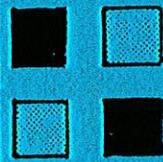




Natural Resources Plan



NATURAL RESOURCES PLAN

The Natural Resources Plan is presented in accordance with the inventory and analysis of natural resources presented herein, and in compliance with the requirements of the Comprehensive Planning and Land Use Regulation Act (30-A-M.R.S.A., Sections 4311-4344) and in response to Land Use Policies set forth by the Town of Waterboro.

The purpose of the Natural Resources Plan is to establish the policies in order to protect the natural resources within Waterboro. Specifically, these policies are developed to protect the quality of the State's water resources, wetlands, wildlife and fisheries habitat, unique natural areas, and agricultural and forest resources from future development that threatens those resources.

Finally, these policies are translated into specific methods of implementation which are presented herein. Within the context of the Comprehensive Planning and Land Use Regulation Act, these methods of implementation will form the basis for future amendments to the Town of Waterboro Zoning Ordinance and other land use regulations. The policies and methods for implementation specific to the protection of natural resources is organized as follows:

- I. MANAGEMENT IMPLEMENTATION
- II. REGIONAL COORDINATION
- III. PROTECTION OF SURFACE WATER RESOURCES
- IV. PROTECTION OF GROUNDWATER RESOURCES
- V. IMPLEMENTATION OF MANDATORY SHORELAND ZONING
- VI. RURAL AREA DESIGNATION
- VII. ZONING PERFORMANCE STANDARDS

I. MANAGEMENT IMPLEMENTATION

Responsibility should be appointed within the Town government to continually and consistently monitor the activity and events which occur within the Town over time. The framework of planning cells and planning units has been established to organize this effort. Development activity, as well as future environmental studies, should be recorded as these events affect Waterboro's natural resources and future planning decisions.

II. REGIONAL COORDINATION

The natural resource management system is organized to facilitate the coordination of regional natural resources with adjacent municipalities. These natural resources shared with adjacent municipalities have been categorized and the associated municipalities identified.

Regional coordination of natural resource management should be organized under the direction of the Southern Maine Regional Planning Commission. Regional coordination programs should provide municipalities with a consistent methodology and management system for regional natural resources. Implementation strategies for natural resource management amongst municipalities should be consistent for these shared resources.

III. PROTECTION OF SURFACE WATER RESOURCES

- A. Establish Watershed Protection Districts for Great Ponds within Waterboro, as well as those in adjacent municipalities. This provision should be included in future zoning ordinance amendments to increase the protection of surface water quality. The inclusion of watersheds of Great Ponds in other municipalities is required to implement regional coordination. A listing of Watershed Protection Districts is presented as follows:

Lake Name/Watershed District Name	Town	% of Watershed
Bartlett Pond	Lyman	0.1
	Waterboro	99.9
Estes Lake	Alfred	71.5
	Sanford	20.3
	Shapleigh	4.4
	Waterboro	3.8
Isinglass Pond	Limington	38.0
	Waterboro	62.0
Killick Pond	Hollis	56.0
	Limington	2.0
	Waterboro	42.0
Lake Sherburne	Shapleigh	45.0
	Waterboro	55.0
Little Ossipee Flow (Lake Arrowhead)	Cornish	0.7
	Limerick	26.2
	Limington	3.0
	Newfield	13.0
	Parsonsfield	22.7
	Shapleigh	11.3
Waterboro	23.1	
Little Ossipee Pond	Waterboro	100.0
Middle Branch Pond	Alfred	42.0
	Waterboro	58.0

- D. Implement State-mandated shoreland zoning regulations; see later discussion on shoreland zoning presented herein.
- E. Require all new development applications to document the amount of phosphorus generated by proposed disturbance of natural resources. This provision will allow the Town to record and monitor phosphorus loads within each watershed.
- F. Monitor the occurrence and impact of point and non-point pollutant sources on surface waters. Continue to monitor the Waterboro Patent Leather and Southern Maine Finishing sites. Where possible, improve runoff conditions where highways and roads cross surface water bodies. Perhaps as part of routine maintenance or roadway improvements, polluted runoff containing road salt, oils and gasoline, and phosphorus can be contained, diverted or treated prior to entering surface waters.

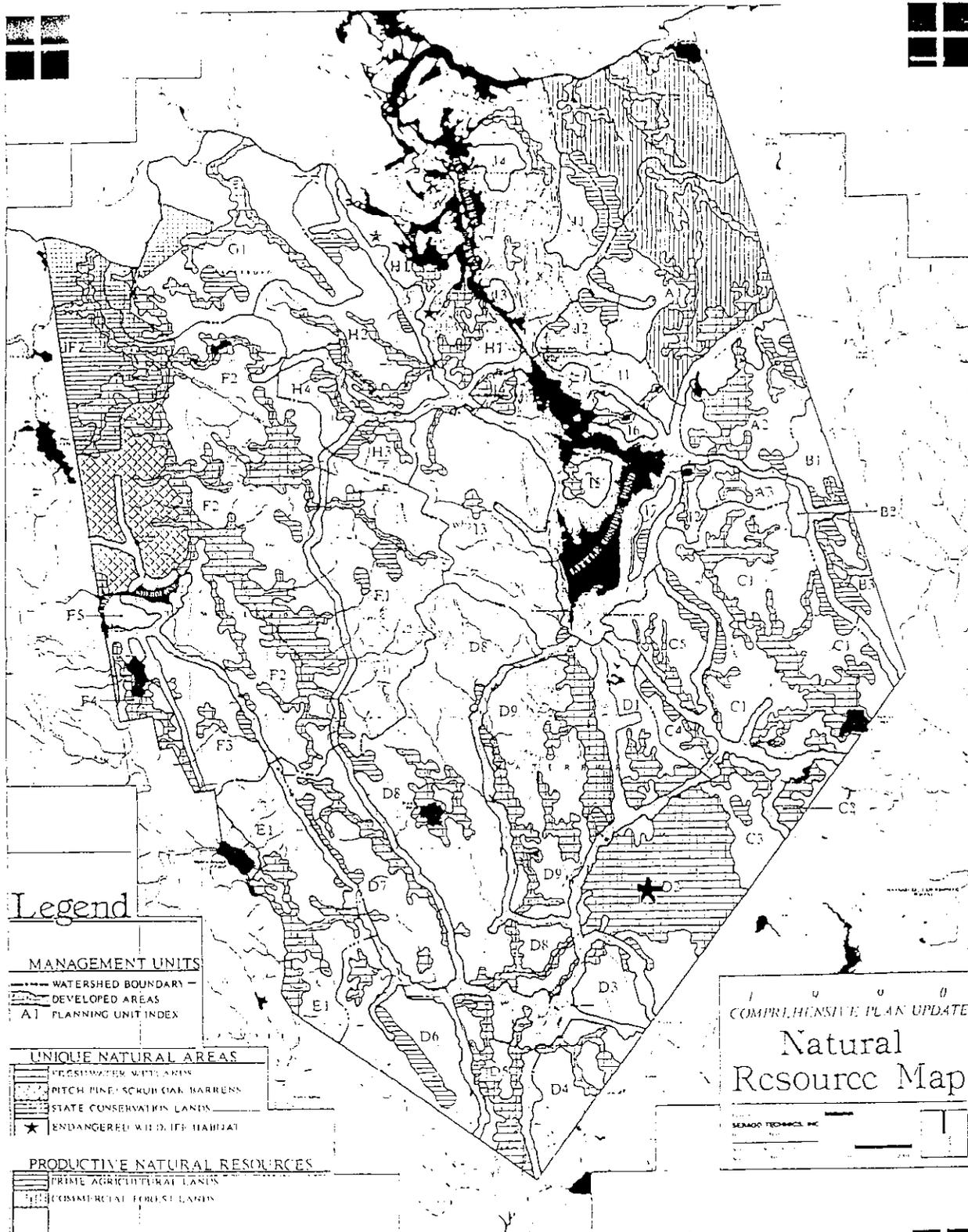
Resource Protection Zones, by State definition, severely curtail any development activity in the zone with the exception of road crossings, temporary dock construction, forestry, conservation, public recreational facilities, and individual campsites if approved by the Planning Board as conditional uses.

Mandatory Shoreline Zoning and Stream Protection Zoning contain provisions for the establishment of less restrictive districts within 250 feet of streams, wetlands, water bodies, and other natural resources of less significance, in areas where development patterns are already established or mitigation strategies can be properly implemented. Districts included in these less restrictive Shoreland Zones include:

- a. Limited Residential Development (LR) - permitting single-family and multi-family residential development in addition to all uses permitted in a Resource Protection Zone. Likely candidates for the LR Zone compass approved projects on the shoreland of Little Ossipee Pond and Lake Arrowhead. Watershed Protection District 1 and 2 performance standards should be adequate to address water quality concerns.
- b. Limited Commercial District (LC) - involves mixed light industrial, commercial, and residential uses that parallel the proposed mixed use zoning approach in the Village Districts, V.P.U.D. District, and Historic Village Districts. Minimum density is 1 unit per 2 acres, only within 250 feet of a regulated area. Outside this area density reverts to the overlying one. Density bonuses could be awarded to those projects that divert development outside of the LC Shoreland Zone.

Lake Name/Watershed District Name	Town	% of Watershed
Moody Pond	Waterboro	100.0
Northwest Pond	Alfred	18.0
	Shapleigh	55.0
	Waterboro	27.0
Roberts Pond	Lyman	94.0
	Waterboro	6.0
Rock Pond	Waterboro	100.0
Shaker Pond	Alfred	17.0
	Lyman	7.0
	Waterboro	76.0
Shy Beaver Pond	Shapleigh	97.0
	Waterboro	3.0
Tar Water Pond	Lyman	48.6
	Waterboro	51.4

- B. Undertake a professional evaluation of the present condition of each proposed Watershed District. Specifically, this study is intended to determine the amount of developed area and undeveloped area within each watershed. This determination will allow the Town to further identify the allowable per acre phosphorus allocation for each watershed. Knowledge of this information will provide the justification for future zoning allocation and development density according to the ability of each watershed to accommodate future growth.
- C. Undertake a professional evaluation to determine measures to reduce water quality impacts from currently approved but undeveloped lands in the watersheds of Lake Arrowhead and Little Ossipee Pond. The large approved subdivision at Lake Arrowhead is of particular concern due to its size. This study should forward recommendations specific to the reduction of phosphorus export from future development. Percentage of lot clearing, phosphorus runoff retention, and peat filter septic systems should be considered. Building permits for future home construction should document compliance with the recommendations of this evaluation and zoning ordinance requirements.



Legend

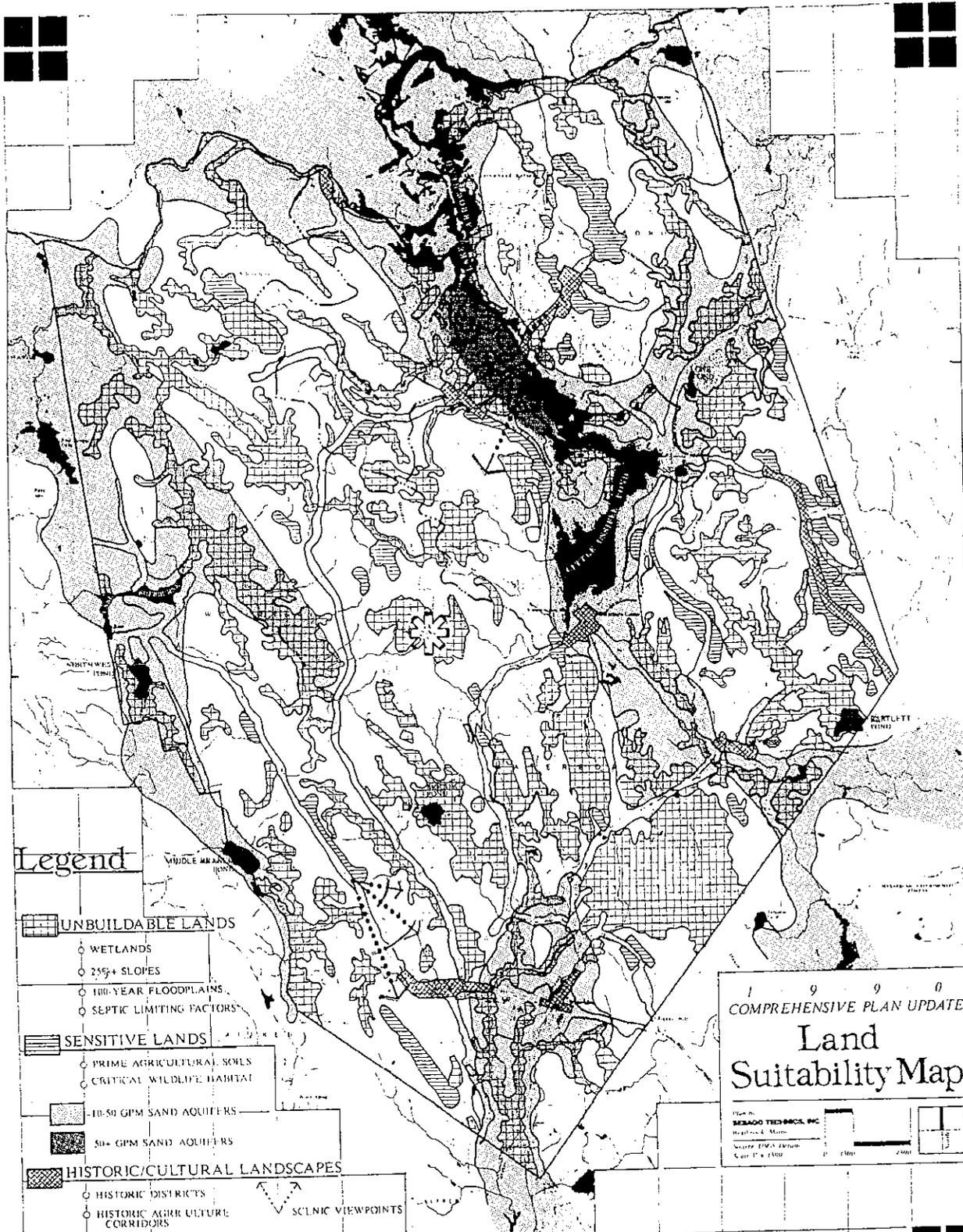
MANAGEMENT UNITS
 - - - - - WATERSHED BOUNDARY -
 - - - - - DEVELOPED AREAS
 A1 - PLANNING UNIT INDEX

UNIQUE NATURAL AREAS
 [Pattern] FRESHWATER WETLANDS
 [Pattern] PITCH PINE-SCRUB OAK BARRENS
 [Pattern] STATE CONSERVATION LANDS
 ★ ENDANGERED WILDLIFE HABITAT

PRODUCTIVE NATURAL RESOURCES
 [Pattern] PRIME AGRICULTURAL LANDS
 [Pattern] COMMERCIAL FOREST LANDS

1 0 0 0
 COMPREHENSIVE PLAN UPDATE
Natural Resource Map
 SERAGO TECHNOLOGY, INC.
 [Scale Bar]

TOWN OF WATERBORO



TOWN OF WATERBORO

c. General Development

The GD District permits all uses allowed in the LC District but focuses more on encouraging industry, commercial activities and commercial recreation facilities.

Given the fact that one of the Town's planning goals is to simplify zoning and balance affordable housing, economic development and resource protection, the Town should look into incorporating the Mandatory Shoreland Zoning into the specific requirements of the proposed designated zoning districts outlined in the Future Land Use Plan.

IV. PROTECTION OF GROUNDWATER RESOURCES

- A. Establish Aquifer Protection Districts to protect groundwater resources within the Town. The Aquifer Protection Districts should be based on the location of sand and gravel aquifers as mapped by Maine Geological Survey, 1983. Establishment of these districts will officially implement the ability to monitor and regulate development and other activities affecting groundwater quantity and quality.
- B. Continue Town policy requiring new development projects to include hydrogeological impact studies and to demonstrate the maintenance of groundwater quality standards equal to or greater than State standards.
- C. Maintain the Well Head Protection District in the area of public water supplies, as defined by the Waterboro Zoning Ordinances. Expand the district area to include those groundwaters identified for future expansion of the public water supply system.
- D. Improve zoning ordinances to control point and non-point pollutant sources; require participation of these sites in clean-up procedures and in permit processes. Establish uniform definition of hazardous materials based on common State and Federal standards.

IMPLEMENTATION OF MANDATORY SHORELAND ZONING

Protection of natural resources will be improved by the implementation of the provisions of the Mandatory Shoreland Zoning Act, 38 M.R.S.A., Sections 435-449. Implementation of this mandatory legislation should be based on the special conditions within Waterboro and should be coordinated with the requirements of the Comprehensive Planning and Land Use Regulation Act, 30 M.R.S.A., Sections 4311-4344.

It should be noted that Waterboro's present shoreland zoning regulations, in some cases, exceed the State definition of areas affected by shoreland zoning regulations. In other cases, present regulations may not meet State minimum guidelines, nor may they respond to the inventory, analysis and policies developed as part of the Comprehensive Plan effort.

Zoning districts set forth by the Shoreland Zoning Act include Resource Protection, Limited Residential, Limited Commercial, General Development, and Stream Protection. Evaluation of existing zoning districts in Waterboro reveals opportunities to incorporate the requirements of State mandated shoreland zones; however, specific recommendations thereof are not within the scope of the Comprehensive Plan. Applicability of Shoreland Zoning includes:

1. Areas within 250 feet of the normal high-water mark of any lake, river or stream.¹
2. Areas within 250 feet of the upland edge of freshwater wetlands.²
3. Areas within 100 feet of flood plains, defined by the 100-year flood plain as designated on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps or Flood Hazard Boundary Maps, or the flood of record, or in the absence of these, by soil types identified as recent flood plain soils.

With respect to natural resource protection, it is appropriate to expand the applicability of the Resource Protection District criteria to include those natural resources specific to Waterboro which warrant special protection. In this context, together with the evaluation of Waterboro's existing shoreland zone criteria, it is recommended that the Waterboro Zoning Ordinance be amended to include a specific Resource Protection District. Criteria for Resource Protection District applicability should include the following areas:

1. Areas within 250 feet of the highwater mark of Moody Pond, Bartlett Pond, Lone Pond, Isinglass Pond and Lake Sherburne.
2. Areas within 250 feet of the highwater mark of Buff Brook, Henderson Brook, Carll Brook, Shaker Brook, Cooks Brook and other unnamed principal watercourses, either discharging into any Great Pond or other significant waterbody as identified in the Natural Resources Chapter.

1 Stream definition shall match definition of river, stream or brook as defined by the natural Resource Protection Act.

2 Freshwater wetland shall be defined as any wetland, regardless of size, which meets the definition set forth by the Army Corps of Engineers 404 Permit, Title 26.

3. Areas within 250 feet of all wetlands in excess of 10 acres in size, wetlands contiguous to a Great Pond regardless of size, and wetland areas identified in the Wetlands Evaluation Report for the Town of Waterboro, Maine (I.E.P., Inc.; 1989) as "Major Wetland Resource Areas."
4. Areas containing significant wildlife habitat, including habitat for species appearing on the official State or Federal lists of endangered or threatened species; high and moderate value deer wintering areas and travel corridors as defined by the Department of Inland Fisheries and Wildlife; high and moderate value waterfowl and wading bird habitats, including nesting and feeding areas as defined by the Department of Inland Fisheries and Wildlife.³ (Currently, only two areas in Waterboro meet this criteria; both are habitat areas for *Emydoidea blandingii*, Blanding's Turtle. See Natural Resources Map.)
5. State-owned conservation lands containing pitch pine - scrub oak barren vegetation communities (see Natural Resources Map).

VI. RURAL AREA DESIGNATION

Protection of natural resources may be implemented to a limited degree by designation of certain areas as "rural areas" as part of the Comprehensive Planning process. The designation of rural areas is intended to protect agricultural, forest, scenic areas, and unique natural areas from incompatible development. Rural areas are depicted on the Future Land Use Plan, and include the following areas of contiguous undeveloped land:

1. Buff Brook/Henderson Brook Watershed (Planning Unit F-2).
2. Ossipee Mountain/Moody Pond Region (Planning Unit D-8, F-1, H-3, I-3).
3. Commercial Forest Lands (Planning Units A-1, K-1).
4. Bartlett Pond Watershed (Planning Unit C-1).
5. The Heath Natural Area (Planning Unit D-2).
6. West Road Agricultural Corridor (Planning Units D-6, D-7, E-1, F-2, F-3).

³ The Natural Resources Protection Act, Title 38 Sections 480-A through 480-S, requires the Department of Environmental Protection to designate areas of "significant wildlife habitat". As these areas are designated as such and are mapped, the areas will automatically be included within the Resource Protection District.

7. Deering Ridge Agricultural Corridor (Planning Units A-2, B-1, B-2, B-3 and C-1).
8. Deering Ridge Agricultural Corridor (Planning Units A-2, A-3, B-1, B-2, B-3, C-1).
9. Undeveloped Shoreland Areas of Lake Arrowhead and Little Ossipee Pond (Planning Units H-1, I-1 through I-7, J-1 through J-4).

VII. ZONING PERFORMANCE STANDARDS

Protection of natural areas can be further achieved through the application of more stringent performing standards as part of Waterboro's Zoning Ordinances. Specific measures of natural resource protection include the following:

1. Implement enforcement for regulating boating moorings and traffic on Waterboro's Great Ponds to help in improving the quality of Waterboro's surface water bodies.
2. Require buffer strips and contiguous open space areas along water courses and shorelands.
3. Promote the use of agricultural lands through State tax incentive programs.
4. Encourage clustered housing around prime agricultural soils.
5. Promote the use of the Tree Growth legislation and encourage re-application on expired lots.
6. Discourage clear cutting of forest resources unless an approved forest management plan is provided.
7. Require that a professional or country forester must help prepare a plan for cutting of forest resources under State of Maine Law.
8. Develop a tree planting regulation for proposed developments.
9. Develop and implement a street-tree planting program within the village centers.
10. Develop and implement a landscaping and buffering plan which includes mandatory greenbelts along roadways and a percentage of greenspace within any proposed development.
11. Promote the use of conservation easements in unique natural areas and critical wildlife habitat areas through tax incentives.

12. Prior to approving new development which may affect shared natural resources, the Planning Board shall solicit comment from the appropriate abutting municipality planning board.

SUMMARY

The Natural Resources Plan is prepared with the objective of protecting Waterboro's natural resources, including surface waters, groundwaters, unique natural resources, productive natural resources and natural resources remaining areas. The recommendations herein are comprised of general guidelines and specific implementation measures. As one component of Waterboro's plan for the future, the recommendations herein are further incorporated into the Future Land Use Plan.