WORK TASK 5.2

PHASE 2 REPORT

# THE COASTAL WETLANDS MAPPING PROGRAM, NEW HAMPSHIRE

Prepared for

The New Hampshire Coastal Program
Office of State Planning, NH



nai
NORMANDEAU ASSOCIATES, INC.
ENVIRONMENTAL SCIENTISTS,
ENGINEERS & PLANNERS

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The New Hampshire Coastal Program provided a grant for the preparation of this report which was funded in part by the Coastal Zone Management Act of 1972 as amended, administered by the Office of Ocean and Coastal Resource Management, NOAA.

June 30, 1986

TABLE OF CONTENTS

LIST OF TABLES

# 1.0 INTRODUCTION

## 1.1 GOALS OF THE STUDY

Normandeau Associates, Inc. (NAI) has completed the inventory and mapping of wetlands and sand dunes in the six coastal New Hampshire towns of New Castle, Rye, North Hampton, Hampton, Hampton Falls, and Seabrook (Figure 1). Copies of the maps have been provided along with this report to the Office of State Planning and to each town.

This report is primarily intended to provide users of these maps in each town with a tool for medium intensity planning. The tool immediately provides:

1. Mapping of approximate boundaries of dunes and wetlands on aerial photographs taken during March, 1986, at a scale of 1" = 200 ft. Specific dunes and larger wetlands are identified by unique five-letter codes.

2. Mapping of approximate boundaries of poorly-drained soils where they extend beyond wetland boundaries (as hatched areas enclosed by dashed lines) superimposed on the same aerial photos.

3. A means of evaluating wetlands and dunes in each town; a list of observations for salt marshes & larger wetlands; and a table of model results by which to gauge the values of the larger and many of the smaller mapped freshwater wetlands; these include:

   a. a brief list of the representative plants in each wetland and summary of the overall ecological community structure (trees, shrubs, etc.)

   b. the value to wildlife and downstream aquatic life

   c. value for groundwater recharge,

   d. value for flood water retention,

   e. value for shoreline protection from erosion,

   f. value for the maintenance of surface water quality,

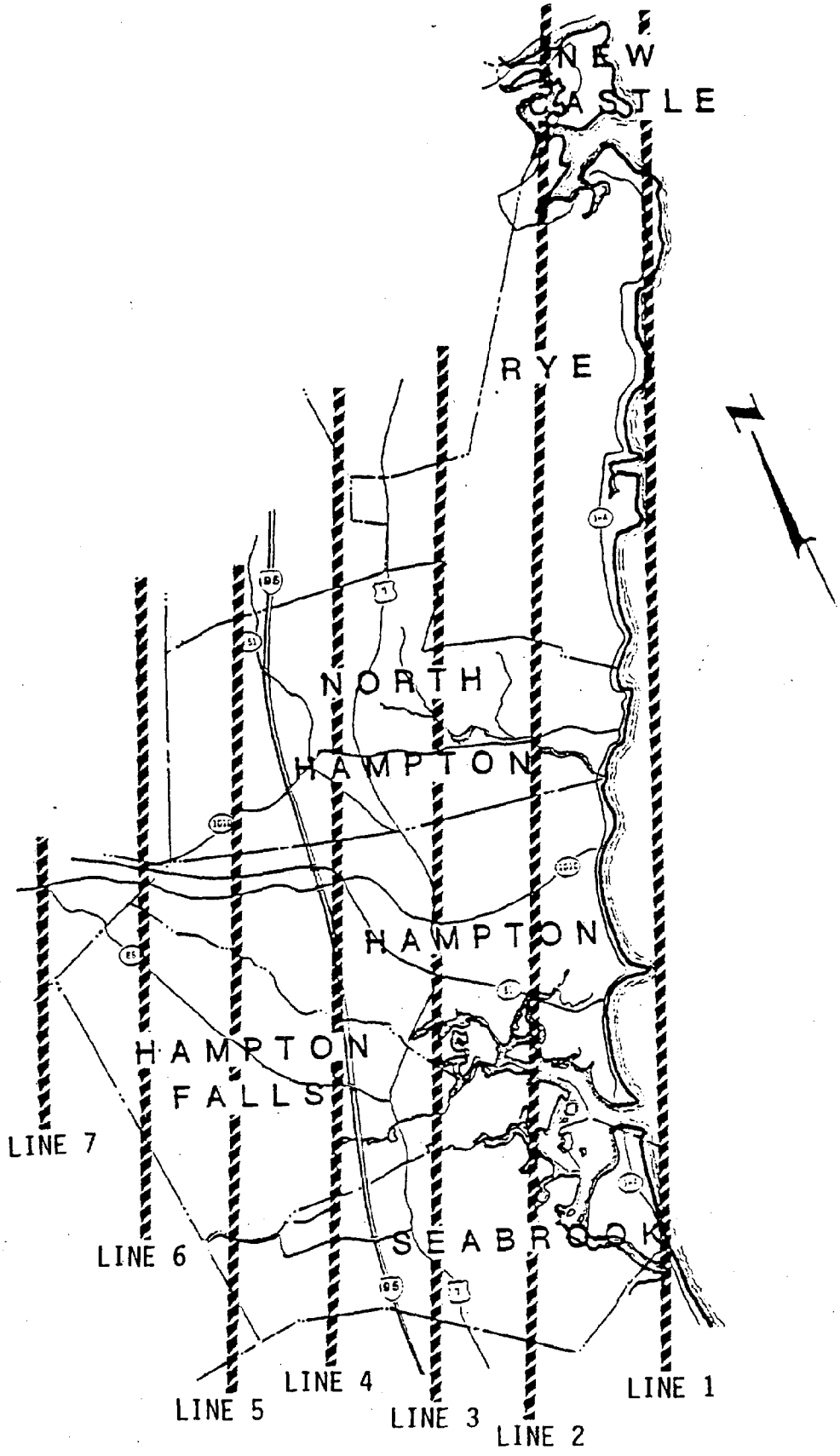


Figure 1. Study Area for Coastal Mapping Project.

g. value for economic, recreational, aesthetic and educational potential.

This report secondarily provides data and guidelines to each town for continuing the planning process in greater detail:

4. Establishing a scientific basis for reviewing projects, to present evidence to aid the NH State Wetlands Board (NHSWB) and the US Corps of Engineers (COE) in permit review, so the towns will have a more important role in development decisions and the resulting impacts to each community.

5. Mapping the prime wetlands in the town.

## 1.2 REPORT OVERVIEW

This report is organized to accommodate a range of users from layman to planner; it progresses from a "how-to" beginning to a detailed account of the concepts, methods and results in the appendices:

2.0 This section explains how to approach wetlands location and evaluation and gives the model results. It also describes what these maps and data do not do.

3.0 This section explains in more detail the definition of wetlands and dunes, and how the maps and model results can provide additional information important in minimizing impacts from projects.

4.0, 5.0 and 6.0 These three appendices contain detailed evaluation results for freshwater wetlands, salt marshes, and dunes. These include descriptions of the areas and results of the study.

# 2.0 GUIDE TO USING WETLANDS MAPS AND EVALUATIONS

## 2.1 WHAT ARE WETLANDS?

Wetlands are neither open water nor well drained dry land; they are intermediate areas subject to high water during some of each year's growing season. They are shown on the project maps by solid lines; the more significant wetlands along with some smaller wetlands are identified by unique codes. Within these areas, high water causes a saturated condition in the upper 24 inches of soil, producing a community of plants adapted to wetness. In a complex and interactive process, soils saturated with water above 5 degrees C (41 degrees F) become rapidly depleted of oxygen, killing the root systems of most plants. Wetland plants have adaptations allowing them to survive this lack of oxygen.

Saturation also leads to chemical conditions in which the soil turns shades of grey or black, replacing the normal yellow or red colors (chroma) or causing visible mottling to appear among the lumps of soil. These features place the soil in either the "Very Poorly Drained" or the "Poorly Drained" category. Note that, in this usage, the word "drained" has a special meaning denoting height of the yearly water table. Some sandy permeable soils are "Very Poorly Drained" due to their low location relative to the nearest stream or river. "Permeable" denotes ease of water movement through the soil; "drained" denotes how close to the soil surface the water table lies.

Most people are aware that septic system leachfields function poorly in saturated soils, causing groundwater pollution. Wetlands were first legally defined as areas unsuited to septic systems and many people still think of them in this very limited sense. High intensity soils mapping is essential to define the proper placement of leach-fields.

## 2.2 WHAT ARE DUNES AND SALT MARSHES?

Dunes, rare in New Hampshire, are ridges or mounds of loose sea sand, formed by waves and wind, trapped by plants specially adapted to the sandy conditions. Wind-born sand moves during dry, windy weather in dune areas, filling in calm areas and eroding peaks exposed to the force of the wind. Dunes are fragile ecosystems because they depend on plants for stability and these plants are easily impacted by man's activities. Typical dune plants in New Hampshire include dune grass (*Ammophila breviligulata*), beach pea (*Lathyrus japonicus*), beach plum (*Prunus maritima*), and seaside goldenrod (*Solidago sempervirens*). Dunes are protected by NH state law from development. They are delineated on project maps by solid lines and identifying codes which start with "DU". Detailed results are presented for 12 dunes with identifying numbers in Appendix Section 6.0.

Salt marshes are level areas regularly inundated by the salt tides. In New Hampshire, tidal wetlands are protected up to 3½ feet above local mean high tide. They are shown on project maps by solid lines and identifying codes starting with "SM". Woody plants cannot survive in salty soils, which are usually dominated by salt marsh grass (*Spartina* spp. ). The combination of salt and peat preserves the layers of organic muck as long as the peat is a part of an intact tidal system. Road culverts and banks may restrict the normal tidal flushing, allowing the salt to be slowly washed out of the marsh peat. In many areas of NH, this process has already degraded many salt marshes by a sequence of events: fresh rain water replaces the salty water, flushing out the salt. Lacking the salt preservative, the peat oxidizes, becomes acid, rots and slumps, producing offensive odors. Pools form in depressions in the rotting soil, on which little vegetation will grow. Evaporation during dry weather concentrates any salt in these shallow pools, so they become too salty for fauna to survive. This means they make poor feeding places for birds, and lack the fish which normally control mosquitoes. Inundation by the highest tides (spring tides) allows the brief breeding of the salt marsh mosquito, and these impacted marshes

become a major nuisance. More detailed accounts of these developmental processes, along with evaluations of the existing impacts to NH salt marshes, are presented for 51 numbered salt marshes in Appendix Section 5.0.

## 2.3 WHAT ARE WETLAND BENEFITS?

The study of wetlands has shown that they provide benefits to the public well beyond any negative effects associated with mosquito production or failing septic systems. Wetlands provide necessary habitat to many birds and wildlife not associated with upland or open water areas. Freshwater wetlands located along a stream or river help downstream abuttors by controlling flood crests, providing water quality purification, and maintaining water purity and flow during dry periods (important to protect downstream fresh and saltwater fisheries resources). These and other public benefits are lost when wetlands are drained or filled. These benefits require legal protection, just as public wildlife resources require state game laws to prevent improper exploitation of deer, fish, ducks or grouse.

Freshwater wetland benefits can be measured by experienced wetland scientists using observable parameters. For 238 numbered freshwater wetlands, NAI has recorded field observations on standardized data sheets and computed scores for ten beneficial functions. These computation methods are called models. To put the models in historical perspective, they were developed in 1981 jointly by IEP and NAI to meet the requirements of the Wisconsin Department of Natural Resources in reviewing and ranking over 100 small wetlands. For the New Hampshire study, the models use the same parameters as the original Wisconsin models, but computations have been modified somewhat to increase precision and to reflect the applicable wetland laws. The results of the model computations can be found in Tables 3 and 4 (Section 2.5). More detailed results, data sheets, and plant lists for each wetland are given in Section 4.0.

## 2.4 PLANNING WITH A WETLANDS MAP

Federal and state laws define the boundaries of wetland areas (for detailed definitions, see Section 3.1.1). NAI has provided each town with sepia maps, indicating and numbering wetland areas delineated not just by soil drainage class, but by four parameters observed in the field: plant community, soil characteristics, topographic features and hydrologic clues. These parameters are necessary to match the definition of freshwater wetlands found in NH CAR Chapter Wt 100, Part Wt 101.01, and defined by the US Fish and Wildlife Service. Areas found to fit these definitions are delineated by solid lines. Brooks with narrow linear wetlands borders were not delineated. All significant wetlands, and as many lesser wetlands as field time allowed, are labeled with codes of five characters: two letters and three digits. These have been evaluated in the field for the ten benefits. Dune areas are all assigned the letters "DU" and salt marshes are assigned "SM" for all six towns. All other letter combinations denote major watersheds in which the freshwater wetlands occur (Table 1). Smaller wetlands are also delineated by solid lines, but the five-character labels are replaced by swamp symbols.

The maps also show areas mapped by the Soil Conservation Service (SCS) as poorly drained soils, but not found to be wetlands. These are shown as cross-hatched areas, surrounded by dashed (not solid) lines. These areas do not share the list of public benefits known to derive from wetlands. However, if septic leachfields are to be sited, these areas should be carefully investigated with test pits and hand augering.

In summary, solid delineations show wetlands with potential benefits to offsite abuttors which may require protection from project-related impacts; these areas are also unsuited to siting septic system leachfields. Dashed areas are unsuited to septic system leachfields, but in areas where water and sewering are available, loss to project construction probably does not present a threat to public welfare.

Table 1. List of wetland letter codes

| LETTER CODE | WATERSHED, RIVER OR OTHER LABEL |
|---|---|
| AW | Awcomin Swamp |
| BA | Bailey Brook |
| BE | Berry's Brook |
| BR | Brown's River |
| BW | Blackwater River |
| CA | Cain's Brook |
| DR | Drake's River |
| *DU | DUNE, not a watershed |
| HA | Hampton Falls River |
| HU | Hunt's Island Creek |
| LI | Little River |
| LU | Lucy Brook |
| ME | Meadow Pond |
| NC | New Castle |
| PB | Philbrick Brook |
| PH | Philbrick Pond |
| *SM | SALTMARSH, not a watershed |
| TA | Taylor River |
| WA | Wallis sands creeks |
| WN | Winnicut River |
| WT | Witch Creek |

* not a freshwater wetland

When development is proposed, project review should begin with the use of these maps and data, followed by a high-intensity study to define the limits of jurisdiction and impact. The extrapolation of measurements from aerial photos introduces distortions which are inherent in the process. Tax maps are also drawen from aerial photo projections, and each produces distortions due to variations in the angle of view (Figure 2). If every landscape were flat and every photo taken by a level airplane no problems would arise. However, a straight map line passing over a hill will appear straight only from directly overhead (Figure 2, "B"). From one side it appears to curve one way, from the other it curves the other way. The distortion increases with the distance from the photo's center and with the height of the hill. This affects the scale of the photo reproductions and tax maps as well.

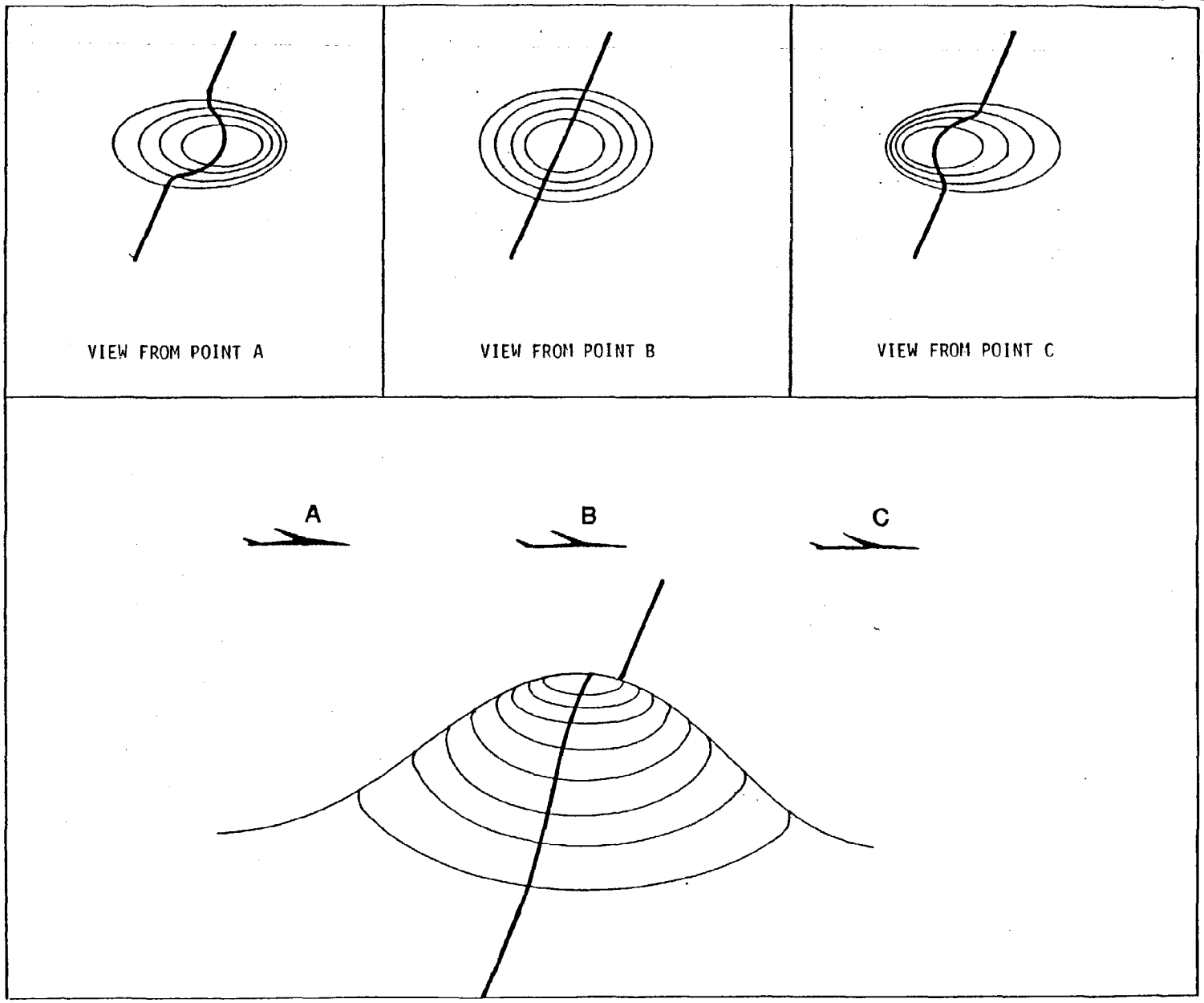


Figure 2. Illustration of distortion inherent in aerial photographs of uneven terrain.

To correctly locate property lines on the wetland maps, some estimate of accuracy should be made in each case, based on the flatness of the terrain and the nearness of the property to the map's center. The most accurate method is to identify the property bounds or location of proposed work relative to real objects visible on the wetland aerial photos, such as field edges, water courses, or stone walls. The wetlands are, of course, accurately delineated with resepect to visible objects, so this procedure will eliminate the effects of distortion.

In reviewing projects where dredge or fill of more than 10,000 square feet (sf) of wetland is proposed, towns should require applicants to independently verify wetland boundaries. The project site should be flagged by a wetland scientist then surveyed onto the project topographic map by licensed surveyors. This is necessary to accurately determine the project boundaries with respect to each wetland boundary. Many New Hampshire towns now require developers of subdivisions and other major projects to present engineering surveys on recent topographic maps. For hilly terrains, 5 or 10 foot contour intervals may be sufficient, but for most of the towns on the New Hmpshire seacoast, relief is very low and $2\frac{1}{2}$ foot intervals are more appropriate for locating wetland edges, slopes and buffer zones.

## 2.5 RESULTS OF FRESHWATER WETLANDS EVALUATION

NAI has completed evaluations and ranked 238 wetlands in this study to provide each town with ranking estimates of the public values specifically cited by state and federal laws (Table 2). These benefits are listed below in the order they are most commonly used, along with the abbreviation used throughout this report for each:

Table 2. List of benefits from freshwater wetlands

| Model | Abbreviation and Beneficial function |
|---|---|
| 1. | Biol — Biological function, includes biological productivity and wildlife habitat (eg. duck breeding, muskrat, amphibian breeding, aquatic life support for fish, etc.). |
| 2. | Hydro — Hydrological Support, ability to maintain good quality downstream flow during dry periods of weather and consequently support downstream aquatic life. |
| 3. | GrWat — Ground Water, ability to protect ground water recharge (a value also attributable to permeable uplands). |
| 4. | Flood — Flood & Storm water storage, ability to store runoff and reduce or delay flood crests, preventing downstream damage. |
| 5. | ShLi — Shoreline protection from erosion by waves or runoff. |
| 6. | WQual — Water Quality maintenance, ability to renovate water quality by filtering, absorbing, or breaking down pollutants. |
| 7. | Econ — Economic values, primarily noting timber value |
| 8. | Recr — Recreational values, provide public with fish & game or passive recreation opportunities |
| 9. | Aest — Aesthetic values, degree of visual scenic appeal based on an assessment of both water and plant features. |
| 10. | Educ — Educational value, capacity to provide public with accessible wetland ecology, rare plants, or animals. |

The scores from the models range from zero to 100, and are listed by model and wetland code (Table 3). Unfortunately, these scores do not provide an ideal means of understanding wetland values, because results from different models are grouped in different ways. For example, the results of the biological model (#1) range from 14 to 87, with an average of about 47, or about what one might expect. The shoreline protection model (#5) ranges from 0 (84 occurrences) to 66, with an average of about 14; not what one would expect. Some model results are grouped around one value due to regional similarities in wetland parameters; many wetlands score the same due to similar soils, slopes and hydrology. In the economic model (#7), 40% of the wetlands (94 occurrences) have a score of exactly 73.9. The point is that one would have to be extremely familiar with each model to understand the "raw" scores in Table 3.

One further level of analysis was therefore performed. For each model, the 238 wetlands were sorted by score from lowest to highest. The range was then broken into thirds. Each wetland in the lowest third was given an L for lowest; each wetland in the middle was assigned an M for medium; each in the highest third was assigned an H for high (Table 4). This ranks the wetlands in the study area against one another, instead of assigning them on an arbitrary scale, just as scholastic tests provide results in percentile, ranking students against one another. The ranking was performed separately on all ten sets of model scores. The results of this ranking are easier to interpret: of the wetlands studied, those scoring H in some benefit are of outstanding public value. Those with M are quite valuable. Those with L may be locally important, but are probably on a par with those numerous wetlands in the study area which were mapped but not numbered or evaluated.

Wetlands should not be given a single rating, lumping different wetland benefits. This would compromise the process of planning projects to avoid specific impacts. No two benefits are of exactly comparable local importance. To illustrate the role of local

importance, contrast the values of a ten acre forested wetland to two communities: one with many low-lying, similar wetlands; the second, with many dense urban areas, more vertical relief, well confined streams with no flooding problems, and very little wild open space. In the first location, the wildlife habitat value (1 Biol) would be of lower importance than the value for flood control (4 Flood). In the second, forested wetlands would be more valuable to the public for their wildlife habitat than for flood control. The models do not take into account the setting, and to average the two model results as if they mattered equally would be unsound planning.

New Hampshire law (NH CAR Chapter Wt 700) requires each town to map and list wetlands of unusual value. These wetlands are to be evaluated and a selection submitted for overall town approval to be designated as "Prime Wetlands". The state guidelines only require that wetlands must have "Very Poorly Drained" (VPD) soil and be of some high value. NAI has incorporated these guidelines into the model computations. Wetlands are given a "P" in Table 3 to indicate candidacy for prime status which meet two criteria:

1. SOILS: a wetland must either include an SCS mapping unit with overall VPD class, or have shown sufficient standing water, swamp or muck deposits on a site visit to fit the VPD class, with summertime water tables at or above the soil surface.

2. BENEFITS: a wetland must rank in the upper third of those sampled in at least one of the ten model scores (see Table 4, "H").

With these model results each town should establish a review procedure which follows the state guidelines. The following is a suggested checklist to act as a starting point:

1. Review the list and maps provided in this report for boundary and data sheet accuracy. All "SM" and "DU" areas are automatically candidates for prime protection. (There are 10 freshwater wetlands in the study area determined to have VPD soils which were not evaluated during this study. These are marked on the wetland maps with wetland codes preceeded by an asterisk (*). They do not appear among the data sheets but should be investigated further for prime candidacy.)

2. For each wetland, add known cultural, historic and archaeological values not included in the NAI survey procedure. Reassess the prime candidacy.

3. Make copies from the sepia maps containing all candidates for prime status and highlight these wetlands and dune areas.

4. Present this combined mapping for public review and incorporate into a warrant for town meeting.

5. After approval, submit the requisite copies to the NHSWB and the coastal program as prime wetlands maps.

6. For review of projects, the town is required to notify the state of all proposed action in prime wetlands.

Table 3. Model scores for all freshwater wetlands

These wetland functional models were developed jointly by NAI and IEP in 1981 to meet the requirements of the state of Wisconsin in protecting ten benefits which accrue to the public from wetlands. They were published in 1981 as part of a site review for Exxon Minerals Co., Rhinelander, WI, and later by G. Hollands and D. Magee in a presentation to the Association of State Wetland Managers in 1985.

The models are run here in modified form; they include the parameters originally specified by the Wisconsin models, but have been altered to fulfill the requirements of wetlands laws in north central New England. Each model ranges from 0 to 100. It is important to understand that a result of zero does not indicate zero importance; only that the wetland is at the low end as compared to others in the region. Model values do not represent the actual value of a wetland in performing each function; they represent a numerical figure suitable for ranking wetlands one against another. A 'P' in the PRIME column indicates the wetland fulfills the New Hampshire definition of prime wetlands: Very Poorly Drained soil and a high (upper one third) ranking in the value of at least one benefit (see Table 4, 'H' for high).

| WETLAND | Biol | Hydro | GrWat | Flood | ShLi* | WQual | Econ | Recr* | Aest* | Educ* | PRIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AW002 | 51.9 | 56.5 | 41.5 | 62.7 | 0.0 | 50.0 | 73.9 | 36.9 | 39.1 | 46.0 | |
| AW003 | 65.1 | 68.4 | 66.0 | 73.5 | 14.4 | 55.8 | 91.3 | 54.7 | 47.8 | 71.4 | |
| AW004 | 48.8 | 67.1 | 41.5 | 62.7 | 31.0 | 50.0 | 73.9 | 36.9 | 39.1 | 46.0 | |
| BA001 | 72.0 | 75.0 | 39.6 | 53.9 | 20.6 | 62.7 | 65.2 | 54.7 | 82.6 | 76.1 | P |
| BA002 | 51.1 | 63.1 | 43.3 | 61.7 | 17.5 | 58.8 | 73.9 | 50.6 | 39.1 | 53.9 | |
| BA003 | 68.2 | 75.0 | 45.2 | 56.8 | 51.7 | 56.8 | 73.9 | 45.2 | 59.4 | 63.4 | P |
| BA004 | 47.2 | 61.8 | 58.4 | 72.5 | 16.5 | 52.9 | 73.9 | 36.9 | 43.4 | 50.7 | P |
| BA005 | 72.8 | 82.8 | 81.1 | 66.6 | 48.2 | 64.7 | 91.3 | 52.0 | 52.1 | 76.1 | P |
| BA006 | 45.7 | 64.4 | 62.2 | 67.6 | 14.4 | 55.8 | 73.9 | 36.9 | 34.7 | 46.0 | P |
| BA007 | 34.8 | 52.6 | 49.0 | 72.5 | 0.0 | 50.9 | 56.5 | 21.9 | 34.7 | 41.2 | |
| BA008 | 54.2 | 65.7 | 64.1 | 68.6 | 14.4 | 57.8 | 73.9 | 41.0 | 47.8 | 63.4 | |
| BA010 | 66.6 | 68.4 | 75.4 | 70.5 | 16.5 | 59.8 | 91.3 | 52.0 | 52.1 | 76.1 | P |
| BE004 | 47.2 | 51.3 | 37.7 | 64.7 | 19.6 | 54.9 | 39.1 | 21.9 | 36.2 | 46.0 | P |
| BE005 | 36.4 | 9.2 | 50.9 | 65.6 | 0.0 | 57.8 | 65.2 | 35.6 | 55.0 | 42.8 | P |
| BE007 | 27.9 | 55.2 | 24.5 | 44.1 | 2.0 | 29.4 | 13.0 | 43.8 | 69.5 | 33.3 | P |
| BE008 | 39.5 | 55.2 | 33.9 | 64.7 | 0.0 | 48.0 | 73.9 | 36.9 | 34.7 | 41.2 | |
| BE012 | 71.3 | 72.3 | 49.0 | 69.6 | 17.5 | 77.4 | 73.9 | 45.2 | 49.2 | 76.1 | P |
| BE013 | 26.3 | 47.3 | 33.9 | 60.7 | 0.0 | 45.0 | 56.5 | 21.9 | 34.7 | 33.3 | |
| BE014 | 32.5 | 63.1 | 54.7 | 72.5 | 16.5 | 55.8 | 73.9 | 32.8 | 30.4 | 28.5 | P |
| BE015 | 54.2 | 68.4 | 60.3 | 61.7 | 17.5 | 54.9 | 91.3 | 52.0 | 52.1 | 76.1 | P |
| BE016 | 56.5 | 68.4 | 67.9 | 68.6 | 0.0 | 64.7 | 91.3 | 52.0 | 52.1 | 76.1 | P |
| BE017 | 43.4 | 63.1 | 35.8 | 64.7 | 19.6 | 55.8 | 73.9 | 36.9 | 39.1 | 46.0 | P |
| BE018 | 45.7 | 53.9 | 37.7 | 58.8 | 17.5 | 55.8 | 73.9 | 36.9 | 43.4 | 50.7 | P |
| BR002 | 27.9 | 51.3 | 69.8 | 63.7 | 0.0 | 47.0 | 73.9 | 32.8 | 34.7 | 33.3 | |
| BW001 | 40.3 | 57.8 | 60.3 | 63.7 | 0.0 | 55.8 | 73.9 | 36.9 | 34.7 | 41.2 | |
| BW002 | 44.9 | 44.7 | 54.7 | 55.8 | 14.4 | 40.1 | 56.5 | 26.0 | 39.1 | 46.0 | P |
| BW003 | 33.3 | 51.3 | 69.8 | 67.6 | 0.0 | 50.0 | 73.9 | 32.8 | 30.4 | 28.5 | |
| BW004 | 44.9 | 71.0 | 77.3 | 65.6 | 16.5 | 65.6 | 73.9 | 36.9 | 34.7 | 41.2 | |
| BW005 | 29.4 | 51.3 | 54.7 | 73.5 | 0.0 | 50.0 | 73.9 | 32.8 | 34.7 | 33.3 | |
| BW006 | 27.9 | 51.3 | 54.7 | 69.6 | 0.0 | 47.0 | 73.9 | 32.8 | 34.7 | 33.3 | |

* Model modified from Wisconsin original

(Table 3. Model scores for all freshwater wetlands, cont'd)

| WETLAND | Biol | Hydro | GrWat | Flood | ShLi* | WQual | Econ | Recr* | Aest* | Educ* | PRIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CA003 | 42.6 | 65.7 | 39.6 | 56.8 | 17.5 | 56.8 | 73.9 | 36.9 | 34.7 | 49.2 | P |
| CA004 | 55.0 | 64.4 | 62.2 | 65.6 | 14.4 | 55.8 | 73.9 | 41.0 | 47.8 | 58.7 | P |
| CA005 | 65.1 | 64.4 | 75.4 | 49.0 | 17.2 | 56.8 | 65.2 | 54.7 | 65.2 | 66.6 | P |
| CA015 | 28.6 | 51.3 | 69.8 | 63.7 | 0.0 | 47.0 | 73.9 | 35.6 | 30.4 | 36.5 | |
| CA016 | 24.0 | 51.3 | 18.8 | 61.7 | 0.0 | 46.0 | 73.9 | 35.6 | 30.4 | 36.5 | |
| CA020 | 24.0 | 51.3 | 67.9 | 58.8 | 0.0 | 46.0 | 56.5 | 21.9 | 30.4 | 28.5 | |
| CA021 | 44.1 | 61.8 | 58.4 | 72.5 | 16.5 | 52.9 | 60.8 | 31.5 | 26.0 | 28.5 | |
| CA024 | 53.4 | 68.4 | 75.4 | 63.7 | 28.9 | 51.9 | 73.9 | 41.0 | 47.8 | 63.4 | |
| CA025 | 30.2 | 52.6 | 56.6 | 70.5 | 0.0 | 48.0 | 73.9 | 32.8 | 34.7 | 33.3 | P |
| DR001 | 57.3 | 68.4 | 33.9 | 61.7 | 19.6 | 60.7 | 73.9 | 49.3 | 39.1 | 61.9 | |
| DR002 | 25.5 | 7.8 | 54.7 | 57.8 | 0.0 | 44.1 | 30.4 | 12.3 | 42.0 | 22.2 | P |
| DR003 | 44.9 | 61.8 | 58.4 | 68.6 | 14.4 | 50.0 | 73.9 | 36.9 | 34.7 | 41.2 | |
| DR004 | 39.5 | 59.2 | 62.2 | 64.7 | 0.0 | 57.8 | 73.9 | 36.9 | 34.7 | 41.2 | |
| DR005 | 43.4 | 56.5 | 52.8 | 69.6 | 0.0 | 50.0 | 73.9 | 36.9 | 39.1 | 46.0 | |
| DR006 | 49.6 | 51.3 | 54.7 | 71.5 | 0.0 | 50.0 | 73.9 | 36.9 | 39.1 | 46.0 | P |
| DR007 | 34.8 | 50.0 | 67.9 | 62.7 | 0.0 | 45.0 | 73.9 | 32.8 | 30.4 | 25.3 | P |
| DR010 | 58.9 | 53.9 | 52.8 | 65.6 | 8.2 | 54.9 | 47.8 | 32.8 | 55.0 | 69.8 | P |
| DR011 | 20.9 | 47.3 | 66.0 | 64.7 | 0.0 | 48.0 | 56.5 | 24.6 | 30.4 | 28.5 | P |
| DR012 | 53.4 | 59.2 | 58.4 | 75.4 | 16.5 | 53.9 | 73.9 | 43.8 | 43.4 | 58.7 | P |
| DR013 | 42.6 | 56.5 | 69.8 | 63.7 | 14.4 | 47.0 | 73.9 | 36.9 | 39.1 | 46.0 | |
| DR014 | 14.7 | 0.0 | 30.1 | 50.0 | 0.0 | 39.2 | 56.5 | 19.1 | 34.7 | 25.3 | |
| DR015 | 20.1 | 52.6 | 26.4 | 64.7 | 19.6 | 47.0 | 56.5 | 21.9 | 30.4 | 20.6 | |
| DR016 | 33.3 | 51.3 | 30.1 | 57.8 | 0.0 | 46.0 | 73.9 | 32.8 | 39.1 | 38.0 | |
| DR018 | 56.5 | 65.7 | 41.5 | 52.9 | 31.0 | 51.9 | 73.9 | 41.0 | 47.8 | 71.4 | P |
| DR019 | 52.7 | 60.5 | 45.2 | 62.7 | 13.4 | 71.5 | 65.2 | 39.7 | 63.7 | 63.4 | P |
| DR022 | 27.1 | 57.8 | 32.0 | 54.9 | 13.4 | 46.0 | 43.4 | 16.4 | 26.0 | 12.6 | |
| DR023 | 30.2 | 7.8 | 32.0 | 58.8 | 15.5 | 44.1 | 43.4 | 13.6 | 26.0 | 12.6 | |
| DR026 | 27.1 | 44.7 | 54.7 | 48.0 | 0.0 | 47.0 | 73.9 | 32.8 | 30.4 | 28.5 | P |
| DR027 | 48.8 | 56.5 | 56.6 | 41.1 | 35.1 | 48.0 | 73.9 | 41.0 | 50.7 | 46.0 | P |
| HA002 | 31.7 | 50.0 | 47.1 | 58.8 | 12.4 | 38.2 | 56.5 | 30.1 | 34.7 | 25.3 | |
| HA003 | 32.5 | 51.3 | 30.1 | 61.7 | 0.0 | 46.0 | 73.9 | 32.8 | 34.7 | 33.3 | |
| HA004 | 56.5 | 75.0 | 37.7 | 60.7 | 65.5 | 54.9 | 73.9 | 45.2 | 59.4 | 71.4 | P |
| HA005 | 37.9 | 47.3 | 43.3 | 24.5 | 10.3 | 25.4 | 13.0 | 52.0 | 69.5 | 30.1 | P |
| HA006 | 45.7 | 22.3 | 39.6 | 59.8 | 9.3 | 53.9 | 47.8 | 28.7 | 50.7 | 46.0 | P |
| HA007 | 51.9 | 59.2 | 49.0 | 34.3 | 10.3 | 31.3 | 30.4 | 67.1 | 69.5 | 41.2 | P |
| HA008 | 31.0 | 55.2 | 39.6 | 61.7 | 0.0 | 48.0 | 73.9 | 32.8 | 34.7 | 33.3 | |
| HA009 | 53.4 | 7.8 | 64.1 | 60.7 | 14.4 | 51.9 | 39.1 | 20.5 | 36.2 | 53.9 | P |
| HA010 | 31.0 | 5.2 | 54.7 | 66.6 | 0.0 | 46.0 | 60.8 | 24.6 | 26.0 | 20.6 | |
| HA011 | 63.5 | 76.3 | 66.0 | 69.6 | 17.5 | 70.5 | 91.3 | 60.2 | 39.1 | 61.9 | P |
| HA015 | 37.9 | 42.1 | 47.1 | 49.0 | 0.0 | 38.2 | 30.4 | 15.0 | 37.6 | 26.9 | |
| HA017 | 46.5 | 59.2 | 50.9 | 59.8 | 19.6 | 53.9 | 56.5 | 26.0 | 39.1 | 53.9 | P |
| HA018 | 60.4 | 80.2 | 66.0 | 77.4 | 16.5 | 66.6 | 91.3 | 52.0 | 43.4 | 58.7 | P |
| HA021 | 34.1 | 56.5 | 30.1 | 57.8 | 17.5 | 46.0 | 73.9 | 32.8 | 39.1 | 33.3 | |
| HA024 | 52.7 | 57.8 | 54.7 | 64.7 | 0.0 | 63.7 | 56.5 | 30.1 | 40.5 | 50.7 | P |
| HA025 | 45.7 | 51.3 | 30.1 | 67.6 | 0.0 | 56.8 | 56.5 | 30.1 | 40.5 | 46.0 | P |
| HA028 | 59.6 | 71.0 | 64.1 | 64.7 | 17.5 | 60.7 | 91.3 | 52.0 | 43.4 | 66.6 | P |
| HA030 | 30.2 | 56.5 | 33.9 | 62.7 | 0.0 | 49.0 | 73.9 | 32.8 | 30.4 | 33.3 | |
| HA032 | 65.1 | 68.4 | 37.7 | 62.7 | 31.0 | 52.9 | 73.9 | 41.0 | 43.4 | 63.4 | P |
| HA034 | 47.2 | 61.8 | 41.5 | 63.7 | 0.0 | 58.8 | 73.9 | 36.9 | 39.1 | 46.0 | |
| HU003 | 38.7 | 52.6 | 58.4 | 50.0 | 28.9 | 48.0 | 43.4 | 16.4 | 30.4 | 20.6 | P |

* Model modified from Wisconsin original

(Table 3. Model scores for all freshwater wetlands, cont'd)

| WETLAND | Biol | Hydro | GrWat | Flood | ShLi* | WQual | Econ | Recr* | Aest* | Educ* | PRIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HU004 | 31.7 | 59.2 | 32.0 | 51.9 | 17.5 | 50.9 | 56.5 | 21.9 | 34.7 | 33.3 | |
| HU005 | 27.9 | 51.3 | 69.8 | 63.7 | 0.0 | 47.0 | 73.9 | 32.8 | 34.7 | 33.3 | P |
| HU006 | 37.2 | 57.8 | 75.4 | 57.8 | 0.0 | 55.8 | 73.9 | 32.8 | 39.1 | 38.0 | |
| LI003 | 44.9 | 57.8 | 43.3 | 67.6 | 0.0 | 54.9 | 73.9 | 39.7 | 39.1 | 46.0 | |
| LI004 | 43.4 | 46.0 | 49.0 | 71.5 | 0.0 | 53.9 | 39.1 | 19.1 | 31.8 | 41.2 | P |
| LI005 | 55.8 | 68.4 | 43.3 | 63.7 | 35.1 | 66.6 | 56.5 | 34.2 | 36.2 | 49.2 | P |
| LI006 | 68.2 | 63.1 | 52.8 | 43.1 | 17.2 | 49.0 | 30.4 | 52.0 | 53.6 | 79.3 | P |
| LI007 | 41.8 | 67.1 | 47.1 | 64.7 | 0.0 | 64.7 | 91.3 | 47.9 | 39.1 | 46.0 | |
| LI008 | 41.0 | 63.1 | 54.7 | 68.6 | 14.4 | 52.9 | 73.9 | 36.9 | 34.7 | 41.2 | P |
| LI009 | 32.5 | 52.6 | 56.6 | 70.5 | 0.0 | 49.0 | 73.9 | 32.8 | 30.4 | 28.5 | P |
| LI010 | 24.8 | 46.0 | 32.0 | 63.7 | 0.0 | 46.0 | 56.5 | 21.9 | 30.4 | 28.5 | |
| LI011 | 66.6 | 69.7 | 73.5 | 53.9 | 27.5 | 64.7 | 65.2 | 52.0 | 63.7 | 71.4 | P |
| LI012 | 50.3 | 59.2 | 50.9 | 59.8 | 17.5 | 51.9 | 56.5 | 26.0 | 39.1 | 46.0 | |
| LI013 | 48.0 | 82.8 | 45.2 | 68.6 | 17.5 | 68.6 | 91.3 | 47.9 | 43.4 | 50.7 | P |
| LI014 | 34.8 | 52.6 | 62.2 | 59.8 | 0.0 | 53.9 | 73.9 | 32.8 | 34.7 | 33.3 | P |
| LI015 | 43.4 | 72.3 | 41.5 | 67.6 | 39.3 | 61.7 | 73.9 | 36.9 | 30.4 | 41.2 | P |
| LI016 | 44.1 | 65.7 | 52.8 | 63.7 | 17.5 | 58.8 | 60.8 | 31.5 | 26.0 | 28.5 | P |
| LI017 | 53.4 | 63.1 | 54.7 | 69.6 | 19.6 | 61.7 | 56.5 | 34.2 | 36.2 | 53.9 | P |
| LI018 | 65.1 | 69.7 | 32.0 | 63.7 | 65.5 | 61.7 | 39.1 | 23.2 | 44.9 | 63.4 | |
| LI019 | 73.6 | 86.8 | 52.8 | 70.5 | 58.6 | 68.6 | 78.2 | 54.7 | 39.1 | 58.7 | P |
| LI020 | 41.0 | 57.8 | 49.0 | 58.8 | 0.0 | 52.9 | 73.9 | 36.9 | 34.7 | 46.0 | P |
| LI021 | 55.8 | 64.4 | 45.2 | 60.7 | 15.5 | 65.6 | 56.5 | 34.2 | 31.8 | 46.0 | |
| LI022 | 39.5 | 9.2 | 32.0 | 52.9 | 11.3 | 50.9 | 47.8 | 30.1 | 57.9 | 41.2 | P |
| LI023 | 41.0 | 51.3 | 24.5 | 51.9 | 11.3 | 49.0 | 47.8 | 32.8 | 53.6 | 41.2 | P |
| LI024 | 59.6 | 69.7 | 37.7 | 59.8 | 39.3 | 57.8 | 73.9 | 41.0 | 43.4 | 66.6 | P |
| LI025 | 20.9 | 44.7 | 22.6 | 58.8 | 0.0 | 47.0 | 17.3 | 9.5 | 20.2 | 4.7 | |
| LI026 | 52.7 | 61.8 | 33.9 | 64.7 | 7.2 | 55.8 | 47.8 | 30.1 | 46.3 | 60.3 | |
| LI027 | 35.6 | 10.5 | 39.6 | 59.8 | 0.0 | 50.0 | 73.9 | 30.1 | 39.1 | 38.0 | |
| LI028 | 20.9 | 44.7 | 22.6 | 54.9 | 0.0 | 37.2 | 56.5 | 21.9 | 34.7 | 25.3 | |
| LI029 | 65.8 | 56.5 | 35.8 | 64.7 | 17.5 | 56.8 | 39.1 | 23.2 | 36.2 | 53.9 | |
| LI030 | 55.0 | 59.2 | 39.6 | 57.8 | 19.6 | 63.7 | 56.5 | 34.2 | 36.2 | 53.9 | |
| LI031 | 42.6 | 51.3 | 30.1 | 67.6 | 0.0 | 56.8 | 56.5 | 30.1 | 31.8 | 41.2 | |
| LI032 | 58.9 | 69.7 | 43.3 | 65.6 | 17.5 | 58.8 | 91.3 | 52.0 | 43.4 | 66.6 | P |
| LI036 | 66.6 | 68.4 | 45.2 | 56.8 | 51.7 | 51.9 | 73.9 | 41.0 | 43.4 | 58.7 | P |
| LI037 | 51.1 | 51.3 | 24.5 | 63.7 | 19.6 | 52.9 | 39.1 | 19.1 | 36.2 | 38.0 | |
| LU101 | 36.4 | 68.4 | 79.2 | 69.6 | 0.0 | 58.8 | 91.3 | 43.8 | 30.4 | 33.3 | P |
| ME002 | 52.7 | 69.7 | 39.6 | 61.7 | 35.1 | 61.7 | 73.9 | 36.9 | 39.1 | 53.9 | P |
| ME003 | 41.0 | 51.3 | 32.0 | 62.7 | 0.0 | 48.0 | 73.9 | 36.9 | 34.7 | 41.2 | P |
| ME004 | 38.7 | 51.3 | 32.0 | 62.7 | 0.0 | 48.0 | 73.9 | 32.8 | 34.7 | 33.3 | P |
| ME005 | 44.1 | 71.0 | 47.1 | 62.7 | 15.5 | 64.7 | 91.3 | 47.9 | 34.7 | 41.2 | P |
| ME006 | 47.2 | 53.9 | 43.3 | 71.5 | 19.6 | 58.8 | 56.5 | 43.8 | 36.2 | 46.0 | P |
| ME008 | 65.8 | 76.3 | 41.5 | 58.8 | 51.7 | 60.7 | 73.9 | 41.0 | 39.1 | 58.7 | P |
| ME011 | 64.3 | 77.6 | 49.0 | 63.7 | 31.0 | 66.6 | 91.3 | 52.0 | 47.8 | 63.4 | P |
| ME015 | 26.3 | 44.7 | 22.6 | 52.9 | 0.0 | 40.1 | 56.5 | 21.9 | 34.7 | 33.3 | |
| ME016 | 34.8 | 56.5 | 30.1 | 61.7 | 19.6 | 49.0 | 73.9 | 32.8 | 39.1 | 46.0 | |
| NC002 | 27.1 | 3.9 | 32.0 | 66.6 | 0.0 | 54.9 | 39.1 | 12.3 | 44.9 | 42.8 | |
| NC003 | 35.6 | 46.0 | 24.5 | 59.8 | 0.0 | 49.0 | 47.8 | 35.6 | 65.2 | 50.7 | |
| NC004 | 34.8 | 18.4 | 24.5 | 60.7 | 11.3 | 51.9 | 47.8 | 21.9 | 59.4 | 50.7 | |
| NC005 | 21.7 | 18.4 | 37.7 | 51.9 | 5.1 | 36.2 | 13.0 | 43.8 | 82.6 | 34.9 | P |
| NC006 | 34.8 | 3.9 | 32.0 | 66.6 | 0.0 | 54.9 | 39.1 | 15.0 | 44.9 | 42.8 | |

* Model modified from Wisconsin original

(Table 3. Model scores for all freshwater wetlands, cont'd)

| WETLAND | Biol | Hydro | GrWat | Flood | ShLi* | WQual | Econ | Recr* | Aest* | Educ* | PRIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NC007 | 53.4 | 56.5 | 41.5 | 68.6 | 0.0 | 60.7 | 56.5 | 34.2 | 40.5 | 58.7 | |
| NC008 | 29.4 | 44.7 | 32.0 | 44.1 | 3.1 | 31.3 | 13.0 | 39.7 | 72.4 | 34.9 | |
| PB009 | 65.1 | 71.0 | 69.8 | 73.5 | 16.5 | 66.6 | 91.3 | 52.0 | 52.1 | 76.1 | |
| PB012 | 41.8 | 68.4 | 75.4 | 66.6 | 14.4 | 56.8 | 91.3 | 47.9 | 39.1 | 53.9 | P |
| PB014 | 22.4 | 2.6 | 69.8 | 59.8 | 0.0 | 43.1 | 56.5 | 19.1 | 34.7 | 25.3 | |
| PH003 | 37.9 | 57.8 | 37.7 | 56.8 | 0.0 | 56.8 | 73.9 | 32.8 | 34.7 | 33.3 | P |
| PH004 | 34.8 | 60.5 | 52.8 | 66.6 | 0.0 | 56.8 | 73.9 | 32.8 | 34.7 | 33.3 | P |
| PH005 | 50.3 | 57.8 | 45.2 | 53.9 | 15.5 | 53.9 | 73.9 | 36.9 | 39.1 | 46.0 | P |
| PH006 | 29.4 | 51.3 | 35.8 | 54.9 | 0.0 | 44.1 | 56.5 | 19.1 | 43.4 | 38.0 | |
| PH007 | 44.1 | 50.0 | 35.8 | 62.7 | 0.0 | 45.0 | 73.9 | 36.9 | 39.1 | 46.0 | |
| TA002 | 31.0 | 50.0 | 28.3 | 56.8 | 0.0 | 44.1 | 73.9 | 41.0 | 34.7 | 33.3 | |
| TA004 | 61.2 | 69.7 | 60.3 | 64.7 | 14.4 | 60.7 | 73.9 | 49.3 | 43.4 | 58.7 | |
| TA007 | 32.5 | 3.9 | 20.7 | 58.8 | 0.0 | 51.9 | 39.1 | 12.3 | 27.5 | 25.3 | |
| TA008 | 30.2 | 46.0 | 30.1 | 47.0 | 0.0 | 47.0 | 56.5 | 21.9 | 34.7 | 33.3 | |
| TA011 | 56.5 | 56.5 | 28.3 | 69.6 | 0.0 | 59.8 | 56.5 | 34.2 | 36.2 | 53.9 | |
| TA012 | 47.2 | 47.3 | 22.6 | 62.7 | 19.6 | 50.9 | 32.6 | 24.6 | 27.5 | 34.9 | |
| TA015 | 57.3 | 72.3 | 50.9 | 50.0 | 44.8 | 44.1 | 30.4 | 71.2 | 86.9 | 63.4 | P |
| TA017 | 59.6 | 57.8 | 30.1 | 51.9 | 11.3 | 58.8 | 34.7 | 35.6 | 42.0 | 41.2 | P |
| TA018 | 53.4 | 47.3 | 28.3 | 54.9 | 13.4 | 52.9 | 47.8 | 32.8 | 55.0 | 66.6 | P |
| TA019 | 35.6 | 52.6 | 32.0 | 64.7 | 0.0 | 48.0 | 73.9 | 32.8 | 39.1 | 38.0 | |
| TA020 | 43.4 | 52.6 | 26.4 | 60.7 | 17.5 | 44.1 | 56.5 | 26.0 | 39.1 | 46.0 | P |
| TA023 | 20.1 | 3.9 | 32.0 | 60.7 | 0.0 | 44.1 | 56.5 | 19.1 | 34.7 | 25.3 | |
| TA025 | 34.8 | 38.1 | 30.1 | 37.2 | 17.5 | 39.2 | 56.5 | 21.9 | 34.7 | 33.3 | |
| TA026 | 34.1 | 44.7 | 62.2 | 58.8 | 0.0 | 41.1 | 56.5 | 21.9 | 34.7 | 38.0 | |
| TA027 | 45.7 | 64.4 | 37.7 | 68.6 | 19.6 | 63.7 | 56.5 | 30.1 | 31.8 | 41.2 | |
| TA030 | 84.4 | 72.3 | 54.7 | 64.7 | 22.7 | 68.6 | 65.2 | 43.8 | 59.4 | 71.4 | P |
| TA033 | 34.1 | 61.8 | 33.9 | 62.7 | 17.5 | 49.0 | 73.9 | 32.8 | 26.0 | 28.5 | |
| TA034 | 53.4 | 65.7 | 39.6 | 62.7 | 17.5 | 56.8 | 73.9 | 41.0 | 39.1 | 53.9 | |
| TA036 | 65.8 | 64.4 | 37.7 | 61.7 | 19.6 | 65.6 | 56.5 | 34.2 | 40.5 | 66.6 | P |
| TA037 | 46.5 | 59.2 | 50.9 | 67.6 | 0.0 | 57.8 | 73.9 | 36.9 | 39.1 | 53.9 | P |
| TA039 | 48.0 | 56.5 | 30.1 | 61.7 | 19.6 | 49.0 | 73.9 | 36.9 | 39.1 | 53.9 | P |
| TA040 | 48.8 | 59.2 | 33.9 | 65.6 | 17.5 | 50.0 | 73.9 | 36.9 | 43.4 | 53.9 | |
| TA042 | 47.2 | 68.4 | 37.7 | 65.6 | 17.5 | 59.8 | 73.9 | 36.9 | 47.8 | 55.5 | |
| TA045 | 77.5 | 76.3 | 54.7 | 68.6 | 35.1 | 74.5 | 73.9 | 53.4 | 49.2 | 76.1 | P |
| TA046 | 27.1 | 46.0 | 13.2 | 57.8 | 0.0 | 50.0 | 39.1 | 15.0 | 31.8 | 25.3 | |
| TA047 | 48.8 | 47.3 | 45.2 | 66.6 | 0.0 | 54.9 | 39.1 | 19.1 | 36.2 | 46.0 | P |
| TA048 | 24.0 | 56.5 | 30.1 | 47.0 | 22.7 | 34.3 | 13.0 | 53.4 | 63.7 | 33.3 | P |
| TA049 | 47.2 | 64.4 | 39.6 | 61.7 | 39.3 | 55.8 | 73.9 | 36.9 | 39.1 | 46.0 | P |
| TA050 | 43.4 | 47.3 | 28.3 | 59.8 | 0.0 | 53.9 | 47.8 | 28.7 | 50.7 | 53.9 | P |
| TA051 | 41.8 | 47.3 | 28.3 | 63.7 | 0.0 | 56.8 | 47.8 | 31.5 | 46.3 | 49.2 | P |
| TA052 | 20.1 | 5.2 | 41.5 | 65.6 | 0.0 | 50.0 | 56.5 | 21.9 | 30.4 | 28.5 | |
| TA054 | 44.1 | 57.8 | 75.4 | 63.7 | 0.0 | 51.9 | 73.9 | 36.9 | 34.7 | 41.2 | P |
| TA055 | 41.8 | 75.0 | 35.8 | 65.6 | 17.5 | 58.8 | 73.9 | 36.9 | 39.1 | 46.0 | |
| TA056 | 53.4 | 64.4 | 47.1 | 55.8 | 10.3 | 69.6 | 65.2 | 46.5 | 46.3 | 57.1 | P |
| TA057 | 64.3 | 82.8 | 58.4 | 64.7 | 35.1 | 67.6 | 91.3 | 52.0 | 47.8 | 71.4 | P |
| TA058 | 58.9 | 64.4 | 50.9 | 64.7 | 13.4 | 67.6 | 65.2 | 43.8 | 55.0 | 66.6 | P |
| TA060 | 67.4 | 75.0 | 56.6 | 68.6 | 39.3 | 63.7 | 91.3 | 52.0 | 43.4 | 66.6 | P |
| TA064 | 45.7 | 63.1 | 49.0 | 64.7 | 17.5 | 52.9 | 73.9 | 36.9 | 34.7 | 49.2 | P |

* Model modified from Wisconsin original

(Table 3. Model scores for all freshwater wetlands, cont'd)

| WETLAND | Biol | Hydro | GrWat | Flood | ShLi* | WQual | Econ | Recr* | Aest* | Educ* | PRIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TA067 | 40.3 | 64.4 | 39.6 | 60.7 | 15.5 | 56.8 | 73.9 | 36.9 | 34.7 | 41.2 | P |
| TA068 | 52.7 | 59.2 | 50.9 | 68.6 | 0.0 | 67.6 | 56.5 | 30.1 | 31.8 | 41.2 | P |
| TA070 | 30.2 | 60.5 | 39.6 | 65.6 | 0.0 | 54.9 | 73.9 | 32.8 | 34.7 | 33.3 | |
| TA077 | 82.9 | 68.4 | 37.7 | 57.8 | 18.6 | 62.7 | 65.2 | 52.0 | 55.0 | 71.4 | P |
| TA078 | 86.0 | 78.9 | 56.6 | 63.7 | 37.9 | 70.5 | 65.2 | 43.8 | 50.7 | 66.6 | P |
| TA079 | 76.7 | 69.7 | 39.6 | 60.7 | 31.0 | 64.7 | 56.5 | 42.4 | 40.5 | 58.7 | P |
| TA080 | 68.9 | 63.1 | 54.7 | 62.7 | 17.5 | 60.7 | 56.5 | 42.4 | 31.8 | 53.9 | P |
| TA082 | 44.9 | 56.5 | 33.9 | 62.7 | 0.0 | 49.0 | 73.9 | 36.9 | 39.1 | 46.0 | |
| TA084 | 72.8 | 73.6 | 49.0 | 68.6 | 17.5 | 72.5 | 73.9 | 45.2 | 36.2 | 66.6 | P |
| TA085 | 62.0 | 27.6 | 32.0 | 62.7 | 17.5 | 56.8 | 56.5 | 31.5 | 40.5 | 58.7 | P |
| TA088 | 65.1 | 56.5 | 54.7 | 62.7 | 19.6 | 57.8 | 56.5 | 34.2 | 40.5 | 66.6 | P |
| TA090 | 51.9 | 59.2 | 37.7 | 64.7 | 0.0 | 60.7 | 56.5 | 30.1 | 36.2 | 46.0 | P |
| TA092 | 86.8 | 81.5 | 73.5 | 64.7 | 37.9 | 74.5 | 82.6 | 54.7 | 50.7 | 66.6 | P |
| TA093 | 60.4 | 59.2 | 50.9 | 60.7 | 0.0 | 64.7 | 65.2 | 43.8 | 46.3 | 61.9 | P |
| TA094 | 76.7 | 64.4 | 79.2 | 60.7 | 8.2 | 66.6 | 82.6 | 54.7 | 59.4 | 71.4 | P |
| TA096 | 47.2 | 51.3 | 30.1 | 65.6 | 0.0 | 49.0 | 73.9 | 36.9 | 43.4 | 50.7 | |
| TA097 | 39.5 | 61.8 | 33.9 | 60.7 | 17.5 | 49.0 | 60.8 | 31.5 | 26.0 | 28.5 | |
| WA002 | 28.6 | 51.3 | 28.3 | 58.8 | 0.0 | 45.0 | 56.5 | 21.9 | 34.7 | 33.3 | |
| WA003 | 36.4 | 51.3 | 52.8 | 64.7 | 0.0 | 46.0 | 56.5 | 21.9 | 39.1 | 41.2 | P |
| WA004 | 31.7 | 51.3 | 49.0 | 63.7 | 0.0 | 47.0 | 73.9 | 32.8 | 34.7 | 33.3 | |
| WA012 | 65.8 | 73.6 | 66.0 | 65.6 | 28.9 | 59.8 | 91.3 | 52.0 | 52.1 | 76.1 | P |
| WA016 | 44.1 | 61.8 | 58.4 | 68.6 | 14.4 | 50.0 | 73.9 | 36.9 | 34.7 | 41.2 | P |
| WA019 | 37.9 | 59.2 | 45.2 | 58.8 | 0.0 | 57.8 | 73.9 | 32.8 | 34.7 | 33.3 | |
| WA021 | 50.3 | 61.8 | 41.5 | 62.7 | 15.5 | 50.0 | 73.9 | 36.9 | 43.4 | 58.7 | |
| WA025 | 68.2 | 75.0 | 64.1 | 70.5 | 17.5 | 68.6 | 91.3 | 52.0 | 47.8 | 68.2 | P |
| WA028 | 48.8 | 64.4 | 71.6 | 57.8 | 14.4 | 58.8 | 73.9 | 36.9 | 47.8 | 55.5 | P |
| WN101 | 77.5 | 81.5 | 45.2 | 70.5 | 65.5 | 71.5 | 73.9 | 53.4 | 49.2 | 76.1 | P |
| WN102 | 51.1 | 68.4 | 64.1 | 58.8 | 48.2 | 49.0 | 56.5 | 26.0 | 39.1 | 46.0 | P |
| WN103 | 62.0 | 9.2 | 66.0 | 59.8 | 14.4 | 46.0 | 56.5 | 27.3 | 47.8 | 71.4 | P |
| WN104 | 52.7 | 51.3 | 37.7 | 58.8 | 17.5 | 44.1 | 56.5 | 26.0 | 52.1 | 55.5 | P |
| WN105 | 38.7 | 9.2 | 45.2 | 59.8 | 17.5 | 46.0 | 56.5 | 19.1 | 39.1 | 38.0 | P |
| WN106 | 74.4 | 63.1 | 39.6 | 52.9 | 58.6 | 56.8 | 56.5 | 34.2 | 49.2 | 68.2 | |
| WN107 | 31.0 | 46.0 | 24.5 | 63.7 | 0.0 | 45.0 | 56.5 | 21.9 | 34.7 | 33.3 | |
| WN108 | 59.6 | 60.5 | 28.3 | 53.9 | 58.6 | 49.0 | 39.1 | 23.2 | 40.5 | 58.7 | P |
| WN110 | 38.7 | 60.5 | 35.8 | 46.0 | 17.2 | 39.2 | 17.3 | 30.1 | 31.8 | 20.6 | |
| WN111 | 55.8 | 51.3 | 24.5 | 50.0 | 9.3 | 47.0 | 47.8 | 32.8 | 50.7 | 66.6 | P |
| WN112 | 61.2 | 55.2 | 43.3 | 51.9 | 11.3 | 60.7 | 47.8 | 32.8 | 55.0 | 74.6 | P |
| WN113 | 49.6 | 50.0 | 56.6 | 59.8 | 14.4 | 50.0 | 39.1 | 19.1 | 36.2 | 46.0 | P |
| WN114 | 32.5 | 57.8 | 43.3 | 48.0 | 5.1 | 42.1 | 13.0 | 39.7 | 72.4 | 46.0 | P |
| WN115 | 45.7 | 14.4 | 66.0 | 57.8 | 22.7 | 46.0 | 39.1 | 20.5 | 65.2 | 79.3 | P |
| WN116 | 50.3 | 7.8 | 64.1 | 64.7 | 16.5 | 54.9 | 26.0 | 10.9 | 27.5 | 33.3 | P |
| WN117 | 21.7 | 13.1 | 64.1 | 50.9 | 4.1 | 35.2 | 0.0 | 31.5 | 59.4 | 12.6 | P |
| WN119 | 55.0 | 80.2 | 49.0 | 57.8 | 35.1 | 62.7 | 73.9 | 41.0 | 34.7 | 53.9 | P |
| WN120 | 66.6 | 71.0 | 58.4 | 71.5 | 19.6 | 73.5 | 73.9 | 45.2 | 44.9 | 76.1 | P |

* Model modified from Wisconsin original

(Table 3. Model scores for all freshwater wetlands, cont'd)

| WETLAND | Biol | Hydro | GrWat | Flood | ShLi* | WQual | Econ | Recr* | Aest* | Educ* | PRIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WN121 | 77.5 | 75.0 | 50.9 | 66.6 | 65.5 | 67.6 | 56.5 | 42.4 | 44.9 | 71.4 | P |
| WN123 | 70.5 | 82.8 | 60.3 | 66.6 | 58.6 | 64.7 | 91.3 | 60.2 | 52.1 | 76.1 | P |
| WN124 | 41.0 | 9.2 | 66.0 | 57.8 | 12.4 | 50.9 | 26.0 | 10.9 | 23.1 | 20.6 | P |
| WN125 | 53.4 | 56.5 | 37.7 | 49.0 | 24.8 | 43.1 | 34.7 | 46.5 | 69.5 | 53.9 | P |
| WN126 | 63.5 | 69.7 | 39.6 | 61.7 | 65.5 | 55.8 | 60.8 | 35.6 | 26.0 | 41.2 | P |
| WN127 | 44.9 | 51.3 | 24.5 | 53.9 | 11.3 | 50.0 | 47.8 | 28.7 | 46.3 | 46.0 | P |
| WN128 | 61.2 | 73.6 | 47.1 | 60.7 | 17.5 | 60.7 | 73.9 | 41.0 | 43.4 | 58.7 | P |
| WN129 | 56.5 | 75.0 | 35.8 | 67.6 | 39.3 | 60.7 | 73.9 | 41.0 | 43.4 | 66.6 | P |
| WN130 | 41.0 | 56.5 | 32.0 | 66.6 | 17.5 | 50.9 | 73.9 | 36.9 | 34.7 | 41.2 | P |
| WN132 | 43.4 | 59.2 | 37.7 | 66.6 | 0.0 | 55.8 | 73.9 | 36.9 | 39.1 | 46.0 | P |
| WN134 | 49.6 | 50.0 | 30.1 | 51.9 | 13.4 | 39.2 | 56.5 | 26.0 | 39.1 | 46.0 | |
| WN135 | 20.1 | 2.6 | 30.1 | 55.8 | 0.0 | 39.2 | 56.5 | 19.1 | 34.7 | 33.3 | |
| WT002 | 31.7 | 56.5 | 35.8 | 62.7 | 0.0 | 50.9 | 73.9 | 32.8 | 34.7 | 33.3 | |
| WT003 | 37.2 | 64.4 | 37.7 | 62.7 | 19.6 | 59.8 | 73.9 | 32.8 | 34.7 | 33.3 | P |
| WT004 | 27.1 | 55.2 | 28.3 | 63.7 | 0.0 | 49.0 | 73.9 | 32.8 | 30.4 | 28.5 | P |
| WT005 | 56.5 | 43.4 | 47.1 | 63.7 | 10.3 | 48.0 | 47.8 | 41.0 | 55.0 | 58.7 | P |

| | |
|---|---|
| Biol | Biological function, includes productivity and wildlife habitat |
| Hydro | Hydrological support, ability to maintain flow during dry periods |
| GrWat | Ground-Water, ability to provide ground water recharge |
| Flood | Flood & storm water storage during heavy runoff periods |
| ShoL* | Shore Line protection from erosion |
| WQual | Water Quality maintenance, ability to renovate water quality |
| Econ | Economic values, primarily timber or hay |
| Recr* | Recreational values, public access to fish, game or nature |
| Aest* | Aesthetic values, degree of scenic appeal |
| Educ* | Educational value, provide public with accessible wetland ecology |

* Model modified from Wisconsin original

Table 4. Wetland model ranking by thirds.

| Model Wetland | 1 Biol | 2 Hydro | 3 GrWat | 4 Flood | 5 ShLi* | 6 WQual | 7 Econ | 8 Recr* | 9 Aest* | 10 Educ* |
|---|---|---|---|---|---|---|---|---|---|---|
| AW002 | M | M | M | M | L | M | H | M | M | M |
| AW003 | H | H | H | H | M | M | H | H | H | H |
| AW004 | M | H | M | M | H | M | H | M | M | M |
| BA001 | H | H | M | L | H | H | M | H | H | H |
| BA002 | M | M | M | M | M | H | H | H | M | H |
| BA003 | H | H | M | L | H | M | H | H | H | H |
| BA004 | M | M | H | H | M | M | H | M | H | M |
| BA005 | H | H | H | H | H | H | H | H | H | H |
| BA006 | M | H | H | H | M | M | H | M | L | M |
| BA007 | L | M | M | H | L | M | M | L | L | M |
| BA008 | H | H | H | H | M | H | H | H | H | H |
| BA010 | H | H | H | H | M | H | H | H | H | H |
| BE004 | M | L | M | H | H | M | L | L | M | M |
| BE005 | L | L | M | H | L | H | M | M | H | M |
| BE007 | L | M | L | L | M | L | L | H | H | L |
| BE008 | M | M | L | H | L | L | H | M | L | M |
| BE012 | H | H | M | H | M | H | H | H | H | H |
| BE013 | L | L | L | M | L | L | M | L | L | L |
| BE014 | L | M | H | H | M | M | H | M | L | L |
| BE015 | H | H | H | M | M | M | H | H | H | H |
| BE016 | H | H | H | H | L | H | H | H | H | H |
| BE017 | M | M | L | H | H | M | H | M | M | M |
| BE018 | M | M | M | L | M | M | H | M | H | M |
| BR002 | L | L | H | M | L | L | H | M | L | L |
| BW001 | M | M | H | M | L | M | H | M | L | M |
| BW002 | M | L | H | L | M | L | M | L | M | M |
| BW003 | L | L | H | H | L | M | H | M | L | L |
| BW004 | M | H | H | H | M | H | H | M | L | M |
| BW005 | L | L | H | H | L | M | H | M | L | L |
| BW006 | L | L | H | H | L | L | H | M | L | L |
| CA003 | M | H | M | L | M | M | H | M | L | M |
| CA004 | H | H | H | H | M | M | H | H | H | H |
| CA005 | H | H | H | L | M | M | M | H | H | H |
| CA015 | L | L | H | M | L | L | H | M | L | L |
| CA016 | L | L | L | M | L | L | H | M | L | L |
| CA020 | L | L | H | L | L | L | M | L | L | L |
| CA021 | M | M | H | H | M | M | M | L | L | L |
| CA024 | H | H | H | M | H | M | H | H | H | H |
| CA025 | L | M | H | H | L | L | H | M | L | L |
| DR001 | H | H | L | M | H | H | H | H | M | H |
| DR002 | L | L | H | L | L | L | L | L | M | L |
| DR003 | M | M | H | H | M | M | H | M | L | M |
| DR004 | M | M | H | H | L | H | H | M | L | M |

H Model score in upper third of wetlands rated.
M Model score in middle third of wetlands rated.
L Model score in lower third of wetlands rated.
* Model modified from Wisconsin original

Table 4. Wetland model ranking by thirds.

| Model<br>Wetland | 1<br>Biol | 2<br>Hydro | 3<br>GrWat | 4<br>Flood | 5<br>ShLi* | 6<br>WQual | 7<br>Econ | 8<br>Recr* | 9<br>Aest* | 10<br>Educ* |
|---|---|---|---|---|---|---|---|---|---|---|
| DR005 | M | M | H | H | L | M | H | M | M | M |
| DR006 | M | L | H | H | L | M | H | M | M | M |
| DR007 | L | L | H | M | L | L | H | M | L | L |
| DR010 | H | M | H | H | M | M | L | M | H | H |
| DR011 | L | L | H | H | L | L | M | L | L | L |
| DR012 | H | M | H | H | M | M | H | H | H | H |
| DR013 | M | M | H | M | M | L | H | M | M | M |
| DR014 | L | L | L | L | L | L | M | L | L | L |
| DR015 | L | M | L | H | H | L | M | L | L | L |
| DR016 | L | L | L | L | L | L | H | M | M | L |
| DR018 | H | H | M | L | H | M | H | H | H | H |
| DR019 | M | M | M | M | M | H | M | H | H | H |
| DR022 | L | M | L | L | M | L | L | L | L | L |
| DR023 | L | L | L | L | M | L | L | L | L | L |
| DR026 | L | L | H | L | L | L | H | M | L | L |
| DR027 | M | M | H | L | H | L | H | H | H | M |
| HA002 | L | L | M | L | M | L | M | L | L | L |
| HA003 | L | L | L | M | L | L | H | M | L | L |
| HA004 | H | H | M | M | H | M | H | H | H | H |
| HA005 | L | L | M | L | M | L | L | H | H | L |
| HA006 | M | L | M | L | M | M | L | L | H | M |
| HA007 | M | M | M | L | M | L | L | H | H | M |
| HA008 | L | M | M | M | L | L | H | M | L | L |
| HA009 | H | L | H | M | M | M | L | L | M | H |
| HA010 | L | L | H | H | L | L | M | L | L | L |
| HA011 | H | H | H | H | M | H | H | H | M | H |
| HA015 | L | L | M | L | L | L | L | L | M | L |
| HA017 | M | M | M | L | H | M | M | L | M | H |
| HA018 | H | H | H | H | M | H | H | H | H | H |
| HA021 | L | M | L | L | M | L | H | M | M | L |
| HA024 | M | M | H | H | L | H | M | L | M | M |
| HA025 | M | L | L | H | L | M | M | L | M | M |
| HA028 | H | H | H | H | M | H | H | H | H | H |
| HA030 | L | M | L | M | L | L | H | M | L | L |
| HA032 | H | H | M | M | H | M | H | H | H | H |
| HA034 | M | M | M | M | L | H | H | M | M | M |
| HU003 | L | M | H | L | H | L | L | L | L | L |
| HU004 | L | M | L | L | M | M | M | L | L | L |
| HU005 | L | L | H | M | L | L | H | M | L | L |
| HU006 | L | M | H | L | L | M | H | M | M | L |
| LI003 | M | M | M | H | L | M | H | H | M | M |
| LI004 | M | L | M | H | L | M | L | L | L | M |
| LI005 | H | H | M | M | H | H | M | M | M | M |

H Model score in upper third of wetlands rated.
M Model score in middle third of wetlands rated.
L Model score in lower third of wetlands rated.
* Model modified from Wisconsin original

Table 4. Wetland model ranking by thirds.

| Model / Wetland | 1 Biol | 2 Hydro | 3 GrWat | 4 Flood | 5 ShLi* | 6 WQual | 7 Econ | 8 Recr* | 9 Aest* | 10 Educ* |
|---|---|---|---|---|---|---|---|---|---|---|
| LI006 | H | M | H | L | M | L | L | H | H | H |
| LI007 | M | H | M | H | L | H | H | H | M | M |
| LI008 | M | M | H | H | M | M | H | M | L | M |
| LI009 | L | M | H | H | L | L | H | M | L | L |
| LI010 | L | L | L | M | L | L | M | L | L | L |
| LI011 | H | H | H | L | H | H | M | H | H | H |
| LI012 | M | M | M | L | M | M | M | L | M | M |
| LI013 | M | H | M | H | M | H | H | H | H | M |
| LI014 | L | M | H | L | L | M | H | M | L | L |
| LI015 | M | H | M | H | H | H | H | M | L | M |
| LI016 | M | H | H | M | M | H | M | L | L | L |
| LI017 | H | M | H | H | H | H | M | M | M | H |
| LI018 | H | H | L | M | H | H | L | L | H | H |
| LI019 | H | H | H | H | H | H | H | H | M | H |
| LI020 | M | M | M | L | L | M | H | M | L | M |
| LI021 | H | H | M | M | M | H | M | M | L | M |
| LI022 | M | L | L | L | M | M | L | L | H | M |
| LI023 | M | L | L | L | M | L | L | M | H | M |
| LI024 | H | H | M | L | H | H | H | H | H | H |
| LI025 | L | L | L | L | L | L | L | L | L | L |
| LI026 | M | M | L | H | M | M | L | L | H | H |
| LI027 | L | L | M | L | L | M | H | L | M | L |
| LI028 | L | L | L | L | L | L | M | L | L | L |
| LI029 | H | M | L | H | M | M | L | L | M | H |
| LI030 | H | M | M | L | H | H | M | M | M | H |
| LI031 | M | L | L | H | L | M | M | L | L | M |
| LI032 | H | H | M | H | M | H | H | H | H | H |
| LI036 | H | H | M | L | H | M | H | H | H | H |
| LI037 | M | L | L | M | H | M | L | L | M | L |
| LU101 | L | H | H | H | L | H | H | H | L | L |
| ME002 | M | H | M | M | H | H | H | M | M | H |
| ME003 | M | L | L | M | L | L | H | M | L | M |
| ME004 | L | L | L | M | L | L | H | M | L | L |
| ME005 | M | H | M | M | M | H | H | H | L | M |
| ME006 | M | M | M | H | H | H | M | H | M | M |
| ME008 | H | H | M | L | H | H | H | H | M | H |
| ME011 | H | H | M | M | H | H | H | H | H | H |
| ME015 | L | L | L | L | L | L | M | L | L | L |
| ME016 | L | M | L | M | H | L | H | M | M | M |
| NC002 | L | L | L | H | L | M | L | L | H | M |
| NC003 | L | L | L | L | L | L | L | M | H | M |
| NC004 | L | L | L | M | M | M | L | L | H | M |
| NC005 | L | L | M | L | M | L | L | H | H | L |

H Model score in upper third of wetlands rated.
M Model score in middle third of wetlands rated.
L Model score in lower third of wetlands rated.
* Model modified from Wisconsin original

Table 4. Wetland model ranking by thirds.

| Model / Wetland | 1 Biol | 2 Hydro | 3 GrWat | 4 Flood | 5 ShLi* | 6 WQual | 7 Econ | 8 Recr* | 9 Aest* | 10 Educ* |
|---|---|---|---|---|---|---|---|---|---|---|
| NC006 | L | L | L | H | L | M | L | L | H | M |
| NC007 | H | M | M | H | L | H | M | M | M | H |
| NC008 | L | L | L | L | M | L | L | H | H | L |
| PB009 | H | H | H | H | M | H | H | H | H | H |
| PB012 | M | H | H | H | M | M | H | H | M | H |
| PB014 | L | L | H | L | L | L | M | L | L | L |
| PH003 | L | M | M | L | L | M | H | M | L | L |
| PH004 | L | M | H | H | L | M | H | M | L | L |
| PH005 | M | M | M | L | M | M | H | M | M | M |
| PH006 | L | L | L | L | L | L | M | L | H | L |
| PH007 | M | L | L | M | L | L | H | M | M | M |
| TA002 | L | L | L | L | L | L | H | H | L | L |
| TA004 | H | H | H | H | M | H | H | H | H | H |
| TA007 | L | L | L | L | L | M | L | L | L | L |
| TA008 | L | L | L | L | L | L | M | L | L | L |
| TA011 | H | M | L | H | L | H | M | M | M | H |
| TA012 | M | L | L | M | H | M | L | L | L | L |
| TA015 | H | H | M | L | H | L | L | H | H | H |
| TA017 | H | M | L | L | M | H | L | M | M | M |
| TA018 | H | L | L | L | M | M | L | M | H | H |
| TA019 | L | M | L | H | L | L | H | M | M | L |
| TA020 | M | M | L | M | M | L | M | L | M | M |
| TA023 | L | L | L | M | L | L | M | L | L | L |
| TA025 | L | L | L | L | M | L | M | L | L | L |
| TA026 | L | L | H | L | L | L | M | L | L | L |
| TA027 | M | H | M | H | H | H | M | L | L | M |
| TA030 | H | H | H | H | H | H | M | H | H | H |
| TA033 | L | M | L | M | M | L | H | M | L | L |
| TA034 | H | H | M | M | M | M | H | H | M | H |
| TA036 | H | H | M | M | H | H | M | M | M | H |
| TA037 | M | M | M | H | L | H | H | M | M | H |
| TA039 | M | M | L | M | H | L | H | M | M | H |
| TA040 | M | M | L | H | M | M | H | M | H | H |
| TA042 | M | H | M | H | M | H | H | M | H | H |
| TA045 | H | H | H | H | H | H | H | H | H | H |
| TA046 | L | L | L | L | L | M | L | L | L | L |
| TA047 | M | L | M | H | L | M | L | L | M | M |
| TA048 | L | M | L | L | H | L | L | H | H | L |
| TA049 | M | H | M | M | H | M | H | M | M | M |
| TA050 | M | L | L | L | L | M | L | L | H | H |
| TA051 | M | L | L | M | L | M | L | L | H | M |
| TA052 | L | L | M | H | L | M | M | L | L | L |
| TA054 | M | M | H | M | L | M | H | M | L | M |

H Model score in upper third of wetlands rated.
M Model score in middle third of wetlands rated.
L Model score in lower third of wetlands rated.
* Model modified from Wisconsin original

Table 4. Wetland model ranking by thirds.

| Model / Wetland | 1 Biol | 2 Hydro | 3 GrWat | 4 Flood | 5 ShLi* | 6 WQual | 7 Econ | 8 Recr* | 9 Aest* | 10 Educ* |
|---|---|---|---|---|---|---|---|---|---|---|
| TA055 | M | H | L | H | M | H | H | M | M | M |
| TA056 | H | H | M | L | M | H | M | H | H | H |
| TA057 | H | H | H | H | H | H | H | H | H | H |
| TA058 | H | H | M | H | M | H | M | H | H | H |
| TA060 | H | H | H | H | H | H | H | H | H | H |
| TA064 | M | M | M | H | M | M | H | M | L | M |
| TA067 | M | H | M | M | M | M | H | M | L | M |
| TA068 | M | M | M | H | L | H | M | L | L | M |
| TA070 | L | M | M | H | L | M | H | M | L | L |
| TA077 | H | H | M | L | H | H | M | H | H | H |
| TA078 | H | H | H | M | H | H | M | H | H | H |
| TA079 | H | H | M | M | H | H | M | H | M | H |
| TA080 | H | M | H | M | M | H | M | H | L | H |
| TA082 | M | M | L | M | L | L | H | M | M | M |
| TA084 | H | H | M | H | M | H | H | H | M | H |
| TA085 | H | L | L | M | M | M | M | L | M | H |
| TA088 | H | M | H | M | H | H | M | M | M | H |
| TA090 | M | M | M | H | L | H | M | L | M | M |
| TA092 | H | H | H | H | H | H | H | H | H | H |
| TA093 | H | M | M | M | L | H | M | H | H | H |
| TA094 | H | H | H | M | M | H | H | H | H | H |
| TA096 | M | L | L | H | L | L | H | M | H | M |
| TA097 | M | M | L | M | M | L | M | L | L | L |
| WA002 | L | L | L | L | L | L | M | L | L | L |
| WA003 | L | L | H | H | L | L | M | L | M | M |
| WA004 | L | L | M | M | L | L | H | M | L | L |
| WA012 | H | H | H | H | H | H | H | H | H | H |
| WA016 | M | M | H | H | M | M | H | M | L | M |
| WA019 | L | M | M | L | L | H | H | M | L | L |
| WA021 | M | M | M | M | M | M | H | M | H | H |
| WA025 | H | H | H | H | M | H | H | H | H | H |
| WA028 | M | H | H | L | M | H | H | M | H | H |
| WN101 | H | H | M | H | H | H | H | H | H | H |
| WN102 | M | H | H | L | H | L | M | L | M | M |
| WN103 | H | L | H | L | M | L | M | L | H | H |
| WN104 | M | L | M | L | M | L | M | L | H | H |
| WN105 | L | L | M | L | M | L | M | L | M | L |
| WN106 | H | M | M | L | H | M | M | M | H | H |
| WN107 | L | L | L | M | L | L | M | L | L | L |
| WN108 | H | M | L | L | H | L | L | L | M | H |
| WN110 | L | M | L | L | M | L | L | L | L | L |
| WN111 | H | L | L | L | M | L | L | M | H | H |
| WN112 | H | M | M | L | M | H | L | M | H | H |

H Model score in upper third of wetlands rated.
M Model score in middle third of wetlands rated.
L Model score in lower third of wetlands rated.
* Model modified from Wisconsin original

Table 4. Wetland model ranking by thirds.

| Model Wetland | 1 Biol | 2 Hydro | 3 GrWat | 4 Flood | 5 ShLi* | 6 WQual | 7 Econ | 8 Recr* | 9 Aest* | 10 Educ* |
|---|---|---|---|---|---|---|---|---|---|---|
| WN113 | M | L | H | L | M | M | L | L | M | M |
| WN114 | L | M | M | L | M | L | L | H | H | M |
| WN115 | M | L | H | L | H | L | L | L | H | H |
| WN116 | M | L | H | H | M | M | L | L | L | L |
| WN117 | L | L | H | L | M | L | L | L | H | L |
| WN119 | H | H | M | L | H | H | H | H | L | H |
| WN120 | H | H | H | H | H | H | H | H | H | H |
| WN121 | H | H | M | H | H | H | M | H | H | H |
| WN123 | H | H | H | H | H | H | H | H | H | H |
| WN124 | M | L | H | L | M | M | L | L | L | L |
| WN125 | H | M | M | L | H | L | L | H | H | H |
| WN126 | H | H | M | M | H | M | M | M | L | M |
| WN127 | M | L | L | L | M | M | L | L | H | M |
| WN128 | H | H | M | M | M | H | H | H | H | H |
| WN129 | H | H | L | H | H | H | H | H | H | H |
| WN130 | M | M | L | H | M | M | H | M | L | M |
| WN132 | M | M | M | H | L | M | H | M | M | M |
| WN134 | M | L | L | L | M | L | M | L | M | M |
| WN135 | L | L | L | L | L | L | M | L | L | L |
| WT002 | L | M | L | M | L | M | H | M | L | L |
| WT003 | L | H | M | M | H | H | H | M | L | L |
| WT004 | L | M | L | M | L | L | H | M | L | L |
| WT005 | H | L | M | M | M | L | L | H | H | H |

H Model score in upper third of wetlands rated.
M Model score in middle third of wetlands rated.
L Model score in lower third of wetlands rated.
* Model modified from Wisconsin original

## 2.6 REVIEWING A PROPOSED PROJECT; AN EXAMPLE

A hypothetical subdivision is proposed for cluster condominiums on 50 acres bordering on the hypothetical "Sally Brook". Under the town zoning, single family standard lots would cut the property into long thin lots with little frontage, and with rears bordering on the wetland and brook. The developer's proposal would place most of the buildings around some old orchards and abandoned hayfields, leaving dedicated open land along the wetlands and brook, with nature trails connected to town conservation land. The proposal seems attractive from the standpoint of land planning and wetlands protection, but there are two logistic problems: a great deal of pressure to deny the project has been placed on the town planning board since the location of the proposed buildings would be visible on the horizon to many old (and some wealthy) residents, and the access road would have to cross the wetland. The fill for the wetland crossing would require a state wetlands board (NHSWB) permit but would impact less than one acre of wetlands, therefore not requiring an individual federal dredge & fill permit from the COE under §404-c.

Using a road map, the town Conservation Commission locates the proposed subdivision on the wetlands aerial photo map No 5-10. The hypothetical wetland in question has the code number "SA101" and is fairly large. The CC members look in the previous section Table 3:

| WETLAND CODE: | MODEL ABBREVIATION: Biol | Hydro | GrWat | Flood | ShLi* | WQual | Econ | Recr* | Aest* | Educ* | PRIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SA101 | 65.1 | 61.8 | 28.3 | 65.6 | 17.5 | 56.8 | 56.5 | 42.4 | 40.5 | 66.6 | |

In table 4 they see:

| Wetland | Biol | Hydro | GrWat | Flood | ShLi* | WQual | Econ | Recr* | Aest* | Educ* |
|---|---|---|---|---|---|---|---|---|---|---|
| SA101 | H | M | L | H | M | M | M | H | M | H |

They note high results in the biological, flood control, recreational and education models. Most of the others are medium in rank, but less critical.

Next the CC checks with the NH Fish and Game Department and determines that Sally Brook and the ensuing watershed are important brook trout fisheries for the coast. Three model results are important to support this fishery. The biological value (Biol: H) shows high biological productivity as well as wildlife habitat. The hydrologic support score (Hydro: M) shows that the wetland contributes somewhat to downstream base flow during the time of year when trout are most sensitive to heat stress. Any pollutants (heavy metals, nutrients, some salts) present in runoff will be significantly attenuated by the wetland (WQual: M), protecting the water quality of the fish habitat. The wetland also ranks in the upper third for recreational and educational values. These facts are important in weighing probable impacts, and should be presented as factual findings to the NHSWB and the COE as a routine part of the town's review process. Suggestions for appropriate orders of conditions might include: preserve vegetated setbacks from this brook and wetland, shading along the bank to prevent solar heating, and protection from erosion and sedimentation, both during construction and after project completion.

The site soils will determine how critical the erosion problem will become. If there are silts and clays present (especially from glacial lake or marine sediments) the soils will be easily erodable. Work on steeply sloped areas must be minimized, with the wetlands protected by silt curtains or at least hay bales, trenched, staked and maintained, until revegetation is well advanced.

Wildlife habitat can be somewhat protected from development by the preservation of densely vegetated strips, connecting preserved wild areas, for wildlife to use as travel corridors. More detailed ecological information about each wetland is described and summarized in tables in Appendix Section 4.0; a sample for our hypothetical wetland, SA101, is shown next (Table 5). This example provides a sample of the representative species lists included in this study. The second page can also be used for the soils information (left column, look up soils numbers in Rockingham County Soils Survey, SCS, 1986).

Table 5. Sample hypothetical ecological summary



Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y
Location: (Photo 5-10) Jct Bridal Path and Route 1, HA
SA101 Field Date: 04/01/86 Report Date: 06/23/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 1 | 0.50 | T | 3 |
| Pinus strobus | White pine | 2 | 0.18 | T | 3 |
| Quercus velutina | Black oak | 1 | 0.00 | T | 4 |
| Ulmus americana | American elm | 1 | 0.82 | T | 1 |
| Quercus bicolor | Swamp white oak | 1 | 1.00 | T | 4 |
| Ulmus americana | American elm | 2 | 0.82 | S | 1 |
| Rhamnus frangula | Europ. buckthorn | 4 | 0.50 | S | 0 |
| Lyonia ligustrina | Maleberry | 1 | 1.00 | S | 0 |
| Acer rubrum | Red maple | 12 | 0.50 | S | 3 |
| Ilex verticillata | Winterberry | 15 | 1.00 | S | 1 |
| Rosa palustris | Marsh rose | 6 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 4 | 0.82 | S | 1 |
| Alnus rugosa | Speckled alder | 35 | 1.00 | S | 1 |
| Cornus amomum | Silky dogwood | 5 | 0.82 | S | 3 |
| Spiraea tomentosa | Steeplebush | 2 | 0.50 | S | 0 |
| Salix sp. | Willow | 3 | 0.82 | S | 1 |
| Pinus strobus | White pine | 2 | 0.18 | S | 3 |
| Vaccinium corymbosum | Highbush blueberry | 1 | 0.82 | S | 2 |
| Spiraea latifolia | Meadowsweet | 8 | 0.50 | S | 0 |
| Vaccinium macrocarpon | Large cranberry | 1 | 1.00 | S | 2 |
| Carex sp. | Sedge | 5 | 1.00 | H | 3 |
| Calamagrostis canadensis | Bluejoint grass | 1 | 1.00 | H | 0 |
| Aster sp. | Asters | 2 | | H | 0 |
| Onoclea sensibilis | Sensitive fern | 4 | 1.00 | H | 0 |
| Typha latifolia | Cattail | 5 | 1.00 | H | 1 |
| Lythrum salicaria | Purple loosestrife | 1 | 1.00 | H | 0 |
| Scirpus cyperinus | Woolgrass | 2 | 1.00 | H | 3 |
| Juncus effusus | Soft rush | 6 | 1.00 | H | 0 |
| Poaceae | Grasses | 12 | | H | 1 |
| Iris versicolor | Blue flag | 1 | 1.00 | H | 0 |

WSI: 0.843 WFV: 0.311 BOG: 0.006 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.13 BUSHY: 0.48 COMPACT: 0.07
MARSH SBCL: ROBUST: 0.04 BROADL: 0.02 NARROW: 0.17 FLOATING: 0.00
SUBTYPES:CNPRUW
WATERSHED: Sally Brook TYPE: Shrub Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 65.1 | :******:****  : | 6 WQual | 56.8 | :******:**  : |
| 2 Hydro | 61.8 | :******:**  : | 7 Econ | 56.5 | :*****  :  : |
| 3 GrWat | 28.3 | :*  :  : | 8 Recr | 42.4 | :******:***  : |
| 4 Flood | 65.6 | :******:***  : | 9 Aest | 40.5 | :******:*  : |
| 5 ShoLi | 17.5 | :******:**  : | 10 Educ | 66.6 | :******:*****  : |

AVERAGE DECILE OF TEN MODELS: 6.60

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

```
WID: SA101  PLACE: (Photo 5-10) Jct Bridal Path and Route 1, HA
FL DATe   :  04/04/86       GS&ABUN 20:  VACMAC 1    Veg DENsity (HML) :   M
GS&ABUN 1 :  ACERUB 1       GS&ABUN 21:  CAREX  5    wetl JUXtapos(HML):   M
GS&ABUN 2 :  PINSTR 2       GS&ABUN 22:  CALCAN 1    w. level FLUCtu (Hi
GS&ABUN 3 :  QUEVEL 1       GS&ABUN 23:  ASTER  2       Lo Vernal pool):   L
GS&ABUN 4 :  ULMAME 1       GS&ABUN 24:  ONOSEN 4    Veg.Spec. Richness:   H
GS&ABUN 5 :  QUEBIC 1       GS&ABUN 25:  TYPLAT 5
GS&ABUN 6 :  uLMAME 2       GS&ABUN 26:  LYTSAL 1    ECOLOGICAL COMPUTATIONS:
GS&ABUN 7 :  RHAFRA 4       GS&ABUN 27:  SCICYP 2        WSI:    0.843
GS&ABUN 8 :  LYOLIG 1       GS&ABUN 28:  JUNEFF 6        WFV:    0.312
GS&ABUN 9 :  aCERUB12       GS&ABUN 29:  POa   12        Perc. Wild. Food:  M
GS&ABUN 10:  ILEVER15       GS&ABUN 30:  IRIVER 1        NO. of species:  30
GS&ABUN 11:  ROSPAL 6       INVestigator     : TLP       Prime :
GS&ABUN 12:  VIBREC 4       Dom Wetl Class (0-11):  6    Aesthetic:  0.089
GS&ABUN 13:  ALNRUG35       SPec ELem (ADEFHRSW ):       Tot ABUN:     146
GS&ABUN 14:  CORAMO 5       CLaSs Richn (1-5)    : 5     Conifer? N
GS&ABUN 15:  SPITOM 2       SubTYpe Richn (ABCDE): B     Trees :   0.041
GS&ABUN 16:  sALIX  3       VEGeta Intersp (HML) : M     Shrubs:   0.692
GS&ABUN 17:  pINSTR 2       Surr. HABitat  (123) : 1     Herbs :   0.267
GS&ABUN 18:  VACCOR 1       Cover DISpers.(ABCDE): D     Bog   :   0.007
GS&ABUN 19:  SPILAT 8       Percent Open W (LMHV): L     SBTY  :  CNPRUW
```

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

```
Wet ID              :SA101      OUTlet2 (APE)        :E
2 letter TOWN codes*:HA         P% Bord OW (NLMH)    :L
Topo CONfig (CSVH)  :S          FETch (LH or blank)  :
Wetl SIZe (LMH)     :M          DEPTH (SD or blank)  :
Dom SOil type (int) :  33       HYdr CoN (None, Stream, River
Other SOil          :            Lake or Combin.     :R
Dom Surround Soil   :  38       ACCeSs (Rd Wat Iso)  :R
Other Surr. Soil1   :  29       POP'n density (LMH)  :L
Other Surr. Soil2   : 397       loc SCARCity (LMH)   :L
wetl GRAdient (LH)  :H          CROP (N Hay Fam Com):N
Surr. SLOpe  (LH)   :H          LEGAL accs (puB priV
TOpo. POsit. (LMH)  :H           or Restricted)      :V
Dom Hydr Condit(1-6):5
RIPArian conn (YN)  :Y
INLet1 (Abs Perrenial
 or Ephemeral       :E      CALCULATED FROM OTHER DATA AND SOIL:
INL2 (APE)          :     SurGeol Under wl(ALOT):L   PERmeabil (LMH):L
INL3 (APE)          :     SurGeol Surround(ALOT):L   THIckness (LMH):L
INL4 (APE)          :     HPOSition (Perch,W,A) :P   GW Relat (DRC) :C
INL5 (APE)          :     TRAnsmissivity (LMH)  :L
OUTLet1 (APE)       :E
```

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

# 3.0 MORE DETAILED INFORMATION ON COASTAL WETLANDS

This section provides users with more details on definitions, processes and analyses of freshwater wetlands (Section 3.1), salt marshes (Section 3.2) and sand dunes (Section 3.3). The results of specific site investigations are found in the three later sections for freshwater wetlands (Section 4.0), salt marshes (Section 5.0) and sand dunes (Section 6.0).

## 3.1 FRESHWATER WETLANDS

### 3.1.1 Wetland Boundary Definitions

State and federal criteria define wetlands by four parameters, using vegetation as the primary indicator of wetland communities unless the area has been recently disturbed (vegetation, soils, hydrology and topography).

Wetlands are areas occupied by plants specially adapted to saturated soils; soil must be saturated during the growing season, especially the upper foot. Wetlands are deemed worthy of protection due to the benefits they provide, including: prevention of downstream flooding; provision of wildlife habitat, including critical habitat and protection for threatened or endangered species of plants and animals; groundwater recharge protection; attenuation of pollution from surface waters; and educational, scientific, historic and aesthetic values.

Plants are grouped into categories of hydrologic preference (wet or dry) for each geographic area of the USA. Plant species found more than 95% of their occurrences in wetlands are called Obligate Hydrophytes, and assigned a wetland frequency of 100%. Those occurring less than 5% of the time in wetlands are called "Upland" species and given a 0% wetland frequency. The US Fish & Wildlife service has described three intermediate (Facultative) classes between these two groups: those flexible species occurring seldom in wetlands (FACU,

wetland frequencies from 6% to 33%, category median frequency of 18%), those occurring equally between uplands and wetlands (FAC, frequencies ranging from 33 to 66%, median frequency of 50%) and those preferring wetlands (FACW, frequencies from 67% through 95%, median value 82%).

For purposes of confirming the plant community structure, NAI has prepared an ecological summary for each of the wetlands evaluated. This lists all the species identified during the visit, up to but not beyond thirty representative species. Each species is assigned a percent cover value, representing its abundance for the overall site. The hydrologic categories for all the species are then weighted by the total relative abundance of each to arrive at a single index of plant community wetness: the Wetland Site Index (WSI) listed directly below each plant list for reference. Because of the computation method, the values can only range between 0 and 1.00, representing perfect uplands and wetlands respectively. Values below 0.50 indicate upland communities; values between 0.5 and 1.0 are typical of all wetlands studied to date.

### 3.1.2 Wetland Ecology and Hydrology

For the purposes of discussion, three freshwater wetland communities are recognized in New Hampshire. Grading from driest to wettest: swamp, marsh and bog. Swamps are dominated by woody vegetation and are further subdivided into Shrub and Wooded swamps, based on the height of the dominant woody plants being less than or greater than 15 feet. Marshes are dominated by herbaceous (non-woody) plants, and are divided into shallow (typically with cattails, sedges, and grasses) or deep marshes (typically with water lilies, pondweeds, pickerelweed and arrowheads).

Bogs are a special plant community where the woody vegetation forms a floating root mat which rises and falls with the water level (Table 6). Bogs usually encroach from the edge to the center of a pond or lake. They may be rooted in no soil whatever. The plants are specialized to survive in a very wet environment with acid water and little or no nutrients (fixed nitrogen or available phosphorus). Most bogs are dominated chemically by Sphagnum moss which acidifies the water and forms a thick sponge among the roots of the woody plants. Bogs are valued more highly than other wetlands in New Hampshire because in addition to the other benefits they provide, they are high in aesthetic and educational values and yet are extremely sensitive to disturbances. Disruptions of the hydrology or the water quality are quickly fatal to bogs. Increased nutrients from lawn fertilizers, failing septic systems, or farmland runoff are also fatal but take several years to become apparent. At first, the increased nutrient levels increase the growth of the bog species, but there follows the development of and eventual dominance of marsh species such as loosestrife, sedges, grasses and cattails over the slower-growing bog plants. In either case the regeneration of a bog can take centuries.

Table 6. Indicator Plant Species for Bogs

| GENUS | SPECIES | COMMON NAME | TYPE |
|---|---|---|---|
| Sphagnum | sp. | Sphagnum moss | Herb |
| Picea | mariana | Black spruce | Tree |
| Picea | mariana | Black spruce | Shrub |
| Larix | laricina | Tamarack | Shrub |
| Larix | laricina | Tamarack | Tree |
| Chamaecyparis | thyoides | Atlantic white cedar | Shrub |
| Chamaecyparis | thyoides | Atlantic white cedar | Tree |
| Eriophorum | sp. | Cottongrass | Herb |
| Eriophorum | spissum | Cottongrass | Herb |
| Eriophorum | viridi-carinatum | Green-keeled cottongrass | Herb |
| Eriophorum | virginicum | Tawny cottongrass | Herb |
| Cypripedium | arietinum | Ram's head lady's-slipper | Herb |
| Cypripedium | parviflorum | Small yel. lady's-slipper | Herb |
| Platanthera | sp. | Orchid | Herb |
| Platanthera | clavellata | Sm. green wood orchid | Herb |
| Platanthera | flava | Tubercled orchid | Herb |
| Platanthera | hyperborea | Northern green orchid | Herb |
| Platanthera | dilatata | Bog candle | Herb |
| Platanthera | blephariglottis | White-fringed orchid | Herb |
| Platanthera | psychodes | Sm.purple fring.orchid | Herb |
| Platanthera | grandiflora | Lar.purple fring. orchid | Herb |
| Pogonia | ophioglossoides | Rose pogonia | Herb |
| Calopogon | tuberosus | Grass pink | Herb |
| Arethusa | bulbosa | Arethusa | Herb |
| Spiranthes | lucida | Shining ladies' tresses | Herb |
| Spiranthes | romanzoffiana | Hooded ladies' tresses | Herb |
| Listera | cordata | Heart-leaved twayblade | Herb |
| Listera | convallarioides | Broad-leaved twayblade | Herb |
| Malaxis | monophylla | White adder's mouth | Herb |
| Malaxis | unifolia | Green adder's mouth | Herb |
| Calypso | bulbosa | Calypso | Herb |
| Sarracenia | purpurea | Pitcher plant | Herb |
| Drosera | intermedia | Spatulate-leaf sundew | Herb |
| Drosera | rotundifolia | Round-leaf sundew | Herb |
| Drosera | filiformis | Dew-thread | Herb |
| Parnassia | glauca | Grass of parnassus | Herb |
| Ericaceae | | Heath family | All |
| Ledum | groenlandicum | Labrador tea | Shrub |
| Rhododendron | canadense | Rhodora | Shrub |
| Kalmia | polifolia | Bog laurel | Shrub |
| Andromeda | glaucophylla | Bog rosemary | Shrub |
| Chamaedaphne | calyculata | Leatherleaf | Shrub |
| Arctostaphylos | alpina | Alpine bearberry | Shrub |
| Vaccinium | vitis-idaea | Mountain cranberry | Shrub |
| Vaccinium | oxycoccos | Small cranberry | Shrub |
| Vaccinium | macrocarpon | Large cranberry | Shrub |
| Menyanthes | trifoliata | Common buckbean | Herb |
| Aster | nemoralis | Bog aster | Herb |

### 3.1.3 Freshwater Wetlands Results and Impacts

Of the 238 above-average wetlands evaluated in the study area, 153 were Wooded swamps (WSI range: 0.51 to 0.87); 41 were shrub swamps (WSI range: 0.61 to 0.91); 24 were shallow marshes (WSI range: 0.79 to 1.00), 9 were open water wetlands (WSI range 0.60 to 0.94); 4 were deep marshes (WSI range: 0.81 to 0.95); 4 were wet meadows (WSI range: 0.71 to 0.97); 2 were brookside wetlands (WSI 0.57 and 0.82) and only one was a bog (WN115, North Hampton, WSI = 0.83).

However, some of the swamps and marshes contained bogs within them. To alert users to the presence of bog indicator species in other wetlands, each ecological summary adds the relative abundances for any plant species in Table 6 and lists the total value immediately below the species list. The presence of any number but 0.000 following the word "BOG" indicates the presence of species on this list. In many cases, this simply represents Sphagnum moss in with the other wetland species, but in some cases it indicates a sensitive species which may be a relic from when the wetland was much wetter.

Towns with bogs, some of which may be too small to have been evaluated by this study, should move to protect them from hydrologic or pollutant impacts, in addition to adding them to a list of prime wetlands. Those occurring in sandy areas are particularly susceptible to irreversible pollution from septic systems. Any source of sediment, nutrients or pollutant or any disruption to the regional hydrology such as inadequate culverts, beaver dams, ditching, or additional runoff sources can quickly end a bog's long life. Bogs should also be checked at least once every two weeks during every summer for rare orchids which can only grow in these sterile, acid waters, and which make the bog more valuable as a state resource.

Impacts to other freshwater wetland communities are much more readily dealt with, since they can be reversed and are of a much shorter duration. Marshes readjust to ditching, cutting, and to minor siltation sources very quickly as long as the hydrology is restored to the same

regime (levels, flow rates, etc). Swamps, generally drier than other wetland communities, are the commonest wetland types in the state, and frequently suffer un-permitted impacts through logging operations, recreational uses (skiing, snowmobiling, skating) or siltation from nearby construction. Most wooded swamps in the study area can tolerate more impacts than other wetlands without the loss of public benefits, unless they possess some unusual wildlife or other fragile benefit. Exceptional to this generality are forested wetlands with significant stands of black spruce (*Picea mariana*) or Atlantic white cedar (*Chamaecyparis thyoides*). These are relic bog species and grow much more slowly than most trees. The latter species in particular has been decimated by all the sources of impact which injure bogs, as previously described, but also by overcutting because its rot-resistant wood has long been highly prized. Growing more slowly than hemlocks, pines and maples, the white cedar is frequently overtopped by these nutrient-loving species shortly after more fertile waters pass through a bog. It remains at a competitive disadvantage where it occurs today along the coast, near the northern limit of its range. Management to reinstate it is best accomplished by girdling the competing trees which threaten to shade it out.

### 3.1.4 Literature

Guide to the designation of prime wetlands in New Hampshire. NHACC, Strafford RPC, and Env. Law Clinic. June 1983, available from NH Assoc. of Conservation Commissions.

Identification, documentation and mapping of prime tidal wetlands in the town of Hampton, NH. F. D. Richardson, Durham, NH December 1982. Coastal Program funded.

Sipple, W. S. 1985. Wetland identification and delineation manual. Draft report. U.S. EPA.

IEP, Inc. 1985. Portsmouth wetland delineation and mapping project. June 1985. Coastal Program funded.

Breeding, C.H.J., F. D. Richardson, and S. A. L. Pilgrim 1974. Soil survey of New Hampshire tidal marshes. NH Agr. Expt. Station, Durham, NH, and USDA SCS.

New Hampshire Code of Administrative Rules, Chapter Wt 100, 200, 300, 400,500, eff. 10-83; and Wt 700 (Prime Wetlands) eff. 10-81.

USGS Topographic maps, 7½ minute quadrangles: Hampton, Portsmouth, Kittery, Exeter, Newburyport East.

Soils maps for each town: New Castle, Rye, Hampton, North Hampton, Hampton Falls, and Seabrook. Available from SCS in Exeter, NH

Aerial photos of the six towns flown March 31, 1986: 130 B/W photos, Flight #6105, J. W. Sewall Co.

## 3.2 SALT MARSHES

Salt marshes, including freshwater tidal wetlands, are protected by New Hampshire law up to 3-1/2 feet above local mean high tide. These areas are of prime importance to estuarine and oceanic food chains.

### 3.2.1 Salt Marsh Development and Ecology

New Hampshire's salt marshes fall under Johnson's (1925) description of "New England type" marshes. They are still responding to the natural forces and events from which they were created. Factors influencing the initial formation of the marshes include the change in sea level, the tidal range, indigenous marsh vegetation, and the processes of sedimentation. A brief description of tidal marsh development and ecology is presented here.

The development of New Hampshire's marshes began at the end of the last glaciation. The marginal retreat of the glacier was quite rapid, and the melting ice sheet caused a rapid rise in sea level. Six thousand five hundred years ago the sea level was within a few meters of its present level (Bloom, 1978; Nixon, 1982). A 1970 study on the Hampton-Seabrook marsh showed that the marsh peat was between 2,700 and 6,800 years old (Keene).

Tidal marsh formation starts when wave and/or tide energy is reduced to the point where water-borne sediments settle out and accumulate upon the substrate. The wave energy is further reduced with the formation of a sand bar which later develops into a dune system. The protected waters behind this sand barrier slowly fill in from the edges with accumulated sediments brought in from the tide and from the upland runoff. Large mud and sand flats form and continue to increase in height. Once the flats reach mid-tide elevation the first

"intertidal" marsh plants, *Spartina alterniflora* (salt marsh cordgrass), appear. Within 4 to 5 years, these grasses spread across the flats by rhizome and seeds, eventually developing major stands.

With the spreading of cordgrass, the accumulation of sediments continues. The grasses themselves contribute to this accumulation by reducing the wave and tide energy and by trapping water-borne sediments. Yearly die-back of vegetation contributes organic material to the predominantly mineral sediment. Amidst these processes, the intertidal marsh grows in height and area, filling in any open water still present behind the sand barrier. Where the marsh reaches an elevation equal to mean high tide (MHW), the *Spartina alterniflora* is replaced by 2/Spartina patens (salt marsh hay), an indicator of "high marsh". This succession from mudflat to high marsh continues until the embayment behind the barrier beach is gradually transformed into the present tidal marsh and drainage creek system.

Even after the open water behind the dunes is replaced with marsh peat, sediments accumulate as the sea level continues to rise. The increase in sea level causes tidal waters to flood upland areas which are then colonized by high marsh species (Mudge, 1862; Redfield, 1972; and Nixon, 1982). Evidence of this upland submergence and subsequent marsh development may be seen in the tidal creek of Fairhill Swamp in Rye where there are submerged stumps and roots of Atlantic white cedar. Similar remnants of a cedar forest can be seen at low tide in the cove just south of Odiorne Point.

The border zone is formed where the high marsh and the upland or freshwater wetland converge. Such an area, intermediate between two communities, is called an ecotone. This zone is important because of its rich biological diversity; it contains some plant and animal species that inhabit both communities, as well as other species that are specifically indigenous to this narrow strip. Beyond its biological richness, the border zone is an integral part of the whole tidal marsh

system, and must be maintained to provide a "buffer zone" for the marsh proper (Richardson, 1982).

Tidal freshwater marshes are located upstream from tidal saline marshes (salt marsh) and down stream from non-tidal freshwater wetlands. They are characterized by (1) near-freshwater conditions with an average annual salinity of .5 ppt or less, except during periods of extended drought, (2) plant and animal communities dominated by freshwater species, and (3) a daily lunar tidal fluctuation.

The absence of dominant estuarine marsh grasses (*Spartina* spp.) differentiate tidal freshwater marshes from higher salinity marshes. Common species found in such systems are *Spartina pectinata* (freshwater cord grass), *Panicum virgatum* (switch grass), *Phragmites communis* (common reed), *Scirpus* spp., *Typha* spp. (cattail) *Polygonum* spp. *Lythrum salicaria* (purple loosestrife) *Iris versicolor* (blue flag) and *Impatiens capensis* (jewelweed).

Sediments in tidal freshwater marshes are high in clay, silt and organic matter, but generally low in peat and in total plant root biomass. This results in a higher susceptibility to erosion, low profile stream banks, and tidal creeks with low sinuosity compared to the estuarine marshes, which generally have high percentages of sand, peat and plant root materials. Tidal freshwater sediments are derived primarily from upstream sources.

The vegetative changes from the subtidal zone to the upland border have been attributed to change in marsh elevation. The difference in elevation causes a change in the frequency and duration of tidal inundation. This affects ecological parameters such as saturation and drainage of marsh soils, nutrient and oxygen availability, and variation in temperature and salinity values and ranges. These parameters will determine the vegetative types for specific locations on the marsh, particularly the high marsh.

The many irregularities of the marsh surface can also affect species distribution. Levees are formed along the marsh drainage creeks through the deposition and accumulation of water-borne sediments as the water overflows the creek's banks and floods the marsh. The major depressions on the marsh are classified either as "pannes" or "pond holes". A "panne" is a shallow pool of standing water (10-30 cm in depth) interrupting the vegetated surface of the marshland. A "pondhole" is a deeper panne (30-100 cm) that holds water throughout the year and has nearly vertical sides (Redfield, 1972; Richardson, 1982). "Rotten spots" are large, irregularly shaped pannes surrounded by a series of smaller, shallower pannes. Many of these smaller pannes may be covered with *Salicornia* and/or the short form of *Spartina alterniflora*. Rotten spots seem to develop in areas that have inadequate drainage. The trapped, standing water kills the high marsh vegetation and apparently leads to the decomposition and subsidence of the underlying peat.

Even though panne areas or rotten spots may indicate a degrading high marsh system these area also provide excellent feeding grounds for waterfowl and shorebirds. *Ruppia maritima*, a submersed aquatic, grows in the deeper pannes and pondholes. The leaves, shoots and seeds of this species provide food for foraging waterfowl. *Ruppia* also serves as an attachment substrate and shelter for invertebrates and small fish which are fed upon by such species as egret, heron and tern (Richardson, 1980).

Table 7 lists plants considered to be typical to New Hampshire marshes. This list is taken from work by Richardson (1982) who felt that these species should be used as "indicators" of tidal marsh when mapping wetlands and delineating the border zone. Some of these species are found only in specific areas of the marsh; their occurrence is often related to marsh elevation. Others on this list

TABLE 7. Indicator Plant Species For Salt Marshes

| SCIENTIFIC NAME | COMMON NAME | HABITAT |
|---|---|---|
| *Aster subulatus* Michx. | Annual Salt Marsh Aster | Upland border of high marsh. |
| *Aster tenuifolius* L. | Perennial Salt Marsh Aster | Upland border of high marsh, uncommon. |
| *Atriplex glabriuscula* Edmond. | Orach | Common along creeks and drainage ditches. |
| *Atriplex patula* L. (vars.) | Orach | Very common on high marsh, along creeks, ditches & in strand line. |
| *Distichlis spicata* (L.) Greene | Spike-grass | Abundant on high marsh, often in association with *Spartina patens*. |
| *Eleocharis halophila* Fern. & Brack. | Salt Marsh Spike-Rush | Occasional in wet depressions on high marsh. |
| *Gerardia maritima* Raf. | Salt Marsh Gerardia | Edges of pannes and scattered on *Spartina patens* marsh. |
| *Glaux maritima* L. var. *obtusifolia* | Sea Milkwort | Border of high marsh growing with *Spartina patens*. |
| *Juncus gerardi* Loisel. | Black Grass | Very abundant along the upland border of high marsh either associated with *Spartina patens* or forming pure stands. |
| *Limonium nashii* Small | Sea Lavender or Marsh Rosemary | Scattered on high marsh, forb pannes and along edges of high marsh. |
| *Myrica pensylvanica* Loisel. | Bayberry | Border zone. |

TABLE 7. (continued)

| SCIENTIFIC NAME | COMMON NAME | HABITAT |
|---|---|---|
| *Panicum virgatum* L. var. *spissum* Linder | Switchgrass | Common in tufts along border zone. |
| *Phragmites communis* | Tall Reed | Forming dense stands along marsh border and in disturbed or filled areas. |
| *Plantago oliganthos* R. & S. | Seaside Plantain | Scattered on high marsh and in forb pannes. |
| *Potentilla anserina* L. | Silverweed | Common especially along edges of high marsh. |
| *Puccinellia maritima* (Huds.) Parl. | Alkali Grass | Scattered in clumps along ditches and on high marsh. |
| *Rosa rugosa* Thunb. | Salt Spray Rose | Clumps or thickets in the border zone. |
| *Rosa virginiana* Mill. | Virginia Rose | Border zone and upland. |
| *Ruppia maritima* L. (vars.) | Ditch Grass | Submersed in pond holes and ditches in the high marsh. |
| *Sanguisorba canadensis* L. | Canadian Burnet | Occasional in the border zone. |
| *Salicornia bigelovii* Torr. | Dwarf Glasswort | Occasional in highly saline pannes on high marsh. |
| *Salicornia europaea* L. | Glasswort or Samphire | Common in pannes and scattered on high marsh especially where soil salinity is high. |
| *Salicornia virginica* L. | Perennial or Woody Glasswort | Forms mats in some areas of high marsh. |
| *Scirpus americanus* Pers. | Three-square sedge | Wet borders of high marsh. |

TABLE 7. (continued)

| SCIENTIFIC NAME | COMMON NAME | HABITAT |
|---|---|---|
| *Scirpus maritimus* L. var. *Fernaldii* (Bickn.) Beetle | Salt Marsh Bulrush | Extensive stands along wet borders of high marsh. |
| *Scirpus paludosus* Nels. | Bayonet-Grass | Sedge of very wet pannes and rotten spots on high marsh. |
| *Smilax rotundifolia* L. | Greenbriar | Thorny, trailing vine of the border zone and on 'marsh islands'. |
| *Solidago sempervirens* L. | Seaside Goldenrod | Common in the border zone. |
| *Spartina alterniflora* Loisel. | Salt Water Cord Grass | Dominant species of intertidal marsh. Dwarfed form in low lying poorly drained areas. |
| *Spartina patens* (Ait.) Muhl. | Salt Meadow Grass | Dominant species of high marsh. |
| *Spartina pectinata* Link | Fresh Water Cordgrass | Border zones and near fresh water. |
| *Spergularia canadensis* (Pers.) Don | Sand Spurrey | Sandy strands along edge of marsh. |
| *Spergularia marina* (L.) Griseb. | Spurrey | Common on edges of high marsh and rim of creek and ditch banks. |
| *Suaeda* (Spp.) | Sea blite | Common along strand line, borders of high and intertidal marsh and around pannes. |
| *Triglochin maritima* L. | Seaside Arrow Grass | Scattered on high marsh and forb pannes. |
| *Typha angustifolia* L. | Narrow-Leaved Cattail | Extensive colonies in brackish areas along border of marsh. |

seem to have a wider distribution and can only help to delineate the major zones; intertidal, high marsh or border zone.

The complexity of the tidal marsh ecosystem does not lend itself to simple explanation. New Hampshire tidal marshes are an ecotone between marine and terrestrial systems, and as such are influenced by both. The species present on the marsh are biologically unique. They have adapted to the rigors of life in an environment that changes daily as well as seasonally. The tidal marshes are still developing and still changing. However, the rate and the kind of change is dependent not only on natural processes, but also on human activities which directly affect them.

### 3.2.2 Salt Marsh Hydrology and Degradation

Many of the coastal marshes in New Hampshire have experienced degradation and loss due to the altering of their hydrology, which can often be attributed directly to human activities. In 1974 there were reported to be 7,500 acres of tidal marsh in New Hampshire (Breeding, *et al.*). This acreage had dwindled to 6,600 acres by 1982 (Short, 1985). With the rapid development of New Hampshire's coastal communities over the last four years, tidal wetlands have undoubtedly continued to shrink further in size.

The two hydrologic conditions that most severely affect saltmarsh viability are restriction of tidal flow, and retention of water on the high marsh surface.

It is the flooding and draining of saline waters that create the conditions essential to the characteristic high marsh flora and fauna. Restrictions along the course of the tidal creeks can inhibit ocean water from reaching the upper regions of the high marsh during a tidal cycle. With a restricted tidal flow, soil salinity will

eventually be reduced and the water table lowered, resulting in subsidence of peat from shrinkage and decomposition. This, in turn, increases areas of pannes and/or rotten spots and permits encroachment of freshwater or border zone species.

The most aggressive of these border zone plants is purple loosestrife (*Lythrum salicaria*). *Lythrum* is an introduced species from Europe that has moved into freshwater and terrestrial habitats throughout New England. It does not produce the detrital material so essential to the food web of a healthy tidal system, nor does it attract birds or wildlife, due to its low food value. Loosestrife tends to constitute a barrier to wildlife rather than a protective habitat. The invasion of purple loosestrife, and to a lesser extent *Typha* (cattail) and *Phragmites* (common reed), indicates a degrading salt marsh system.

*Phragmites* has been described by Roman *et al.* (1984) as an indicator of a marsh system degraded due to tidal restriction. *Phragmites* is most often found along the border of the tidal marsh, particularly in areas that have been disturbed by manmade or natural causes (Niering and Warren, 1980; Nixon and Oviatt, 1973; Redfield, 1972). *Typha* is also a border zone species that can withstand limited exposure to brackish water (Richardson, 1983; Redfield, 1972). *Typha*, and *Phragmites* may indicate sources of freshwater coming into the marsh (Nixon, 1982; Nixon and Oviatt, 1973).

Prolonged retention of water on the high marsh surface will destroy the high marsh vegetation creating dead pannes and rotten spots. At these sites, the marsh peat begins to rot, compact and subside, creating low areas on the marsh. The low areas act to trap additional waters. As trapped tidal water begins to evaporate, salt concentration increases. These shallow pannes, with high saline conditions, will kill off most high marsh vegetation and eventually will eliminate much of the fauna brought in with the tidal waters. However, these shallow pannes are not totally dead. They support thriving colonies of bluegreen algae

and many insects. The deeper pannes, which do not progress toward hyper-saline conditions, will often contain crustaceans and small fish brought in by the higher spring tides. Wildlife and shore birds are attracted to this trapped food source and to the submergent plants, such as *Ruppia maritima*, often found in these deeper pannes (Richardson, 1980).

Panne formation indicates an unstable ecosystem. As the pannes increase in size and number, the marsh's health degrades to the point where it becomes inhospitable to birds and animals. Ironically, an area of tidal marsh rich in birds and fish may indicate a system in the process of decline toward a stable, but non-ecologically productive condition (Short, 1985).

Mosquito ditches, excavated earlier in this century, have exacerbated the problems associated with trapped waters. The levees, which were formed as the peat was removed and piled up along the margins of the ditches, have created enclosed areas that are flooded on the higher spring tides and then prevented from draining.

When residents complain about the health of a salt marsh, mosquitos and odor are among their greatest concerns. Both of these are natural phenomena of a tidal marsh system, but both may be aggravated by a restricted tidal ebb and flow and/or lack of proper drainage of the high marsh. A marsh with restricted drainage, many pannes and rotten spots, and large mono-culture stands of border zone species is likely to be afflicted with mosquito and odor problems.

The solution to problems associated with tidal restriction and lack of drainage is an increase in the movement of both fresh and salt water across the marsh surface. However, each impacted tidal system has its own set of conditions contributing to inhibited tidal ebb and flow, so solutions for mitigating these impacts must be site-specific. See Section 5.3 for a discussion of problems in selected New Hampshire salt marshes.

### 3.2.3 Salt Marsh Soils

Soils in tidal wetlands are organic peat deposits composed of plant remains in various stages of decomposition, and sand, silt and clay mineral particles. The intertidal marsh soils contain a smaller percentage of organic matter than do the high marsh soils, due to the extent and duration of tidal flooding and the scouring action of ice flows which carry away the aerial plant parts. The high marsh peat, in addition to greater organic matter content, contains finer mineral fractions (silts and clays) which are held in suspension longer as the flood ties cover the marsh. The presence of sulfidic materials is an important property of tidal wetland soils. These materials accumulate in both organic and mineral soil materials under permanently saturated conditions. When a clod of tidal marsh soil is dug up, the characteristic "rotten egg" smell of hydrogen sulfide ($H_2S$) is often quite noticeable. If these soils are drained or excavated and exposed to the air, the sulfides oxidize and form sulfuric acid and the soil will no longer support plant growth.

The soils found in New Hampshire saltmarshes, along with their Soil Conservation Service (SCS) identification codes, are briefly described below.

397 TYPIC SULFIHEMISTS, organic materials thicker than 50 inches.

This soil occupies the high marsh of the main central part of the coastal marshes, the high marsh bordering the streams feeding into the coastal marshes, and the high marsh bordering the smaller streams flowing into Great and Little Bays. In its natural state, this soil is suited for the growth of halophytes such as *Spartina patens* and *Juncus gerardi*. Salt hay is the only suitable agricultural crop. Flooding and salinity preclude use of this soil for tree growth. Restricted internal drainage, flooding, and low bearing strength present

severe limitations to its use for community development. It is well suited to wetland wildlife habitat development.

497 TERRIC SULFIHEMISTS over sand, organic materials 16 to 50 inches thick, overlying sandy materials.

This soil generally lies at the edges of the high coastal marshes, both the landward margin underlain by sandy-textured tills and the seaward margin underlain by the sand and gravels of the barrier beaches. It also lies in the banks of the large tidal rivers of the coastal marsh. Most of the intertidal marshes are underlain by this soil.

The natural vegetation of the intertidal portion of this soil is uniformly *Spartina alterniflora*. The high marsh vegetation comprises a greater variety of salt-tolerant herbaceous plants, the dominant species being *Spartina patens, Distichlis spicata* and *Juncus gerardi*. Only the high marsh areas afford any potential for farming and that is limited to production of salt hay. This soil does not support tree growth. It has severe limitations to use for community and recreational development. It is best suited to wetland wildlife habitat development.

597 TERRIC SULFIHEMISTS over silt, organic materials 16 yo 50 inches thick overlying silty materials.

This soil occurs at the headwaters of small tidal streams and in small coves on the landward side of the coastal marshes. It also occupies high marsh areas along the upper reaches of streams feeding into the Great Bay complex, shallow coves and narrow margins of the bay, and the intertidal marshes contiguous to deep high marsh soils of the bay.

The dominant natural vegetation is *Spartina alterniflora* on the intertidal marsh, and *Spartina patens, Distichlis spicata* and *Juncus gerardi*, on the high marsh. The salinity and periodic flooding preclude tree growth and the growth of herbaceous plants other than those capable of standing salt concentrations in excess of 10 ppt. The properties of this soil make it unfavorable for community and recreational development uses. It is not suitable for farming. It is well adapted for use as wetland wildlife habitat development.

697 LITHIC SULFIHEMISTS, organic materials 16 to 50 inches thick overlying bedrock

This soil occupies areas characterized by numerous rock outcroppings. It occurs in New Castle, in the eastern part of the town of Rye and in one small area in the town of Seabrook.

In its natural condition, the soil is covered with herbaceous, salt-tolerant plants typical of the high marsh. The dominant species are *Spartina patens* and *Juncus gerardi*. Where installed, open drainage ditches have not materially improved the soil's potential for agricultural production. Salinity and flooding preclude the growth of forest trees. All areas of this soil are in natural vegetation. Its best use is for wetland wildlife habitat development.

797 TYPIC SULFAQUENTS, organic materials less than 16 inches thick overlying sandy materials.

This soil of the high marsh lies at the extreme seaward margin of the coastal marshes on the gently shelving sands of the barrier beach. It is also in small areas on the western side of Great Bay and several streams flowing into it.

The natural vegetation includes salt-tolerant herbaceous plants, mainly *Spartina patens*, *Juncus gerardi* and *Salicornia virginica*. Periodic flooding and high salinity inhibit the growth of trees. Salinity and tidal flooding limit any farming operations except the harvesting of salt hay. If flooding is controlled, the thin surface organic horizons and the underlying sands do not present the problems to filling, presented by other salt marsh soils. In fact, perhaps one-third of the original extent of this soil has been filled and developed. In its natural condition, however, its best use is for wetland wildlife habitat development.

997 SULFIHEMISTS, surface soils with low salt, organic materials thicker than 50 inches, or 16 to 50 inches thick overlying sandy or silty materials.

This soil commonly occurs in small areas at the headwaters of streams feeding into the marshes and along the banks of the larger tidal river flowing into the Great Bay complex. *Spartina alterniflora* is the dominant vegetation of the intertidal portions. On the high marsh portion, in addition to *Spartina patens*, are many plant species unable to withstand the higher salt concentrations of other tidal marsh soils. Typical plants are *Spartina pectinata* (freshwater cordgrass), and *Typha* spp., the cattails. The soil has little or no value for farming and will not support forest tree growth. It is well suited to wetland wildlife habitat development.

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## 3.3 SAND DUNE COMMUNITIES

The public benefits from dune areas fall into two categories: they provide buffer zones which protect public and private interests from blowing sand, erosion and flooding associated with coastal storms, and they provide critical habitat for a plant community as unique as that of the salt marshes. Twelve dune areas were evaluated as part of this project, marked with codes beginning with "DU" on the wetlands maps.

### 3.1.1 Dune Ecology and Development

Dunes are common on the Atlantic coastal plain from Cape Cod southward, but very few exist north of Plum Island, MA. In New Hampshire, sand dune plants are at the northern limit of their ranges (Table 8). The most common indicator species is beach (or dune) grass (*Ammophila breviligulata*), able to grow several inches a day and tolerate the extreme dune conditions.

Dunes are formed from fine sand carried along the coast by waves and long shore currents. As the wave patterns change and the daily tide rises and falls, a ridge of sand is deposited just above the waters' highest reach. This ridge dries out at low tide and and is subject to wind erosion. Much of the sand is blown back into the ocean but some moves inland and is dropped by the wind in quieter areas. Onshore breezes erode the tidal ridge, carry the fine sea sand inland across a level expanse of beach and deposit it at the first major wind break, usually at the bases of pioneer dune plants such as beach grass, sea rocket (*Cakile edentula*), or beach pea (*Lathyrus japonica*). These plants can tolerate the salt in the sea sand, and by stopping the blowing sand they form the first ridge of dunes closest to the beach, called the foredunes. Each tidal cycle brings more sand along the coast to the beach top and each onshore breeze adds sand to the bases of the foredune plants, gradually building the dunes to a height which the waves alone do not reach.

Table 8. Indicator Plant Species for Sand Dunes

| GENUS | SPECIES | COMMON NAME | TYPE |
|---|---|---|---|
| Pinus | rigida | Pitch pine | Tree |
| Ammophila | breviligulata | Dune grass | Herb |
| Aristida | tuberculosa | Seabeach needle grass | Herb |
| Cenchrus | longispinus | Northern sandbur | Herb |
| Cenchrus | incertus | Gulf coast sandbur | Herb |
| Myrica | pensylvanica | Bayberry | Shrub |
| Myrica | cerifera | Waxmyrtle | Shrub |
| Quercus | prinoides | Dwarf chinkapin oak | Shrub |
| Quercus | ilicifolia | Bear (scrub) oak | Shrub |
| Atriplex | patula | Halberd-leaved orach | Herb |
| Suaeda | maritima | Seaside blight | Herb |
| Suaeda | richii | Sea-blite | Herb |
| Suaeda | linearis | Sea-blite | Herb |
| Salsola | kali | Common saltwort | Herb |
| Spergularia | marina | Sand-spurrey | Herb |
| Arenaria | lateriflora | Grove sandwort | Herb |
| Arenaria | peploides | Seabeach sandwort | Herb |
| Cakile | edentula | Searocket | Herb |
| Prunus | maritima | Beach plum | Shrub |
| Prunus | pumila | Sand cherry | Shrub |
| Prunus | susquehanae | Sand cherry | Shrub |
| Cytisus | scoparius | Scotch broom | Shrub |
| Empetrum | nigrum | Black crowberry | Shrub |
| Corema | conradii | Broom crowberry | Shrub |
| Hudsonia | ericoides | Golden heather | Shrub |
| Hudsonia | tomentosa | Poverty-grass | Shrub |
| Arctostaphylos | uva-ursi | Bearberry | Shrub |
| Limonium | carolinianum | Sea lavender | Herb |
| Solidago | sempervirens | Seaside goldenrod | Herb |
| Baccharis | halimifolia | Groundsel-tree | Shrub |
| Iva | frutescens | Marsh elder | Both |
| Artemisia | caudata | Wormwood | Herb |
| Artemisia | stelleriana | Dusty miller | Herb |

Successive dune ridges are built in this manner and maintained by the dune plants until eroded by an extreme coastal storm where erosion by large waves removes the entire beach and foredune areas. Back dunes (old foredunes now protected by new rows of foredunes) are protected from salt by their distance from the ocean. A new plant community develops, where less salt-tolerant plants such as beach plum (*Prunus maritima*) and golden heather (*Hudsonia ericoides*) invade the beach grass.

The water table in sandy areas is a critical factor in determining what plant species take hold of these back dunes. Precipitation and runoff percolate down through the sand and come to rest on the denser layer of salt water. Some mixing occurs at the boundary, but less than one might assume. With additional rain, the boundary is depressed below sea level and the fresh water forms a floating layer, thin near the salt water edge and thick in the middle of the dunes, called a lens (for its shape). Plants requiring fresh water can tap this lens, provided there is sufficient recharge water to prevent the salt water from entering their root systems during the driest part of each summer. When one considers the effects of the daily rise and fall of the tides, with the fresh water rising and falling as it floats on top of the salt, one can imagine how complex the interactions become.

### 3.3.2 Dune Uses and Degradation

Dune stability depends most directly on sand mobility, which in turn depends on plants and other natural wind breaks. Unfortunately, the plants most able to colonize dunes are also very fragile due to their delicate underground roots systems, easily damaged by foot or vehicular traffic. Some plants, like the golden heather, are destroyed for decades by the passage of a single vehicle.

Once sandy areas are disturbed by traffic, progressive degeneration ensues, with blowing sand being removed by any high wind, exposing the roots of the remaining plants, causing them to fail, and so forth. Sand is removed rapidly from flat open areas, being deposited around the nearest downwind wind breaks. Nearby standing vegetation is drenched with this sand, forming ridges around the flat depleted area. The result is a bowl-shaped area called a "blow-out". Unless checked by the addition of windbreaks in the center of the bowl, the sand will be removed to a great depth, often reaching the water table, where the wind encounters less erodible sand and the erosion "bottoms out".

The keys to managing sandy areas are listed below; more information is available in the Management Plan for Seabrook Dunes (NAI, 1985, Office of State Planning). The following summary may be useful:

1. Avoid foot and vehicular traffic to the greatest extent possible. Place barricades and signs. Restrict all human use.

2. Place windbreaks (snow fences, brush staked in place) in unvegetated areas to stop the loss of sand.

3. Establish new vegetation; beach grass can be purchased and easily planted. Fertilize it well initially. Follow up with woody species within the next year. Hand-planting of sprigs (culms) should begin early in May in areas protected from all traffic and from wind. This species has been successfully used to stabilize moving sand since approximately 1895, when the Town of Provincetown, Massachusetts, used it to remedy a major sand dune movement. Once rooted it grows rapidly and reduces the sand movement to a moderate level wherever it flourishes. It is routinely used at Parker River Refuge and Salisbury Beach Reserve to replace vegetation following vehicle damage, and is planted one culm every 1½ feet, or about one culm per 0.45 square feet. It is available from:

Mr. Edwin Springer, Springer Environmental Services, Inc.
245 Keene Road, Acushnet, MA 02743, (617) 763-2152

For additional information on sand management or planting contact:

Mr. Peter Carlson, Sr. Forest & Parks Supervisor, Salisbury Beach State Reservation, P. O. Box 303, Salisbury, MA 01950, (617) 462-4481

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# 4.0 APPENDIX: FRESHWATER WETLANDS, DETAILED RESULTS

## 4.1 HOW TO USE THE RESULTS

Two pages present the evaluation results for each wetland. The left page consists of copies of the two data sheets ("EVAL" and "MAPR") output by the computer in the exact forms from which the results were calculated. The right page contains the most important summaries, as described below. It is divided into the top: ECOLOGICAL SUMMARY, and the bottom: RESULTS OF MODEL COMPUTATIONS.

### Explanation of ECOLOGICAL SUMMARY

PLANT SPECIES LIST:

Abundance - a relative measure of areal dominance estimated visually in the field for each species; (summed to the variable TABUN on the datasheet EVAL)

Wetl Freq - the frequency with which the plant species occurs in wetlands; based on National Wetlands Inventory plant list; blank indicates no data, usually because the plant species is not adequately identified.

Type - Plant type: T=tree, S=shrub; H=herb; B=both S and H; A=all types
Note: trees may be T if mature or S if less than 5 meters (15 ft) high.

Food Value - summary of wildlife food value, range: low to hi 0-4

COMMUNITY SUMMARY PARAMETERS:

WSI - Wetland Site Index, an overall summation of Wetl Freq for all the species listed, weighted by abundance.

WFV - Wildlife Food Value, a summation of food values for the species listed, weighted by abundance, normalized to range: 0 to 1.

BOG - Fraction of total abundance contributed by bog indicator species.

SALT - Fraction of total abundance contributed by salt marsh species.

DUNE - Fraction of total abundance contributed by sand dune species.

SUBCLASS REPRESENTATIONS:

SHRUB - Fraction of total abundance contributed by shrubs described as Aquatic, Sapling, Bushy and Compact
MARSH - Fraction of total abundance contributed by herbs described as Robust, Broad-leafed, Narrow-leafed, and Floating-leafed

TYPE:
The wetland type is set by the field observer's choice of Dominant Wetland Class (DWC on the EVAL datasheet, although more than one class may be present in each wetland) as follows:

0 Brookside
1 Open water
2 Deep fresh marsh
3 Shallow fresh marsh
4 Annual floodplain
5 Wet meadow
6 Shrub swamp
7 Wooded swamp
8 Bog
9 Salt marsh
10 Dune

SUBTYPES:
All plant species found in significant amounts (greater than 2% total abundance) are taken to indicate the presence of marsh and shrub swamp subtypes. Their presence causes the appropriate letter to appear in this space. Some stand for community indicator species (B,D and S), the others stand for the subtypes listed below.

| | | | | |
|---|---|---|---|---|
| A=Aquatic Sh. | D=Dune | N=Narrow-leaf H. | S=Saltmarsh | W=Wide-leaf |
| B=Bog | F=Float-leaf H. | P=saPling Sh. | U=bUshy Sh. | (broad) |
| C=Compact Sh. | M=Moss | R=Robust H. | V=Vine | |

Explanation of RESULTS OF MODEL COMPUTATIONS

Each model has been run on 238 wetlands in New Hampshire. The results were sorted by score in order of rank, from the lowest to the highest. The lowest ten percent of the wetland scores are placed in the first decile, the next ten percent higher are placed in the second decile, and so on until all ten deciles are specified. This results table shows which decile each wetland falls in, ranked against the other wetlands in this study. The number of stars indicates the number of deciles.

The table is organized to show the model number, then the model abbreviation, then the raw score, then the ranking decile. A colon is placed after the first five deciles to show the placement of the median value (the lowest five deciles or 50% of the wetlands).

Below the table is the average decile for all ten models, as well as an indication of whether the wetland fit the two criteria for prime wetland candidate (See Section 2.5).

## 4.2 RESULTS TABLES BY TOWN

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: HA002 PLACE: (Photo 3-6) S of Depot Ave, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/16/86 | GS&ABUN 20: | VIBREC10 | Veg DENsity (HML) : | L |
| GS&ABUN 1 : | ACERUB15 | GS&ABUN 21: | CORAMO 1 | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : | POPTRE 8 | GS&ABUN 22: | sALIX 3 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | BETPOP 2 | GS&ABUN 23: | pOPTRE 5 | Lo Vernal pool): | L |
| GS&ABUN 4 : | PINSTR 4 | GS&ABUN 24: | SPILAT 1 | Veg.Spec. Richness: | L |
| GS&ABUN 5 : | ULMAME 1 | GS&ABUN 25: | MYRPEN 1 | | |
| GS&ABUN 6 : | PRUSER 1 | GS&ABUN 26: | RIBES 1 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | CAROVA 1 | GS&ABUN 27: | ROSPAL 2 | WSI: 0.724 | |
| GS&ABUN 8 : | BETPAP 1 | GS&ABUN 28: | RHURAD30 | WFV: 0.362 | |
| GS&ABUN 9 : | RHUTYP 1 | GS&ABUN 29: | ONOSEN18 | Perc. Wild. Food: | M |
| GS&ABUN 10: | aCERUB 3 | GS&ABUN 30: | SOLIDA 2 | NO. of species: | 30 |
| GS&ABUN 11: | ALNRUG35 | INVestigator | : TLP | Prime : | |
| GS&ABUN 12: | pINSTR 3 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.051 |
| GS&ABUN 13: | ILEVER16 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 177 |
| GS&ABUN 14: | RHAFRA 6 | CLaSs Richn (1-5) | : 2 | Conifer? | N |
| GS&ABUN 15: | jUNVIR 1 | SubTYpe Richn (ABCDE): | D | Trees : | 0.192 |
| GS&ABUN 16: | uLMAME 1 | VEGeta Intersp (HML) : | L | Shrubs: | 0.695 |
| GS&ABUN 17: | VITIS 1 | Surr. HABitat (123) : | 2 | Herbs : | 0.113 |
| GS&ABUN 18: | ROSMUL 2 | Cover DISpers.(ABCDE): | E | Bog : | 0.000 |
| GS&ABUN 19: | bETPOP 1 | Percent Open W (LMHV): | L | SBTY : | PUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :HA002 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :L |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :L | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 26 | HYdr CoN (None, Stream, River | |
| Other SOil | : 538 | Lake or Combin. | :R |
| Dom Surround Soil | : 38 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 397 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :H | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :A | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :O |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :E | | |

| | | | | | |
|---|---|---|---|---|---|
| * NC | New Castle | RY | Rye | HA | Hampton |
| NH | North Hampton | HF | Hampton Falls | SE | Seabrook |

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 3-6) S of Depot Ave, HF
HA002 Field Date: 04/16/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 15 | 0.50 | T | 3 |
| Populus tremuloides | Quaking aspen | 8 | 0.00 | T | 2 |
| Betula populifolia | Grey birch | 2 | 0.50 | T | 2 |
| Pinus strobus | White pine | 4 | 0.18 | T | 3 |
| Ulmus americana | American elm | 1 | 0.82 | T | 1 |
| Prunus serotina | Black cherry | 1 | 0.18 | T | 3 |
| Carya ovata | Shagbark hickory | 1 | 0.18 | T | 2 |
| Betula papyrifera | Paper birch | 1 | 0.18 | T | 2 |
| Rhus typhina | Staghorn sumac | 1 | 0.00 | T | 2 |
| Acer rubrum | Red maple | 3 | 0.50 | S | 3 |
| Alnus rugosa | Speckled alder | 35 | 1.00 | S | 1 |
| Pinus strobus | White pine | 3 | 0.18 | S | 3 |
| Ilex verticillata | Winterberry | 16 | 1.00 | S | 1 |
| Rhamnus frangula | Europ. buckthorn | 6 | 0.50 | S | 0 |
| Juniperus virginiana | Red cedar | 1 | 0.18 | S | 1 |
| Ulmus americana | American elm | 1 | 0.82 | S | 1 |
| Vitis sp. | Grapevine | 1 | | S | 3 |
| Rosa multiflora | Multiflora rose | 2 | 0.00 | S | 1 |
| Betula populifolia | Grey birch | 1 | 0.50 | S | 2 |
| Viburnum recognitum | Northern arrowwood | 10 | 0.82 | S | 1 |
| Cornus amomum | Silky dogwood | 1 | 0.82 | S | 3 |
| Salix sp. | Willow | 3 | 0.82 | S | 1 |
| Populus tremuloides | Quaking aspen | 5 | 0.00 | S | 2 |
| Spiraea latifolia | Meadowsweet | 1 | 0.50 | S | 0 |
| Myrica pensylvanica | Bayberry | 1 | 0.50 | S | 2 |
| Ribes sp. | Gooseberry | 1 | | S | 1 |
| Rosa palustris | Marsh rose | 2 | 1.00 | S | 1 |
| Rhus radicans | Poison ivy | 30 | 0.82 | S | 2 |
| Onoclea sensibilis | Sensitive fern | 18 | 1.00 | H | 0 |
| Solidago sp. | Goldenrod | 2 | | H | 0 |

WSI: 0.723 WFV: 0.361 BOG: 0.000 SALT: 0.000 DUNE: 0.005
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.09 BUSHY: 0.39 COMPACT: 0.01
MARSH SBCL: ROBUST: 0.00 BROADL: 0.10 NARROW: 0.00 FLOATING: 0.00
SUBTYPES: PUVW
WATERSHED: Hampton Falls River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 31.7 | :** : : | 6 WQual | 38.2 | :* : : |
| 2 Hydro | 50.0 | :*** : : | 7 Econ | 56.5 | :**** : : |
| 3 GrWat | 47.1 | :******:* : | 8 Recr | 30.1 | :*** : : |
| 4 Flood | 58.8 | :*** : : | 9 Aest | 34.7 | :*** : : |
| 5 ShoLi | 12.4 | :******: : | 10 Educ | 25.3 | :* : : |

AVERAGE DECILE OF TEN MODELS: 3.10

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: HA003 PLACE: (Photo 3-6) Brimers Ln, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 06/04/86 | GS&ABUN 20: | ASTER 1 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB30 | GS&ABUN 21: | IMPCAP 2 | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : | QUERUB 1 | GS&ABUN 22: | ARANUD 2 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | BETLUT 1 | GS&ABUN 23: | OSMREG 3 | Lo Vernal pool): | L |
| GS&ABUN 4 : | VACCOR15 | GS&ABUN 24: | MAICAN 7 | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | CLEALN10 | GS&ABUN 25: | ONOSEN10 | | |
| GS&ABUN 6 : | ILEVER 8 | GS&ABUN 26: | | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | RHURAD 7 | GS&ABUN 27: | | WSI: 0.719 | |
| GS&ABUN 8 : | bETPOP 1 | GS&ABUN 28: | | WFV: 0.343 | |
| GS&ABUN 9 : | pRUSER 1 | GS&ABUN 29: | | Perc. Wild. Food: | M |
| GS&ABUN 10: | ALNRUG10 | GS&ABUN 30: | | NO. of species: | 25 |
| GS&ABUN 11: | ROSPAL 8 | INVestigator : | HCS | Prime : | |
| GS&ABUN 12: | VIBREC 7 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.075 |
| GS&ABUN 13: | VITIS 2 | SPec ELem (ADEFHRSW·): | | Tot ABUN: | 134 |
| GS&ABUN 14: | OSMCIN 3 | CLaSs Richn (1-5) : | 2 | Conifer? | N |
| GS&ABUN 15: | IRIVER 1 | SubTYpe Richn (ABCDE): | D | Trees : | 0.239 |
| GS&ABUN 16: | THAPOL 1 | VEGeta Intersp (HML) : | L | Shrubs: | 0.515 |
| GS&ABUN 17: | ATHFIL 1 | Surr. HABitat (123) : | 1 | Herbs : | 0.246 |
| GS&ABUN 18: | SOLIDA 1 | Cover DISpers.(ABCDE): | E | Bog : | 0.000 |
| GS&ABUN 19: | TRIBOR 1 | Percent Open W (LMHV): | L | SBTY : | RUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :HA003 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 538 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :S |
| Dom Surround Soil | : 397 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 38 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 40 | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :H | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :L THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :E | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 3-6) Brimers Ln, HF
HA003 Field Date: 06/04/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 30 | 0.50 | T | 3 |
| Quercus rubra | Northern red oak | 1 | 0.18 | T | 4 |
| Betula lutea | Yellow birch | 1 | 0.50 | T | 2 |
| Vaccinium corymbosum | Highbush blueberry | 15 | 0.82 | S | 2 |
| Clethra alnifolia | Sweet pepperbush | 10 | 0.82 | S | 0 |
| Ilex verticillata | Winterberry | 8 | 1.00 | S | 1 |
| Rhus radicans | Poison ivy | 7 | 0.82 | S | 2 |
| Betula populifolia | Grey birch | 1 | 0.50 | S | 2 |
| Prunus serotina | Black cherry | 1 | 0.18 | S | 3 |
| Alnus rugosa | Speckled alder | 10 | 1.00 | S | 1 |
| Rosa palustris | Marsh rose | 8 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 7 | 0.82 | S | 1 |
| Vitis sp. | Grapevine | 2 | | S | 3 |
| Osmunda cinnamomea | Cinnamon fern | 3 | 0.82 | H | 0 |
| Iris versicolor | Blue flag | 1 | 1.00 | H | 0 |
| Thalictrum polygamum | Tall meadow-rue | 1 | 0.00 | H | 0 |
| Athyrium filix-femina | Lady fern | 1 | 0.50 | H | 0 |
| Solidago sp. | Goldenrod | 1 | | H | 0 |
| Trientalis borealis | Starflower | 1 | 0.50 | H | 0 |
| Aster sp. | Asters | 1 | | H | 0 |
| Impatiens capensis | Jewelweed | 2 | 0.82 | H | 0 |
| Aralia nudicaulis | Wild sarsaparilla | 2 | 0.00 | H | 0 |
| Osmunda regalis | Royal fern | 3 | 1.00 | H | 0 |
| Maianthemum canadense | Canada mayflower | 7 | 0.00 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 10 | 1.00 | H | 0 |

WSI: 0.718 WFV: 0.343 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.01 BUSHY: 0.43 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.02 BROADL: 0.12 NARROW: 0.00 FLOATING: 0.00
SUBTYPES:RUVW
WATERSHED: Hampton Falls River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 32.5 | :** : : | 6 WQual | 46.0 | :** : : |
| 2 Hydro | 51.3 | :*** : : | 7 Econ | 73.9 | :******:** : |
| 3 GrWat | 30.1 | :** : : | 8 Recr | 32.8 | :***** : : |
| 4 Flood | 61.7 | :******: : | 9 Aest | 34.7 | :*** : : |
| 5 ShoLi | 0.00 | :** : : | 10 Educ | 33.3 | :*** : : |

AVERAGE DECILE OF TEN MODELS: 3.30

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: HA004 PLACE: (Photo 3-6) Dodge Ponds, between Rt1 & Rt84, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 05/28/86 | GS&ABUN 20: | CAREX 3 | Veg DENsity (HML) : | H |
| GS&ABUN 1 : | ACERUB50 | GS&ABUN 21: | JUNEFF 2 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | PINSTR 5 | GS&ABUN 22: | SOLIDA 2 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | ULMAME 2 | GS&ABUN 23: | IRIVER 3 | Lo Vernal pool): | L |
| GS&ABUN 4 : | sALIX 1 | GS&ABUN 24: | IMPCAP 7 | Veg.Spec. Richness: | H |
| GS&ABUN 5 : | VIBCAS10 | GS&ABUN 25: | PANTRI 2 | | |
| GS&ABUN 6 : | CORSTO 2 | GS&ABUN 26: | MAICAN 4 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | pINSTR 3 | GS&ABUN 27: | DRYNOV 1 | WSI: 0.716 | |
| GS&ABUN 8 : | ALNRUG 4 | GS&ABUN 28: | ARISAE 2 | WFV: 0.363 | |
| GS&ABUN 9 : | vIBLEN 7 | GS&ABUN 29: | ONOSEN30 | Perc. Wild. Food: | M |
| GS&ABUN 10: | pRUSER 3 | GS&ABUN 30: | | NO. of species: | 29 |
| GS&ABUN 11: | RHAFRA 2 | INVestigator : | HCS | Prime : | P |
| GS&ABUN 12: | ILEVER20 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.078 |
| GS&ABUN 13: | RHURAD30 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 232 |
| GS&ABUN 14: | VIBREC25 | CLaSs Richn (1-5) : | 4 | Conifer? | N |
| GS&ABUN 15: | RIBES 2 | SubTYpe Richn (ABCDE): | C | Trees : | 0.246 |
| GS&ABUN 16: | CORAMO 2 | VEGeta Intersp (HML) : | M | Shrubs: | 0.478 |
| GS&ABUN 17: | LYTSAL 3 | Surr. HABitat (123) : | 3 | Herbs : | 0.276 |
| GS&ABUN 18: | ASTER 3 | Cover DISpers.(ABCDE): | D | Bog : | 0.000 |
| GS&ABUN 19: | TYPLAT 2 | Percent Open W (LMHV): | M | SBTY : | NPRUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :HA004 | OUTlet2 (APE) | : |
| 2 letter TOWN codes*: | HF | P% Bord OW (NLMH) | :H |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | :L |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | :D |
| Dom SOil type (int) | : 538 | HYdr CoN (None, Stream, River | |
| Other SOil | : 395 | Lake or Combin. | :S |
| Dom Surround Soil | : 299 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 510 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :H |
| wetl GRAdient (LH) | :H | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | :E | SurGeol Surround(ALOT) | :O THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 3-6) Dodge Ponds, between Rt1 & Rt84, HF
HA004 Field Date: 05/28/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 50 | 0.50 | T | 3 |
| Pinus strobus | White pine | 5 | 0.18 | T | 3 |
| Ulmus americana | American elm | 2 | 0.82 | T | 1 |
| Salix sp. | Willow | 1 | 0.82 | S | 1 |
| Viburnum cassinoides | Northern wild raisin | 10 | 0.82 | S | 1 |
| Cornus stolonifera | Red-osier dogwood | 2 | 0.82 | S | 3 |
| Pinus strobus | White pine | 3 | 0.18 | S | 3 |
| Alnus rugosa | Speckled alder | 4 | 1.00 | S | 1 |
| Viburnum lentago | Nannyberry | 7 | 0.00 | S | 1 |
| Prunus serotina | Black cherry | 3 | 0.18 | S | 3 |
| Rhamnus frangula | Europ. buckthorn | 2 | 0.50 | S | 0 |
| Ilex verticillata | Winterberry | 20 | 1.00 | S | 1 |
| Rhus radicans | Poison ivy | 30 | 0.82 | S | 2 |
| Viburnum recognitum | Northern arrowwood | 25 | 0.82 | S | 1 |
| Ribes sp. | Gooseberry | 2 | | S | 1 |
| Cornus amomum | Silky dogwood | 2 | 0.82 | S | 3 |
| Lythrum salicaria | Purple loosestrife | 3 | 1.00 | H | 0 |
| Aster sp. | Asters | 3 | | H | 0 |
| Typha latifolia | Cattail | 2 | 1.00 | H | 1 |
| Carex sp. | Sedge | 3 | 1.00 | H | 3 |
| Juncus effusus | Soft rush | 2 | 1.00 | H | 0 |
| Solidago sp. | Goldenrod | 2 | | H | 0 |
| Iris versicolor | Blue flag | 3 | 1.00 | H | 0 |
| Impatiens capensis | Jewelweed | 7 | 0.82 | H | 0 |
| Panax trifolium | Dwarf ginseng | 2 | 0.00 | H | 0 |
| Maianthemum canadense | Canada mayflower | 4 | 0.00 | H | 0 |
| Dryopteris noveboracensis | New york fern | 1 | 0.00 | H | 0 |
| Arisaema sp. | Jack-in-the-pulpit | 2 | | H | 0 |
| Onoclea sensibilis | Sensitive fern | 30 | 1.00 | H | 0 |

WSI: 0.716 WFV: 0.363 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.06 BUSHY: 0.28 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.06 BROADL: 0.14 NARROW: 0.02 FLOATING: 0.00
SUBTYPES:NPRUVW
WATERSHED: Hampton Falls River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 56.5 | :******:***  : | 6 WQual | 54.9 | :******:*  : |
| 2 Hydro | 75.0 | :******:******: | 7 Econ | 73.9 | :******:**  : |
| 3 GrWat | 37.7 | :*****  :  : | 8 Recr | 45.2 | :******:*****  : |
| 4 Flood | 60.7 | :*****  :  : | 9 Aest | 59.4 | :******:******: |
| 5 ShoLi | 65.5 | :******:******: | 10 Educ | 71.4 | :******:******: |

AVERAGE DECILE OF TEN MODELS: 7.80 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: HA005 PLACE: (Photo 4-6) Dodge Ponds, E of I95, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 06/03/86 | GS&ABUN 20: | | Veg DENsity (HML) : | L |
| GS&ABUN 1 : | ACERUB40 | GS&ABUN 21: | | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | PINSTR 8 | GS&ABUN 22: | | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | VACCOR12 | GS&ABUN 23: | | Lo Vernal pool): | L |
| GS&ABUN 4 : | VIBREC 1 | GS&ABUN 24: | | Veg.Spec. Richness: | L |
| GS&ABUN 5 : | CLEALN 1 | GS&ABUN 25: | | | |
| GS&ABUN 6 : | CARSTR 1 | GS&ABUN 26: | | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | ONOSEN 5 | GS&ABUN 27: | | WSI: | 0.607 |
| GS&ABUN 8 : | OSMCIN15 | GS&ABUN 28: | | WFV: | 0.500 |
| GS&ABUN 9 : | OSMREG 1 | GS&ABUN 29: | | Perc. Wild. Food: | H |
| GS&ABUN 10: | DRYNOV 2 | GS&ABUN 30: | | NO. of species: | 10 |
| GS&ABUN 11: | | INVestigator : | MCM | Prime : | P |
| GS&ABUN 12: | | Dom Wetl Class (0-11): | 1 | Aesthetic: | 0.000 |
| GS&ABUN 13: | | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 86 |
| GS&ABUN 14: | | CLaSs Richn (1-5) : | 2 | Conifer? | N |
| GS&ABUN 15: | | SubTYpe Richn (ABCDE): | D | Trees : | 0.558 |
| GS&ABUN 16: | | VEGeta Intersp (HML) : | L | Shrubs: | 0.163 |
| GS&ABUN 17: | | Surr. HABitat (123) : | 1 | Herbs : | 0.279 |
| GS&ABUN 18: | | Cover DISpers.(ABCDE): | D | Bog : | 0.000 |
| GS&ABUN 19: | | Percent Open W (LMHV): | H | SBTY : | UW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :HA005 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :SE | P% Bord OW (NLMH) | :H |
| Topo CONfig (CSVH) | :V | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :L | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 395 | HYdr CoN (None, Stream, River | |
| Other SOil | : 538 | Lake or Combin. | :R |
| Dom Surround Soil | : 140 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :M |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :L | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :2 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :M |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :T THIckness (LMH) :M |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) Dodge Ponds, E of I95, HF
HA005 Field Date: 06/03/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 40 | 0.50 | T | 3 |
| Pinus strobus | White pine | 8 | 0.18 | T | 3 |
| Vaccinium corymbosum | Highbush blueberry | 12 | 0.82 | S | 2 |
| Viburnum recognitum | Northern arrowwood | 1 | 0.82 | S | 1 |
| Clethra alnifolia | Sweet pepperbush | 1 | 0.82 | S | 0 |
| Carex stricta | Tussock sedge | 1 | 1.00 | H | 3 |
| Onoclea sensibilis | Sensitive fern | 5 | 1.00 | H | 0 |
| Osmunda cinnamomea | Cinnamon fern | 15 | 0.82 | H | 0 |
| Osmunda regalis | Royal fern | 1 | 1.00 | H | 0 |
| Dryopteris noveboracensis | New york fern | 2 | 0.00 | H | 0 |

WSI: 0.607 WFV: 0.500 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.00 BUSHY: 0.16 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.00 BROADL: 0.26 NARROW: 0.01 FLOATING: 0.00
SUBTYPES: UW
WATERSHED: Hampton Falls River TYPE: Open Freshwater Wetland

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 37.9 | :***** : : | 6 WQual | 25.4 | :* : : |
| 2 Hydro | 47.3 | :** : : | 7 Econ | 13.0 | :* : : |
| 3 GrWat | 43.3 | :******: : | 8 Recr | 52.0 | :******:******: |
| 4 Flood | 24.5 | :* : : | 9 Aest | 69.5 | :******:******: |
| 5 ShoLi | 10.3 | :******: : | 10 Educ | 30.1 | :** : : |

AVERAGE DECILE OF TEN MODELS: 4.10 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: HA006 PLACE: (Photo 4-6) W of Rt1, S of Rt88, HF

| | | | |
|---|---|---|---|
| FL DATe : 03/28/86 | GS&ABUN 20: | Veg DENsity (HML) : | L |
| GS&ABUN 1 : ACERUB20 | GS&ABUN 21: | wetl JUXtapos(HML): | L |
| GS&ABUN 2 : PINSTR 2 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : CEPOCC70 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : ROSPAL 3 | GS&ABUN 24: | Veg.Spec. Richness: | L |
| GS&ABUN 5 : ILEVER 3 | GS&ABUN 25: | | |
| GS&ABUN 6 : PYRMEL 1 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : pINSTR 1 | GS&ABUN 27: | WSI: 0.874 | |
| GS&ABUN 8 : VACCOR 2 | GS&ABUN 28: | WFV: 0.189 | |
| GS&ABUN 9 : ONOSEN 4 | GS&ABUN 29: | Perc. Wild. Food: | L |
| GS&ABUN 10: | GS&ABUN 30: | NO. of species: | 9 |
| GS&ABUN 11: | INVestigator : ASG | Prime : P | |
| GS&ABUN 12: | Dom Wetl Class (0-11): 3 | Aesthetic: 0.028 | |
| GS&ABUN 13: | SPec ELem (ADEFHRSW ): | Tot ABUN: 106 | |
| GS&ABUN 14: | CLaSs Richn (1-5) : 3 | Conifer? N | |
| GS&ABUN 15: | SubTYpe Richn (ABCDE): C | Trees : 0.208 | |
| GS&ABUN 16: | VEGeta Intersp (HML) : M | Shrubs: 0.755 | |
| GS&ABUN 17: | Surr. HABitat (123) : 2 | Herbs : 0.038 | |
| GS&ABUN 18: | Cover DISpers.(ABCDE): E | Bog : 0.000 | |
| GS&ABUN 19: | Percent Open W (LMHV): L | SBTY : AUW | |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :HA006 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :L |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | :L |
| Wetl SIZe (LMH) | :L | DEPTH (SD or blank) | :S |
| Dom SOil type (int) | : 197 | HYdr CoN (None, Stream, River | |
| Other SOil | : 538 | Lake or Combin. | :S |
| Dom Surround Soil | : 40 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 510 | POP'n density (LMH) | :M |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :6 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :A | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :M |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :T THIckness (LMH) :M |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) W of Rt1, S of Rt88, HF
HA006 Field Date: 03/28/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 20 | 0.50 | T | 3 |
| Pinus strobus | White pine | 2 | 0.18 | T | 3 |
| Cephalanthus occidentalis | Buttonbush | 70 | 1.00 | S | 0 |
| Rosa palustris | Marsh rose | 3 | 1.00 | S | 1 |
| Ilex verticillata | Winterberry | 3 | 1.00 | S | 1 |
| Pyrus melanocarpa | Black chokeberry | 1 | 0.50 | S | 1 |
| Pinus strobus | White pine | 1 | 0.18 | S | 3 |
| Vaccinium corymbosum | Highbush blueberry | 2 | 0.82 | S | 2 |
| Onoclea sensibilis | Sensitive fern | 4 | 1.00 | H | 0 |

WSI: 0.874 WFV: 0.188 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.66 SAPLINGS: 0.01 BUSHY: 0.07 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.00 BROADL: 0.03 NARROW: 0.00 FLOATING: 0.00
SUBTYPES:AUW
WATERSHED: Hampton Falls River TYPE: Shallow Fresh Marsh

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 45.7 | :******:* : | 6 WQual | 53.9 | :******:* : |
| 2 Hydro | 22.3 | :** : : | 7 Econ | 47.8 | :** : : |
| 3 GrWat | 39.6 | :***** : : | 8 Recr | 28.7 | :**** : : |
| 4 Flood | 59.8 | :***** : : | 9 Aest | 50.7 | :******:***** : |
| 5 ShoLi | 9.31 | :***** : : | 10 Educ | 46.0 | :******:* : |

AVERAGE DECILE OF TEN MODELS: 4.60 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: HA007 PLACE: (Photo 4-6) Dodge Ponds, W of I95,HF

| | | | |
|---|---|---|---|
| FL DATe : 06/03/86 | GS&ABUN 20: | Veg DENsity (HML) : | L |
| GS&ABUN 1 : ACERUB20 | GS&ABUN 21: | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : TILAME 1 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : ULMAME 2 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : FRAAME 2 | GS&ABUN 24: | Veg.Spec. Richness: | M |
| GS&ABUN 5 : CORAMO 1 | GS&ABUN 25: | | |
| GS&ABUN 6 : sALIX 1 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : ILEVER 1 | GS&ABUN 27: | WSI: 0.680 | |
| GS&ABUN 8 : VACCOR 3 | GS&ABUN 28: | WFV: 0.417 | |
| GS&ABUN 9 : RHAFRA 1 | GS&ABUN 29: | Perc. Wild. Food: | H |
| GS&ABUN 10: CLEALN 3 | GS&ABUN 30: | NO. of species: | 17 |
| GS&ABUN 11: OSMCIN 3 | INVestigator : MCM | Prime : | P |
| GS&ABUN 12: OSMREG 1 | Dom Wetl Class (0-11): 1 | Aesthetic: | 0.029 |
| GS&ABUN 13: CARSTR 3 | SPec ELem (ADEFHRSW ): | Tot ABUN: | 51 |
| GS&ABUN 14: DRYSPI 2 | CLaSs Richn (1-5) : 3 | Conifer? | N |
| GS&ABUN 15: ONOSEN 5 | SubTYpe Richn (ABCDE): D | Trees : | 0.490 |
| GS&ABUN 16: THAPOL 1 | VEGeta Intersp (HML) : H | Shrubs: | 0.196 |
| GS&ABUN 17: IRIS 1 | Surr. HABitat (123) : 1 | Herbs : | 0.314 |
| GS&ABUN 18: | Cover DISpers.(ABCDE): B | Bog : | 0.000 |
| GS&ABUN 19: | Percent Open W (LMHV): H | SBTY : | NUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :HA007 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :SE | P% Bord OW (NLMH) | :H |
| Topo CONfig (CSVH) | :V | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 395 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :R |
| Dom Surround Soil | : 38 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 140 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 510 | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :M | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :3 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :M |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :L THIckness (LMH) :M |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) Dodge Ponds, W of I95, HF
HA007 Field Date: 06/03/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 20 | 0.50 | T | 3 |
| Tilia americana | Basswood | 1 | 0.18 | T | 1 |
| Ulmus americana | American elm | 2 | 0.82 | T | 1 |
| Fraxinus americana | White ash | 2 | 0.50 | T | 1 |
| Cornus amomum | Silky dogwood | 1 | 0.82 | S | 3 |
| Salix sp. | Willow | 1 | 0.82 | S | 1 |
| Ilex verticillata | Winterberry | 1 | 1.00 | S | 1 |
| Vaccinium corymbosum | Highbush blueberry | 3 | 0.82 | S | 2 |
| Rhamnus frangula | Europ. buckthorn | 1 | 0.50 | S | 0 |
| Clethra alnifolia | Sweet pepperbush | 3 | 0.82 | S | 0 |
| Osmunda cinnamomea | Cinnamon fern | 3 | 0.82 | H | 0 |
| Osmunda regalis | Royal fern | 1 | 1.00 | H | 0 |
| Carex stricta | Tussock sedge | 3 | 1.00 | H | 3 |
| Dryopteris spinulosa | Spinulose shieldfern | 2 | 0.82 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 5 | 1.00 | H | 0 |
| Thalictrum polygamum | Tall meadow-rue | 1 | 0.00 | H | 0 |
| Iris sp. | Iris | 1 | | H | 0 |

WSI: 0.679 WFV: 0.416 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.01 BUSHY: 0.17 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.01 BROADL: 0.21 NARROW: 0.05 FLOATING: 0.00
SUBTYPES: NUW
WATERSHED: Hampton Falls River TYPE: Open Freshwater Wetland

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 51.9 | :******:** : | 6 WQual | 31.3 | :* : : |
| 2 Hydro | 59.2 | :******:* : | 7 Econ | 30.4 | :* : : |
| 3 GrWat | 49.0 | :******:* : | 8 Recr | 67.1 | :******:******: |
| 4 Flood | 34.3 | :* : : | 9 Aest | 69.5 | :******:******: |
| 5 ShoLi | 10.3 | :******: : | 10 Educ | 41.2 | :***** : : |

AVERAGE DECILE OF TEN MODELS: 5.10 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: HA008 PLACE: (Photo 4-6) Cock Hill Rd, near jct with Rt88, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 03/27/86 | GS&ABUN 20: | | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB65 | GS&ABUN 21: | | wetl JUXtapos(HML): | L |
| GS&ABUN 2 : | BETLEN10 | GS&ABUN 22: | | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | ULMAME10 | GS&ABUN 23: | | Lo Vernal pool): | L |
| GS&ABUN 4 : | PINSTR 3 | GS&ABUN 24: | | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | ILEVER25 | GS&ABUN 25: | | | |
| GS&ABUN 6 : | VIBREC20 | GS&ABUN 26: | | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | ALNRUG15 | GS&ABUN 27: | | WSI: | 0.697 |
| GS&ABUN 8 : | SPILAT 3 | GS&ABUN 28: | | WFV: | 0.403 |
| GS&ABUN 9 : | ROSPAL 4 | GS&ABUN 29: | | Perc. Wild. Food: | H |
| GS&ABUN 10: | RHAFRA12 | GS&ABUN 30: | | NO. of species: | 11 |
| GS&ABUN 11: | ONOSEN18 | INVestigator : | ASG | Prime : | |
| GS&ABUN 12: | | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.078 |
| GS&ABUN 13: | | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 185 |
| GS&ABUN 14: | | CLaSs Richn (1-5) : | 2 | Conifer? | N |
| GS&ABUN 15: | | SubTYpe Richn (ABCDE): | D | Trees : | 0.476 |
| GS&ABUN 16: | | VEGeta Intersp (HML) : | L | Shrubs: | 0.427 |
| GS&ABUN 17: | | Surr. HABitat (123) : | 2 | Herbs : | 0.097 |
| GS&ABUN 18: | | Cover DISpers.(ABCDE): | E | Bog : | 0.000 |
| GS&ABUN 19: | | Percent Open W (LMHV): | L | SBTY : | UW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :HA008 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 546 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :S |
| Dom Surround Soil | : 40 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 47 | POP'n density (LMH) | :M |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :H | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :A | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :T PERmeabil (LMH) :H |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :T THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) Cock Hill Rd, near jct with Rt88, HF
HA008 Field Date: 03/27/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 65 | 0.50 | T | 3 |
| Betula lenta | Sweet birch | 10 | 0.18 | T | 2 |
| Ulmus americana | American elm | 10 | 0.82 | T | 1 |
| Pinus strobus | White pine | 3 | 0.18 | T | 3 |
| Ilex verticillata | Winterberry | 25 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 20 | 0.82 | S | 1 |
| Alnus rugosa | Speckled alder | 15 | 1.00 | S | 1 |
| Spiraea latifolia | Meadowsweet | 3 | 0.50 | S | 0 |
| Rosa palustris | Marsh rose | 4 | 1.00 | S | 1 |
| Rhamnus frangula | Europ. buckthorn | 12 | 0.50 | S | 0 |
| Onoclea sensibilis | Sensitive fern | 18 | 1.00 | H | 0 |

WSI: 0.696 WFV: 0.402 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.00 BUSHY: 0.41 COMPACT: 0.01
MARSH SBCL: ROBUST: 0.00 BROADL: 0.09 NARROW: 0.00 FLOATING: 0.00
SUBTYPES:UW
WATERSHED: Hampton Falls River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 31.0 | :** : : | 6 WQual | 48.0 | :**** : : |
| 2 Hydro | 55.2 | :****** : : | 7 Econ | 73.9 | :******:** : |
| 3 GrWat | 39.6 | :***** : : | 8 Recr | 32.8 | :***** : : |
| 4 Flood | 61.7 | :******: : | 9 Aest | 34.7 | :**** : : |
| 5 ShoLi | 0.00 | :** : : | 10 Educ | 33.3 | :**** : : |

AVERAGE DECILE OF TEN MODELS: 3.80

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: HA009 PLACE: (Photo 4-6) S of Rt88, between I95 & Rt1, HF

| | | | |
|---|---|---|---|
| FL DATe : 03/28/86 | GS&ABUN 20: | Veg DENsity (HML) : | M |
| GS&ABUN 1 : ACERUB18 | GS&ABUN 21: | wetl JUXtapos(HML): | L |
| GS&ABUN 2 : BETPOP 3 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : CEPOCC 3 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : ALNRUG10 | GS&ABUN 24: | Veg.Spec. Richness: | M |
| GS&ABUN 5 : VACCOR 3 | GS&ABUN 25: | | |
| GS&ABUN 6 : CLEALN 3 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : pINSTR 3 | GS&ABUN 27: | WSI: 0.707 | |
| GS&ABUN 8 : aCERUB15 | GS&ABUN 28: | WFV: 0.435 | |
| GS&ABUN 9 : SPITOM 5 | GS&ABUN 29: | Perc. Wild. Food: | H |
| GS&ABUN 10: VACMAC 8 | GS&ABUN 30: | NO. of species: 12 | |
| GS&ABUN 11: SPHAGN10 | INVestigator : ASG | Prime : P | |
| GS&ABUN 12: PHRCOM 3 | Dom Wetl Class (0-11): 6 | Aesthetic: 0.048 | |
| GS&ABUN 13: | SPec ELem (ADEFHRSW ): | Tot ABUN: 84 | |
| GS&ABUN 14: | CLaSs Richn (1-5) : 4 | Conifer? N | |
| GS&ABUN 15: | SubTYpe Richn (ABCDE): C | Trees : 0.250 | |
| GS&ABUN 16: | VEGeta Intersp (HML) : M | Shrubs: 0.595 | |
| GS&ABUN 17: | Surr. HABitat (123) : 1 | Herbs : 0.155 | |
| GS&ABUN 18: | Cover DISpers.(ABCDE): D | Bog : 0.214 | |
| GS&ABUN 19: | Percent Open W (LMHV): L | SBTY : ACMPRU | |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID :HA009 | OUTlet2 (APE) : | | |
| 2 letter TOWN codes*:HF | P% Bord OW (NLMH) :L | | |
| Topo CONfig (CSVH) :C | FETch (LH or blank) :L | | |
| Wetl SIZe (LMH) :L | DEPTH (SD or blank) :S | | |
| Dom SOil type (int) : 95 | HYdr CoN (None, Stream, River | | |
| Other SOil : 298 | Lake or Combin. :N | | |
| Dom Surround Soil : 510 | ACCeSs (Rd Wat Iso) :R | | |
| Other Surr. Soil1 : 38 | POP'n density (LMH) :M | | |
| Other Surr. Soil2 : 40 | loc SCARCity (LMH) :L | | |
| wetl GRAdient (LH) :L | CROP (N Hay Fam Com):N | | |
| Surr. SLOpe (LH) :H | LEGAL accs (puB priV | | |
| TOpo. POsit. (LMH) :H | or Restricted) :V | | |
| Dom Hydr Condit(1-6):6 | | | |
| RIPArian conn (YN) :N | | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral :A | CALCULATED FROM OTHER DATA AND SOIL: | | |
| INL2 (APE) : | SurGeol Under wl(ALOT):O | PERmeabil (LMH):M | |
| INL3 (APE) : | SurGeol Surround(ALOT):O | THIckness (LMH):H | |
| INL4 (APE) : | HPOSition (Perch,W,A) :W | GW Relat (DRC) :R | |
| INL5 (APE) : | TRAnsmissivity (LMH) :H | | |
| OUTLet1 (APE) :A | | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) S of Rt88, between I95 & Rt1, HF
HA009 Field Date: 03/28/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 18 | 0.50 | T | 3 |
| Betula populifolia | Grey birch | 3 | 0.50 | T | 2 |
| Cephalanthus occidentalis | Buttonbush | 3 | 1.00 | S | 0 |
| Alnus rugosa | Speckled alder | 10 | 1.00 | S | 1 |
| Vaccinium corymbosum | Highbush blueberry | 3 | 0.82 | S | 2 |
| Clethra alnifolia | Sweet pepperbush | 3 | 0.82 | S | 0 |
| Pinus strobus | White pine | 3 | 0.18 | S | 3 |
| Acer rubrum | Red maple | 15 | 0.50 | S | 3 |
| Spiraea tomentosa | Steeplebush | 5 | 0.50 | S | 0 |
| Vaccinium macrocarpon | Large cranberry | 8 | 1.00 | S | 2 |
| Sphagnum sp. | Sphagnum moss | 10 | 1.00 | H | 0 |
| Phragmites communis | Reed | 3 | 0.82 | H | 0 |

WSI: 0.707 WFV: 0.434 BOG: 0.214 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.03 SAPLINGS: 0.21 BUSHY: 0.19 COMPACT: 0.15
MARSH SBCL: ROBUST: 0.03 BROADL: 0.00 NARROW: 0.00 FLOATING: 0.00
SUBTYPES:ACMPRU
WATERSHED: Hampton Falls River TYPE: Shrub Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 53.4 | :******:** : | 6 WQual | 51.9 | :******: : |
| 2 Hydro | 7.89 | :* : : | 7 Econ | 39.1 | :** : : |
| 3 GrWat | 64.1 | :******:**** : | 8 Recr | 20.5 | :* : : |
| 4 Flood | 60.7 | :***** : : | 9 Aest | 36.2 | :******: : |
| 5 ShoLi | 14.4 | :******:* : | 10 Educ | 53.9 | :******:** : |

AVERAGE DECILE OF TEN MODELS: 4.70 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: HA010 PLACE: (Photo 4-6) N of Rt84, W of I95, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 06/03/86 | GS&ABUN 20: | ONOSEN12 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB55 | GS&ABUN 21: | EQUARV 3 | wetl JUXtapos(HML): | L |
| GS&ABUN 2 : | PINSTR20 | GS&ABUN 22: | SOLIDA 2 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | ULMAME 2 | GS&ABUN 23: | IRIPRI 1 | Lo Vernal pool): | H |
| GS&ABUN 4 : | POPTRE 1 | GS&ABUN 24: | GERMAC 1 | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | JUNVIR 1 | GS&ABUN 25: | OSMREG 1 | | |
| GS&ABUN 6 : | uLMAME 1 | GS&ABUN 26: | MAICAN 3 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | VIBCAS 1 | GS&ABUN 27: | ARANUD 1 | WSI: 0.543 | |
| GS&ABUN 8 : | aCERUB 5 | GS&ABUN 28: | TRIBOR 1 | WFV: 0.489 | |
| GS&ABUN 9 : | sALIX 1 | GS&ABUN 29: | COPGRO 2 | Perc. Wild. Food: | H |
| GS&ABUN 10: | VACCOR 1 | GS&ABUN 30: | DRYSPI 2 | NO. of species: | 30 |
| GS&ABUN 11: | SPILAT 2 | INVestigator | : MCM | Prime : | |
| GS&ABUN 12: | RHAFRA 2 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.015 |
| GS&ABUN 13: | CLEALN 1 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 134 |
| GS&ABUN 14: | VIBREC 2 | CLaSs Richn (1-5) | : 1 | Conifer? | N |
| GS&ABUN 15: | ALNRUG 3 | SubTYpe Richn (ABCDE): | D | Trees : | 0.590 |
| GS&ABUN 16: | ILEVER 1 | VEGeta Intersp (HML) : | M | Shrubs: | 0.172 |
| GS&ABUN 17: | RHURAD 3 | Surr. HABitat (123) : | 1 | Herbs : | 0.239 |
| GS&ABUN 18: | DRYTHE 1 | Cover DISpers.(ABCDE): | E | Bog : | 0.000 |
| GS&ABUN 19: | OSMCIN 2 | Percent Open W (LMHV): | L | SBTY : | NPUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :HA010 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :SE | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :C | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 32 | HYdr CoN (None, Stream, River | |
| Other SOil | : 538 | Lake or Combin. | :N |
| Dom Surround Soil | : 140 | ACCeSs (Rd Wat Iso) | :I |
| Other Surr. Soil1 | : 510 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :6 | | |
| RIPArian conn (YN) | :N | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :A | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :T THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W GW Relat (DRC) :R |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :A | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) N of Rt84, W of I95, HF
HA010 Field Date: 06/03/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 55 | 0.50 | T | 3 |
| Pinus strobus | White pine | 20 | 0.18 | T | 3 |
| Ulmus americana | American elm | 2 | 0.82 | T | 1 |
| Populus tremuloides | Quaking aspen | 1 | 0.00 | T | 2 |
| Juniperus virginiana | Red cedar | 1 | 0.18 | T | 1 |
| Ulmus americana | American elm | 1 | 0.82 | S | 1 |
| Viburnum cassinoides | Northern wild raisin | 1 | 0.82 | S | 1 |
| Acer rubrum | Red maple | 5 | 0.50 | S | 3 |
| Salix sp. | Willow | 1 | 0.82 | S | 1 |
| Vaccinium corymbosum | Highbush blueberry | 1 | 0.82 | S | 2 |
| Spiraea latifolia | Meadowsweet | 2 | 0.50 | S | 0 |
| Rhamnus frangula | Europ. buckthorn | 2 | 0.50 | S | 0 |
| Clethra alnifolia | Sweet pepperbush | 1 | 0.82 | S | 0 |
| Viburnum recognitum | Northern arrowwood | 2 | 0.82 | S | 1 |
| Alnus rugosa | Speckled alder | 3 | 1.00 | S | 1 |
| Ilex verticillata | Winterberry | 1 | 1.00 | S | 1 |
| Rhus radicans | Poison ivy | 3 | 0.82 | S | 2 |
| Dryopteris thelypteris | Marsh fern | 1 | 1.00 | H | 0 |
| Osmunda cinnamomea | Cinnamon fern | 2 | 0.82 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 12 | 1.00 | H | 0 |
| Equisetum arvense | Common horsetail | 3 | 0.50 | H | 0 |
| Solidago sp. | Goldenrod | 2 | | H | 0 |
| Iris prismatica | Slender blue flag | 1 | 1.00 | H | 0 |
| Geranium maculatum | Wild cranesbill | 1 | 0.18 | H | 0 |
| Osmunda regalis | Royal fern | 1 | 1.00 | H | 0 |
| Maianthemum canadense | Canada mayflower | 3 | 0.00 | H | 0 |
| Aralia nudicaulis | Wild sarsaparilla | 1 | 0.00 | H | 0 |
| Trientalis borealis | Starflower | 1 | 0.50 | H | 0 |
| Coptis groenlandica | Goldthread | 2 | 0.82 | H | 0 |
| Dryopteris spinulosa | Spinulose shieldfern | 2 | 0.82 | H | 0 |

WSI: 0.543 WFV: 0.488 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.05 BUSHY: 0.08 COMPACT: 0.01
MARSH SBCL: ROBUST: 0.00 BROADL: 0.14 NARROW: 0.02 FLOATING: 0.00
SUBTYPES:NPUVW
WATERSHED: Hampton Falls River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 31.0 | :** : : | 6 WQual | 46.0 | :** : : |
| 2 Hydro | 5.26 | :* : : | 7 Econ | 60.8 | :******: : |
| 3 GrWat | 54.7 | :******:*** : | 8 Recr | 24.6 | :** : : |
| 4 Flood | 66.6 | :******:*** : | 9 Aest | 26.0 | :* : : |
| 5 ShoLi | 0.00 | :** : : | 10 Educ | 20.6 | :* : : |

AVERAGE DECILE OF TEN MODELS: 3.20

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: HA011 PLACE: (Photo 4-4) Hampton Falls River, S of Rt84, W of I95, HF SE

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/03/86 | GS&ABUN 20: | fRAAME 1 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB30 | GS&ABUN 21: | LYOLIG 1 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | QUEBIC 1 | GS&ABUN 22: | RUBHIS 1 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | PINSTR14 | GS&ABUN 23: | CARSTR20 | Lo Vernal pool): | L |
| GS&ABUN 4 : | TSUCAN 5 | GS&ABUN 24: | COPGRO 4 | Veg.Spec. Richness: | H |
| GS&ABUN 5 : | NYSSYL 1 | GS&ABUN 25: | ONOSEN 5 | | |
| GS&ABUN 6 : | JUNVIR 1 | GS&ABUN 26: | SPHAGN 2 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | aCERUB22 | GS&ABUN 27: | LYTSAL 1 | WSI: 0.640 | |
| GS&ABUN 8 : | pINSTR 3 | GS&ABUN 28: | CAREXA 1 | WFV: 0.578 | |
| GS&ABUN 9 : | ILEVER 2 | GS&ABUN 29: | TYPLAT 1 | Perc. Wild. Food: | H |
| GS&ABUN 10: | VIBREC 4 | GS&ABUN 30: | ASTER 1 | NO. of species: | 30 |
| GS&ABUN 11: | VACCOR10 | INVestigator : | MCM | Prime : | P |
| GS&ABUN 12: | CORAMO 2 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.021 |
| GS&ABUN 13: | SALDIS 1 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 141 |
| GS&ABUN 14: | SPILAT 2 | CLaSs Richn (1-5) : | 3 | Conifer? | N |
| GS&ABUN 15: | ALNRUG 1 | SubTYpe Richn (ABCDE): | C | Trees : | 0.369 |
| GS&ABUN 16: | ROSPAL 1 | VEGeta Intersp (HML) : | H | Shrubs: | 0.379 |
| GS&ABUN 17: | VACANG 1 | Surr. HABitat (123) : | 1 | Herbs : | 0.252 |
| GS&ABUN 18: | tSUCAN 1 | Cover DISpers.(ABCDE): | D | Bog : | 0.014 |
| GS&ABUN 19: | RHURAD 1 | Percent Open W (LMHV): | L | SBTY : | CMNPUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :HA011 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HA HF | P% Bord OW (NLMH) | :L |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :H | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 395 | HYdr CoN (None, Stream, River | |
| Other SOil | : 134 | Lake or Combin. | :R |
| Dom Surround Soil | : 538 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 533 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 32 | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :L | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :M | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :P | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :M |
| INL3 (APE) | :P | SurGeol Surround(ALOT) | :L THIckness (LMH) :M |
| INL4 (APE) | :P | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-4) Hampton Falls River, S of Rt84, W of I95, HF SE
HA011 Field Date: 04/03/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 30 | 0.50 | T | 3 |
| Quercus bicolor | Swamp white oak | 1 | 1.00 | T | 4 |
| Pinus strobus | White pine | 14 | 0.18 | T | 3 |
| Tsuga canadensis | Hemlock | 5 | 0.50 | T | 1 |
| Nyssa sylvatica | Black gum, tupelo | 1 | 0.82 | T | 1 |
| Juniperus virginiana | Red cedar | 1 | 0.18 | T | 1 |
| Acer rubrum | Red maple | 22 | 0.50 | S | 3 |
| Pinus strobus | White pine | 3 | 0.18 | S | 3 |
| Ilex verticillata | Winterberry | 2 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 4 | 0.82 | S | 1 |
| Vaccinium corymbosum | Highbush blueberry | 10 | 0.82 | S | 2 |
| Cornus amomum | Silky dogwood | 2 | 0.82 | S | 3 |
| Salix discolor | Pussy willow | 1 | 0.82 | S | 1 |
| Spiraea latifolia | Meadowsweet | 2 | 0.50 | S | 0 |
| Alnus rugosa | Speckled alder | 1 | 1.00 | S | 1 |
| Rosa palustris | Marsh rose | 1 | 1.00 | S | 1 |
| Vaccinium angustifolium | Late sweet blueberry | 1 | 0.50 | S | 2 |
| Tsuga canadensis | Hemlock | 1 | 0.50 | S | 1 |
| Rhus radicans | Poison ivy | 1 | 0.82 | S | 2 |
| Fraxinus americana | White ash | 1 | 0.50 | S | 1 |
| Lyonia ligustrina | Maleberry | 1 | 1.00 | S | 0 |
| Rubus hispidus | Trailing bramble | 1 | 0.50 | B | 3 |
| Carex stricta | Tussock sedge | 20 | 1.00 | H | 3 |
| Coptis groenlandica | Goldthread | 4 | 0.82 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 5 | 1.00 | H | 0 |
| Sphagnum sp. | Sphagnum moss | 2 | 1.00 | H | 0 |
| Lythrum salicaria | Purple loosestrife | 1 | 1.00 | H | 0 |
| Carex sp.(A) | A Sedge | 1 | 1.00 | H | 3 |
| Typha latifolia | Cattail | 1 | 1.00 | H | 1 |
| Aster sp. | Asters | 1 | | H | 0 |

WSI: 0.640 WFV: 0.578 BOG: 0.014 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.19 BUSHY: 0.14 COMPACT: 0.02
MARSH SBCL: ROBUST: 0.01 BROADL: 0.06 NARROW: 0.14 FLOATING: 0.00
SUBTYPES: CMNPUW
WATERSHED: Hampton Falls River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 63.5 | :******:****  : | 6 WQual | 70.5 | :******:******: |
| 2 Hydro | 76.3 | :******:******: | 7 Econ | 91.3 | :******:******: |
| 3 GrWat | 66.0 | :******:*****  : | 8 Recr | 60.2 | :******:******: |
| 4 Flood | 69.6 | :******:******: | 9 Aest | 39.1 | :******:      : |
| 5 ShoLi | 17.5 | :******:**    : | 10 Educ | 61.9 | :******:****  : |

AVERAGE DECILE OF TEN MODELS: 8.80 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: HA028 PLACE: (Photo 5-4) Winkley Brook, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 06/04/86 | GS&ABUN 20: | TYPLAT 3 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB40 | GS&ABUN 21: | SYMFOE 2 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | ULMAME 3 | GS&ABUN 22: | ATHFIL 3 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | JUNVIR 1 | GS&ABUN 23: | GALASP 2 | Lo Vernal pool): | L |
| GS&ABUN 4 : | PINSTR 6 | GS&ABUN 24: | EQUSYL 2 | Veg.Spec. Richness: | H |
| GS&ABUN 5 : | pOPGRA 2 | GS&ABUN 25: | OSMREG 2 | | |
| GS&ABUN 6 : | aCERUB 5 | GS&ABUN 26: | CAREX 15 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | CORAMO 8 | GS&ABUN 27: | SOLIDA 2 | WSI: 0.725 | |
| GS&ABUN 8 : | RHURAD 5 | GS&ABUN 28: | FRAVIR 1 | WFV: 0.414 | |
| GS&ABUN 9 : | ALNRUG 7 | GS&ABUN 29: | JUNEFF 2 | Perc. Wild. Food: | H |
| GS&ABUN 10: | VIBREC 8 | GS&ABUN 30: | THAPOL 1 | NO. of species: | 30 |
| GS&ABUN 11: | ROSPAL 8 | INVestigator : | GS | Prime : | P |
| GS&ABUN 12: | SPILAT 5 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.038 |
| GS&ABUN 13: | RHAFRA 5 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 195 |
| GS&ABUN 14: | VIBCAS 4 | CLaSs Richn (1-5) : | 3 | Conifer? | N |
| GS&ABUN 15: | RUBALL 3 | SubTYpe Richn (ABCDE): | C | Trees : | 0.256 |
| GS&ABUN 16: | POa 20 | VEGeta Intersp (HML) : | M | Shrubs: | 0.300 |
| GS&ABUN 17: | ONOSEN15 | Surr. HABitat (123) : | 1 | Herbs : | 0.444 |
| GS&ABUN 18: | CARSTR 8 | Cover DISpers.(ABCDE): | D | Bog : | 0.000 |
| GS&ABUN 19: | IMPCAP 7 | Percent Open W (LMHV): | L | SBTY : | CNPRUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :HA028 | OUTlet2 (APE) | : |
| 2 letter TOWN codes*: | HA | P% Bord OW (NLMH) | :L |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :H | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 134 | HYdr CoN (None, Stream, River | |
| Other SOil | : 33 | Lake or Combin. | :S |
| Dom Surround Soil | : 38 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 510 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 32 | loc SCARCity (LMH) | :M |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :M | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | :E | SurGeol Surround(ALOT) | :L THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 5-4) Winkley Brook, HF
HA028 Field Date: 06/04/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 40 | 0.50 | T | 3 |
| Ulmus americana | American elm | 3 | 0.82 | T | 1 |
| Juniperus virginiana | Red cedar | 1 | 0.18 | T | 1 |
| Pinus strobus | White pine | 6 | 0.18 | T | 3 |
| Populus grandidentata | Large-toothed aspen | 2 | 0.18 | S | 2 |
| Acer rubrum | Red maple | 5 | 0.50 | S | 3 |
| Cornus amomum | Silky dogwood | 8 | 0.82 | S | 3 |
| Rhus radicans | Poison ivy | 5 | 0.82 | S | 2 |
| Alnus rugosa | Speckled alder | 7 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 8 | 0.82 | S | 1 |
| Rosa palustris | Marsh rose | 8 | 1.00 | S | 1 |
| Spiraea latifolia | Meadowsweet | 5 | 0.50 | S | 0 |
| Rhamnus frangula | Europ. buckthorn | 5 | 0.50 | S | 0 |
| Viburnum cassinoides | Northern wild raisin | 4 | 0.82 | S | 1 |
| Rubus allegheniensis | Blackberry | 3 | 0.00 | B | 3 |
| Poaceae | Grasses | 20 | | H | 1 |
| Onoclea sensibilis | Sensitive fern | 15 | 1.00 | H | 0 |
| Carex stricta | Tussock sedge | 8 | 1.00 | H | 3 |
| Impatiens capensis | Jewelweed | 7 | 0.82 | H | 0 |
| Typha latifolia | Cattail | 3 | 1.00 | H | 1 |
| Symplocarpus foetidus | Skunk cabbage | 2 | 1.00 | H | 0 |
| Athyrium filix-femina | Lady fern | 3 | 0.50 | H | 0 |
| Galium asprellum | Rough bedstraw | 2 | 1.00 | H | 0 |
| Equisetum sylvaticum | Wood horsetail | 2 | 0.82 | H | 0 |
| Osmunda regalis | Royal fern | 2 | 1.00 | H | 0 |
| Carex sp. | Sedge | 15 | 1.00 | H | 3 |
| Solidago sp. | Goldenrod | 2 | | H | 0 |
| Fragaria virginiana | Strawberry | 1 | 0.50 | H | 0 |
| Juncus effusus | Soft rush | 2 | 1.00 | H | 0 |
| Thalictrum polygamum | Tall meadow-rue | 1 | 0.00 | H | 0 |

WSI: 0.725 WFV: 0.414 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.03 BUSHY: 0.20 COMPACT: 0.02
MARSH SBCL: ROBUST: 0.05 BROADL: 0.11 NARROW: 0.25 FLOATING: 0.00
SUBTYPES:CNPRUVW
WATERSHED: Hampton Falls River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 59.6 | :******:***: | 6 WQual | 60.7 | :******:***: |
| 2 Hydro | 71.0 | :******:*****: | 7 Econ | 91.3 | :******:******: |
| 3 GrWat | 64.1 | :******:*****: | 8 Recr | 52.0 | :******:******: |
| 4 Flood | 64.7 | :******:**: | 9 Aest | 43.4 | :******:**: |
| 5 ShoLi | 17.5 | :******:**: | 10 Educ | 66.6 | :******:*****: |

AVERAGE DECILE OF TEN MODELS: 8.40 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: HA030 PLACE: (Photo 4-4) Lamprey Rd, S of Great Hill, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 06/04/86 | GS&ABUN 20: | | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB55 | GS&ABUN 21: | | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : | PINSTR 5 | GS&ABUN 22: | | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | RHAFRA 5 | GS&ABUN 23: | | Lo Vernal pool): | L |
| GS&ABUN 4 : | aCERUB 5 | GS&ABUN 24: | | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | SPILAT 6 | GS&ABUN 25: | | | |
| GS&ABUN 6 : | VACCOR 4 | GS&ABUN 26: | | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | SAMCAN 1 | GS&ABUN 27: | | WSI: | 0.666 |
| GS&ABUN 8 : | jUNVIR 1 | GS&ABUN 28: | | WFV: | 0.333 |
| GS&ABUN 9 : | LYOLIG 2 | GS&ABUN 29: | | Perc. Wild. Food: | M |
| GS&ABUN 10: | ILEVER 3 | GS&ABUN 30: | | NO. of species: | 17 |
| GS&ABUN 11: | RHURAD 6 | INVestigator : | GS | Prime : | |
| GS&ABUN 12: | VIBREC 8 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.009 |
| GS&ABUN 13: | OSMCIN30 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 171 |
| GS&ABUN 14: | ONOSEN30 | CLaSs Richn (1-5) : | 2 | Conifer? | N |
| GS&ABUN 15: | UVUSES 2 | SubTYpe Richn (ABCDE): | D | Trees : | 0.351 |
| GS&ABUN 16: | EQUSYL 3 | VEGeta Intersp (HML) : | L | Shrubs: | 0.240 |
| GS&ABUN 17: | MAICAN 5 | Surr. HABitat (123) : | 2 | Herbs : | 0.409 |
| GS&ABUN 18: | | Cover DISpers.(ABCDE): | E | Bog : | 0.000 |
| GS&ABUN 19: | | Percent Open W (LMHV): | L | SBTY : | CPUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :HA030 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 538 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :S |
| Dom Surround Soil | : 29 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 40 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :T THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-4 ) Lamprey Rd, S of Great Hill, HF
HA030 Field Date: 06/04/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 55 | 0.50 | T | 3 |
| Pinus strobus | White pine | 5 | 0.18 | T | 3 |
| Rhamnus frangula | Europ. buckthorn | 5 | 0.50 | S | 0 |
| Acer rubrum | Red maple | 5 | 0.50 | S | 3 |
| Spiraea latifolia | Meadowsweet | 6 | 0.50 | S | 0 |
| Vaccinium corymbosum | Highbush blueberry | 4 | 0.82 | S | 2 |
| Sambucus canadensis | Elderberry | 1 | 0.18 | S | 1 |
| Juniperus virginiana | Red cedar | 1 | 0.18 | S | 1 |
| Lyonia ligustrina | Maleberry | 2 | 1.00 | S | 0 |
| Ilex verticillata | Winterberry | 3 | 1.00 | S | 1 |
| Rhus radicans | Poison ivy | 6 | 0.82 | S | 2 |
| Viburnum recognitum | Northern arrowwood | 8 | 0.82 | S | 1 |
| Osmunda cinnamomea | Cinnamon fern | 30 | 0.82 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 30 | 1.00 | H | 0 |
| Uvularia sessilifolia | Sessile bellwort | 2 | 0.18 | H | 0 |
| Equisetum sylvaticum | Wood horsetail | 3 | 0.82 | H | 0 |
| Maianthemum canadense | Canada mayflower | 5 | 0.00 | H | 0 |

WSI: 0.666 WFV: 0.333 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.03 BUSHY: 0.13 COMPACT: 0.03
MARSH SBCL: ROBUST: 0.00 BROADL: 0.35 NARROW: 0.01 FLOATING: 0.00
SUBTYPES: CPUVW
WATERSHED: Hampton Falls River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 30.2 | :** : : | 6 WQual | 49.0 | :***** : : |
| 2 Hydro | 56.5 | :******: : | 7 Econ | 73.9 | :******:** : |
| 3 GrWat | 33.9 | :*** : : | 8 Recr | 32.8 | :***** : : |
| 4 Flood | 62.7 | :******:* : | 9 Aest | 30.4 | :** : : |
| 5 ShoLi | 0.00 | :** : : | 10 Educ | 33.3 | :*** : : |

AVERAGE DECILE OF TEN MODELS: 3.80

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: HA032 PLACE: (Photo 4-6) S of Crank Rd, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/24/86 | GS&ABUN 20: | MITREP 2 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB30 | GS&ABUN 21: | SPHAGN35 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | ULMAME12 | GS&ABUN 22: | MAICAN20 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | BETLUT 5 | GS&ABUN 23: | ONOSEN15 | Lo Vernal pool): | L |
| GS&ABUN 4 : | PINSTR 4 | GS&ABUN 24: | TYPLAT10 | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | QUERUB 1 | GS&ABUN 25: | CARSTR 8 | | |
| GS&ABUN 6 : | TSUCAN 1 | GS&ABUN 26: | OSMCIN 8 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | BETLEN 1 | GS&ABUN 27: | SYMFOE 5 | WSI: 0.720 | |
| GS&ABUN 8 : | BETPOP 1 | GS&ABUN 28: | TRILLI 1 | WFV: 0.304 | |
| GS&ABUN 9 : | RHURAD33 | GS&ABUN 29: | EQUARV 1 | Perc. Wild. Food: | M |
| GS&ABUN 10: | ALNRUG18 | GS&ABUN 30: | | NO. of species: | 29 |
| GS&ABUN 11: | VIBREC12 | INVestigator : | ASG | Prime : | P |
| GS&ABUN 12: | SPILAT 5 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.006 |
| GS&ABUN 13: | pINSTR 6 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 250 |
| GS&ABUN 14: | RIBES 5 | CLaSs Richn (1-5) : | 5 | Conifer? | N |
| GS&ABUN 15: | aCERUB 3 | SubTYpe Richn (ABCDE): | B | Trees : | 0.220 |
| GS&ABUN 16: | LINBEN 3 | VEGeta Intersp (HML) : | M | Shrubs: | 0.364 |
| GS&ABUN 17: | tSUCAN 2 | Surr. HABitat (123) : | 1 | Herbs : | 0.416 |
| GS&ABUN 18: | ILEVER 2 | Cover DISpers.(ABCDE): | D | Bog : | 0.140 |
| GS&ABUN 19: | VACCOR 1 | Percent Open W (LMHV): | L | SBTY : | CMNPRUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :HA032 | OUTlet2 (APE) | : |
| 2 letter TOWN codes*: | HF | P% Bord OW (NLMH) | :M |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | :L |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | :D |
| Dom SOil type (int) | : 197 | HYdr CoN (None, Stream, River | |
| Other SOil | : 547 | Lake or Combin. | :S |
| Dom Surround Soil | : 47 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 32 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 40 | loc SCARCity (LMH) | :M |
| wetl GRAdient (LH) | :H | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :T PERmeabil (LMH) :M |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :T THIckness (LMH) :M |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) S of Crank Rd, HF
HA032 Field Date: 04/24/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 30 | 0.50 | T | 3 |
| Ulmus americana | American elm | 12 | 0.82 | T | 1 |
| Betula lutea | Yellow birch | 5 | 0.50 | T | 2 |
| Pinus strobus | White pine | 4 | 0.18 | T | 3 |
| Quercus rubra | Northern red oak | 1 | 0.18 | T | 4 |
| Tsuga canadensis | Hemlock | 1 | 0.50 | T | 1 |
| Betula lenta | Sweet birch | 1 | 0.18 | T | 2 |
| Betula populifolia | Grey birch | 1 | 0.50 | T | 2 |
| Rhus radicans | Poison ivy | 33 | 0.82 | S | 2 |
| Alnus rugosa | Speckled alder | 18 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 12 | 0.82 | S | 1 |
| Spiraea latifolia | Meadowsweet | 5 | 0.50 | S | 0 |
| Pinus strobus | White pine | 6 | 0.18 | S | 3 |
| Ribes sp. | Gooseberry | 5 | | S | 1 |
| Acer rubrum | Red maple | 3 | 0.50 | S | 3 |
| Lindera benzoin | Spicebush | 3 | 0.82 | S | 1 |
| Tsuga canadensis | Hemlock | 2 | 0.50 | S | 1 |
| Ilex verticillata | Winterberry | 2 | 1.00 | S | 1 |
| Vaccinium corymbosum | Highbush blueberry | 1 | 0.82 | S | 2 |
| Mitchella repens | Partridge-berry | 2 | 0.00 | B | 0 |
| Sphagnum sp. | Sphagnum moss | 35 | 1.00 | H | 0 |
| Maianthemum canadense | Canada mayflower | 20 | 0.00 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 15 | 1.00 | H | 0 |
| Typha latifolia | Cattail | 10 | 1.00 | H | 1 |
| Carex stricta | Tussock sedge | 8 | 1.00 | H | 3 |
| Osmunda cinnamomea | Cinnamon fern | 8 | 0.82 | H | 0 |
| Symplocarpus foetidus | Skunk cabbage | 5 | 1.00 | H | 0 |
| Trillium sp. | Trillium | 1 | | H | 0 |
| Equisetum arvense | Common horsetail | 1 | 0.50 | H | 0 |

WSI: 0.720 WFV: 0.304 BOG: 0.140 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.04 BUSHY: 0.14 COMPACT: 0.04
MARSH SBCL: ROBUST: 0.04 BROADL: 0.11 NARROW: 0.03 FLOATING: 0.00
SUBTYPES: CMNPRUVW
WATERSHED: Hampton Falls River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 65.1 | :******:***** : | 6 WQual | 52.9 | :******: : |
| 2 Hydro | 68.4 | :******:***** : | 7 Econ | 73.9 | :******:** : |
| 3 GrWat | 37.7 | :***** : : | 8 Recr | 41.0 | :******:** : |
| 4 Flood | 62.7 | :******:* : | 9 Aest | 43.4 | :******:** : |
| 5 ShoLi | 31.0 | :******:***** : | 10 Educ | 63.4 | :******:***** : |

AVERAGE DECILE OF TEN MODELS: 7.20 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: HA034 PLACE: (Photo 4-6) N of Lamprey Rd, W of Great Hill, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/24/86 | GS&ABUN 20: | TYPLAT 3 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | PINSTR10 | GS&ABUN 21: | SYMFOE 4 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | ACERUB50 | GS&ABUN 22: | CARSTR 2 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | ULMAME15 | GS&ABUN 23: | CAREX 2 | Lo Vernal pool): | L |
| GS&ABUN 4 : | BETLUT 4 | GS&ABUN 24: | ONOSEN20 | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | BETLEN 1 | GS&ABUN 25: | EQUSYL 1 | | |
| GS&ABUN 6 : | QUERUB 1 | GS&ABUN 26: | EQUARV 1 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | FAGGRA 1 | GS&ABUN 27: | MAICAN 5 | WSI: 0.694 | |
| GS&ABUN 8 : | TSUCAN 2 | GS&ABUN 28: | IRIVER 1 | WFV: 0.432 | |
| GS&ABUN 9 : | BETPOP 1 | GS&ABUN 29: | VERVIR 1 | Perc. Wild. Food: | H |
| GS&ABUN 10: | BETPAP 1 | GS&ABUN 30: | SPHAGN 5 | NO. of species: | 30 |
| GS&ABUN 11: | SPILAT 1 | INVestigator : | ASG | Prime : | |
| GS&ABUN 12: | VACCOR 2 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.016 |
| GS&ABUN 13: | aCERUB 3 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 190 |
| GS&ABUN 14: | ILEVER 4 | CLaSs Richn (1-5) : | 4 | Conifer? | N |
| GS&ABUN 15: | ALNRUG10 | SubTYpe Richn (ABCDE): | C | Trees : | 0.453 |
| GS&ABUN 16: | VIBREC10 | VEGeta Intersp (HML) : | M | Shrubs: | 0.311 |
| GS&ABUN 17: | CORAMO 2 | Surr. HABitat (123) : | 1 | Herbs : | 0.237 |
| GS&ABUN 18: | RHURAD25 | Cover DISpers.(ABCDE): | E | Bog : | 0.026 |
| GS&ABUN 19: | RIBES 2 | Percent Open W (LMHV): | L | SBTY : | MNRUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :HA034 | OUTlet2 (APE) | : |
| 2 letter TOWN codes*: | HF | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 33 | HYdr CoN (None, Stream, River | |
| Other SOil | : 547 | Lake or Combin. | :S |
| Dom Surround Soil | : 47 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 42 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :H | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :M | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | :E | SurGeol Surround(ALOT) | :T THIckness (LMH) :L |
| INL4 (APE) | :E | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) N of Lamprey Rd, W of Great Hill, HF
HA034 Field Date: 04/24/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Pinus strobus | White pine | 10 | 0.18 | T | 3 |
| Acer rubrum | Red maple | 50 | 0.50 | T | 3 |
| Ulmus americana | American elm | 15 | 0.82 | T | 1 |
| Betula lutea | Yellow birch | 4 | 0.50 | T | 2 |
| Betula lenta | Sweet birch | 1 | 0.18 | T | 2 |
| Quercus rubra | Northern red oak | 1 | 0.18 | T | 4 |
| Fagus grandifolia | Beech | 1 | 0.18 | T | 3 |
| Tsuga canadensis | Hemlock | 2 | 0.50 | T | 1 |
| Betula populifolia | Grey birch | 1 | 0.50 | T | 2 |
| Betula papyrifera | Paper birch | 1 | 0.18 | T | 2 |
| Spiraea latifolia | Meadowsweet | 1 | 0.50 | S | 0 |
| Vaccinium corymbosum | Highbush blueberry | 2 | 0.82 | S | 2 |
| Acer rubrum | Red maple | 3 | 0.50 | S | 3 |
| Ilex verticillata | Winterberry | 4 | 1.00 | S | 1 |
| Alnus rugosa | Speckled alder | 10 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 10 | 0.82 | S | 1 |
| Cornus amomum | Silky dogwood | 2 | 0.82 | S | 3 |
| Rhus radicans | Poison ivy | 25 | 0.82 | S | 2 |
| Ribes sp. | Gooseberry | 2 | | S | 1 |
| Typha latifolia | Cattail | 3 | 1.00 | H | 1 |
| Symplocarpus foetidus | Skunk cabbage | 4 | 1.00 | H | 0 |
| Carex stricta | Tussock sedge | 2 | 1.00 | H | 3 |
| Carex sp. | Sedge | 2 | 1.00 | H | 3 |
| Onoclea sensibilis | Sensitive fern | 20 | 1.00 | H | 0 |
| Equisetum sylvaticum | Wood horsetail | 1 | 0.82 | H | 0 |
| Equisetum arvense | Common horsetail | 1 | 0.50 | H | 0 |
| Maianthemum canadense | Canada mayflower | 5 | 0.00 | H | 0 |
| Iris versicolor | Blue flag | 1 | 1.00 | H | 0 |
| Veratrum viride | White hellebore | 1 | 0.82 | H | 0 |
| Sphagnum sp. | Sphagnum moss | 5 | 1.00 | H | 0 |

WSI: 0.693 WFV: 0.431 BOG: 0.026 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.01 BUSHY: 0.14 COMPACT: 0.01
MARSH SBCL: ROBUST: 0.02 BROADL: 0.12 NARROW: 0.03 FLOATING: 0.00
SUBTYPES:MNRUVW
WATERSHED: Hampton Falls River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 47.2 | :******:* : | 6 WQual | 58.8 | :******:**** : |
| 2 Hydro | 61.8 | :******:** : | 7 Econ | 73.9 | :******:** : |
| 3 GrWat | 41.5 | :******: : | 8 Recr | 36.9 | :******:* : |
| 4 Flood | 63.7 | :******:** : | 9 Aest | 39.1 | :******: : |
| 5 ShoLi | 0.00 | :** : : | 10 Educ | 46.0 | :******:* : |

AVERAGE DECILE OF TEN MODELS: 5.90

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA002 PLACE: (Photo 3-6) S of Depot Ave, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/14/86 | GS&ABUN 20: | ILEVER 3 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB25 | GS&ABUN 21: | RHURAD 5 | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : | BETPOP 1 | GS&ABUN 22: | MYRPEN 1 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | PINSTR 4 | GS&ABUN 23: | sALIX 5 | Lo Vernal pool): | L |
| GS&ABUN 4 : | PRUSER 1 | GS&ABUN 24: | vIBLEN 1 | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | CAROVA 1 | GS&ABUN 25: | ALNRUG20 | | |
| GS&ABUN 6 : | ULMAME 1 | GS&ABUN 26: | SOLIDA 2 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | POPTRE 2 | GS&ABUN 27: | LYTSAL 2 | WSI: 0.615 | |
| GS&ABUN 8 : | QUEBIC 1 | GS&ABUN 28: | ONOSEN 3 | WFV: 0.369 | |
| GS&ABUN 9 : | RHUTYP 2 | GS&ABUN 29: | ASTER 2 | Perc. Wild. Food: | M |
| GS&ABUN 10: | pINSTR 1 | GS&ABUN 30: | POa 5 | NO. of species: | 30 |
| GS&ABUN 11: | aCERUB 5 | INVestigator | : TLP | Prime : | |
| GS&ABUN 12: | SPILAT25 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.022 |
| GS&ABUN 13: | VITIS 5 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 137 |
| GS&ABUN 14: | VIBREC 6 | CLaSs Richn (1-5) | : 2 | Conifer? | N |
| GS&ABUN 15: | CORAMO 1 | SubTYpe Richn (ABCDE): | D | Trees : | 0.277 |
| GS&ABUN 16: | pOPTRE 1 | VEGeta Intersp (HML) : | L | Shrubs: | 0.620 |
| GS&ABUN 17: | ROSMUL 3 | Surr. HABitat (123) : | 2 | Herbs : | 0.102 |
| GS&ABUN 18: | uLMAME 2 | Cover DISpers.(ABCDE): | E | Bog : | 0.000 |
| GS&ABUN 19: | RHAFRA 1 | Percent Open W (LMHV): | L | SBTY : | CNPUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA002 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 538 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :R |
| Dom Surround Soil | : 26 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 397 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 510 | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :H | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :A | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :O THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :E | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 3-6) S of Depot Ave, HF
TA002 Field Date: 04/14/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 25 | 0.50 | T | 3 |
| Betula populifolia | Grey birch | 1 | 0.50 | T | 2 |
| Pinus strobus | White pine | 4 | 0.18 | T | 3 |
| Prunus serotina | Black cherry | 1 | 0.18 | T | 3 |
| Carya ovata | Shagbark hickory | 1 | 0.18 | T | 2 |
| Ulmus americana | American elm | 1 | 0.82 | T | 1 |
| Populus tremuloides | Quaking aspen | 2 | 0.00 | T | 2 |
| Quercus bicolor | Swamp white oak | 1 | 1.00 | T | 4 |
| Rhus typhina | Staghorn sumac | 2 | 0.00 | T | 2 |
| Pinus strobus | White pine | 1 | 0.18 | S | 3 |
| Acer rubrum | Red maple | 5 | 0.50 | S | 3 |
| Spiraea latifolia | Meadowsweet | 25 | 0.50 | S | 0 |
| Vitis sp. | Grapevine | 5 | | S | 3 |
| Viburnum recognitum | Northern arrowwood | 6 | 0.82 | S | 1 |
| Cornus amomum | Silky dogwood | 1 | 0.82 | S | 3 |
| Populus tremuloides | Quaking aspen | 1 | 0.00 | S | 2 |
| Rosa multiflora | Multiflora rose | 3 | 0.00 | S | 1 |
| Ulmus americana | American elm | 2 | 0.82 | S | 1 |
| Rhamnus frangula | Europ. buckthorn | 1 | 0.50 | S | 0 |
| Ilex verticillata | Winterberry | 3 | 1.00 | S | 1 |
| Rhus radicans | Poison ivy | 5 | 0.82 | S | 2 |
| Myrica pensylvanica | Bayberry | 1 | 0.50 | S | 2 |
| Salix sp. | Willow | 5 | 0.82 | S | 1 |
| Viburnum lentago | Nannyberry | 1 | 0.00 | S | 1 |
| Alnus rugosa | Speckled alder | 20 | 1.00 | S | 1 |
| Solidago sp. | Goldenrod | 2 | | H | 0 |
| Lythrum salicaria | Purple loosestrife | 2 | 1.00 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 3 | 1.00 | H | 0 |
| Aster sp. | Asters | 2 | | H | 0 |
| Poaceae | Grasses | 5 | | H | 1 |

WSI: 0.615 WFV: 0.368 BOG: 0.000 SALT: 0.000 DUNE: 0.007
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.10 BUSHY: 0.22 COMPACT: 0.18
MARSH SBCL: ROBUST: 0.01 BROADL: 0.02 NARROW: 0.03 FLOATING: 0.00
SUBTYPES: CNPUVW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 31.0 | :** : : | 6 WQual | 44.1 | :** : : |
| 2 Hydro | 50.0 | :**** : : | 7 Econ | 73.9 | :******:** : |
| 3 GrWat | 28.3 | :* : : | 8 Recr | 41.0 | :******:** : |
| 4 Flood | 56.8 | :** : : | 9 Aest | 34.7 | :**** : : |
| 5 ShoLi | 0.00 | :** : : | 10 Educ | 33.3 | :**** : : |

AVERAGE DECILE OF TEN MODELS: 3.20

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA004 PLACE: (Photo 3-8) N of Old Coach Lane, E of Rt1, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/15/86 | GS&ABUN 20: | RHURAD 3 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | PINSTR20 | GS&ABUN 21: | LYCOBS 1 | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : | ACERUB35 | GS&ABUN 22: | OSMCIN45 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | BETLUT 1 | GS&ABUN 23: | JUNEFF 1 | Lo Vernal pool): | L |
| GS&ABUN 4 : | QUEALB 1 | GS&ABUN 24: | PHRCOM 1 | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | ULMAME 1 | GS&ABUN 25: | DRYSPI 1 | | |
| GS&ABUN 6 : | JUNVIR 1 | GS&ABUN 26: | TYPLAT 1 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | NYSSYL 1 | GS&ABUN 27: | POa 2 | WSI: | 0.647 |
| GS&ABUN 8 : | VIBREC 5 | GS&ABUN 28: | COPGRO 8 | WFV: | 0.341 |
| GS&ABUN 9 : | CLEALN 6 | GS&ABUN 29: | ONOSEN 3 | Perc. Wild. Food: | M |
| GS&ABUN 10: | ILEVER 7 | GS&ABUN 30: | SYMFOE 2 | NO. of species: | 30 |
| GS&ABUN 11: | aCERUB 4 | INVestigator | : TLP | Prime : | |
| GS&ABUN 12: | LINBEN 3 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.027 |
| GS&ABUN 13: | HAMVIR 2 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 167 |
| GS&ABUN 14: | vIBLEN 2 | CLaSs Richn (1-5) | : 5 | Conifer? | N |
| GS&ABUN 15: | pINSTR 1 | SubTYpe Richn (ABCDE): | B | Trees : | 0.359 |
| GS&ABUN 16: | SPILAT 1 | VEGeta Intersp (HML) : | M | Shrubs: | 0.252 |
| GS&ABUN 17: | VACCOR 6 | Surr. HABitat (123) : | 2 | Herbs : | 0.389 |
| GS&ABUN 18: | LYOLIG 1 | Cover DISpers.(ABCDE): | C | Bog : | 0.000 |
| GS&ABUN 19: | ROSPAL 1 | Percent Open W (LMHV): | L | SBTY : | MPUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA004 | OUTlet2 (APE) | :E |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :L |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 214 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :R |
| Dom Surround Soil | : 497 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 313 | POP'n density (LMH) | :M |
| Other Surr. Soil2 | : 40 | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :H | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :L | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :O PERmeabil (LMH) :H |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :L THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 3-8) N of Old Coach Lane, E of Rt1, HF
TA004 Field Date: 04/15/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Pinus strobus | White pine | 20 | 0.18 | T | 3 |
| Acer rubrum | Red maple | 35 | 0.50 | T | 3 |
| Betula lutea | Yellow birch | 1 | 0.50 | T | 2 |
| Quercus alba | White oak | 1 | 0.18 | T | 4 |
| Ulmus americana | American elm | 1 | 0.82 | T | 1 |
| Juniperus virginiana | Red cedar | 1 | 0.18 | T | 1 |
| Nyssa sylvatica | Black gum, tupelo | 1 | 0.82 | T | 1 |
| Viburnum recognitum | Northern arrowwood | 5 | 0.82 | S | 1 |
| Clethra alnifolia | Sweet pepperbush | 6 | 0.82 | S | 0 |
| Ilex verticillata | Winterberry | 7 | 1.00 | S | 1 |
| Acer rubrum | Red maple | 4 | 0.50 | S | 3 |
| Lindera benzoin | Spicebush | 3 | 0.82 | S | 1 |
| Hamamelis virginiana | Witchhazel | 2 | 0.18 | S | 0 |
| Viburnum lentago | Nannyberry | 2 | 0.00 | S | 1 |
| Pinus strobus | White pine | 1 | 0.18 | S | 3 |
| Spiraea latifolia | Meadowsweet | 1 | 0.50 | S | 0 |
| Vaccinium corymbosum | Highbush blueberry | 6 | 0.82 | S | 2 |
| Lyonia ligustrina | Maleberry | 1 | 1.00 | S | 0 |
| Rosa palustris | Marsh rose | 1 | 1.00 | S | 1 |
| Rhus radicans | Poison ivy | 3 | 0.82 | S | 2 |
| Lycopodium obscurum | Ground pine | 1 | 0.18 | H | 0 |
| Osmunda cinnamomea | Cinnamon fern | 45 | 0.82 | H | 0 |
| Juncus effusus | Soft rush | 1 | 1.00 | H | 0 |
| Phragmites communis | Reed | 1 | 0.82 | H | 0 |
| Dryopteris spinulosa | Spinulose shieldfern | 1 | 0.82 | H | 0 |
| Typha latifolia | Cattail | 1 | 1.00 | H | 1 |
| Poaceae | Grasses | 2 | | H | 1 |
| Coptis groenlandica | Goldthread | 8 | 0.82 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 3 | 1.00 | H | 0 |
| Symplocarpus foetidus | Skunk cabbage | 2 | 1.00 | H | 0 |

WSI: 0.647 WFV: 0.341 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.05 BUSHY: 0.17 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.01 BROADL: 0.35 NARROW: 0.01 FLOATING: 0.00
SUBTYPES: MPUW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|
| 1 Biol | 61.2 | :******:***** : |
| 2 Hydro | 69.7 | :******:***** : |
| 3 GrWat | 60.3 | :******:***** : |
| 4 Flood | 64.7 | :******:** : |
| 5 ShoLi | 14.4 | :******:* : |
| 6 WQual | 60.7 | :******:*** : |
| 7 Econ | 73.9 | :******:** : |
| 8 Recr | 49.3 | :******:***** : |
| 9 Aest | 43.4 | :******:** : |
| 10 Educ | 58.7 | :******:*** : |

AVERAGE DECILE OF TEN MODELS: 7.90

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA007 PLACE: (Photo 4-6) Rt88, between Cock Hill Rd & I95, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 03/27/86 | GS&ABUN 20: | | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB15 | GS&ABUN 21: | | wetl JUXtapos(HML): | L |
| GS&ABUN 2 : | PINSTR 2 | GS&ABUN 22: | | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | aCERUB 5 | GS&ABUN 23: | | Lo Vernal pool): | L |
| GS&ABUN 4 : | VIBREC60 | GS&ABUN 24: | | Veg.Spec. Richness: | L |
| GS&ABUN 5 : | ALNRUG15 | GS&ABUN 25: | | | |
| GS&ABUN 6 : | SPILAT 5 | GS&ABUN 26: | | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | pINSTR 1 | GS&ABUN 27: | | WSI: | 0.799 |
| GS&ABUN 8 : | ONOSEN25 | GS&ABUN 28: | | WFV: | 0.281 |
| GS&ABUN 9 : | | GS&ABUN 29: | | Perc. Wild. Food: | M |
| GS&ABUN 10: | | GS&ABUN 30: | | NO. of species: | 8 |
| GS&ABUN 11: | | INVestigator : | ASG | Prime : | |
| GS&ABUN 12: | | Dom Wetl Class (0-11): | 6 | Aesthetic: | 0.000 |
| GS&ABUN 13: | | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 128 |
| GS&ABUN 14: | | CLaSs Richn (1-5) : | 2 | Conifer? | N |
| GS&ABUN 15: | | SubTYpe Richn (ABCDE): | D | Trees : | 0.133 |
| GS&ABUN 16: | | VEGeta Intersp (HML) : | M | Shrubs: | 0.672 |
| GS&ABUN 17: | | Surr. HABitat (123) : | 2 | Herbs : | 0.195 |
| GS&ABUN 18: | | Cover DISpers.(ABCDE): | D | Bog : | 0.000 |
| GS&ABUN 19: | | Percent Open W (LMHV): | L | SBTY : | CPUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA007 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :C | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :L | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 68 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :N |
| Dom Surround Soil | : 538 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 510 | POP'n density (LMH) | :M |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :L | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :6 | | |
| RIPArian conn (YN) | :N | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :T PERmeabil (LMH) :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :L THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :R |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :A | | |

| | | | | | |
|---|---|---|---|---|---|
| * NC | New Castle | RY | Rye | HA | Hampton |
| NH | North Hampton | HF | Hampton Falls | SE | Seabrook |

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) Rt88, between Cock Hill Rd & I95, HF
TA007 Field Date: 03/27/86 Report Date: 06/26/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 15 | 0.50 | T | 3 |
| Pinus strobus | White pine | 2 | 0.18 | T | 3 |
| Acer rubrum | Red maple | 5 | 0.50 | S | 3 |
| Viburnum recognitum | Northern arrowwood | 60 | 0.82 | S | 1 |
| Alnus rugosa | Speckled alder | 15 | 1.00 | S | 1 |
| Spiraea latifolia | Meadowsweet | 5 | 0.50 | S | 0 |
| Pinus strobus | White pine | 1 | 0.18 | S | 3 |
| Onoclea sensibilis | Sensitive fern | 25 | 1.00 | H | 0 |

WSI: 0.798 WFV: 0.281 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.04 BUSHY: 0.58 COMPACT: 0.03
MARSH SBCL: ROBUST: 0.00 BROADL: 0.19 NARROW: 0.00 FLOATING: 0.00
SUBTYPES: CPUW
WATERSHED: Taylor River TYPE: Shrub Wetland

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 32.5 | :** : : | 6 WQual | 51.9 | :******: : |
| 2 Hydro | 3.94 | :* : : | 7 Econ | 39.1 | :** : : |
| 3 GrWat | 20.7 | :* : : | 8 Recr | 12.3 | :* : : |
| 4 Flood | 58.8 | :*** : : | 9 Aest | 27.5 | :* : : |
| 5 ShoLi | 0.00 | :** : : | 10 Educ | 25.3 | :* : : |

AVERAGE DECILE OF TEN MODELS: 1.90

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA008 PLACE: (Photo 3-8) Kenney Brook, N of Rt88, HF

| | | | |
|---|---|---|---|
| FL DATe : 03/28/86 | GS&ABUN 20: SOLIDA 1 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : ACERUB25 | GS&ABUN 21: SPHAGN 4 | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : QUERUB 3 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : BETLUT 4 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : QUEALB 1 | GS&ABUN 24: | Veg.Spec. Richness: | M |
| GS&ABUN 5 : CORAMO 1 | GS&ABUN 25: | | |
| GS&ABUN 6 : VIBCAS 1 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : tSUCAN 1 | GS&ABUN 27: | WSI: 0.663 | |
| GS&ABUN 8 : KALANG 2 | GS&ABUN 28: | WFV: 0.411 | |
| GS&ABUN 9 : ILEVER 2 | GS&ABUN 29: | Perc. Wild. Food: | H |
| GS&ABUN 10: VACCOR 2 | GS&ABUN 30: | NO. of species: | 21 |
| GS&ABUN 11: ALNRUG 5 | INVestigator : ASG | Prime : | |
| GS&ABUN 12: CLEALN 2 | Dom Wetl Class (0-11): 7 | Aesthetic: | 0.014 |
| GS&ABUN 13: SAMCAN 1 | SPec ELem (ADEFHRSW ): | Tot ABUN: | 73 |
| GS&ABUN 14: VIBREC 3 | CLaSs Richn (1-5) : 3 | Conifer? | N |
| GS&ABUN 15: sALIX 1 | SubTYpe Richn (ABCDE): D | Trees : | 0.452 |
| GS&ABUN 16: HAMVIR 1 | VEGeta Intersp (HML) : L | Shrubs: | 0.301 |
| GS&ABUN 17: ONOSEN 6 | Surr. HABitat (123) : 2 | Herbs : | 0.247 |
| GS&ABUN 18: COPGRO 5 | Cover DISpers.(ABCDE): E | Bog : | 0.055 |
| GS&ABUN 19: ASTER 2 | Percent Open W (LMHV): L | SBTY : | CMPUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA008 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :L | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 538 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :S |
| Dom Surround Soil | : 38 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 313 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :L | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :4 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :L THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 3-8) Kenney Brook, N of Rt88, HF
TA008 Field Date: 03/28/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 25 | 0.50 | T | 3 |
| Quercus rubra | Northern red oak | 3 | 0.18 | T | 4 |
| Betula lutea | Yellow birch | 4 | 0.50 | T | 2 |
| Quercus alba | White oak | 1 | 0.18 | T | 4 |
| Cornus amomum | Silky dogwood | 1 | 0.82 | S | 3 |
| Viburnum cassinoides | Northern wild raisin | 1 | 0.82 | S | 1 |
| Tsuga canadensis | Hemlock | 1 | 0.50 | S | 1 |
| Kalmia angustifolia | Sheep laurel | 2 | 0.50 | S | 0 |
| Ilex verticillata | Winterberry | 2 | 1.00 | S | 1 |
| Vaccinium corymbosum | Highbush blueberry | 2 | 0.82 | S | 2 |
| Alnus rugosa | Speckled alder | 5 | 1.00 | S | 1 |
| Clethra alnifolia | Sweet pepperbush | 2 | 0.82 | S | 0 |
| Sambucus canadensis | Elderberry | 1 | 0.18 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 3 | 0.82 | S | 1 |
| Salix sp. | Willow | 1 | 0.82 | S | 1 |
| Hamamelis virginiana | Witchhazel | 1 | 0.18 | S | 0 |
| Onoclea sensibilis | Sensitive fern | 6 | 1.00 | H | 0 |
| Coptis groenlandica | Goldthread | 5 | 0.82 | H | 0 |
| Aster sp. | Asters | 2 | | H | 0 |
| Solidago sp. | Goldenrod | 1 | | H | 0 |
| Sphagnum sp. | Sphagnum moss | 4 | 1.00 | H | 0 |

WSI: 0.662 WFV: 0.410 BOG: 0.054 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.04 BUSHY: 0.23 COMPACT: 0.02
MARSH SBCL: ROBUST: 0.00 BROADL: 0.15 NARROW: 0.00 FLOATING: 0.00
SUBTYPES: CMPUW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 30.2 | :** : : | 6 WQual | 47.0 | :*** : : |
| 2 Hydro | 46.0 | :** : : | 7 Econ | 56.5 | :***** : : |
| 3 GrWat | 30.1 | :** : : | 8 Recr | 21.9 | :** : : |
| 4 Flood | 47.0 | :* : : | 9 Aest | 34.7 | :*** : : |
| 5 ShoLi | 0.00 | :** : : | 10 Educ | 33.3 | :*** : : |

AVERAGE DECILE OF TEN MODELS: 2.40

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA015 PLACE: (Photo 5-10)Taylor River, between Mill Rd & Towle Rd, HA HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 06/25/86 | GS&ABUN 20: | IMPCAP10 | Veg DENsity (HML) : | L |
| GS&ABUN 1 : | ACERUB 2 | GS&ABUN 21: | POa 1 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | QUERUB 1 | GS&ABUN 22: | TYPLAT 8 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | TILAME 1 | GS&ABUN 23: | CAREX 3 | Lo Vernal pool): | H |
| GS&ABUN 4 : | TSUCAN 1 | GS&ABUN 24: | ONOSEN 1 | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | CAROVA 1 | GS&ABUN 25: | POTEMO10 | | |
| GS&ABUN 6 : | PINSTR 1 | GS&ABUN 26: | PONCOR 2 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | VIBREC 2 | GS&ABUN 27: | CARCRI 1 | WSI: 0.881 | |
| GS&ABUN 8 : | RHURAD 1 | GS&ABUN 28: | JUNEFF 1 | WFV: 0.231 | |
| GS&ABUN 9 : | cARCAR 1 | GS&ABUN 29: | CERDEM 4 | Perc. Wild. Food: | M |
| GS&ABUN 10: | uLMAME 1 | GS&ABUN 30: | | NO. of species: | 29 |
| GS&ABUN 11: | SAMCAN 1 | INVestigator : | GS | Prime : | P |
| GS&ABUN 12: | ALNRUG 3 | Dom Wetl Class (0-11): | 1 | Aesthetic: | 0.114 |
| GS&ABUN 13: | ROSPAL 1 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 79 |
| GS&ABUN 14: | SPILAT 1 | CLaSs Richn (1-5) : | 5 | Conifer? | N |
| GS&ABUN 15: | DRYTHE 1 | SubTYpe Richn (ABCDE): | C | Trees : | 0.089 |
| GS&ABUN 16: | SAGLAT 3 | VEGeta Intersp (HML) : | L | Shrubs: | 0.139 |
| GS&ABUN 17: | SPARGA 5 | Surr. HABitat (123) : | 1 | Herbs : | 0.772 |
| GS&ABUN 18: | EQUPRA 1 | Cover DISpers.(ABCDE): | A | Bog : | 0.000 |
| GS&ABUN 19: | LEMMIN10 | Percent Open W (LMHV): | H | SBTY : | FNPRUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA015 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HA HF | P% Bord OW (NLMH) | :H |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | :H |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | :D |
| Dom SOil type (int) | : 6 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :R |
| Dom Surround Soil | : 38 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 510 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 40 | loc SCARCity (LMH) | :H |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :M | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :M |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :L THIckness (LMH) :M |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 5-10) Taylor River, between Mill Rd & Towle Rd, HA HF
TA015 Field Date: 06/25/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 2 | 0.50 | T | 3 |
| Quercus rubra | Northern red oak | 1 | 0.18 | T | 4 |
| Tilia americana | Basswood | 1 | 0.18 | T | 1 |
| Tsuga canadensis | Hemlock | 1 | 0.50 | T | 1 |
| Carya ovata | Shagbark hickory | 1 | 0.18 | T | 2 |
| Pinus strobus | White pine | 1 | 0.18 | T | 3 |
| Viburnum recognitum | Northern arrowwood | 2 | 0.82 | S | 1 |
| Rhus radicans | Poison ivy | 1 | 0.82 | S | 2 |
| Carpinus caroliniana | Ironwood | 1 | 0.50 | S | 1 |
| Ulmus americana | American elm | 1 | 0.82 | S | 1 |
| Sambucus canadensis | Elderberry | 1 | 0.18 | S | 1 |
| Alnus rugosa | Speckled alder | 3 | 1.00 | S | 1 |
| Rosa palustris | Marsh rose | 1 | 1.00 | S | 1 |
| Spiraea latifolia | Meadowsweet | 1 | 0.50 | S | 0 |
| Dryopteris thelypteris | Marsh fern | 1 | 1.00 | H | 0 |
| Sagittaria latifolia | Arrowhead | 3 | 1.00 | H | 1 |
| Sparganium sp. | Burreed | 5 | 1.00 | H | 1 |
| Equisetum pratense | Meadow horsetail | 1 | 0.82 | H | 0 |
| Lemna minor | Duckweed | 10 | 1.00 | H | 1 |
| Impatiens capensis | Jewelweed | 10 | 0.82 | H | 0 |
| Poaceae | Grasses | 1 | | H | 1 |
| Typha latifolia | Cattail | 8 | 1.00 | H | 1 |
| Carex sp. | Sedge | 3 | 1.00 | H | 3 |
| Onoclea sensibilis | Sensitive fern | 1 | 1.00 | H | 0 |
| Potemogeton sp. | Pondweed | 10 | 1.00 | H | 0 |
| Pontederia cordata | Pickerel weed | 2 | 1.00 | H | 3 |
| Carex crinita | Fringed sedge | 1 | 1.00 | H | 3 |
| Juncus effusus | Soft rush | 1 | 1.00 | H | 0 |
| Ceratophyllum demersum | Coontail | 4 | 1.00 | H | 0 |

WSI: 0.880 WFV: 0.231 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.02 BUSHY: 0.08 COMPACT: 0.01
MARSH SBCL: ROBUST: 0.30 BROADL: 0.08 NARROW: 0.07 FLOATING: 0.30
SUBTYPES: FNPRUW
WATERSHED: Taylor River TYPE: Open Freshwater Wetland

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 57.3 | :******:***  : | 6 WQual | 44.1 | :**  :  : |
| 2 Hydro | 72.3 | :******:***** : | 7 Econ | 30.4 | :*  :  : |
| 3 GrWat | 50.9 | :******:**  : | 8 Recr | 71.2 | :******:******: |
| 4 Flood | 50.0 | :*  :  : | 9 Aest | 86.9 | :******:******: |
| 5 ShoLi | 44.8 | :******:******: | 10 Educ | 63.4 | :******:***** : |

AVERAGE DECILE OF TEN MODELS: 6.70 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA017 PLACE: (Photo 4-8) Brown Rd, W of I95, HF

| | | | |
|---|---|---|---|
| FL DATe : 04/04/86 | GS&ABUN 20: SOLIDA 1 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : ACERUB 1 | GS&ABUN 21: LYTSAL 1 | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : VIBLEN 1 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : JUNVIR 1 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : BERVUL 1 | GS&ABUN 24: | Veg.Spec. Richness: | L |
| GS&ABUN 5 : ALNRUG 7 | GS&ABUN 25: | | |
| GS&ABUN 6 : aCERUB 1 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : VIBREC 2 | GS&ABUN 27: | WSI: 0.923 | |
| GS&ABUN 8 : ROSPAL 1 | GS&ABUN 28: | WFV: 0.266 | |
| GS&ABUN 9 : SPILAT 2 | GS&ABUN 29: | Perc. Wild. Food: | M |
| GS&ABUN 10: ILEVER 1 | GS&ABUN 30: | NO. of species: | 21 |
| GS&ABUN 11: LONICE 1 | INVestigator : TLP | Prime : P | |
| GS&ABUN 12: ONOSEN 2 | Dom Wetl Class (0-11): 3 | Aesthetic: 0.016 | |
| GS&ABUN 13: SCICYP 1 | SPec ELem (ADEFHRSW ): | Tot ABUN: 92 | |
| GS&ABUN 14: POa 10 | CLaSs Richn (1-5) : 4 | Conifer? N | |
| GS&ABUN 15: CAREX 12 | SubTYpe Richn (ABCDE): C | Trees : 0.033 | |
| GS&ABUN 16: JUNEFF10 | VEGeta Intersp (HML) : M | Shrubs: 0.174 | |
| GS&ABUN 17: TYPLAT30 | Surr. HABitat (123) : 1 | Herbs : 0.793 | |
| GS&ABUN 18: PHRCOM 5 | Cover DISpers.(ABCDE): C | Bog : 0.000 | |
| GS&ABUN 19: ASTER 1 | Percent Open W (LMHV): L | SBTY : CNRUW | |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID :TA017 | OUTlet2 (APE) : | | |
| 2 letter TOWN codes*:HF | P% Bord OW (NLMH) :L | | |
| Topo CONfig (CSVH) :S | FETch (LH or blank) : | | |
| Wetl SIZe (LMH) :L | DEPTH (SD or blank) : | | |
| Dom SOil type (int) : 33 | HYdr CoN (None, Stream, River | | |
| Other SOil : 95 | Lake or Combin. :R | | |
| Dom Surround Soil : 32 | ACCeSs (Rd Wat Iso) :I | | |
| Other Surr. Soil1 : 313 | POP'n density (LMH) :L | | |
| Other Surr. Soil2 : | loc SCARCity (LMH) :L | | |
| wetl GRAdient (LH) :L | CROP (N Hay Fam Com):N | | |
| Surr. SLOpe (LH) :H | LEGAL accs (puB priV | | |
| TOpo. POsit. (LMH) :L | or Restricted) :V | | |
| Dom Hydr Condit(1-6):5 | | | |
| RIPArian conn (YN) :Y | | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral :P | CALCULATED FROM OTHER DATA AND SOIL: | | |
| INL2 (APE) : | SurGeol Under wl(ALOT):L | PERmeabil (LMH):L | |
| INL3 (APE) : | SurGeol Surround(ALOT):L | THIckness (LMH):L | |
| INL4 (APE) : | HPOSition (Perch,W,A) :P | GW Relat (DRC) :C | |
| INL5 (APE) : | TRAnsmissivity (LMH) :L | | |
| OUTLet1 (APE) :P | | | |

| | | | | | |
|---|---|---|---|---|---|
| * NC | New Castle | RY | Rye | HA | Hampton |
| NH | North Hampton | HF | Hampton Falls | SE | Seabrook |

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-8) Brown Rd, W of I95, HF
TA017 Field Date: 04/04/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 1 | 0.50 | T | 3 |
| Viburnum lentago | Nannyberry | 1 | 0.00 | T | 1 |
| Juniperus virginiana | Red cedar | 1 | 0.18 | T | 1 |
| Berberis vulgaris | Common barberry | 1 | | S | 0 |
| Alnus rugosa | Speckled alder | 7 | 1.00 | S | 1 |
| Acer rubrum | Red maple | 1 | 0.50 | S | 3 |
| Viburnum recognitum | Northern arrowwood | 2 | 0.82 | S | 1 |
| Rosa palustris | Marsh rose | 1 | 1.00 | S | 1 |
| Spiraea latifolia | Meadowsweet | 2 | 0.50 | S | 0 |
| Ilex verticillata | Winterberry | 1 | 1.00 | S | 1 |
| Lonicera sp. | Honeysuckle | 1 | 0.00 | S | 0 |
| Onoclea sensibilis | Sensitive fern | 2 | 1.00 | H | 0 |
| Scirpus cyperinus | Woolgrass | 1 | 1.00 | H | 3 |
| Poaceae | Grasses | 10 | | H | 1 |
| Carex sp. | Sedge | 12 | 1.00 | H | 3 |
| Juncus effusus | Soft rush | 10 | 1.00 | H | 0 |
| Typha latifolia | Cattail | 30 | 1.00 | H | 1 |
| Phragmites communis | Reed | 5 | 0.82 | H | 0 |
| Aster sp. | Asters | 1 | | H | 0 |
| Solidago sp. | Goldenrod | 1 | | H | 0 |
| Lythrum salicaria | Purple loosestrife | 1 | 1.00 | H | 0 |

WSI: 0.923 WFV: 0.266 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.01 BUSHY: 0.13 COMPACT: 0.02
MARSH SBCL: ROBUST: 0.39 BROADL: 0.02 NARROW: 0.35 FLOATING: 0.00
SUBTYPES: CNRUW
WATERSHED: Taylor River TYPE: Shallow Fresh Marsh

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 59.6 | :******:***  : | 6 WQual | 58.8 | :******:***  : |
| 2 Hydro | 57.8 | :******:*  : | 7 Econ | 34.7 | :*  :  : |
| 3 GrWat | 30.1 | :**  :  : | 8 Recr | 35.6 | :******:*  : |
| 4 Flood | 51.9 | :*  :  : | 9 Aest | 42.0 | :******:*  : |
| 5 ShoLi | 11.3 | :******:  : | 10 Educ | 41.2 | :***** :  : |

AVERAGE DECILE OF TEN MODELS: 4.70 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA018 PLACE: (Photo 4-6,8) Brown Rd, W of I95, HF

| | | | |
|---|---|---|---|
| FL DATe : 04/14/86 | GS&ABUN 20: | Veg DENsity (HML) : | H |
| GS&ABUN 1 : LONICE 1 | GS&ABUN 21: | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : jUNVIR 1 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : ALNRUG12 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : ROSPAL 1 | GS&ABUN 24: | Veg.Spec. Richness: | M |
| GS&ABUN 5 : CARSTR 1 | GS&ABUN 25: | | |
| GS&ABUN 6 : IRIVER 2 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : MYOSOT 4 | GS&ABUN 27: | WSI: 0.869 | |
| GS&ABUN 8 : JUNEFF15 | GS&ABUN 28: | WFV: 0.273 | |
| GS&ABUN 9 : POa 65 | GS&ABUN 29: | Perc. Wild. Food: M | |
| GS&ABUN 10: SOLIDA 2 | GS&ABUN 30: | NO. of species: 18 | |
| GS&ABUN 11: ASTER 2 | INVestigator : GS | Prime : P | |
| GS&ABUN 12: DAUCAR 1 | Dom Wetl Class (0-11): 3 | Aesthetic: 0.045 | |
| GS&ABUN 13: CAREX 20 | SPec ELem (ADEFHRSW ): | Tot ABUN: 143 | |
| GS&ABUN 14: POA 10 | CLaSs Richn (1-5) : 3 | Conifer? N | |
| GS&ABUN 15: PLAMAJ 1 | SubTYpe Richn (ABCDE): C | Trees : 0.000 | |
| GS&ABUN 16: TYPLAT 2 | VEGeta Intersp (HML) : M | Shrubs: 0.105 | |
| GS&ABUN 17: EPILEP 1 | Surr. HABitat (123) : 2 | Herbs : 0.895 | |
| GS&ABUN 18: RANUNC 2 | Cover DISpers.(ABCDE): D | Bog : 0.000 | |
| GS&ABUN 19: | Percent Open W (LMHV): L | SBTY : NRU | |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID :TA018 | OUTlet2 (APE) : | | |
| 2 letter TOWN codes*:HF | P% Bord OW (NLMH) :L | | |
| Topo CONfig (CSVH) :S | FETch (LH or blank) : | | |
| Wetl SIZe (LMH) :L | DEPTH (SD or blank) : | | |
| Dom SOil type (int) : 33 | HYdr CoN (None, Stream, River | | |
| Other SOil : 95 | Lake or Combin. :S | | |
| Dom Surround Soil : 313 | ACCeSs (Rd Wat Iso) :R | | |
| Other Surr. Soil1 : 32 | POP'n density (LMH) :L | | |
| Other Surr. Soil2 : | loc SCARCity (LMH) :M | | |
| wetl GRAdient (LH) :L | CROP (N Hay Fam Com):N | | |
| Surr. SLOpe (LH) :H | LEGAL accs (puB priV | | |
| TOpo. POsit. (LMH) :H | or Restricted) :V | | |
| Dom Hydr Condit(1-6):4 | | | |
| RIPArian conn (YN) :Y | | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral :E | CALCULATED FROM OTHER DATA AND SOIL: | | |
| INL2 (APE) :E | SurGeol Under wl(ALOT):L | PERmeabil (LMH):L | |
| INL3 (APE) :E | SurGeol Surround(ALOT):O | THIckness (LMH):L | |
| INL4 (APE) : | HPOSition (Perch,W,A) :P | GW Relat (DRC) :C | |
| INL5 (APE) : | TRAnsmissivity (LMH) :L | | |
| OUTLet1 (APE) :E | | | |

| | | | | | |
|---|---|---|---|---|---|
| * NC | New Castle | RY | Rye | HA | Hampton |
| NH | North Hampton | HF | Hampton Falls | SE | Seabrook |

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6,8) Brown Rd, W of I95, HF
TA018 Field Date: 04/14/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Lonicera sp. | Honeysuckle | 1 | 0.00 | S | 0 |
| Juniperus virginiana | Red cedar | 1 | 0.18 | S | 1 |
| Alnus rugosa | Speckled alder | 12 | 1.00 | S | 1 |
| Rosa palustris | Marsh rose | 1 | 1.00 | S | 1 |
| Carex stricta | Tussock sedge | 1 | 1.00 | H | 3 |
| Iris versicolor | Blue flag | 2 | 1.00 | H | 0 |
| Myosotis sp. | Forget-me-not | 4 | 0.00 | H | 0 |
| Juncus effusus | Soft rush | 15 | 1.00 | H | 0 |
| Poaceae | Grasses | 65 | | H | 1 |
| Solidago sp. | Goldenrod | 2 | | H | 0 |
| Aster sp. | Asters | 2 | | H | 0 |
| Daucus carota | Queen anne's lace | 1 | 0.00 | H | 0 |
| Carex sp. | Sedge | 20 | 1.00 | H | 3 |
| Poa sp. | Grass | 10 | | H | 1 |
| Plantago major | Common plantain | 1 | 0.18 | H | 1 |
| Typha latifolia | Cattail | 2 | 1.00 | H | 1 |
| Epilobium leptophyllum | Narrow-leaf willowweed | 1 | 0.50 | H | 1 |
| Ranunculus sp. | Buttercup | 2 | | H | 0 |

WSI: 0.868 WFV: 0.272 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.00 BUSHY: 0.09 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.02 BROADL: 0.00 NARROW: 0.81 FLOATING: 0.00
SUBTYPES:NRU
WATERSHED: Taylor River TYPE: Shallow Fresh Marsh

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 53.4 | :******:** : | 6 WQual | 52.9 | :******: : |
| 2 Hydro | 47.3 | :** : : | 7 Econ | 47.8 | :** : : |
| 3 GrWat | 28.3 | :* : : | 8 Recr | 32.8 | :***** : : |
| 4 Flood | 54.9 | :** : : | 9 Aest | 55.0 | :******:***** : |
| 5 ShoLi | 13.4 | :******: : | 10 Educ | 66.6 | :******:***** : |

AVERAGE DECILE OF TEN MODELS: 4.60 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA019 PLACE: (Photo 4-6) W of North Rd, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 03/26/86 | GS&ABUN 20: | LONICE 1 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB30 | GS&ABUN 21: | VITIS 2 | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : | ULMAME40 | GS&ABUN 22: | ONOSEN30 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | SALIX 2 | GS&ABUN 23: | ASTER 5 | Lo Vernal pool): | L |
| GS&ABUN 4 : | CAROVA 1 | GS&ABUN 24: | CAREX 2 | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | BETPOP 2 | GS&ABUN 25: | SOLIDA 2 | | |
| GS&ABUN 6 : | BETLEN 1 | GS&ABUN 26: | | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | PINSTR 1 | GS&ABUN 27: | | WSI: 0.748 | |
| GS&ABUN 8 : | QUERUB 1 | GS&ABUN 28: | | WFV: 0.348 | |
| GS&ABUN 9 : | TSUCAN 2 | GS&ABUN 29: | | Perc. Wild. Food: | M |
| GS&ABUN 10: | POPTRE 2 | GS&ABUN 30: | | NO. of species: | 25 |
| GS&ABUN 11: | FRAAME 2 | INVestigator : | ASG | Prime : | |
| GS&ABUN 12: | JUNVIR 1 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.015 |
| GS&ABUN 13: | aCERUB 8 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 164 |
| GS&ABUN 14: | RHURAD 5 | CLaSs Richn (1-5) : | 3 | Conifer? | N |
| GS&ABUN 15: | ILEVER 2 | SubTYpe Richn (ABCDE): | C | Trees : | 0.518 |
| GS&ABUN 16: | ALNRUG15 | VEGeta Intersp (HML) : | L | Shrubs: | 0.244 |
| GS&ABUN 17: | VIBREC 2 | Surr. HABitat (123) : | 2 | Herbs : | 0.238 |
| GS&ABUN 18: | VACCOR 2 | Cover DISpers.(ABCDE): | E | Bog : | 0.000 |
| GS&ABUN 19: | ROSA 3 | Percent Open W (LMHV): | L | SBTY : | PUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA019 | OUTlet2 (APE) | : |
| 2 letter TOWN codes*: | HF | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 33 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :S |
| Dom Surround Soil | : 40 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 38 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :L | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :T THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :E | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) W of North Rd, HF
TA019 Field Date: 03/26/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 30 | 0.50 | T | 3 |
| Ulmus americana | American elm | 40 | 0.82 | T | 1 |
| Salix sp. | Willow | 2 | 0.82 | T | 1 |
| Carya ovata | Shagbark hickory | 1 | 0.18 | T | 2 |
| Betula populifolia | Grey birch | 2 | 0.50 | T | 2 |
| Betula lenta | Sweet birch | 1 | 0.18 | T | 2 |
| Pinus strobus | White pine | 1 | 0.18 | T | 3 |
| Quercus rubra | Northern red oak | 1 | 0.18 | T | 4 |
| Tsuga canadensis | Hemlock | 2 | 0.50 | T | 1 |
| Populus tremuloides | Quaking aspen | 2 | 0.00 | T | 2 |
| Fraxinus americana | White ash | 2 | 0.50 | T | 1 |
| Juniperus virginiana | Red cedar | 1 | 0.18 | T | 1 |
| Acer rubrum | Red maple | 8 | 0.50 | S | 3 |
| Rhus radicans | Poison ivy | 5 | 0.82 | S | 2 |
| Ilex verticillata | Winterberry | 2 | 1.00 | S | 1 |
| Alnus rugosa | Speckled alder | 15 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 2 | 0.82 | S | 1 |
| Vaccinium corymbosum | Highbush blueberry | 2 | 0.82 | S | 2 |
| Rosa sp. | Rose | 3 | | S | 1 |
| Lonicera sp. | Honeysuckle | 1 | 0.00 | S | 0 |
| Vitis sp. | Grapevine | 2 | | S | 3 |
| Onoclea sensibilis | Sensitive fern | 30 | 1.00 | H | 0 |
| Aster sp. | Asters | 5 | | H | 0 |
| Carex sp. | Sedge | 2 | 1.00 | H | 3 |
| Solidago sp. | Goldenrod | 2 | | H | 0 |

WSI: 0.748 WFV: 0.347 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.04 BUSHY: 0.13 COMPACT: 0.01
MARSH SBCL: ROBUST: 0.00 BROADL: 0.18 NARROW: 0.01 FLOATING: 0.00
SUBTYPES:PUVW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 35.6 | :*** : : | 6 WQual | 48.0 | :*** : : |
| 2 Hydro | 52.6 | :***** : : | 7 Econ | 73.9 | :******:** : |
| 3 GrWat | 32.0 | :** : : | 8 Recr | 32.8 | :***** : : |
| 4 Flood | 64.7 | :******:** : | 9 Aest | 39.1 | :******: : |
| 5 ShoLi | 0.00 | :** : : | 10 Educ | 38.0 | :***** : : |

AVERAGE DECILE OF TEN MODELS: 4.10

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA020 PLACE: (Photo 4-6) North Rd, near jct with Rt88, HF

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FL DATe | : 04/14/86 | GS&ABUN 20: | TYPLAT 3 | Veg DENsity (HML) | : M |
| GS&ABUN 1 | : ACERUB35 | GS&ABUN 21: | POa 2 | wetl JUXtapos(HML) | : M |
| GS&ABUN 2 | : PRUSER 1 | GS&ABUN 22: | ONOSEN18 | w. level FLUCtu (Hi | |
| GS&ABUN 3 | : ULMAME 1 | GS&ABUN 23: | SOLIDA 2 | Lo Vernal pool) | : L |
| GS&ABUN 4 | : VACCOR 1 | GS&ABUN 24: | ASTER 2 | Veg.Spec. Richness | : M |
| GS&ABUN 5 | : PRUVIR 1 | GS&ABUN 25: | MYOSOT 2 | | |
| GS&ABUN 6 | : ALNRUG25 | GS&ABUN 26: | RANUNC 2 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 | : SPILAT 2 | GS&ABUN 27: | EPICOL 1 | WSI | : 0.715 |
| GS&ABUN 8 | : uLMAME 1 | GS&ABUN 28: | IMPCAP 8 | WFV | : 0.326 |
| GS&ABUN 9 | : sALIX 1 | GS&ABUN 29: | MATSTR 1 | Perc. Wild. Food | : M |
| GS&ABUN 10: | PARQUI 1 | GS&ABUN 30: | VIOLA 1 | NO. of species | : 30 |
| GS&ABUN 11: | ILEVER 1 | INVestigator | : GS | Prime | : P |
| GS&ABUN 12: | SAMCAN 1 | Dom Wetl Class (0-11) | : 7 | Aesthetic | : 0.060 |
| GS&ABUN 13: | VIBREC 1 | SPec ELem (ADEFHRSW ) | : | Tot ABUN | : 125 |
| GS&ABUN 14: | LONICE 4 | CLaSs Richn (1-5) | : 4 | Conifer? | N |
| GS&ABUN 15: | RUBALL 1 | SubTYpe Richn (ABCDE) | : C | Trees | : 0.296 |
| GS&ABUN 16: | RUBHIS 2 | VEGeta Intersp (HML) | : M | Shrubs | : 0.324 |
| GS&ABUN 17: | OSMREG 1 | Surr. HABitat (123) | : 2 | Herbs | : 0.380 |
| GS&ABUN 18: | OSMCIN 2 | Cover DISpers.(ABCDE) | : D | Bog | : 0.000 |
| GS&ABUN 19: | POLARI 1 | Percent Open W (LMHV) | : L | SBTY | : NRUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA020 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :L |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :L | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 33 | HYdr CoN (None, Stream, River | |
| Other SOil | : 95 | Lake or Combin. | :S |
| Dom Surround Soil | : 40 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 38 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 32 | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :H | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :T THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :E | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) North Rd, near jct with Rt88, HF
TA020 Field Date: 04/14/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 35 | 0.50 | T | 3 |
| Prunus serotina | Black cherry | 1 | 0.18 | T | 3 |
| Ulmus americana | American elm | 1 | 0.82 | T | 1 |
| Vaccinium corymbosum | Highbush blueberry | 1 | 0.82 | S | 2 |
| Prunus virginiana | Choke cherry | 1 | 0.00 | S | 3 |
| Alnus rugosa | Speckled alder | 25 | 1.00 | S | 1 |
| Spiraea latifolia | Meadowsweet | 2 | 0.50 | S | 0 |
| Ulmus americana | American elm | 1 | 0.82 | S | 1 |
| Salix sp. | Willow | 1 | 0.82 | S | 1 |
| Parthenocissus quinquefolia | Virginia creeper | 1 | 0.00 | S | 1 |
| Ilex verticillata | Winterberry | 1 | 1.00 | S | 1 |
| Sambucus canadensis | Elderberry | 1 | 0.18 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 1 | 0.82 | S | 1 |
| Lonicera sp. | Honeysuckle | 4 | 0.00 | S | 0 |
| Rubus allegheniensis | Blackberry | 1 | 0.00 | B | 3 |
| Rubus hispidus | Trailing bramble | 2 | 0.50 | B | 3 |
| Osmunda regalis | Royal fern | 1 | 1.00 | H | 0 |
| Osmunda cinnamomea | Cinnamon fern | 2 | 0.82 | H | 0 |
| Polygonum arifolium | Halberd-leaf smartweed | 1 | 1.00 | H | 3 |
| Typha latifolia | Cattail | 3 | 1.00 | H | 1 |
| Poaceae | Grasses | 2 | | H | 1 |
| Onoclea sensibilis | Sensitive fern | 18 | 1.00 | H | 0 |
| Solidago sp. | Goldenrod | 2 | | H | 0 |
| Aster sp. | Asters | 2 | | H | 0 |
| Myosotis sp. | Forget-me-not | 2 | 0.00 | H | 0 |
| Ranunculus sp. | Buttercup | 2 | | H | 0 |
| Epilobium coloratum | Purple willowweed | 1 | 1.00 | H | 1 |
| Impatiens capensis | Jewelweed | 8 | 0.82 | H | 0 |
| Mattuccia struthiopteris | Ostrich fern | 1 | 0.82 | H | 0 |
| Viola sp. | Violet | 1 | | H | 0 |

WSI: 0.715 WFV: 0.326 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.01 BUSHY: 0.27 COMPACT: 0.01
MARSH SBCL: ROBUST: 0.08 BROADL: 0.17 NARROW: 0.04 FLOATING: 0.00
SUBTYPES:NRUVW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 43.4 | :******: : | 6 WQual | 44.1 | :** : : |
| 2 Hydro | 52.6 | :***** : : | 7 Econ | 56.5 | :***** : : |
| 3 GrWat | 26.4 | :* : : | 8 Recr | 26.0 | :*** : : |
| 4 Flood | 60.7 | :***** : : | 9 Aest | 39.1 | :******: : |
| 5 ShoLi | 17.5 | :******:** : | 10 Educ | 46.0 | :******:* : |

AVERAGE DECILE OF TEN MODELS: 4.10 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA023 PLACE: (Photo 4-6) Jct Rt88 & North Rd, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe | : 03/26/86 | GS&ABUN 20: | | Veg DENsity (HML) : | M |
| GS&ABUN 1 | : ACERUB25 | GS&ABUN 21: | | wetl JUXtapos(HML): | L |
| GS&ABUN 2 | : ULMAME 1 | GS&ABUN 22: | | w. level FLUCtu (Hi | |
| GS&ABUN 3 | : POPTRE 2 | GS&ABUN 23: | | Lo Vernal pool): | L |
| GS&ABUN 4 | : RHUTYP 2 | GS&ABUN 24: | | Veg.Spec. Richness: | L |
| GS&ABUN 5 | : LONMOR 1 | GS&ABUN 25: | | | |
| GS&ABUN 6 | : ROSPAL10 | GS&ABUN 26: | | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 | : aCERUB20 | GS&ABUN 27: | | WSI: 0.675 | |
| GS&ABUN 8 | : SPILAT15 | GS&ABUN 28: | | WFV: 0.419 | |
| GS&ABUN 9 | : VIBREC 2 | GS&ABUN 29: | | Perc. Wild. Food: | H |
| GS&ABUN 10 | : ALNRUG30 | GS&ABUN 30: | | NO. of species: | 13 |
| GS&ABUN 11 | : sALIX 3 | INVestigator | : ASG | Prime : | |
| GS&ABUN 12 | : RUBALL 2 | Dom Wetl Class (0-11) | : 7 | Aesthetic: | 0.043 |
| GS&ABUN 13 | : ONOSEN 4 | SPec ELem (ADEFHRSW ) | : | Tot ABUN: | 117 |
| GS&ABUN 14: | | CLaSs Richn (1-5) | : 2 | Conifer? | N |
| GS&ABUN 15: | | SubTYpe Richn (ABCDE) | : D | Trees : | 0.256 |
| GS&ABUN 16: | | VEGeta Intersp (HML) | : L | Shrubs: | 0.701 |
| GS&ABUN 17: | | Surr. HABitat (123) | : 3 | Herbs : | 0.043 |
| GS&ABUN 18: | | Cover DISpers.(ABCDE) | : D | Bog : | 0.000 |
| GS&ABUN 19: | | Percent Open W (LMHV) | : L | SBTY : | CPUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA023 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :C | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :L | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 538 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :N |
| Dom Surround Soil | : 68 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : | POP'n density (LMH) | :M |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :6 | | |
| RIPArian conn (YN) | :N | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :T THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :R |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :A | | |

| | | | | | |
|---|---|---|---|---|---|
| * NC | New Castle | RY | Rye | HA | Hampton |
| NH | North Hampton | HF | Hampton Falls | SE | Seabrook |

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) Jct Rt88 & North Rd, HF
TA023 Field Date: 03/26/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 25 | 0.50 | T | 3 |
| Ulmus americana | American elm | 1 | 0.82 | T | 1 |
| Populus tremuloides | Quaking aspen | 2 | 0.00 | T | 2 |
| Rhus typhina | Staghorn sumac | 2 | 0.00 | T | 2 |
| Lonicera morrowi | Morrow's honeysuckle | 1 | 0.00 | S | 1 |
| Rosa palustris | Marsh rose | 10 | 1.00 | S | 1 |
| Acer rubrum | Red maple | 20 | 0.50 | S | 3 |
| Spiraea latifolia | Meadowsweet | 15 | 0.50 | S | 0 |
| Viburnum recognitum | Northern arrowwood | 2 | 0.82 | S | 1 |
| Alnus rugosa | Speckled alder | 30 | 1.00 | S | 1 |
| Salix sp. | Willow | 3 | 0.82 | S | 1 |
| Rubus allegheniensis | Blackberry | 2 | 0.00 | B | 3 |
| Onoclea sensibilis | Sensitive fern | 4 | 1.00 | H | 0 |

WSI: 0.674 WFV: 0.418 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.19 BUSHY: 0.36 COMPACT: 0.12
MARSH SBCL: ROBUST: 0.00 BROADL: 0.03 NARROW: 0.00 FLOATING: 0.00
SUBTYPES: CPUW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 20.1 | :* : : | 6 WQual | 44.1 | :** : : |
| 2 Hydro | 3.94 | :* : : | 7 Econ | 56.5 | :***** : : |
| 3 GrWat | 32.0 | :** : : | 8 Recr | 19.1 | :* : : |
| 4 Flood | 60.7 | :***** : : | 9 Aest | 34.7 | :**** : : |
| 5 ShoLi | 0.00 | :** : : | 10 Educ | 25.3 | :* : : |

AVERAGE DECILE OF TEN MODELS: 2.10

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA025 PLACE: (Photo 4-6) Kenney Brook, between I95 & Rt1, N of Rt88, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/14/86 | GS&ABUN 20: | TYPLAT 2 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB50 | GS&ABUN 21: | ASTER 3 | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : | BETPOP 2 | GS&ABUN 22: | SOLIDA 3 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | ULMAME 2 | GS&ABUN 23: | ONOSEN30 | Lo Vernal pool): | L |
| GS&ABUN 4 : | PRUSER 1 | GS&ABUN 24: | OSMCIN15 | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | ALNRUG 5 | GS&ABUN 25: | SPHAGN 8 | | |
| GS&ABUN 6 : | PARQUI 2 | GS&ABUN 26: | COPGRO 2 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | RHURAD15 | GS&ABUN 27: | POLSAG 1 | WSI: | 0.722 |
| GS&ABUN 8 : | pINSTR 1 | GS&ABUN 28: | RANUNC 2 | WFV: | 0.344 |
| GS&ABUN 9 : | SAMCAN 1 | GS&ABUN 29: | CAREX 2 | Perc. Wild. Food: | M |
| GS&ABUN 10: | pOPTRE 2 | GS&ABUN 30: | IMPCAP 2 | NO. of species: | 30 |
| GS&ABUN 11: | VACCOR 2 | INVestigator : | GS | Prime : | |
| GS&ABUN 12: | VIBREC 8 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.014 |
| GS&ABUN 13: | ILEVER 3 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 173 |
| GS&ABUN 14: | SPILAT 2 | CLaSs Richn (1-5) : | 3 | Conifer? | N |
| GS&ABUN 15: | VIBCAS 1 | SubTYpe Richn (ABCDE): | D | Trees : | 0.318 |
| GS&ABUN 16: | RHAFRA 1 | VEGeta Intersp (HML) : | L | Shrubs: | 0.269 |
| GS&ABUN 17: | LONICE 2 | Surr. HABitat (123) : | 2 | Herbs : | 0.413 |
| GS&ABUN 18: | RUBHIS 2 | Cover DISpers.(ABCDE): | D | Bog : | 0.046 |
| GS&ABUN 19: | SMILAX 1 | Percent Open W (LMHV): | L | SBTY : | MRUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA025 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :L |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :L | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 538 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :S |
| Dom Surround Soil | : 38 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 313 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :H | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :L | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :2 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :L THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) Kenney Brook, between I95 & Rt1, N of Rt88, HF
TA025 Field Date: 04/14/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 50 | 0.50 | T | 3 |
| Betula populifolia | Grey birch | 2 | 0.50 | T | 2 |
| Ulmus americana | American elm | 2 | 0.82 | T | 1 |
| Prunus serotina | Black cherry | 1 | 0.18 | T | 3 |
| Alnus rugosa | Speckled alder | 5 | 1.00 | S | 1 |
| Parthenocissus quinquefolia | Virginia creeper | 2 | 0.00 | S | 1 |
| Rhus radicans | Poison ivy | 15 | 0.82 | S | 2 |
| Pinus strobus | White pine | 1 | 0.18 | S | 3 |
| Sambucus canadensis | Elderberry | 1 | 0.18 | S | 1 |
| Populus tremuloides | Quaking aspen | 2 | 0.00 | S | 2 |
| Vaccinium corymbosum | Highbush blueberry | 2 | 0.82 | S | 2 |
| Viburnum recognitum | Northern arrowwood | 8 | 0.82 | S | 1 |
| Ilex verticillata | Winterberry | 3 | 1.00 | S | 1 |
| Spiraea latifolia | Meadowsweet | 2 | 0.50 | S | 0 |
| Viburnum cassinoides | Northern wild raisin | 1 | 0.82 | S | 1 |
| Rhamnus frangula | Europ. buckthorn | 1 | 0.50 | S | 0 |
| Lonicera sp. | Honeysuckle | 2 | 0.00 | S | 0 |
| Rubus hispidus | Trailing bramble | 2 | 0.50 | B | 3 |
| Smilax sp. | Greenbriar | 1 | 0.50 | B | 1 |
| Typha latifolia | Cattail | 2 | 1.00 | H | 1 |
| Aster sp. | Asters | 3 | | H | 0 |
| Solidago sp. | Goldenrod | 3 | | H | 0 |
| Onoclea sensibilis | Sensitive fern | 30 | 1.00 | H | 0 |
| Osmunda cinnamomea | Cinnamon fern | 15 | 0.82 | H | 0 |
| Sphagnum sp. | Sphagnum moss | 8 | 1.00 | H | 0 |
| Coptis groenlandica | Goldthread | 2 | 0.82 | H | 0 |
| Polygonum saggitatum | Arrow-leaved tearthumb | 1 | 1.00 | H | 3 |
| Ranunculus sp. | Buttercup | 2 | | H | 0 |
| Carex sp. | Sedge | 2 | 1.00 | H | 3 |
| Impatiens capensis | Jewelweed | 2 | 0.82 | H | 0 |

WSI: 0.721 WFV: 0.343 BOG: 0.046 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.01 BUSHY: 0.13 COMPACT: 0.01
MARSH SBCL: ROBUST: 0.02 BROADL: 0.27 NARROW: 0.01 FLOATING: 0.00
SUBTYPES:MRUVW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 34.8 | :*** : : | 6 WQual | 39.2 | :* : : |
| 2 Hydro | 38.1 | :** : : | 7 Econ | 56.5 | :***** : : |
| 3 GrWat | 30.1 | :** : : | 8 Recr | 21.9 | :** : : |
| 4 Flood | 37.2 | :* : : | 9 Aest | 34.7 | :*** : : |
| 5 ShoLi | 17.5 | :******:** : | 10 Educ | 33.3 | :*** : : |

AVERAGE DECILE OF TEN MODELS: 2.80

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA026 PLACE: (Photo 4-6) W of Rt1, N of Rt88, HF

| | | | |
|---|---|---|---|
| FL DATe : 03/28/86 | GS&ABUN 20: | Veg DENsity (HML) : | M |
| GS&ABUN 1 : ACERUB30 | GS&ABUN 21: | wetl JUXtapos(HML): | L |
| GS&ABUN 2 : ULMAME10 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : PINSTR 3 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : SASALB 1 | GS&ABUN 24: | Veg.Spec. Richness: | M |
| GS&ABUN 5 : BETLUT 1 | GS&ABUN 25: | | |
| GS&ABUN 6 : TSUCAN 1 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : ALNRUG 5 | GS&ABUN 27: | WSI: 0.756 | |
| GS&ABUN 8 : VIBREC 9 | GS&ABUN 28: | WFV: 0.328 | |
| GS&ABUN 9 : aCESAC 1 | GS&ABUN 29: | Perc. Wild. Food: | M |
| GS&ABUN 10: VACCOR 3 | GS&ABUN 30: | NO. of species: | 17 |
| GS&ABUN 11: aCERUB15 | INVestigator : ASG | Prime : | |
| GS&ABUN 12: ONOSEN20 | Dom Wetl Class (0-11): 7 | Aesthetic: | 0.000 |
| GS&ABUN 13: OSMCIN15 | SPec ELem (ADEFHRSW ): | Tot ABUN: | 144 |
| GS&ABUN 14: SPHAGN20 | CLaSs Richn (1-5) : 3 | Conifer? | N |
| GS&ABUN 15: COPGRO 5 | SubTYpe Richn (ABCDE): C | Trees : | 0.319 |
| GS&ABUN 16: TYPLAT 3 | VEGeta Intersp (HML) : L | Shrubs: | 0.229 |
| GS&ABUN 17: CAREX 2 | Surr. HABitat (123) : 1 | Herbs : | 0.451 |
| GS&ABUN 18: | Cover DISpers.(ABCDE): E | Bog : | 0.139 |
| GS&ABUN 19: | Percent Open W (LMHV): L | SBTY : | MPRUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA026 | OUTlet2 (APE) | : |
| 2 letter TOWN codes*: | HF | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :L | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 214 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :S |
| Dom Surround Soil | : 313 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :A | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :O PERmeabil (LMH) :H |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :O THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :H |
| OUTLet1 (APE) | :E | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) W of Rt1, N of Rt88, HF
TA026 Field Date: 03/28/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 30 | 0.50 | T | 3 |
| Ulmus americana | American elm | 10 | 0.82 | T | 1 |
| Pinus strobus | White pine | 3 | 0.18 | T | 3 |
| Sassafras albidum | Sassafras | 1 | 0.18 | T | 0 |
| Betula lutea | Yellow birch | 1 | 0.50 | T | 2 |
| Tsuga canadensis | Hemlock | 1 | 0.50 | T | 1 |
| Alnus rugosa | Speckled alder | 5 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 9 | 0.82 | S | 1 |
| Acer saccharum | Sugar maple | 1 | 0.18 | S | 3 |
| Vaccinium corymbosum | Highbush blueberry | 3 | 0.82 | S | 2 |
| Acer rubrum | Red maple | 15 | 0.50 | S | 3 |
| Onoclea sensibilis | Sensitive fern | 20 | 1.00 | H | 0 |
| Osmunda cinnamomea | Cinnamon fern | 15 | 0.82 | H | 0 |
| Sphagnum sp. | Sphagnum moss | 20 | 1.00 | H | 0 |
| Coptis groenlandica | Goldthread | 5 | 0.82 | H | 0 |
| Typha latifolia | Cattail | 3 | 1.00 | H | 1 |
| Carex sp. | Sedge | 2 | 1.00 | H | 3 |

WSI: 0.755 WFV: 0.328 BOG: 0.138 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.11 BUSHY: 0.11 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.02 BROADL: 0.27 NARROW: 0.01 FLOATING: 0.00
SUBTYPES: MPRUW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 34.1 | :*** : : | 6 WQual | 41.1 | :* : : |
| 2 Hydro | 44.7 | :** : : | 7 Econ | 56.5 | :***** : : |
| 3 GrWat | 62.2 | :******:***** : | 8 Recr | 21.9 | :** : : |
| 4 Flood | 58.8 | :*** : : | 9 Aest | 34.7 | :*** : : |
| 5 ShoLi | 0.00 | :** : : | 10 Educ | 38.0 | :***** : : |

AVERAGE DECILE OF TEN MODELS: 3.30

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA027 PLACE: (Photo 4-6) Kenney Brook, between I95 & Rt1, S of Rt88, HF

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FL DATe | : 04/14/86 | GS&ABUN 20: | HYPVIR 1 | Veg DENsity (HML) : | H |
| GS&ABUN 1 : | ACERUB40 | GS&ABUN 21: | ASCINC 1 | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : | PINSTR 3 | GS&ABUN 22: | SCICYP 1 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | BETPOP 1 | GS&ABUN 23: | LYTSAL 2 | Lo Vernal pool): | L |
| GS&ABUN 4 : | VIBLEN 2 | GS&ABUN 24: | CAREX 3 | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | CORAMO 2 | GS&ABUN 25: | CALPAL 1 | | |
| GS&ABUN 6 : | sALIX 2 | GS&ABUN 26: | MIMRIN 1 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | ALNRUG15 | GS&ABUN 27: | ONOSEN55 | WSI: 0.818 | |
| GS&ABUN 8 : | VACCOR 6 | GS&ABUN 28: | POa 7 | WFV: 0.250 | |
| GS&ABUN 9 : | SPITOM 1 | GS&ABUN 29: | SOLIDA 6 | Perc. Wild. Food: | M |
| GS&ABUN 10: | ILEVER15 | GS&ABUN 30: | SPHAGN15 | NO. of species: | 30 |
| GS&ABUN 11: | VIBREC40 | INVestigator : GS | | Prime : | |
| GS&ABUN 12: | SPILAT 2 | Dom Wetl Class (0-11): | 6 | Aesthetic: | 0.039 |
| GS&ABUN 13: | SAMCAN 2 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 259 |
| GS&ABUN 14: | aCERUB 2 | CLaSs Richn (1-5) : | 3 | Conifer? | N |
| GS&ABUN 15: | VITIS 1 | SubTYpe Richn (ABCDE): | D | Trees : | 0.178 |
| GS&ABUN 16: | LONICE 2 | VEGeta Intersp (HML) : | L | Shrubs: | 0.351 |
| GS&ABUN 17: | RUBHIS 2 | Surr. HABitat (123) : | 3 | Herbs : | 0.471 |
| GS&ABUN 18: | OSMCIN20 | Cover DISpers.(ABCDE): | D | Bog : | 0.058 |
| GS&ABUN 19: | JUNEFF 8 | Percent Open W (LMHV): | L | SBTY : | MNUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA027 | OUTlet2 (APE) | : |
| 2 letter TOWN codes*: | HF | P% Bord OW (NLMH) | :L |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 538 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :S |
| Dom Surround Soil | : 38 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 510 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | :E | SurGeol Surround(ALOT) | :L THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-6) Kenney Brook, between I95 & Rt1, S of Rt88, HF
TA027  Field Date: 04/14/86  Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 40 | 0.50 | T | 3 |
| Pinus strobus | White pine | 3 | 0.18 | T | 3 |
| Betula populifolia | Grey birch | 1 | 0.50 | T | 2 |
| Viburnum lentago | Nannyberry | 2 | 0.00 | T | 1 |
| Cornus amomum | Silky dogwood | 2 | 0.82 | S | 3 |
| Salix sp. | Willow | 2 | 0.82 | S | 1 |
| Alnus rugosa | Speckled alder | 15 | 1.00 | S | 1 |
| Vaccinium corymbosum | Highbush blueberry | 6 | 0.82 | S | 2 |
| Spiraea tomentosa | Steeplebush | 1 | 0.50 | S | 0 |
| Ilex verticillata | Winterberry | 15 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 40 | 0.82 | S | 1 |
| Spiraea latifolia | Meadowsweet | 2 | 0.50 | S | 0 |
| Sambucus canadensis | Elderberry | 2 | 0.18 | S | 1 |
| Acer rubrum | Red maple | 2 | 0.50 | S | 3 |
| Vitis sp. | Grapevine | 1 | | S | 3 |
| Lonicera sp. | Honeysuckle | 2 | 0.00 | S | 0 |
| Rubus hispidus | Trailing bramble | 2 | 0.50 | B | 3 |
| Osmunda cinnamomea | Cinnamon fern | 20 | 0.82 | H | 0 |
| Juncus effusus | Soft rush | 8 | 1.00 | H | 0 |
| Hypericum virginicum | Marsh st. johnswort | 1 | 1.00 | H | 0 |
| Asclepias incarnata | Swamp milkweed | 1 | 1.00 | H | 0 |
| Scirpus cyperinus | Woolgrass | 1 | 1.00 | H | 3 |
| Lythrum salicaria | Purple loosestrife | 2 | 1.00 | H | 0 |
| Carex sp. | Sedge | 3 | 1.00 | H | 3 |
| Caltha palustris | Marsh marigold | 1 | 1.00 | H | 0 |
| Mimulus ringens | Monkey-flower | 1 | 1.00 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 55 | 1.00 | H | 0 |
| Poaceae | Grasses | 7 | | H | 1 |
| Solidago sp. | Goldenrod | 6 | | H | 0 |
| Sphagnum sp. | Sphagnum moss | 15 | 1.00 | H | 0 |

WSI: 0.817  WFV: 0.250  BOG: 0.057  SALT: 0.000  DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00  SAPLINGS: 0.01  BUSHY: 0.31  COMPACT: 0.01
MARSH SBCL: ROBUST: 0.00  BROADL: 0.29  NARROW: 0.07  FLOATING: 0.00
SUBTYPES:MNUW
WATERSHED: Taylor River  TYPE: Shrub Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 45.7 | :*****:* : | 6 WQual | 63.7 | :******:**** : |
| 2 Hydro | 64.4 | :******:*** : | 7 Econ | 56.5 | :***** : : |
| 3 GrWat | 37.7 | :***** : : | 8 Recr | 30.1 | :*** : : |
| 4 Flood | 68.6 | :******:***** : | 9 Aest | 31.8 | :** : : |
| 5 ShoLi | 19.6 | :******:*** : | 10 Educ | 41.2 | :***** : : |

AVERAGE DECILE OF TEN MODELS: 5.70

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA030 PLACE: (Photo 5-6) Headwaters of Grapevine Run, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/18/86 | GS&ABUN 20: | ONOSEN30 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB15 | GS&ABUN 21: | CALPAL 1 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | PINSTR 3 | GS&ABUN 22: | SYMFOE 2 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | JUNVIR 1 | GS&ABUN 23: | EQUISE 1 | Lo Vernal pool): | L |
| GS&ABUN 4 : | ULMAME 1 | GS&ABUN 24: | SOLIDA 2 | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | ROSPAL 1 | GS&ABUN 25: | SPHAGN 5 | | |
| GS&ABUN 6 : | SAMCAN 1 | GS&ABUN 26: | | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | VACCOR 2 | GS&ABUN 27: | | WSI: 0.843 | |
| GS&ABUN 8 : | ALNRUG15 | GS&ABUN 28: | | WFV: 0.381 | |
| GS&ABUN 9 : | aCERUB10 | GS&ABUN 29: | | Perc. Wild. Food: | M |
| GS&ABUN 10: | pINSTR 2 | GS&ABUN 30: | | NO. of species: | 25 |
| GS&ABUN 11: | VIBREC 3 | INVestigator : | ASG | Prime : | P |
| GS&ABUN 12: | ILEVER 5 | Dom Wetl Class (0-11): | 3 | Aesthetic: | 0.024 |
| GS&ABUN 13: | LONMOR 2 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 168 |
| GS&ABUN 14: | RHURAD 6 | CLaSs Richn (1-5) : | 5 | Conifer? | N |
| GS&ABUN 15: | SPILAT 3 | SubTYpe Richn (ABCDE): | B | Trees : | 0.119 |
| GS&ABUN 16: | RUBOCC 1 | VEGeta Intersp (HML) : | H | Shrubs: | 0.304 |
| GS&ABUN 17: | RUBIDA 1 | Surr. HABitat (123) : | 1 | Herbs : | 0.577 |
| GS&ABUN 18: | TYPLAT25 | Cover DISpers.(ABCDE): | A | Bog : | 0.030 |
| GS&ABUN 19: | CARSTR30 | Percent Open W (LMHV): | L | SBTY : | MNPRUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA030 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :M |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 197 | HYdr CoN (None, Stream, River | |
| Other SOil | : 33 | Lake or Combin. | :S |
| Dom Surround Soil | : 40 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 32 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :M |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :M | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :M |
| INL3 (APE) | :E | SurGeol Surround(ALOT) | :T THIckness (LMH) :M |
| INL4 (APE) | :E | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 5-6) Headwaters of Grapevine Run, HF
TA030 Field Date: 04/18/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 15 | 0.50 | T | 3 |
| Pinus strobus | White pine | 3 | 0.18 | T | 3 |
| Juniperus virginiana | Red cedar | 1 | 0.18 | T | 1 |
| Ulmus americana | American elm | 1 | 0.82 | T | 1 |
| Rosa palustris | Marsh rose | 1 | 1.00 | S | 1 |
| Sambucus canadensis | Elderberry | 1 | 0.18 | S | 1 |
| Vaccinium corymbosum | Highbush blueberry | 2 | 0.82 | S | 2 |
| Alnus rugosa | Speckled alder | 15 | 1.00 | S | 1 |
| Acer rubrum | Red maple | 10 | 0.50 | S | 3 |
| Pinus strobus | White pine | 2 | 0.18 | S | 3 |
| Viburnum recognitum | Northern arrowwood | 3 | 0.82 | S | 1 |
| Ilex verticillata | Winterberry | 5 | 1.00 | S | 1 |
| Lonicera morrowi | Morrow's honeysuckle | 2 | 0.00 | S | 1 |
| Rhus radicans | Poison ivy | 6 | 0.82 | S | 2 |
| Spiraea latifolia | Meadowsweet | 3 | 0.50 | S | 0 |
| Rubus occidentalis | Black raspberry | 1 | 0.00 | B | 3 |
| Rubus idaeus | Red raspberry | 1 | 0.00 | B | 3 |
| Typha latifolia | Cattail | 25 | 1.00 | H | 1 |
| Carex stricta | Tussock sedge | 30 | 1.00 | H | 3 |
| Onoclea sensibilis | Sensitive fern | 30 | 1.00 | H | 0 |
| Caltha palustris | Marsh marigold | 1 | 1.00 | H | 0 |
| Symplocarpus foetidus | Skunk cabbage | 2 | 1.00 | H | 0 |
| Equisetum sp. | Horsetail | 1 | | H | 0 |
| Solidago sp. | Goldenrod | 2 | | H | 0 |
| Sphagnum sp. | Sphagnum moss | 5 | 1.00 | H | 0 |

WSI: 0.843 WFV: 0.380 BOG: 0.029 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.07 BUSHY: 0.17 COMPACT: 0.01
MARSH SBCL: ROBUST: 0.14 BROADL: 0.19 NARROW: 0.18 FLOATING: 0.00
SUBTYPES:MNPRUVW
WATERSHED: Taylor River TYPE: Shallow Fresh Marsh

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 84.4 | :******:******: | 6 WQual | 68.6 | :******:******: |
| 2 Hydro | 72.3 | :******:***** : | 7 Econ | 65.2 | :******: : |
| 3 GrWat | 54.7 | :******:*** : | 8 Recr | 43.8 | :******:*** : |
| 4 Flood | 64.7 | :******:** : | 9 Aest | 59.4 | :******:******: |
| 5 ShoLi | 22.7 | :******:***** : | 10 Educ | 71.4 | :******:******: |

AVERAGE DECILE OF TEN MODELS: 8.60 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA033 PLACE: (Photo 5-6) Cock Hill Rd, N of Crank Rd, HF

| | | | |
|---|---|---|---|
| FL DATe : 03/28/86 | GS&ABUN 20: | Veg DENsity (HML) : | M |
| GS&ABUN 1 : ACERUB50 | GS&ABUN 21: | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : FRAAME 4 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : PINSTR 6 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : ACESAC 1 | GS&ABUN 24: | Veg.Spec. Richness: | M |
| GS&ABUN 5 : uLMAME10 | GS&ABUN 25: | | |
| GS&ABUN 6 : aCERUB20 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : pINSTR 6 | GS&ABUN 27: | WSI: 0.512 | |
| GS&ABUN 8 : VACCOR 4 | GS&ABUN 28: | WFV: 0.582 | |
| GS&ABUN 9 : tSUCAN 2 | GS&ABUN 29: | Perc. Wild. Food: | H |
| GS&ABUN 10: aCESAC 6 | GS&ABUN 30: | NO. of species: | 15 |
| GS&ABUN 11: LONMOR 1 | INVestigator : ASG | Prime : | |
| GS&ABUN 12: ONOSEN 3 | Dom Wetl Class (0-11): 7 | Aesthetic: | 0.000 |
| GS&ABUN 13: SPHAGN 6 | SPec ELem (ADEFHRSW ): | Tot ABUN: | 128 |
| GS&ABUN 14: POa 6 | CLaSs Richn (1-5) : 2 | Conifer? | N |
| GS&ABUN 15: GAUPRO 3 | SubTYpe Richn (ABCDE): E | Trees : | 0.477 |
| GS&ABUN 16: | VEGeta Intersp (HML) : L | Shrubs: | 0.383 |
| GS&ABUN 17: | Surr. HABitat (123) : 1 | Herbs : | 0.141 |
| GS&ABUN 18: | Cover DISpers.(ABCDE): E | Bog : | 0.047 |
| GS&ABUN 19: | Percent Open W (LMHV): L | SBTY : | CMNPUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID :TA033 | OUTlet2 (APE) : | | |
| 2 letter TOWN codes*:HF | P% Bord OW (NLMH) :L | | |
| Topo CONfig (CSVH) :S | FETch (LH or blank) : | | |
| Wetl SIZe (LMH) :M | DEPTH (SD or blank) : | | |
| Dom SOil type (int) : 538 | HYdr CoN (None, Stream, River | | |
| Other SOil : | Lake or Combin. :S | | |
| Dom Surround Soil : 40 | ACCeSs (Rd Wat Iso) :R | | |
| Other Surr. Soil1 : 510 | POP'n density (LMH) :L | | |
| Other Surr. Soil2 : 29 | loc SCARCity (LMH) :L | | |
| wetl GRAdient (LH) :L | CROP (N Hay Fam Com):N | | |
| Surr. SLOpe (LH) :H | LEGAL accs (puB priV | | |
| TOpo. POsit. (LMH) :H | or Restricted) :V | | |
| Dom Hydr Condit(1-6):5 | | | |
| RIPArian conn (YN) :Y | | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral :E | CALCULATED FROM OTHER DATA AND SOIL: | | |
| INL2 (APE) : | SurGeol Under wl(ALOT):L | PERmeabil (LMH):L | |
| INL3 (APE) : | SurGeol Surround(ALOT):T | THIckness (LMH):L | |
| INL4 (APE) : | HPOSition (Perch,W,A) :P | GW Relat (DRC) :C | |
| INL5 (APE) : | TRAnsmissivity (LMH) :L | | |
| OUTLet1 (APE) :P | | | |

| | | | | | |
|---|---|---|---|---|---|
| * NC | New Castle | RY | Rye | HA | Hampton |
| NH | North Hampton | HF | Hampton Falls | SE | Seabrook |

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 5-6) Cock Hill Rd, N of Crank Rd, HF
TA033 Field Date: 03/28/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 50 | 0.50 | T | 3 |
| Fraxinus americana | White ash | 4 | 0.50 | T | 1 |
| Pinus strobus | White pine | 6 | 0.18 | T | 3 |
| Acer saccharum | Sugar maple | 1 | 0.18 | T | 3 |
| Ulmus americana | American elm | 10 | 0.82 | S | 1 |
| Acer rubrum | Red maple | 20 | 0.50 | S | 3 |
| Pinus strobus | White pine | 6 | 0.18 | S | 3 |
| Vaccinium corymbosum | Highbush blueberry | 4 | 0.82 | S | 2 |
| Tsuga canadensis | Hemlock | 2 | 0.50 | S | 1 |
| Acer saccharum | Sugar maple | 6 | 0.18 | S | 3 |
| Lonicera morrowi | Morrow's honeysuckle | 1 | 0.00 | S | 1 |
| Onoclea sensibilis | Sensitive fern | 3 | 1.00 | H | 0 |
| Sphagnum sp. | Sphagnum moss | 6 | 1.00 | H | 0 |
| Poaceae | Grasses | 6 | | H | 1 |
| Gaultheria procumbens | Wintergreen | 3 | 0.18 | H | 0 |

WSI: 0.511 WFV: 0.582 BOG: 0.046 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.34 BUSHY: 0.03 COMPACT: 0.02
MARSH SBCL: ROBUST: 0.00 BROADL: 0.02 NARROW: 0.04 FLOATING: 0.00
SUBTYPES:CMNPUW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 34.1 | :**** : : | 6 WQual | 49.0 | :***** : : |
| 2 Hydro | 61.8 | :******:** : | 7 Econ | 73.9 | :******:** : |
| 3 GrWat | 33.9 | :**** : : | 8 Recr | 32.8 | :***** : : |
| 4 Flood | 62.7 | :******:* : | 9 Aest | 26.0 | :* : : |
| 5 ShoLi | 17.5 | :******:** : | 10 Educ | 28.5 | :** : : |

AVERAGE DECILE OF TEN MODELS: 4.40

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA034 PLACE: (Photo 5-6,8) Grapevine Run, S of Rt88, HF

| | | | |
|---|---|---|---|
| FL DATe : 03/28/86 | GS&ABUN 20: | Veg DENsity (HML) : | M |
| GS&ABUN 1 : ACERUB30 | GS&ABUN 21: | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : QUERUB 2 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : BETPAP 1 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : POPTRE 1 | GS&ABUN 24: | Veg.Spec. Richness: | M |
| GS&ABUN 5 : ULMAME 6 | GS&ABUN 25: | | |
| GS&ABUN 6 : FAGGRA 1 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : PINSTR 3 | GS&ABUN 27: | WSI: 0.700 | |
| GS&ABUN 8 : CORAMO 4 | GS&ABUN 28: | WFV: 0.472 | |
| GS&ABUN 9 : sALNIG 2 | GS&ABUN 29: | Perc. Wild. Food: | H |
| GS&ABUN 10: ALNRUG15 | GS&ABUN 30: | NO. of species: | 18 |
| GS&ABUN 11: ROSPAL 5 | INVestigator : ASG | Prime : | |
| GS&ABUN 12: LINBEN 1 | Dom Wetl Class (0-11): 7 | Aesthetic: | 0.028 |
| GS&ABUN 13: SALDIS 3 | SPec ELem (ADEFHRSW ): | Tot ABUN: | 90 |
| GS&ABUN 14: SPILAT 4 | CLaSs Richn (1-5) : 5 | Conifer? | N |
| GS&ABUN 15: VIBREC 4 | SubTYpe Richn (ABCDE): C | Trees : | 0.489 |
| GS&ABUN 16: TYPLAT 2 | VEGeta Intersp (HML) : M | Shrubs: | 0.422 |
| GS&ABUN 17: SCICYP 2 | Surr. HABitat (123) : 1 | Herbs : | 0.089 |
| GS&ABUN 18: ONOSEN 4 | Cover DISpers.(ABCDE): D | Bog : | 0.000 |
| GS&ABUN 19: | Percent Open W (LMHV): L | SBTY : | CNPRUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID :TA034 | OUTlet2 (APE) : | | |
| 2 letter TOWN codes*:HF | P% Bord OW (NLMH) :L | | |
| Topo CONfig (CSVH) :S | FETch (LH or blank) : | | |
| Wetl SIZe (LMH) :M | DEPTH (SD or blank) : | | |
| Dom SOil type (int) : 538 | HYdr CoN (None, Stream, River | | |
| Other SOil : | Lake or Combin. :S | | |
| Dom Surround Soil : 43 | ACCeSs (Rd Wat Iso) :R | | |
| Other Surr. Soil1 : 32 | POP'n density (LMH) :L | | |
| Other Surr. Soil2 : 40 | loc SCARCity (LMH) :L | | |
| wetl GRAdient (LH) :L | CROP (N Hay Fam Com):N | | |
| Surr. SLOpe (LH) :H | LEGAL accs (puB priV | | |
| TOpo. POsit. (LMH) :M | or Restricted) :V | | |
| Dom Hydr Condit(1-6):5 | | | |
| RIPArian conn (YN) :Y | | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral :P | CALCULATED FROM OTHER DATA AND SOIL: | | |
| INL2 (APE) :P | SurGeol Under wl(ALOT):L | PERmeabil (LMH):L | |
| INL3 (APE) : | SurGeol Surround(ALOT):T | THIckness (LMH):L | |
| INL4 (APE) : | HPOSition (Perch,W,A) :P | GW Relat (DRC) :C | |
| INL5 (APE) : | TRAnsmissivity (LMH) :L | | |
| OUTLet1 (APE) :P | | | |

| | | | | | |
|---|---|---|---|---|---|
| * NC | New Castle | RY | Rye | HA | Hampton |
| NH | North Hampton | HF | Hampton Falls | SE | Seabrook |

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 5-6,8) Grapevine Run, S of Rt88, HF
TA034 Field Date: 03/28/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 30 | 0.50 | T | 3 |
| Quercus rubra | Northern red oak | 2 | 0.18 | T | 4 |
| Betula papyrifera | Paper birch | 1 | 0.18 | T | 2 |
| Populus tremuloides | Quaking aspen | 1 | 0.00 | T | 2 |
| Ulmus americana | American elm | 6 | 0.82 | T | 1 |
| Fagus grandifolia | Beech | 1 | 0.18 | T | 3 |
| Pinus strobus | White pine | 3 | 0.18 | T | 3 |
| Cornus amomum | Silky dogwood | 4 | 0.82 | S | 3 |
| Salix nigra | Black willow | 2 | 1.00 | S | 1 |
| Alnus rugosa | Speckled alder | 15 | 1.00 | S | 1 |
| Rosa palustris | Marsh rose | 5 | 1.00 | S | 1 |
| Lindera benzoin | Spicebush | 1 | 0.82 | S | 1 |
| Salix discolor | Pussy willow | 3 | 0.82 | S | 1 |
| Spiraea latifolia | Meadowsweet | 4 | 0.50 | S | 0 |
| Viburnum recognitum | Northern arrowwood | 4 | 0.82 | S | 1 |
| Typha latifolia | Cattail | 2 | 1.00 | H | 1 |
| Scirpus cyperinus | Woolgrass | 2 | 1.00 | H | 3 |
| Onoclea sensibilis | Sensitive fern | 4 | 1.00 | H | 0 |

WSI: 0.700 WFV: 0.472 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.05 BUSHY: 0.32 COMPACT: 0.04
MARSH SBCL: ROBUST: 0.02 BROADL: 0.04 NARROW: 0.02 FLOATING: 0.00
SUBTYPES: CNPRUW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|
| 1 Biol | 53.4 | :******:** : |
| 2 Hydro | 65.7 | :******:*** : |
| 3 GrWat | 39.6 | :***** : : |
| 4 Flood | 62.7 | :******:* : |
| 5 ShoLi | 17.5 | :******:** : |
| 6 WQual | 56.8 | :******:** : |
| 7 Econ | 73.9 | :******:** : |
| 8 Recr | 41.0 | :******:** : |
| 9 Aest | 39.1 | :******: : |
| 10 Educ | 53.9 | :******:** : |

AVERAGE DECILE OF TEN MODELS: 6.50

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA036 PLACE: (Photo 5-8) Grapevine Run, Rt88, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe | : 04/01/86 | GS&ABUN 20: | LYTSAL 5 | Veg DENsity (HML) : | H |
| GS&ABUN 1 : | ACERUB 7 | GS&ABUN 21: | TYPANG 4 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | PINSTR 2 | GS&ABUN 22: | CAREX 25 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | BETPOP 2 | GS&ABUN 23: | ASTER 2 | Lo Vernal pool): | L |
| GS&ABUN 4 : | POPTRE 1 | GS&ABUN 24: | SOLIDA 4 | Veg.Spec. Richness: | H |
| GS&ABUN 5 : | SALIX 12 | GS&ABUN 25: | ONOSEN10 | | |
| GS&ABUN 6 : | uLMAME 1 | GS&ABUN 26: | JUNEFF 5 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | ALNRUG30 | GS&ABUN 27: | LYCOPU 1 | WSI: 0.824 | |
| GS&ABUN 8 : | VIBREC15 | GS&ABUN 28: | | WFV: 0.320 | |
| GS&ABUN 9 : | CORSTO 3 | GS&ABUN 29: | | Perc. Wild. Food: | M |
| GS&ABUN 10: | ROSPAL 5 | GS&ABUN 30: | | NO. of species: | 27 |
| GS&ABUN 11: | SPILAT 7 | INVestigator | : HCS | Prime : | P |
| GS&ABUN 12: | RHURAD10 | Dom Wetl Class (0-11): | 6 | Aesthetic: | 0.027 |
| GS&ABUN 13: | LONICE12 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 188 |
| GS&ABUN 14: | POa 5 | CLaSs Richn (1-5) | : 5 | Conifer? | N |
| GS&ABUN 15: | SCICYP 1 | SubTYpe Richn (ABCDE): | B | Trees : | 0.128 |
| GS&ABUN 16: | CARSTR 2 | VEGeta Intersp (HML) : | M | Shrubs: | 0.441 |
| GS&ABUN 17: | CAREXA 3 | Surr. HABitat (123) : | 2 | Herbs : | 0.431 |
| GS&ABUN 18: | EPILEP 2 | Cover DISpers.(ABCDE): | D | Bog : | 0.000 |
| GS&ABUN 19: | TYPLAT12 | Percent Open W (LMHV): | L | SBTY : | CNRUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA036 | OUTlet2 (APE) | : |
| 2 letter TOWN codes*: | HF | P% Bord OW (NLMH) | :L |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 33 | HYdr CoN (None, Stream, River | |
| Other SOil | : 197 | Lake or Combin. | :S |
| Dom Surround Soil | : 510 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 32 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 44 | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :H | CROP (N Hay Fam Com) | :C |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :M | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :O |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

| | | | | | |
|---|---|---|---|---|---|
| * NC | New Castle | RY | Rye | HA | Hampton |
| NH | North Hampton | HF | Hampton Falls | SE | Seabrook |

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 5-8) Grapevine Run, Rt88, HF
TA036 Field Date: 04/01/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 7 | 0.50 | T | 3 |
| Pinus strobus | White pine | 2 | 0.18 | T | 3 |
| Betula populifolia | Grey birch | 2 | 0.50 | T | 2 |
| Populus tremuloides | Quaking aspen | 1 | 0.00 | T | 2 |
| Salix sp. | Willow | 12 | 0.82 | T | 1 |
| Ulmus americana | American elm | 1 | 0.82 | S | 1 |
| Alnus rugosa | Speckled alder | 30 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 15 | 0.82 | S | 1 |
| Cornus stolonifera | Red-osier dogwood | 3 | 0.82 | S | 3 |
| Rosa palustris | Marsh rose | 5 | 1.00 | S | 1 |
| Spiraea latifolia | Meadowsweet | 7 | 0.50 | S | 0 |
| Rhus radicans | Poison ivy | 10 | 0.82 | S | 2 |
| Lonicera sp. | Honeysuckle | 12 | 0.00 | S | 0 |
| Poaceae | Grasses | 5 | | H | 1 |
| Scirpus cyperinus | Woolgrass | 1 | 1.00 | H | 3 |
| Carex stricta | Tussock sedge | 2 | 1.00 | H | 3 |
| Carex sp.(A) | A Sedge | 3 | 1.00 | H | 3 |
| Epilobium leptophyllum | Narrow-leaf willowweed | 2 | 0.50 | H | 1 |
| Typha latifolia | Cattail | 12 | 1.00 | H | 1 |
| Lythrum salicaria | Purple loosestrife | 5 | 1.00 | H | 0 |
| Typha angustifolia | Narrowleaf cattail | 4 | 1.00 | H | 1 |
| Carex sp. | Sedge | 25 | 1.00 | H | 3 |
| Aster sp. | Asters | 2 | | H | 0 |
| Solidago sp. | Goldenrod | 4 | | H | 0 |
| Onoclea sensibilis | Sensitive fern | 10 | 1.00 | H | 0 |
| Juncus effusus | Soft rush | 5 | 1.00 | H | 0 |
| Lycopus sp. | Waterhorehound | 1 | | H | 0 |

WSI: 0.823 WFV: 0.320 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.00 BUSHY: 0.34 COMPACT: 0.03
MARSH SBCL: ROBUST: 0.11 BROADL: 0.05 NARROW: 0.23 FLOATING: 0.00
SUBTYPES: CNRUVW
WATERSHED: Taylor River TYPE: Shrub Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 65.8 | :******:***** : | 6 WQual | 65.6 | :******:***** : |
| 2 Hydro | 64.4 | :******:**** : | 7 Econ | 56.5 | :***** : : |
| 3 GrWat | 37.7 | :***** : : | 8 Recr | 34.2 | :******: : |
| 4 Flood | 61.7 | :******: : | 9 Aest | 40.5 | :******:* : |
| 5 ShoLi | 19.6 | :******:**** : | 10 Educ | 66.6 | :******:***** : |

AVERAGE DECILE OF TEN MODELS: 6.70 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA037 PLACE: (Photo 4-8,5-8) Grapevine Run, between Rt88 & North Rd, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/09/86 | GS&ABUN 20: | ONOSEN18 | Veg DENsity (HML) : | H |
| GS&ABUN 1 : | ACERUB11 | GS&ABUN 21: | CAREX 19 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | PINSTR10 | GS&ABUN 22: | SPHAGN 5 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | BETPOP 1 | GS&ABUN 23: | OSMREG 1 | Lo Vernal pool): | L |
| GS&ABUN 4 : | ULMAME 1 | GS&ABUN 24: | OSMCIN 1 | Veg.Spec. Richness: | H |
| GS&ABUN 5 : | FRAAME 1 | GS&ABUN 25: | POa 1 | | |
| GS&ABUN 6 : | aCERUB 1 | GS&ABUN 26: | JUNEFF 1 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | uLMAME 1 | GS&ABUN 27: | SOLIDA 1 | WSI: | 0.850 |
| GS&ABUN 8 : | VIBREC 6 | GS&ABUN 28: | ASTER 1 | WFV: | 0.340 |
| GS&ABUN 9 : | ALNRUG 9 | GS&ABUN 29: | TYPLAT19 | Perc. Wild. Food: | M |
| GS&ABUN 10: | ROSPAL 4 | GS&ABUN 30: | CAREXA 4 | NO. of species: | 30 |
| GS&ABUN 11: | LONICE 1 | INVestigator : | HCS | Prime : | P |
| GS&ABUN 12: | ILEVER 5 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.071 |
| GS&ABUN 13: | SPILAT 2 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 141 |
| GS&ABUN 14: | RHAFRA 2 | CLaSs Richn (1-5) : | 3 | Conifer? | N |
| GS&ABUN 15: | LYOLIG 1 | SubTYpe Richn (ABCDE): | D | Trees : | 0.170 |
| GS&ABUN 16: | VACCOR 1 | VEGeta Intersp (HML) : | M | Shrubs: | 0.245 |
| GS&ABUN 17: | CORAMO 1 | Surr. HABitat (123) : | 2 | Herbs : | 0.585 |
| GS&ABUN 18: | RUBHIS 1 | Cover DISpers.(ABCDE): | E | Bog : | 0.035 |
| GS&ABUN 19: | LYTSAL11 | Percent Open W (LMHV): | L | SBTY : | MNRUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA037 | OUTlet2 (APE) | : |
| 2 letter TOWN codes*: | HF | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 197 | HYdr CoN (None, Stream, River | |
| Other SOil | : 538 | Lake or Combin. | :S |
| Dom Surround Soil | : 33 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 197 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 547 | loc SCARCity (LMH) | :M |
| wetl GRAdient (LH) | :H | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :M |
| INL3 (APE) | :E | SurGeol Surround(ALOT) | :L THIckness (LMH) :M |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

| | | | | | |
|---|---|---|---|---|---|
| * NC | New Castle | RY | Rye | HA | Hampton |
| NH | North Hampton | HF | Hampton Falls | SE | Seabrook |

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-8,5-8) Grapevine Run, between Rt88 & North Rd, HF
TA037 Field Date: 04/09/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 11 | 0.50 | T | 3 |
| Pinus strobus | White pine | 10 | 0.18 | T | 3 |
| Betula populifolia | Grey birch | 1 | 0.50 | T | 2 |
| Ulmus americana | American elm | 1 | 0.82 | T | 1 |
| Fraxinus americana | White ash | 1 | 0.50 | T | 1 |
| Acer rubrum | Red maple | 1 | 0.50 | S | 3 |
| Ulmus americana | American elm | 1 | 0.82 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 6 | 0.82 | S | 1 |
| Alnus rugosa | Speckled alder | 9 | 1.00 | S | 1 |
| Rosa palustris | Marsh rose | 4 | 1.00 | S | 1 |
| Lonicera sp. | Honeysuckle | 1 | 0.00 | S | 0 |
| Ilex verticillata | Winterberry | 5 | 1.00 | S | 1 |
| Spiraea latifolia | Meadowsweet | 2 | 0.50 | S | 0 |
| Rhamnus frangula | Europ. buckthorn | 2 | 0.50 | S | 0 |
| Lyonia ligustrina | Maleberry | 1 | 1.00 | S | 0 |
| Vaccinium corymbosum | Highbush blueberry | 1 | 0.82 | S | 2 |
| Cornus amomum | Silky dogwood | 1 | 0.82 | S | 3 |
| Rubus hispidus | Trailing bramble | 1 | 0.50 | B | 3 |
| Lythrum salicaria | Purple loosestrife | 11 | 1.00 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 18 | 1.00 | H | 0 |
| Carex sp. | Sedge | 19 | 1.00 | H | 3 |
| Sphagnum sp. | Sphagnum moss | 5 | 1.00 | H | 0 |
| Osmunda regalis | Royal fern | 1 | 1.00 | H | 0 |
| Osmunda cinnamomea | Cinnamon fern | 1 | 0.82 | H | 0 |
| Poaceae | Grasses | 1 | | H | 1 |
| Juncus effusus | Soft rush | 1 | 1.00 | H | 0 |
| Solidago sp. | Goldenrod | 1 | | H | 0 |
| Aster sp. | Asters | 1 | | H | 0 |
| Typha latifolia | Cattail | 19 | 1.00 | H | 1 |
| Carex sp.(A) | A Sedge | 4 | 1.00 | H | 3 |

WSI: 0.850 WFV: 0.340 BOG: 0.035 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.01 BUSHY: 0.21 COMPACT: 0.01
MARSH SBCL: ROBUST: 0.21 BROADL: 0.14 NARROW: 0.17 FLOATING: 0.00
SUBTYPES:MNRUW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 46.5 | :******:* : | 6 WQual | 57.8 | :******:** : |
| 2 Hydro | 59.2 | :******:* : | 7 Econ | 73.9 | :******:** : |
| 3 GrWat | 50.9 | :******:** : | 8 Recr | 36.9 | :******:* : |
| 4 Flood | 67.6 | :******:***** : | 9 Aest | 39.1 | :******: : |
| 5 ShoLi | 0.00 | :** : : | 10 Educ | 53.9 | :******:** : |

AVERAGE DECILE OF TEN MODELS: 6.20 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA039 PLACE: (Photo 5-8) Mill Rd, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/03/86 | GS&ABUN 20: | RUBIDA 1 | Veg DENsity (HML) : | H |
| GS&ABUN 1 : | ACERUB10 | GS&ABUN 21: | OSMCIN 4 | wetl JUXtapos(HML): | L |
| GS&ABUN 2 : | ULMAME 1 | GS&ABUN 22: | SCICYP 2 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | PINSTR30 | GS&ABUN 23: | TYPLAT 5 | Lo Vernal pool): | L |
| GS&ABUN 4 : | JUNVIR 1 | GS&ABUN 24: | ONOSEN15 | Veg.Spec. Richness: | H |
| GS&ABUN 5 : | BETLUT 1 | GS&ABUN 25: | CAREXA 8 | | |
| GS&ABUN 6 : | VACCOR 2 | GS&ABUN 26: | JUNEFF 2 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | LONICE 2 | GS&ABUN 27: | CARSTR 2 | WSI: 0.713 | |
| GS&ABUN 8 : | VIBREC 3 | GS&ABUN 28: | SPHAGN 1 | WFV: 0.441 | |
| GS&ABUN 9 : | aCERUB 3 | GS&ABUN 29: | EPICOL 1 | Perc. Wild. Food: | H |
| GS&ABUN 10: | uLMAME 1 | GS&ABUN 30: | | NO. of species: | 29 |
| GS&ABUN 11: | RHURAD50 | INVestigator : | HCS | Prime : | P |
| GS&ABUN 12: | ILEVER15 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.047 |
| GS&ABUN 13: | SPILAT 8 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 181 |
| GS&ABUN 14: | ALNRUG 6 | CLaSs Richn (1-5) : | 4 | Conifer? | N |
| GS&ABUN 15: | ROSPAL 1 | SubTYpe Richn (ABCDE): | C | Trees : | 0.238 |
| GS&ABUN 16: | SPITOM 1 | VEGeta Intersp (HML) : | M | Shrubs: | 0.539 |
| GS&ABUN 17: | sALIX 2 | Surr. HABitat (123) : | 2 | Herbs : | 0.224 |
| GS&ABUN 18: | CORSTO 2 | Cover DISpers.(ABCDE): | B | Bog : | 0.006 |
| GS&ABUN 19: | VITIS 1 | Percent Open W (LMHV): | L | SBTY : | CMNPRUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA039 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :L |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 33 | HYdr CoN (None, Stream, River | |
| Other SOil | : 95 | Lake or Combin. | :S |
| Dom Surround Soil | : 510 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 14 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :H | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :O THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :E | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 5-8) Mill Rd, HF
TA039 Field Date: 04/03/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 10 | 0.50 | T | 3 |
| Ulmus americana | American elm | 1 | 0.82 | T | 1 |
| Pinus strobus | White pine | 30 | 0.18 | T | 3 |
| Juniperus virginiana | Red cedar | 1 | 0.18 | T | 1 |
| Betula lutea | Yellow birch | 1 | 0.50 | T | 2 |
| Vaccinium corymbosum | Highbush blueberry | 2 | 0.82 | S | 2 |
| Lonicera sp. | Honeysuckle | 2 | 0.00 | S | 0 |
| Viburnum recognitum | Northern arrowwood | 3 | 0.82 | S | 1 |
| Acer rubrum | Red maple | 3 | 0.50 | S | 3 |
| Ulmus americana | American elm | 1 | 0.82 | S | 1 |
| Rhus radicans | Poison ivy | 50 | 0.82 | S | 2 |
| Ilex verticillata | Winterberry | 15 | 1.00 | S | 1 |
| Spiraea latifolia | Meadowsweet | 8 | 0.50 | S | 0 |
| Alnus rugosa | Speckled alder | 6 | 1.00 | S | 1 |
| Rosa palustris | Marsh rose | 1 | 1.00 | S | 1 |
| Spiraea tomentosa | Steeplebush | 1 | 0.50 | S | 0 |
| Salix sp. | Willow | 2 | 0.82 | S | 1 |
| Cornus stolonifera | Red-osier dogwood | 2 | 0.82 | S | 3 |
| Vitis sp. | Grapevine | 1 | | S | 3 |
| Rubus idaeus | Red raspberry | 1 | 0.00 | B | 3 |
| Osmunda cinnamomea | Cinnamon fern | 4 | 0.82 | H | 0 |
| Scirpus cyperinus | Woolgrass | 2 | 1.00 | H | 3 |
| Typha latifolia | Cattail | 5 | 1.00 | H | 1 |
| Onoclea sensibilis | Sensitive fern | 15 | 1.00 | H | 0 |
| Carex sp.(A) | A Sedge | 8 | 1.00 | H | 3 |
| Juncus effusus | Soft rush | 2 | 1.00 | H | 0 |
| Carex stricta | Tussock sedge | 2 | 1.00 | H | 3 |
| Sphagnum sp. | Sphagnum moss | 1 | 1.00 | H | 0 |
| Epilobium coloratum | Purple willowweed | 1 | 1.00 | H | 1 |

WSI: 0.713 WFV: 0.440 BOG: 0.005 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.03 BUSHY: 0.17 COMPACT: 0.04
MARSH SBCL: ROBUST: 0.02 BROADL: 0.10 NARROW: 0.08 FLOATING: 0.00
SUBTYPES:CMNPRUVW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 48.0 | :******:* : | 6 WQual | 49.0 | :***** : : |
| 2 Hydro | 56.5 | :******: : | 7 Econ | 73.9 | :******:** : |
| 3 GrWat | 30.1 | :** : : | 8 Recr | 36.9 | :******:* : |
| 4 Flood | 61.7 | :******: : | 9 Aest | 39.1 | :******: : |
| 5 ShoLi | 19.6 | :******:*** : | 10 Educ | 53.9 | :******:** : |

AVERAGE DECILE OF TEN MODELS: 5.50 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA040 PLACE: (Photo 5-8) Mill Rd, HF

| | | | |
|---|---|---|---|
| FL DATe : 05/29/86 | GS&ABUN 20: SPHAGN10 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : BETPOP 2 | GS&ABUN 21: IRIVER 2 | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : ACERUB35 | GS&ABUN 22: OSMREG 4 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : PINSTR 5 | GS&ABUN 23: OSMCIN 5 | Lo Vernal pool): | L |
| GS&ABUN 4 : SALIX 1 | GS&ABUN 24: RANUNC 1 | Veg.Spec. Richness: | H |
| GS&ABUN 5 : BETLUT 1 | GS&ABUN 25: CAREX 3 | | |
| GS&ABUN 6 : CORSTO 2 | GS&ABUN 26: EQUISE 2 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : ALNRUG 4 | GS&ABUN 27: IMPCAP 5 | WSI: 0.770 | |
| GS&ABUN 8 : sALIX 2 | GS&ABUN 28: CALPAL 1 | WFV: 0.390 | |
| GS&ABUN 9 : aCERUB 5 | GS&ABUN 29: CARSTR 7 | Perc. Wild. Food: | M |
| GS&ABUN 10: fRAAME 1 | GS&ABUN 30: ONOSEN15 | NO. of species: | 30 |
| GS&ABUN 11: VIBREC 5 | INVestigator : HCS | Prime : | |
| GS&ABUN 12: uLMAME 1 | Dom Wetl Class (0-11): 7 | Aesthetic: | 0.101 |
| GS&ABUN 13: RHURAD 3 | SPec ELem (ADEFHRSW ): | Tot ABUN: | 154 |
| GS&ABUN 14: ILEVER20 | CLaSs Richn (1-5) : 4 | Conifer? | N |
| GS&ABUN 15: RIBES 2 | SubTYpe Richn (ABCDE): C | Trees : | 0.286 |
| GS&ABUN 16: LONICE 1 | VEGeta Intersp (HML) : L | Shrubs: | 0.357 |
| GS&ABUN 17: VIBCAS 3 | Surr. HABitat (123) : 2 | Herbs : | 0.357 |
| GS&ABUN 18: pINSTR 2 | Cover DISpers.(ABCDE): C | Bog : | 0.065 |
| GS&ABUN 19: CORAMO 4 | Percent Open W (LMHV): L | SBTY : | MNPRUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA040 | OUTlet2 (APE) | : |
| 2 letter TOWN codes*: | HF | P% Bord OW (NLMH) | :L |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 33 | HYdr CoN (None, Stream, River | |
| Other SOil | : 47 | Lake or Combin. | :S |
| Dom Surround Soil | : 129 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 510 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 46 | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :H | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | :E | SurGeol Surround(ALOT) | :T THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :E | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 5-8) Mill Rd, HF
TA040 Field Date: 05/29/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Betula populifolia | Grey birch | 2 | 0.50 | T | 2 |
| Acer rubrum | Red maple | 35 | 0.50 | T | 3 |
| Pinus strobus | White pine | 5 | 0.18 | T | 3 |
| Salix sp. | Willow | 1 | 0.82 | T | 1 |
| Betula lutea | Yellow birch | 1 | 0.50 | T | 2 |
| Cornus stolonifera | Red-osier dogwood | 2 | 0.82 | S | 3 |
| Alnus rugosa | Speckled alder | 4 | 1.00 | S | 1 |
| Salix sp. | Willow | 2 | 0.82 | S | 1 |
| Acer rubrum | Red maple | 5 | 0.50 | S | 3 |
| Fraxinus americana | White ash | 1 | 0.50 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 5 | 0.82 | S | 1 |
| Ulmus americana | American elm | 1 | 0.82 | S | 1 |
| Rhus radicans | Poison ivy | 3 | 0.82 | S | 2 |
| Ilex verticillata | Winterberry | 20 | 1.00 | S | 1 |
| Ribes sp. | Gooseberry | 2 | | S | 1 |
| Lonicera sp. | Honeysuckle | 1 | 0.00 | S | 0 |
| Viburnum cassinoides | Northern wild raisin | 3 | 0.82 | S | 1 |
| Pinus strobus | White pine | 2 | 0.18 | S | 3 |
| Cornus amomum | Silky dogwood | 4 | 0.82 | S | 3 |
| Sphagnum sp. | Sphagnum moss | 10 | 1.00 | H | 0 |
| Iris versicolor | Blue flag | 2 | 1.00 | H | 0 |
| Osmunda regalis | Royal fern | 4 | 1.00 | H | 0 |
| Osmunda cinnamomea | Cinnamon fern | 5 | 0.82 | H | 0 |
| Ranunculus sp. | Buttercup | 1 | | H | 0 |
| Carex sp. | Sedge | 3 | 1.00 | H | 3 |
| Equisetum sp. | Horsetail | 2 | | H | 0 |
| Impatiens capensis | Jewelweed | 5 | 0.82 | H | 0 |
| Caltha palustris | Marsh marigold | 1 | 1.00 | H | 0 |
| Carex stricta | Tussock sedge | 7 | 1.00 | H | 3 |
| Onoclea sensibilis | Sensitive fern | 15 | 1.00 | H | 0 |

WSI: 0.769 WFV: 0.389 BOG: 0.064 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.07 BUSHY: 0.25 COMPACT: 0.01
MARSH SBCL: ROBUST: 0.04 BROADL: 0.16 NARROW: 0.07 FLOATING: 0.00
SUBTYPES:MNPRUW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 48.8 | :******:* : | 6 WQual | 50.0 | :***** : : |
| 2 Hydro | 59.2 | :******:* : | 7 Econ | 73.9 | :******:** : |
| 3 GrWat | 33.9 | :*** : : | 8 Recr | 36.9 | :******:* : |
| 4 Flood | 65.6 | :******:*** : | 9 Aest | 43.4 | :******:** : |
| 5 ShoLi | 17.5 | :******:** : | 10 Educ | 53.9 | :******:** : |

AVERAGE DECILE OF TEN MODELS: 6.10

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA045 PLACE: (Photo 4-10,5-10) Taylor River, NE of Rt88, HA HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/04/86 | GS&ABUN 20: | ONOSEN17 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB20 | GS&ABUN 21: | SOLIDA 6 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | PINSTR19 | GS&ABUN 22: | ASTER 7 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | ULMAME 3 | GS&ABUN 23: | SPHAGN 9 | Lo Vernal pool): | L |
| GS&ABUN 4 : | FRAAME 1 | GS&ABUN 24: | CAREX 11 | Veg.Spec. Richness: | H |
| GS&ABUN 5 : | RHUVER 2 | GS&ABUN 25: | JUNEFF 4 | | |
| GS&ABUN 6 : | pINSTR 1 | GS&ABUN 26: | SYMFOE 1 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | aCERUB 5 | GS&ABUN 27: | POa 14 | WSI: | 0.751 |
| GS&ABUN 8 : | ROSPAL 2 | GS&ABUN 28: | LYTSAL 2 | WFV: | 0.378 |
| GS&ABUN 9 : | SPITOM 1 | GS&ABUN 29: | IRIVER 1 | Perc. Wild. Food: | M |
| GS&ABUN 10: | ALNRUG15 | GS&ABUN 30: | EUPMAC 1 | NO. of species: | 30 |
| GS&ABUN 11: | VIBREC 9 | INVestigator : | GS | Prime : | P |
| GS&ABUN 12: | ILEVER 5 | Dom Wetl Class (0-11): | 6 | Aesthetic: | 0.030 |
| GS&ABUN 13: | SPILAT 9 | SPec ELem (aDEFHRSW ): | | Tot ABUN: | 197 |
| GS&ABUN 14: | VACCOR 6 | CLaSs Richn (1-5) : | 5 | Conifer? | N |
| GS&ABUN 15: | CORAMO 2 | SubTYpe Richn (ABCDE): | B | Trees : | 0.218 |
| GS&ABUN 16: | RHURAD 9 | VEGeta Intersp (HML) : | H | Shrubs: | 0.348 |
| GS&ABUN 17: | RUBHIS 5 | Surr. HABitat (123) : | 1 | Herbs : | 0.434 |
| GS&ABUN 18: | CARSTR 8 | Cover DISpers.(ABCDE): | D | Bog : | 0.046 |
| GS&ABUN 19: | TYPLAT 2 | Percent Open W (LMHV): | L | SBTY : | CMNPRUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA045 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HA HF | P% Bord OW (NLMH) | :M |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | :L |
| Wetl SIZe (LMH) | :H | DEPTH (SD or blank) | :D |
| Dom SOil type (int) | : 33 | HYdr CoN (None, Stream, River | |
| Other SOil | : 197 | Lake or Combin. | :R |
| Dom Surround Soil | : 40 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 38 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 510 | loc SCARCity (LMH) | :H |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :L | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :M | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :4 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :P | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | :P | SurGeol Surround(ALOT) | :T THIckness (LMH) :L |
| INL4 (APE) | :P | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | :E | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 4-10,5-10) Taylor River, NE of Rt88, HA HF
TA045 Field Date: 04/04/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 20 | 0.50 | T | 3 |
| Pinus strobus | White pine | 19 | 0.18 | T | 3 |
| Ulmus americana | American elm | 3 | 0.82 | T | 1 |
| Fraxinus americana | White ash | 1 | 0.50 | T | 1 |
| Rhus vernix | Poison sumac | 2 | 1.00 | S | 2 |
| Pinus strobus | White pine | 1 | 0.18 | S | 3 |
| Acer rubrum | Red maple | 5 | 0.50 | S | 3 |
| Rosa palustris | Marsh rose | 2 | 1.00 | S | 1 |
| Spiraea tomentosa | Steeplebush | 1 | 0.50 | S | 0 |
| Alnus rugosa | Speckled alder | 15 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 9 | 0.82 | S | 1 |
| Ilex verticillata | Winterberry | 5 | 1.00 | S | 1 |
| Spiraea latifolia | Meadowsweet | 9 | 0.50 | S | 0 |
| Vaccinium corymbosum | Highbush blueberry | 6 | 0.82 | S | 2 |
| Cornus amomum | Silky dogwood | 2 | 0.82 | S | 3 |
| Rhus radicans | Poison ivy | 9 | 0.82 | S | 2 |
| Rubus hispidus | Trailing bramble | 5 | 0.50 | B | 3 |
| Carex stricta | Tussock sedge | 8 | 1.00 | H | 3 |
| Typha latifolia | Cattail | 2 | 1.00 | H | 1 |
| Onoclea sensibilis | Sensitive fern | 17 | 1.00 | H | 0 |
| Solidago sp. | Goldenrod | 6 | | H | 0 |
| Aster sp. | Asters | 7 | | H | 0 |
| Sphagnum sp. | Sphagnum moss | 9 | 1.00 | H | 0 |
| Carex sp. | Sedge | 11 | 1.00 | H | 3 |
| Juncus effusus | Soft rush | 4 | 1.00 | H | 0 |
| Symplocarpus foetidus | Skunk cabbage | 1 | 1.00 | H | 0 |
| Poaceae | Grasses | 14 | | H | 1 |
| Lythrum salicaria | Purple loosestrife | 2 | 1.00 | H | 0 |
| Iris versicolor | Blue flag | 1 | 1.00 | H | 0 |
| Eupatorium maculatum | Spotted joe pye weed | 1 | 0.82 | H | 0 |

WSI: 0.751 WFV: 0.378 BOG: 0.045 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.04 BUSHY: 0.19 COMPACT: 0.05
MARSH SBCL: ROBUST: 0.02 BROADL: 0.09 NARROW: 0.19 FLOATING: 0.00
SUBTYPES:CMNPRUVW
WATERSHED: Taylor River TYPE: Shrub Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 77.5 | :******:******: | 6 WQual | 74.5 | :******:******: |
| 2 Hydro | 76.3 | :******:******: | 7 Econ | 73.9 | :******:**  : |
| 3 GrWat | 54.7 | :******:***  : | 8 Recr | 53.4 | :******:******: |
| 4 Flood | 68.6 | :******:***** : | 9 Aest | 49.2 | :******:***** : |
| 5 ShoLi | 35.1 | :******:***** : | 10 Educ | 76.1 | :******:******: |

AVERAGE DECILE OF TEN MODELS: 9.20 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA077 PLACE: (Photo 5-8) Taylor River, N of Drinkwater Rd, HF

| | | | |
|---|---|---|---|
| FL DATe : 04/08/86 | GS&ABUN 20: | Veg DENsity (HML) : | M |
| GS&ABUN 1 : ACERUB 5 | GS&ABUN 21: | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : ULMAME 3 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : SALNIG 3 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : sALIX 4 | GS&ABUN 24: | Veg.Spec. Richness: | M |
| GS&ABUN 5 : aCERUB 5 | GS&ABUN 25: | | |
| GS&ABUN 6 : CORSTO 4 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : ALNRUG15 | GS&ABUN 27: | WSI: 0.929 | |
| GS&ABUN 8 : LONMOR 2 | GS&ABUN 28: | WFV: 0.430 | |
| GS&ABUN 9 : TYPLAT30 | GS&ABUN 29: | Perc. Wild. Food: | H |
| GS&ABUN 10: CAREX 35 | GS&ABUN 30: | NO. of species: | 13 |
| GS&ABUN 11: CARSTR10 | INVestigator : ASG | Prime : P | |
| GS&ABUN 12: JUNEFF10 | Dom Wetl Class (0-11): 3 | Aesthetic: 0.000 | |
| GS&ABUN 13: JUNCUS10 | SPec ELem (ADEFHRSW ): | Tot ABUN: 136 | |
| GS&ABUN 14: | CLaSs Richn (1-5) : 5 | Conifer? N | |
| GS&ABUN 15: | SubTYpe Richn (ABCDE): B | Trees : 0.081 | |
| GS&ABUN 16: | VEGeta Intersp (HML) : M | Shrubs: 0.221 | |
| GS&ABUN 17: | Surr. HABitat (123) : 1 | Herbs : 0.699 | |
| GS&ABUN 18: | Cover DISpers.(ABCDE): A | Bog : 0.000 | |
| GS&ABUN 19: | Percent Open W (LMHV): L | SBTY : NPRU | |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID :TA077 | OUTlet2 (APE) : | | |
| 2 letter TOWN codes*:HF | P% Bord OW (NLMH) :M | | |
| Topo CONfig (CSVH) :S | FETch (LH or blank) : | | |
| Wetl SIZe (LMH) :M | DEPTH (SD or blank) : | | |
| Dom SOil type (int) : 595 | HYdr CoN (None, Stream, River | | |
| Other SOil : 647 | Lake or Combin. :R | | |
| Dom Surround Soil : 32 | ACCeSs (Rd Wat Iso) :R | | |
| Other Surr. Soil1 : 29 | POP'n density (LMH) :L | | |
| Other Surr. Soil2 : | loc SCARCity (LMH) :M | | |
| wetl GRAdient (LH) :L | CROP (N Hay Fam Com):N | | |
| Surr. SLOpe (LH) :H | LEGAL accs (puB priV | | |
| TOpo. POsit. (LMH) :M | or Restricted) :V | | |
| Dom Hydr Condit(1-6):5 | | | |
| RIPArian conn (YN) :Y | | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral :P | CALCULATED FROM OTHER DATA AND SOIL: | | |
| INL2 (APE) : | SurGeol Under wl(ALOT):T | PERmeabil (LMH):M | |
| INL3 (APE) : | SurGeol Surround(ALOT):L | THIckness (LMH):M | |
| INL4 (APE) : | HPOSition (Perch,W,A) :W | GW Relat (DRC) :C | |
| INL5 (APE) : | TRAnsmissivity (LMH) :L | | |
| OUTLet1 (APE) :P | | | |

| | | | | | |
|---|---|---|---|---|---|
| * NC | New Castle | RY | Rye | HA | Hampton |
| NH | North Hampton | HF | Hampton Falls | SE | Seabrook |

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 5-8) Taylor River, N of Drinkwater Rd, HF
TA077 Field Date: 04/08/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 5 | 0.50 | T | 3 |
| Ulmus americana | American elm | 3 | 0.82 | T | 1 |
| Salix nigra | Black willow | 3 | 1.00 | T | 1 |
| Salix sp. | Willow | 4 | 0.82 | S | 1 |
| Acer rubrum | Red maple | 5 | 0.50 | S | 3 |
| Cornus stolonifera | Red-osier dogwood | 4 | 0.82 | S | 3 |
| Alnus rugosa | Speckled alder | 15 | 1.00 | S | 1 |
| Lonicera morrowi | Morrow's honeysuckle | 2 | 0.00 | S | 1 |
| Typha latifolia | Cattail | 30 | 1.00 | H | 1 |
| Carex sp. | Sedge | 35 | 1.00 | H | 3 |
| Carex stricta | Tussock sedge | 10 | 1.00 | H | 3 |
| Juncus effusus | Soft rush | 10 | 1.00 | H | 0 |
| Juncus sp. | Rush | 10 | | H | 0 |

WSI: 0.928 WFV: 0.430 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.06 BUSHY: 0.15 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.22 BROADL: 0.00 NARROW: 0.47 FLOATING: 0.00
SUBTYPES: NPRU
WATERSHED: Taylor River TYPE: Shallow Fresh Marsh

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 82.9 | :******:******: | 6 WQual | 62.7 | :******:***** : |
| 2 Hydro | 68.4 | :******:***** : | 7 Econ | 65.2 | :******: : |
| 3 GrWat | 37.7 | :***** : : | 8 Recr | 52.0 | :******:******: |
| 4 Flood | 57.8 | :**** : : | 9 Aest | 55.0 | :******:***** : |
| 5 ShoLi | 18.6 | :******:**** : | 10 Educ | 71.4 | :******:******: |

AVERAGE DECILE OF TEN MODELS: 7.70 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA078 PLACE: (Photo 5-8) Taylor River, N of Drinkwater Rd, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/08/86 | GS&ABUN 20: | | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB 6 | GS&ABUN 21: | | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | PINSTR 2 | GS&ABUN 22: | | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | JUNVIR 1 | GS&ABUN 23: | | Lo Vernal pool): | L |
| GS&ABUN 4 : | POPTRE 1 | GS&ABUN 24: | | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | SALNIG 2 | GS&ABUN 25: | | | |
| GS&ABUN 6 : | aCERUB 5 | GS&ABUN 26: | | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | LONMOR 1 | GS&ABUN 27: | | WSI: 0.934 | |
| GS&ABUN 8 : | ALNRUG18 | GS&ABUN 28: | | WFV: 0.506 | |
| GS&ABUN 9 : | CORAMO 2 | GS&ABUN 29: | | Perc. Wild. Food: | H |
| GS&ABUN 10: | VACCOR 2 | GS&ABUN 30: | | NO. of species: | 18 |
| GS&ABUN 11: | VIBREC 1 | INVestigator : | ASG | Prime : | P |
| GS&ABUN 12: | KALANG 1 | Dom Wetl Class (0-11): | 3 | Aesthetic: | 0.002 |
| GS&ABUN 13: | pINSTR 2 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 210 |
| GS&ABUN 14: | sALIX 5 | CLaSs Richn (1-5) : | 5 | Conifer? | N |
| GS&ABUN 15: | CARSTR40 | SubTYpe Richn (ABCDE): | C | Trees : | 0.057 |
| GS&ABUN 16: | CAREX 50 | VEGeta Intersp (HML) : | H | Shrubs: | 0.176 |
| GS&ABUN 17: | TYPLAT70 | Surr. HABitat (123) : | 1 | Herbs : | 0.767 |
| GS&ABUN 18: | LYTSAL 1 | Cover DISpers.(ABCDE): | A | Bog : | 0.000 |
| GS&ABUN 19: | | Percent Open W (LMHV): | L | SBTY : | NPRU |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA078 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :H |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 595 | HYdr CoN (None, Stream, River | |
| Other SOil | : 33 | Lake or Combin. | :S |
| Dom Surround Soil | : 32 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 66 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 29 | loc SCARCity (LMH) | :M |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :M | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :M |
| INL3 (APE) | :E | SurGeol Surround(ALOT) | :L THIckness (LMH) :M |
| INL4 (APE) | :E | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | :E | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 5-8) Taylor River, N of Drinkwater Rd, HF
TA078 Field Date: 04/08/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 6 | 0.50 | T | 3 |
| Pinus strobus | White pine | 2 | 0.18 | T | 3 |
| Juniperus virginiana | Red cedar | 1 | 0.18 | T | 1 |
| Populus tremuloides | Quaking aspen | 1 | 0.00 | T | 2 |
| Salix nigra | Black willow | 2 | 1.00 | T | 1 |
| Acer rubrum | Red maple | 5 | 0.50 | S | 3 |
| Lonicera morrowi | Morrow's honeysuckle | 1 | 0.00 | S | 1 |
| Alnus rugosa | Speckled alder | 18 | 1.00 | S | 1 |
| Cornus amomum | Silky dogwood | 2 | 0.82 | S | 3 |
| Vaccinium corymbosum | Highbush blueberry | 2 | 0.82 | S | 2 |
| Viburnum recognitum | Northern arrowwood | 1 | 0.82 | S | 1 |
| Kalmia angustifolia | Sheep laurel | 1 | 0.50 | S | 0 |
| Pinus strobus | White pine | 2 | 0.18 | S | 3 |
| Salix sp. | Willow | 5 | 0.82 | S | 1 |
| Carex stricta | Tussock sedge | 40 | 1.00 | H | 3 |
| Carex sp. | Sedge | 50 | 1.00 | H | 3 |
| Typha latifolia | Cattail | 70 | 1.00 | H | 1 |
| Lythrum salicaria | Purple loosestrife | 1 | 1.00 | H | 0 |

WSI: 0.933 WFV: 0.505 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.05 BUSHY: 0.11 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.33 BROADL: 0.00 NARROW: 0.42 FLOATING: 0.00
SUBTYPES:NPRU
WATERSHED: Taylor River TYPE: Shallow Fresh Marsh

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 86.0 | :******:******: | 6 WQual | 70.5 | :******:******: |
| 2 Hydro | 78.9 | :******:******: | 7 Econ | 65.2 | :******: : |
| 3 GrWat | 56.6 | :******:***  : | 8 Recr | 43.8 | :******:***  : |
| 4 Flood | 63.7 | :******:**  : | 9 Aest | 50.7 | :******:***** : |
| 5 ShoLi | 37.9 | :******:******: | 10 Educ | 66.6 | :******:***** : |

AVERAGE DECILE OF TEN MODELS: 8.60 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA079 PLACE: (Photo 6-4) Between Drinkwater Rd & Cock Hill Rd, HF

| | | | |
|---|---|---|---|
| FL DATe : 04/03/86 | GS&ABUN 20: | Veg DENsity (HML) : | M |
| GS&ABUN 1 : FRAPEN 5 | GS&ABUN 21: | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : PINSTR 6 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : ULMAME 5 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : ACERUB10 | GS&ABUN 24: | Veg.Spec. Richness: | M |
| GS&ABUN 5 : ALNRUG25 | GS&ABUN 25: | | |
| GS&ABUN 6 : sALIX 15 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : ILEVER 3 | GS&ABUN 27: | WSI: 0.768 | |
| GS&ABUN 8 : aCERUB 5 | GS&ABUN 28: | WFV: 0.401 | |
| GS&ABUN 9 : LONMOR 3 | GS&ABUN 29: | Perc. Wild. Food: | H |
| GS&ABUN 10: TYPLAT 4 | GS&ABUN 30: | NO. of species: 11 | |
| GS&ABUN 11: CAREX 5 | INVestigator : ASG | Prime : P | |
| GS&ABUN 12: | Dom Wetl Class (0-11): 6 | Aesthetic: 0.017 | |
| GS&ABUN 13: | SPec ELem (ADEFHRSW ): | Tot ABUN: 86 | |
| GS&ABUN 14: | CLaSs Richn (1-5) : 5 | Conifer? N | |
| GS&ABUN 15: | SubTYpe Richn (ABCDE): C | Trees : 0.302 | |
| GS&ABUN 16: | VEGeta Intersp (HML) : M | Shrubs: 0.593 | |
| GS&ABUN 17: | Surr. HABitat (123) : 1 | Herbs : 0.105 | |
| GS&ABUN 18: | Cover DISpers.(ABCDE): A | Bog : 0.000 | |
| GS&ABUN 19: | Percent Open W (LMHV): L | SBTY : NPRU | |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA079 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :M |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 595 | HYdr CoN (None, Stream, River | |
| Other SOil | : 647 | Lake or Combin. | :R |
| Dom Surround Soil | : 32 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 29 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 67 | loc SCARCity (LMH) | :M |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :M | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :T PERmeabil (LMH) :M |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :L THIckness (LMH) :M |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 6-4) Between Drinkwater Rd & Cock Hill Rd, HF
TA079 Field Date: 04/03/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Fraxinus p. subintegerrima | Green ash | 5 | 0.82 | T | 1 |
| Pinus strobus | White pine | 6 | 0.18 | T | 3 |
| Ulmus americana | American elm | 5 | 0.82 | T | 1 |
| Acer rubrum | Red maple | 10 | 0.50 | T | 3 |
| Alnus rugosa | Speckled alder | 25 | 1.00 | S | 1 |
| Salix sp. | Willow | 15 | 0.82 | S | 1 |
| Ilex verticillata | Winterberry | 3 | 1.00 | S | 1 |
| Acer rubrum | Red maple | 5 | 0.50 | S | 3 |
| Lonicera morrowi | Morrow's honeysuckle | 3 | 0.00 | S | 1 |
| Typha latifolia | Cattail | 4 | 1.00 | H | 1 |
| Carex sp. | Sedge | 5 | 1.00 | H | 3 |

WSI: 0.768 WFV: 0.401 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.23 BUSHY: 0.36 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.04 BROADL: 0.00 NARROW: 0.05 FLOATING: 0.00
SUBTYPES:NPRU
WATERSHED: Taylor River TYPE: Shrub Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 76.7 | :******:******: | 6 WQual | 64.7 | :******:****** : |
| 2 Hydro | 69.7 | :******:***** : | 7 Econ | 56.5 | :***** : : |
| 3 GrWat | 39.6 | :***** : : | 8 Recr | 42.4 | :******:*** : |
| 4 Flood | 60.7 | :***** : : | 9 Aest | 40.5 | :******:* : |
| 5 ShoLi | 31.0 | :******:***** : | 10 Educ | 58.7 | :******:*** : |

AVERAGE DECILE OF TEN MODELS: 7.10 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA080 PLACE: (Photo 6-4) Taylor River, E of Kings Rd, HF

| | | | |
|---|---|---|---|
| FL DATe : 04/04/86 | GS&ABUN 20: | Veg DENsity (HML) : | M |
| GS&ABUN 1 : PINSTR10 | GS&ABUN 21: | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : ACERUB25 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : SALIX 13 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : ULMAME10 | GS&ABUN 24: | Veg.Spec. Richness: | M |
| GS&ABUN 5 : ALNRUG20 | GS&ABUN 25: | | |
| GS&ABUN 6 : sALIX 15 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : CORAMO10 | GS&ABUN 27: | WSI: 0.774 | |
| GS&ABUN 8 : VIBCAS10 | GS&ABUN 28: | WFV: 0.448 | |
| GS&ABUN 9 : RHURAD 5 | GS&ABUN 29: | Perc. Wild. Food: | H |
| GS&ABUN 10: VIBREC10 | GS&ABUN 30: | NO. of species: 13 | |
| GS&ABUN 11: TYPLAT10 | INVestigator : ASG | Prime : P | |
| GS&ABUN 12: CAREX 6 | Dom Wetl Class (0-11): 6 | Aesthetic: 0.000 | |
| GS&ABUN 13: CARSTR 6 | SPec ELem (ADEFHRSW ): | Tot ABUN: 150 | |
| GS&ABUN 14: | CLaSs Richn (1-5) : 4 | Conifer? N | |
| GS&ABUN 15: | SubTYpe Richn (ABCDE): C | Trees : 0.387 | |
| GS&ABUN 16: | VEGeta Intersp (HML) : M | Shrubs: 0.467 | |
| GS&ABUN 17: | Surr. HABitat (123) : 1 | Herbs : 0.147 | |
| GS&ABUN 18: | Cover DISpers.(ABCDE): C | Bog : 0.000 | |
| GS&ABUN 19: | Percent Open W (LMHV): L | SBTY : NPRUV | |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID :TA080 | OUTlet2 (APE) : | | |
| 2 letter TOWN codes*:HF | P% Bord OW (NLMH) :L | | |
| Topo CONfig (CSVH) :S | FETch (LH or blank) : | | |
| Wetl SIZe (LMH) :M | DEPTH (SD or blank) : | | |
| Dom SOil type (int) : 134 | HYdr CoN (None, Stream, River | | |
| Other SOil : 595 | Lake or Combin. :R | | |
| Dom Surround Soil : 43 | ACCeSs (Rd Wat Iso) :R | | |
| Other Surr. Soil1 : 32 | POP'n density (LMH) :L | | |
| Other Surr. Soil2 : 29 | loc SCARCity (LMH) :L | | |
| wetl GRAdient (LH) :L | CROP (N Hay Fam Com):N | | |
| Surr. SLOpe (LH) :L | LEGAL accs (puB priV | | |
| TOpo. POsit. (LMH) :M | or Restricted) :V | | |
| Dom Hydr Condit(1-6):5 | | | |
| RIPArian conn (YN) :Y | | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral :P | CALCULATED FROM OTHER DATA AND SOIL: | | |
| INL2 (APE) : | SurGeol Under wl(ALOT):L | PERmeabil (LMH):L | |
| INL3 (APE) : | SurGeol Surround(ALOT):T | THIckness (LMH):L | |
| INL4 (APE) : | HPOSition (Perch,W,A) :W | GW Relat (DRC) :C | |
| INL5 (APE) : | TRAnsmissivity (LMH) :L | | |
| OUTLet1 (APE) :P | | | |

| | | | | | |
|---|---|---|---|---|---|
| * NC | New Castle | RY | Rye | HA | Hampton |
| NH | North Hampton | HF | Hampton Falls | SE | Seabrook |

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 6-4) Taylor River, E of Kings Rd, HF
TA080 Field Date: 04/04/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Pinus strobus | White pine | 10 | 0.18 | T | 3 |
| Acer rubrum | Red maple | 25 | 0.50 | T | 3 |
| Salix sp. | Willow | 13 | 0.82 | T | 1 |
| Ulmus americana | American elm | 10 | 0.82 | T | 1 |
| Alnus rugosa | Speckled alder | 20 | 1.00 | S | 1 |
| Salix sp. | Willow | 15 | 0.82 | S | 1 |
| Cornus amomum | Silky dogwood | 10 | 0.82 | S | 3 |
| Viburnum cassinoides | Northern wild raisin | 10 | 0.82 | S | 1 |
| Rhus radicans | Poison ivy | 5 | 0.82 | S | 2 |
| Viburnum recognitum | Northern arrowwood | 10 | 0.82 | S | 1 |
| Typha latifolia | Cattail | 10 | 1.00 | H | 1 |
| Carex sp. | Sedge | 6 | 1.00 | H | 3 |
| Carex stricta | Tussock sedge | 6 | 1.00 | H | 3 |

WSI: 0.774 WFV: 0.448 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.10 BUSHY: 0.33 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.06 BROADL: 0.00 NARROW: 0.08 FLOATING: 0.00
SUBTYPES:NPRUV
WATERSHED: Taylor River TYPE: Shrub Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 68.9 | :******:******: | 6 WQual | 60.7 | :******:***  : |
| 2 Hydro | 63.1 | :******:**  : | 7 Econ | 56.5 | :***** :  : |
| 3 GrWat | 54.7 | :******:***  : | 8 Recr | 42.4 | :******:***  : |
| 4 Flood | 62.7 | :******:*  : | 9 Aest | 31.8 | :**  :  : |
| 5 ShoLi | 17.5 | :******:**  : | 10 Educ | 53.9 | :******:**  : |

AVERAGE DECILE OF TEN MODELS: 6.70 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA082 PLACE: (Photo 5-8) New Rd, N of Drinkwater Rd, HF

| | | | |
|---|---|---|---|
| FL DATe : 04/03/86 | GS&ABUN 20: | Veg DENsity (HML) : | M |
| GS&ABUN 1 : ACERUB40 | GS&ABUN 21: | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : ULMAME12 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : PINSTR 5 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : BETLUT 2 | GS&ABUN 24: | Veg.Spec. Richness: | M |
| GS&ABUN 5 : ALNRUG18 | GS&ABUN 25: | | |
| GS&ABUN 6 : LONMOR 1 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : aCERUB15 | GS&ABUN 27: | WSI: 0.630 | |
| GS&ABUN 8 : ROSPAL 3 | GS&ABUN 28: | WFV: 0.464 | |
| GS&ABUN 9 : CORAMO10 | GS&ABUN 29: | Perc. Wild. Food: | H |
| GS&ABUN 10: sALIX 8 | GS&ABUN 30: | NO. of species: 18 | |
| GS&ABUN 11: SPILAT 5 | INVestigator : ASG | Prime : | |
| GS&ABUN 12: pINSTR 2 | Dom Wetl Class (0-11): 7 | Aesthetic: 0.010 | |
| GS&ABUN 13: VIBREC 1 | SPec ELem (ADEFHRSW ): | Tot ABUN: 147 | |
| GS&ABUN 14: ROSMUL10 | CLaSs Richn (1-5) : 4 | Conifer? N | |
| GS&ABUN 15: SOLIDA 3 | SubTYpe Richn (ABCDE): C | Trees : 0.401 | |
| GS&ABUN 16: ONOSEN 7 | VEGeta Intersp (HML) : M | Shrubs: 0.497 | |
| GS&ABUN 17: CALCAN 4 | Surr. HABitat (123) : 2 | Herbs : 0.102 | |
| GS&ABUN 18: JUNEFF 1 | Cover DISpers.(ABCDE): D | Bog : 0.000 | |
| GS&ABUN 19: | Percent Open W (LMHV): L | SBTY : CNPUVW | |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID :TA082 | OUTlet2 (APE) : | | |
| 2 letter TOWN codes*:HF | P% Bord OW (NLMH) :N | | |
| Topo CONfig (CSVH) :S | FETch (LH or blank) : | | |
| Wetl SIZe (LMH) :M | DEPTH (SD or blank) : | | |
| Dom SOil type (int) : 538 | HYdr CoN (None, Stream, River | | |
| Other SOil : 510 | Lake or Combin. :S | | |
| Dom Surround Soil : 40 | ACCeSs (Rd Wat Iso) :R | | |
| Other Surr. Soil1 : 32 | POP'n density (LMH) :L | | |
| Other Surr. Soil2 : 43 | loc SCARCity (LMH) :L | | |
| wetl GRAdient (LH) :L | CROP (N Hay Fam Com):N | | |
| Surr. SLOpe (LH) :L | LEGAL accs (puB priV | | |
| TOpo. POsit. (LMH) :H | or Restricted) :V | | |
| Dom Hydr Condit(1-6):5 | | | |
| RIPArian conn (YN) :Y | | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral :E | CALCULATED FROM OTHER DATA AND SOIL: | | |
| INL2 (APE) : | SurGeol Under wl(ALOT):L | PERmeabil (LMH):L | |
| INL3 (APE) : | SurGeol Surround(ALOT):T | THIckness (LMH):L | |
| INL4 (APE) : | HPOSition (Perch,W,A) :P | GW Relat (DRC) :C | |
| INL5 (APE) : | TRAnsmissivity (LMH) :L | | |
| OUTLet1 (APE) :P | | | |

* NC New Castle RY Rye HA Hampton
NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 5-8) New Rd, N of Drinkwater Rd, HF
TA082 Field Date: 04/03/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 40 | 0.50 | T | 3 |
| Ulmus americana | American elm | 12 | 0.82 | T | 1 |
| Pinus strobus | White pine | 5 | 0.18 | T | 3 |
| Betula lutea | Yellow birch | 2 | 0.50 | T | 2 |
| Alnus rugosa | Speckled alder | 18 | 1.00 | S | 1 |
| Lonicera morrowi | Morrow's honeysuckle | 1 | 0.00 | S | 1 |
| Acer rubrum | Red maple | 15 | 0.50 | S | 3 |
| Rosa palustris | Marsh rose | 3 | 1.00 | S | 1 |
| Cornus amomum | Silky dogwood | 10 | 0.82 | S | 3 |
| Salix sp. | Willow | 8 | 0.82 | S | 1 |
| Spiraea latifolia | Meadowsweet | 5 | 0.50 | S | 0 |
| Pinus strobus | White pine | 2 | 0.18 | S | 3 |
| Viburnum recognitum | Northern arrowwood | 1 | 0.82 | S | 1 |
| Rosa multiflora | Multiflora rose | 10 | 0.00 | S | 1 |
| Solidago sp. | Goldenrod | 3 | | H | 0 |
| Onoclea sensibilis | Sensitive fern | 7 | 1.00 | H | 0 |
| Calamagrostis canadensis | Bluejoint grass | 4 | 1.00 | H | 0 |
| Juncus effusus | Soft rush | 1 | 1.00 | H | 0 |

WSI: 0.629 WFV: 0.464 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.17 BUSHY: 0.22 COMPACT: 0.03
MARSH SBCL: ROBUST: 0.00 BROADL: 0.04 NARROW: 0.03 FLOATING: 0.00
SUBTYPES: CNPUVW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 44.9 | :******: : | 6 WQual | 49.0 | :***** : : |
| 2 Hydro | 56.5 | :******: : | 7 Econ | 73.9 | :******:** : |
| 3 GrWat | 33.9 | :***  : : | 8 Recr | 36.9 | :******:* : |
| 4 Flood | 62.7 | :******:* : | 9 Aest | 39.1 | :******: : |
| 5 ShoLi | 0.00 | :**  : : | 10 Educ | 46.0 | :******:* : |

AVERAGE DECILE OF TEN MODELS: 4.90

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA084 PLACE: (Photo 5-6) Taylor River, HF Town Forest, HF

| | | | |
|---|---|---|---|
| FL DATe : 04/03/86 | GS&ABUN 20: CAREX 6 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : POPTRE 3 | GS&ABUN 21: ONOSEN15 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : ACERUB25 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : BETLUT 1 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : ULMAME12 | GS&ABUN 24: | Veg.Spec. Richness: | H |
| GS&ABUN 5 : PINSTR 2 | GS&ABUN 25: | | |
| GS&ABUN 6 : ALNRUG25 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : aCERUB15 | GS&ABUN 27: | WSI: 0.828 | |
| GS&ABUN 8 : VIBREC10 | GS&ABUN 28: | WFV: 0.345 | |
| GS&ABUN 9 : CORAMO 2 | GS&ABUN 29: | Perc. Wild. Food: | M |
| GS&ABUN 10: tSUCAN 1 | GS&ABUN 30: | NO. of species: | 21 |
| GS&ABUN 11: RHURAD 5 | INVestigator : ASG | Prime : P | |
| GS&ABUN 12: SPILAT10 | Dom Wetl Class (0-11): 6 | Aesthetic: 0.002 | |
| GS&ABUN 13: pINSTR 1 | SPec ELem (ADEFHRSW ): | Tot ABUN: 216 | |
| GS&ABUN 14: SPHAGN30 | CLaSs Richn (1-5) : 5 | Conifer? N | |
| GS&ABUN 15: TYPLAT34 | SubTYpe Richn (ABCDE): C | Trees : 0.199 | |
| GS&ABUN 16: COPGRO 2 | VEGeta Intersp (HML) : H | Shrubs: 0.319 | |
| GS&ABUN 17: LYTSAL 1 | Surr. HABitat (123) : 1 | Herbs : 0.481 | |
| GS&ABUN 18: ASTER 1 | Cover DISpers.(ABCDE): B | Bog : 0.139 | |
| GS&ABUN 19: CARSTR15 | Percent Open W (LMHV): L | SBTY : CMNPRUVW | |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID :TA084 | OUTlet2 (APE) : | | |
| 2 letter TOWN codes*:HF | P% Bord OW (NLMH) :L | | |
| Topo CONfig (CSVH) :S | FETch (LH or blank) :L | | |
| Wetl SIZe (LMH) :H | DEPTH (SD or blank) :S | | |
| Dom SOil type (int) : 33 | HYdr CoN (None, Stream, River | | |
| Other SOil : 134 | Lake or Combin. :S | | |
| Dom Surround Soil : 32 | ACCeSs (Rd Wat Iso) :R | | |
| Other Surr. Soil1 : 40 | POP'n density (LMH) :L | | |
| Other Surr. Soil2 : 38 | loc SCARCity (LMH) :M | | |
| wetl GRAdient (LH) :L | CROP (N Hay Fam Com):N | | |
| Surr. SLOpe (LH) :H | LEGAL accs (puB priV | | |
| TOpo. POsit. (LMH) :M | or Restricted) :V | | |
| Dom Hydr Condit(1-6):5 | | | |
| RIPArian conn (YN) :Y | | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral :P | CALCULATED FROM OTHER DATA AND SOIL: | | |
| INL2 (APE) :P | SurGeol Under wl(ALOT):L | PERmeabil (LMH):L | |
| INL3 (APE) :P | SurGeol Surround(ALOT):L | THIckness (LMH):L | |
| INL4 (APE) : | HPOSition (Perch,W,A) :P | GW Relat (DRC) :C | |
| INL5 (APE) : | TRAnsmissivity (LMH) :L | | |
| OUTLet1 (APE) :P | | | |

| | | | | | |
|---|---|---|---|---|---|
| * NC | New Castle | RY | Rye | HA | Hampton |
| NH | North Hampton | HF | Hampton Falls | SE | Seabrook |

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 5-6) Taylor River, HF Town Forest, HF
TA084 Field Date: 04/03/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Populus tremuloides | Quaking aspen | 3 | 0.00 | T | 2 |
| Acer rubrum | Red maple | 25 | 0.50 | T | 3 |
| Betula lutea | Yellow birch | 1 | 0.50 | T | 2 |
| Ulmus americana | American elm | 12 | 0.82 | T | 1 |
| Pinus strobus | White pine | 2 | 0.18 | T | 3 |
| Alnus rugosa | Speckled alder | 25 | 1.00 | S | 1 |
| Acer rubrum | Red maple | 15 | 0.50 | S | 3 |
| Viburnum recognitum | Northern arrowwood | 10 | 0.82 | S | 1 |
| Cornus amomum | Silky dogwood | 2 | 0.82 | S | 3 |
| Tsuga canadensis | Hemlock | 1 | 0.50 | S | 1 |
| Rhus radicans | Poison ivy | 5 | 0.82 | S | 2 |
| Spiraea latifolia | Meadowsweet | 10 | 0.50 | S | 0 |
| Pinus strobus | White pine | 1 | 0.18 | S | 3 |
| Sphagnum sp. | Sphagnum moss | 30 | 1.00 | H | 0 |
| Typha latifolia | Cattail | 34 | 1.00 | H | 1 |
| Coptis groenlandica | Goldthread | 2 | 0.82 | H | 0 |
| Lythrum salicaria | Purple loosestrife | 1 | 1.00 | H | 0 |
| Aster sp. | Asters | 1 | | H | 0 |
| Carex stricta | Tussock sedge | 15 | 1.00 | H | 3 |
| Carex sp. | Sedge | 6 | 1.00 | H | 3 |
| Onoclea sensibilis | Sensitive fern | 15 | 1.00 | H | 0 |

WSI: 0.827 WFV: 0.344 BOG: 0.138 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.07 BUSHY: 0.17 COMPACT: 0.04
MARSH SBCL: ROBUST: 0.16 BROADL: 0.07 NARROW: 0.09 FLOATING: 0.00
SUBTYPES: CMNPRUVW
WATERSHED: Taylor River TYPE: Shrub Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 72.8 | :******:******: | 6 WQual | 72.5 | :******:******: |
| 2 Hydro | 73.6 | :******:***** : | 7 Econ | 73.9 | :******:** : |
| 3 GrWat | 49.0 | :******:* : | 8 Recr | 45.2 | :******:***** : |
| 4 Flood | 68.6 | :******:***** : | 9 Aest | 36.2 | :******: : |
| 5 ShoLi | 17.5 | :******:** : | 10 Educ | 66.6 | :******:***** : |

AVERAGE DECILE OF TEN MODELS: 8.10 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA085 PLACE: (Photo 5-6) New Rd, S of Drinkwater Rd, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/03/86 | GS&ABUN 20: | | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB10 | GS&ABUN 21: | | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : | PINSTR 1 | GS&ABUN 22: | | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | JUNVIR 1 | GS&ABUN 23: | | Lo Vernal pool): | L |
| GS&ABUN 4 : | ALNRUG40 | GS&ABUN 24: | | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | CORAMO 1 | GS&ABUN 25: | | | |
| GS&ABUN 6 : | MYRPEN 2 | GS&ABUN 26: | | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | VIBREC 1 | GS&ABUN 27: | | WSI: | 0.854 |
| GS&ABUN 8 : | pINSTR 1 | GS&ABUN 28: | | WFV: | 0.252 |
| GS&ABUN 9 : | SPILAT10 | GS&ABUN 29: | | Perc. Wild. Food: | M |
| GS&ABUN 10: | ROSPAL15 | GS&ABUN 30: | | NO. of species: | 18 |
| GS&ABUN 11: | SAMCAN 1 | INVestigator : | ASG | Prime : | P |
| GS&ABUN 12: | SPITOM 2 | Dom Wetl Class (0-11): | 6 | Aesthetic: | 0.077 |
| GS&ABUN 13: | ILEVER 2 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 111 |
| GS&ABUN 14: | sALIX 3 | CLaSs Richn (1-5) : | 5 | Conifer? | N |
| GS&ABUN 15: | RHUVER 1 | SubTYpe Richn (ABCDE): | B | Trees : | 0.108 |
| GS&ABUN 16: | TYPLAT 2 | VEGeta Intersp (HML) : | M | Shrubs: | 0.712 |
| GS&ABUN 17: | ONOSEN16 | Surr. HABitat (123) : | 1 | Herbs : | 0.180 |
| GS&ABUN 18: | TYPLAT 2 | Cover DISpers.(ABCDE): | D | Bog : | 0.000 |
| GS&ABUN 19: | | Percent Open W (LMHV): | L | SBTY : | CPRUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA085 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :L |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 33 | HYdr CoN (None, Stream, River | |
| Other SOil | : 134 | Lake or Combin. | :N |
| Dom Surround Soil | : 32 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 47 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :L | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :6 | | |
| RIPArian conn (YN) | :N | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :A | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :L THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

| | | | | | |
|---|---|---|---|---|---|
| * NC | New Castle | RY | Rye | HA | Hampton |
| NH | North Hampton | HF | Hampton Falls | SE | Seabrook |

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 5-6) New Rd, S of Drinkwater Rd, HF
TA085 Field Date: 04/03/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 10 | 0.50 | T | 3 |
| Pinus strobus | White pine | 1 | 0.18 | T | 3 |
| Juniperus virginiana | Red cedar | 1 | 0.18 | T | 1 |
| Alnus rugosa | Speckled alder | 40 | 1.00 | S | 1 |
| Cornus amomum | Silky dogwood | 1 | 0.82 | S | 3 |
| Myrica pensylvanica | Bayberry | 2 | 0.50 | S | 2 |
| Viburnum recognitum | Northern arrowwood | 1 | 0.82 | S | 1 |
| Pinus strobus | White pine | 1 | 0.18 | S | 3 |
| Spiraea latifolia | Meadowsweet | 10 | 0.50 | S | 0 |
| Rosa palustris | Marsh rose | 15 | 1.00 | S | 1 |
| Sambucus canadensis | Elderberry | 1 | 0.18 | S | 1 |
| Spiraea tomentosa | Steeplebush | 2 | 0.50 | S | 0 |
| Ilex verticillata | Winterberry | 2 | 1.00 | S | 1 |
| Salix sp. | Willow | 3 | 0.82 | S | 1 |
| Rhus vernix | Poison sumac | 1 | 1.00 | S | 2 |
| Typha latifolia | Cattail | 2 | 1.00 | H | 1 |
| Onoclea sensibilis | Sensitive fern | 16 | 1.00 | H | 0 |
| Typha latifolia | Cattail | 2 | 1.00 | H | 1 |

WSI: 0.854 WFV: 0.252 BOG: 0.000 SALT: 0.000 DUNE: 0.018
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.04 BUSHY: 0.54 COMPACT: 0.12
MARSH SBCL: ROBUST: 0.03 BROADL: 0.14 NARROW: 0.00 FLOATING: 0.00
SUBTYPES:CPRUW
WATERSHED: Taylor River TYPE: Shrub Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 62.0 | :*****:**** : | 6 WQual | 56.8 | :*****:** : |
| 2 Hydro | 27.6 | :** : : | 7 Econ | 56.5 | :**** : : |
| 3 GrWat | 32.0 | :** : : | 8 Recr | 31.5 | :*** : : |
| 4 Flood | 62.7 | :******:* : | 9 Aest | 40.5 | :******:* : |
| 5 ShoLi | 17.5 | :******:** : | 10 Educ | 58.7 | :******:*** : |

AVERAGE DECILE OF TEN MODELS: 5.40 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA088 PLACE: (Photo 5-6) S of Lamprey Rd, HF

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FL DATe | : 06/30/86 | GS&ABUN 20: | SOLIDA 5 | Veg DENsity (HML) : | H |
| GS&ABUN 1 : | ACERUB15 | GS&ABUN 21: | LYSTER 6 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | PINSTR 4 | GS&ABUN 22: | JUNEFF 4 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | TSUCAN 2 | GS&ABUN 23: | GLYSTR 3 | Lo Vernal pool): | L |
| GS&ABUN 4 : | ULMAME 2 | GS&ABUN 24: | CARSTR 2 | Veg.Spec. Richness: | H |
| GS&ABUN 5 : | SALIX 1 | GS&ABUN 25: | SOLIDA 2 | | |
| GS&ABUN 6 : | uLMAME 2 | GS&ABUN 26: | OSMCIN 2 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | tSUCAN 3 | GS&ABUN 27: | TYPLAT 2 | WSI: 0.796 | |
| GS&ABUN 8 : | ALNRUG22 | GS&ABUN 28: | MAICAN 3 | WFV: 0.232 | |
| GS&ABUN 9 : | RHAFRA 2 | GS&ABUN 29: | POa 40 | Perc. Wild. Food: | M |
| GS&ABUN 10: | RHURAD 4 | GS&ABUN 30: | | NO. of species: 29 | |
| GS&ABUN 11: | SPILAT11 | INVestigator : GS | | Prime : P | |
| GS&ABUN 12: | ROSPAL 8 | Dom Wetl Class (0-11): 6 | | Aesthetic: 0.093 | |
| GS&ABUN 13: | VIBREC 6 | SPec ELem (ADEFHRSW ): | | Tot ABUN: 220 | |
| GS&ABUN 14: | ONOSEN12 | CLaSs Richn (1-5) : 4 | | Conifer? N | |
| GS&ABUN 15: | CAREX 14 | SubTYpe Richn (ABCDE): C | | Trees : 0.109 | |
| GS&ABUN 16: | EQUFLU 2 | VEGeta Intersp (HML) : M | | Shrubs: 0.264 | |
| GS&ABUN 17: | EQUARV 6 | Surr. HABitat (123) : 2 | | Herbs : 0.627 | |
| GS&ABUN 18: | IMPCAP30 | Cover DISpers.(ABCDE): D | | Bog : 0.000 | |
| GS&ABUN 19: | ASTER 5 | Percent Open W (LMHV): L | | SBTY : CNPRUW | |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA088 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :L |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 134 | HYdr CoN (None, Stream, River | |
| Other SOil | : 33 | Lake or Combin. | :S |
| Dom Surround Soil | : 32 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 38 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 37 | loc SCARCity (LMH) | :M |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :4 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :L THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 5-6) S of Lamprey Rd, HF
TA088 Field Date: 06/30/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 15 | 0.50 | T | 3 |
| Pinus strobus | White pine | 4 | 0.18 | T | 3 |
| Tsuga canadensis | Hemlock | 2 | 0.50 | T | 1 |
| Ulmus americana | American elm | 2 | 0.82 | T | 1 |
| Salix sp. | Willow | 1 | 0.82 | T | 1 |
| Ulmus americana | American elm | 2 | 0.82 | S | 1 |
| Tsuga canadensis | Hemlock | 3 | 0.50 | S | 1 |
| Alnus rugosa | Speckled alder | 22 | 1.00 | S | 1 |
| Rhamnus frangula | Europ. buckthorn | 2 | 0.50 | S | 0 |
| Rhus radicans | Poison ivy | 4 | 0.82 | S | 2 |
| Spiraea latifolia | Meadowsweet | 11 | 0.50 | S | 0 |
| Rosa palustris | Marsh rose | 8 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 6 | 0.82 | S | 1 |
| Onoclea sensibilis | Sensitive fern | 12 | 1.00 | H | 0 |
| Carex sp. | Sedge | 14 | 1.00 | H | 3 |
| Equisetum fluviatile | River horsetail | 2 | 1.00 | H | 0 |
| Equisetum arvense | Common horsetail | 6 | 0.50 | H | 0 |
| Impatiens capensis | Jewelweed | 30 | 0.82 | H | 0 |
| Aster sp. | Asters | 5 | | H | 0 |
| Solidago sp. | Goldenrod | 5 | | H | 0 |
| Lysimachia terrestris | Swamp candles | 6 | 1.00 | H | 0 |
| Juncus effusus | Soft rush | 4 | 1.00 | H | 0 |
| Glyceria striata | Fowl-meadow grass | 3 | 1.00 | H | 1 |
| Carex stricta | Tussock sedge | 2 | 1.00 | H | 3 |
| Solidago sp. | Goldenrod | 2 | | H | 0 |
| Osmunda cinnamomea | Cinnamon fern | 2 | 0.82 | H | 0 |
| Typha latifolia | Cattail | 2 | 1.00 | H | 1 |
| Maianthemum canadense | Canada mayflower | 3 | 0.00 | H | 0 |
| Poaceae | Grasses | 40 | | H | 1 |

WSI: 0.796 WFV: 0.231 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.02 BUSHY: 0.17 COMPACT: 0.05
MARSH SBCL: ROBUST: 0.14 BROADL: 0.06 NARROW: 0.35 FLOATING: 0.00
SUBTYPES:CNPRUW
WATERSHED: Taylor River TYPE: Shrub Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 65.1 | :******:****  : | 6 WQual | 57.8 | :******:**  : |
| 2 Hydro | 56.5 | :******:  : | 7 Econ | 56.5 | :*****  :  : |
| 3 GrWat | 54.7 | :******:***  : | 8 Recr | 34.2 | :******:  : |
| 4 Flood | 62.7 | :******:*  : | 9 Aest | 40.5 | :******:*  : |
| 5 ShoLi | 19.6 | :******:***  : | 10 Educ | 66.6 | :******:****  : |

AVERAGE DECILE OF TEN MODELS: 6.70 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA090 PLACE: (Photo 6-4) N of Drinkwater Rd, W of Kings Rd, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/25/86 | GS&ABUN 20: | SPHAGN25 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB25 | GS&ABUN 21: | ONOSEN20 | wetl JUXtapos(HML): | M |
| GS&ABUN 2 : | PINSTR 5 | GS&ABUN 22: | IMPCAP10 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | ULMAME 5 | GS&ABUN 23: | CARSTR10 | Lo Vernal pool): | L |
| GS&ABUN 4 : | SALNIG 4 | GS&ABUN 24: | CAREX 10 | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | CAROVA 1 | GS&ABUN 25: | JUNEFF10 | | |
| GS&ABUN 6 : | PRUPEN 1 | GS&ABUN 26: | COPGRO 5 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | POPTRE 2 | GS&ABUN 27: | SYMFOE 5 | WSI: 0.836 | |
| GS&ABUN 8 : | aCERUB 1 | GS&ABUN 28: | CALPAL 1 | WFV: 0.325 | |
| GS&ABUN 9 : | sALIX 5 | GS&ABUN 29: | TYPLAT20 | Perc. Wild. Food: | M |
| GS&ABUN 10: | ALNRUG25 | GS&ABUN 30: | | NO. of species: | 29 |
| GS&ABUN 11: | ILEVER 4 | INVestigator : | ASG | Prime : | P |
| GS&ABUN 12: | VIBREC 5 | Dom Wetl Class (0-11): | 6 | Aesthetic: | 0.030 |
| GS&ABUN 13: | CORAMO 2 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 265 |
| GS&ABUN 14: | RHURAD50 | CLaSs Richn (1-5) : | 4 | Conifer? | N |
| GS&ABUN 15: | SPILAT10 | SubTYpe Richn (ABCDE): | C | Trees : | 0.162 |
| GS&ABUN 16: | VACCOR 1 | VEGeta Intersp (HML) : | M | Shrubs: | 0.398 |
| GS&ABUN 17: | pINSTR 1 | Surr. HABitat (123) : | 1 | Herbs : | 0.440 |
| GS&ABUN 18: | SAMCAN 1 | Cover DISpers.(ABCDE): | E | Bog : | 0.094 |
| GS&ABUN 19: | RUBIDA 1 | Percent Open W (LMHV): | L | SBTY : | CMNPRUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA090 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 33 | HYdr CoN (None, Stream, River | |
| Other SOil | : 134 | Lake or Combin. | :S |
| Dom Surround Soil | : 32 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 510 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 66 | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | :E | SurGeol Surround(ALOT) | :L THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 6-4) N of Drinkwater Rd, W of Kings Rd, HF
TA090 Field Date: 04/25/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 25 | 0.50 | T | 3 |
| Pinus strobus | White pine | 5 | 0.18 | T | 3 |
| Ulmus americana | American elm | 5 | 0.82 | T | 1 |
| Salix nigra | Black willow | 4 | 1.00 | T | 1 |
| Carya ovata | Shagbark hickory | 1 | 0.18 | T | 2 |
| Prunus pensylvanica | Bird cherry | 1 | 0.00 | T | 3 |
| Populus tremuloides | Quaking aspen | 2 | 0.00 | T | 2 |
| Acer rubrum | Red maple | 1 | 0.50 | S | 3 |
| Salix sp. | Willow | 5 | 0.82 | S | 1 |
| Alnus rugosa | Speckled alder | 25 | 1.00 | S | 1 |
| Ilex verticillata | Winterberry | 4 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 5 | 0.82 | S | 1 |
| Cornus amomum | Silky dogwood | 2 | 0.82 | S | 3 |
| Rhus radicans | Poison ivy | 50 | 0.82 | S | 2 |
| Spiraea latifolia | Meadowsweet | 10 | 0.50 | S | 0 |
| Vaccinium corymbosum | Highbush blueberry | 1 | 0.82 | S | 2 |
| Pinus strobus | White pine | 1 | 0.18 | S | 3 |
| Sambucus canadensis | Elderberry | 1 | 0.18 | S | 1 |
| Rubus idaeus | Red raspberry | 1 | 0.00 | B | 3 |
| Sphagnum sp. | Sphagnum moss | 25 | 1.00 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 20 | 1.00 | H | 0 |
| Impatiens capensis | Jewelweed | 10 | 0.82 | H | 0 |
| Carex stricta | Tussock sedge | 10 | 1.00 | H | 3 |
| Carex sp. | Sedge | 10 | 1.00 | H | 3 |
| Juncus effusus | Soft rush | 10 | 1.00 | H | 0 |
| Coptis groenlandica | Goldthread | 5 | 0.82 | H | 0 |
| Symplocarpus foetidus | Skunk cabbage | 5 | 1.00 | H | 0 |
| Caltha palustris | Marsh marigold | 1 | 1.00 | H | 0 |
| Typha latifolia | Cattail | 20 | 1.00 | H | 1 |

WSI: 0.835 WFV: 0.325 BOG: 0.094 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.02 BUSHY: 0.14 COMPACT: 0.03
MARSH SBCL: ROBUST: 0.11 BROADL: 0.11 NARROW: 0.11 FLOATING: 0.00
SUBTYPES:CMNPRUVW
WATERSHED: Taylor River TYPE: Shrub Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 51.9 | :*****:** : | 6 WQual | 60.7 | :*****:*** : |
| 2 Hydro | 59.2 | :******:* : | 7 Econ | 56.5 | :***** : : |
| 3 GrWat | 37.7 | :***** : : | 8 Recr | 30.1 | :*** : : |
| 4 Flood | 64.7 | :******:** : | 9 Aest | 36.2 | :******: : |
| 5 ShoLi | 0.00 | :** : : | 10 Educ | 46.0 | :******:* : |

AVERAGE DECILE OF TEN MODELS: 5.20 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA092 PLACE: (Photo 6-4) Taylor River, between Osgood Rd & Rt88, HF

| | | | |
|---|---|---|---|
| FL DATe : 04/22/86 | GS&ABUN 20: JUNCUS 2 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : ACERUB 6 | GS&ABUN 21: | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : PINSTR 1 | GS&ABUN 22: | w. level FLUCtu (Hi | |
| GS&ABUN 3 : SALIX 1 | GS&ABUN 23: | Lo Vernal pool): | L |
| GS&ABUN 4 : ALNRUG45 | GS&ABUN 24: | Veg.Spec. Richness: | M |
| GS&ABUN 5 : sALIX 15 | GS&ABUN 25: | | |
| GS&ABUN 6 : SPILAT10 | GS&ABUN 26: | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : VIBREC 5 | GS&ABUN 27: | WSI: 0.956 | |
| GS&ABUN 8 : CORSTO 1 | GS&ABUN 28: | WFV: 0.451 | |
| GS&ABUN 9 : pRUPEN 1 | GS&ABUN 29: | Perc. Wild. Food: | H |
| GS&ABUN 10: ILEVER 5 | GS&ABUN 30: | NO. of species: | 20 |
| GS&ABUN 11: VACCOR 1 | INVestigator : ASG | Prime : P | |
| GS&ABUN 12: TYPLAT70 | Dom Wetl Class (0-11): 3 | Aesthetic: 0.009 | |
| GS&ABUN 13: CARSTR70 | SPec ELem (ADEFHRSW ): | Tot ABUN: 327 | |
| GS&ABUN 14: CAREX 70 | CLaSs Richn (1-5) : 5 | Conifer? N | |
| GS&ABUN 15: PHRCOM 1 | SubTYpe Richn (ABCDE): C | Trees : 0.024 | |
| GS&ABUN 16: LYTSAL 1 | VEGeta Intersp (HML) : H | Shrubs: 0.254 | |
| GS&ABUN 17: SOLIDA 2 | Surr. HABitat (123) : 1 | Herbs : 0.722 | |
| GS&ABUN 18: SPHAGN10 | Cover DISpers.(ABCDE): B | Bog : 0.031 | |
| GS&ABUN 19: ONOSEN10 | Percent Open W (LMHV): L | SBTY : CMNPRUW | |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA092 | OUTlet2 (APE) | : |
| 2 letter TOWN codes*: | HF | P% Bord OW (NLMH) | :H |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :H | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 134 | HYdr CoN (None, Stream, River | |
| Other SOil | : 33 | Lake or Combin. | :S |
| Dom Surround Soil | : 38 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 313 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 538 | loc SCARCity (LMH) | :M |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :M | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :4 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :P | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | :P | SurGeol Surround(ALOT) | :L THIckness (LMH) :L |
| INL4 (APE) | :P | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | :E | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 6-4) Taylor River, between Osgood Rd & Rt88, HF
TA092 Field Date: 04/22/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 6 | 0.50 | T | 3 |
| Pinus strobus | White pine | 1 | 0.18 | T | 3 |
| Salix sp. | Willow | 1 | 0.82 | T | 1 |
| Alnus rugosa | Speckled alder | 45 | 1.00 | S | 1 |
| Salix sp. | Willow | 15 | 0.82 | S | 1 |
| Spiraea latifolia | Meadowsweet | 10 | 0.50 | S | 0 |
| Viburnum recognitum | Northern arrowwood | 5 | 0.82 | S | 1 |
| Cornus stolonifera | Red-osier dogwood | 1 | 0.82 | S | 3 |
| Prunus pensylvanica | Bird cherry | 1 | 0.00 | S | 3 |
| Ilex verticillata | Winterberry | 5 | 1.00 | S | 1 |
| Vaccinium corymbosum | Highbush blueberry | 1 | 0.82 | S | 2 |
| Typha latifolia | Cattail | 70 | 1.00 | H | 1 |
| Carex stricta | Tussock sedge | 70 | 1.00 | H | 3 |
| Carex sp. | Sedge | 70 | 1.00 | H | 3 |
| Phragmites communis | Reed | 1 | 0.82 | H | 0 |
| Lythrum salicaria | Purple loosestrife | 1 | 1.00 | H | 0 |
| Solidago sp. | Goldenrod | 2 | | H | 0 |
| Sphagnum sp. | Sphagnum moss | 10 | 1.00 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 10 | 1.00 | H | 0 |
| Juncus sp. | Rush | 2 | | H | 0 |

WSI: 0.956 WFV: 0.451 BOG: 0.030 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.04 BUSHY: 0.17 COMPACT: 0.03
MARSH SBCL: ROBUST: 0.22 BROADL: 0.03 NARROW: 0.43 FLOATING: 0.00
SUBTYPES:CMNPRUW
WATERSHED: Taylor River TYPE: Shallow Fresh Marsh

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 86.8 | :******:******: | 6 WQual | 74.5 | :******:******: |
| 2 Hydro | 81.5 | :******:******: | 7 Econ | 82.6 | :******:******: |
| 3 GrWat | 73.5 | :******:******: | 8 Recr | 54.7 | :******:******: |
| 4 Flood | 64.7 | :******:** : | 9 Aest | 50.7 | :******:***** : |
| 5 ShoLi | 37.9 | :******:******: | 10 Educ | 66.6 | :******:***** : |

AVERAGE DECILE OF TEN MODELS: 9.50 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA093 PLACE: (Photo 6-6) N of Osgood Rd, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 04/22/86 | GS&ABUN 20: | ONOSEN30 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB10 | GS&ABUN 21: | TYPLAT80 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | PINSTR 3 | GS&ABUN 22: | | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | CAROVA 1 | GS&ABUN 23: | | Lo Vernal pool): | L |
| GS&ABUN 4 : | tSUCAN 1 | GS&ABUN 24: | | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | pRUPEN 1 | GS&ABUN 25: | | | |
| GS&ABUN 6 : | ALNRUG30 | GS&ABUN 26: | | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | aCERUB40 | GS&ABUN 27: | | WSI: 0.887 | |
| GS&ABUN 8 : | sALIX 10 | GS&ABUN 28: | | WFV: 0.446 | |
| GS&ABUN 9 : | VIBREC15 | GS&ABUN 29: | | Perc. Wild. Food: | H |
| GS&ABUN 10: | CORSTO 1 | GS&ABUN 30: | | NO. of species: | 21 |
| GS&ABUN 11: | ILEVER 2 | INVestigator : | ASG | Prime : | P |
| GS&ABUN 12: | SPILAT10 | Dom Wetl Class (0-11): | 3 | Aesthetic: | 0.003 |
| GS&ABUN 13: | SPITOM 2 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 376 |
| GS&ABUN 14: | RUBALL 1 | CLaSs Richn (1-5) : | 3 | Conifer? | N |
| GS&ABUN 15: | RUBIDA 1 | SubTYpe Richn (ABCDE): | C | Trees : | 0.037 |
| GS&ABUN 16: | CARSTR60 | VEGeta Intersp (HML) : | M | Shrubs: | 0.301 |
| GS&ABUN 17: | CAREX 60 | Surr. HABitat (123) : | 1 | Herbs : | 0.662 |
| GS&ABUN 18: | SYMFOE 3 | Cover DISpers.(ABCDE): | E | Bog : | 0.040 |
| GS&ABUN 19: | SPHAGN15 | Percent Open W (LMHV): | L | SBTY : | CMNPRUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA093 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 395 | HYdr CoN (None, Stream, River | |
| Other SOil | : | Lake or Combin. | :S |
| Dom Surround Soil | : 38 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 313 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : 26 | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :M | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :E | SurGeol Under wl(ALOT) | :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :P | | |

| | | | | | |
|---|---|---|---|---|---|
| * NC | New Castle | RY | Rye | HA | Hampton |
| NH | North Hampton | HF | Hampton Falls | SE | Seabrook |

PERmeabil (LMH):M
THIckness (LMH):M
GW Relat (DRC) :C

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 6-6) N of Osgood Rd, HF
TA093 Field Date: 04/22/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 10 | 0.50 | T | 3 |
| Pinus strobus | White pine | 3 | 0.18 | T | 3 |
| Carya ovata | Shagbark hickory | 1 | 0.18 | T | 2 |
| Tsuga canadensis | Hemlock | 1 | 0.50 | S | 1 |
| Prunus pensylvanica | Bird cherry | 1 | 0.00 | S | 3 |
| Alnus rugosa | Speckled alder | 30 | 1.00 | S | 1 |
| Acer rubrum | Red maple | 40 | 0.50 | S | 3 |
| Salix sp. | Willow | 10 | 0.82 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 15 | 0.82 | S | 1 |
| Cornus stolonifera | Red-osier dogwood | 1 | 0.82 | S | 3 |
| Ilex verticillata | Winterberry | 2 | 1.00 | S | 1 |
| Spiraea latifolia | Meadowsweet | 10 | 0.50 | S | 0 |
| Spiraea tomentosa | Steeplebush | 2 | 0.50 | S | 0 |
| Rubus allegheniensis | Blackberry | 1 | 0.00 | B | 3 |
| Rubus idaeus | Red raspberry | 1 | 0.00 | B | 3 |
| Carex stricta | Tussock sedge | 60 | 1.00 | H | 3 |
| Carex sp. | Sedge | 60 | 1.00 | H | 3 |
| Symplocarpus foetidus | Skunk cabbage | 3 | 1.00 | H | 0 |
| Sphagnum sp. | Sphagnum moss | 15 | 1.00 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 30 | 1.00 | H | 0 |
| Typha latifolia | Cattail | 80 | 1.00 | H | 1 |

WSI: 0.887 WFV: 0.446 BOG: 0.039 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.13 BUSHY: 0.12 COMPACT: 0.03
MARSH SBCL: ROBUST: 0.21 BROADL: 0.08 NARROW: 0.31 FLOATING: 0.00
SUBTYPES:CMNPRUW
WATERSHED: Taylor River TYPE: Shallow Fresh Marsh

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 60.4 | :******:****  : | 6 WQual | 64.7 | :******:****  : |
| 2 Hydro | 59.2 | :******:*  : | 7 Econ | 65.2 | :******:  : |
| 3 GrWat | 50.9 | :******:**  : | 8 Recr | 43.8 | :******:***  : |
| 4 Flood | 60.7 | :*****  :  : | 9 Aest | 46.3 | :******:***  : |
| 5 ShoLi | 0.00 | :**  :  : | 10 Educ | 61.9 | :******:***  : |

AVERAGE DECILE OF TEN MODELS: 6.60 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA094 PLACE: (Photo 7-4) The Cove, W of Rt88, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe | : 04/22/86 | GS&ABUN 20: | SOLIDA 2 | Veg DENsity (HML) : | M |
| GS&ABUN 1 : | ACERUB15 | GS&ABUN 21: | ONOSEN20 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | ULMAME 1 | GS&ABUN 22: | IRIVER 4 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | TSUCAN 2 | GS&ABUN 23: | SYMFOE 2 | Lo Vernal pool): | L |
| GS&ABUN 4 : | PINSTR 2 | GS&ABUN 24: | | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | aCERUB 5 | GS&ABUN 25: | | | |
| GS&ABUN 6 : | ALNRUG10 | GS&ABUN 26: | | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | CORAMO 2 | GS&ABUN 27: | | WSI: 0.944 | |
| GS&ABUN 8 : | tSUCAN 1 | GS&ABUN 28: | | WFV: 0.364 | |
| GS&ABUN 9 : | bETLUT 1 | GS&ABUN 29: | | Perc. Wild. Food: | M |
| GS&ABUN 10: | pINSTR 2 | GS&ABUN 30: | | NO. of species: | 23 |
| GS&ABUN 11: | TYPLAT70 | INVestigator | : ASG | Prime : | P |
| GS&ABUN 12: | CALCAN40 | Dom Wetl Class (0-11): | 3 | Aesthetic: | 0.012 |
| GS&ABUN 13: | CARSTR50 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 333 |
| GS&ABUN 14: | CAREX 50 | CLaSs Richn (1-5) | : 4 | Conifer? | N |
| GS&ABUN 15: | JUNEFF10 | SubTYpe Richn (ABCDE): | C | Trees : | 0.060 |
| GS&ABUN 16: | JUNCUS10 | VEGeta Intersp (HML) : | M | Shrubs: | 0.063 |
| GS&ABUN 17: | SPHAGN15 | Surr. HABitat (123) : | 1 | Herbs : | 0.877 |
| GS&ABUN 18: | SCICYP 7 | Cover DISpers.(ABCDE): | A | Bog : | 0.045 |
| GS&ABUN 19: | COPGRO12 | Percent Open W (LMHV): | L | SBTY : | MNPRUW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA094 | OUTlet2 (APE) | : |
| 2 letter TOWN codes* | :HF | P% Bord OW (NLMH) | :L |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | :L |
| Wetl SIZe (LMH) | :H | DEPTH (SD or blank) | :S |
| Dom SOil type (int) | : 197 | HYdr CoN (None, Stream, River | |
| Other SOil | : 395 | Lake or Combin. | :S |
| Dom Surround Soil | : 313 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 26 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :H |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :M | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :4 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :P | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | :P | SurGeol Under wl(ALOT) | :O PERmeabil (LMH) :M |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :O THIckness (LMH) :M |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :W GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH). | :H |
| OUTLet1 (APE) | :P | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 7-4) The Cove, W of Rt88, HF
TA094 Field Date: 04/22/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 15 | 0.50 | T | 3 |
| Ulmus americana | American elm | 1 | 0.82 | T | 1 |
| Tsuga canadensis | Hemlock | 2 | 0.50 | T | 1 |
| Pinus strobus | White pine | 2 | 0.18 | T | 3 |
| Acer rubrum | Red maple | 5 | 0.50 | S | 3 |
| Alnus rugosa | Speckled alder | 10 | 1.00 | S | 1 |
| Cornus amomum | Silky dogwood | 2 | 0.82 | S | 3 |
| Tsuga canadensis | Hemlock | 1 | 0.50 | S | 1 |
| Betula lutea | Yellow birch | 1 | 0.50 | S | 2 |
| Pinus strobus | White pine | 2 | 0.18 | S | 3 |
| Typha latifolia | Cattail | 70 | 1.00 | H | 1 |
| Calamagrostis canadensis | Bluejoint grass | 40 | 1.00 | H | 0 |
| Carex stricta | Tussock sedge | 50 | 1.00 | H | 3 |
| Carex sp. | Sedge | 50 | 1.00 | H | 3 |
| Juncus effusus | Soft rush | 10 | 1.00 | H | 0 |
| Juncus sp. | Rush | 10 | | H | 0 |
| Sphagnum sp. | Sphagnum moss | 15 | 1.00 | H | 0 |
| Scirpus cyperinus | Woolgrass | 7 | 1.00 | H | 3 |
| Coptis groenlandica | Goldthread | 12 | 0.82 | H | 0 |
| Solidago sp. | Goldenrod | 2 | | H | 0 |
| Onoclea sensibilis | Sensitive fern | 20 | 1.00 | H | 0 |
| Iris versicolor | Blue flag | 4 | 1.00 | H | 0 |
| Symplocarpus foetidus | Skunk cabbage | 2 | 1.00 | H | 0 |

WSI: 0.943 WFV: 0.364 BOG: 0.045 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.02 BUSHY: 0.03 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.22 BROADL: 0.10 NARROW: 0.50 FLOATING: 0.00
SUBTYPES:MNPRUW
WATERSHED: Taylor River TYPE: Shallow Fresh Marsh

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 76.7 | :******:******: | 6 WQual | 66.6 | :******:******: |
| 2 Hydro | 64.4 | :******:***  : | 7 Econ | 82.6 | :******:******: |
| 3 GrWat | 79.2 | :******:******: | 8 Recr | 54.7 | :******:******: |
| 4 Flood | 60.7 | :*****  :  : | 9 Aest | 59.4 | :******:******: |
| 5 ShoLi | 8.27 | :*****  :  : | 10 Educ | 71.4 | :******:******: |

AVERAGE DECILE OF TEN MODELS: 8.60 Candidate for prime

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA096 PLACE: (Photo 6-6) S of Rt88, N of Munt Hill, HF

| | | | | | |
|---|---|---|---|---|---|
| FL DATe : | 06/09/86 | GS&ABUN 20: | ONOSEN30 | Veg DENsity (HML) : | H |
| GS&ABUN 1 : | PINSTR15 | GS&ABUN 21: | TYPLAT10 | wetl JUXtapos(HML): | H |
| GS&ABUN 2 : | ACERUB40 | GS&ABUN 22: | GERMAC 2 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : | SALIX 1 | GS&ABUN 23: | SYMFOE 3 | Lo Vernal pool): | L |
| GS&ABUN 4 : | pRUSER 1 | GS&ABUN 24: | CALCAN 3 | Veg.Spec. Richness: | M |
| GS&ABUN 5 : | VACCOR 3 | GS&ABUN 25: | EUPMAC 1 | | |
| GS&ABUN 6 : | uLMAME 3 | GS&ABUN 26: | CARSTR10 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : | aCERUB 7 | GS&ABUN 27: | DRYTHE 3 | WSI: | 0.737 |
| GS&ABUN 8 : | pINSTR 5 | GS&ABUN 28: | CALPAL 1 | WFV: | 0.396 |
| GS&ABUN 9 : | VIBREC10 | GS&ABUN 29: | OSMREG 1 | Perc. Wild. Food: | M |
| GS&ABUN 10: | CORAMO 8 | GS&ABUN 30: | IRIVER 1 | NO. of species: | 30 |
| GS&ABUN 11: | ROSPAL 3 | INVestigator : GS | | Prime : | |
| GS&ABUN 12: | SPILAT 7 | Dom Wetl Class (0-11): | 7 | Aesthetic: | 0.046 |
| GS&ABUN 13: | ALNRUG 8 | SPec ELem (ADEFHRSW ): | | Tot ABUN: | 216 |
| GS&ABUN 14: | RHURAD15 | CLaSs Richn (1-5) : | 3 | Conifer? | N |
| GS&ABUN 15: | VIBCAS 8 | SubTYpe Richn (ABCDE): | B | Trees : | 0.259 |
| GS&ABUN 16: | ILEVER 5 | VEGeta Intersp (HML) : | M | Shrubs: | 0.384 |
| GS&ABUN 17: | EQUPRA 2 | Surr. HABitat (123) : | 2 | Herbs : | 0.356 |
| GS&ABUN 18: | IMPCAP 5 | Cover DISpers.(ABCDE): | D | Bog : | 0.000 |
| GS&ABUN 19: | OSMCIN 5 | Percent Open W (LMHV): | L | SBTY : | CNPRUVW |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID | :TA096 | OUTlet2 (APE) | : |
| 2 letter TOWN codes*: | HF | P% Bord OW (NLMH) | :N |
| Topo CONfig (CSVH) | :S | FETch (LH or blank) | : |
| Wetl SIZe (LMH) | :M | DEPTH (SD or blank) | : |
| Dom SOil type (int) | : 533 | HYdr CoN (None, Stream, River | |
| Other SOil | : 33 | Lake or Combin. | :S |
| Dom Surround Soil | : 38 | ACCeSs (Rd Wat Iso) | :R |
| Other Surr. Soil1 | : 14 | POP'n density (LMH) | :L |
| Other Surr. Soil2 | : | loc SCARCity (LMH) | :L |
| wetl GRAdient (LH) | :L | CROP (N Hay Fam Com) | :N |
| Surr. SLOpe (LH) | :H | LEGAL accs (puB priV | |
| TOpo. POsit. (LMH) | :H | or Restricted) | :V |
| Dom Hydr Condit(1-6) | :5 | | |
| RIPArian conn (YN) | :Y | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral | :E | CALCULATED FROM OTHER DATA AND SOIL: | |
| INL2 (APE) | : | SurGeol Under wl(ALOT) | :L PERmeabil (LMH) :L |
| INL3 (APE) | : | SurGeol Surround(ALOT) | :L THIckness (LMH) :L |
| INL4 (APE) | : | HPOSition (Perch,W,A) | :P GW Relat (DRC) :C |
| INL5 (APE) | : | TRAnsmissivity (LMH) | :L |
| OUTLet1 (APE) | :E | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 6-6) S of Rt88, N of Munt Hill, HF
TA096 Field Date: 06/09/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Pinus strobus | White pine | 15 | 0.18 | T | 3 |
| Acer rubrum | Red maple | 40 | 0.50 | T | 3 |
| Salix sp. | Willow | 1 | 0.82 | T | 1 |
| Prunus serotina | Black cherry | 1 | 0.18 | S | 3 |
| Vaccinium corymbosum | Highbush blueberry | 3 | 0.82 | S | 2 |
| Ulmus americana | American elm | 3 | 0.82 | S | 1 |
| Acer rubrum | Red maple | 7 | 0.50 | S | 3 |
| Pinus strobus | White pine | 5 | 0.18 | S | 3 |
| Viburnum recognitum | Northern arrowwood | 10 | 0.82 | S | 1 |
| Cornus amomum | Silky dogwood | 8 | 0.82 | S | 3 |
| Rosa palustris | Marsh rose | 3 | 1.00 | S | 1 |
| Spiraea latifolia | Meadowsweet | 7 | 0.50 | S | 0 |
| Alnus rugosa | Speckled alder | 8 | 1.00 | S | 1 |
| Rhus radicans | Poison ivy | 15 | 0.82 | S | 2 |
| Viburnum cassinoides | Northern wild raisin | 8 | 0.82 | S | 1 |
| Ilex verticillata | Winterberry | 5 | 1.00 | S | 1 |
| Equisetum pratense | Meadow horsetail | 2 | 0.82 | H | 0 |
| Impatiens capensis | Jewelweed | 5 | 0.82 | H | 0 |
| Osmunda cinnamomea | Cinnamon fern | 5 | 0.82 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 30 | 1.00 | H | 0 |
| Typha latifolia | Cattail | 10 | 1.00 | H | 1 |
| Geranium maculatum | Wild cranesbill | 2 | 0.18 | H | 0 |
| Symplocarpus foetidus | Skunk cabbage | 3 | 1.00 | H | 0 |
| Calamagrostis canadensis | Bluejoint grass | 3 | 1.00 | H | 0 |
| Eupatorium maculatum | Spotted joe pye weed | 1 | 0.82 | H | 0 |
| Carex stricta | Tussock sedge | 10 | 1.00 | H | 3 |
| Dryopteris thelypteris | Marsh fern | 3 | 1.00 | H | 0 |
| Caltha palustris | Marsh marigold | 1 | 1.00 | H | 0 |
| Osmunda regalis | Royal fern | 1 | 1.00 | H | 0 |
| Iris versicolor | Blue flag | 1 | 1.00 | H | 0 |

WSI: 0.736 WFV: 0.395 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.07 BUSHY: 0.20 COMPACT: 0.03
MARSH SBCL: ROBUST: 0.07 BROADL: 0.19 NARROW: 0.07 FLOATING: 0.00
SUBTYPES:CNPRUVW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 47.2 | :******:* : | 6 WQual | 49.0 | :***** : : |
| 2 Hydro | 51.3 | :*** : : | 7 Econ | 73.9 | :******:** : |
| 3 GrWat | 30.1 | :** : : | 8 Recr | 36.9 | :******:* : |
| 4 Flood | 65.6 | :******:*** : | 9 Aest | 43.4 | :******:** : |
| 5 ShoLi | 0.00 | :** : : | 10 Educ | 50.7 | :******:** : |

AVERAGE DECILE OF TEN MODELS: 5.20

Copy of 'EVAL' datasheet: FIELD DATA & COMPUTATIONS ON ECOLOGICAL SUMMARY

WID: TA097 PLACE: (Photo 6-8) Near Exeter/HF/HA town lines, HF

| | | | |
|---|---|---|---|
| FL DATe : 05/13/86 | GS&ABUN 20: RANUNC 2 | Veg DENsity (HML) : M | |
| GS&ABUN 1 : ACERUB60 | GS&ABUN 21: SYMFOE10 | wetl JUXtapos(HML): M | |
| GS&ABUN 2 : PINSTR10 | GS&ABUN 22: ONOSEN25 | w. level FLUCtu (Hi | |
| GS&ABUN 3 : ULMAME 5 | GS&ABUN 23: OSMCIN 3 | Lo Vernal pool): L | |
| GS&ABUN 4 : RHURAD20 | GS&ABUN 24: OSMREG 1 | Veg.Spec. Richness: M | |
| GS&ABUN 5 : aCERUB10 | GS&ABUN 25: MAICAN10 | | |
| GS&ABUN 6 : pINSTR 4 | GS&ABUN 26: PTEAQU 1 | ECOLOGICAL COMPUTATIONS: | |
| GS&ABUN 7 : pOPTRE 1 | GS&ABUN 27: EQUSYL 2 | WSI: 0.641 | |
| GS&ABUN 8 : VACCOR 7 | GS&ABUN 28: TRIBOR 1 | WFV: 0.402 | |
| GS&ABUN 9 : ALNRUG 8 | GS&ABUN 29: COPGRO 2 | Perc. Wild. Food: H | |
| GS&ABUN 10: VIBREC 8 | GS&ABUN 30: | NO. of species: 29 | |
| GS&ABUN 11: SPILAT 5 | INVestigator : GS | Prime : | |
| GS&ABUN 12: ILEVER 5 | Dom Wetl Class (0-11): 7 | Aesthetic: 0.023 | |
| GS&ABUN 13: CORAMO 2 | SPec ELem (ADEFHRSW ): | Tot ABUN: 216 | |
| GS&ABUN 14: pRUSER 2 | CLaSs Richn (1-5) : 3 | Conifer? N | |
| GS&ABUN 15: SAMCAN 1 | SubTYpe Richn (ABCDE): D | Trees : 0.347 | |
| GS&ABUN 16: GEUMAC 1 | VEGeta Intersp (HML) : L | Shrubs: 0.338 | |
| GS&ABUN 17: ANEQUI 3 | Surr. HABitat (123) : 2 | Herbs : 0.315 | |
| GS&ABUN 18: VERVIR 2 | Cover DISpers.(ABCDE): D | Bog : 0.000 | |
| GS&ABUN 19: IMPCAP 5 | Percent Open W (LMHV): L | SBTY : CPRUVW | |

Copy of 'MAPR' datasheet: SOIL, MAP & PHOTO DATA

| | | | |
|---|---|---|---|
| Wet ID :TA097 | OUTlet2 (APE) : | | |
| 2 letter TOWN codes*:HF | P% Bord OW (NLMH) :L | | |
| Topo CONfig (CSVH) :S | FETch (LH or blank) : | | |
| Wetl SIZe (LMH) :M | DEPTH (SD or blank) : | | |
| Dom SOil type (int) : 538 | HYdr CoN (None, Stream, River | | |
| Other SOil : 33 | Lake or Combin. :S | | |
| Dom Surround Soil : 38 | ACCeSs (Rd Wat Iso) :I | | |
| Other Surr. Soil1 : 32 | POP'n density (LMH) :L | | |
| Other Surr. Soil2 : | loc SCARCity (LMH) :L | | |
| wetl GRAdient (LH) :L | CROP (N Hay Fam Com):N | | |
| Surr. SLOpe (LH) :H | LEGAL accs (puB priV | | |
| TOpo. POsit. (LMH) :H | or Restricted) :V | | |
| Dom Hydr Condit(1-6):5 | | | |
| RIPArian conn (YN) :Y | | | |
| INLet1 (Abs Perrenial | | | |
| or Ephemeral :E | CALCULATED FROM OTHER DATA AND SOIL: | | |
| INL2 (APE) : | SurGeol Under wl(ALOT):L | PERmeabil (LMH):L | |
| INL3 (APE) : | SurGeol Surround(ALOT):L | THIckness (LMH):L | |
| INL4 (APE) : | HPOSition (Perch,W,A) :P | GW Relat (DRC) :C | |
| INL5 (APE) : | TRAnsmissivity (LMH) :L | | |
| OUTLet1 (APE) :P | | | |

* NC New Castle RY Rye HA Hampton

NH North Hampton HF Hampton Falls SE Seabrook

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 6-8) Near Exeter/HF/HA town lines, HF
TA097 Field Date: 05/13/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Acer rubrum | Red maple | 60 | 0.50 | T | 3 |
| Pinus strobus | White pine | 10 | 0.18 | T | 3 |
| Ulmus americana | American elm | 5 | 0.82 | T | 1 |
| Rhus radicans | Poison ivy | 20 | 0.82 | S | 2 |
| Acer rubrum | Red maple | 10 | 0.50 | S | 3 |
| Pinus strobus | White pine | 4 | 0.18 | S | 3 |
| Populus tremuloides | Quaking aspen | 1 | 0.00 | S | 2 |
| Vaccinium corymbosum | Highbush blueberry | 7 | 0.82 | S | 2 |
| Alnus rugosa | Speckled alder | 8 | 1.00 | S | 1 |
| Viburnum recognitum | Northern arrowwood | 8 | 0.82 | S | 1 |
| Spiraea latifolia | Meadowsweet | 5 | 0.50 | S | 0 |
| Ilex verticillata | Winterberry | 5 | 1.00 | S | 1 |
| Cornus amomum | Silky dogwood | 2 | 0.82 | S | 3 |
| Prunus serotina | Black cherry | 2 | 0.18 | S | 3 |
| Sambucus canadensis | Elderberry | 1 | 0.18 | S | 1 |
| Geum macrophyllum | Big-leaf avens | 1 | 1.00 | H | 0 |
| Anemone quinquefolia | Wood anemone | 3 | 0.00 | H | 0 |
| Veratrum viride | White hellebore | 2 | 0.82 | H | 0 |
| Impatiens capensis | Jewelweed | 5 | 0.82 | H | 0 |
| Ranunculus sp. | Buttercup | 2 | | H | 0 |
| Symplocarpus foetidus | Skunk cabbage | 10 | 1.00 | H | 0 |
| Onoclea sensibilis | Sensitive fern | 25 | 1.00 | H | 0 |
| Osmunda cinnamomea | Cinnamon fern | 3 | 0.82 | H | 0 |
| Osmunda regalis | Royal fern | 1 | 1.00 | H | 0 |
| Maianthemum canadense | Canada mayflower | 10 | 0.00 | H | 0 |
| Pteridium aquilinum | Bracken | 1 | 0.18 | H | 0 |
| Equisetum sylvaticum | Wood horsetail | 2 | 0.82 | H | 0 |
| Trientalis borealis | Starflower | 1 | 0.50 | H | 0 |
| Coptis groenlandica | Goldthread | 2 | 0.82 | H | 0 |

WSI: 0.640 WFV: 0.401 BOG: 0.000 SALT: 0.000 DUNE: 0.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.07 BUSHY: 0.14 COMPACT: 0.02
MARSH SBCL: ROBUST: 0.03 BROADL: 0.19 NARROW: 0.01 FLOATING: 0.00
SUBTYPES: CPRUVW
WATERSHED: Taylor River TYPE: Wooded Swamp

R E S U L T S  O F  M O D E L  C O M P U T A T I O N S

| Benefit | Score | 1-R-A-N-K-10 | Benefit | Score | 1-R-A-N-K-10 |
|---|---|---|---|---|---|
| 1 Biol | 39.5 | :***** : : | 6 WQual | 49.0 | :***** : : |
| 2 Hydro | 61.8 | :******:** : | 7 Econ | 60.8 | :******: : |
| 3 GrWat | 33.9 | :*** : : | 8 Recr | 31.5 | :*** : : |
| 4 Flood | 60.7 | :***** : : | 9 Aest | 26.0 | :* : : |
| 5 ShoLi | 17.5 | :******:** : | 10 Educ | 28.5 | :** : : |

AVERAGE DECILE OF TEN MODELS: 4.00

## 4.3 OUTLINE OF FRESHWATER WETLANDS MODELS

Model 1 Biological Function

| Element | Condition | Original model | Equivalent | Modified model |
|---|---|---|---|---|
| Dom Wet. Class | 0 Streamside | 5 x 1 | 5 | 5 |
| DWC | 1 OW | 5 x 0 | 0 | 0 |
| | 2 Deep Mar | 5 x 4 | 20 | 20 |
| | 3 Shal Mar | 5 x 5 | 25 | 25 |
| | 4 An Floodp | 5 x 5 | 25 | 25 |
| | 5 Wet Meadow | 5 x 2 | 10 | 10 |
| | 6 Shrub Sw | 5 x 4 | 20 | 20 |
| | 7 N Decid For | 5 x 2 | 10 | 10 |
| | 7 Y Conif For | 5 x 4 | 20 | 20 |
| | 8 Bog | 5 x 3 | 15 | 15 |
| | 9 Saltmarsh | - | - | - |
| | 10 Dune | - | - | - |
| Number of Wetl. Classes | 5 or more | 4 x 5 | 20 | 16 |
| | 4 | 4 x 4 | 16 | 12 |
| CLSR | 3 | 4 x 3 | 12 | 8 |
| | 2 | 4 x 2 | 8 | 4 |
| | 1 | 4 x 1 | 4 | 0 |
| No. Wetl Subcl | A | 3 x 5 | 15 | 12 |
| STYR | B | 3 x 4 | 12 | 9 |
| | C | 3 x 3 | 9 | 6 |
| | D | 3 x 2 | 6 | 3 |
| | E | 3 x 1 | 3 | 0 |
| Vegetative Interspersion | H | 4 x 3 | 12 | 8 |
| | M | 4 x 2 | 8 | 4 |
| VEGI | L | 4 x 1 | 4 | 0 |
| Surrounding Habitat | 1 | 3 x 3 | 9 | 6 |
| | 2 | 3 x 2 | 6 | 3 |
| SHAB | 3 | 3 x 1 | 3 | 0 |
| Cover Dispersion | A | 3 x 4 | 12 | 9 |
| | B | 3 x 2 | 6 | 5 |
| CDIS | C | 3 x 3 | 9 | 7 |
| | D | 3 x 1 | 3 | 3 |
| | E | | | 0 |
| Vegetative Spec Richness | H | 2 x 3 | 6 | 4 |
| | M | 2 x 2 | 4 | 2 |
| VSR | L | 2 x 1 | 2 | 0 |
| Proportion of Wildlife Food | H | 1 x 3 | 3 | 2 |
| | M | 1 x 2 | 2 | 1 |
| PWF | L | 1 x 1 | 1 | 0 |

(Biol Model 1, cont'd)

| | | | | |
|---|---|---|---|---|
| Vegetative Density VDEN | H | 2 x 3 | 6 | 4 |
| | M | 2 x 2 | 4 | 2 |
| | L | 2 x 1 | 2 | 0 |
| Wetland Juxtaposit. JUX | H | 3 x 3 | 9 | 9 |
| | M | 3 x 2 | 6 | 6 |
| | L | 3 x 0 | 0 | 0 |
| Hydrologic Position HPOS | W | 2 x 4 | 8 | 6 |
| | A | 2 x 3 | 6 | 4 |
| | P | 2 x 1 | 2 | 0 |
| Water level Fluctuation FLUC | H | 1 x 0 | 0 | 0 |
| | L | 1 x 2 | 2 | 2 |
| | V | 1 x 1 | 1 | 1 |
| Hydrologic Connection HYCN | S | 1 x 1 | 1 | 1 |
| | R | 1 x 2 | 2 | 2 |
| | L | 1 x 3 | 3 | 3 |
| | C | 1 x 4 | 4 | 4 |
| | N | 1 x 0 | 0 | 0 |
| Percent Wetl. Bordering OW PBOW | L | 4 x 1 | 4 | 4 |
| | M | 4 x 2 | 8 | 8 |
| | H | 4 x 3 | 12 | 12 |
| | N | 4 x 0 | 0 | 0 |
| Wetland Size WSIZ | H | 5 x 3 | 15 | 10 |
| | M | 5 x 2 | 10 | 5 |
| | L | 5 x 1 | 5 | 0 |

| | | |
|---|---|---|
| MINIMUM TOTAL | 29 | 0 |
| MAXIMUM TOTAL | 158 | 129 / 1.29 = 100 |

Model 2 Hydrologic Support Function

| Element | Condition | Original model | Equivalent | Modified model |
|---|---|---|---|---|
| Wetland Size | High | 4 x 3 | 12 | 8 |
| WSIZ | Moderate | 4 x 2 | 8 | 4 |
| | Low | 4 x 1 | 4 | 0 |
| Topographic | S | 1 x 3 | 3 | 3 |
| Configuration | V | 1 x 2 | 2 | 2 |
| TCON | H | 1 x 1 | 1 | 1 |
| | C | 1 x 0 | 0 | 0 |
| Dominant Hydr- | 1 | 5 x 1 | 5 | 5 |
| ologic Cond. | 2 | 5 x 2 | 10 | 10 |
| DHC | 3 | 5 x 3 | 15 | 15 |
| | 4 | 5 x 4 | 20 | 20 |
| | 5 | 5 x 5 | 25 | 25 |
| | 6 | 5 x 0 | 0 | 0 |
| Water level | L | 2 x 2 | 4 | 2 |
| Fluctuation | H | 2 x 1 | 2 | 0 |
| FLUC | | | | |
| Outlet #1 | P | 4 x 2 | 8 | 8 |
| OUTL1 | E | 4 x 1 | 4 | 4 |
| | A | 4 x 0 | 0 | 0 |
| Outlet #2 | P | 4 x 2 | 8 | 8 |
| OUTL2 | E | 4 x 1 | 4 | 4 |
| | A | 4 x 0 | 0 | 0 |
| Inlet #1 | P | 1 x 2 | 2 | 2 |
| INL1 | E | 1 x 1 | 1 | 1 |
| | A | 1 x 0 | 0 | 0 |
| Inlet #2 | P | 1 x 2 | 2 | 2 |
| INL2 | E | 1 x 1 | 1 | 1 |
| | A | 1 x 0 | 0 | 0 |
| Inlet #3 | P | 1 x 2 | 2 | 2 |
| INL3 | E | 1 x 1 | 1 | 1 |
| | A | 1 x 0 | 0 | 0 |
| Inlet #4 | P | 1 x 2 | 2 | 2 |
| INL4 | E | 1 x 1 | 1 | 1 |
| | A | 1 x 0 | 0 | 0 |

(Hydrol. Support, Model 2, cont'd)

| | | | | |
|---|---|---|---|---|
| Inlet #5 | P | 1 x 2 | 2 | 2 |
| INL5 | E | 1 x 1 | 1 | 1 |
| | A | 1 x 0 | 0 | 0 |
| Percent Bordering Open Water PBOW | H | 4 x 3 | 12 | 12 |
| | M | 4 x 2 | 8 | 8 |
| | L | 4 x 1 | 4 | 4 |
| | N | 4 x 0 | 0 | 0 |
| MINIMUM TOTAL | | | 6 | 0 |
| MAXIMUM TOTAL | | | 82 | 76 / 0.76 = 100 |

Model 3 Ground Water Function

| Element | Condition | Original model | Equivalent | Modified model |
|---|---|---|---|---|
| Surficial Geology (Und) SGU | Outw | 3 x 4 | 12 | 9 |
| | Lake | 3 x 3 | 9 | 6 |
| | Alluv | 3 x 2 | 6 | 3 |
| | Till | 3 x 1 | 3 | 0 |
| Thickness of Organics THI | L | | | 4 |
| | M or H | | | then use PER |
| Permeability of Organics PER | H | 2 x 3 | 6 | 2 |
| | M | 2 x 2 | 4 | 1 |
| | L | 2 x 1 | 2 | 0 |
| Hydrologic Position HPOS | W | 5 x 4 | 20 | 10 |
| | A | 5 x 1 | 5 | 0 |
| | P | 5 x 2 | 10 | 0 |
| Transmissivity of Aquifer TRA | H | 4 x 3 | 12 | 8 |
| | M | 4 x 2 | 8 | 4 |
| | L | 4 x 1 | 4 | 0 |
| Inlet #1 INL1 | P | 1 x 3 | 3 | 2 |
| | E | 1 x 2 | 2 | 1 |
| | A | 1 x 1 | 1 | 0 |
| Inlet #2 INL2 | P | 1 x 3 | 3 | 2 |
| | E | 1 x 2 | 2 | 1 |
| | A | 1 x 1 | 1 | 0 |
| Inlet #3 INL3 | P | 1 x 3 | 3 | 2 |
| | E | 1 x 2 | 2 | 1 |
| | A | 1 x 1 | 1 | 0 |
| Inlet #4 INL4 | P | 1 x 3 | 3 | 2 |
| | E | 1 x 2 | 2 | 1 |
| | A | 1 x 1 | 1 | 0 |
| Inlet #5 INL5 | P | 1 x 3 | 3 | 2 |
| | E | 1 x 2 | 2 | 1 |
| | A | 1 x 1 | 1 | 0 |

(Model 3, Ground Water, cont'd)

| | | | | |
|---|---|---|---|---|
| Outlet #1 | A and O2=A | 2 x 3 | 6 | 6 |
| OUTL1 | P | 2 x 2 | 4 | 4 |
| | E | 2 x 1 | 2 | 2 |
| Outlet #2 | A | see above scores | 0 | 0 |
| OUTL2 | P | see above scores | 0 | 0 |
| | E | see above scores | 0 | 0 |
| Wetland Size | H | 3 x 3 | 9 | 6 |
| WSIZ | M | 3 x 2 | 6 | 3 |
| | L | 3 x 1 | 3 | 0 |
| MINIMUM TOTAL | | | 24 | 0 |
| MAXIMUM TOTAL | | | 80 | 53 / 0.53 = 100 |

Model 4 Storm and Flood water Storage Function

| Element | Condition | Original model | Equivalent | Modified model |
|---|---|---|---|---|
| Dom Wet. Class | 0 | 2 x 1 | 2 | 0 |
| DWC | 1 | 2 x 1 | 2 | 0 |
| | 2 | 2 x 2 | 4 | 2 |
| | 3 | 2 x 4 | 8 | 6 |
| | 4 | 2 x 4 | 8 | 6 |
| | 5 | 2 x 3 | 6 | 4 |
| | 6 | 2 x 5 | 10 | 8 |
| | 7 | 2 x 4 | 8 | 6 |
| | 8 | 2 x 3 | 6 | 4 |
| | 9 | - | - | - |
| | 10 | - | - | - |
| Percent Open | L | 2 x 3 | 6 | 6 |
| Water | M | 2 x 2 | 4 | 4 |
| POW | H | 2 x 1 | 2 | 2 |
| | V | 2 x 0 | 0 | 0 |
| Vegetative | H | 4 x 3 | 12 | 8 |
| Density | M | 4 x 2 | 8 | 4 |
| VDEN | L | 4 x 1 | 4 | 0 |
| Topographic | C or more | 2 x 4 | 8 | 6 |
| Configuration | S | 2 x 3 | 6 | 4 |
| TCON | V | 2 x 2 | 4 | 2 |
| | H | 2 x 1 | 2 | 0 |
| Topographic | H | 3 x 3 | 9 | 6 |
| Position | M | 3 x 2 | 6 | 3 |
| TOPO | L | 3 x 1 | 3 | 0 |
| Surficial Mat- | Till | 2 x 4 | 8 | 6 |
| erial of | Lake | 2 x 3 | 6 | 4 |
| Watershed | Alluv | 2 x 2 | 4 | 2 |
| SGS | Outw | 2 x 1 | 2 | 0 |
| Surficial Mat- | Till | 2 x 1 | 2 | 0 |
| erial of | Lake | 2 x 2 | 4 | 2 |
| Wetland banks | Alluv | 2 x 3 | 6 | 4 |
| SGU | Outw | 2 x 4 | 8 | 6 |
| Permeability of | H | 1 x 2 | 2 | 2 |
| Organics | M | 1 x 1 | 1 | 1 |
| PER | L | 1 x 0 | 0 | 0 |

(Model 4, Storm & Flood, cont'd)

| | | | | |
|---|---|---|---|---|
| Dominant | 6 | 5 x 6 | 30 | 25 |
| Hydrologic | 5 | 5 x 5 | 25 | 20 |
| Condition | 4 | 5 x 4 | 20 | 15 |
| DHC | 3 | 5 x 3 | 15 | 10 |
| | 2 | 5 x 2 | 10 | 5 |
| | 1 | 5 x 1 | 5 | 0 |
| Connection to | Y | 4 x 2 | 8 | 4 |
| Riparian Sys. | N | 4 x 1 | 4 | 0 |
| RIPA | | | | |
| Water level | H | 3 x 2 | 6 | 3 |
| Fluctuation | L | 3 x 1 | 3 | 0 |
| FLUC | V | 3 x ? | ? | 0 |
| Inlet #1 | P | 1 x 2 | 2 | 2 |
| INL1 | E | 1 x 1 | 1 | 1 |
| | A | 1 x 0 | 0 | 0 |
| Inlet #2 | P | 1 x 2 | 2 | 2 |
| INL2 | E | 1 x 1 | 1 | 1 |
| | A | 1 x 0 | 0 | 0 |
| Inlet #3 | P | 1 x 2 | 2 | 2 |
| INL3 | E | 1 x 1 | 1 | 1 |
| | A | 1 x 0 | 0 | 0 |
| Inlet #4 | P | 1 x 2 | 2 | 2 |
| INL4 | E | 1 x 1 | 1 | 1 |
| | A | 1 x 0 | 0 | 0 |
| Inlet #5 | P | 1 x 2 | 2 | 2 |
| INL5 | E | 1 x 1 | 1 | 1 |
| | A | 1 x 0 | 0 | 0 |
| Outlet #1 | P | 1 x 1 | 1 | 1 |
| OUTL1 | E | 1 x 2 | 2 | 2 |
| | A | 1 x 0 | 0 | 0 |
| Outlet #2 | P | 1 x 1 | 1 | 1 |
| OUTL2 | E | 1 x 2 | 2 | 2 |
| | A | 1 x 0 | 0 | 0 |
| Wetland Size | H | 4 x 3 | 12 | 8 |
| WSIZ | M | 4 x 2 | 8 | 4 |
| | L | 4 x 1 | 4 | 0 |
| MINIMUM TOTAL | | | 31 | 0 |
| MAXIMUM TOTAL | | | 133 | 102 / 1.02 = 100 |

Model 5 Shoreline Protection Function

| Element | Condition | Original model | Equivalent | Modified model |
|---|---|---|---|---|
| if PBOW = N | value = 0 | | | |
| if PBOW = L | value x 0.3 | | | |
| if PBOW = M | value x 0.6 | | | |
| if PBOW = H | value x 1.0 | | | |
| Veg. Density | High | 2 x 3 | 6 | 4 |
| VDEN | Moderate | 2 x 2 | 4 | 2 |
| | Low | 2 x 1 | 2 | 0 |
| Dom Wet. Class | 0 | 3 x 0 | 0 | 0 |
| DWC | 1 | 3 x 0 | 0 | 0 |
| | 2 | 3 x 1 | 3 | 3 |
| | 3 | 3 x 2 | 6 | 6 |
| | 4 | 3 x 4 | 12 | 12 |
| | 5 | 3 x 1 | 3 | 3 |
| | 6 | 3 x 4 | 12 | 12 |
| | 7 | 3 x 4 | 12 | 12 |
| | 8 | 3 x 3 | 9 | 9 |
| | 9 | - | - | - |
| | 10 | - | - | - |
| Surficial Mat. | Till | 1 x 2 | 2 | 1 |
| under wetland | O(S&G) | 1 x 1 | 1 | 0 |
| SGU | L(Si) | 1 x 4 | 4 | 3 |
| | Alluvium | 1 x 3 | 3 | 2 |
| Fetch | H | 4 x 2 | 8 | 8 |
| FET | L | 4 x 1 | 4 | 4 |
| | (not a lake) | 4 x 0 | 0 | 0 |
| Depth of lake | D | 1 x 2 | 2 | 2 |
| DEPTH | S | 1 x 1 | 1 | 1 |
| | (not a lake) | 1 x 0 | 0 | 0 |
| MINIMUM TOTAL | | | 3 | 0 |
| MAXIMUM TOTAL | | | 32 | 29 / 0.29 = 100 |

Model 6 Water Quality Maintenance Model

| Element | Condition | Original model | Equivalent | Modified model |
|---|---|---|---|---|
| Dom Wetland Class | 0 | 4 x 1 | 4 | 4 |
| | 1 | 4 x 0 | 0 | 0 |
| DWC | 2 | 4 x 3 | 12 | 12 |
| | 3 | 4 x 4 | 16 | 16 |
| | 4 | 4 x 4 | 16 | 16 |
| | 5 | 4 x 3 | 12 | 12 |
| | 6 | 4 x 4 | 16 | 12 |
| | 7 | 4 x 2 | 8 | 8 |
| | 8 | 4 x 2 | 8 | 8 |
| | 9 | - | - | - |
| | 10 | - | - | - |
| Percent Open Water | L | 1 x 3 | 3 | 3 |
| | M | 1 x 2 | 2 | 2 |
| POW | H | 1 x 1 | 1 | 1 |
| | V | 1 x 0 | 0 | 0 |
| Veg. Density | High | 3 x 3 | 9 | 6 |
| VDEN | Moderate | 3 x 2 | 6 | 3 |
| | Low | 3 x 1 | 3 | 0 |
| Topographic Configuration | C | 3 x 4 | 12 | 9 |
| | S | 3 x 3 | 9 | 6 |
| TCON | V | 3 x 2 | 6 | 3 |
| | H | 3 x 1 | 3 | 0 |
| Topographic Position | H | 2 x 1 | 2 | 0 |
| | M | 2 x 2 | 4 | 2 |
| TOPO | L | 2 x 3 | 6 | 4 |
| Permeability of Organics | H | 1 x 1 | 1 | 1 |
| | M | 1 x 2 | 2 | 2 |
| PER | L | 1 x 0 | 0 | 0 |
| Dominant Hydrologic Condition | 6 | 4 x 6 | 24 | 20 |
| | 5 | 4 x 5 | 20 | 16 |
| | 4 | 4 x 4 | 16 | 12 |
| DHC | 3 | 4 x 3 | 12 | 8 |
| | 2 | 4 x 2 | 8 | 4 |
| | 1 | 4 x 1 | 4 | 0 |
| Connection to Riparian sys | Y | 2 x 2 | 4 | 2 |
| | N | 2 x 1 | 2 | 0 |
| RIPA | | | | |

(Model 6, Water Quality Function, cont'd)

| | | | | |
|---|---|---|---|---|
| Inlet #1 | P | 2 x 2 | 4 | 4 |
| INL1 | E | 2 x 1 | 2 | 2 |
| | A | 2 x 0 | 0 | 0 |
| Inlet #2 | P | 2 x 2 | 4 | 4 |
| INL2 | E | 2 x 1 | 2 | 2 |
| | A | 2 x 0 | 0 | 0 |
| Inlet #3 | P | 2 x 2 | 4 | 4 |
| INL3 | E | 2 x 1 | 2 | 2 |
| | A | 2 x 0 | 0 | 0 |
| Inlet #4 | P | 2 x 2 | 4 | 4 |
| INL4 | E | 2 x 1 | 2 | 2 |
| | A | 2 x 0 | 0 | 0 |
| Inlet #5 | P | 2 x 2 | 4 | 4 |
| INL5 | E | 2 x 1 | 2 | 2 |
| | A | 2 x 0 | 0 | 0 |
| Outlet #1 | P | 3 x 2 | 6 | 6 |
| OUTL1 | E | 3 x 1 | 3 | 3 |
| | A | 3 x 0 | 0 | 0 |
| Outlet #2 | P | 3 x 2 | 6 | 6 |
| OUTL2 | E | 3 x 1 | 3 | 3 |
| | A | 3 x 0 | 0 | 0 |
| Wetland size | H | 4 x 3 | 12 | 8 |
| WSIZ | M | 4 x 2 | 8 | 4 |
| | L | 4 x 1 | 4 | 0 |
| MINIMUM TOTAL | | | 18 | 0 |
| MAXIMUM TOTAL | | | 120 | 102 / 1.02 = 100 |

Model 7 Cultural and Economic Model

| Element | Condition | Original model | Equivalent | Modified model |
|---|---|---|---|---|
| Dom Wetland Class | 0 | 4 x 0 | 0 | 0 |
| | 1 | 4 x 0 | 0 | 0 |
| DWC | 2 | 4 x 4 | 16 | 16 |
| | 3 | 4 x 4 | 16 | 16 |
| | 4 | 4 x 0 | 0 | 0 |
| | 5 | 4 x 2 | 8 | 8 |
| | 6 | 4 x 3 | 12 | 12 |
| | 7 N | 4 x 5 | 20 | 20 |
| | 7 Y | 4 x 6 | 24 | 24 |
| | 8 | 4 x 3 | 12 | 12 |
| | 9 | - | - | - |
| | 10 | - | - | - |
| Access | R | 3 x 3 | 9 | 6 |
| ACCS | W | 3 x 2 | 6 | 3 |
| | I | 3 x 1 | 3 | 0 |
| Wetland size | H | 8 x 3 | 24 | 16 |
| WSIZ | M | 8 x 2 | 16 | 8 |
| | L | 8 x 1 | 8 | 0 |
| MINIMUM TOTAL | | | 11 | 0 |
| MAXIMUM TOTAL | | | 57 | 46 / 0.46 = 100 |

Model 8 Recreational Function Model

| Element | Condition | Original model | Equivalent | Modified model |
|---|---|---|---|---|
| Dom Wetland Class | 0 | 3 x 0 | 0 | 12 |
| | 1 | 3 x 0 | 0 | 20 |
| DWC | 2 | 3 x 6 | 18 | 20 |
| | 3 | 3 x 5 | 15 | 12 |
| | 4 | 3 x 0 | 0 | 0 |
| | 5 | 3 x 0 | 0 | 5 |
| | 6 | 3 x 2 | 6 | 5 |
| | 7 N | 3 x 2 | 6 | 10 |
| | 7 Y | 3 x 3 | 9 | 10 |
| | 8 | 3 x 2 | 6 | 8 |
| | 9 | - | - | 10 |
| | 10 | - | - | 10 |
| Percent Open Water | L | 3 x 1 | 3 | 0 |
| | M | 3 x 2 | 6 | 3 |
| POW | H | 3 x 3 | 9 | 6 |
| | V | 3 x 0 | 0 | 9 |
| Hydrological Connection | S | 4 x 1 | 4 | 2 |
| | R | 4 x 2 | 8 | 8 |
| HCON | L | 4 x 3 | 12 | 12 |
| | C | 4 x 4 | 16 | 16 |
| | N | 4 x 0 | 0 | 0 |
| Access | R | 2 x 3 | 6 | 4 |
| ACCS | W | 2 x 2 | 4 | 2 |
| | I | 2 x 1 | 2 | 0 |
| Wetland size | H | 4 x 3 | 12 | 16 |
| WSIZ | M | 4 x 2 | 8 | 8 |
| | L | 4 x 1 | 4 | 0 |
| Legal Access | B | 2 x 2 | 4 | 2 |
| LEGAL | V | 2 x 1 | 2 | 0 |
| | R | 2 x 1 | 2 | 0 |
| Biological Value | H | 3 x 3 | 9 | 6 |
| | M | 3 x 2 | 6 | 3 |
| (from model 1) | L | 3 x 1 | 3 | 0 |
| MINIMUM TOTAL | | | 11 | 0 |
| MAXIMUM TOTAL | | | 74 | 73 / 0.73 = 100 |

Model 9 Aesthetic Function Model

| Element | Condition | Original model | Equivalent | Modified model | |
|---|---|---|---|---|---|
| Dom Wetland | 0 | 4 x 0 | 0 | 0 | 12 |
| Class | 1 | 4 x 0 | 0 | 0 | 20 |
| DWC | 2 | 4 x 5 | 20 | 20 | 20 |
| | 3 | 4 x 4 | 16 | 16 | 16 |
| | 4 | 4 x 0 | 0 | 0 | 0 |
| | 5 | 4 x 0 | 0 | 0 | 10 |
| | 6 | 4 x 2 | 8 | 6 | 6 |
| | 7 N | 4 x 3 | 12 | 12 | 8 |
| | 7 Y | 4 x 3 | 12 | 12 | 12 |
| | 8 | 4 x 5 | 20 | 20 | 20 |
| | 9 | - | - | - | |
| | 10 | - | - | - | |
| Subclass | A | 3 x 4 | 12 | 9 | |
| Richness | B | 3 x 4 | 12 | 9 | |
| STYR | C | 3 x 3 | 9 | 6 | |
| | D | 3 x 2 | 6 | 3 | |
| | E | 3 x 1 | 3 | 0 | |
| Percent Open | L | 4 x 1 | 4 | 4 | |
| Water | M | 4 x 3 | 12 | 12 | |
| POW | H | 4 x 4 | 16 | 16 | |
| | V | 4 x 0 | 0 | 0 | |
| Access | R | 3 x 3 | 9 | 6 | |
| ACCS | W | 3 x 2 | 6 | 3 | |
| | I | 3 x 1 | 3 | 0 | |
| Local Scarcity | H | 3 x 3 | 9 | 6 | |
| SCARC | M | 3 x 2 | 6 | 3 | |
| | L | 3 x 1 | 3 | 0 | |
| BEAUTy value | gt 0.2 | | | 12 | |
| | gt 0.1 | | | 6 | |
| | gt 0.01 | | | 3 | |
| | lt 0.01 | | | 0 | |
| MINIMUM TOTAL | | | 9 | 0 | |
| MAXIMUM TOTAL | | | 66 | 69 / 0.69 = 100 | |

Model 10 Education Function Model

| Element | Condition | Original model | Equivalent | Modified model |
|---|---|---|---|---|
| Subclass Richness STYR | A | 3 x 4 | 12 | 9 |
| | B | 3 x 4 | 12 | 9 |
| | C | 3 x 3 | 9 | 6 |
| | D | 3 x 2 | 6 | 3 |
| | E | 3 x 1 | 3 | 0 |
| Access ACCS | R | 4 x 3 | 12 | 8 |
| | W | 4 x 2 | 8 | 4 |
| | I | 4 x 1 | 4 | 0 |
| Biol. value from FMC1 | H | | | 10 |
| | M | | | 5 |
| | L | | | 0 |
| Dominant Wetl. Class DWC | 0 | | | 10 |
| | 1 | | | 5 |
| | 2 | | | 10 |
| | 3 | | | 10 |
| | 4 | | | 0 |
| | 5 | | | 3 |
| | 6 | | | 5 |
| | 7 N | | | 5 |
| | 7 Y | | | 15 |
| | 8 | | | 20 |
| | 9 | | | 20 |
| | 10 | | | 20 |
| Local Scarcity SCARC | H | | | 6 |
| | M | | | 3 |
| | L | | | 0 |
| Vegetative Species Richness VSR | H | | | 10 |
| | M | | | 5 |
| | L | | | 0 |
| MINIMUM TOTAL | | | 7 | 0 |
| MAXIMUM TOTAL | | | 24 | 63 / 0.63 = 100 |

## 5.0 APPENDIX: SALT MARSHES, DETAILED RESULTS

### 5.1 HOW TO USE THE RESULTS

Assessment of the tidal marsh systems was based on infra-red photo interpretation and field surveys. This report presents a broad overview of conditions. More detailed work is necessary to document the more highly impacted tidal systems and to monitor changes that will occur if efforts are made to restore their hydrology.

To assess the general health of a tidal marsh system, the following factors were considered:

1. Extent of panne and/or rotten spots present on the high marsh surface.

2. Presence of species indicative of high saline conditions, such as *Salicornia* sp. and the short form of *Spartina alterniflora* on the high marsh.

3. Presence of species, such as *Lythrum salicaria, Phragmites* sp. and *Typha* sp. which indicate progression of the high marsh toward a freshwater tidal system. Also, species such as *Phragmites*, and to a lesser extent *Typha*, which often point to a man-made disturbance.

4. Presence of man-made restrictions, such as culverts, road and railroad beds, extensive mosquito ditching, stream blockages due to riprap and/or fell.

5. Presence of bedrock and/or glacial till islands in the high marsh, or other unique geological or topographical features. These areas provide an ecotonal situation which contributes to the diversity of wildlife on the marsh.

6. Presence of open areas of freshwater, adjacent to tidal marsh systems. These sites provide a diversity in habitat which increases the biological diversity of flora and fauna in the area.

7. Integrity of the border zone around the tidal marsh system. The border zone not only buffers the high marsh from human activities, but also provides a biologically rich habitat, due to its ecotonal nature.

8. Relative size of the tidal marsh and its proximity to other similar systems.

9. Development of salt marsh peat, which includes depth of soil, stage of decomposition, texture of underlying mineral soil materials and total salts in surface soil materials. For a description of salt marsh soils, see Section 3.2.3.

Though a quantitive model was not used in the assessment of these tidal systems, each of the criteria above were assigned a value of high, medium or low for each marsh, from which were calculated a rating for the marsh's overall health. Section 5.2 presents these results, along with brief comments for each marsh.

## 5.2 RESULTS TABLES

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM001
LOCATION: (Photo 2-26) North Shore, NC

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | *Rare(3) | Med.(2) | Com.(1) | 3 |
| (+) | Soil Type | 397(3) | 497,597, & 697 (2) | 797 & 997 (1) | ? |

General Health Index ($\bar{X}$): 2.2

COMMENTS:

Culvert into this marsh may need to be cleaned out.

(A) Intertidal patch of marsh with a small strip of *Spartina patens*

(B) *Spartina alterniflora* all the way up drainage ditch until point *Typha* enters the marsh from the east. Majority of marsh supports *Spartina patens, Juncus gerardi*, and *Distichlis spicata*. On the eastern border switch grass and *Juncus* (*balticus* possibly).

(A), (B), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM002
LOCATION: (Photo 2-26) East of Boatswain Hill, NC

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | *Rare(3) | Med.(2) | Com.(1) | 3 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |

General Health Index ($\bar{X}$): 2.1

COMMENTS:

This is a unique isolated system, which is hard to approach without crossing private property. Even though the houses are very close to the marsh on the western boundary, the main channel of the tidal creek prevents easy access to the high marsh.

The upper part of this system (A) is primarily forb pannes dominated by arrow-grass, black grass and some golden rod around the border zone. (B) There are two major restrictions to flushing in the high marsh:

(SM002 Cont.)

a stone wall and a berm. Behind the berm is a *Typha* stand. This area could be classified as tidal-fresh water. (C) A small stand of *Phragmites* is growing on an area where a tree fell into the marsh. (D) From photo interpretation (only) there appears to be an obstruction (possibly stones) at the mouth of the system.

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(A), (B), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM003
LOCATION: (Photo 1-24) Little Harbor, NC

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) | *Low(3) | 3 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) * | Low(1) | 1.5 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | *Rare(3) | Med.(2) | Com.(1) | 3 |
| (+) | Soil Type | 397(3) | 497,597, & 697 (2) | 797 & 997 (1) | ? |

General Health Index ($\bar{X}$): 2.4

COMMENTS:

This site is mostly intertidal. It is an important marsh due to the lack of similar systems in this area. There is potential for impact to the system if boat traffic into and out of Little Harbor increases and/or if the docking facilities to the west are enlarged.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM005, SM006, SM007
LOCATION: (Photo 2-24) Point West of Wentworth Hotel, NC

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) | *Low(3) | 3 |
| (+) | Unique Geological/ Topographical Formations | *High(3) | Med.(2) | Low(1) | 3 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) * | Med.(2) | Com.(1) | 2.5 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |

General Health Index ($\bar{X}$): 2.5

COMMENTS:

Both intertidal and high marsh exist at these sites.

SM005 - narrow band of intertidal marsh with healthy high marsh; *Spartina patens* and blackgrass present.

SM006 - mostly intertidal with a small strip of high marsh.

SM007 - (photo interpretation only) appears to have a thin stand of *Spartina alterniflora*; 80% of area high marsh.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM008
LOCATION: (Photo 2-24) Leach's Island, NC

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) | *Low(3) | 3 |
| (+) | Unique Geological/ Topographical Formations | *High(3) | Med.(2) | Low(1) | 3 |
| (+) | Buffer/Borderzone | *High(3) | Med.(2) | Low(1) | 3 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | *Rare(3) | Med.(2) | Com.(1) | 3 |
| (+) | Soil Type | 397(3) | 497,597, & 697 (2) | 797 & 997 (1) | ? |

General Health Index ($\bar{X}$): 2.8

COMMENTS:

(photo interpretation only) Unique well-protected system. Undoubtedly provides good wildlife/waterfowl/shore bird feeding habitat.

Very few large irregular pannes. Many small circular to oval pannes. indicating deeper standing water which aids survival of fish and invertebrates brought in on the higher tides.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM009
LOCATION: (Photo 2-26) Goat Island and nearby islands, NC

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) | *Low(3) | 3 |
| (+) | Unique Geological/ Topographical Formations | *High(3) | Med.(2) | Low(1) | 3 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | *Rare(3) | Med.(2) | Com.(1) | 3 |
| (+) | Soil Type | 397(3) | 497,597, & 697 (2) | 797 & 997 (1) | ? |

General Health Index ($\bar{X}$): 2.6

COMMENTS:

These are small islands of mostly intertidal marsh. The rarity of salt marsh in the region makes these quite important despite their small size.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM010
LOCATION: (Photo 2-22, 2-24) Witch Creek, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) | *Low(3) | 3 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | *High(3) | Med.(2) | Low(1) | 3 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | *Med.(2) | Com.(1) | 2 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 2.6

COMMENTS:

(A) At western end, large areas of black grass (*Juncus gerardi*) *Spartina patens*, silver weed (*Potentilla anserina*) and, to a lesser extent, seaside plantain (*Plantago juncoides*) and arrow-grass. *Spartina alterniflora* grows nearly to tree line along stream channel. Channel contains numerous rocks.

(SM010 Cont.)

(B) Island where marsh widens still has a good deal of black grass. Stones in creeks not evident downstream of island.

(C) Small stand of *Typha* near golf course to the north.

(D) Small stand of *Scirpus* along edge of marsh on southern border. Stone wall extends into marsh just east of narrows and island.

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(A), (B), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM011
LOCATION: (Photo 2-22) Berry's Brook, West of Brackett Road, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) * | Med.(2) | Low(3) | 1.5 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) * | Low(1) | 1.5 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |

General Health Index ($\bar{X}$): 1.9

COMMENTS:

(A) A combination of stone walls, mosquito ditch levees and vehicle tracks on the high marsh inhibits drainage at this site. Undoubtedly an excellent birding location. Many pannes are deep enough to support *Ruppia maritima* and will probably contain water through the summer.

(SM011 Cont.)

(B) Forb pannes in evidence; area dominated by short *Spartina alterniflora*, arrow-grass, *Salicornia*, silver weed.

(A), (B), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM012
LOCATION: (Photos 1-22, 2-24) Mouth of Berry's Brook, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) * | Low(1) | 1.5 |
| (+) | Buffer/Borderzone | High(3) * | Med.(2) | Low(1) | 2.5 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) * | Com.(1) | 1.5 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |

General Health Index ($\bar{X}$): 2.2

COMMENTS:

Egrets and herons sighted.

(A) Four stone walls not only restrict tidal flooding, but also trap water in this area. Between 2nd and 3rd stone wall there are numerous pannes with scattered stands of short *Spartina alterniflora*.

(SM012 Cont.)

(B) Beyond restriction: a few forb pannes dominated by arrow-grass and some *Salicornia*. Evidence of a good deal of *Salicornia* at this site last year; at present *Spartina alterniflora* and black grass dominate.

(A), (B), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM013
LOCATION: (Photo 1-24) Mouth of Berry's Brook, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) | *Low(3) | 3 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | *Med.(2) | Com.(1) | 2 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |

General Health Index ($\bar{X}$): 2.2

COMMENTS:

Very healthy system. *Spartina alterniflora* borders outer edge; forb pannes in center.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM014
LOCATION: (Photo 1-24) Odiorne Point, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) | *Low(3) | 3 |
| (+) | Unique Geological/ Topographical Formations | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Buffer/Borderzone | *High(3) | Med.(2) | Low(1) | 3 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | *Rare(3) | Med.(2) | Com.(1) | 3 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |

General Health Index ($\bar{X}$): 2.6

COMMENTS:

This is a tiny but healthy saltmarsh with approximately 50% intertidal and 50% high marsh. Being so close to the influence of ocean tides and storm surges, it is remarkable that this marsh is doing so well.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM016
LOCATION: (Photo 1-22) Fairhill Swamp, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | High(3) * | Med.(2) | Low(1) | 2.5 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | *Med.(2) | Com.(1) | 2 |
| (+) | Soil Type | 397(3) | * 497,597, & 697 (2) | 797 & 997 (1) | 2.75 |

General Health Index ($\bar{X}$): 2.3

COMMENTS:

An important marsh due to the high number of marsh islands and the visible presence of 3000-year-old cedar stumps. This is the largest contiguous marsh area north of Hampton-Seabrook in New Hampshire.

(A) Has been highly impacted by all terrain vehicles. Already water is being trapped in depressions caused by the wheels, leading to expansion of rotten spots/panne areas. *Ruppia maritima* is present in pond holes. This area is a rich wildlife/birding area.

(SM016 Cont.)

(B) More all-terrain vehicle tracks. This area is exceptionally thick with mosquitoes. A number of short *Spartina alterniflora* pannes.

(C) Area rich in wildlife. Raccoon, fox and deer sign. 20+ mallards and a number of egrets sighted feeding in these large pannes.

Much of the drainage problems can be attributed to mosquito ditch levees.

---

(A), (B), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM018
LOCATION: (Photo 1-20) Wallis Sands, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | *High(3) | Med.(2) | Low(1) | 3 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 1.9

COMMENTS:

This area is becoming a freshwater/tidal system. It has a large deep pond hole which allows for survival of fauna brought in by the highest spring tides. Potential for restoration is high. Must alter culverts running under Route 1A to provide better communication with SM023. Also must direct parking lot (Wallis Sands State Beach) runoff away from SM018.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM019
LOCATION: (Photo 1-22) Marsh Road Pond, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | Low(3) | N/A |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | Low(3) | N/A |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | *Med.(2) | Low(3) | 1.5 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | *High(3) | Med.(2) | Low(1) | 3 |
| (+) | Buffer/Borderzone | *High(3) | Med.(2) | Low(1) | 3 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | *Rare(3) | Med.(2) | Com.(1) | 3 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |
| | | | | General Health Index ($\bar{X}$): | 2.2 |

COMMENTS:

East Rye pond is essentially a freshwater system. The major restriction to flow is the culvert going under Parsons Road. However, in this case the restriction is helping maintain the freshwater habitat in the pond. Excellent bordering area. Though soils classified as Terric Sulfihemists, may be closer to a Sulfihemist; surface soil materials low in salt.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM020
LOCATION: (Photo 1-22) East of Marsh Road Pond, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Indicator Species Re: High Saline Conditions | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Borderzone/Freshwater Species Encroachment | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | *Med.(2) | Com.(1) | 2 |
| (+) | Soil Type | 397(3) | 497,597, & 697 (2) | *797 & 997 (1) | 1 |

General Health Index ($\bar{X}$): 1.1

COMMENTS:

Highly impacted system. Culvert under Marsh Road is blocked leaving little, if any, communication with main marsh system (SM023). *Typha* over-running site creating a stagnant system. High mosquito breeding potential. This roadway has been known to flood (1978).

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM021
LOCATION: (Photo 2-24) Sheafe's Point, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) | *Low(3) | 3 |
| (+) | Unique Geological/ Topographical Formations | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) * | Com.(1) | 1.5 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 2.3

COMMENTS:

This is a narrow band of healthy high marsh at the mouth of Witch's Creek, dominated by *Spartina patens* and *Juncus gerardi*, both interspersed and in pure stands. Other common species: *Distichlis spicata, Puccinellia maritima, Plantago juncoides* and *oliganthos, Solidago sempervirens*.

Presence of golf course provides some buffer from disturbance, but may be contributing to encroachment of freshwater herbaceous species.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM022
LOCATION: (Photo 1-22) North West end of Parsons Creek Marsh, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | *Med.(2) | Com.(1) | 2 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |

General Health Index ($\bar{X}$): 1.7

COMMENTS:

This section of the Parsons Creek Marsh is showing definite signs of impact, caused by a series of tidal restrictions along the drainage. The area is changing toward a freshwater tidal system with stands of *Typha* evident. Though loosestrife is not present at this site, it is found in SM023 and if the species migrates into MS022, it will quickly take over.

For further discussion, see Appendix Section 5.3.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM023
LOCATION: (Photo 1-20) Parsons Creek Marsh, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Indicator Species Re: High Saline Conditions | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | *Med.(2) | Com.(1) | 2 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 1.4

COMMENTS:

This marsh is showing definite signs of impact from tidal restrictions along the creek drainage. Large areas of pannes/rotten spots and the proliferation of *Salicornia* and short forms of *Spartina alterniflora* indicate inadequate flushing and poor drainage. Construction along Route 1A and Wallis Road has contributed to the marsh's condition.

For further discussion, see Appendix Section 5.3.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM024
LOCATION: (Photo 1-20) West of Brackett Road at Massacre Marsh, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | *Med.(2) | Com.(1) | 2 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 2.1

COMMENTS:

Culvert under Brackett Road is restricting tidal flow and spring runoff to some extent. Soil is classified 397; however from soundings taken, it appears that SM024 is approaching the upland edge of the Massacre Marsh tidal system. This site has good potential for restoration if culvert is enlarged and if obstructions at Concord Point are removed.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM025
LOCATION: (Photo 1-20) Massacre Marsh, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) | *Low(3) | 3 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | *Med.(2) | Com.(1) | 2 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 2.3

COMMENTS:

Area (A) in western section of SM025 is showing signs of impact. It appears that water during the higher spring tides is trapped behind the levees of the mosquito ditching. The lower part of this drainage is known as "Stinky Creek". The causes for the odor are localized at Concord point.

For further discussion, see Appendix Section 5.3.

(A), (B), (C), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM026
LOCATION: (Photo 1-20) South of Massacre Marsh, RY

| | SUBJECT | | SCORE | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |

General Health Index ($\bar{X}$): 1.6

COMMENTS:

(Photo interpretation only)

There appears to be a blockage or constriction between SM025 and SM026. Mosquito ditching and soil type indicate an impacted salt marsh. The area has changed towards a shrub-marsh with what appears to be *Typha* and/or *Phragmites* stands. The hydrology is well on its way to a freshwater-tidal system.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM027
LOCATION: (Photo 1-18) Dredge spoils site West of Rye Harbor, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | Low(3) | N/A |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | Low(3) | N/A |
| (-) | Borderzone/Freshwater Species Encroachment | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | Low(1) | N/A |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | Low(1) | N/A |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | Com.(1) | N/A |
| (+) | Soil Type | 397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 0 (dredge spoils) |

General Health Index ($\bar{X}$): .75

COMMENTS:

*Zero chance of restoration*

This area can no longer be considered a salt marsh system. Dredge spoils deposited at this site have killed all high marsh vegetation and compressed the peat. A *Phragmites* - *Typha* - sedge system has replaced the once viable sedge tidal system. The area is surrounded with a berm to contain runoff of leachate from dredge spoils. The berm acts to trap freshwater and restrict tidal flow into this site.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM028
LOCATION: (Photo 1-18) South of Rye Harbor, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) * | Low(3) | 2.5 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |
| | | | General Health Index ($\bar{X}$): | | 1.9 |

COMMENTS:

High tides normally saturate most of this system, but drainage is inhibited around the perimeter and water is trapped by mosquito levees.

Marsh shore birds (egrets, herons, plovers, ducks and an Ibis) seen in vicinity of pannes/sandholes, indicating these provide a good food source - at least during the spring and early summer.

For further discussion, see Appendix Section 5.3.

(SM028 Cont.)

(A) Fill may have been placed in marsh in the southwest corner Deep panne present enclosed by levees.
(B) Many small shallow pannes. Seems to be most impacted section of this marsh.

(A), (B), (C), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM029
LOCATION: (Photo 1-18) Awcomin Marsh, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) | *Low(3) | 3 |
| (+) | Unique Geological/ Topographical Formations | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | *Med.(2) | Com.(1) | 2 |
| (+) | Soil Type | 397(3) * | 497,597, & 697 (2) | 797 & 997 (1) | 2.5 |
| | | | General Health Index ($\bar{X}$): | | 2.6 |

COMMENTS:

A number of bedrock and/or till islands associated with this system provide good protective habitat for animal and bird species. This marsh has a variety of peat types.

Due to work done to contain the dredge spoil runoff, the area behind SM027 has been cut off from the tidal ebb and flow. *Phragmites* has invaded this site creating a stagnant area that may contribute to the local mosquito problem.

(SM029 Cont.)

(A) *Salicornia*, short form of *Spartina alterniflora* and *Distichlis* were present, evidence that recent high tide inundated and flooded pannes in this area.

(B) Large pond progressing toward freshwater tidal system. *Phragmites* and *Typha* around ponds.

(C) Slumping of creek banks; stones in stream restricting tidal ebb and flow.

(D) Very large area of shallow pannes with the short form of *Spartina alterniflora* in evidence. Many of the mosquito ditches are blocked due to slumping.

List of wildlife or wildlife sign seen:

Egret
Kingfisher
Bittern
Hawk
Crows
Ducks (mallards and black)
Fox
Raccoon

(A), (B), (C), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM031
LOCATION: (Photo 1-18) Between Rye Harbor and Route 1, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | 397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 0 (dredge spoils) |
| | | | General Health Index ($\bar{X}$): | | 1.1 |

COMMENTS:

This is an isolated pocket of marsh >80% impacted. Soil soundings indicate dredge spoils in northwest with increasing peat layer toward the southeast. Dr. Richardson (NHSWB) states that dredge spoils were deposited here, thus explaining the berm surrounding this area. There is no visible means for tidal inundation, though the presence of *Spartina patens* would indicate there must be. The only culvert discovered was a rusted pipe in the southeast corner. The pipe appears

(SM031 Cont.)

to have been installed to allow the dredge spoils leachate to drain back into the harbor. On investigation no outlet end of the pipe could be found on the harbor side.

This small ecotone supports a great diversity of wildlife.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM032
LOCATION: (Photo 1-18) West of Rye Harbor, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | 397(3) * | 497,597, & 697 (2) | 797 & 997 (1) | 2.5 |
| | | | General Health Index ($\bar{X}$): | | 1.7 |

COMMENTS:

This area is suffering from inadequate drainage.

The culvert under Route 1-A was recently replaced by the highway department. During site visit, waters were reaching the upper portions of this system. However, water backed up at the culvert on the ebbtide.

(A) Freshwater is trapped during spring runoff and salt water after the higher spring tides. The integrity of the high marsh peat has

(SM032 Cont.)

degraded to the point that slumping is quite evident. Such slumping is exacerbating the blockages, thus increasing the trapping of waters.

(B) This area supports a large shallow panne; field evidence suggests that it partially dried up the previous summer. The primary drainage ditch for the panne has filled in at its western end. Birds were observed feeding on the this panne.

For further discussion, see Appendix Section 5.3.

(A), (B), (C), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM033
LOCATION: (Photo 1-18) West of Locke Road, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |

General Health Index ($\bar{X}$): 1.6

COMMENTS:

A large encroachment of border zone species in southwest corner of this system, primarily *Typha* and *Phragmites*. Extensive "rotten spots" bordering private drive crossing marsh. There is evidence that a recent high spring tide has inundated this system.

This area receives inadequate tidal flushing for much of the year. The stream entering from the southwest floods the area with freshwater. The tidal energy coming up the drainage is not great enough to offset this freshwater inundation from the upland.

(SM033 Cont.)

Tidal restrictions along the creek drainage have contributed to the restricted tidal ebb and flow. The building of the Pilot House Restaurant and its adjoining parking lot may be a causal factor.

For further discussion, see Appendix Section 5.3.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM034
LOCATION: (Photos 1-16, 1-18) West of Locke Road, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |

General Health Index ($\bar{X}$): 1.6

COMMENTS:

Private road crossing the marsh has led to the deterioration of this system by cutting off communication between SM033 and SM034. The culvert constructed is inadequate to allow proper flushing of the high marsh. Consequently, border zone species have encroached to within 50 feet of the tidal channel at the eastern end of this wetland. There are rotten spots present east of the drive, trapping runoff from the road.

For further discussion, see Appendix Section 5.3.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM036
LOCATION: (Photo 1-16) East of Route 1 at Straw Point, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |

General Health Index ($\bar{X}$): 1.6

COMMENTS:

Sounding showed 6 feet of Terric Sulfihemists peat. The flood tides are not getting into this area because the culvert into SM036 and SM034 is inadequate and there are other obstructions along the drainage. Division of the main channel (parallelling Route 1A) also has reduced the amount of tidal waters reaching this system.

This is a highly impacted system with over 85% of the original high marsh occupied by *Typha*. One panne in the southwest corner shows

(SM036 Cont.)

that the highest of spring tides will make it into this marsh. Surrounding the panne were small patches of *Spartina patens* and larger areas of *Distichlis spicata*. The panne and connecting mosquito ditch are experiencing the onset of anaerobic conditions. This area has a very high odor and mosquito potential.

For further discussion, see Appendix Section 5.3.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM038
LOCATION: (Photo 1-14) North of Philbrick Pond, RY

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Indicator Species Re: High Saline Conditions | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) * | Med.(2) | Low(3) | 1.5 |
| (-) | Obstruct./Restrict. | High(1) * | Med.(2) | Low(3) | 1.5 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | *Med.(2) | Com.(1) | 2 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |

General Health Index ($\bar{X}$): 1.3

COMMENTS:

Evidence of recent tidal inundation. Encroaching stands of *Lythrum, Phragmites* and *Typha* around the perimeter.

Area (A) is devoid of *Spartina patens* and is covered with *Salicornia*. This area appears to trap saline waters during the higher spring tides. As the water evaporates, it creates hyper-saline conditions, killing off the high marsh vegetation, permitting only *Salicornia* to survive.

(SM038 Cont.)

Area (B) is cut off from tidal flooding by an old trolley bed that traverses the marsh from north to south. There is very little evidence of high marsh vegetation. There is *Typha* and some *Lythrum* and an extensive area of panne formation. This area floods from runoff coming down the stream and from adjacent developed areas. This influx of fresh water, without the mitigating effect of daily tidal flooding, has caused area B to change toward a freshwater system.

For further discussion, see Appendix Section 5.3.

(A), (B), (C), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM039
LOCATION: (Photo 1-14) Philbrick Pond, NH

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Indicator Species Re: High Saline Conditions | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) * | Low(1) | 1.5 |
| (+) | Relative Size | Large(3) | Med.(2) * | Sma.(1) | 1.5 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) * | Com.(1) | 1.5 |
| (+) | Soil Type | 397(3) * | 497,597, & 697 (2) | 797 & 997 (1) | 2.5 |

General Health Index ($\bar{X}$): 1.5

COMMENTS:

This area is greater than 90% impacted. The system is suffering from lack of proper drainage. The mosquito ditch levees are trapping water during the higher spring tides. Standing water has led to rotting and subsidence of the marsh peat. These panne areas support bluegreen algae, mosquitoes, and other insects. Small fish and crustaceans can be observed in the deeper pannes. Many shore birds and waterfowl were seen frequenting this area. This marsh is definitely changing to a highly unproductive system.

For further discussion, see Appendix Section 5.3.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM041
LOCATION: (Photo 1-12) Little River Swamp, NH

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) * | Low(1) | 1.5 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) * | Com.(1) | 1.5 |
| (+) | Soil Type | 397(3) * | 497,597, & 697 (2) | 797 & 997 (1) | 2.5 |

General Health Index ($\bar{X}$): 1.8

COMMENTS:

More than 80% of the original tidal marsh has been severely impacted. Restrictions have reduced tidal flushing dramatically, and rerouting of the main channel from its original egress in the south (A) to a dug ditch in the north (B), has shifted the ecology of the system. The original mouth of the tidal system has now become isolated above the reach of the tidal influence. Border zone species are prevalent, with *Lythrum salicaria* in large abundance.

(SM041 Cont.)

The section south of Huckleberry Lane (C) is divided by an east-west dike, south of which grows a mixture of loosestrife, cattails and sedges, and north of which is a dense stand of loosestrife.

The section north of Huckleberry Lane (D) contains a small, viable but isolated high marsh (*Spartina patens*) in center and a small patch of *Spartina patens* and *Distichlis spicata* surrounded by *Phragmites* near Route 1A. Cattails are present in the southern part of this section and loosestrife is scattered throughout. The area will soon be taken over by loosestrife if nothing is done to improve the drainage.

For further discussion, see Appendix Section 5.3.

(A), (B), (C), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM044
LOCATION: (Photo 1-10) Meadow Pond, HA

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | *Med.(2) | Com.(1) | 2 |
| (+) | Soil Type | 397(3) | 497,597, & 697 (2) | 797 & *997 (1) | 1 |

General Health Index ($\bar{X}$): 1.4

COMMENTS:

(At low tide, waters exiting Meadow Pond were at 4% salinity (15°C); at the north end salinity was 0% (16°C)).

Meadow Pond is an excellent example of a transition from tidal marsh in the south to a freshwater-tidal system in the north, though the saltmarsh has been impacted along the border zone which is under

(SM044 Cont.)

development pressure. *Phragmites* dominates the northern border. Cranberry can be found in the wetter areas. This ecotonal area is excellent bird/wildlife habitat and should have a greater diversity of species then the tidal marsh proper.

(A), (B), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM046
LOCATION: (Photos 1-8, 2-8) Tide Mill Creek, North of Route 51, HA

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) | *Low(3) | 3 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 2.1

COMMENTS:

This is generally a healthy marsh. There are a number of deeper pond holes without rotten spots. Unfortunately, the border zone continues to suffer from development, particularly along Eel Creek.

For further discussion, see Appendix Section 5.3.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM047
LOCATION: (Photo 1-8) Isolated marshes South of Great Boar's Head, HA

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) * | Med.(2) | Low(3) | 1.5 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | *Med.(2) | Com.(1) | 2 |
| (+) | Soil Type | 397(3) | 497,597, & 697 (2) | 797 & 997 (1) | ? |

General Health Index ($\bar{X}$): 1.6

COMMENTS:

Even though these systems are highly impacted, they serve as "natural areas" in this highly developed location. Also, they help mitigate flooding and storm drainage.

(A) seems the healthiest of the 3 sites.

(B) is being heavily impacted by surrounding residential area. *Phragmites* is well established in the eastern section of this marsh.

(SM047 Cont.)

(C) has encroachment of border zone species, but a small healthy section of high marsh.

(A), (B), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM051
LOCATION: (Photo 3-8) North of Route 51, East and West of Landing Road, HA

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |

General Health Index ($\bar{X}$): 1.8

COMMENTS:

(A) Approximately 50% is occupied by border zone species including *Typha, Phragmites, and Juncus*. Center of area a mixture of *Spartina patens*, black grass, arrow-grass and *Distichlis spicata*. Western end of high marsh area has a short *Spartina alterniflora* panne.

(B) Similar to (A) but encroachment of border zone species is not as pronounced.

(A), (B), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM054
LOCATION: (Photo 3-8) Junction Route 1 and Route 51, HA

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | 397(3) | *497,597, & 697 (2) | 797 & 997 (1) | 2 |

General Health Index ($\bar{X}$): 1.4

COMMENTS:

This area has been highly impacted and isolated from the main marsh, primarily because of road construction.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM056
LOCATION: (Photo 3-8) South of Route 51, East of Landing Road, HA

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) * | Med.(2) | Low(3) | 1.5 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) * | Med.(2) | Low(3) | 1.5 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | 397(3) * | 497,597, & 697 (2) | 797 & 997 (1) | 2.5 |

General Health Index ($\bar{X}$): 1.5

COMMENTS:

Large open-water pannes, noted by Richardson (1982) as good birding area. No wildlife in evidence during site visit. These pannes are surrounded by a number of short *Spartina alterniflora* panne areas - a typical "rotten spot" formation. Drainage is restricted apparently because of a combination of mosquito ditch levees, two roads, and old fences. There is a small stand of *Phragmites* in the northeast corner of the area; *Typha* is bordering the eastern edge.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM057
LOCATION: (Photo 3-10) Drakes River between Drakeside Road and Route 51, HA

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 2.1

COMMENTS:

This is a healthy piece of marsh though there is evidence of *Phragmites* and *Typha* encroachment. A tide gate is on one of the two culverts passing under Drakeside Road; it serves no useful function. The topography does not suggest a flooding problem, nor is this close to being a fresh water system. The tide gate is just inhibiting the flow and contributing to the encroachment of the border zone species.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM058
LOCATION: (Photos 3-8, 4-8) Taylor River and Drakes River between Route 1 and I95, HA HF

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) * | Low(1) | 1.5 |
| (+) | Buffer/Borderzone | High(3) * | Med.(2) | Low(1) | 2.5 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 2.1

COMMENTS:

Restrictions at the railroad bed and Route 1 have contributed to the lack of tidal flushing of these upper reaches of the marsh. Also the extensive mosquito ditch levees have inhibited adequate drainage. Borderzone species such as *Phragmites* and *Typha* have entered the marsh near the extremities. This area is rich in wildlife sign and birds.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM059
LOCATION: (Photo 3-8) Taylor River between RR tracks and Route 1, HA HF

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 2

COMMENTS:

Area behind railroad bed not draining adequately. Opening to south inadequate. As tidal water floods this area, tidal energy is lost at Route 1, causing ponding. On ebb tide, the force of outgoing water is less than the tidal energy coming in, so drainage takes a longer period of time.

- Mosquitoes seemed to be bad compared to other similar areas.
- Vegetation primarily short *Spartina alterniflora, Salicornia*

(SM059 cont.)

intermixed with *Spartina patens*. There were a number of "rafted" pieces of marsh peat deposited in this area. The peat was undoubtedly broken off or slumped further down the drainage. As the high tide came in the peat was moved upstream until it reached the Route 1 barrier where it was deposited.

It has been noted by F. Richardson, that this type of area is good for birding. This seems to be correct, based on large concentration of egrets and herons.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM061
LOCATION: (Photo 3-6) Hampton Falls River, HF

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) | *Low(3) | 3 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 2.3

COMMENTS:

A relatively healthy system; culvert under railroad tracks is adequate in size.

(A) Spike grass and short *Spartina alterniflora* with patches of black grass and arrow-grass. Predominant vegetation *Spartina patens*. Old mosquito ditch levees along with some slumping has contributed to capturing some water; however, this is not very extensive. Hawk, heron(s), egrets, deer sign.

(SM061 Cont.)

(B) Dam at pond west of 1A. Some tidal restrictions in creek before dam. Borderzones have stands of *Typha* and *Lythrum*.

(A), (B), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM062
LOCATION: (Photo 3-6) Browns River, HF SE

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) * | Med.(2) | Low(3) | 1.5 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) * | Med.(2) | Low(3) | 1.5 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) * | Low(3) | 2.5 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | *High(3) | Med.(2) | Low(1) | 3 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 1.9

COMMENTS:

Culvert under railroad trestle seems undersized; drainage inadequate. Some circular deep pond holes. Extensive areas of large irregular-shaped pannes surrounded primarily by short *Spartina alterniflora*. Deer sign at edge of marsh.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM063
LOCATION: (Photo 2-4) Cains Brook, West of Causeway Road, SE

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | 397(3) | 497,597, & 697 (2) | *797 & 997 (1) | 1 |

General Health Index ($\bar{X}$): 1.4

COMMENTS:

Major restriction is under private road. Damming caused by stones, logs and stumps, causing ponding of water to west.

(A) *Spartina patens* with seaside goldenrod and sedges near channel. Sparse stand of short *Spartina alterniflora*. The area is changing toward a freshwater tidal regime. Also present was silver weed and *Typha* (on the border).

(SM063 Cont.)

(B) Large areas of *Juncus*. Limit of salt marsh vegetation.

(C) Tidal to freshwater.

(A), (B), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM064
LOCATION: (Photo 2-4) Cains Brook, East of Causeway Road, SE

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) | *Low(3) | 3 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | Large(3) | *Med.(2) | Sma.(1) | 2 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 2.3

COMMENTS:

(A) Forb pannes dominated by arrow-grass. Some recently dried out pannes with short form of *Spartina alterniflora* with some *Salicornia*. Slumped mosquito ditches seem the main reason for trapped waters in these panne areas. Remainder of marsh mostly *Spartina patens* interspersed with stands of blackgrass.

(A), (B), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM065
LOCATION: (Photos 1-4, 1-6, 1-8; 2-4, 2-6, 2-8; 3-6, 3-8) Hampton/ Seabrook Estuary, East of RR tracks, HA HF SE

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | High(1) | Med.(2) | *Low(3) | 3 |
| (+) | Unique Geological/ Topographical Formations | *High(3) | Med.(2) | Low(1) | 3 |
| (+) | Buffer/Borderzone | High(3) | *Med.(2) | Low(1) | 2 |
| (+) | Relative Size | *Large(3) | Med.(2) | Sma.(1) | 3 |
| (+) | Relative Uniqueness | *Rare(3) | Med.(2) | Com.(1) | 3 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 2.9

COMMENTS:

This system is New Hampshire's best example of a large productive salt marsh. Saltmarshes SM044-SM067 are all part of this tidal system, totalling about 3,500 acres.

Area along Hampton River behind Hampton Beach is experiencing high impact both from development and all-terrain vehicles along the edge of marsh.

(SM065 Cont.)

- Development of Mills Point and Riverside have adversely affected the marsh in the immediate vicinity.

For further discussion see Appendix Section 5.3.

# TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM066
LOCATION: (Photo 1-2) Between South Main Street and Route 86, SE

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | High(1) * | Med.(2) | Low(3) | 1.5 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Obstruct./Restrict. | High(1) | *Med.(2) | Low(3) | 2 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | *397(3) | 497,597, & 697 (2) | 797 & 997 (1) | 3 |

General Health Index ($\bar{X}$): 1.6

COMMENTS:

Tidal restriction at point where stream passes under Route 86C.

(A) Western 25% covered with *Phragmites* and *Typha*. High marsh primarily rotten spots with short form of *Spartina alterniflora*. Fill from recently excavated mosquito ditch has been placed on high marsh. Will act to inhibit tidal flow across surface of marsh, leading to eventual death of *Spartina patens* and further degradation of marsh.

(SM066 Cont.)

(B) Healthy high marsh with small amounts of short form of *Spartina alterniflora*. Stones in creek create obstruction at culvert under South Main St.

(A), (B), etc. refer to locations on wetland maps.

TIDAL MARSH SITE EVALUATION

WETLAND CODE: SM067
LOCATION: (Photo 1-2) South of South Main Street, SE

| | SUBJECT | SCORE | | | TOTAL |
|---|---|---|---|---|---|
| (-) | Pannes/Rotten Spots | *High(1) | Med.(2) | Low(3) | 1 |
| (-) | Indicator Species Re: High Saline Conditions | High(1) | *Med.(2) | Low(3) | 2 |
| (-) | Borderzone/Freshwater Species Encroachment | High(1) | Med.(2) | *Low(3) | 3 |
| (-) | Obstruct./Restrict. | *High(1) | Med.(2) | Low(3) | 1 |
| (+) | Unique Geological/ Topographical Formations | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Buffer/Borderzone | High(3) | Med.(2) | *Low(1) | 1 |
| (+) | Relative Size | Large(3) | Med.(2) | *Sma.(1) | 1 |
| (+) | Relative Uniqueness | Rare(3) | Med.(2) | *Com.(1) | 1 |
| (+) | Soil Type | 397(3) | 497,597, & 697 (2) | *797 & 997 (1) | 1 |

General Health Index ($\bar{X}$): 1.3

COMMENTS:

This marsh has little communication with SM066 or SM065.The large ditch surrounding it was full of standing water at low tide. Even though the marsh itself is highly impacted with extensive rotten spots this may be a good habitat for waterfowl and shorebirds. Dominant species is short form of *Spartina alterniflora*.

## 5.3 IMPACT ANALYSIS OF SELECTED SALT MARSHES

### Concord Point Drainage, Rye

This drainage includes not only Parsons (SM022, SM023) and Massacre Marsh (SM025) Creeks, but also a number of small isolated pockets of marsh (SM018, SM019, SM020) that communicate via culverts with the main tidal creeks. Table 9 summarizes some of the impacts that have contributed to the marsh's degradation. In 1985, the Town of Rye obtained Coastal Zone Management monies to remove obstructions and restrictions along the course of Parsons Creek. The objective was to increase tidal ebb and flow into the upper reaches of the marsh. In the spring of 1985, work was carried out to: (1) straighten the channel at Concord Point, (2) remove the obstructions in the creek at the site of the old Wallis Road bed and (3) dredge the channel of the creek at the point it passes under Wallis Road.

After this work was completed, field investigations confirmed that tidal innundation had increased in the upper reaches of the marsh, but further analysis is needed to determine the long-term benefit of these actions. Restrictions along the creek remain, and further actions should be taken to continue the removal of these materials (Simpson, 1986). Increased tidal flooding into the higher reaches of the system (including the small isolated pockets) would stem the advancement of the invasive species *Phragmites, Typha, Lythrum, Scirpus*, etc. These border zone plants would gradually die back and the restoration of high marsh species could proceed.

### Philbrick Brook Drainage, Rye

The situation in this series of marshes (SM028, SM032, SM033, SM034, SM036) is similar to that described for the Concord Point drainage. Through the years construction of a number of roads has inadvertently choked off the upper reaches of this salt marsh. Each time a road was

TABLE 9. Summary Of Impacts At Parsons Creek Marsh

| SITE NAME | LOCATION DESCRIPTION | COMMENTS |
|---|---|---|
| Concord Point | East of Route 1-A where "Stinky Creek" empties into the ocean | Grounded barge has shifted stream channel and reduced flow. |
| Old Wallis Road | South of Wallis Road; looks like a stone wall running through the marsh | Old bridge abutments have fallen into creek restricting ebb and flow of the tide. |
| Wallis Road | Road running east-west through center of marsh. | Stones, sand, and debris accumulate under and on either side of bridge, impeding ebb and flow of tide. |
| Red Roof Market Area ("Trash Corner") | Corner of Route 1-A and Wallis Road; also residence to north of Market | Loss of marsh due to placement of gravel-fill over marsh. Fill is being undercut by creek; debris is being used to stabilize bank. |
| Horse Paddock | North of Red Roof Market, built in major ox-bow of creek | Encroachment onto marsh; organics, nitrogen, etc. finding way into creek waters. |
| Wallis Sands/ Route 1A | Northern end of marsh before junction of 1-A and Parsons Road | Rerouting of 1-A isolated segment of marsh from main drainage system; changing to brackish conditions |

added, the movement of salt water through the peat was inhibited. The road beds either replaced the peat or compressed the peat so that subsurface tidal waters could not pass underneath these barriers. Thus, areas of salt marsh that hydrologically communicated with each other are now isolated except for the tidal waters that can move through the culverts under these roadways. A good example is the private drive that was built across the marsh, cutting off SM033 from SM034. The construction of Ocean Boulevard early in this century created a smiliar effect.

In addition to road construction, other activities, such as the development of Rye Harbor and the riprapping of the major creek channels, helped to cut off infiltration of tidal waters into the creek bank peat. Also, near the Pilot House Restaurant, rocks from riprap appear to have fallen into the creek, blocking tidal flow into SM032, SM033, etc. and ultimately reducing the distance the tidal bore can move through the tidal creeks.

Little can be done about the roads already built across the tidal marsh, except to insure that culverts are large enough to allow adequate ebb and flow of the tidal waters. A culvert of adequate size will not cause damming of waters on the ebb tide. The overall health of the system can be improved by removing all rocks and stones along the drainage that either inhibit tidal inundation on the flood tide or restrict draining of the marsh on the ebb tide. Such mitigation activities might precede work on culverts discussed above. In addition, a maintenance schedule should be established for all culverts to insure clear passage of tidal waters.

Golf Course Drainage, (Bass Beach) Rye

This marsh (SM038) is the southern-most saltmarsh in the Town of Rye. The upland stream feeding this area flows from a golf course west of Causeway Road and exits through a culvert under Route 1A into the ocean. Short (1985) states that at one time this drainage entered the Bass Beach Marsh (Philbrick Pond) to the south. An old trolley bed traverses the marsh from north to south approximately 650 feet west of Route 1A. During the site visits there was ample evidence that the tide had entered and inundated the marsh. *Spartina alterniflora* is present for about 150 feet upstream of the Route 1A culvert. *Spartina patens* is prevalent up to 600 feet west of Route 1A. At about 600 feet there is a *Spartina/Typha* interface. *Typha* as well as *Phragmites* and *Lythrum salicaria* are prevalent along the northern and western borders of the marsh. Of particular note is an area in the eastern section of the marsh, close to Route 1A, where a large area is devoid of *Spartina patens*, and is dominated by *Salicornia*.

The area immediately west of the trolley bed is a highly impacted high marsh, with sparse stands of *Spartina*, a great deal of *Typha* and some *Lythrum*. It appears to be flooded by the highest of the yearly tides, but seems quite stagnant most of the year making it prime mosquito breeding habitat. The upland stream has a very organic substrate until approximately 200 feet east of Causeway Road where the bottom substrate is primarily sand and small stones. If the opening through the trolley bed were enlarged and the stream cleared of obstructions, the increased ebb and flow of the tide into this isolated area would not only alleviate the stagnation, but help restore the high marsh vegetation.

A flapper valve, which was presumably attached to the ocean end of the culvert running under Route 1A, now lies (unattached) on the rocks to the south of the pipe opening. Its function was to keep the tidal waters from flooding the marsh; its earlier operation contributed to the marsh's present condition.

The presence of the large area dominated by *Salicornia* indicates that this part of the marsh (closest to Route 1A) is being inundated by saline waters during the higher spring tides. During the summer, tides are not high enough to periodically soak this area; the saltwater that was trapped on the marsh evaporates and creates a hypersaline condition in this section of the marsh. *Spartina* is unable to grow, but the more salt tolerant *Salicornia* appears to thrive.

In order to increase tidal flushing and restore the high marsh vegetation, the pipe now running under Route 1A must be redesigned or enlarged. A second, and more costly, alternative is to install another pipe to the north, running under Route 1A, which would allow greater amounts of salt water to inundate the marsh during a flood tide. The benefits would be both the reestablishment of the high marsh plants and the decline of the border zone species which are now invading the system.

Philbrick Pond, North Hampton

This small tidal system (SM039) is an excellent birding location, partly because of the confluence of a number of small drainages entering the southwest end of Philbrick Pond. The pond's outlet flows under an old trolley bed, and travels by culvert under Route 1A to the ocean.

*Spartina alterniflora* (tall form) is found along the channel and at the upper end of the pond. The short form of *Spartina alterniflora*, along with *Salicornia*, is found in the rotten spot/panne areas which have dried out. Stands of *Phragmites* are present along the western border of this area. Some loosestrife (*Lythrum salicaria*) appears just upland from the marsh (Short, 1985).

The main problem at Philbrick Pond is a lack of adequate drainage. The levees along the numerous mosquito ditches have created a patchwork of enclosed areas. These areas trap saline water during the higher spring tides. The standing salt water inhibits the growth of *Spartina patens*. As the water evaporates, these pannes are invaded by species of *Salicornia* and the short from of *Spartina alterniflora*, two plants that can withstand high saline conditions.

This is not a stable ecosystem. The size and extent of the pannes have increased rapidly over the last ten years, and could continue to expand (Short, 1985). To restore this area the outflow channel from Philbrick Pond should be enlarged, and the pannes should be drained through ditching. Material excavated from such a ditching operation should be removed from the marsh. Moreover, some of the shallower pannes should be deepened so as to insure survival of fauna brought in on the high tides. If more water is allowed to enter the marsh during the tidal cycles and the drainage restrictions are removed, the outgoing water will flush the channels and re-establish adequate communication with the ocean.

Little River Marsh, North Hampton and Hampton

Before 1950, Little River Marsh (SM041) had access to the ocean through a channel that flowed under Route 1A at the town line of North Hampton and Hampton. This channel has since been blocked, reducing the marsh's communication with the ocean to one man-made channel to the north, a culvert that runs under Route 1A near the junction with Sea Road.

*Spartina patens* is in evidence in this marsh, and can be seen as far upstream as Fifield Road. There is one stand of *Spartina alterniflora*. In addition there are stands of *Typha* and *Phragmites* which border this area.

*Lythrum salicaria* has invaded this system and now covers 60% of the former marsh area (Short, 1985). This invasion of loosestrife occurred after the old channel had been blocked. The prevalence of loosestrife indicates that much of this marsh does not have an adequate flow of tidal waters. The culverts at 1A and under Fifield Road may contribute to the tidal restriction. If these restrictions were reduced and/or if additional ocean access could be secured, tidal flushing would be enhanced. The flushing would curtail the invasion of the loosestrife and encourage the re-establishment of high marsh vegetation, rendering the area a productive tidal marsh.

Hampton-Seabrook Marsh System, Hampton, Hampton Falls and Seabrook

The six to seven thousand acres of tidal wetlands along the coast represent only a small percentage of the total wetlands in the State. It is because of this limited acreage that these systems should be protected as unique and valuable State resources. The Hampton-Seabrook Estuary is the largest contiguous tidal marsh system in New Hampshire, comprising about 3500 acres. Most of these associated tidal wetlands are in good condition though there are outlying areas and isolated pockets that are suffering from developmental pressures and/or manmade constrictions.

A train track on a raised bed traverses the western side of the Hampton-Seabrook marsh. This, together with Route 1 to the west, has resulted in the restriction of tidal ebb and flow. There are a number of areas beyond these restrictions that have extensive panne/ rotten spots due to a lack of proper drainage.

The areas bordering the Hampton Beach development (SM065) are showing signs of severe impact. This is due not only to the continued encroachment by construction activities, but also to the fact that the

marsh is so accessible at this location. The high concentration of people during the summer months results in the marsh being trampled.

The Hampton-Seabrook system, overall, should be considered a prime tidal wetland and accorded all appropriate relief from current impacts and protection from further disturbance. For further discussion of Prime Wetland status of this tidal system, see Richardson's (1982) Identification, Documentation and Mapping of Prime Tidal Wetlands In The Town of Hampton, New Hampshire.

# 6.0 APPENDIX: SAND DUNES, DETAILED RESULTS

## 6.1 HOW TO USE THE RESULTS

The twelve sand dune areas evaluated in the study area were sampled only for plant species. The plants were listed in the same manner as for wetlands. The computer was used to produce ecological summaries, despite the inappropriateness of wetland data computations for these sandy upland communities. Refer to Section 3.3 for a more complete description of dune ecology, impacts and management.

The following results are useful as representative lists of the plant species occurring at the sites sampled. At the end of each species list is a number between 0 and 1.0 following the label "DUNE: ". This is the computed fraction of the plant abundances from the site which are considered to be dune indicator species (Table 6, section 3.3). This number is 1.000 for a community comprised of only dune species, and 0.000 for a community with no dune species. This fraction gives the user a rough idea of how pure the community is for foredune species (1.00) or how many upland sandy species have taken over for the pioneer dune species (less than 1.00). Numbers less than 1.00 do not imply lower value to the dune ecology. For example, poison ivy, common throughout the inland parts of the state, cannot be considered to be a dune indicator, so its presence lowers the "DUNE" fraction. But it is one of the most useful dune species, according to Dr. Lazell (1976):

"Resplendent in lovely purples, scarlets, russets, ochres, and greens, growing first as a ground trailing vine, then low herbage, then as dense shrubbery, and someday even attaining the character of a small tree, poison ivy is the finest and most wonderful of all our plants. Poison ivy holds the shifting sands; it shades and shelters the birds and animals; its berries richly augment the complex ecological chain; best of all, poison ivy keeps people off the land. It is the trouncing, trampling feet of man that crush and kill the fragile plants of the dunes, and set the sand to blowing mercilessly inland."

## 6.2 RESULTS TABLES FOR STUDY AREA

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 1-20) Wallis Sands State Beach, jct with Marsh Rd, RY
DU001 Field Date: 06/04/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Rosa rugosa | Salt-spray rose | 8 | 0.00 | S | 1 |
| Rhus typhina | Staghorn sumac | 2 | 0.00 | T | 2 |
| Prunus maritima | Beach plum | 1 | 0.00 | S | 3 |
| Crataegus sp. | Hawthorn | 3 | 0.00 | T | 1 |
| Rhus radicans | Poison ivy | 1 | 0.82 | S | 2 |
| Solanum dulcamara | Bittersweet | 2 | 0.50 | H | 0 |
| Euphorbia cyparissias | Cypress spurge | 8 | 0.00 | H | 0 |
| Juncus tenuis | Path rush | 1 | 0.50 | H | 0 |
| Agrostis alba | Redtop grass | 2 | 0.82 | H | 0 |
| Asclepias syriaca | Common milkweed | 2 | 0.50 | H | 0 |
| Solidago sempervirens | Seaside goldenrod | 2 | 0.82 | H | 0 |
| Oenothera biennis | Evening primrose | 5 | 0.18 | H | 0 |
| Senecio sp. | Ragwort | 1 | | H | 0 |
| Ammophila breviligulata | Dune grass | 50 | 0.00 | H | 0 |
| Lathyrus japonicus | Beach pea | 12 | 0.00 | H | 0 |
| Taraxacum officinale | Dandelion | 1 | 0.50 | H | 1 |
| Artemisia stelleriana | Dusty miller | 6 | 0.18 | H | 0 |
| Cakile edentula | Searocket | 6 | 0.18 | H | 0 |
| Agropyron repens | Quack grass | 1 | 0.00 | H | 1 |

WSI: 0.089 WFV: 0.048 BOG: 0.000 SALT: 0.070 DUNE: 0.570
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.00 BUSHY: 0.07 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.00 BROADL: 0.07 NARROW: 0.47 FLOATING: 0.00
SUBTYPES:NUVW
WATERSHED: Beach Dunes TYPE: Sand Dune Community

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 1-16) Jenness Beach, RY
DU002 Field Date: 06/04/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Rosa rugosa | Salt-spray rose | 3 | 0.00 | S | 1 |
| Lathyrus japonicus | Beach pea | 5 | 0.00 | H | 0 |
| Ammophila breviligulata | Dune grass | 70 | 0.00 | H | 0 |
| Solidago sempervirens | Seaside goldenrod | 5 | 0.82 | H | 0 |
| Bromus tectorum | Cheat grass | 25 | 0.00 | H | 0 |
| Cakile edentula | Searocket | 2 | 0.18 | H | 0 |
| Euphorbia cyparissias | Cypress spurge | 2 | 0.00 | H | 0 |

WSI: 0.039 WFV: 0.006 BOG: 0.000 SALT: 0.062 DUNE: 0.687
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.00 BUSHY: 0.02 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.00 BROADL: 0.01 NARROW: 0.84 FLOATING: 0.00
SUBTYPES: NUV
WATERSHED: Beach Dunes TYPE: Sand Dune Community

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 1-12) Plaice Cove, E of Rt1, HA
DU003 Field Date: 06/05/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Pinus rigida | Pitch pine | 3 | 0.18 | T | 3 |
| Lathyrus japonicus | Beach pea | 2 | 0.00 | H | 0 |
| Rosa rugosa | Salt-spray rose | 3 | 0.00 | S | 1 |
| Ammophila breviligulata | Dune grass | 40 | 0.00 | H | 0 |
| Myrica pensylvanica | Bayberry | 1 | 0.50 | S | 2 |
| Artemisia stelleriana | Dusty miller | 1 | 0.18 | H | 0 |
| Solidago sempervirens | Seaside goldenrod | 2 | 0.82 | H | 0 |

WSI: 0.055 WFV: 0.067 BOG: 0.000 SALT: 0.038 DUNE: 0.903
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.00 BUSHY: 0.05 COMPACT: 0.01
MARSH SBCL: ROBUST: 0.00 BROADL: 0.00 NARROW: 0.76 FLOATING: 0.00
SUBTYPES:NUV
WATERSHED: Beach Dunes TYPE: Sand Dune Community

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 1-12) N of Plaice Cove, W of Rt1A, HA
DU004 Field Date: 06/05/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Myrica pensylvanica | Bayberry | 2 | 0.50 | S | 2 |
| Quercus ilicifolia | Bear (scrub) oak | 3 | 0.00 | S | 4 |
| Prunus maritima | Beach plum | 1 | 0.00 | S | 3 |
| Pinus rigida | Pitch pine | 2 | 0.18 | T | 3 |
| Ammophila breviligulata | Dune grass | 30 | 0.00 | H | 0 |
| Hudsonia tomentosa | Poverty-grass | 5 | 0.00 | S | 0 |
| Poaceae | Grasses | 10 | | H | 1 |

WSI: 0.031 WFV: 0.165 BOG: 0.000 SALT: 0.000 DUNE: 0.811
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.01 BUSHY: 0.05 COMPACT: 0.13
MARSH SBCL: ROBUST: 0.00 BROADL: 0.00 NARROW: 0.75 FLOATING: 0.00
SUBTYPES:CNU
WATERSHED: Beach Dunes TYPE: Sand Dune Community

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 1-6) Hampton Beach State Park, HA
DU005 Field Date: 06/05/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Lathyrus japonicus | Beach pea | 12 | 0.00 | H | 0 |
| Ammophila breviligulata | Dune grass | 70 | 0.00 | H | 0 |
| Solidago sempervirens | Seaside goldenrod | 2 | 0.82 | H | 0 |
| Trifolium repens | White clover | 2 | 0.00 | H | 2 |

WSI: 0.019 WFV: 0.011 BOG: 0.000 SALT: 0.023 DUNE: 0.837
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.00 BUSHY: 0.00 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.00 BROADL: 0.00 NARROW: 0.81 FLOATING: 0.00
SUBTYPES:NV
WATERSHED: Beach Dunes TYPE: Sand Dune Community

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 1-6) S of HA Harbor inlet, W of Rt1A, HA SE
DU006 Field Date: 06/05/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Lathyrus japonicus | Beach pea | 10 | 0.00 | H | 0 |
| Ammophila breviligulata | Dune grass | 40 | 0.00 | H | 0 |
| Euphorbia cyparissias | Cypress spurge | 1 | 0.00 | H | 0 |
| Solidago sempervirens | Seaside goldenrod | 3 | 0.82 | H | 0 |

WSI: 0.045 WFV: 0.000 BOG: 0.000 SALT: 0.055 DUNE: 0.796
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.00 BUSHY: 0.00 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.00 BROADL: 0.01 NARROW: 0.74 FLOATING: 0.00
SUBTYPES:NV
WATERSHED: Beach Dunes TYPE: Sand Dune Community

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 1-6) Beckmans Point, E of Rt1A, SE
DU007 Field Date: 06/05/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Lathyrus japonicus | Beach pea | 5 | 0.00 | H | 0 |
| Solidago sempervirens | Seaside goldenrod | 2 | 0.82 | H | 0 |
| Ammophila breviligulata | Dune grass | 50 | 0.00 | H | 0 |

WSI: 0.028 WFV: 0.000 BOG: 0.000 SALT: 0.035 DUNE: 0.912
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.00 BUSHY: 0.00 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.00 BROADL: 0.00 NARROW: 0.87 FLOATING: 0.00
SUBTYPES:NV
WATERSHED: Beach Dunes TYPE: Sand Dune Community

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 1-6) S of HA Harbor inlet, W of Rt1A, SE
DU008 Field Date: 06/05/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Solidago sempervirens | Seaside goldenrod | 2 | 0.82 | H | 0 |
| Ammophila breviligulata | Dune grass | 50 | 0.00 | H | 0 |

WSI: 0.031 WFV: 0.000 BOG: 0.000 SALT: 0.038 DUNE: 1.000
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.00 BUSHY: 0.00 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.00 BROADL: 0.00 NARROW: 0.96 FLOATING: 0.00
SUBTYPES:N
WATERSHED: Beach Dunes TYPE: Sand Dune Community

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 1-4) The Sands, W of Rt1A, SE
DU009 Field Date: 06/05/86 Report Date: 06/30/86

| Scientific name | Common name | Abundance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Amelanchier canadensis | Canada serviceberry | 10 | 0.50 | T | 1 |
| Prunus maritima | Beach plum | 10 | 0.00 | S | 3 |
| Pinus rigida | Pitch pine | 10 | 0.18 | T | 3 |
| Crataegus sp. | Hawthorn | 2 | 0.00 | T | 1 |
| Myrica pensylvanica | Bayberry | 15 | 0.50 | S | 2 |
| Rhus radicans | Poison ivy | 8 | 0.82 | S | 2 |
| Rosa virginiana | Virginia rose | 9 | 0.50 | S | 1 |
| Rhus typhina | Staghorn sumac | 6 | 0.00 | T | 2 |
| Prunus serotina | Black cherry | 5 | 0.18 | T | 3 |
| Populus tremuloides | Quaking aspen | 2 | 0.00 | T | 2 |
| Lonicera morrowi | Morrow's honeysuckle | 12 | 0.00 | S | 1 |
| Ammophila breviligulata | Dune grass | 60 | 0.00 | H | 0 |
| Hudsonia tomentosa | Poverty-grass | 4 | 0.00 | S | 0 |
| Oenothera parviflora | Evening primrose | 3 | | H | 0 |
| Solidago sempervirens | Seaside goldenrod | 3 | 0.82 | H | 0 |
| Danthonia spicata | Poverty grass | 12 | 0.00 | H | 0 |
| Lathyrus japonicus | Beach pea | 3 | 0.00 | H | 0 |
| Artemisia caudata | Wormwood | 1 | 0.00 | H | 0 |
| Puccinellia maritima | Alkali grass | 1 | 1.00 | H | 0 |
| Puccinellia paupercula | Alkali grass | 1 | 0.82 | H | 0 |
| Lechea maritima | Pinweed | 1 | 0.00 | H | 0 |
| Limonium carolinianum | Sea lavender | 1 | 1.00 | H | 0 |
| Parthenocissus quinquefolia | Virginia creeper | 2 | 0.00 | S | 1 |
| Andropogon scoparius | Broom beardgrass | 15 | 0.00 | H | 0 |
| Aristida tuberculosa | Seabeach needle grass | 1 | | H | 0 |
| Cakile edentula | Searocket | 1 | 0.18 | H | 0 |
| Cyperus grayii | Gray's sedge | 1 | | H | 0 |
| Euphorbia polygonifolia | Seaside spurge | 1 | 0.00 | H | 0 |
| Solidago rugosa | Rough-leaved goldenrod | 1 | 0.50 | H | 0 |

WSI: 0.164 WFV: 0.213 BOG: 0.000 SALT: 0.034 DUNE: 0.527
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.04 BUSHY: 0.05 COMPACT: 0.13
MARSH SBCL: ROBUST: 0.00 BROADL: 0.00 NARROW: 0.45 FLOATING: 0.00
SUBTYPES: CNPUV
WATERSHED: Beach Dunes TYPE: Sand Dune Community

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 1-4) Seabrook beach, E of Rt1A, SE
DU010 Field Date: 06/05/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Rosa rugosa | Salt-spray rose | 8 | 0.00 | S | 1 |
| Myrica pensylvanica | Bayberry | 2 | 0.50 | S | 2 |
| Prunus maritima | Beach plum | 1 | 0.00 | S | 3 |
| Cakile edentula | Searocket | 1 | 0.18 | H | 0 |
| Artemisia stelleriana | Dusty miller | 1 | 0.18 | H | 0 |
| Solanum dulcamara | Bittersweet | 2 | 0.50 | H | 0 |
| Euphorbia cyparissias | Cypress spurge | 2 | 0.00 | H | 0 |
| Lathyrus japonicus | Beach pea | 5 | 0.00 | H | 0 |
| Ammophila breviligulata | Dune grass | 50 | 0.00 | H | 0 |
| Solidago sempervirens | Seaside goldenrod | 2 | 0.82 | H | 0 |
| Solidago sempervirens | Seaside goldenrod | 2 | 0.82 | H | 0 |

WSI: 0.074 WFV: 0.049 BOG: 0.000 SALT: 0.065 DUNE: 0.776
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.01 BUSHY: 0.10 COMPACT: 0.02
MARSH SBCL: ROBUST: 0.00 BROADL: 0.02 NARROW: 0.65 FLOATING: 0.00
SUBTYPES:CNUVW
WATERSHED: Beach Dunes TYPE: Sand Dune Community

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 1-26) New Castle Beach, NC
DU012 Field Date: 06/17/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Pinus rigida | Pitch pine | 2 | 0.18 | T | 3 |
| Pinus rigida | Pitch pine | 1 | 0.18 | S | 3 |
| Rosa rugosa | Salt-spray rose | 8 | 0.00 | S | 1 |
| Rhus radicans | Poison ivy | 2 | 0.82 | S | 2 |
| Spiraea latifolia | Meadowsweet | 4 | 0.50 | S | 0 |
| Juniperus communis | Juniper | 1 | 0.00 | S | 1 |
| Rumex crispus | Curled dock | 1 | 0.82 | H | 0 |
| Ambrosia artemesiifolia | Common ragweed | 1 | 0.00 | H | 4 |
| Oenothera biennis | Evening primrose | 1 | 0.18 | H | 0 |
| Artemisia stelleriana | Dusty miller | 3 | 0.18 | H | 0 |
| Artemisea vulgaris | Common mugwort | 2 | 0.00 | H | 0 |
| Polygonum cuspidatum | Japanese knotweed | 1 | 0.00 | H | 3 |
| Taraxacum officinale | Dandelion | 1 | 0.50 | H | 1 |
| Lathyrus japonicus | Beach pea | 2 | 0.00 | H | 0 |
| Daucus carota | Queen anne's lace | 2 | 0.00 | H | 0 |
| Ammophila breviligulata | Dune grass | 90 | 0.00 | H | 0 |
| Tanacetum vulgare | Common tansy | 2 | 0.00 | H | 0 |
| Agropyron repens | Quack grass | 5 | 0.00 | H | 1 |
| Brassica sp. | Mustard | 1 | 0.00 | H | 0 |
| Lepidium campestre | Cow-cress | 3 | 0.00 | H | 1 |
| Solidago sempervirens | Seaside goldenrod | 1 | 0.82 | H | 0 |

WSI: 0.052 WFV: 0.070 BOG: 0.000 SALT: 0.007 DUNE: 0.723
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.00 BUSHY: 0.05 COMPACT: 0.03
MARSH SBCL: ROBUST: 0.00 BROADL: 0.00 NARROW: 0.73 FLOATING: 0.00
SUBTYPES:CNUV
WATERSHED: Beach Dunes TYPE: Sand Dune Community

Normandeau Assoc. Inc: E C O L O G I C A L  S U M M A R Y

Location: (Photo 1-12) Plaice Cove, HA NH
DU013 Field Date: 06/30/86 Report Date: 06/30/86

| Scientific name | Common name | Abun-dance | Wetl Freq | Type | Food Value |
|---|---|---|---|---|---|
| Rosa rugosa | Salt-spray rose | 4 | 0.00 | S | 1 |
| Rhus radicans | Poison ivy | 2 | 0.82 | S | 2 |
| Ammophila breviligulata | Dune grass | 60 | 0.00 | H | 0 |
| Lathyrus japonicus | Beach pea | 10 | 0.00 | H | 0 |
| Artemisia stelleriana | Dusty miller | 2 | 0.18 | H | 0 |
| Solidago sempervirens | Seaside goldenrod | 3 | 0.82 | H | 0 |
| Oenothera biennis | Evening primrose | 3 | 0.18 | H | 0 |
| Phragmites communis | Reed | 3 | 0.82 | H | 0 |

WSI: 0.085 WFV: 0.022 BOG: 0.000 SALT: 0.034 DUNE: 0.747
SHRUB SBCL: AQUATIC: 0.00 SAPLINGS: 0.00 BUSHY: 0.04 COMPACT: 0.00
MARSH SBCL: ROBUST: 0.03 BROADL: 0.00 NARROW: 0.68 FLOATING: 0.00
SUBTYPES: NRUV
WATERSHED: Beach Dunes TYPE: Sand Dune Community