CHAPTER VI
NATURAL RESOURCES

Introduction

In history, the natural resource base composes the starting point for all municipalities. As a rural community, Waterboro is comprised of a rich and diverse proliferation of its natural resources. To a great extent, the character of the Town is largely defined by the spatial configuration and surface cover of the natural landscape. Existing land use patterns have generally developed in response to natural conditions and, therefore, provide a general sense of compatibility between developed areas and natural areas.

While generally in conformance, development has compromised the natural resources bases within the Town.

As Waterboro develops a comprehensive plan for economic and developmental expansion into the next century, its natural resources should be the driving force and provide the direction for future decisions affecting the landscape of the Town. Much can be learned from mistakes made in existing developed areas where natural resources have been irretrievably lost and remaining resources continue to be threatened.

The purpose of this portion of the 1990 Waterboro Comprehensive Plan Update is threefold:

1. To identify renewable natural resources of regional significance and those which require coordination with other municipalities.

2. To define the natural landscape signature of the Town and to provide an understanding of remaining renewable natural resources, including unique natural landscape areas, productive natural resources, and threatened natural resources.

3. To provide the framework for a management system by which the Town can organize its effort to continually manage its remaining natural resource base into the future. This management system has been developed in order to provide the Town with an evaluation system to measure the consequences of a particular activity within the Town and to provide a positive direction for the management of the utilization and preservation of renewable natural resources over time.

Background

In response to the need for regional coordination of natural resource planning, this study is first based on the determination of natural, identifiable boundaries which relate to regional natural resources. The first step, therefore, is to determine the major watersheds within the Town:

I. **The Saco River Watershed**
II. **The Mousam River Watershed**

WATERSHED POSITION

The two major watersheds within Waterboro represent distinct conditions of position to the major river courses of regional significance. Proper planning within Waterboro must account for the Town's contribution to the regional influence upon these river resources. (See Figure 1)

The Saco River headwaters are located in the White Mountains of New Hampshire. As the Saco River makes its way to the Atlantic Ocean, it becomes a major river body of Statewide economical and recreational significance.

Waterboro's largest drainage area within the Saco River watershed drains to the Little Ossipee River. The Little Ossipee River is a major tributary to the Saco River and, with Lake Arrowhead, forms the northern boundary of Waterboro. From a regional perspective, management of this section of the Little Ossipee would occur with the adjacent towns of Limerick and Limington. Within Waterboro, the major subwatershed tributaries to the Little Ossipee are Buff Brook, Little Ossipee Pond/Ossipee Flowage, and the Isinglass Pond drainage.

The remaining portion of the Saco River watershed within Waterboro is drained via Killick Pond, Junkins Brook and Stony Brook, all of which pass through the Town of Hollis. Cooks Brook, which drains Bartlett Pond and the valley between Waterboro Center and East Waterboro, passes through the towns of Lyman and Dayton before reaching the Saco. All of these tributaries occur at the lower end of the overall Saco River system.

In contrast, Waterboro contains three headwater areas in the Mousam River watershed. A major wetland complex, including a portion of The Heath*, is at the upper reaches of the Hamilton Branch, which eventually drains to Shaker Pond through the Town of Alfred before joining the Middle Branch of the Mousam River in Sanford. Moody Pond, at 492 feet above sea level, comprises the headwaters of the Carll Branch, also drains to Shaker Pond and drains to the Middle Branch through Alfred and Sanford. Middle Branch Pond, which straddles the Waterboro/Shapleigh town line, is the source of the Middle Branch of the Mousam River.

* It should be noted that interpretation of U.S.G.S. data is not entirely conclusive as to the portions of The Heath which apparently drain to both the Saco River and the Mousam River.

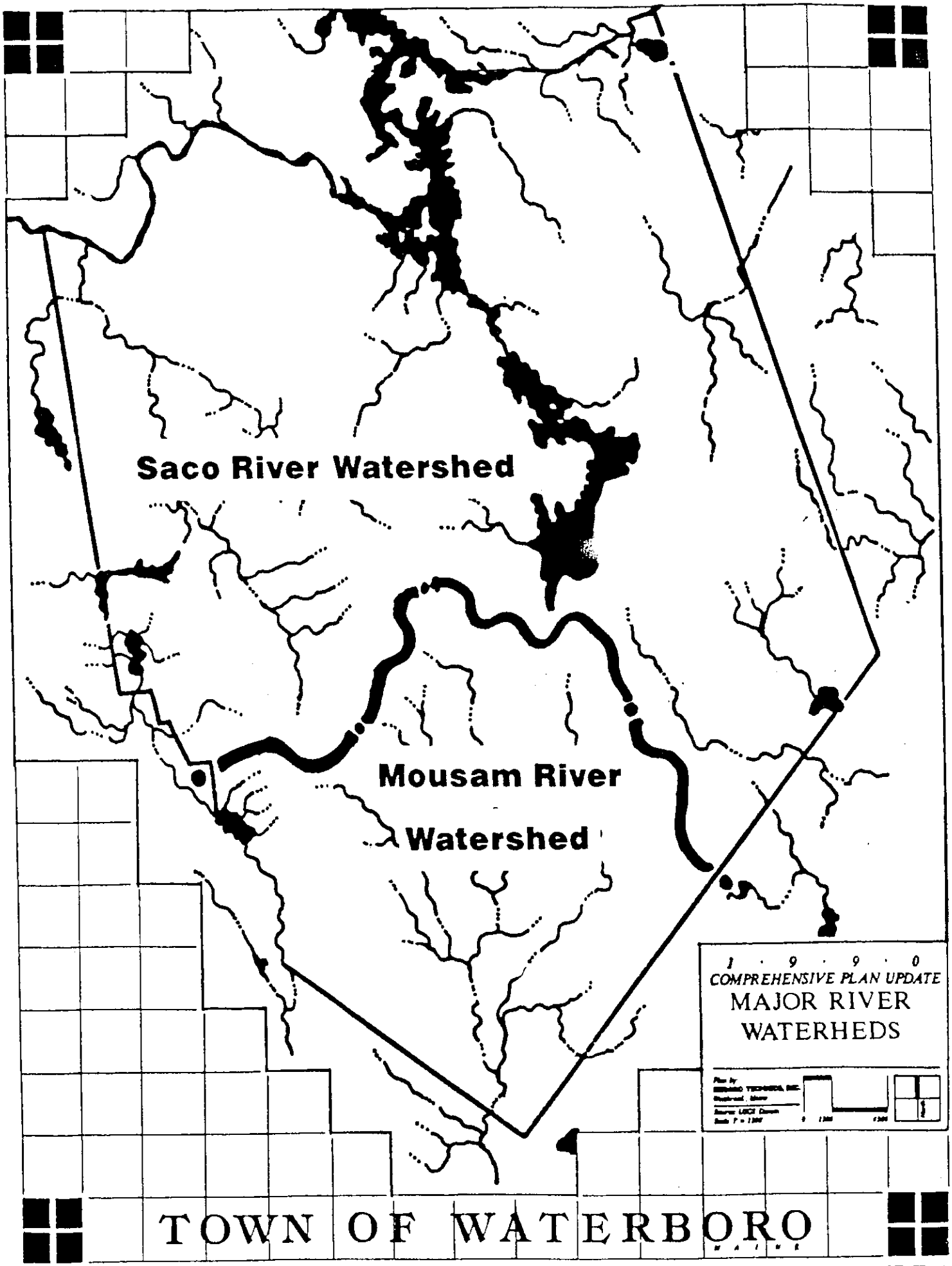

Saco River Watershed
Mousam River
Watershed
1 9 9 0
COMPREHENSIVE PLAN UPDATE
MAJOR RIVER
WATERHEDS
TOWN OF WATERBORO

FIGURE 1

The water quality of these major rivers is dependent on the water quality of all river sections, tributaries, water bodies and wetlands in several municipalities which comprise the watershed area. In the interest of regional coordination and natural resource planning, it is important to understand the position of Waterboro's area within these major watersheds.

It is clear that Waterboro contains a significant portion of the Mousam River headwaters. From a regional perspective, protection of water quality within this watershed is of vital importance to the overall quality of the Mousam river and the municipalities "downstream" from Waterboro.

Methodology

Renewable natural resources are composed of several ecological components which comprise a dynamic, successional natural system. Evaluation of these resources, within the scope of this study, is based on the present condition of the landscape.

Furthermore, the scale of this study is conducted at a Town-wide level, thus limiting the amount of detail pertaining to the natural resource analysis presented herein. This effort does not focus on the ability for natural resources to accommodate development, but rather to provide an understanding of these natural resources and the importance of the continuous management of these resources as they relate to the visual and historical sense of Waterboro. Once this level of understanding is reached, the compromise between preservation and utilization of the natural resource base can be intelligently contemplated. Finally, the methodology is presented in an accountable, "reader-friendly" format comprised of the sequential steps taken during the process.

1. STEP ONE - DELINEATE MAJOR WATERSHEDS

We have previously discussed the need for regional natural resource planning and the importance of the determination of natural identifiable boundaries to begin to organize the analysis process. Figure 1 illustrates the position of the Saco River and Mousam River Watersheds within the Town.

2. STEP TWO - DELINEATE SUBWATERSHEDS (PLANNING CELLS)

In order to further evaluate natural resources specific to the Town of Waterboro, the major watersheds are then broken down into subwatersheds. These subwatersheds allow the planning effort to focus upon specific water resources within the Town (Little Ossipee Pond, Buff Brook/Henderson Brook and Bartlett Pond are some examples). Subwatersheds may be defined as PLANNING CELLS which become a component of the long-term natural resource management system. PLANNING CELLS are depicted in Figure 2 and are categorized as follows:

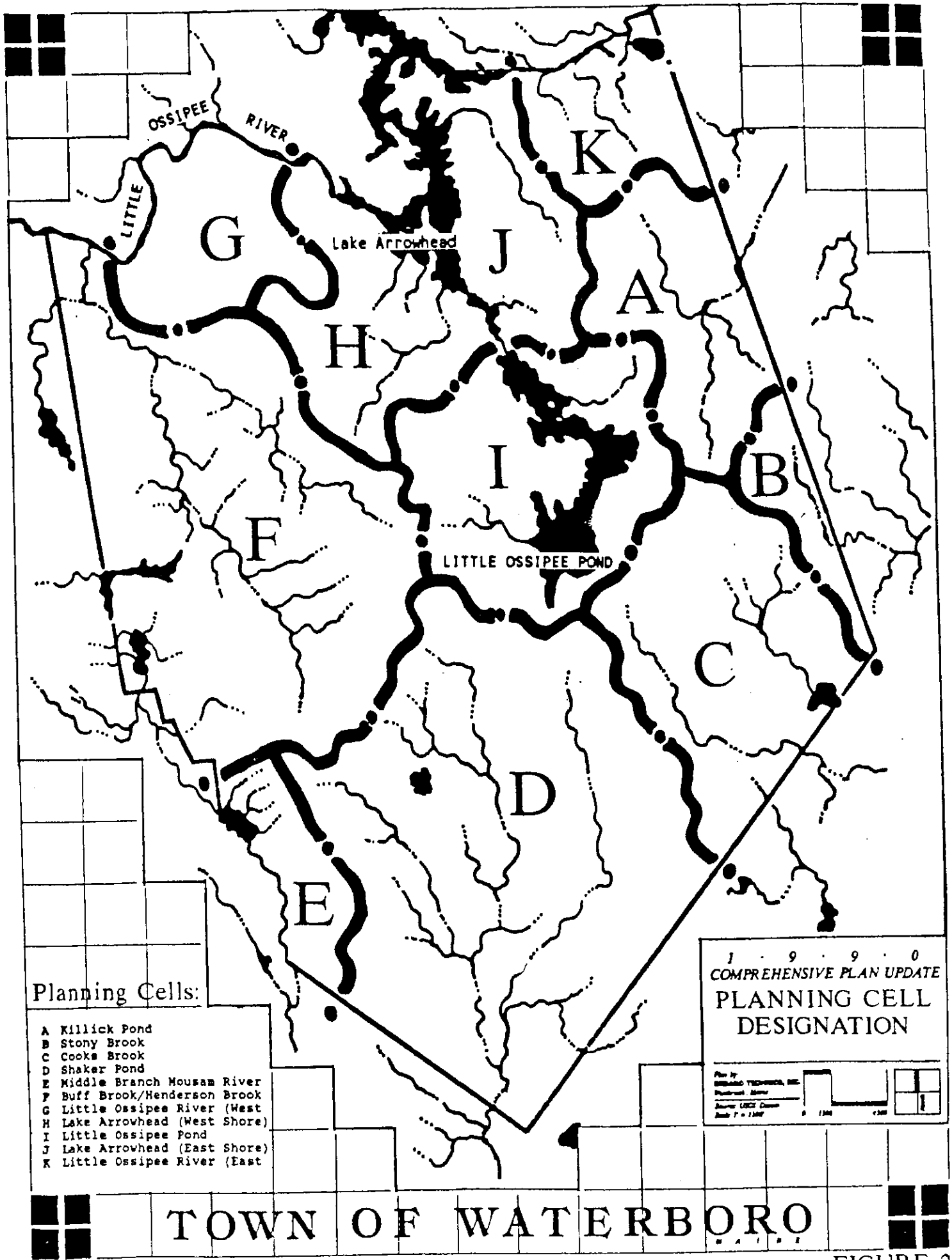

OSSIPEE RIVER
LITTLE
Lake Arrowhead
LITTLE OSSIPEE POND
A
B
C
D
E
F
G
H
I
J
K
Planning Cells:
A Killick Pond
B Stony Brook
C Cooks Brook
D Shaker Pond
E Middle Branch Mousam River
F Buff Brook/Henderson Brook
G Little Ossipee River (West
H Lake Arrowhead (West Shore)
I Little Ossipee Pond
J Lake Arrowhead (East Shore)
K Little Ossipee River (East
1 · 9 · 9 · 0
COMPREHENSIVE PLAN UPDATE
PLANNING CELL DESIGNATION
TOWN OF WATERBORO

FIGURE 2

PLANNING CELL (Sub-Watershed)		Major Watershed
A	Killick Pond	Saco River
B	Stony Brook	Saco River
C	Cooks Brook	Saco River
D	Shaker Pond	Mousam River
E	Middle Branch Mousam River	Mousam River
F	Buff Brook/Henderson Brook	Saco River
G	Little Ossipee River (West Section)	Saco River
H	Lake Arrowhead (West Shore)	Saco River
I	Little Ossipee Pond	Saco River
J	Lake Arrowhead (East Shore)	Saco River
K	Little Ossipee River (East Section)	Saco River

3. STEP THREE - DELINEATE PLANNING UNITS

Existing developed areas basically represent non-renewable natural resources; however, developed areas provide a framework for organizing the remaining renewable resource base. Within each planning cell, developed areas are mapped, thereby delineating the remaining contiguous natural areas, or PLANNING UNITS.

PLANNING UNITS provide the long-term natural resource management system with a framework for continuing re-evaluation at a manageable level over time. Inventory and analysis of each planning unit allows the natural resource base to be studied at a manageable level at a Town-wide scale. This level of inventory and analysis provides a framework for detailed accounting of the present condition of the landscape within the scope of this effort. Inventory and analysis is conducted for each planning unit and is provided in a specialized format herein (**at the end of this chapter**) on the following basis:

- **PLANNING UNIT DESIGNATION**

  In accordance with planning cell letter designations (A through K), each planning unit is designated by number. For example, within planning cell A, there are three planning units described as A-1, A-2 and A-3.

- **WATERSHED**

  Defines the major watershed in which the planning unit occurs (Saco River or Mousam River).

- **SUB-WATERSHED**

  Defines the planning cell or sub-watershed in which the planning unit occurs (A through K).

- **LAND AREA**

  Defines the area or acreage of the planning unit (horizontal area).

- **ELEVATION RANGE**

  Defines the topographic elevation change within the planning unit (vertical variation).

- **CONTIGUOUS PLANNING UNITS**

  This designation is an important component of the management system. While the planning units afford a manageable level of inventory, analysis, and management over time, their contiguity is equally as important. For example, a perennial stream may pass through many planning units within the Town, or a major ridge land form may be composed of several planning units. As such, the management of a particular resource will be comprised of the subsequent management of contiguous planning units.

- **MUNICIPALITY COORDINATION**

  In support of the recognition that natural resources supersede municipal boundaries, planning units which directly abut neighboring towns are identified. These particular areas require specialized coordination between Waterboro and neighboring towns in terms of natural resource management.

Subsequent to the designation of planning units, their respective watershed position, land area, elevation range, continuity with other planning units, and requirements for direct municipality coordination, further analysis of each planning unit is conducted based on the following criteria:

4. STEP FOUR - PLANNING UNIT SIGNATURE

The "signature" of the planning unit describes the visual appearance of the natural landscape within the Town. The landscape signature is described by four primary components:

- **Context** - Defines the boundaries and edge condition of the planing unit which is consistently described by watershed divides of developed area edge conditions. (Source: U.S.G.S. Topographic Datum).

- **Spatial Configuration** - Describes the topographic land form conditions which exist within and adjacent to the planning unit. (Source: U.S.G.S. Topographic Datum).

- **Water Regime** - Describes surface water occurrence and wetland characteristics within and/or adjacent to the planning unit. (Source: Wetlands Inventory, Town of Waterboro; I.E.P. Inc. 1988, U.S.G.S. Topographic Datum.)

- **Land Cover** - Generally defines the land surface vegetative conditions within the planning unit. (Source: Aerial Photographic Interpretation, Sebago Technics, Inc., photo date 1988).

The process of defining the landscape signature of all planning units within the Town provides the initial step in understanding the natural resources of Waterboro. Specifically, this analysis achieves the following level of understanding:

- The visual appearance of the Town.

- An understanding of the context and natural components of each planning unit.

- An understanding of the relationships between planning units and the natural resources which create linkages between them.

- An understanding of those areas which are unique within the Town, based on occurrence rate and context.

- An understanding of the interface between natural areas and developed areas.

- An overall understanding of the Town of Waterboro's natural systems.

It is now possible to conduct further analyses of the overall condition of the natural resources within the Town. In conformance with the management system heretofore established, the entire Town is evaluated utilizing the following analyses:

5. STEP FIVE - EXAMINE WATER RESOURCES

The natural resource management system heretofore established is specifically designed to accommodate the inventory and analysis of water resources within the Town of Waterboro. Major watersheds within the Town and subwatershed areas (PLANNING CELLS) define the framework for the analysis of water resources. Water resources compose perhaps the most important component of the Town resource base, serving the needs of public water supply, recreational uses, and forming a major portion of the visual sense of Waterboro. The inventory and analysis of these water resources is based on the classification of water resources in the following categories:

- Surface Waters
- Freshwater Wetlands
- Groundwaters

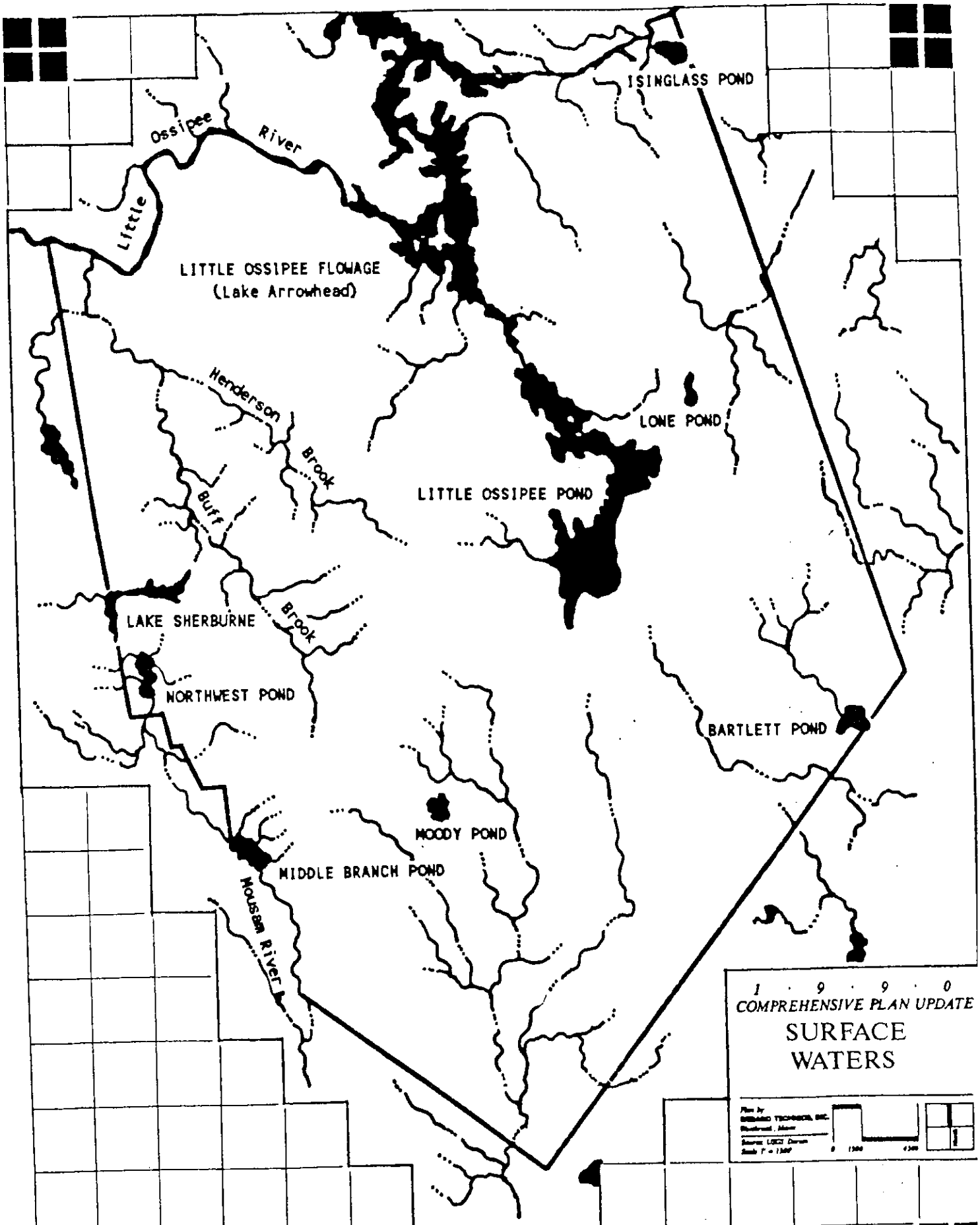
Surface Waters

Surface waters may be further defined as rivers, lakes, ponds and streams (See Figure 3). Within Waterboro, the major surface waters, their size, location within the management system, water quality classification and principal uses include the following:

***SURFACE WATER LOCATION**

PONDS AND LAKES	SUBWATERSHED	PLANNING CELL	AREA (ACRES)
BARTLETT POND	Cooks Brook	C	30
MIDDLE BRANCH POND	Mousam River (MB)	E	38
ISINGLASS POND	Little Ossipee River (E)	K	30
LOWE POND	Shaker Pond	D	8
MOODY POND	Shaker Pond	C	18
NORTHWEST POND	Buff Brook/Henderson Brook	F	38
LITTLE OSSIPEE FLOWAGE	Lake Arrowhead (W,E)	H,J	1005
LITTLE OSSIPEE POND	Little Ossipee Pond	I	564
LAKE SHERBURNE	Buff Brook/Henderson Brook	F	52

RIVERS AND STREAMS	SUBWATERSHED	PLANNING CELL	LENGTH (MILES)
MOUSAM RIVER (MIDDLE BRANCH)	Mousam River (MB)	E	1.30
CARLL BRANCH/SHAKER BROOK	Shaker Pond	J	5.00
HAMILTON BRANCH	Shaker Pond	J	4.40
COOKS BROOK	Cooks Brook	C	2.70
BARTLETT BROOK	Cooks Brook	C	2.40
LITTLE OSSIPEE RIVER	Little Ossipee River (W,E)	G,K	6.60
BUFF BROOK	Buff Brook/ Henderson Brook	F	4.90
HENDERSON BROOK	Buff Brook/ Henderson Brook	F	1.20



TOWN OF WATERBORO

FIGURE

*SURFACE WATER QUALITY

PONDS AND LAKES	GREAT POND DESIGNATION	D.E.P. WATER QUALITY CATEGORY	WATERSHED AREA (ACRES)	PHOSPHORUS COEFFICIENT (LBS/PPB/YR)
BARTLETT POND	Yes	Moderate/Sensitive	2233	13.20
MIDDLE BRANCH POND	Yes	Moderate/Sensitive	298	2.99
ISINGLASS POND	Yes	Moderate/Sensitive	205	2.00
LONE POND	No	Not Available	90	N/A
MOODY POND	Yes	Moderate/Sensitive	74	0.88
LITTLE OSSIPEE FLOWAGE	Yes	Moderate/Sensitive	733	4.85
LITTLE OSSIPEE POND	Yes	Moderate/Sensitive	12278	91.00
LAKE SHERBURNE	Yes	Moderate/Sensitive	538	4.38

**RIVERS AND STREAMS	PRIMARY OUTLET	GREAT RIVER DESIGNATION	D.E.P. WATER QUALITY CATEGORY
MOUSAM RIVER (MIDDLE BRANCH)	Estes Lake	No	B
CARLL BRANCH/SHAKER BROOK	Shaker Pond	No	B
HAMILTON BRANCH	Shaker Pond	No	B
COOKS BROOK	Saco River	No	B
BARTLETT BROOK	Bartlett Pond	No	B
LITTLE OSSIPEE RIVER	Saco River	Yes	A
BUFF BROOK	Little Ossipee River	No	A
HENDERSON BROOK	Little Ossipee River	No	A

*PRINCIPAL USE OF SURFACE WATERS

POND, LAKE, RIVER, STREAM	PUBLIC WATER SUPPLY	IMPOUNDMENT/ % FLOWED	BOAT LANDING	RECREATION
BARTLETT POND	No			
MIDDLE BRANCH POND	No	No	No	Yes
ISINGLASS POND	No	No	No	Yes
LONE POND	No	No	Yes	Yes
MOODY POND	No	No	No	Yes
NORTHWEST POND	No	No	Yes	Yes
LITTLE OSSIPEE FLOWAGE	No	Yes (>50%)	Yes	Yes
LITTLE OSSIPEE POND	No	Yes (<50%)	Yes	Yes
LAKE SHERBURNE	Data Not Available			
MOUSAM RIVER (MIDDLE BRANCH)	No	No	No	No
CARLL BRANCH/SHAKER BROOK	No	No	No	No
HAMILTON BRANCH	No	Yes	No	No
COOKS BROOK	No	No	No	No
BARTLETT BROOK	No	No	No	No
LITTLE OSSIPEE RIVER	No	Yes	No	No
BUFF BROOK	No	No	No	No
HENDERSON BROOK	No	No	No	No

* SOURCE: Maine Department of Inland Fisheries and Wildlife

**SOURCE: Maine Department of Environmental Protection

Freshwater Wetlands

Waterboro exhibits a prolific occurrence with a rich diversity in wetland types and associations. A detailed inventory and analysis has been conducted for the Town entitled, "Wetlands Inventory, Town of Waterboro; I.E.P. Inc. 1988." This inventory and analysis has been incorporated as a major component of the overall analysis of natural resources as presented herein.

Groundwaters

Groundwater resources within Waterboro provide vital public water supply to the Town and, as such, are a crucial natural resource, both currently and into the future. Available data is derived from the State of Maine Sand and Gravel Aquifers mapping system which provides the basis for the information provided herein. Figure 4 illustrates groundwater resources within Waterboro.

Sand and gravel aquifers within Waterboro are comprised of three major aquifer systems which extend into adjacent municipalities. The first aquifer system occurs within the valley regions on the west side of the Town overlying the Mousam River (Middle Branch), Buff Brook and the Little Ossipee River. Predicted well yields within this aquifer system are estimated at 10-50 gallons per minute.

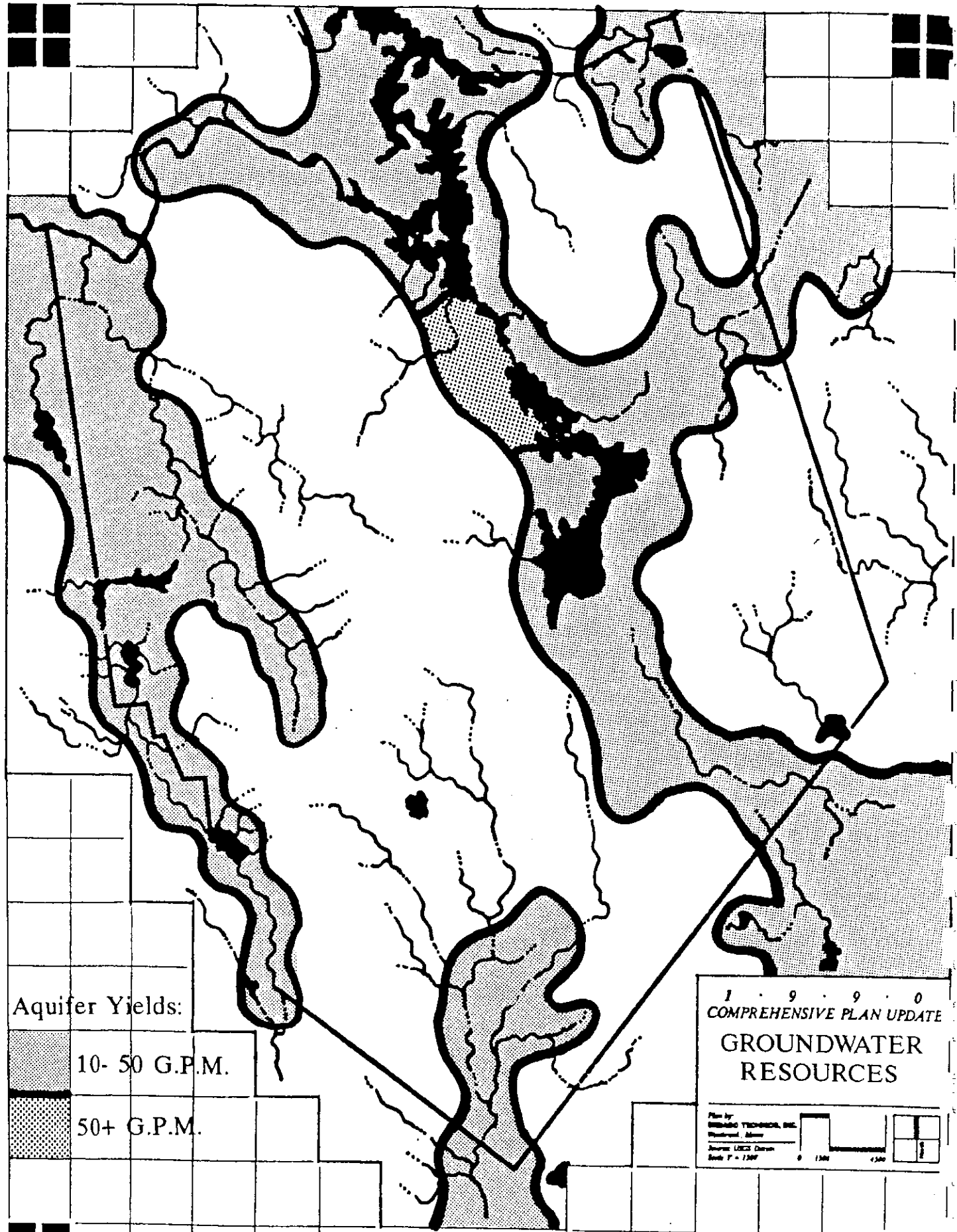
The second and most extensive aquifer system overlays lower sections of the Little Ossipee River, Little Ossipee Flowage, Little Ossipee Pond, Killick Pond headwaters, and Cooks Brook headwaters. Predicted well yields are estimated at 10-50 gallons per minute except for an area on the west shore of Little Ossipee Flowage estimated at 50+ gallons per minute.

The third aquifer system extends from South Waterboro into the Town of Alfred, overlying the valley containing Carll Branch and Hamilton Brook, draining to Shaker Brook. Predicted well yields within this aquifer are estimated 10-50 gallons per minute. This aquifer supports a new public water supply system for the village section of South Waterboro. Refer to the Public Utilities and Infrastructure section for additional information.

6. STEP SIX - IDENTIFY UNIQUE NATURAL AREAS

A. **UNIQUE NATURAL AREAS DESIGNATION CRITERIA**
Within the context of this study, "unique natural areas" are defined based on the following criteria:

1. Natural areas designated for preservation within the framework of a National, State, Town or Private Park, Forest, Preserve or Wilderness Area.



TOWN OF WATERBORO
MAINE

FIGURE 4

2. Natural areas placed on the State of Maine Register of Critical Areas in accordance with the State of Maine Critical Areas Act. (None presently occur.)

3. All surface waters within the Town of Waterboro.

4. Wetland areas comprised of 10 or more acres as defined by the State of Maine Natural Resources Protection Act.

5. Occurrences of rare or endangered species of plant or animal life protected under the Federal Endangered Species Act. (None presently occur.)

6. Occurrence of rare or endangered species of plant or animal life as identified by the State of Maine Natural Heritage Data Base Program.

7. Natural areas unique to the Town of Waterboro, based on regional significance and occurrence rate within the Town which have been identified by publications and research performed to date.

7. STEP SEVEN - IDENTIFY PRODUCTIVE NATURAL RESOURCES

As a necessary component of the natural resource inventory and analysis, it is necessary to identify and evaluate productive natural resources. Within this context, three categories of productive natural resources have been identified: prime agricultural lands, commercial forest lands, and mineral resource lands.

A. **Prime Agricultural Lands** are herein defined as those areas with soil properties ideal for agricultural uses. Prime agricultural lands are further defined as follows:

1. Existing areas presently used for active agricultural operations.

2. Undeveloped lands exhibiting soil types identified by the Soil Conservation Service listing of "Prime Agricultural Soils of York County, Maine."

Most active farms are located on Waterboro's ridge tops and/or adjacent to travel corridors, ranging in size from 10 to 150 acres. Principal products are pasturage, silage and orchard crops. In 1990, it is estimated that approximately 900 acres is being actively farmed. No information was available regarding participation in the Farm and Open Space Law taxation program.

B. **Commercial Forest Lands** are herein defined as those lands of sufficient acreage and having timber resources of commercial value. There is only one area meeting this criteria, located in the northwest section of Waterboro between Townhouse Road and the Little Ossipee River. This parcel has been actively managed by a timber harvest corporation for several years and contains approximately 750 acres.

As a part of this inventory and analysis, a methodology was explored to identify other areas of potential commercial forest value. Site index values for soil group types, according to S.C.S. Soil Survey Data, proved to be vague and inconclusive to warrant use as a sound methodology. It was concluded that an extensive vegetation inventory and analysis would be necessary to achieve a suitable result and defensible conclusions.

Waterboro contains approximately 4300 acres of forest lands registered under the State of Maine Tree Growth Tax Program, ranging in size from 10 to 100 acres. Forest products include cordwood, pulp and lumber products.

C. **Mineral Resource Lands** are comprised of sand and gravel deposits concentrated within the Little Ossipee River, around Little Ossipee Lake and in South Waterboro. Active mineral extraction operations include approximately 125 acres of land.*

8. STEP EIGHT - IDENTIFY COMPROMISED NATURAL AREAS

Man's activities related to timber harvesting, mineral extraction, residential, commercial and industrial development all represent the compromise between this activity and the natural resource base. The compromise is justifiable if responsibly executed; however, in some cases, the compromise extends to significant alteration or degradation of the natural landscape.

*Also see Chapter 2, Existing Land use.
Within the scope of this analysis, Waterboro is analyzed respective to the influence of man upon the resources of the Town. This analysis is based upon topographic data, aerial photographic interpretation, and information provided by the Town.*

"Compromised Natural Areas" are defined based on the following criteria:

A. Point source discharges into surface waters or watershed areas of surface waters.

B. Non-point discharges into surface waters or watershed areas of surface waters.

C. Agricultural and Forestry Operations

D. Intrusion or juxtaposition of developed areas upon natural areas presenting surface water and groundwater contamination potential to these areas.

9. STEP NINE - RECOGNIZE DEVELOPED AREAS

As part of a responsible natural resource inventory and analysis, it is necessary to recognize the existence and importance of natural resources within existing developed areas. Unlike natural areas, these natural resources may not occur in a contiguous context; however, they comprise an important component of the overall natural resource base.

The analysis of these resources requires a highly detailed level of inventory which is not afforded within the scope of this study; however, examples may best illustrate the point. Specimen trees, old growth timber, and unique planted species occur within Waterboro's developed areas. A great diversity of wildlife activity, as well as habitat, is evident in these areas. Significant water resources are prevalent within and beneath developed areas.

10. STEP TEN - SUMMARIZE NATURAL AREA CLASSIFICATIONS

To this point, the methodology presented herein has defined the natural resource management system (ORGANIZATION), the identification and inventory of those natural resources (DOCUMENTATION), and analysis of the natural resources (CLASSIFICATION). To summarize, the methodology has identified five primary classifications of Waterboro's natural resource base:

- Unique Natural Areas (Protected)
- Productive Natural Areas
- Compromised Natural Areas
- Natural Areas within Developed Areas
- Remaining Natural Areas

*It should be noted that this information is not entirely conclusive to actual conditions.

The Natural Resources Plan delineates the management system of planning cells and planning units, and delineates the five natural resource classifications. (See Figure 7).

Areas classified as "remaining natural areas" are those undeveloped lands which do not meet the classification criteria for the previously identified four classification groups. It is important to note that not everything is known about these areas; for example, these areas may contain endangered wildlife habitat which is presently undocumented.

These remaining natural areas will provide the future growth needs of Waterboro and, therefore, must be analyzed for their ability to accommodate future growth. This type of analysis does not identify or describe natural resources, but rather evaluates characteristics of those resources and the suitability of those resources to accommodate future development. Examples of these characteristics include soil suitability for septic disposal systems, degree of slope, and floodplain hazard areas.

These analyses criteria are combined with other factors in determining future growth trends. Other factors include cultural resources, historic areas, scenic areas, and public infrastructure conditions. The suitability analysis of natural resources is therefore presented in coordination with these other factors, refer to Chapter 12, Future Land Use Plan.

11. STEP ELEVEN - EVALUATE EXISTING REGULATORY CONTROLS

Existing measures providing protection of natural resources include regulatory controls set forth by State laws and local zoning ordinances. For the purposes of evaluation, existing measures of protection are summarized as follows:

1. **Shoreland Zoning** - Waterboro's Zoning Ordinance includes an overlay zone governing activity within 500 feet of surface water bodies. This Ordinance provision also stipulates that State legislation standards shall apply if more stringent than local standards. Waterboro is required to comply with the Mandatory Shoreland Zoning Act, 38 M.R.S.A, Sections 435-449 by 1992; however, these control standards are not in place as of 1990.

2. **Natural Resources Protection Act** - This State legislative act controls the activity within the vicinity of surface waters, including streams and freshwater wetlands. N.R.P.A. further protects threatened plant and wildlife species. Waterboro has two occurrences of Blandings Turtle; these locations are shown on the Natural Resources Map.

3. **State Conservation Lands** - Located in the northwest corner of the Town, these lands were recently purchased by the State of Maine for the purposes of preservation and conservation. These lands to remain forever in their natural state include significant wildlife habitat and Pitch Pine/Scrub Oak Barrens, a vegetation community unique in Maine.

4. **Well Head Overlay Zoning District** - Located in South Waterboro, this zoning district was created to control development and other activity in the vicinity of a public water supply source.

5. **D.E.P. Site Location Act** - This act only applies to recent large scale development projects, however does provide limited protection of development and other activity affecting natural resources.

6. **Local Zoning Ordinances** - Zoning district designations, land use regulations, performance standards, and other land use controls are set forth by Waterboro's zoning ordinances and regulated by the Waterboro Planning Board. These regulations and administrative application of these regulations provide control over development activity in the Town.

Recommendations

In accordance with the management system established herein and the classifications of natural resources within Waterboro, recommendations are forwarded below. These recommendations are established as general guidelines only; specific methods of implementation are discussed in the Natural Resources Plan.

- **Establish a management system based on the planning cells and planning units identified herein.**
- **Establish a regional coordination component in the context of natural resource management.**
- **Protect, maintain, and where warranted, improve the water quality of each water body according to the State classification system.**
- **Protect, maintain, and where warranted, improve the water quality of groundwater resources.**
- **Protect, maintain, and conserve natural resources within Unique Natural Areas; monitor and manage any and all activity within these areas.**
- **Protect, monitor, and where required, improve the condition of natural resources which occur within Developed Areas.**
- **Plan, monitor, and manage natural resources within areas designated as Remaining Natural Areas; monitor and manage any and all activity within these areas. Evaluate the compromise or gain vs. loss between preservation and utilization of natural resources.**

- Surface Waters
- Freshwater Wetlands
- Groundwaters

3

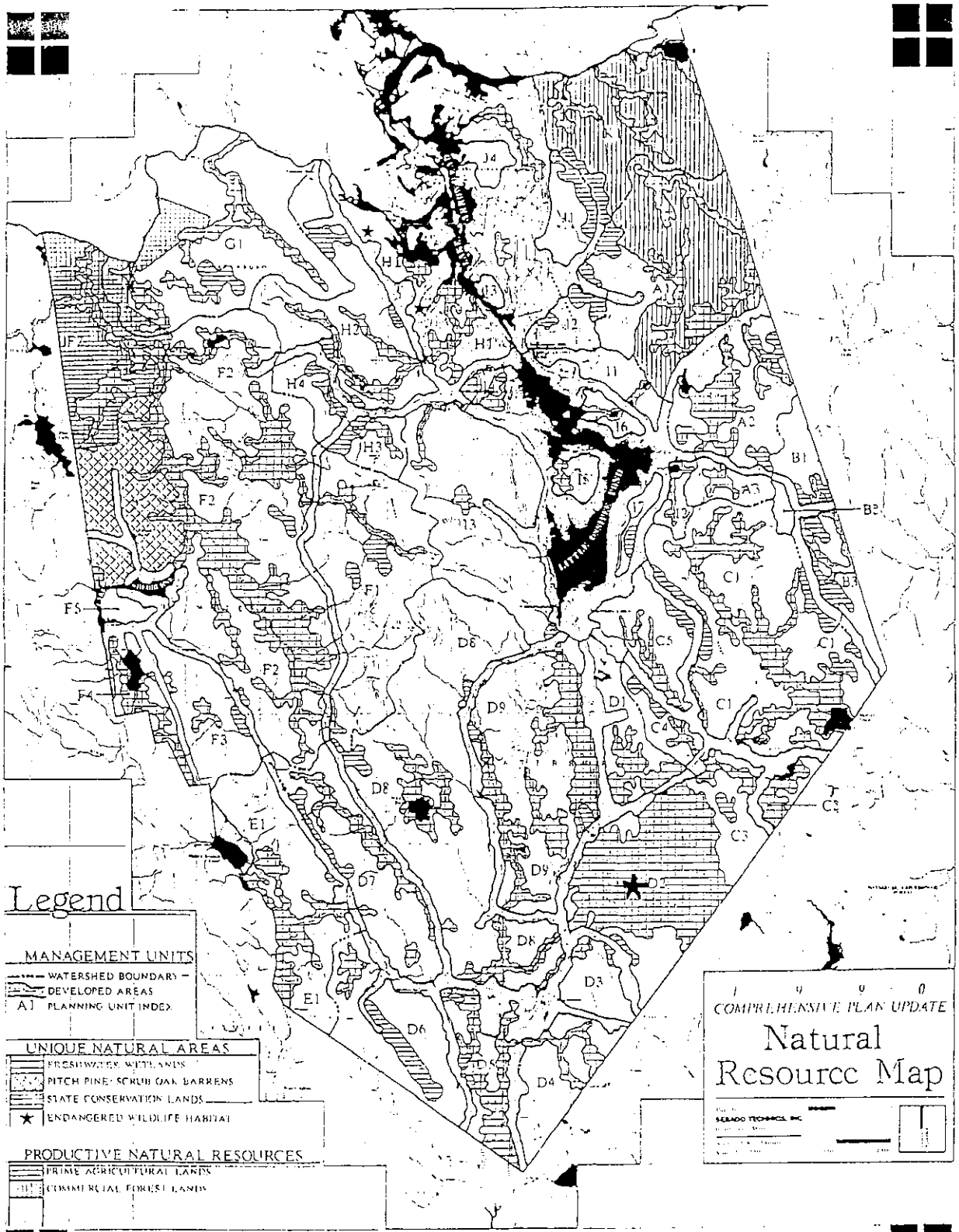
Surface Waters

Surface waters may be further defined as rivers, lakes, ponds and streams (See Figure 4). Within Waterboro, the major surface waters, their size, location within the management system, water quality classification and principal uses include the following:

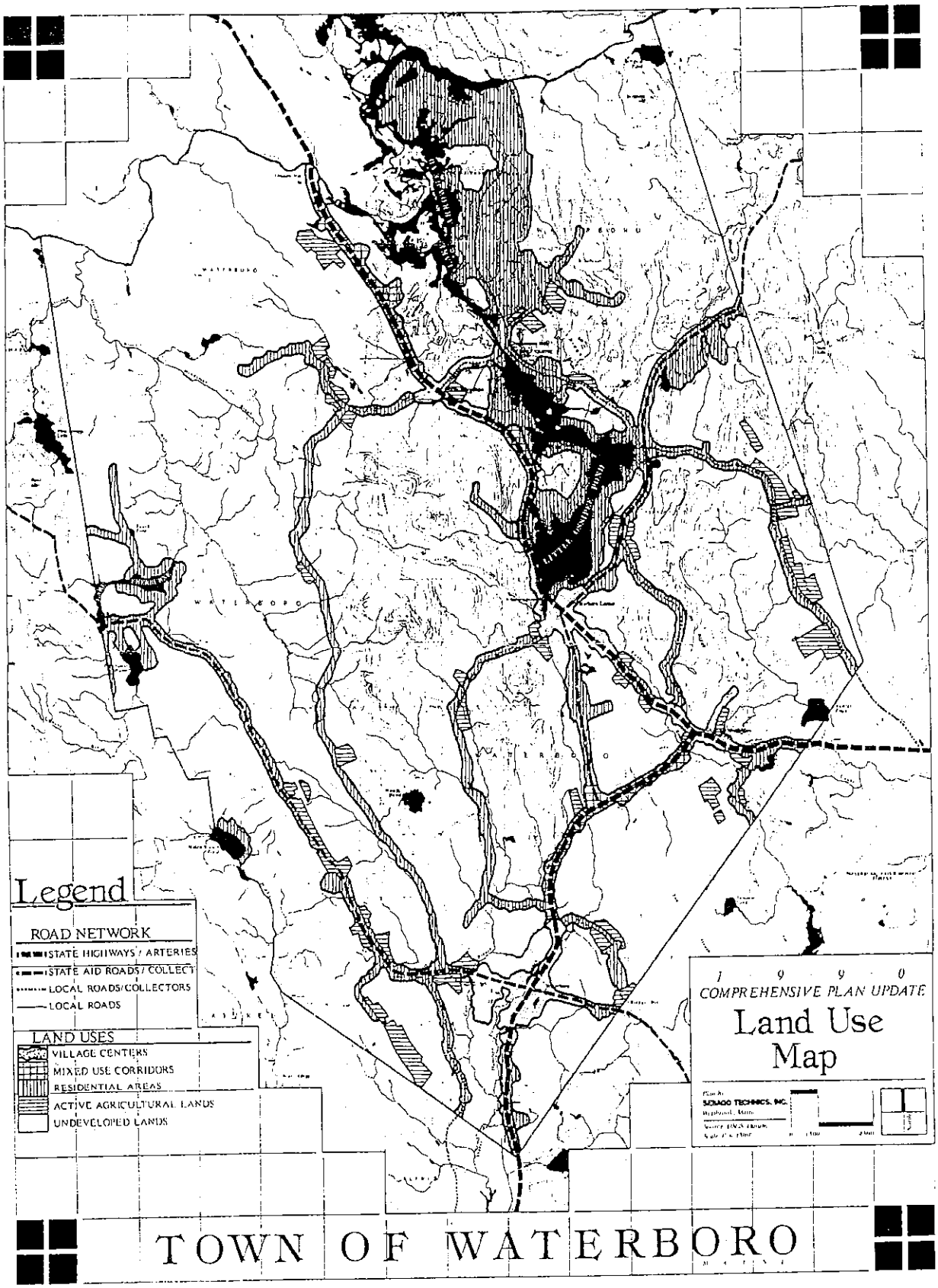
***SURFACE WATER LOCATION**

PONDS AND LAKES	SUBWATERSHED	PLANNING CELL	AREA (ACRES)
BARTLETT POND	Cooks Brook	C	30
MIDDLE BRANCH POND	Mousam River (MB)	E	38
ISINGLASS POND	Little Ossipee River (E)	K	30
LONE POND	Shaker Pond	D	8
MOODY POND	Shaker Pond	C	18
NORTHWEST POND	Buff Brook/Henderson Brook	F	38
LITTLE OSSIPEE FLOWAGE	Lake Arrowhead (W,E)	H,J	1005
LITTLE OSSIPEE POND	Little Ossipee Pond	I	564
LAKE SHERBURNE	Buff Brook/Henderson Brook	F	52

RIVERS AND STREAMS	SUBWATERSHED	PLANNING CELL	LENGTH (MILES)
MOUSAM RIVER (MIDDLE BRANCH)	Mousam River (MB)	E	1.30
CARLL BRANCH/SHAKER BROOK	Shaker Pond	J	5.00
HAMILTON BRANCH	Shaker Pond	J	4.40
COOKS BROOK	Cooks Brook	C	2.70
BARTLETT BROOK	Cooks Brook	C	2.40
LITTLE OSSIPEE RIVER	Little Ossipee River (W,E)	G,K	6.60
BUFF BROOK	Buff Brook/ Henderson Brook	F	4.90
HENDERSON BROOK	Buff Brook/ Henderson Brook	F	1.20



TOWN OF WATERBORO


Legend
ROAD NETWORK
STATE HIGHWAYS / ARTERIES
STATE AID ROADS / COLLECT
LOCAL ROADS/COLLECTORS
LOCAL ROADS
LAND USES
VILLAGE CENTERS
MIXED USE CORRIDORS
RESIDENTIAL AREAS
ACTIVE AGRICULTURAL LANDS
UNDEVELOPED LANDS
1 9 9 0
COMPREHENSIVE PLAN UPDATE
Land Use Map
SEBAGO TECHNICS, INC.
TOWN OF WATERBORO