT PLAN		
CROSS SECTION		
Designer: S. Tibbetts, p.e.		2
Scale: as shown	11/6/81	



SECTION B-B
Scale: 1"=5'-0"

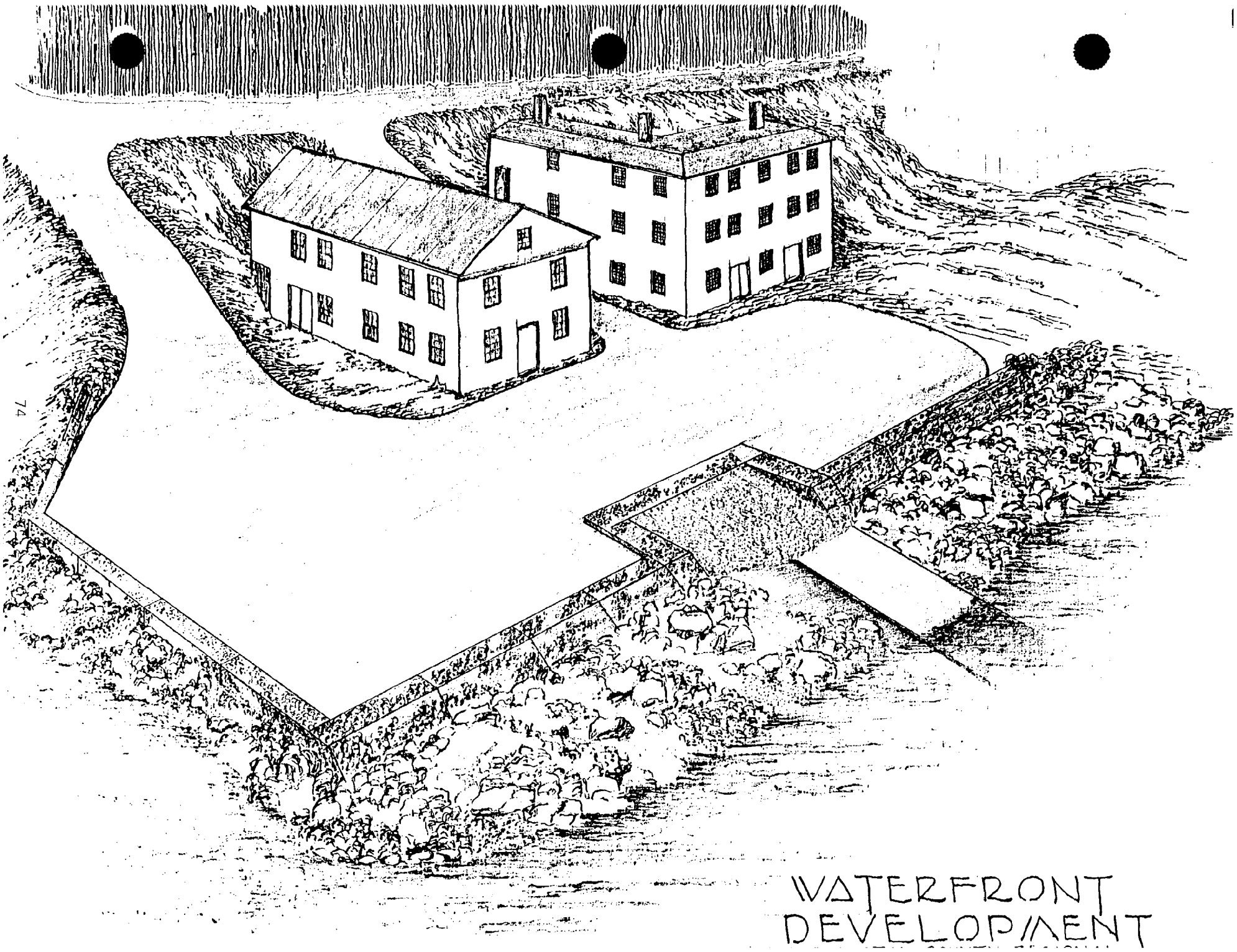


SECTION C-C
Scale 1"=5'



SECTION D-D
Scale 1"=5'-0"

TOWN OF MACHIASPORT WATERFRONT MANAGEMENT PLAN		
CROSS - SECTION		
Designer: S. Tibbetts, P.E.		3
Scale: As Shown	11/6/01	


WATERFRONT
DEVELOPMENT

Stephen W. Tibbetts
consulting water resources engineer

oak ridge road
brunswick maine 04011
207-725-2667

MATERIALS AND COST ESTIMATE

Machiasport Waterfront Study
Machiasport, Maine

Item	Number	x	Unit Cost	=	Cost
Gabions: Series 300, PVC coated					
*3' x 3' x 12' (Code C)	25		71.25		1781.25
*3' x 3' x 6' (Code A)	29		38.74		1123.46
Sub-total gabions					$ 2904.71
15% shipping					435.70
Total gabions					$ 3340.42
Plastic Filter Cloth:					
* 250 square yards x $2.25 per yard					562.50
Stone (4" to 8")					
* 158 cubic yards x $8.00 per yard					1264.00
Granular Fill:					
* 150 cubic yards x $4.00 per yard					600.00
Total materials cost					$5766.92

LIBERTY HALL RESTORATION PROJECT DESCRIPTION

A. GENERAL

Liberty Town Hall was designed and built by Andrew R. Gilson of Machias in 1873. This large two story clapboard structure with a central square tower is an excellent example of the Italianate style of architecture. The corners of the tower and first story of the building have wooden quoins. The windows have heavy ornate lintels, and tower's denticulated cornice is supported by paired brackets. Each side of the tower has a pair of round headed apertures with a circular opening above. The roof of the bell tower has been remodelled. Liberty Hall faces east on Route 92, and has served as a center for social activities and meetings for many years.

Liberty Hall is in active daily use as the Town Office. It is used for suppers by the Historical Society and other groups. Its great hall is also used for recreational programs. This land-mark building means "Machiasport" to many people.

The public will benefit directly from all of the work to be done. However, repair of the leaky belfrey which is threatening the entire structure, and retoration of the great hall once the leaking is fixed, will be of the greatest benefit.

The town has consistently voted funds over the years for the maintenance of Liberty Hall and it is anticipated that it will continue to do so. However, we have slowly fallen behind. The requested grant funds will enable us to catch up and the five-year maintenance management plan will be a guide for the future efforts so we can better keep up with the building's needs.

B. PROJECT WORK

Work will begin within one month of the awarding of the grant.

1. Final Plans and Specifications.

   Based upon the preliminary cost estimates for the restoration needs a licensed engineer will prepare detailed plans and specifications conforming to Standards for Historic Preservation adopted y the U.S. Secretary of the Interior (sections relating to stabilization, preservation, restoration, and reconstruction) and the Maine Historic Restoration Standards (05-089, Chap. 74). The engineer will also prepare a specific maintenance management plan for at least a five year period.

2. Restoration Work Items.

   a. Repair belfry
   b. Install wall-board on first floor walls and ceilings
   c. Ceiling restoration and painting in upstairs great hall
   d. Replace wiring and fixtures for main ceiling and furnace room
   e. Strip and refinish woodwork
   f. Install septic system
   g. Run water piping from adjacent house
   h. Install new heating unit

3. Contractor Selection.

   Persons licensed in the State of Maine to practice the necessary trade or profession will be selected to accomplish this work.

4. Sign.

   A four foot square sign which acknowledges state assistance through the Historic Restoration Grant Program will be painted and placed outside the front of the Hall.

5. Five-year Maintenance Management Plan.

   The engineer who prepares the final plans and specifications will also prepare a Maintenance Management Plan to guide future efforts.

6. Completion Report.

   A final report of the project, including photography, will be prepared and submitted to the Director upon completion of the project.

All work will be completed within 12 months of the award of this grant.

C. COST ESTIMATES

Costs will be kept to a minimum through the use of volunteer and no-cost labor for those items not requiring licensed workers.

1.	Final plans and specifications.	$ 250
2.	Construction work.	
	a. belfry repair	5,500
	b. water line	500
	c. wiring and fixtures	1,000
	d. stripping and refinishing	2,070
	e. wall-board walls & ceilings	2,700
	f. septic system	1,500
	g. new heating unit	1,100
		$14,370
3.	Contractor selection (advertisement)	50
4.	Sign	50
5.	Five Year Maintenance Plan	300
6.	Completion Report (w/photos)	150
	Total	$15,170
	Local	7,585
	Grant request	7.585

FRIENDS OF JASPER BEACH
BOX 442, BUCKS HARBOR, MAINE 04618

February 13, 1981

Advisory Committee on Coastal Natural Areas
Natural Resource Planning Division
State Planning Office
State House Station #38
Augusta, ME 04333

Subject: Machias Bay Estuarine Sanctuary.

The attached information explains how this sanctuary:

1. Is valuable for scientific research and educational activities,
2. Will protect a type of area not already protected,
3. Is of unusual natural significance,
4. Will conserve a relatively complete natural system,
5. Has strong local support,
6. Can be continued and managed with available resources,
7. Has multiple use values,
8. Is totally compatible with existing uses.

We look forward to your early positive action upon our request for selection of this area.

Sincerely,

Marion Davis

Marion Davis for
Friends of Jasper Beach

To: Natural Resource Planning Division
State Planning Office
State House Station #38
Augusta, Maine 04333

Proposed Coastal Natural Area

1. Name of Area Machias Bay Estuarine Sanctuary

2. Town Machiasport

3. County Washington

4. If you haven't previously shown the location of the area on a map, please attach one to the form. Map attached.

5. Is the area on tide water? Yes, this area is entirely on tide water.

6. How much will it cost to acquire the area or areas proposed? How will non-federal match be provided?

Estimated cost of acquiring areas proposed:

$ 35,000	Access to Howard Cove Beach, or Jasper Beach. Approximately 30 acres.
$180,000	150 acres including Sea Shore Point back to Sea Shore Mountain and up to the entrance of Buck's Harbor.
$ 50,000	Parking facility and public information. Seasonal building.
$ 50,000	Developing trails and public access to the area for educational and research purposes.
$100,000 - 250,000	Other access areas.
$100,000	Contingencies
$415,000 - $565,000	Total

"Match" to be provided through value of land such as:

PROPERTY	OWNER
Round Island Sanborn Point	Town of Machiasport
Fort O'Brien State Park	State of Maine
Stone Island	Nature Conservancy
Cross Island	Federal Government
Yellow Head Island Libby Island Starboard Island Foster Island Scabby & Ram Island	Private ownership

Possible match on purchase of 150 acres if sold for less than appraised value.

7. What research and educational activities would take place on the area?

(a) Scientific surveys on habitat, nesting, bird species, mammals, food cycle for various organizms. (food pyramid)

(b) Environmental studies for elementary, secondary schools. Also, college studies including all marine biology, zoology, shoreline botany.

College level: University of Maine at Orono
Suffolk University
University of Maine at Machias

Local: Elder Hostel Program at University of Maine at Machias

Secondary level: Washington Academy
Machias High School

All area schools in Washington County

Elementary Schools: Environmental Studies

(c) Historical Inventory

1. Machiasport petroglyphs

2. First Naval Battle of the American Revolution

3. Gates House - Machiasport Historical Society

4. Sunrise County Research Institute - Family Lineage

5. Indian archeology

6. Schoodic Chapter - Maine Audubon

7. Upward Bound - coordination with Bowdoin College

8. Outward Bound - Hurricane Island

9. Boy Scouts and Girl Scouts

10. 4-H Clubs

8. Is there a local government, state agency or conservation organization that is willing to manage the areas to be acquired?

Town of Machiasport

1. Conservation Committee to be elected or appointed with support of town selectmen both by signature and letters of support;

2. With representation from both the public and private sector representing conservation groups.

3. To be worked out on acquisition of final designation.

4. A primary responsibility of this committee would be to serve as a clearing house for research and educational activities.

5. Coordination of fish and wildlife with management. Maine State Fish and Wildlife Services.

9. Is this area particularly valuable for research and educational activities and if so why? Is there interest or are there any arrangements with educational and/or research institutions to use the area?

This area is valuable for research and educational activities because it holds a wide variety of natural resources peculiar to the Coast of Maine.

Yes, a definite interest. At the present time the University of Maine at Machias has instituted an environmental studies curriculum. The local secondary schools, including Machias High School and Washington Academy, are teaching marine biology courses. Suffolk University.

10. Will acquisition of this area protect a type of coastal land that is not already protected by other parks, refuges or sanctuaries?

Yes. Acquisition of this sanctuary will be unique to the East Coast.

11. Are there any rare or unusual plants or animals found in this area? Is there anything else that makes the area unusually significant? For example, does the area have a great diversity of natural values?

Yes. This is a significant nesting site of the common Eider duck which is the only nesting sea duck on the Eastern United States Coast. Maine is the only one of the lower 48 states which supports a large population of Eiders.

One of the values is that it is a nesting site for many shore birds including:

Artic Terns, Great Black Back Gulls, Herring Gulls, Great Blue Heron, Guillemots, Kingfishers.

Also, non-shore birds such as:

Eagles, Hawks and Owls.

The intertidal area between Starboard Island Bar and the mainland is habitat for a variety of marine invertebrates. High diversity makes this area an important collecting locality.

12. Is this proposed acquisiton going to protect an entire natural system or most of it?

This proposed acquisition would protect most of this natural system with few exceptions.

State regulations from the Game and Wildlife ordinances, as well as other state agencies protect the area.

13. Is there local support for this project? (Letters or endorsements from local officials and groups help demonstrate this support.)

Endorsements from local residents and officials has been very unusual. Private letters of support from individuals as well as groups, educational institutions, and landowners has been evident.

In the town of Machiasport alone, there was support of over 350 signatures.

(Please see attached letters of support.)

In addition, other letters are being sent directly to the state.

14. Can the conservation objectives for this area be met with available resources? (There is a maximum of $3,000,000 available for any one project.)

Considering all of the objectives we have presented, from our point of view, we may stay well within the budget.

15. Does the area receive multiple use? If so, of what kind and how much? Would the area provide access to the coast?

The area has many uses:

bird watching
hiking
geological study
biological study
photography
observation of lobstering
clamming, dragging
commercial fishing
boating
picnicing
canoeing
fishing (marine)
recreational use
plant study
whale watching
spiritual - philosophical values
artists
journalism: writers, poets

16. Is conservation of this land compatible with the existing uses of the area?

The existing uses of the area are entirely compatible with the concepts of conservation and designation of Machias Bay as an estuarine sanctuary.

Friends of Jasper Beach
Name

(207)255-4426
Phone

Box 442
Address

Contact: Marion Davis

Bucks Harbor, Maine 04618

February 12, 1981
Date

Bangor Daily News, Tuesday, December 1, 1981

Estuarine sanctuary proposal is Machiasport hearing topic

By Clayton Beal
NEWS Machias Bureau

MACHIASPORT — A public hearing at 7:30 p.m. Wednesday, Dec. 2, at Liberty Hall will focus on Howard Cove's Jasper Beach, as part of a proposal to establish a Maine Coast Estuarine Sanctuary at Machias Bay.

According to one of four key supporters of the proposal, Norman Famous of East Machias, the sanctuary is being sought for the primary purpose of preserving 48,880 acres of Maine-owned water in Machias Bay and about 600 acres of uplands, wetlands and islands on the bay.

He said public support is expected to be shown during the Wednesday meeting, emphasizing the need for preserving the bay area's ecosystem for future use in the fields of science, education and recreation.

Famous, who helped prepare the Draft Environmental Impact Statement, said Machias Bay was selected as the primary site in Maine for the proposed sanctuary because of its diversity of natural resources and because of the unprecedented show of support by the Friends of Jasper Beach, and by residents of Machiasport.

Two other sites, Marsh River in Newcastle and Drakes Island in Wells, will be included in the proposed sanctuary at a later date, pending future funding of the sanctuary project.

According to Marion Davis of Machiasport, the Machias Bay proposal may beccome the 11th sanctuary in the National Estuarine Sanctuary Program. She said each of the Acadian Biographic areas formed into estuarine

See ESTUARINE on Page 12

Estuarine sanctuary is hearing topic

● from page 1

sanctuaries are chosen because of their value as important reservoirs of natural resources. Native sources of clams and other shellfish, finfish and the natural foods available to support marine life, are held high on the list of reasons supporting the proposed sanctuary.

Davis said the public should understand the classification or recognition as a sanctuary is being sought to establish an official scientific designation of the area critical to the support of a high quality of natural life. The area would be protected against commercial encroachment and uses, but would be available to the public and organized educational purposes. It would be forever closed to mining and other ventures which would upset or destroy the sites' existing ecology.

Machias Bay is said to be a pristine, relatively undeveloped deep water estuarine system with a diversity of nationally significant biological features. The area, according to studies already performed, includes bald eagle nesting and feeding areas, seabird nesting areas, large shorebird feeding and resting areas, three species of endangered whales, two Atlantic salmon rivers, river salt marshes, pocket salt marshes, undeveloped rocky shores, coastal spruce-fir forested uplands, a coastal raised peatland ecosystem, and rare maritime plant species.

Maine has applied to the National Oceanic and Atmospheric Administration for an acquisition grant of approximately $500,000 to be matched with an equivalent amount of state, local or private funds or donations of land.

The public hearing will be conducted by NOAA officials and its Office of Coastal Zone Management. From Washington D.C, will be Ed Lindelos, sanctuary project manager; John Taul Tolson, public hearings officer; and a court reporter from OCZM.

Also present will be Alec Giffen, director of critical areas programs; Hank Tyler, assistant director of critical areas programs; and Joyce Gerardi, all from the Maine State Planning Office in Augusta.

According to Famous, the merits of the proposed sanctuary and its Draft Environmental Impact Statement will be discussed in detail at the meeting.

The proposed sanctuary, according to its supporters, will not add new regulations and restrictions on present uses of shellfishing, finfishing and low-intensity recreational day use.

State officials, according to Famous, believe the sanctuary could increase the productivity of the commercial fisherman through scientific research and proper management of the resource.

The economy of the Machias Bay area may benefit from sanctuary visitors, scientists and educators. Such proposed benefits would tend to offset all or part of the loss in property taxes to the local community.

Educational programs developed through the sanctuary are expected to benefit schools at every level throughout eastern Maine, Famous explained Monday in a prepared statement concerning the planned public airing of the proposal.

MAINE COAST HERITAGE TRUST

22 MONUMENT SQUARE
PORTLAND, MAINE 04101
(207) 775-1339

January 21, 1981

Mr. Lanier Greer, Executive Director
Washington County Regional Planning Commission
Machias, Maine 04654

Dear Nick:

I am attempting to build support for designation of the Machias Bay area as a National Estuarine Sanctuary. You probably are well aware of the nomination process which is underway. The enclosed literature explains things.

The specific area that I am talking about is that beginning with Great Wass Island on the west and ending with Fairy Head on the east. The scope was expanded beyond Machias Bay proper at the suggestion of the State Planning Office. Protection of portions of several "natural areas" (or local eco-systems) apparently is as viable an approach as protection of one complete natural area. Public access and traditional uses of the land will be maintained largely as they are now if designation of the greater Machias Bay area were to become fact. One and one half million to three million dollars would become available for land protection and research and educational uses of the sanctuary area. There would be some limited full-fee acquisition of very ecologically sensitive locations, but acquisition of development rights via purchase of easements would be the most fully utilized protection tool. In this way local control and private ownership of land continue to dominate while insensitive residential or commercial land use is minimized. The State of Maine would do the acquiring of property interests with NOAA funds on a 50% matching basis. The local match need not be in cash.

Conservation of the natural character of this geographic area (its islands and coastal property) tends to enhance the economic stability of local municipalities by avoiding drastic increases in costs to service new development. Fishing and other Maine industries are positively affected by preservation of self-supporting natural eco-systems. Tourism is positively affected since a key attraction is the unspoiled character of coastal Washington County.

In order to receive the nomination local support of the project must be in evidence. So far the State has received several letters from individuals supporting the idea. Would the R.P.C. be willing to send a letter of endorsement? Support from organizations such as yours is very important if designation of the subject area is to occur. I view the overwhelming local support of Jasper Beach protection as a complementary indication of local support, however it is not as broadly focused as is necessary to this nomination process.

Thank you for your interest and attention.

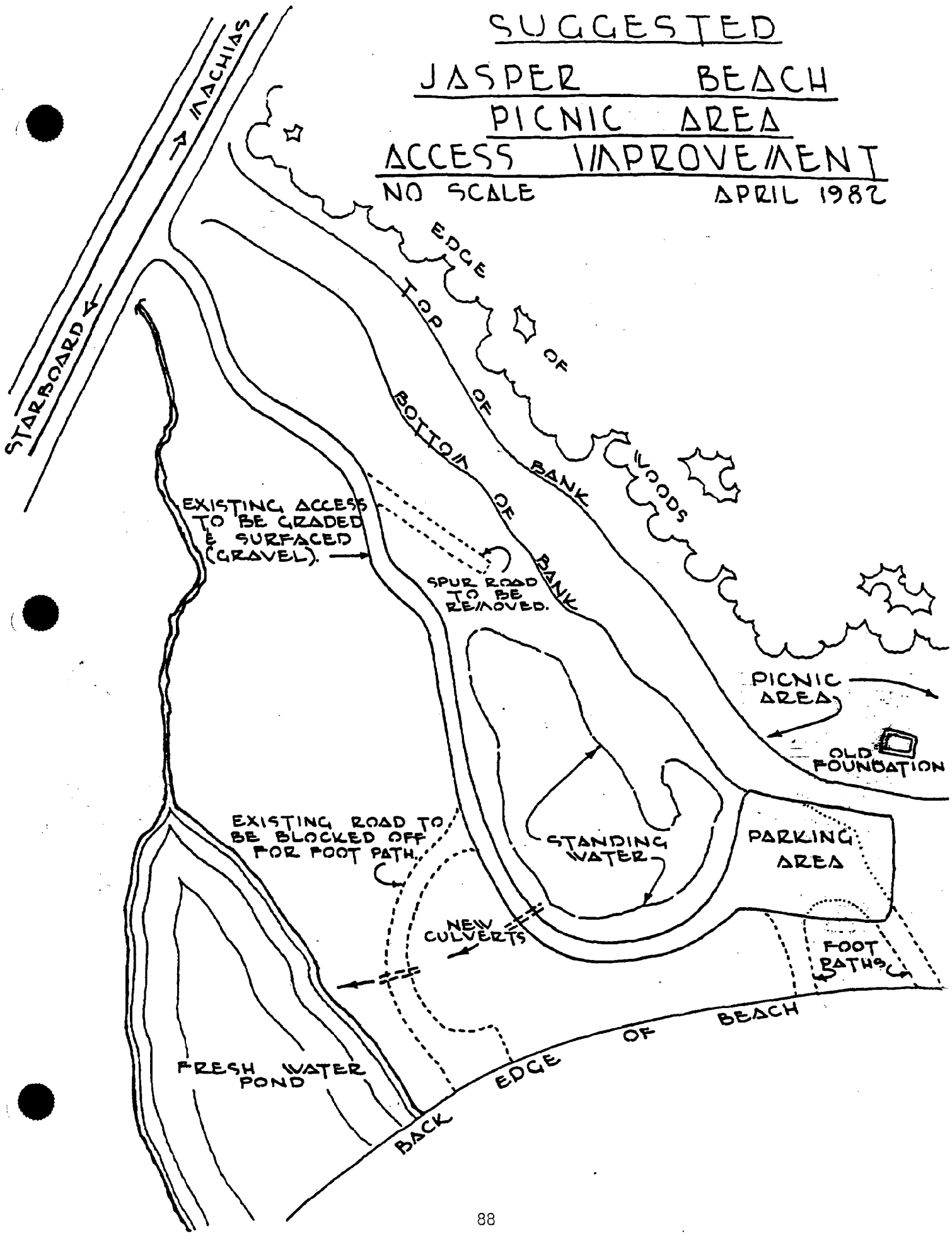
Sincerely,

Earl Ireland

Earl Ireland

EI:dy

Enclosure


SUGGESTED
JASPER BEACH
PICNIC AREA
ACCESS IMPROVEMENT
NO SCALE
APRIL 1982
MACHIAS
STARBOARD
EDGE OF WOODS
TOP OF BANK
BOTTOM OF BANK
EXISTING ACCESS TO BE GRADED & SURFACED (GRAVEL).
SPUR ROAD TO BE REMOVED.
PICNIC AREA
OLD FOUNDATION
EXISTING ROAD TO BE BLOCKED OFF FOR FOOT PATH.
STANDING WATER
PARKING AREA
NEW CULVERTS
FOOT PATHS
FRESH WATER POND
BACK EDGE OF BEACH

MACHIASPORT CONSERVATION COMMISSION

NEWSLETTER SUMMER 1983

VOLUME I NUMBER 1

Conservation Commission meetings are held the first Tuesday of each month at the Machiasport Town Hall at 7:30 P.M. You are invited to attend and contribute your ideas, support, and interest.

*

PURPOSE: This newsletter is being developed with the intent of keeping Machiasport residents informed about their most important resource, their natural resources. There will be a publication four times a year edited by the M.C.C. If you have information that would add to the newsletter the M.C.C. members would be glad to include it

MACHIASPORT QUAHOG RESEARCH PROJECT: Have you ever asked yourself; How old is a quahog when it is dragged? How old is a quahog when it spawns? How fast do they grow? How large a quahog resource do we actually have? How many rings a year show on the shell of a quahog? These are but a few of the questions the Machiasport Commission members asked themselves as they developed a grant request to the State Planning Office for funds to conduct a research project. The Dept. of Marine Resources through their technological advisor, Phil Averill conducted a workshop for the fishermen in June. Some information was learned from this meeting, but it was obvious that we need to learn a lot more in order to conserve the artica islandica or mahogany quahog in our bay. At the time of this newsletter the commission has learned that the town will receive $3,000 to conduct this research. We will be calling on many people to help make the project work well. Goals have been established and the information we gather will be finalized in December. At that time the M.C.C. will draw up their suggestions for the D.M.R. as far as the type of regulations they think the state shoud adopt. There will be an important meeting in September of many knowledgeable scientists in our Town Hall. We will post the date and time soon. We hope that all residents will come to this meeting to ask questions and learn the answers to some of ours. This is an issue which encompasses more than just fishermen.

MACHIASPORT HAS JOINED THE MAINE ASSOCIATION OF CONSERVATION COMMISSIONS
Other towns in this county that are members are Gouldsboro, Cherryfield, Steuben, Whitneyville. By joining this association our town will gain support from many conservation commissions in the state and have information constantly available of the conservation efforts that are in progress all over the state.

JASPER BEACH: The residents voted at the July 18th Town Meeting to pursue the acquisition of the access property to the beach owned by Ruby Longfellow. At this time there is a grant request in the office of the State Bureau of Parks and Recreation. This grant requests money for half the sale price of the property. The M.C.C. with the help you, your friends, everyone and anyone who could make a donation for the matching money hope to see this acquisition of public property for the town become a reality. The amount of money that all of us will need to raise is in the $20,000 bracket. This is a lot of money, but over a period of time with a lot of cooperation, fund raising ventures that churches, organizations, and individuals gifts it will shrink and the beach will be ours in perpetuity. LETS GET BEHIND THIS PROJECT! Contact any conservation member: Dana Urqhart, George Flynn, Al Larson Marion Davis

LC APP.

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AUGUSTA, MAINE 04330

BOARD ORDER

IN THE MATTER OF

TOWN OF MACHIASPORT Machiasport, Maine (Washington) FLOATS, LAUNCHING RAMP & CLEAN-UP #03-3284-29280	))))	Coastal Wetlands Alteration Act And Water Quality Certificatior FINDINGS OF FACT AND ORDER

After reviewing the project file and related materials submitted with regard to the above noted application under provisions of Title 38, Section 474 and Section 401 of P.L. 92-500, the Federal Water Pollution Control Act Amendments of 1972, the Board finds the following facts:

1. The project will not unreasonably interfere with existing recreational and navigational uses.

2. The project will not cause unreasonable soil erosion, however, extreme care should be taken in the removal and regrading of the adjacent piece of land 50' x 110'.

3. The project will not unreasonably harm wildlife or freshwater, estuarine, or marine fisheries.

4. The project will not unreasonably interfere with the natural flow of any waters.

5. There is reasonably assurance that the activity will not lower the quality of any waters or violate applicable Water Quality Standards.

HOWEVER, the Board approves the application of the Town of Machiasport to construct a wharf 10' x 110' to be held by pilings and place a 12' x 100' cement drive and clear a 50' x 110' area of logs and regrade subject to the following conditions:

1. The applicant will perform work only during low water.

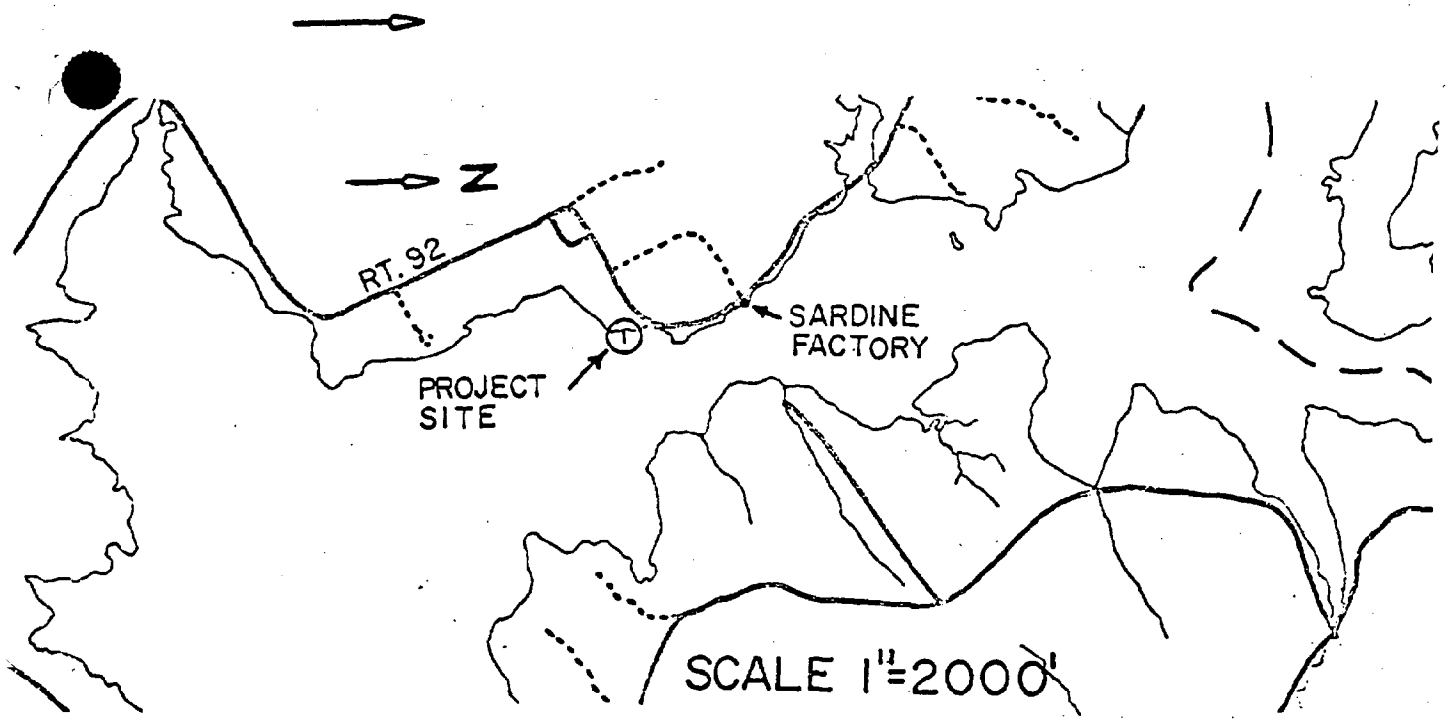
2. Any excess material from regrading and clean-up will be hauled away to a site approved by the Commissioner prior to actual removal.

DONE AND DATED AT AUGUSTA, MAINE, THIS 4TH DAY OF NOVEMBER, 1976.

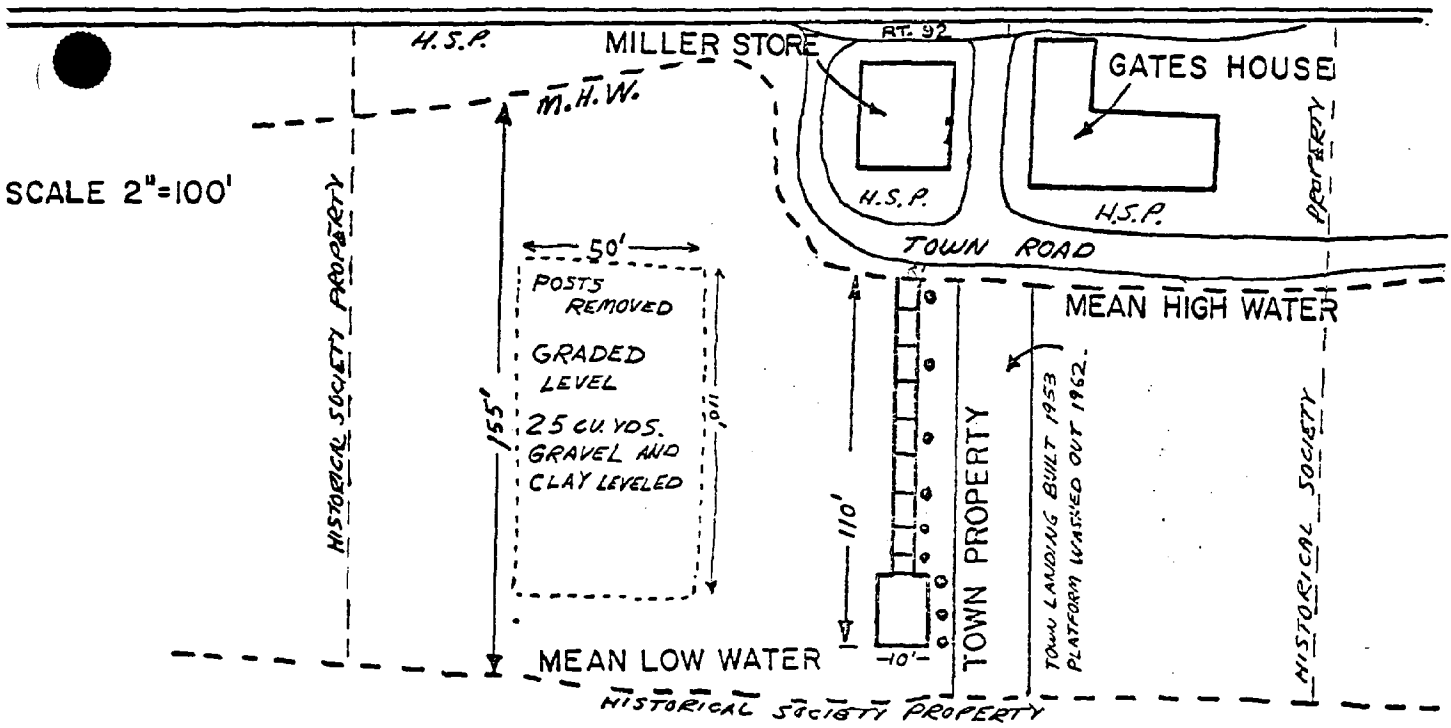
DEPARTMENT OF ENVIRONMENTAL PROTECTION

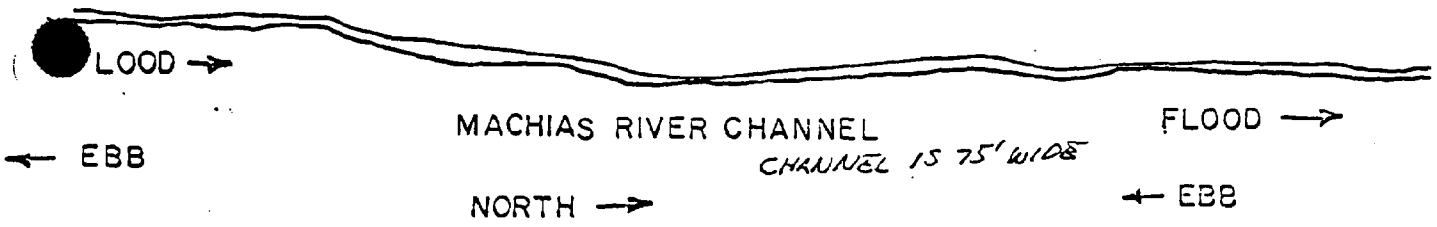
BY: Henry E. Warren, Acting
William R. Adams, Jr., Commissioner

PLEASE NOTE ATTACHED SHEET FOR APPEAL PROCEDURES.....

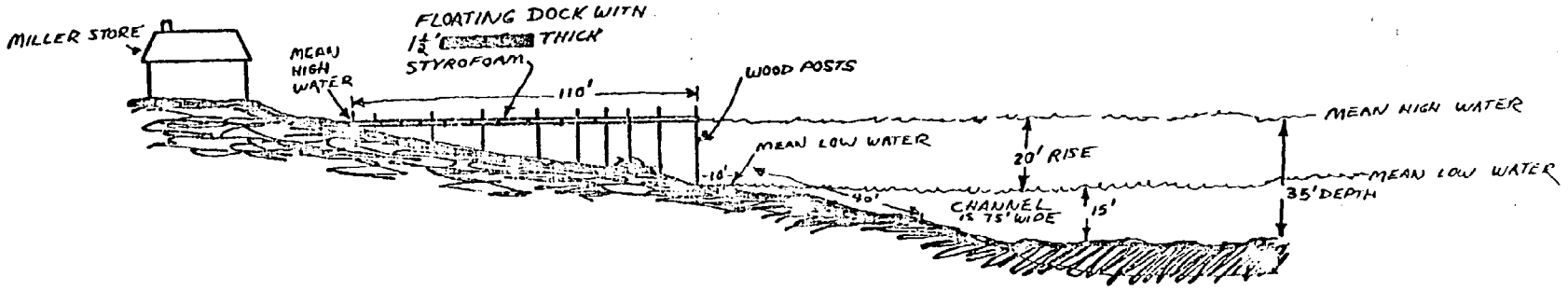


VICINITY MAP





SECTION VIEW



DOCK MOVES UP AND DOWN WITH TIDE - ATTACHED TO NINE WOODEN POSTS WITH CHAINS.

SCALE: 1" = 200'

Bucks Harbor dredging mulled

MACHIASPORT -- A $257,000 dredging project for the mooring and channel areas of Bucks Harbor could go out to bid early in February, as a result of discussions Tuesday morning involving the Army Corps of Engineers, fishermen, and other municipal and state authorities.

Representatives of the Corps of Engineers out of Waltham, Mass., joined in a public hearing Tuesday at Machiasport and determined that the non-polluting dredged materials from the Bucks Harbor anchorage area could be deposited at sea without complications.

The eleven-plus acres of the harbor floor have long been a problem to local lobster fishermen and other pilots using larger boats.

A total of 50,000 cubic yards of material is slated to be removed and deposited outside the harbor entrance. The project could start in late March or early in April after bids are returned and the contract awarded.

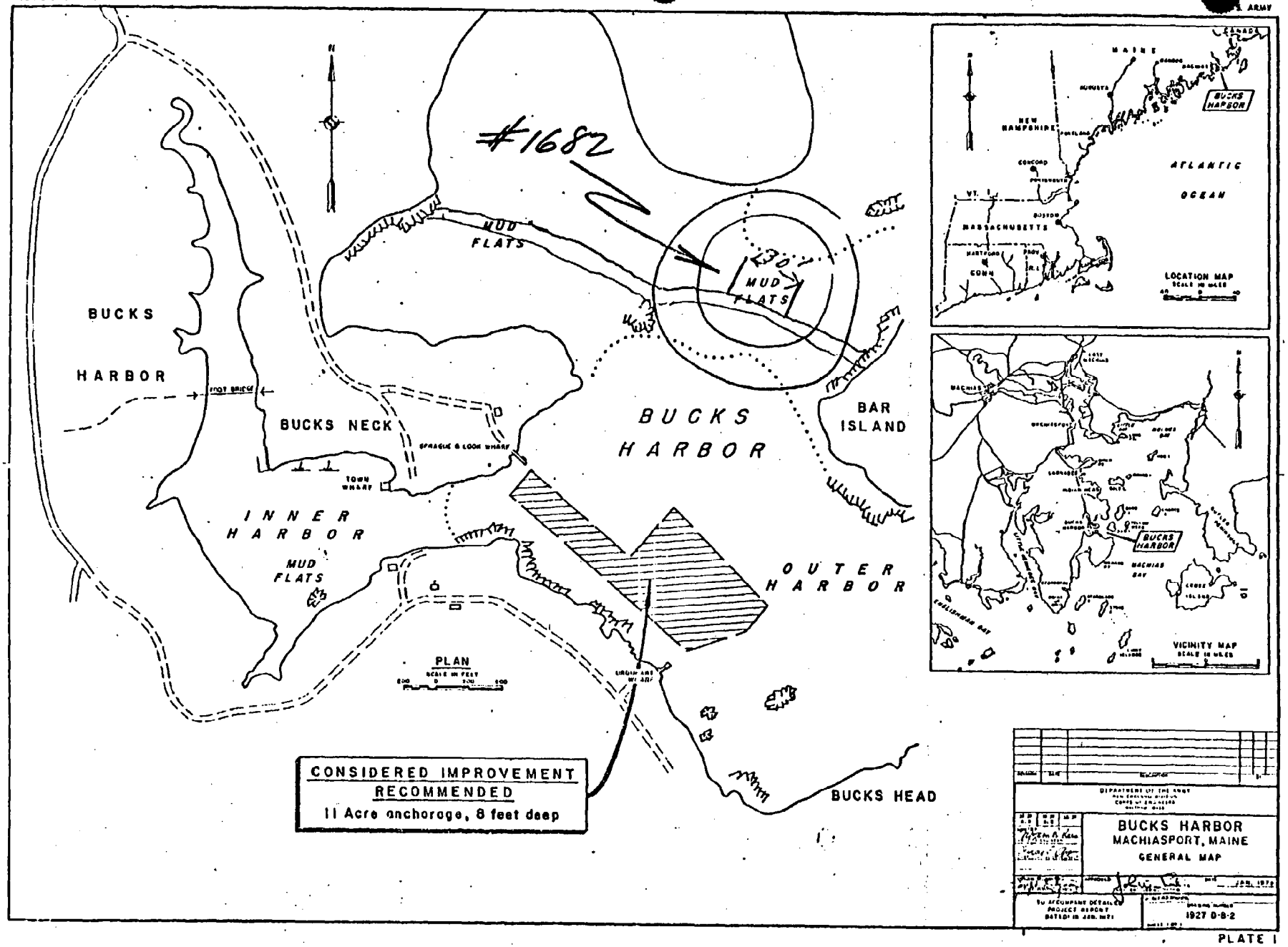
The Corps of Engineers, which was represented by two officials, is expected to report back to the Machiasport board of selectmen within 30 days, indicating whether final clearances permit the project going out to bid. Another 10 days will be needed to review the bids, and 20 days later the project is slated to start. In all, the project should involve four months of dredging near the Millard Urquhart Jr. wharf and another pier owned by Roy Sprague.

Douglas Stanhope, chairman of the local board of selectmen, noted that the project should represent an economic boost to the area because of the increased ability of fishermen to perform their work.

Others represented at the session were John Hurst of the Sea and Shore Fisheries Department, Second Selectman Harold Sprague, and Sea and Shore Fisheries Warden Wendell Long of Machias and Biologist Malcolm Richards of Sullivan.

CORPS OF ENGINEERS

U.S. ARMY



BUCKS HARBOR
MACHIASPORT, MAINE
GENERAL MAP

JUNE 1972

1927 D-9-2

PLATE I

1985

HARBOR MANAGEMENT ORDINANCE
Town of Machiasport

SECTION I. Channel

Clear a one hundred foot wide channel at the mouth of Bucks Harbor commencing at the old weirs located on the east and west sides with a direct path to within one hundred feet of the Bucks Harbor Co-op wharf. This channel then narrows to a fifty foot wide channel (measured at low water mark) into the creek area.

SECTION II. Clearance

No boat can swing within one hundred feet of wharves or docks. Note: Lobster cars and bait cars, which are connected to wharves, which are connected to land, are also considered docks.

SECTION III. Moorings

A. The present mooring scheme(using granite block, chain, pole, etc.) is satisfactory at this time.
B. All moorings must be cleared through the Harbor Master and the Bucks Harbor Improvement Committee.
C. No boat can have a bridle longer than the overall length of the boat before it is spliced.
D. All moorings must be so marked as to be visible at all times.
E. The use of present mooring poles meets with the committee's approval at the present time. However, pole replacement must be brought before the Bucks Harbor Improvement Committee. It is the concern of the committee that all pole moorings be replaced with chain type.
F. Ownership of moorings cannot be transfered.

SECTION IV. Application, Renewal and Mooring Fees

A. This ordinance applies to resident and non-resident owners alike.
B. All moorings will be renewed every two years.
C. Fees for commercial boats will be $5.00 every two years. Fees for pleasure boats will be $10.00 every two years.

SECTION V. Speed

The Bucks Harbor speed limit shall not exceed five knots commencing at the harbor entrance buoy.

SECTION VI. Floats

Floats are to be located in the designated float areas. The float owners will locate their floats in the specific locations as designated and approved by the Harbor Master and the Bucks Harbor Improvement Committee.

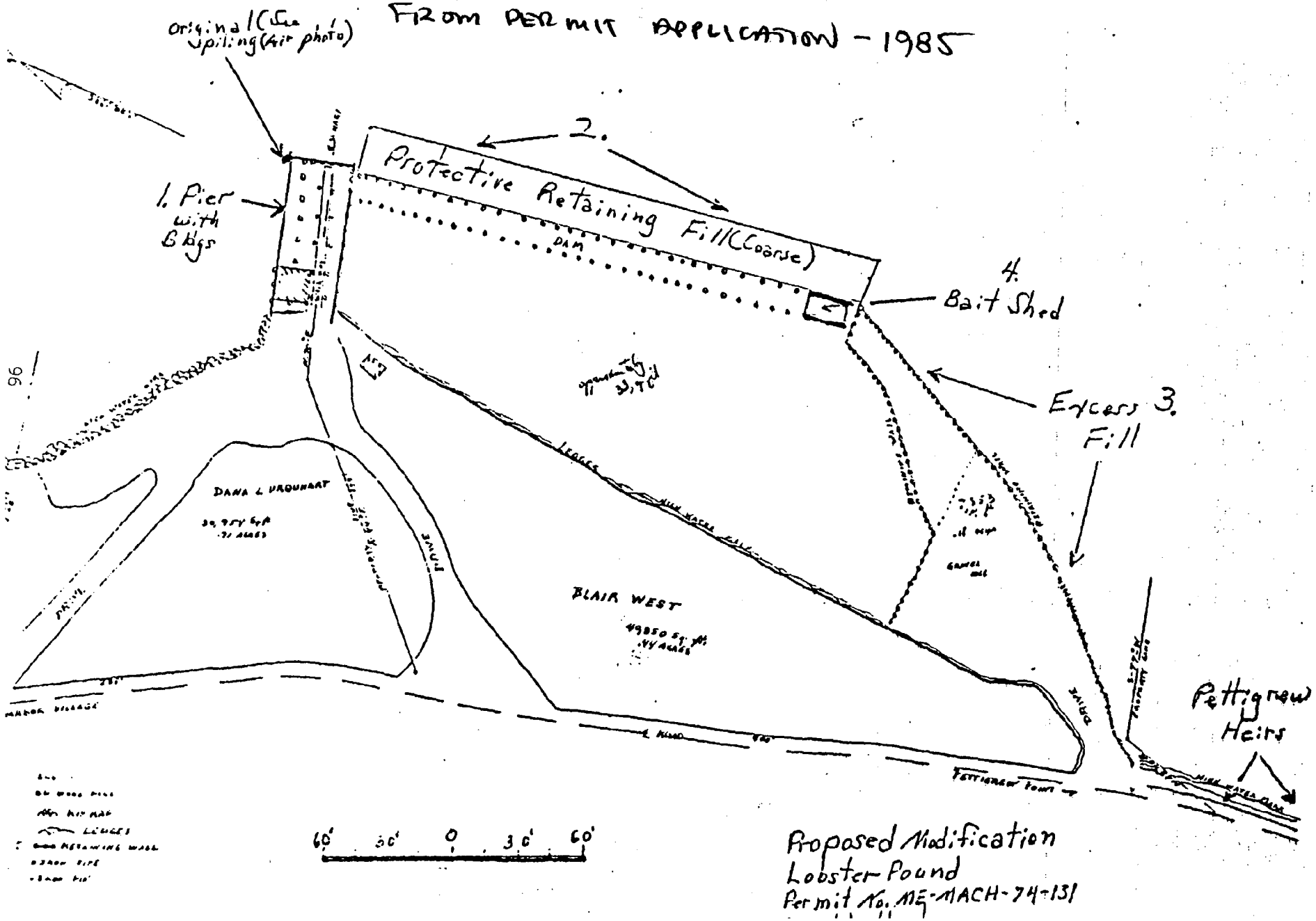
SECTION VII. Beach Maintenance

The Harbor Master and the Bucks Harbor Improvement Committee will have the right to clean up beaches associated with Bucks Harbor.

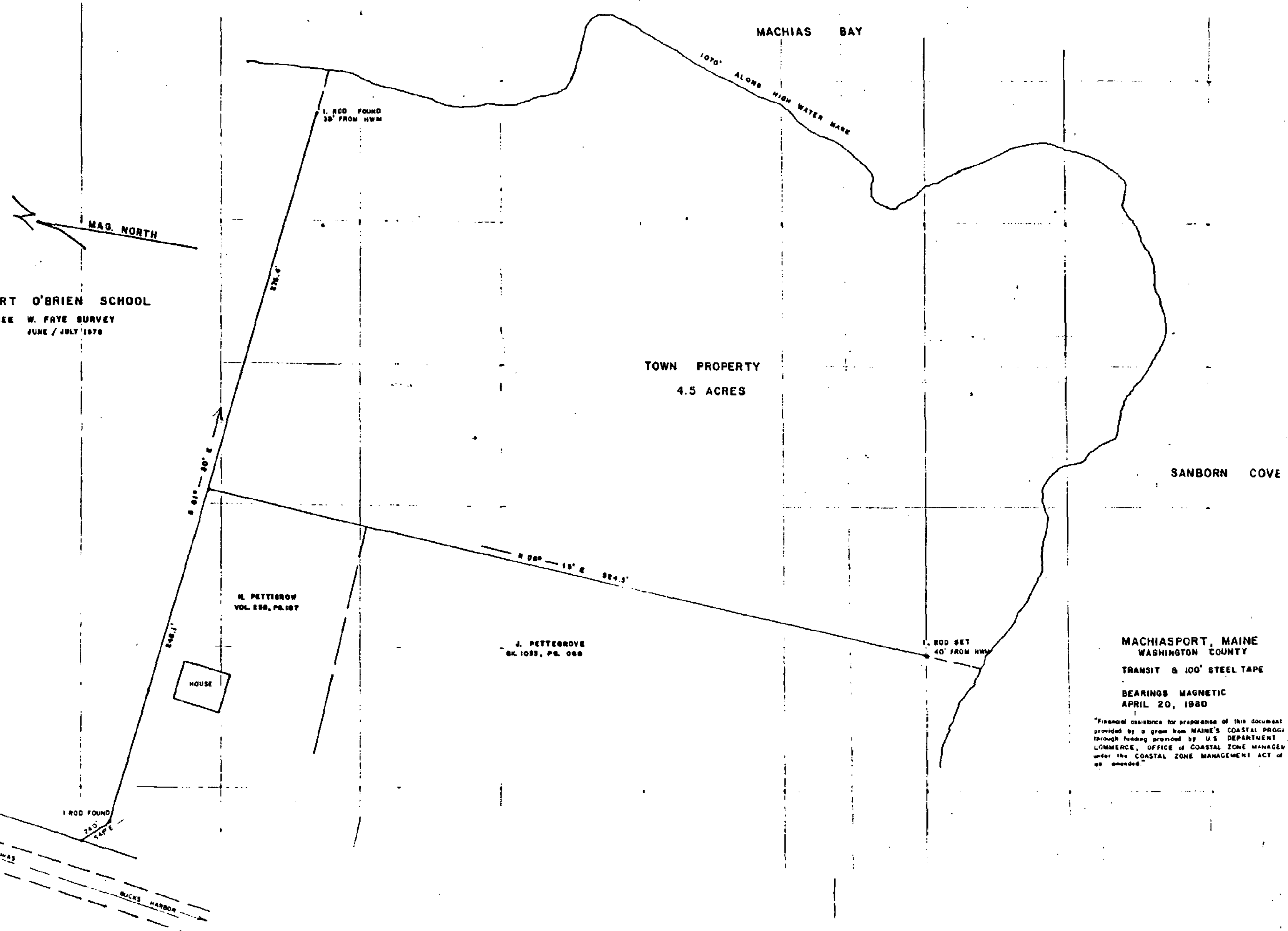
SECTION VIII. Future Ordinances

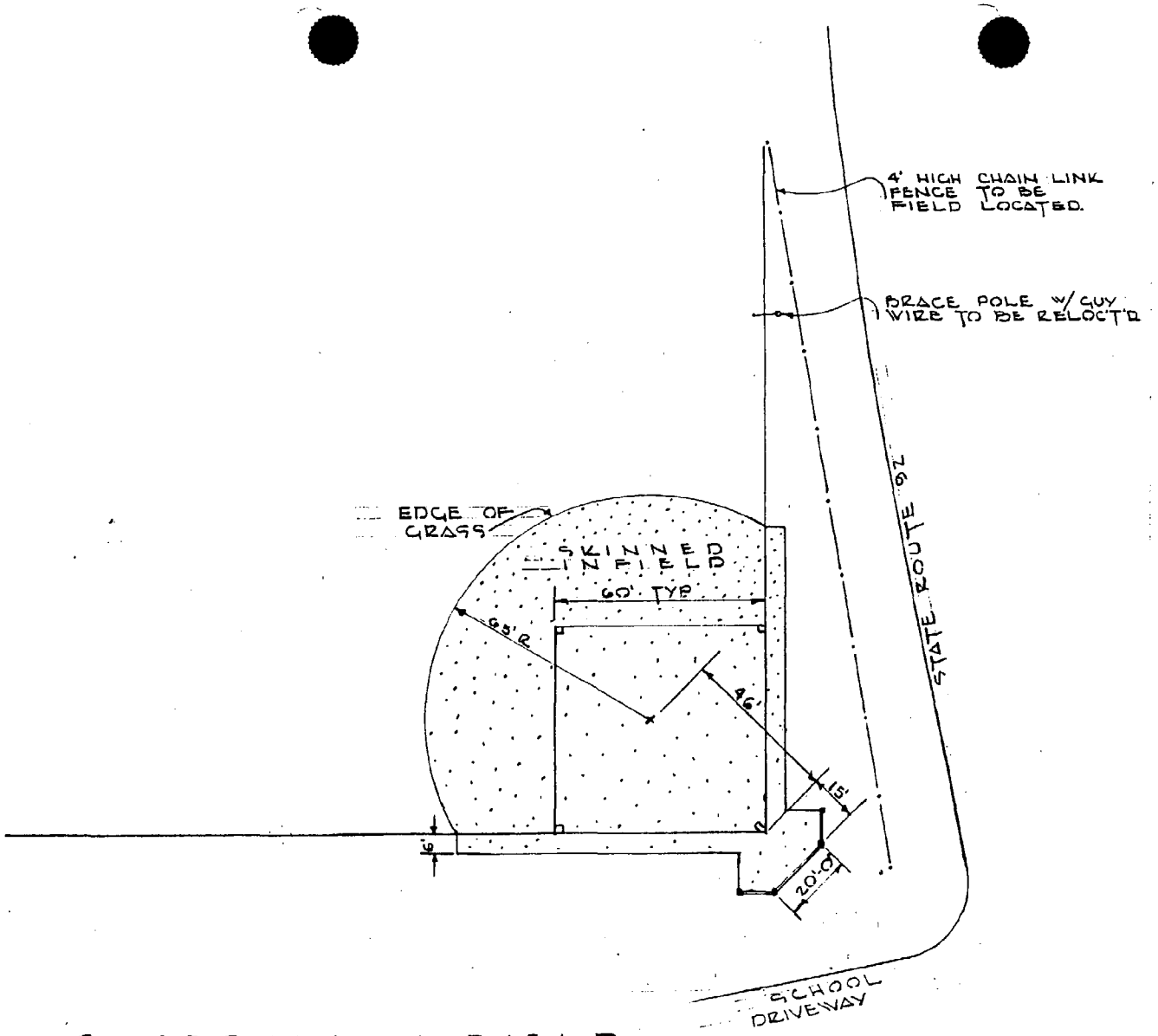
The committee shall have the right to propose new ordinances as applicable in the future.

BLAIR WEST LOBSTER POUND
(With Modification)
FROM PERMIT APPLICATION - 1985



Proposed Modification
Lobster Pound
Permit No. ME-MACH-74-131


MACHIAS BAY
1070' ALONG HIGH WATER MARK
SANBORN COVE
1. ROD FOUND 35' FROM HWM
MAG. NORTH
FORT O'BRIEN SCHOOL
SEE W. FRYE SURVEY
JUNE / JULY 1978
TOWN PROPERTY
4.5 ACRES
N. PETTIGROW
VOL. 258, PG.107
J. PETTEGROVE
BK. 1033, PG. 089
HOUSE
I ROD FOUND
I. ROD SET
40' FROM HWM
BUCKS HARBOR
MACHIASPORT, MAINE
WASHINGTON COUNTY
TRANSIT & 100' STEEL TAPE
BEARINGS MAGNETIC
APRIL 20, 1980
"Financial assistance for preparation of this document provided by a grant from MAINE'S COASTAL PROG through funding provided by U.S DEPARTMENT COMMERCE, OFFICE of COASTAL ZONE MANAGEM under the COASTAL ZONE MANAGEMENT ACT of as amended."

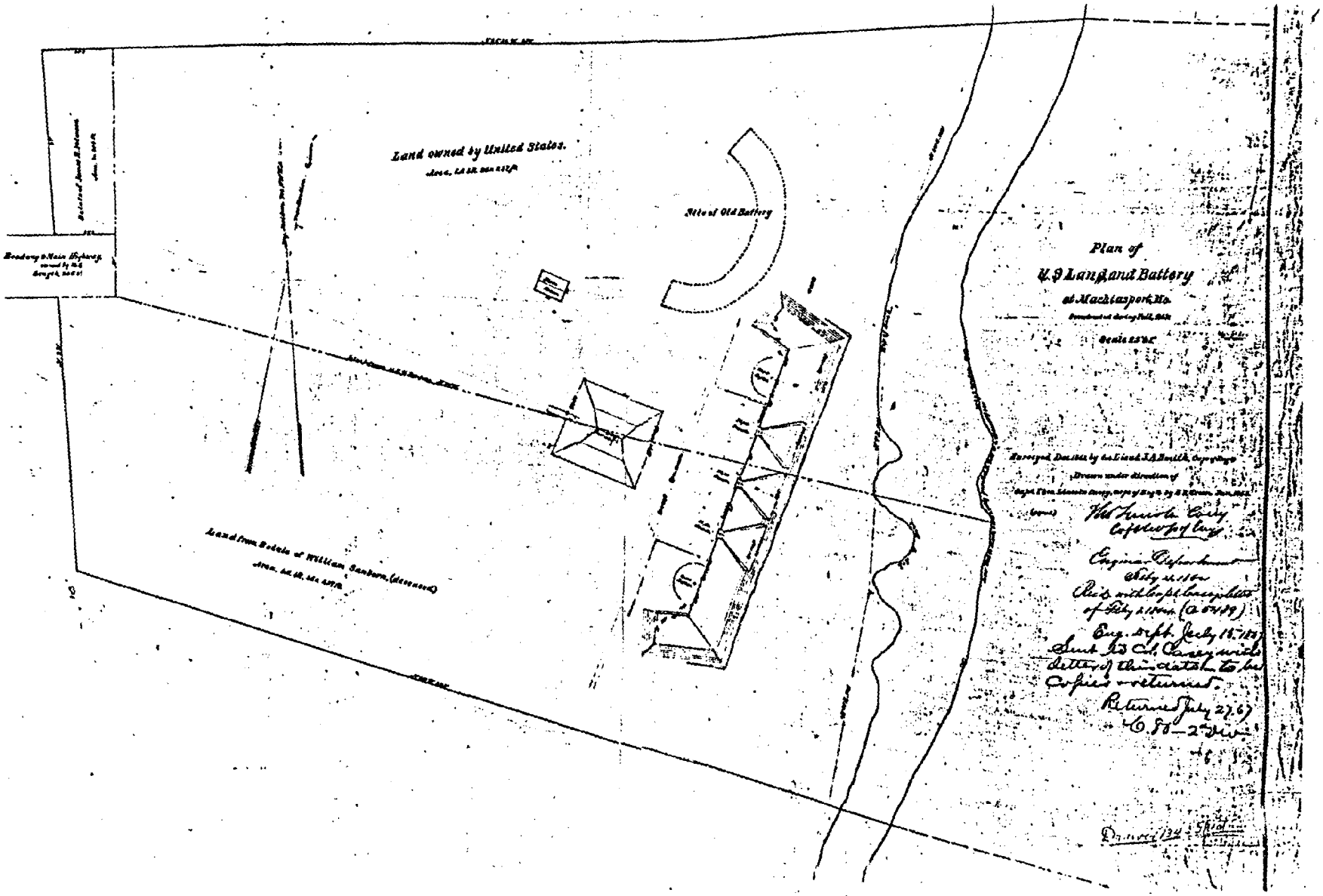


NOTE
LOCATION APPROXIMATE.
HOMEPLATE & ORIENTATION TO BE FIELD LOCATED.

BASEBALL FIELD

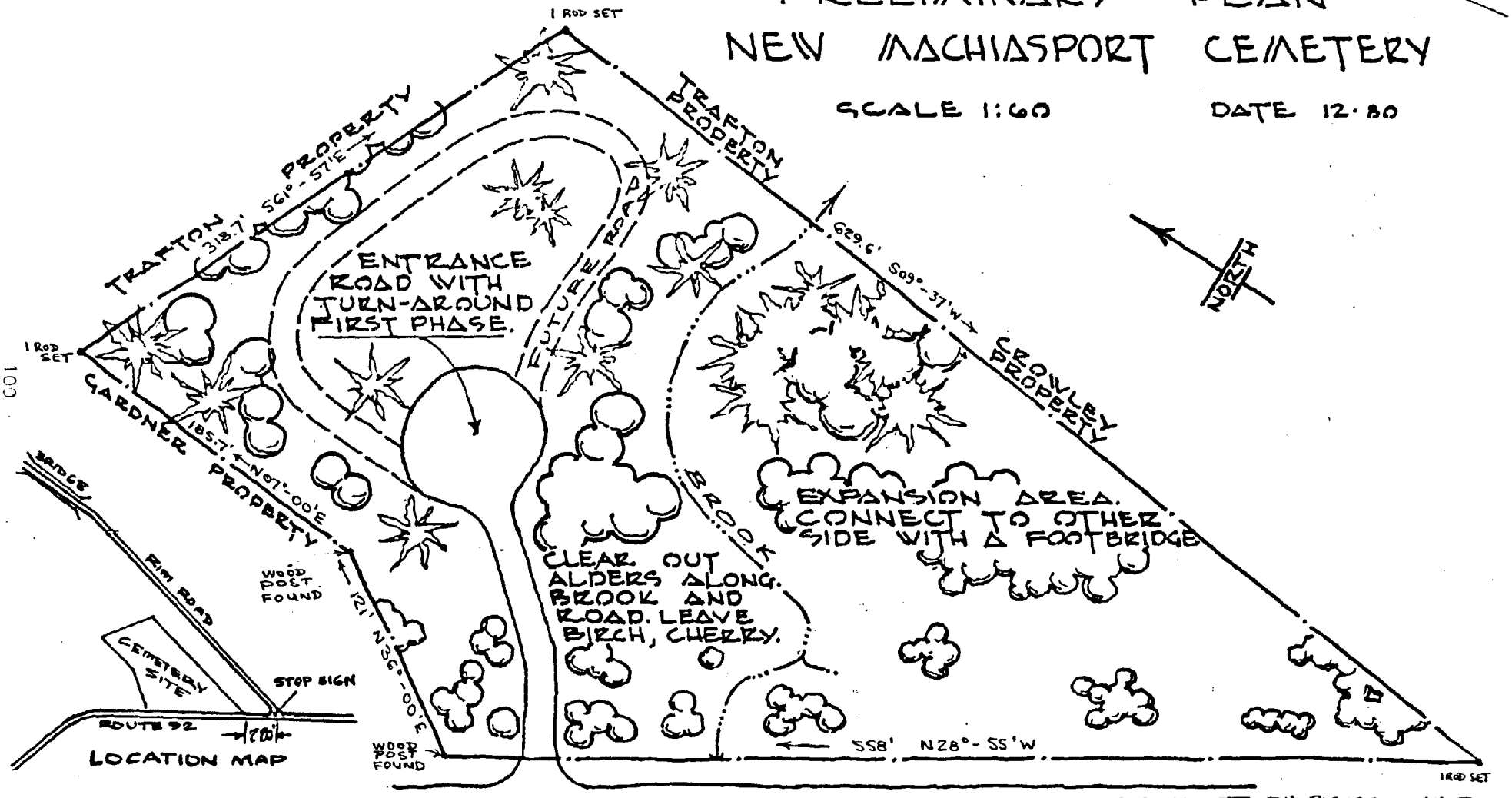
FORT O'BRIEN SCHOOL ATHLETIC FIELD AND PLAYGROUND

PREPARED BY	DATE	MACHIASPORT	SHEET 4 OF 6
WCRPC (K)	3/81	MAINE	


Land owned by United States.
Site of Old Battery
Land from Estate of William Sanborn, (deceased)
Plan of
U.S. Land and Battery
at Machiasport Me.
Scale 1 Inch
Engineer Department
July 11 1870
Rec'd with Capt Langfitt's
of July 1 1870 (A 6419)
Eng. Office July 15 1870
Sent to Col Casey with
letter of this date to be
Copies returned.
Returned July 27 70
6 80 — 2nd Dist.

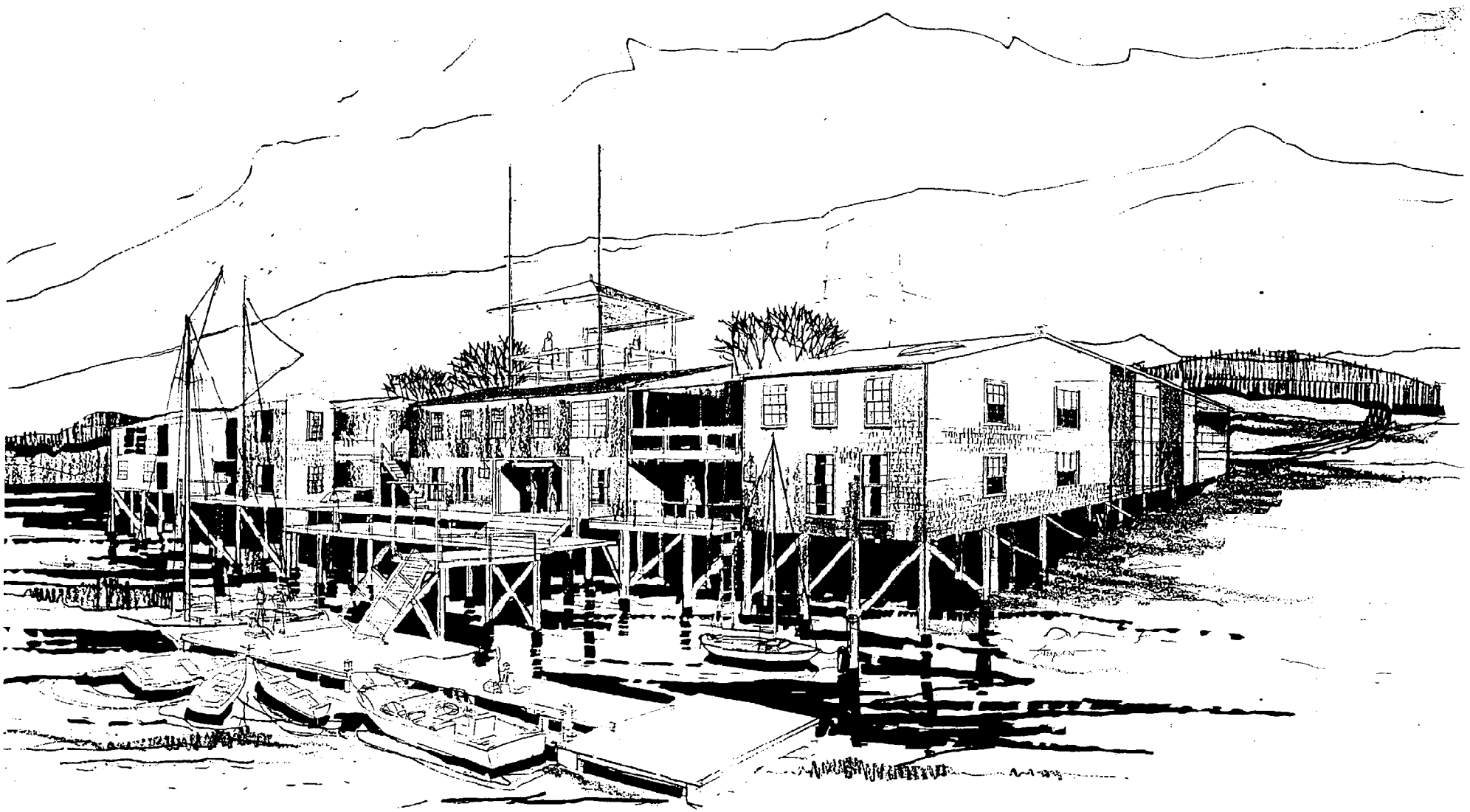
PRELIMINARY PLAN
NEW MACHIASPORT CEMETERY

SCALE 1:60 DATE 12·80



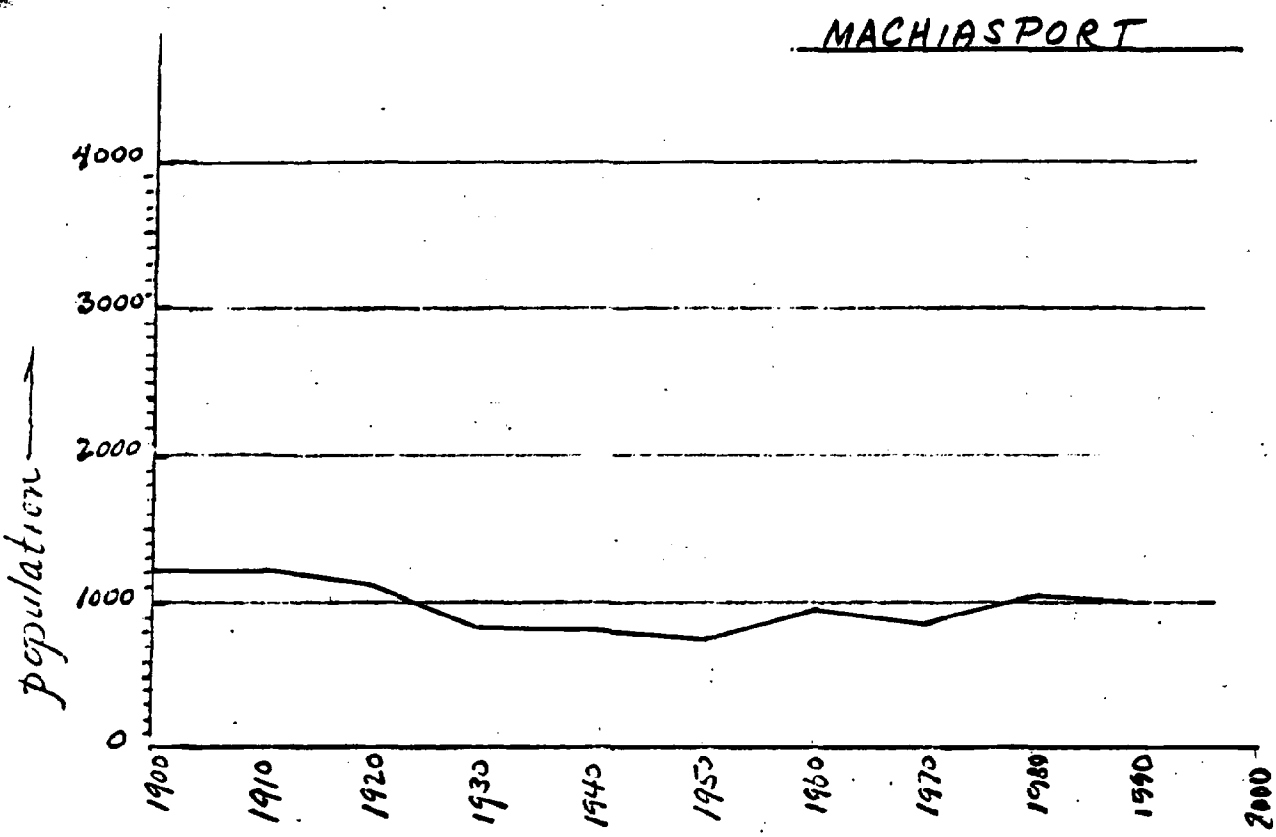
NOTE: SURVEY DATA BY RICHARD M'KEE NOVEMBER 2, 1980.

PLAN PREPARED BY WASHINGTON COUNTY REGIONAL PLANNING



KRUMBHAAR AND HOLT ASSOCIATED ARCHITECTS

101 P. T HARBOR CONDOMINIUMS MACHIASPORT MAINE



1900	1218
1910	1218
1920	1117
1930	825
1940	818
1950	781
1960	980
1970	807
1980	1108
1990	1100*

*Maine Department of Human Services estimate probably wrong.

TABLE 1: URBAN AND RURAL - COUNT OF PERSONS

TOTAL	1 108
INSIDE URBANIZED AREAS	0
RURAL	1 108

TABLE 2: COUNT OF FAMILIES 308

TABLE 3: COUNT OF HOUSEHOLDS 376

TABLE 4: URBAN AND RURAL HOUSING UNITS (INC. SEASONAL AND MIGRATORY)

TOTAL	489
INSIDE URBANIZED AREAS	0
RURAL	489

TABLE 5: OCCUPANCY STATUS - COUNT OF YEAR ROUND HOUSING UNITS

TOTAL	418
OCCUPIED	376
VACANT	42

TABLE 6: SEX - COUNT OF PERSONS

MALE	550
FEMALE	558

TABLE 10: AGE - COUNT OF PERSONS

	TOTAL	MALE	FEMALE
UNDER 1 YEAR	25	14	11
1 AND 2 YEARS	36	18	18
3 AND 4 YEARS	41	28	13
5 YEARS	17	6	11
6 YEARS	19	7	12
7 TO 9 YEARS	55	31	24
10 TO 13 YEARS	71	35	36
14 YEARS	22	11	11
15 YEARS	23	10	13
16 YEARS	19	7	12
17 YEARS	18	7	11
18 YEARS	14	3	11
19 YEARS	17	6	11
20 YEARS	13	6	7
21 YEARS	16	6	10
22 TO 24 YEARS	56	29	27
25 TO 29 YEARS	87	45	42
30 TO 34 YEARS	76	39	37
35 TO 44 YEARS	132	69	63
45 TO 54 YEARS	112	58	54
55 TO 59 YEARS	48	25	23
60 AND 61 YEARS	16	9	7
62 TO 64 YEARS	27	17	10
65 TO 74 YEARS	94	41	53
75 TO 84 YEARS	39	20	19
85 YEARS AND OVER	15	3	12
TABLE 11: MEDIAN AGE BY SEX	30.3	30.8	29.9

TABLE 12: RACE BY AGE - COUNT OF PERSONS

	TOTAL	WHITE	BLACK
UNDER 5 YEARS	102	100	---
5 TO 17 YEARS	244	243	---
18 TO 64 YEARS	614	611	---
65 YEARS AND OVER	148	148	---

TABLE 14: SEX BY MARITAL STATUS - COUNT OF PERSONS 15 YEARS AND OVER

	MALE	FEMALE
SINGLE	77	76
NOW MARRIED, EXCEPT SEPARATED	275	269
SEPARATED	6	5
WIDOWED	19	43
DIVORCED	24	30

TABLE 15: HOUSEHOLD TYPE AND RELATIONSHIP - COUNT OF PERSONS

IN FAMILY HOUSEHOLD:	
HOUSEHOLDER	308
SPOUSE	260
OTHER RELATIVES	416
NONRELATIVES	29
IN NONFAMILY HOUSEHOLD:	
MALE HOUSEHOLDER	31
FEMALE HOUSEHOLDER	37
NONRELATIVES	17
IN GROUP QUARTERS:	
INMATE OF INSTITUTION	0
OTHER	10

TABLE 16: PERSONS IN HOUSEHOLD AND HOUSEHOLD TYPE - COUNT OF HOUSEHOLDS

1 PERSON: MALE HOUSEHOLDER	25
FEMALE HOUSEHOLDER	33
2 OR MORE PERSONS:	
MARRIED COUPLE FAMILY	260
OTHER FAMILY:	
MALE HOUSEHOLDER, NO WIFE PRESENT	14
FEMALE HOUSEHLDR, NO HUSBAND PRESENT	34
NONFAMILY HOUSEHOLD:	
MALE HOUSEHOLDER	6
FEMALE HOUSEHOLDER	4

TABLE 17: HOUSEHOLD TYPE AND RELATIONSHIP - COUNT OF PERSONS UNDER 18 YEARS

IN HOUSEHOLD:	
HOUSEHOLDER OR SPOUSE	0
OWN CHILD OF HOUSEHOLDER:	
IN MARRIED COUPLE FAMILY	269
IN OTHER FAMILY	45
OTHER RELATIVES	15
NONRELATIVES	17
IN GROUP QUARTERS:	
INMATE OF INSTITUTION	0
OTHER	0

TABLE 18: AGE - COUNT OF RELATED CHILDREN

UNDER 5 YEARS	100
5 TO 17 YEARS	229

TABLE 19: HOUSEHOLD TYPE - COUNT OF HOUSEHOLDS WITH ONE OR MORE PERSONS UNDER 18 YEARS

MARRIED-COUPLE FAMILY	142
OTHER FAMILY: MALE HOUSEHOLDER, NO WIFE PRESENT	4
FEMALE HOUSEHLDR, NO HUSB.PRESENT	25
NONFAMILY HOUSEHOLD	2

TABLE 20: HOUSEHOLD TYPE AND RELATIONSHIP - COUNT OF PERSONS 65 YEARS OLD AND OVER

IN FAMILY HOUSEHOLD:	HOUSEHOLDER	55
	SPOUSE	43
	OTHER RELATIVES	11
	NONRELATIVES	3
IN NONFAMILY HOUSEHOLD:	MALE HOUSEHOLDER	11
	FEMALE HOUSEHOLDER	22
	NONRELATIVES	3
IN GROUP QUARTERS:	INMATE OF INSTITUTION	0
	OTHER	0

TABLE 21: PERSONS IN HOUSEHOLD AND HOUSEHOLD TYPE - COUNT OF HOUSEHOLDS WITH ONE OR MORE PERSONS 60 YEARS OLD AND OVER

1 PERSON		35
2 OR MORE PERSONS:	FAMILY HOUSEHOLD	98
	NONFAMILY HOUSEHOLD	4

TABLE 22: PERSONS IN HOUSEHOLD AND HOUSEHOLD TYPE - COUNT OF HOUSEHOLDS WITH ONE OR MORE PERSONS 65 YEARS OLD AND OVER

1 PERSON		30
2 OR MORE PERSONS:	FAMILY HOUSEHOLD	70
	NONFAMILY HOUSEHOLD	3

TABLE 23: TENURE BY AGE OF HOUSEHOLDER - COUNT OF OCCUPIED HOUSING UNITS WITH ONE OR MORE PERSONS 65 YEARS OLD AND OVER

	TOTAL	OWNER OCCUPIED	RENTER OCCUPIED
HOUSEHOLDER UNDER 65 YEARS	15	15	0
HOUSEHOLDER 65 YEARS AND OVER	88	80	8

TABLE 24: HOUSEHOLDS WITH ONE OR MORE NONRELATIVES 33

TABLE 25: VACANCY STATUS - COUNT OF VACANT YEAR-ROUND HOUSING UNITS

FOR SALE ONLY	4
FOR RENT	0
HELD FOR OCCASIONAL USE	12
OTHER VACANT	26

TABLE 26: TENURE - COUNT OF OCCUPIED HOUSING UNITS

	TOTAL	OWNER OCCUPIED	RENTER OCCUPIED
OCCUPIED HOUSING UNITS	376	319	57

TABLE 27: TENURE BY RACE OF HOUSEHOLDER - COUNT OF OCCUPIED HOUSING UNITS

	TOTAL	OWNER OCCUPIED	RENTER OCCUPIED
WHITE	376	319	57
BLACK	0	0	0
AMERICAN INDIAN,ESKIMO,AND ALEUT	0	0	0
ASIAN AND PACIFIC ISLANDER	0	0	0
OTHER	0	0	0

TABLE 29: TENURE AND VACANCY STATUS - COUNT OF YEAR-ROUND CONDOMINIUM HOUSING UNITS

TOTAL	0
RENTER OCCUPIED	0
VACANT FOR SALE ONLY	0
OTHER VACANT	0

TABLE 30: ROOMS - COUNT OF YEAR-ROUND HOUSING UNITS

1 ROOM	1
2 ROOMS	11
3 ROOMS	24
4 ROOMS	75
5 ROOMS	111
6 OR MORE ROOMS	196

TABLE 31: MEDIAN ROOMS - YEAR-ROUND HOSUSING UNITS 5.4

TABLE 33: TENURE BY PERSONS IN UNIT - COUNT OF OCCUPIED HOUSING UNITS

	TOTAL	OWNER OCCUPIED	RENTER OCCUPIED
1 PERSON	58	44	14
2 PERSONS	124	106	18
3 PERSONS	73	64	9
4 PERSONS	66	57	9
5 PERSONS	34	30	4
6 OR MORE PERSONS	21	18	3

TABLE 34: MEDIAN PERSONS PER UNIT 2.58

TABLE 35: MEAN PERSONS PER UNIT 2.92

TABLE 36: TENURE - COUNT OF PERSONS IN OCCUPIED HOUSING UNITS

	TOTAL	OWNER OCCUPIED	RENTER OCCUPIED
COUNT OF PERSONS	1 098	947	151

TABLE 37: TENURE BY PERSONS PER ROOM - COUNT OF OCCUPIED HOUSING UNITS

	TOTAL	OWNER OCCUPIED	RENTER OCCUPIED
1.00 OR LESS	360	308	52
1.01 - 1.50	13	8	5
1.51 OR MORE	3	3	0

TABLE 38: VALUE - COUNT OF SPECIFIED OWNER-OCCUPIED NONCONDOMINIUM HOUSING UNITS

LESS THAN $10,000	22
$10,000 TO $14,999	11
$15,000 TO $19,999	14
$20,000 TO $24,999	19
$25,000 TO $29,999	12
$30,000 TO $34,999	18
$35,000 TO $39,999	16
$40,000 TO $49,999	47
$50,000 TO $79,999	16
$80,000 TO $99,999	2
$100,000 TO $149,999	4
$150,000 TO $199,999	0
$200,000 OR MORE	0

TABLE 39: MEDIAN VALUE - SPECIFIED OWNER-OCCUPIED NONCONDOMINIUM HOUSING UNITS 33 500

TABLE 41: OCCUPANCY STATUS - COUNT OF SPECIFIED OWNER-OCCUPIED AND VACANT-FOR-SALE-ONLY NONCONDOMINIUM HOUSING UNITS

OWNER OCCUPIED	181
VACANT-FOR-SALE-ONLY	4

TABLE 43: CONTRACT RENT - COUNT OF SPECIFIED RENTER-OCCUPIED HOUSING UNITS

WITH CASH RENT:	
LESS THAN $50	0
$ 50 TO $ 99	4
$100 TO $119	2
$120 TO $139	1
$140 TO $149	0
$150 TO $159	3
$160 TO $169	0
$170 TO $199	3
$200 TO $249	8
$250 TO $299	1
$300 TO $399	1
$400 TO $499	0
$500 OR MORE	0
NO CASH RENT	27

TABLE 44: MEDIAN CONTRACT RENT - SPECIFIED RENTER-OCCUPIED HOUSING UNITS PAYING CASH RENT 185

TABLE 46: OCCUPANCY STATUS - COUNT OF SPECIFIED RENTER-OCCUPIED PAYING CASH RENT AND VACANT-FOR-RENT HOUSING UNITS

RENTER OCCUPIED	23
VACANT-FOR-RENT	0

TABLE 47: TENURE AND OCCUPANCY STATUS BY PLUMBING FACILITIES - COUNT OF YEAR-ROUND HOUSING UNITS

	TOTAL OCCUPIED	OWNER OCCUPIED	RENTER OCCUPIED	TOTAL OCCUPIED AND VACANT
COMPLETE PLUMBING FOR EXCLUSIVE USE	323	278	45	350
LACKING COMPLETE PLUMBING FOR EXCLUSIVE USE	53	41	12	68

TABLE 48: TENURE - COUNT OF OCCUPIED HOUSING UNITS WITH 1.01 OR MORE PERSONS PER ROOM LACKING COMPLETE PLUMBING FACILITIES FOR EXCLUSIVE USE

	TOTAL OCCUPIED	OWNER OCCUPIED	RENTER OCCUPIED
COUNT OF HOUSING UNITS	4	4	0

TABLE 49: TENURE - COUNT OF PERSONS IN OCCUPIED HOUSING UNITS WITH 1.01 OR MORE PERSONS PER ROOM

	TOTAL OCCUPIED	OWNER OCCUPIED	RENTER OCCUPIED
COUNT OF PERSONS	99	74	25

TABLE 50: PERSONS IN OCCUPIED HOUSING UNITS LACKING COMPLETE PLUMBING FACILITIES FOR EXCLUSIVE USE 120

TABLE 51: PLUMBING FACILITIES - COUNT OF PERSONS IN OCCUPIED HOUSING UNITS WITH 1.01 OR MORE PERSONS PER ROOM

COMPLETE PLUMBING FOR EXCLUSIVE USE	78
LACKING COMPLETE PLUMBING FOR EXCLUSIVE USE	21

TABLE 52: VACANT YEAR-ROUND HOUSING UNITS BOARDED UP 3

TABLE 53: VACANT-FOR-RENT HOUSING UNITS WHICH HAVE BEEN VACANT 2 OR MORE MONTHS 0

TABLE 54: VACANT-FOR-SALE-ONLY HOUSING UNITS WHICH HAVE BEEN VACANT 6 OR MORE MONTHS 3

TABLE 55: UNITS AT ADDRESS - COUNT OF YEAR-ROUND HOUSING UNITS

1 UNIT	332
2 TO 9 UNITS	19
10 OR MORE UNITS	0
MOBILE HOME OR TRAILER	67

Full Value Tax Rates

State valuations for Maine communities in 1988 rose approximately 15½ percent over last year's valuation to $37 billion. Total property taxes assessed by local governments in 1987 amounted to approximately $625 million. The average statewide full value tax rate (1987 total municipal assessment divided by the 1988 state valuation) is 16.89 mils ($16.89 per $1,000 valuation).

The following listing gives the 1988 State Valuation, the 1987 tax assessment, and the full value tax rate for every municipality. Full Value is computed by dividing the 1987 tax assessment by the 1988 State Valuation. The 1988 State Valuation reflects property values approximately 1½-2 years old. This time lag causes some of the Full Value numbers to be an inaccurate portrayal of a municipality's property tax situation. For those communities which experienced either a dramatic rise or steep decline in local valuation for their 1987 fiscal year, it would be improper to draw conclusions about their Full Value tax rates in relation to other municipalities.

Figures used below were taken from the Municipal Valuation Returns sent to the Division of Property Tax, State Bureau of Taxation.

ABOUT THESE TAX RATES

For about 15 years, the February issue of the TOWNSMAN has featured the Full Value Tax Rates. Many times, we've been asked, "why do you do it?"

Property taxes are the principal source of revenue for Maine communities. Everybody is interested in property taxes, and particularly municipal officials.

In 1987, Maine communities raised over $625 million of property taxes. That compares to $409 million just five years ago. From 1986 to 1987, property taxes increased 14 percent on average in Maine communities. Seems like reason enough for MMA and local officials to be interested.

One of the interesting things we've seen over the past few years concerning the tax tables is that many coastal and southern Maine communities are lowering their full value tax rates while northern and rural Maine communities are seeing tax rate increases. Portland, for example, went from $25.84 in 1983 to $20.57 in 1988. Rockland dropped from $28.20 to $22.39 during the same time period. On the reverse side, Fort Fairfield went from $25.62 to $31.08 and Sherman increased from $17.27 to $22.67 during the same time period.

A word of caution! Too much should not be read into these statistics. Remember, growth and increased property values have a lot to do with a community's full value tax rate. For example, in the past five years, Portland's state valuation has increased 105 percent compared to Fort Fairfield's 28 percent.

While we know that property taxes should not be taken lightly, we urge municipal officials, the media and property taxpayers not to take these numbers too seriously. The individual circumstances of a community have a lot do to with its tax rate and maybe more than anything else, these tax rate tables reflects as vividly as anything "the two Maines" situation.

Municipality	1988 State Valuation	1987 Tax Assessment	Full Value
Addison	20.300.000	233.478	11.50
Alexander	9.950.000	92.451	9.29
Baileyville	148.100.000	2.909.754	19.65
Baring Plt.	3.950.000	65.948	16.70
Beals	8.750.000	181.519	20.75
Beddington	5.650.000	41.790	7.40
Calais	61.900.000	1.758.558	28.41
Centerville	2.300.000	20.938	9.10
Charlotte	7.350.000	129.404	17.61
Cherryfield	22.000.000	270.181	12.28
Codyville Plt.	2.200.000	37.582	17.08
Columbia	6.700.000	103.754	15.49
Columbia Falls	8.600.000	101.711	11.83
Cooper	4.800.000	69.945	14.57
Crawford	3.350.000	35.119	10.48
Cutler	11.000.000	135.046	12.28
Danforth	11.250.000	180.228	16.02
Deblois	4.550.000	45.722	10.05
Dennysville	5.300.000	64.590	12.19
East Machias	19.500.000	340.278	17.45
Eastport	28.300.000	738.949	26.11
Grand Lake Stream Plt.	8.050.000	123.339	15.32
Harrington	13.000.000	191.935	14.76
Jonesboro	17.600.000	509.757	28.96
Jonesport	26.500.000	389.087	14.68
Lubec	30.200.000	682.849	22.61
Machias	39.700.000	835.255	21.04
Machiasport	13.900.000	250.493	18.02
Marshfield	7.650.000	93.609	12.24
Meddybemps	5.750.000	64.212	11.17
Milbridge	27.100.000	429.541	15.85
Northfield	7.100.000	55.663	7.84
Pembroke	12.100.000	188.030	15.54
Perry	13.600.000	173.383	12.75
Princeton	16.800.000	309.356	18.41
Robbinston	10.300.000	121.263	11.77
Roque Bluffs	9.850.000	92.853	9.43
Steuben	20.850.000	317.051	15.21
Talmadge	2.200.000	23.148	10.52
Topsfield	4.900.000	61.410	12.53
Vanceboro	4.450.000	66.169	14.87
Waite	3.700.000	32.762	8.85
Wesley	5.650.000	71.991	12.74
Whiting	10.150.000	126.452	12.46
Whitneyville	4.450.000	81.265	18.26

MAINE DEPARTMENT OF
LABOR
20 Union Street Augusta, Maine 04330
BUREAU OF EMPLOYMENT SECURITY
Division of Economic Analysis and Research

LABOR FORCE ESTIMATES FOR MINOR CIVIL DIVISIONS
BY SELECTED AREA IN MAINE
AVERAGE FOR 12 MONTH PERIOD ENDING 12-87

AREA	LABOR FORCE	EMPLOYMENT	UNEMPLOYMENT	UNEMPLOYMENT RATE
WASHINGTON COUNTY				
ADDISON	484	452	32	6.61
ALEXANDER	176	158	18	10.22
BAILEYVILLE	1,103	1,003	100	9.06
BARING	149	136	13	8.72
BEALS	324	302	22	6.79
BEDDINGTON	3	3	0	.00
CALAIS	1,776	1,631	145	8.16
CENTERVILLE	0	0	0	.00
CHARLOTTE	152	144	8	5.26
CHERRYFIELD	365	317	48	13.15
CODYVILLE PLT	21	21	0	.00
COLUMBIA	101	89	12	11.88
COLUMBIA FALLS	177	153	24	13.55
COOPER	55	52	3	5.45
CRAWFORD	45	45	0	.00
CUTLER	197	183	14	7.10
DANFORTH	295	251	44	14.91
DEBLOIS	15	13	2	13.33
DENNYSVILLE	136	119	17	12.50
EAST MACHIAS	591	542	49	8.29
EASTPORT	785	717	68	8.66
GRAND LAKE STREAM	73	67	6	8.21
HARRINGTON	389	352	37	9.51
JONESBORO	314	291	23	7.32
JONESPORT	556	513	43	7.73
LUBEC	765	655	110	14.37
MACHIAS	1,072	984	88	8.20
MACHIASPORT	452	422	30	6.63
MARSHFIELD	207	204	3	1.44
MEDDYBEMPS	64	58	6	9.37
MILBRIDGE	513	453	60	11.69
NORTHFIELD	29	29	0	.00
PLANTATION #14	23	23	0	.00
PLANTATION #21	57	57	0	.00
PEMBROKE	342	313	29	8.47
PERRY	317	268	49	15.45
PRINCETON	483	423	60	12.42
ROBBINSTON	202	190	12	5.94
ROQUE BLUFFS	118	117	1	.84
STEUBEN	388	349	39	10.05
TALMADGE	9	9	0	.00
TOPFIELD	88	79	9	10.22
VANCEBORO	85	78	7	8.23
WAITE	47	42	5	10.63
WESLEY	48	40	8	16.66
WHITING	133	121	12	9.02
WHITNEYVILLE	117	109	8	6.83

MARKET AREA

For the purposes of this analysis, the Machias Housing market area has been assumed to be coterminus with the Machias primary retail trade area. The validity of this assupmption has been verified by those active in the business. This section containes a general description of the area. Details are provided in the section on dempgraphics.

Machias is the county seat of Washington County (the easternmost in the U.S.A.). The Shefiff's Office, Jail, Superior Court, and District Court for southern Washington County are located here. Several agencies of state and federal government have district offices in Machias. A branch of the University of Maine is located here with an enrollment of approximately 600 students. The Downeast Community Hospital in Machias serves Washington County families within a radius of approximately 30 miles...from Lubec to the east and from Milbridge to the west.

The State Planning Office identifies Machias and nine other communities as an "economic summary area" for the purpose of data collection and anaylsis regarding taxable sales.

MACHIAS TRADE AREA POPULATION

TOWN	1900	1910	1920	1930	1940	1950	1960	1970	1980	1985*	1990*
CUTLER	565	585	584	492	481	483	645	588	726	750	760
EAST MACHIAS	1521	1392	1353	1253	1183	1101	1198	1057	1233	1250	1250
MACHIAS	2082	2089	2152	1853	1954	2063	2614	2441	2458	2450	2550
MACHIASPORT	1218	1218	1117	825	815	781	980	887	1108	1150	1100
MARSHFIELD	227	178	187	197	173	247	267	227	416	420	410
NORTHFIELD	126	81	83	73	57	75	79	57	88	82	79
ROQUE BLUFFS	168	105	98	108	120	80	152	153	244	240	230
WESLEY	198	172	146	170	157	149	145	110	140	140	140
WHITING	399	368	374	327	358	354	339	269	335	330	330
WHITNEYVILLE	424	258	210	229	262	227	229	155	264	270	280
TOTAL	6928	6446	6304	5527	5560	5560	6657	5944	6924	7082	7129

Source: 1980 U.S. Census.

The 1984 CDBG Market Study determined that many Machias merchants - particularly automobile dealers, appliance sales and repair, and hardware and building supplies clientele come from a much larger geographic area - from Dennysville and Lubec to the east, and from Jonesport to Addison to the west.

For purposes of this study, the State's summary area is used as Machias' PRIMARY trade area. The larger area, the SECONDARY trade area contains an additional 8,026 persons. The communities of the secondary area have virtually the same demographics as the primary area. This means that the HOUSING needs projections, which are conservative to begin with, have a considerable demand "cushion."

*Maine D.H.S. Estimates, June 1987. The basic assumption in these projects is that the population trend for a given town will be the same as from April 1980-July 1983.

MAINE TAXABLE SALES

CONSUMER RETAIL SALES

3/25/88

ANNUAL REPORT 1987
(THOUSANDS OF DOLLARS)

AREA - DISTRICT	ANNUAL TOTALS 1983	1984	1985	1986	1987	ANNUAL % CHANGE 83-87	86-87
STATE TOTAL	**4429059**	**5090708**	**5709977**	**6362236**	**7179076**	**13%**	**13%**
KITTERY	131757	160687	190782	221696	262292	19	18
KENNEBUNK	48988	56317	65001	82370	89930	16	9
BIDDEFORD	173539	203710	238368	274475	311756	16	14
SANFORD	85323	97222	113388	141762	151684	15	7
FRYEBURG	13727	14948	16323	18480	21301	12	15
YORK DIST	**453335**	**532884**	**623863**	**738782**	**836963**	**17**	**13**
PORTLAND	730496	861053	969725	1053435	1168537	12	11
PORTLAND SUBURBAN	196779	234154	274997	327959	376913	18	15
SEBAGO LAKE	80247	95559	117415	149925	175856	22	17
CUMBERLAND DIST	**1007523**	**1190766**	**1362136**	**1531319**	**1721305**	**14**	**12**
LEWISTON	314320	355724	386861	426561	476715	11	12
LEWISTON SUBURBAN	17257	21096	25511	29002	35388	20	22
PARIS	56911	62597	71595	76235	84977	11	11
RUMFORD	40748	46559	52035	58752	68725	14	17
LIVERMORE FALLS	23304	25960	26947	29068	31283	8	8
FARMINGTON	52447	55035	58396	63184	79098	11	25
RANGELEY	20466	26836	30475	32472	38620	17	19
ANDROSCOGGIN DIST	**525452**	**593807**	**651822**	**715275**	**814806**	**12**	**14**
AUGUSTA	239875	273732	305323	342271	385292	13	13
WATERVILLE	201883	230588	261237	292068	319283	12	9
SKOWHEGAN	63756	70832	89885	88309	103665	13	17
PITTSFIELD	21562	23918	26309	25539	30094	9	18
JACKMAN	8191	10034	10529	10891	12830	12	18
KENNEBEC DIST	**535267**	**609105**	**693283**	**759078**	**851164**	**12**	**12**
BRUNSWICK	206014	223150	242480	297809	320655	12	8
DAMARISCOTTA	83016	93882	105416	133495	161730	18	21
ROCKLAND	80277	93159	100014	113567	133758	14	18
CAMDEN	42855	49138	54797	61369	61395	9	0
BELFAST	37606	44848	49939	50022	67466	16	35
MID COAST DIST	**449769**	**504176**	**552646**	**656262**	**745006**	**13**	**14**
ELLSWORTH	109854	126225	132867	155327	174650	12	12
BLUE HILL	17749	19872	21355	25270	29247	13	16
BAR HARBOR	51101	56037	63111	74829	80373	12	7
JONESPORT	11449	12881	14440	17665	20923	16	18
MACHIAS	19077	21151	22569	25028	27834	10	11
EASTPORT	7337	8386	9526	11079	11965	13	8
CALAIS	31929	35245	46595	43908	49191	11	12
EASTERN MAINE DIST	**248497**	**279796**	**310464**	**353105**	**394184**	**12**	**12**
WINTERPORT	7133	8097	9157	9514	10596	10	11
BANGOR	470244	519889	558800	603251	677528	10	12
BANGOR SUBURBAN	52517	64168	76695	86628	113631	21	31
DOVER-FOXCROFT	50934	59173	63392	69732	78863	12	13
LINCOLN	32963	38169	40699	45750	54069	13	18
MILLINOCKET	26359	38765	32711	32921	39474	11	20
PENOBSCOT DIST	**640150**	**728260**	**781454**	**847797**	**974162**	**11**	**15**
HOULTON	42305	48792	51761	57469	59293	9	3
PATTEN	8699	9480	10654	11029	12396	9	12
PRESQUE ISLE	148745	165105	175585	178657	193431	7	8
MADAWASKA	27276	29380	28990	29352	32354	4	10
FORT KENT	20740	23472	23861	25066	27609	7	10
NORTHERN MAINE DIST	**247766**	**276228**	**290851**	**301574**	**325083**	**7**	**8**
OUT OF STATE	321301	375686	443458	459043	516404	13	12

EASTERN MAINE ECONOMIC SUMMARY DISTRICT

Ellsworth: Amherst, Aurora, Bucksport, Dedham, Eastbrook, Ellsworth, Franklin, Gouldsboro, Hancock, Lamoine, Mariaville, Orland, Osborn, Otis, Sorrento, Sullivan, Surry, Trenton, Verona, Waltham, Winter Harbor

Blue Hill Area: Blue Hill, Brooklin, Brooksville, Castine, Deer Isle, Isle Au Haut, Penobscot, Sedgwick, Stonington

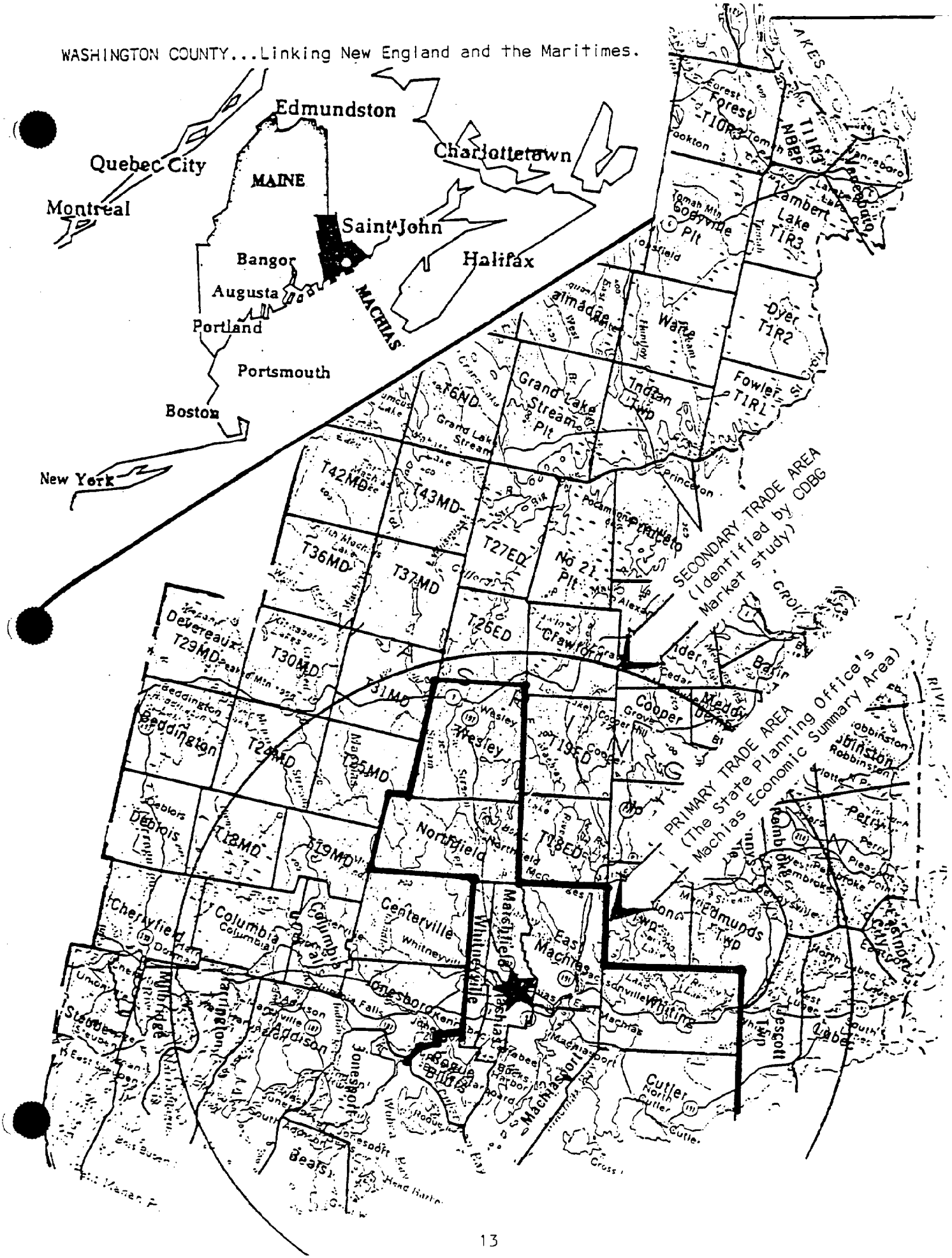
Bar Harbor Area: Bar Harbor, Cranberry Isles, Long Island Plantation, Mount Desert, Southwest Harbor, Swans Island, Tremont

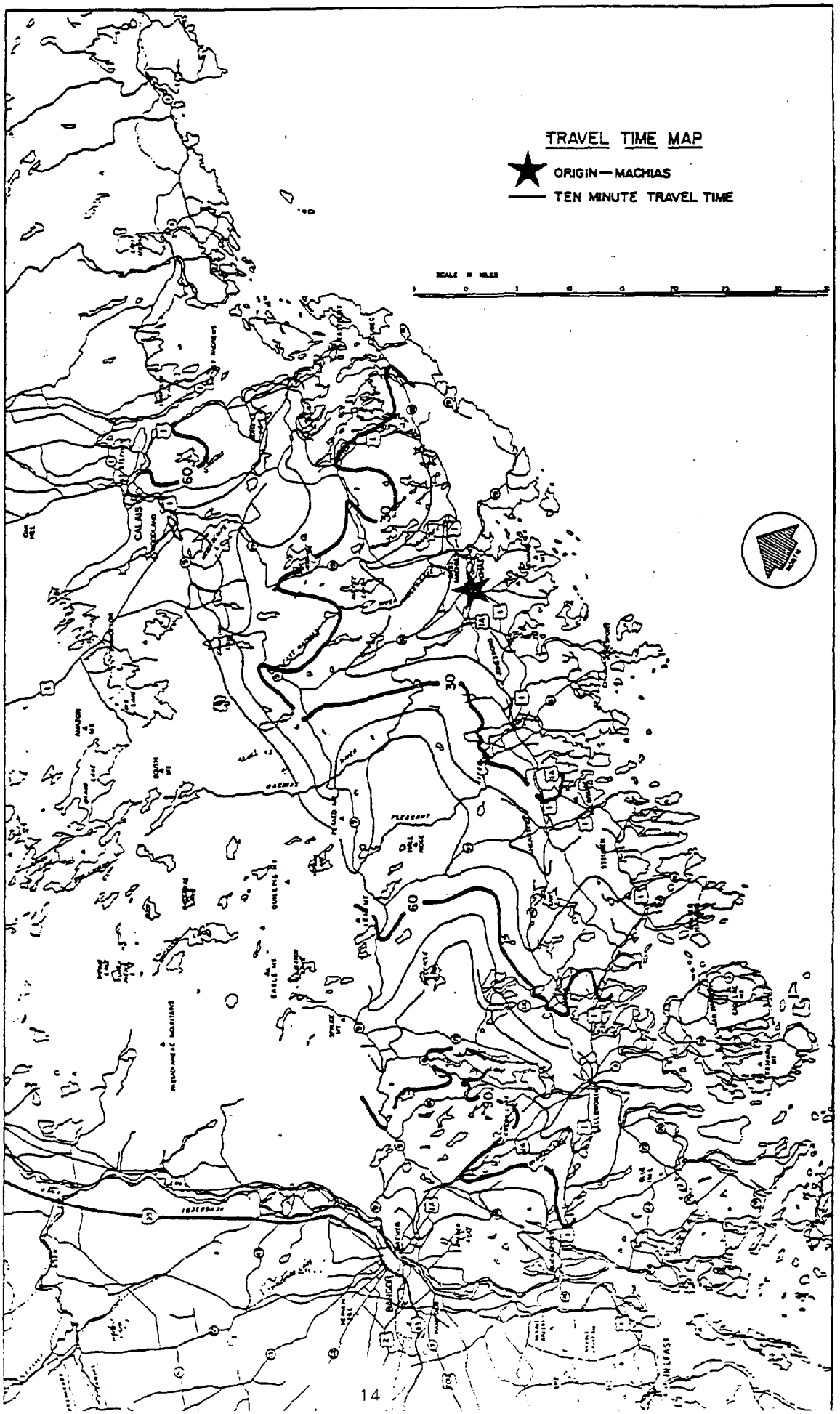
Jonesport Area: Addison, Beals, Beddington, Centerville, Cherryfield, Columbia, Columbia Falls, Deblois, Harrington, Jonesboro, Jonesport, Milbridge, Steuben

Machias Area: Cutler, East Machias, Machias, Machiasport, Marion Township, Marshfield, Northfield, Roque Bluffs, Wesley, Whiting, Whitneyville

Eastport Area: Dennysville, Eastport, Edmunds Township, Lubec, No. 14 Plantation, Pembroke, Perry, Trescott Township

Calais Area: Alexander, Baileyville, Baring Plantation, Brookton Township, Calais, Charlotte, Codyville, Crawford, Cooper, Forest Township, Grand Lake Stream, Lambert Lake, Meddybemps, No. 21 Plantation, Princeton, Robbinston, Talmadge, Topsfield, Vanceboro, Waite


WASHINGTON COUNTY...Linking New England and the Maritimes.
Edmundston
Quebec City
Charlottetown
MAINE
Montreal
Saint John
Bangor
Halifax
Augusta
MACHIAS
Portland
Portsmouth
Boston
New York
SECONDARY TRADE AREA
(Identified by CDBG
Market study)
PRIMARY TRADE AREA
(The State Planning Office's
Machias Economic Summary Area)
Forest
T10R
T11R3
NBEP
Lambert
Lake
T1R3
Dyer
T1R2
Fowler
T1R1
Ware
Indian
Twp
Grand Lake
Stream
Plt
T6ND
T42MD
T43MD
T36MD
T37MD
T27ED
No 21
Plt
T26ED
Crawford
Deveareux
T29MD
T30MD
T31MD
Beddington
T24MD
T25MD
Wesley
T19ED
Cooper
Dennis
T18MD
T19MD
Northfield
T18ED
Centerville
Columbia
Columbia Falls
Cherryfield
Whitneyville
Machiasport
East
Machias
Machias
Addison
Jonesport
Beals
Cutler
Whiting
Trescott
Pembroke
Perry
Robbinston
Johnson
Edmunds
Twp


TRAVEL TIME MAP
ORIGIN—MACHIAS
TEN MINUTE TRAVEL TIME
60
30
60
50
CALAIS
MACHIAS
PLEASANT
BANGOR

During the summer months the area's population grows substantially. Actual numbers are hard to come by, but a survey in 1975 by the Regional Planning Commission showed approximately 300 seasonal homes or cottages in the 11 town "economic summary area". This could mean an additional 500-1000 persons patronizing Machias stores during mid-August.

Halfway between Ellsworth and Calais on Route 1, Machias provides motorists with a convenient stopping place for gasoline, a meal. or just a chance to stretch the legs. It would be quite difficult to precisely identify the economic impact of this "thru-traffic", yet it appears to be substantial. In 1972, the State commissioned the firm of Northeast Markets, Inc. and others to study tourism. The study reported that tourists who stay in motels (as opposed to campgrounds, with relatives, etc.) spend an average of $33.59 per person per day (for lodging, meals, gasoline, souvenirs, etc.). Machias has four motels, with a total of about 100 units. Assuming an occupancy rate of 90% between June 1 and September 1, with two persons per unit...the town host approximately 200 persons per night. These 200 persons spend a total of $6600 per day (1972) dollars, and a significant portion of it will remain here in Machias.

SERVICES AND FACILITIES

1. FINANCIAL

Three banking and trust companies from outside the Machias area serve Machias and a savings bank also has its head office here.

2. COMMUNICATIONS

One AM and one FM radio stations are located in Machias. Many other radio stations can be received in this area. U.S. and Canadian TV can be received, including an educational channel. Cable TV is available which greatly increases clarity and dependability and offers additional channels.

The Bangor Daily News provides daily coverage of northeastern Maine, with a Downeast page featured in Washington County editions. The Machias Valley News Observer is the local newspaper with a circulation of about 3,200.

3. ELEMENTARY AND SECONDARY EDUCATION

Machias is a member of School Union 102. Machias Memorial High School has a total enrollment of 225 of which 144 are Machias residents and 81 are tuition students from other towns in the Union. In 1970 there were 141 resident students. Thie increase, while small, has come during a period when many schools have been facing declining enrollments. The high school includes grades 8-12. Major renovations and new construction will be completed early in 1986. Washington Academy in East Machias serves the S.A.D. 77 towns of Machiasport, East Machias, Cutler and Whiting as well as tuition students from other towns.

4. COLLEGE EDUCATION

The University of Maine at Machias - has an enrollment of over 600 students and offers four-year degree programs. Early Childhood Education, Elementary Education, Elementary-Junior High School Education and Business Education. All programs require a minimum of 128 credit hours to complete requirements for a degree of Bachelor of Science. The college also offers a two-year Business Management Program. Through its counselling service, the college assists students in adjusting to college life. While providing a strong program of general education, the college enables the student to cultivate the qualities necessary to think independently, develop imaginative responses to his envieonment and aids the student in bringing to focus, realization of himself, his abilities and his potential contribution to society.

There are many organizations on the campus, established to offer well-rounded and balanced activities, consistent with the interests and needs of the students. Extra curricular activities include the Campus Recreation Association, Concert Choir, a National Honorary Dramatics Society, Future Business Leaders of America and scores of other for both male and female students.

5. MEDICAL FACILITIES

The Machias area is served by the Down East Community Hospital, a non-profit 38 bed community hospital, incorporated in 1960 and serving patients since 1964. The hospital is accredited by the Joint Commission on Accredition of Hospitals.

The hospital has an active medical staff of 17 doctors, 9 technicians and six head nurses. In 1978 the total budget was $2,247,989, with an excess of revenues over expenses of $47,737.

A new nursing home was completed in Machias in 1979, and a former nursing home is being converted into a minimal care facility.

DEMOGRAPHIC CHARACTERISTICS

Population

The Machias area population has remained stable for many years (the area maintained a population of about 6,000 during the years from 1900 to 1970 when Washington County's population declined from 45,000 to 30,000!).

From 1970 to 1980 the area has kept pace with the County's re-newed growth. Precise future projections are diffcult in areas of low population. However, it is anticipated that by 2000 the area will have between 7,500 and 8,000 residents.

This will be an increase of 576 to 1075. At the 1980 ratio of 2.9 persons per household, 199 to 371 units will be required to house this increase. This is 66 to 124 units every five years.

The tables, charts, and graphs on the following pages present detailed population data for the Machias area. Two population segments of special interest to this study are discussed in this section.

The Elderly

Eleven percent of tha area's population was over 65 in 1970, by 1980 this percentage had increased to 15%.

During the decade, the population as a whole had increased by 16.5% while the over 65 population increased by 34.4%. There was a sizable in-migration of elerly in addition to the natural increase. This trend is expected to continue. By 2000 those over 65 are projected to account for 17.% of the area's population of 7,000 to 8,000. The total elderly will be 1,225 - 1,400 an increase of 420 - 595 over 1980.

There are 1.50 persons per houshold in this age group in this area. Therefore 280 - 397 additional over 65 households will be in the area by 2000. For planning purposes, approximately 113 new units every five years until the end of the 1900's will be required in this area to accommodate newcomers to this age group.

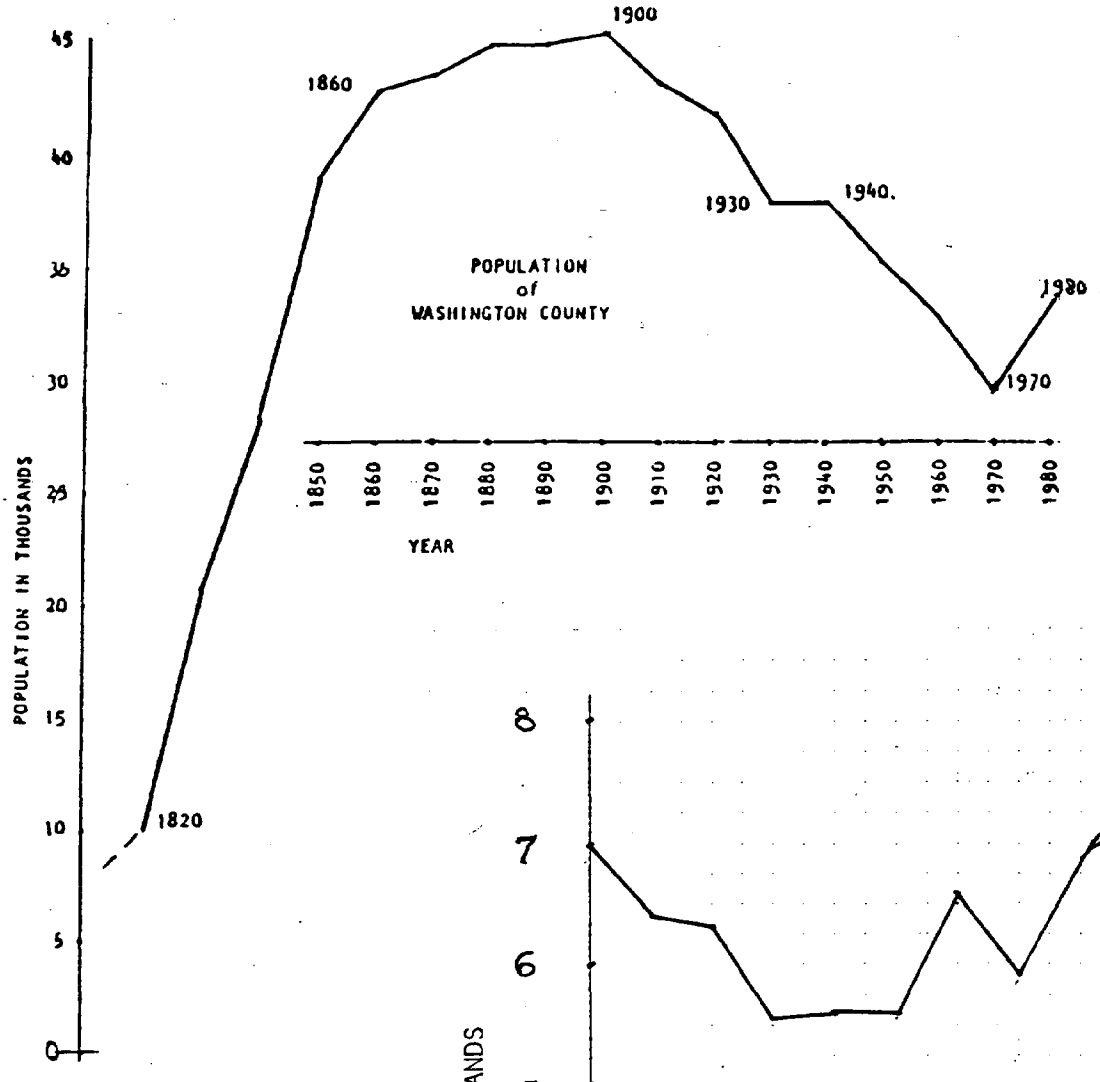
The "Work Disabled"

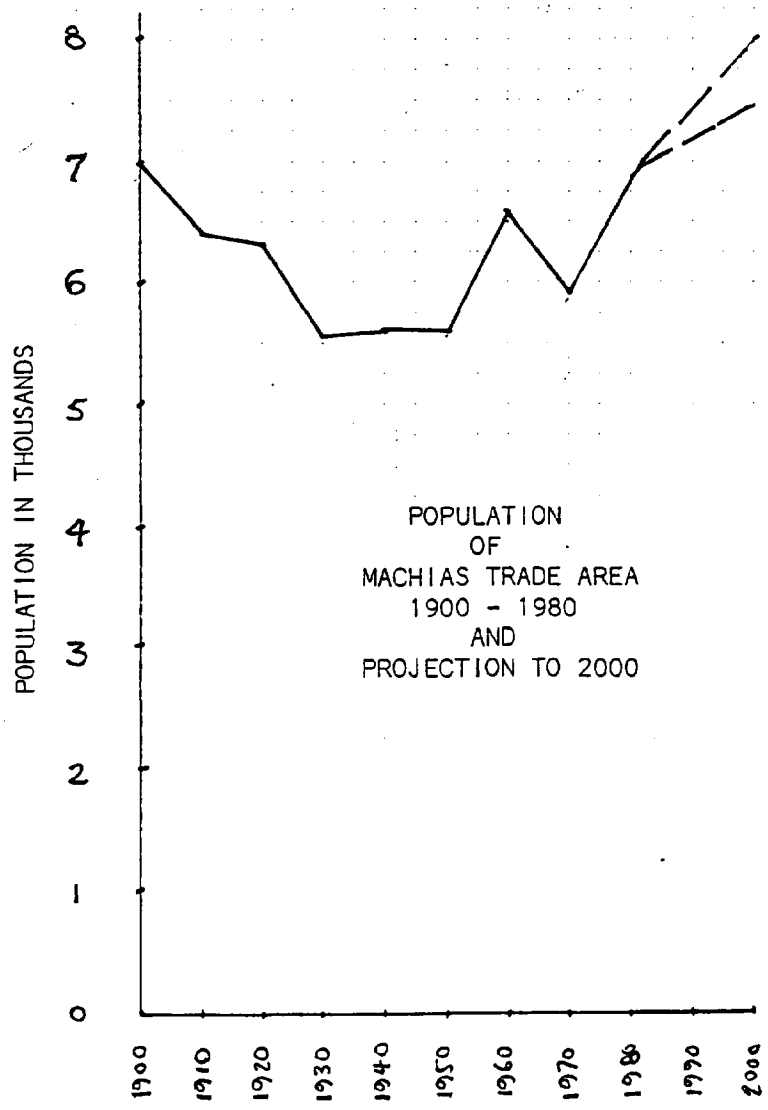
The number of residents in 1980 with "work disabilities" was 434. Assuming that this group increases in size as the population as a whole, an additional 76 persons will be in this category and may be eligible for FmHA assisted housing by 2000. They could account for 25 units every five years.

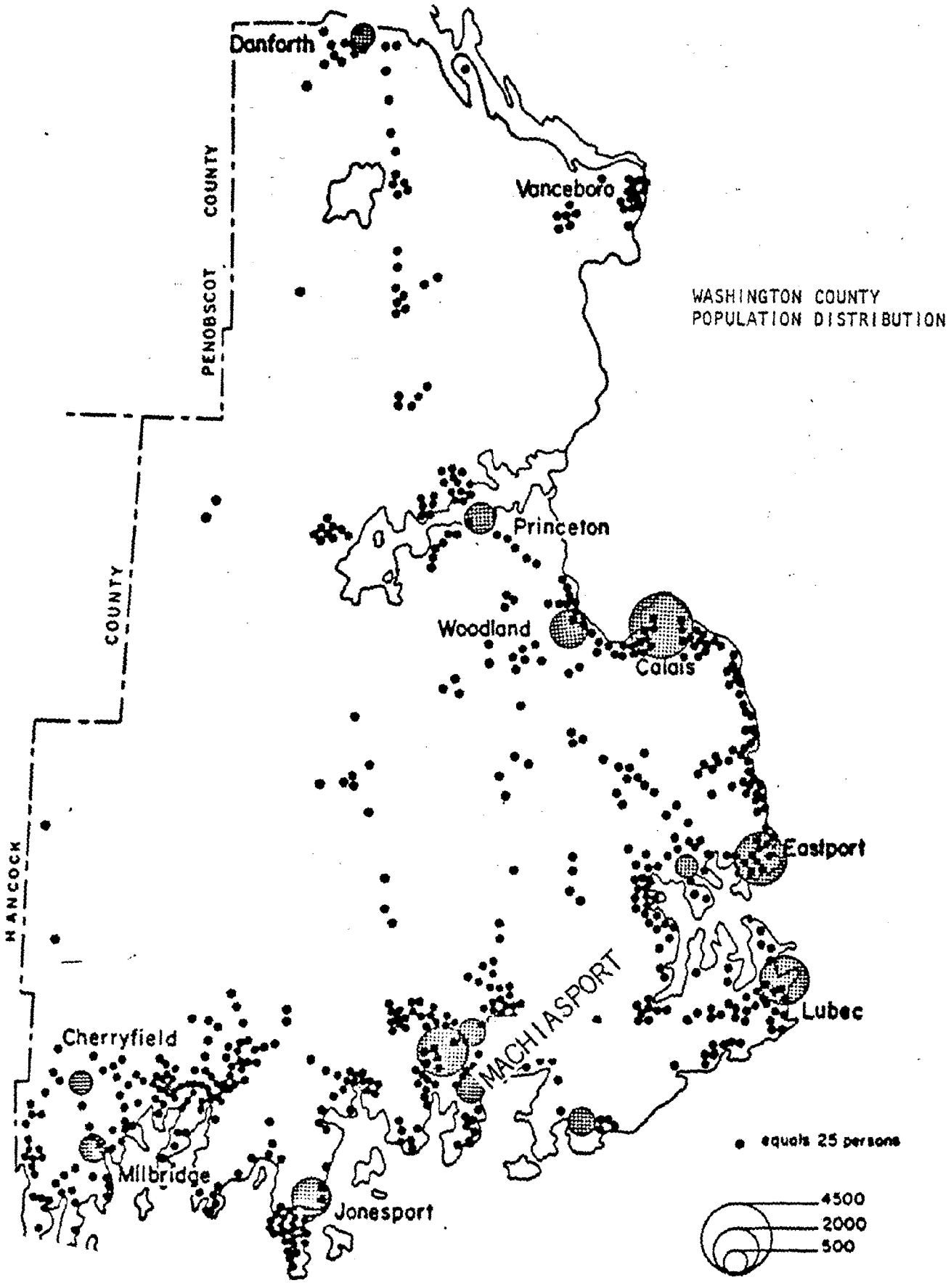
The work disabled plus elderly households increase would total 92 every five years.

Physically and Mentally Handicapped

The residential needs of the physically and mentally handicapped population in the area are perhaps one of the most pressing. Washington County is one of the few areas in the State with no group homes or nursing homes specifically for the handicapped, and at this date the only handicapped residential service in the county is a supervised apartment project which will serve 16 adults who require a minimal amount of supervision to enqble them to live independently.


POPULATION IN THOUSANDS
45
40
35
30
25
20
15
10
5
0
1820
1860
1900
1930
1940
1970
1980
POPULATION
of
WASHINGTON COUNTY
1850
1860
1870
1880
1890
1900
1910
1920
1930
1940
1950
1960
1970
1980
YEAR


POPULATION IN THOUSANDS
8
7
6
5
4
3
2
1
0
POPULATION
OF
MACHIAS TRADE AREA
1900 - 1980
AND
PROJECTION TO 2000
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000


Danforth
Vanceboro
PENOBSCOT COUNTY
WASHINGTON COUNTY
POPULATION DISTRIBUTION
Princeton
Woodland
Calais
COUNTY
HANCOCK
Eastport
Lubec
MACHIASPORT
Cherryfield
Milbridge
Jonesport
• equals 25 persons
4500
2000
500

STATE PLANNING OFFICE

POPULATION CHANGE 1970-1980

10/19/81

TOWN NAME	POP CHANGE 70-80 NAT INCR	NET MIGR	TOT CHNG	CHANGE IN HSLD 70-80 TOT	SIZE	1980 HSLD SIZE	TOT HOUSEHOLDS 1980	1970	TOTAL POPULATION 1980	1970	1980 GROUP QTRS
CUTLER	18%	6%	23%	35%	-7%	3.21	214	158	726	588	38
EAST MACHIAS	7%	9%	17%	29%	-9%	2.72	453	352	1233	1057	0
MACHIAS	6%	-6%	1%	18%	-13%	2.60	823	696	2458	2441	322
MACHIASPORT	10%	15%	25%	57%	-15%	2.92	376	239	1108	885	10
MARSHFIELD	10%	73%	83%	125%	-19%	3.08	135	60	416	227	0
NORTHFIELD	-4%	58%	54%	43%	8%	2.20	40	28	88	57	0
ROQUE BLUFFS	5%	55%	59%	87%	-14%	2.90	84	45	244	153	0
WESLEY	12%	15%	27%	25%	2%	2.80	50	40	140	110	0
WHITING	1%	24%	25%	30%	-4%	2.89	116	89	335	269	0
WHITNEYVILLE	10%	61%	70%	59%	1%	2.91	86	54	264	155	14

Summary of Social and Economic Characteristics: 1980

	Noninstitutional persons 16 to 64 years		Persons 16 years and over in labor force in 1979			Median income in 1979 (dollars)		Persons for whom poverty status is determined						
									Income in 1979 below poverty level					
												Related children		Income in 1979 below 125 percent of poverty level
	Total	Percent with a work disability	Total	Percent unemployed 15 or more weeks	Per capita income in 1979 (dollars)	Households	Families	Total	Total	Percent	65 years and over	Under 18 years	5 to 17 years	
Cutler town	453	13.2	334	13.5	4 277	12 619	13 393	712	120	16 9	10	41	22	155
East Machias town	796	12.1	623	9.0	5 217	11 431	12 820	1 233	186	15 1	41	51	41	272
Machias town	1 454	6 4	1 144	5 2	4 961	11 916	15 625	2 050	389	19 0	80	133	113	535
Machiasport town	655	16 2	536	9 9	4 097	9 569	10 382	1 082	214	19 8	25	77	42	356
Marshfield town	263	8 0	220	8.2	5 941	15 588	16 176	426	27	6 3	7	9	6	62
Northfield town	65	24 6	48	10.4	5 217	6 667	13 611	86	17	19 8	3	-	-	35
Roque Bluffs town	155	6.5	114	10.5	3 370	8 846	9 038	248	123	49 6	5	64	36	133
Wesley town	92	12 0	76	21 1	4 416	7 059	8 750	135	22	16 3	8	3	3	53
Whiting town	200	4 0	168	13 5	4 236	8 523	9 205	307	91	29 6	14	37	22	170
Whitneyville town	148	15 5	113	6 2	4 379	12 768	13 750	258	42	16 3	10	14	11	63

AGE COUNT OF PERSONS
MACHIAS AREA*, 1980

	TOTAL	MALE	FEMALE
UNDER 1 YEAR	111	64	47
1 AND 2 YEARS	231	110	121
3 AND 4 YEARS	213	122	91
5 YEARS	97	55	42
6 YEARS	94	42	52
7 TO 9 YEARS	337	184	153
10 TO 13 YEARS	407	206	201
14 YEARS	108	52	56
15 YEARS	121	69	52
16 YEARS	122	59	63
17 YEARS	109	59	50
18 YEARS	132	69	63
19 YEARS	170	79	91
20 YEARS	130	60	70
21 YEARS	136	67	69
22 TO 24 YEARS	373	190	183
25 TO 29 YEARS	559	265	294
30 TO 34 YEARS	502	258	244
35 TO 44 YEARS	735	373	362
45 TO 54 YEARS	696	348	348
55 TO 59 YEARS	355	175	180
60 AND 61 YEARS	123	64	59
62 TO 64 YEARS	198	92	102
65 TO 74 YEARS	523	239	284
75 TO 84 YEARS	317	121	196
85 YEARS AND OVER	113	29	84

*Includes towns of Cutler, East Machias, Machias, Machiasport, Marshfield, Northfield, Wesley, Whiting and Whitneyville.

Source: 1980 U.S. Census.

MAINE DEPARTMENT OF LABOR

BUREAU OF EMPLOYMENT SECURITY
Division of Economic Analysis and Research

CIVILIAN LABOR FORCE BY MAINE COUNTY

STATISTICAL DATA SERIES CCLF 5-88

COUNTY 1/	CIVILIAN LABOR FORCE 2/			UNEMPLOYMENT			RATE			RESIDENT EMPLOYED		
	May 88	Apr 88	May 87	May 88	Apr 88	May 87	May 88	Apr 88	May 87	May 88	Apr 88	May 87
ANDROSCOGGIN	47,630	47,860	48,370	1,890	2,130	2,440	4.0	4.5	5.0	45,740	45,730	45,930
AROOSTOOK	38,170	37,960	37,770	3,170	3,380	3,160	8.3	8.9	8.4	35,000	34,580	34,610
CUMBERLAND	132,850	133,970	130,960	2,950	2,730	3,250	2.2	2.0	2.5	129,900	131,240	127,710
FRANKLIN	12,170	12,610	12,060	670	770	720	5.5	6.1	6.0	11,500	11,840	11,340
HANCOCK	23,050	22,250	22,380	1,250	1,180	1,070	5.4	5.3	4.8	21,800	21,070	21,310
KENNEBEC	55,320	56,500	55,270	1,790	2,590	2,380	3.2	4.6	4.3	53,530	53,910	52,890
KNOX	16,530	16,270	16,050	640	610	510	3.9	3.7	3.2	15,890	15,660	15,540
LINCOLN	17,310	16,880	16,790	430	470	450	2.5	2.8	2.7	16,880	16,410	16,340
OXFORD	22,510	22,980	22,080	1,060	1,280	1,050	4.7	5.6	4.8	21,450	21,700	21,030
PENOBSCOT	62,790	64,440	64,200	2,200	3,110	3,290	3.5	4.8	5.1	60,590	61,330	60,910
PISCATAQUIS	7,930	7,730	8,040	360	420	400	4.5	5.4	5.0	7,570	7,310	7,640
SAGADAHOC	15,310	15,410	14,900	410	450	700	2.7	2.9	4.7	14,900	14,960	14,200
SOMERSET	22,210	22,770	22,370	1,290	1,740	1,250	5.8	7.6	5.6	20,920	21,030	21,120
WALDO	12,790	13,010	12,980	1,010	1,270	720	7.9	9.8	5.5	11,780	11,740	12,260
WASHINGTON	14,680	14,510	13,620	1,700	1,800	1,500	11.6	12.4	11.0	12,980	12,710	12,120
YORK	86,580	86,150	84,360	1,740	2,020	2,050	2.0	2.3	2.4	84,840	84,130	82,310

1/ Labor force and current and unemployment data are not seasonally adjusted. All data are on a place of residence basis. Members of the armed forces are excluded.
2/ Current and last month figures preliminary, year ago figures revised.

THESE DATA ARE DEVELOPED BY THE MAINE BUREAU OF EMPLOYMENT SECURITY IN COOPERATION WITH THE U.S. BUREAU OF LABOR STATISTICS

Labor Market Information Services

WASHINGTON COUNTY
FIRMS EMPLOYING 20 OR MORE PEOPLE (1985)

A.M. Look Canning Co.*
East Machias (Whiting)
ME 04630
26-50 employees

Jasper Wyman & Son
Cherryfield, ME
50-60 year round
up to 500 seasonal

L. Ray Packing CO. Inc.
Milbridge, ME 04658
80-85 employees

Machiasport Packing & Canning Co.
Machiasport, ME 04655

Maine Wild Blueberry*
Elm Street
Machias, ME 04654

R.J. Peacock Canning Co.
Water Street
Lubec, ME 04652
18-130 employees

McCurdy Fish Co.
Lubec, ME 04652
25 employees

Booth Fisheries
P.O. Box 96
Lubec, ME 04652
150 employees

Port Clyde Food, Inc.
7 Madison Street
Eastport, ME 04631
160-175 employees

Guilford Industries
Quoddy Village
Eastport, ME 04631
160 employees

Kel-Co Industries
Milbridge, ME 04658
20-120 employees

Cherryfield Foods
Cherryfield, ME 04622
201-250 employees

Ware Knitters
Calais, ME 04619
101-150 employees

Lane Construction Company
Charlotte Road
Calais, ME 04619
15-20 employees

Georgia-Pacific Corporation
Woodland, ME 04694
901-1000 employees

R.H. Foster, Inc.*
Old county Road
Marshfield, ME 04654
75 employees

Champion Paper Co. (formerly
St. Regis)
Whitneyville, ME 04692

Ocean Products, Inc
Eastport, ME 04631
50 employees

Thomas Dicenzo, Inc.
Calais, ME 04619
130 employees

Goding Ready Mix Co.*
Box 415
Machias, ME 04654
20 employees

*Firms marked with an asterisk are located in the primary market area.

PER CAPITA INCOME &
UNEMPLOYMENT RATE
1980

	POPULATION	LABOR FORCE	PER CAPITA INCOME	UNEMPLOYMENT* RATE
CUTLER	726	296	$4,277	5.74
EAST MACHIAS	1233	593	5,217	9.10
MACHIAS	2458	1122	5,040	8.55
MACHIASPORT	1108	496	4,097	6.25
MARSHFIELD	416	183	5,941	3.27
NORTHFIELD	88	39	5,217	5.12
ROQUE BLUFFS	244	106	3,370	1.88
WESLEY	140	71	4,416	8.45
WHITING	335	161	4,236	9.93
WHITNEYVILLE	264	123	4,579	9.75
TOTAL	7012			

*Source: Maine Department of Labor, 12-84

UNEMPLOYMENT
1983

	WASHINGTON COUNTY		MAINE	
	$	%	$	%
January	2,180	15.9	49,400	10.0
February	2,400	17.3	54,900	10.9
March	2,480	17.3	55,000	10.7
April	2,620	17.8	51,700	9.9
May	2,440	16.1	51,400	9.6
June	2,150	14.0	47,500	8.6
July	1,950	12.0	56,500	10.0
August	1,640	8.5	41,500	7.4
September	1,480	9.8	39,200	7.1
October	1,410	9.9	39,100	7.4
November	1,480	10.6	39,000	7.6
December	1,600	7.9	40,700	11.6
Average	1,989	13.3	47,158	8.9

The County averaged 150% of the Maine Unemployment Rate for 1983

Source: Labor Market Digest
Maine Department of Labor

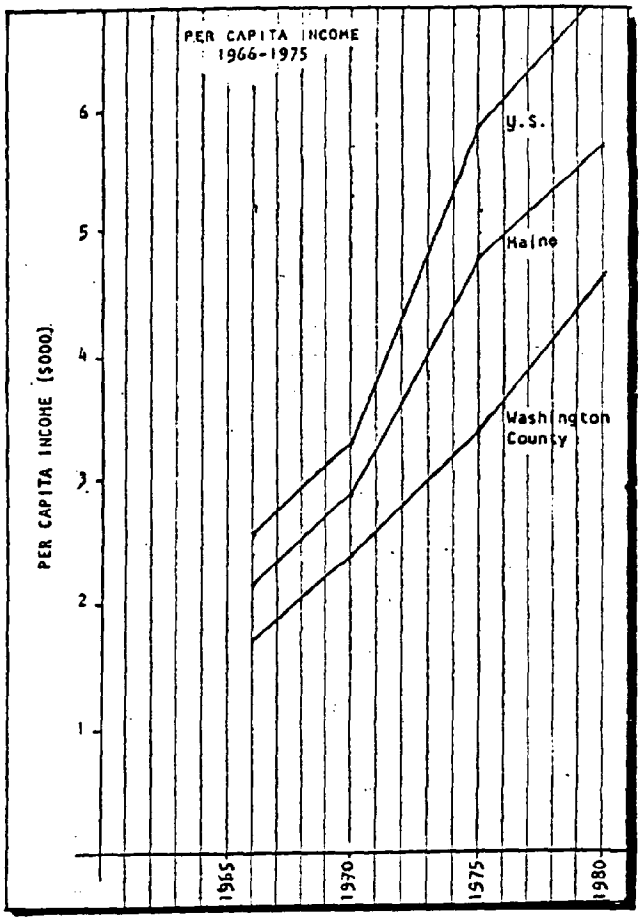
AVERAGE PER CAPITA INCOME[a]

	1966	1970	%Increase
Washington County	$1729	$2382	37.7%
Maine	2154	2879	33.6
United States	2543	3308	30.1

	1970	1975	%Increase
Washington County	$2382	$3391	42.4%
Maine	2879	4785	66.2
United States	3308	5834	76.4

	1957	1980	%Increase
Washinton County	$3391	$4581	74
Maine	4785	5768	83
United States	5834	7001	83

a) from Charts 5.6, 5.7, "Effective Buying Income Per Capita," Maine Economic Data Book 1973; Also derived from "Survey of Current Buying Power," 1971-1976, Sales Management Magazine; and from State Planning Office Statistical Reports "Economic Indicator Series" August 1977.



COVERED EMPLOYMENT AND WAGES BY MAJOR INDUSTRY DIVISION, 1984

WASHINGTON COUNTY

Industry Division	Employers at Year-End	Average Employment		Total Wages	
		Total	Female	Annual Total	Average Weekly
Total.....	788	8,307	3,834	$108,942,901	$252.20
Agriculture, Forestry, and Fishing.....	15	194	63	1,326,461	131.49
Mining.....	1	15	3	222,770	285.60
Construction.....	71	406	52	7,349,736	348.13
Manufacturing.....	85	2,335	617	42,474,817	349.82
Transportation and Public Utilities....	55	399	79	5,966,488	287.57
Wholesale Trade.....	48	292	88	3,135,334	206.49
Retail Trade.....	235	1,416	785	11,104,182	150.81
Finance, Insurance, and Real Estate....	30	189	136	2,430,815	247.34
Services.....	156	1,448	1,143	14,663,688	194.75
State Government.....	7	236	110	4,334,597	353.21
Local Government.....	85	1,377	758	15,934,013	222.53

SOURCE: Maine Department of Labor

LOW INCOME FAMILIES

The Department of Housing and Urban Development defines low and moderate income people as those with median household incomes below 0.8 times their county's average. Washington County is the only county in Maine with a median household income less than 0.8 times the State's median.

State of Maine	$13,816
0.8 Times State Median	11,053
Washington County	10,443

A sizable percentage of persons in Machias area towns had median household incomes below the 0.8 level in 1979, according to the U.S. Census.

	Total Families	% With Income Below 0.8 Index	No. with Incomes Below 0.8
Cutler	187	33	62
East Machias	365	33	122
Machias	559	27	152
Machiasport	313	47	146
Marshfield	130	21	27
Northfield	28	36	10
Roque Bluffs	72	56	40
Wesley	34	56	19
Whiting	91	53	48
Whitneyville	72	31	23
Total			503

For planning purposes, it is assumed that as the population grows, the percent of the area's residents with extremely low incomes will grow at the same rate. This would yield an additional 88 families by 2000 or approximately 30 new eligible families every five years.

The 1986 H.E.A.P. Guidelines set family income limits of:

$ 7,875	for a family of 1
10,575	for a family of 2
13,275	for a family of 3
18,675	for a family of 5

While 1985 income figures for each town are not available, it is clear that they have not increased as dramatically as would have been necessary to alter the estimates of eligible families which was based upon H.U.D.S's requirements.

The 1980 Census figures show that one-third of the areas families which earn $15,000 a year or less are paying over 25% of their household income for housing! This figure is especially significant when the fact that the median household income in the county is $4,500 below $15,000.

STATE PLANNING OFFICE DATE: 10/16/80

SOCIAL ASSISTANCE RECIPIENTS
(UNDUPLICATED COUNT)
AS OF JUNE, 1980

	TOTAL	FOOD STAMPS	AFDC	SSI	NURSING HOMES	MEDICAID
CUTLER	205	165	19	14	1	69
EAST MACHIAS	345	256	50	36	0	158
MACHIAS	699	465	122	95	48	408
MACHIASPORT	361	273	90	25	0	170
MARSHFIELD	52	50	10	3	0	16
NORTHFIELD	14	11	0	0	0	4
ROQUE BLUFFS	89	79	15	3	0	25
WESLEY	55	39	5	7	0	29
WHITING	92	81	18	6	0	39
WHITNEYVILLE	90	58	11	15	0	49

HOUSING: AGE

The Machias area is one of older homes, many built when there was more prosperity by the sea captains who made their homes here, others, more humble. In the past 20 years many have been renovated, others removed (accidently or intentionally). The age of the housing stock is not as critical here as in some other areas, but must be considered when almost 50% of the units are almost 50 years old (1,244 of the 2,638 units constructed prior to 1939).

Replacing 20% of this stock by 2000 would require 249 new units or 83 every 5 years.

HOUSING: LACKING PLUMBING

A home lacking complete plumbing does not carry the stigma in this area that they do in some places, but it is reasonable to assume that by 2000 most units without such facilities will either have them installed or be removed. If one half of the 347 are removed it will require 173 replacement units or 57 every five years.

HOUSING: SUBSTANDARD

The 1980 census indicates 120 housing units in the area are "substandard." No separate estimate is made for replacement of these units because to do so would probably result in "double counting." (It is likely that these units are included in one of the other counts such as age of dwelling, lacking facilities, etc.).

SUBSTANDARD HOUSING

TOWN	% SUBSTANDARD HOUSING	# SUBSTANDARD
CUTLER	5.0	11
EAST MACHIAS	4.6	23
MACHIAS	4.1	36
MACHIASPORT	6.7	28
MARSHFIELD	3.9	6
NORTHFIELD	*	*
ROQUE BLUFFS	*	*
WESLEY	11.1	6
WHITING	6.7	10
WHITNEYVILLE	*	*
		120

Source: 1980 U.S. Census.

YEAR-ROUND HOUSING UNITS

TOWN	TOTAL	OCCUPIED	NO. VACANT	% VACANT
CUTLER	226	214	12	9
EAST MACHIAS	501	453	48	9
MACHIAS	888	823	65	9
MACHIASPORT	418	376	42	9
MARSHFIELD	149	135	14	9
NORTHFIELD	43	40	3	9
ROQUE BLUFFS	117	84	33	7
WESLEY	57	50	7	9
WHITING	150	116	34	8
WHITNEYVILLE	97	86	11	9
TOTAL	2646	2377	269	9

CHANGES IN HOUSING STOCK 1970-1980

	YEAR-ROUND HOUSING UNITS 1970	1980	INCREASE #	%
CUTLER	190	226	36	19
EAST MACHIAS	391	501	110	28
MACHIAS	735	888	153	21
MACHIASPORT	283	418	135	48
MARSHFIELD	68	149	81	120
NORTHFIELD	28	43	15	53
ROQUE BLUFFS	63	117	54	86
WESLEY	43	57	14	33
WHITING	101	150	49	49
WHITNEYVILLE	66	97	31	47
	1968	2646	678	34

Source: 1980 U.S. Census.

Summary of General Housing Characteristics: 1980

	Year-round housing units			Occupied housing units					Value, specified owner-occupied housing units			Contract rent, specified renter-occupied housing units			
	Total housing units	Total	Lacking complete plumbing for exclusive use	Total	Owner	Renter	Lacking complete plumbing for exclusive use	1.01 or more persons per room	Less than $20,000	$50,000 or more	Median (dollars)	Less than $100	$200 or more	Median (dollars)	Rental vacancy rate
Cutler town.....	290	226	36	214	149	65	34	8	21	17	37,500	6	14	196	1.5
East Machias town	659	501	83	455	400	53	68	14	79	20	28,800	9	4	151	-
Machias town.....	898	868	51	823	606	217	42	26	87	52	34,100	39	44	157	6.5
Machiasport town.	489	418	68	376	319	57	53	16	47	22	33,500	4	10	185	-
Marshfield town..	166	149	16	135	117	18	13	4	8	18	41,200	2	3	145	3.3
Northfield town..	204	43	17	40	36	4	14	2	1	1	34,200	---	---	---	-
Roques Bluff town	166	117	15	84	79	5	10	4	4	15	45,000	1	-	75	28.6
Wesley town.....	131	57	22	50	38	12	19	3	6	-	27,500	5	-	50	-
Whiting town.....	275	150	21	116	105	11	12	3	7	7	41,300	-	-	141	26.7
Whitneyville town.	105	97	18	86	78	8	12	7	13	1	29,500	2	-	75	-
	3383	2646	347	2377	1927	450	277	87	273	153		68	75		68.6

Summary of Detailed Housing Characteristics: 1980

	Year-round housing units									Occupied housing units					
	Percent with-									Percent with-			Median selected monthly owner costs (dollars) specified owner occupied		
	Total	Year structure built: 1970 to March 1980	Year structure built: 1939 or earlier	5 or more units in structure	Source of water by public system or private company	Public sewer	Central heating system	Air conditioning	1 or more complete bath rooms	3 or more bedrooms	Total	Householder moved into unit 1979 to March 1980	1 or more vehicles available	With a mortgage	Not mortgaged	Median gross rent (dollar), Specified renter occupied
Cutler town.....	217	31.3	41.5	5.5	15.7	15.7	65.9	-	84.3	73.7	206	21.4	92.2	248	115	160
East Machias town	499	24.6	54.5	1.0	1.4	5.2	65.9	1.8	83.2	65.7	453	13.9	90.9	242	120	-
Machias town.....	895	29.1	52.4	9.7	57.5	68.5	80.0	3.1	93.7	62.2	820	22.4	93.2	281	147	219
Machiasport town.	417	29.0	43.9	1.4	7.7	7.2	59.2	0.5	86.1	65.0	376	22.1	94.1	247	132	213
Marshfield town..	157	47.1	34.4	-	-	-	60.5	-	93.0	71.3	140	19.3	92.9	275	138	257
Northfield town...	47	29.8	36.2	-	-	-	48.9	4.3	48.9	34.0	43	16.3	88.4	300	71	-
Roques Bluff town	108	59.3	22.2	-	-	-	70.4	6.5	92.6	67.6	80	7.5	97.5	237	138	-
Wesley town.....	60	15.0	46.7	-	-	-	33.3	3.3	58.3	40.0	52	11.5	88.5	245	94	70
Whiting town.....	145	40.0	44.8	-	34	-	58.6	-	84.1	58.6	105	6.7	85.7	292	144	250
Whitneyville town.	93	35.5	45.2	-	-	-	75.3	3.2	83.9	66.7	81	4.9	92.6	259	145	-
	2638	340.7	421.8								2356	146.0	916.0			

Source: 1980 U.S. Census.

HOUSING: RENTALS

The H.U.D. Fair Market Rental Schedule lists a two-bedroom home at $340 a month. (The average Washington County household has 2.9 persons and would require this size unit). Median household income is $10,443. The fair market rental is $4,080 annually or 39% of the households income. By definition, half of the families would be paying a substanitally higher percentage.

Rentals comprise 19% of the total occupied dwelling units. Which is just above the county figure of 18% but well below the Maine percentage of 29. These figures confirm local opinion that there is a need for additional rental units.

There is a waiting list for Valley View Apartments for 21 units. Those are of similar length as other facilities although there is inevitably a duplication of applicants.

FAIR MARKET RENT SCHEDULE

0-BEDROOM	1-BEDROOM	2-BEDROOM	3-BEDROOM	4-BEDROOM
252	289	340	412	446

SOURCE: U.S. Department of Housing and Urban Development

H.U.D. SECTION 8 INCOME LIMITS (3-1-84)
WASHINGTON COUNTY, MAINE

	1 PERSON	2 PERSON	3 PERSON	4 PERSON	5 PERSON	6 PERSON	7 PERSON	8 + PERSON
LOWER INCOME	10450	11900	13400	14900	15850	16750	17700	18650
VERY LOW INCOME	6200	7100	7950	8850	9559	10250	10950	11700

TOWN	% EARNING $15,000/YR AND PAYING 25%+ FOR HOUSING
CUTLER	32.7
EAST MACHIAS	24.8
MACHIAS	35.7
MACHIASPORT	27.7
MARSHFIELD	31.1
NORTHFIELD	*
ROQUE BLUFFS	*
WESLEY	40.7
WHITING	40.2
WHITNEYVILLE	*

Source: Maine State Planning Office.

WASHINGTON COUNTY REGIONAL PLANNING COMMISSION
ESTIMATE OF SHORT-RANGE
HOUSING NEED

	Estimate of New Housing Units to Meet Existing Demand	Estimate of New Housing Units to Meet Normal Growth	Estimate of Total Short-Range Need
Cutler	20	12	32
East Machias	28	21	49
Machias	79	40	119
Machiasport	18	17	35
Marshfield	8	6	14
Northfield	4	2	6
Roque Bluffs	8	4	12
Wesley	3	2	5
Whiting	8	6	14
Whitneyville	8	4	12

WASHINGTON COUNTY REGIONAL PLANNING COMMISSION
ESTIMATE OF FIVE YEAR
HOUSING NEED

	Estimate of New Housing Units to Meet Existing Demand	Estimate of New Housing Units to Meet Normal Growth	Estimate of Total Short-Range Need
Cutler	20	12	32
East Machias	28	21	49
Machias	79	40	119
Machiasport	18	17	35
Marshfield	8	6	14
Northfield	4	2	6
Roque Bluffs	8	4	12
Wesley	3	2	5
Whiting	8	6	14
Whitneyville	8	4	12
	184	114	298