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## VI. ANALYSIS AND ALTERNATIVES

Planning for the development of Point Au Roche has been on an intermittent basis since the park's acquisition in 1974. The planning process has consisted of three overlapping elements - namely, (1) inventory, (2) analysis of resources and uses and (3) development of alternatives. Alternatives were developed by blending or synthesizing the analysis of resources (character and capacity) with functional relationships of identified uses. The process is reiterative. For instance, updating of the resource inventory is conducted on a continuing basis. New and more detailed inventory information may affect analysis findings and may ultimately lead to a fine tuning of development proposals.

This section will address the analysis of inventory information (presented in the previous section) and synthesis aspects of the planning for Point Au Roche State Park. Alternatives are evaluated in terms of the park land classification, functional relationships, as well as intensity and location of uses. The end product of this process is the identification of a preferred plan (i.e. Master Plan) which is described in detail in the next section.

### A. GENERAL GUIDELINES FOR THE PLANNING OF POINT AU ROCHE

The planning for Point Au Roche State Park has proceeded under the following policy guidelines:

#### 1. PARK LAND CLASSIFICATION

As previously mentioned, Point Au Roche has been classified as a Scenic Park (OPR, 1980). While this classification does allow for a variety of recreation uses, the design of facilities supporting such uses must be consistent with the natural, scenic setting of the park. Thus, at Point Au Roche a primary consideration has been the protection of the natural setting of the park.

#### 2. EXTENT OF AREAS TO BE DEVELOPED

As stated within the planning policies for Point Au Roche (Section V), no more than 30% of the park will be developed for intensive recreation uses such as camping and swimming. This 30% criterion was derived in part from the park's classification as scenic. In the array of parkland classes from those with the greatest use restrictions to the most intensively used, scenic parks are "next to" or a step above (in terms of intensity) the park preserve category. Under Parks and Recreation Law, no more than 15% of the land designated as a park preserve can be developed. Since Point Au Roche is a scenic park and not a preserve, an increase in the maximum allowable percentage of parkland to be developed was determined by OPRHP to be appropriate

providing that such development was consistent with the natural and scenic character of the parkland.

The 30% development criterion was derived through OPRHP staff discussions concerning another Scenic Park - Wellesley Island State Park which is situated on the St. Lawrence River. Unlike Point Au Roche State Park, however, Wellesley Island is developed and analyses have shown that its natural and scenic qualities have been adequately preserved; the total area intensively used at Wellesley Island is within 20%-30% of the total park. Using Wellesley Island as a model, a 30% maximum for development for Point Au Roche seemed to be a reasonable criterion and was incorporated within the park policy statements.

## B. RESOURCE ANALYSIS

As described above, the first step in developing a plan for Point Au Roche State Park was an inventory of existing characteristics. The following is a summary description of the findings from analysis of the inventory information contained in Section IV - The Environmental Setting.

### 1. CULTURAL RESOURCES

Because of its location, the Point Au Roche State Park area may contain important historic and/or archeological resources, including those on land and on the bottom of Lake Champlain. While much of the proposed development will be situated on previously disturbed areas, a more detailed survey of the park's potential for historic/archeological resources will be conducted. Findings from the study will be considered in the final design of each phase of plan development.

### 2. PHYSICAL RESOURCES

#### a. Bedrock

As illustrated in Figure 6, (p. 26) a substantial amount of bedrock is either at or very near the surface. This can present some constraints to development. For example, construction of roads or building foundations may require some blasting, which in time may contribute to increased cost for development.

Another potential concern (Lapping, et.al. 1974) relates to the presence of argillite. This bedrock closely resembles limestone and dolostone, two of the most common types of carbonate rocks. While limestone units are generally suitable for foundations, improper backfilling and compaction could lead to settling problems. Careful supervision during construction and proper controls for stormwater runoff are important preventative measures when working in this bedrock type.

A normal fault line in the bedrock of Point Au Roche is situated in the western-most portion of the park. Since this area of the park is designated for dune restoration (natural) and preservation, the fault line is not an important consideration in the design of a Master Plan.

b. Topography

The relief or slope of the land in the park ranges from minimal to very steep (along cliff faces) (Figure 8, p. 28). From a development perspective, slopes at either of the extremes of this range can present significant constraints. Areas with little slope may exhibit problems associated with poor drainage, while design of facilities on steeper slopes must take into account increased erosion and/or slippage potential.

Areas of little or no slope which may require special consideration during design are situated (1) south of Point Au Roche Road (western portion of central area of park), (2) along the primary stream/wetland complex which enters Middle Bay, and (3) beach areas. Additional studies will be conducted on the slope/soil characteristics of these areas prior to final design.

Steep slope areas occupy less than 15 percent of the park and are situated primarily on Short, Middle and Long Points. Since these steep slope areas have considerable scenic quality and contribute substantially to the park's natural diversity, they will be protected from the effects of development. The cliff areas may also require management steps to assure public safety.

c. Soils

The Soil Conservation Service of the United States Department of Agriculture has developed a system for rating soils for engineering uses. Soils are rated according to their limitations for certain types of use. Definitions of the rating classes which are contained in Part 603.03(a) "Application of Soils Information" of the National Soils Handbook (1983), are as follows:

"603.03 Rating Soils for Engineering Uses

- (a) Definitions. Soils are placed in three or more classes according to their limitations or suitabilities for certain engineering uses. Soils are rated for the uses expected to be important or potentially important to users of soil survey information.
- (b) Purpose. The purpose of the ratings is to help engineers, planners, and others understand how soil properties influence behavior when used for engineering purposes. Ratings are confirmed by those familiar with that soil and by the experience of users. If the performance of the soil is not consistent with the estimates, then the ratings need

are enlisted to obtain such supporting data. Ratings that deviate from the guide are acceptable if (1) the actual performance is documented to be different from the rating derived from the guide, (2) all states that use the series agree to the rating, and (3) a formal request is approved by the head of the NTC soils staff. The Director of Soils, in the national headquarters is responsible for the preparation and maintenance of guides for rating soils.

- (c) Rating Terms. Ratings for proposed uses are given in terms of limitations and restrictive features, suitability and restrictive features, or only restrictive features. Only the most restrictive features are listed. Other features may need to be treated to overcome soil limitations for a specific purpose.

(1) Limitation Ratings. Soils are rated in their "natural" state, that is, no unusual modification of the soil site or material is made other than that which is considered normal practice for the rated use. Only the most restrictive features are listed. In rating soils for engineering uses, it is important to remember that engineers and others can modify soil features or can design or adjust the plans for a structure to compensate for most degrees of limitations. Most of these practices, however, are costly. The owner may be willing to live with a few limitations, provided the use does not violate community codes or regulations. The final decision in selecting a site for a particular use is a personal one and generally involves weighing the costs for site preparation and maintenance.

(i) Slight is the rating given soils that have properties favorable for the use. The degree of limitation is minor and can be overcome easily. Good performance and low maintenance can be expected.

(ii) Moderate is the rating given soils that have properties moderately favorable for the use. This degree of limitation can be overcome or modified by special planning, design, or maintenance. During some part of the year, the expected performance of the structure or other planned use is somewhat less desirable than for soils rated slight. Some soils rated moderate require treatment such as artificial drainage, control of runoff to reduce erosion, extended septic tank absorption fields, extra excavation, or some modification is needed for those construction plans generally used for soils of slight limitation. Modification may include specially designed foundations, extra reinforcement of structures, sump pumps and the like.

(iii) Severe is the rating given soils that have one or more properties unfavorable for the rated use, such as steep slopes, bedrock near the surface, flooding, high shrink-swell potential, a seasonal high water table, or low strength. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance. Some of these soils, however, can be improved by reducing or removing the soil feature that limits use, but in most situations, it is difficult to alter the soil or to design a structure so as to compensate for a severe degree of limitation."

Data on soil limitations is one of several parameters to be considered in the design and location of recreation facilities. Whenever possible, facilities should be situated in areas with lower limitations to development. It is more reasonable from an economic (and also oftentimes an environmental) perspective to locate facilities on soils with slight limitations (e.g. well drained, slight slope) than in areas with soils possessing severe limitations (e.g. poorly drained, ponding). With soils possessing slight limitations, construction costs are primarily those required for facility construction. There is minimal need for modification of the soil in order to eliminate or manage limitation problems. On the other hand, while a limitation rating of "severe" does not preclude development, it does indicate the probable need for special design and engineering steps to eliminate or reduce the limitation.

The kinds of engineering steps taken to deal with a certain limitation will vary according to sites. The steps, however, needed to deal with limitations will usually result in higher construction costs. Examples of the kinds of steps that can be taken to deal with soil limitations are construction of raised leaching beds for the discharge of wastewater effluent from septic systems, and/or the placement of tile drainage systems to eliminate the limitations that might be caused by wetness.

Thus, in situations where limitations of soils vary considerably, that is, where there are soils with slight limitations and others with severe limitations, the planner or developer has a certain amount of flexibility in determining locations of facilities. The facilities can be directed away from areas with severe limitations and toward areas which are more capable of accepting development.

The situation at Point Au Roche State Park is quite different. With the exception of a few soil types relating to one or two recreation uses, all of the soils in the park possess severe limitations for development (Table 6a).

TABLE 6a APPROXIMATE PERCENTAGE OF POINT AU ROCHE  
STATE PARK SOILS CLASSIFIED AS POSSESSING  
SEVERE LIMITATIONS FOR RECREATIONAL USES

<u>Recreation Use</u>	<u>% Severe Limitations</u>
Roads and Parking Lots	100
Low Buildings	100
Absorption Fields	100
Camp Areas	97
Picnic Areas	97
Playgrounds	96
Paths and Trails	53

As stated previously, the severe limitation rating for the soils in Point Au Roche State Park does not preclude development. The severe limitation rating for essentially all the soils in the park means that there is less flexibility in locating facilities and structures according to their limitations. For example, the only soils in the park which have less than severe limitations for camping are situated in the upland eastern portion of the park. While it would be preferable to place camping on these soils, they are situated in an area which is not functionally related to the other elements of the Master Plan, specifically the day use facilities. In other words, campers would be located quite a distance away from the day use area.

The approach taken by OPRHP staff was to evaluate and select areas where the soil was most conducive to construction and least costly in terms of management of limitations. Overlays of the soils characteristics were made and areas were identified according to the degree to which economic construction was most feasible. The most critical soils in terms of limitations were eliminated as locations for facilities. For example, those areas where soil was close to rock or where slopes were so severe that erosion could be a problem were eliminated as possible sites for facility construction.

Analysis of soils information for use in the design and location of wastewater treatment facilities resulted in three groups of soils. The first group consisted of soils with a percolation rate of less than 1" per hour (DEC, 1980). Soils series within this group were Massena, Livingston, Panton, Covington, and Sun. Based on the soil characteristics provided by the SCS and on the percolation rates, this group of soils was judged as not suitable for use as absorption fields.

Sub-surface discharge of wastewater may be feasible in certain soils through construction of raised leaching beds. In soils where the groundwater table or impervious soil layers such as clay are encountered at a depth less than the standards recognized by the New York State Department of Environmental Conservation, fill can be used to raise the finished grade to an acceptable level, i.e. two feet above groundwater and/or four feet above the impervious

layer. These two criteria were taken from the "Standards for Waste Treatment Works for Institutional and Commercial Sewerage Facilities" (DEC 1980). Soil series within this group were identified as Au Gres, Swanton, Whately, and Monson.

The third group of soils included those which may have a higher potential for accepting standard sub-surface wastewater disposal systems. The soils series in this group were Granby, Amenia, Fahey, Coveytown, and Galway.

In addition to this preliminary grouping of soils according to their potential suitability for use as absorption fields, additional detailed studies must be conducted to confirm or fine tune the location or placement of absorption fields. Such a study has been recently completed for the first phase of the day use portion of the plan (Atlantic Testing Laboratories Ltd., 1984a). This study includes analysis of soils where the roads and parking lot as well as the bathhouse and bathing areas will be located.

With regard to wastewater treatment facilities, the report contains a recommendation that any absorption fields in the vicinity of the proposed contact station be raised bed or mound types due to high water table. In the general area of the proposed bathhouse the sub-surface conditions appear to be suitable for construction and operation of a standard type of leaching fields. Finally, in the area of the proposed pumping station for deep draft vessels, it also appears that a raised bed or mound type of absorption field would be preferable.

In summary then, essentially all of the soils within Point Au Roche State Park possess severe limitations for all recreational uses. This classification does not mean that development should not occur. Rather, it indicates that more detailed analysis should be conducted to determine the feasibility and the appropriateness of certain engineering actions which can be taken to reduce the limitations to an acceptable level. The OPRHP recognizes that in certain instances these special steps may require additional costs. Results from detailed soil analyses pertaining to early portions of development indicate that the severe limitations present in the park are not insurmountable and indeed that conditions may not be as adverse as initially thought. For example, it appears that it will not be necessary to discharge treated wastewater into the lake proper but rather steps can be taken to dispose of the treated wastewater in upland absorption fields. The OPRHP will continue to have detailed soil investigations conducted prior to final design of any phase of the Master Plan implementation.

#### d. Water Resources

For the purposes of this analysis the water resources of the Park are classified as ground water, park surface water and Lake Champlain.



i. Groundwater.

While the groundwater may contain elevated levels of hardness, there are strong indications that it will be adequate, in both supply and quality, for park development. A well at the Headland Building has had a history of substantial flow (similar, at times, to artesian flow) and several springs exist across the park.

ii. Surface (Park) Water Resources.

The primary water resources of the park proper are two ponds and their associated wetlands. Because of their relative scarcity, the surficial water resources contribute significantly to the park's diversity of plant and wildlife species. Development of the park will be directed away from these environmentally sensitive areas toward those areas capable of withstanding more intensive use.

iii. Lake Champlain.

Since the park has approximately six miles of shoreline, the lake resource is of primary interest. The lake serves as a swimming, boating, fishing and aesthetic resource to the park.

Detailed information on the water quality of the bay areas is lacking and surveys will be conducted to obtain better baseline data. Baseline data is important in monitoring possible shifts in water quality due to recreation uses. There is, however, evidence that the water quality is good in the Point Au Roche area and as such highly suitable for both contact recreation and fishing.

Monitoring programs will focus on the three areas with the most potential for impact - the beach, Middle and Deep Bays. Beach water quality will be monitored through sampling and analysis for coliform and other related parameters. Likewise, the effects of any boat launch which may be constructed in Middle Bay and/or mooring in Deep Bay will also be monitored. OPRHP plans to develop and conduct such monitoring programs with the assistance of DEC, SUNY Plattsburgh and Clinton County.

While Deep Bay had more than adequate dissolved oxygen levels in samples taken in 1977, it may be susceptible to the potential effects of recreation use. The Bay's length and narrowness render it particularly vulnerable to the effects of pollutants.

Deep Bay is a popular mooring area for deeper draft vessels. During 1983 an average of 90 vessels used Deep Bay each week. Use of the bay has doubled from 1246 to 2506 boats per season from 1980 to 1983. The wastewater pumpout station being considered for Deep Bay will minimize the tendency for illegal discharge of wastewater from vessels.

Lake Champlain water levels vary as much as several feet (approximately 5 feet) and are usually highest during the spring. The areas of shoreline from Deep Bay to Mooney Bay have been classified as flood prone by the US Department of Housing and Urban Development (HUD). High water levels coupled with strong winds can

lead to significant shoreline erosion. According to the NERBC Study of Lake Champlain (1978), the Point Au Roche shoreline has only slight erosion potential. The exceptions are the two wetland areas (moderate erosion potential) and a portion of Short Point (severe erosion potential). Also, staff of the Thousand Islands Park Region have noted significant erosion potential at the ends of Short, Middle and Long Points. Erosion potential information was considered in the location of day use facilities and will be considered in the final design of such facilities.

#### iv. Climate

Based on the information as presented in Section IV, the climate of the Point Au Roche area is consistent with the four-season recreational concept being proposed for the park.

#### v. Biological Resources.

The predominant vegetative system is brushland (i.e. former farmland reverting to forest). There are, however, a few areas of mature forest which are associated primarily with areas of greatest relief or slope. The few ponds and wetland areas add to the variety of habitat in the park. Because of their contribution to diversity (and in turn to nature interpretative opportunities), special consideration will also be given to the protection of forest and wetland areas.

### C. USE ANALYSIS

Selection or identification of the most appropriate recreational uses of the park was accomplished through evaluation of resource character, recreation demand, and special management needs.

#### 1. RESOURCE CHARACTER

Appropriate uses for Point Au Roche were first identified through an analysis of resource character and capacity. Stated in different terms - What uses are most consistent with the character of existing resources? Table 7 contains a listing of the identified uses and major park land resources. While much of this information is self-evident, it is interesting to note that environmental education and camping are the only uses which draw upon all the park land resources at or associated with Point Au Roche. Similarly only one resource, scenic character, is associated with all of the identified uses. Both of these findings are quite consistent with the park's Scenic Classification.

In addition to identification of potential uses, the resource capacity for use is also an important consideration. Capacity analysis addresses the "how much" question in park design. Findings from capacity analysis may indicate, for example, that use restrictions are required to protect the special features of important environmental areas.

Table 7

Matrix of Potential Park Uses and Existing Resources of the Park

Activity	RESOURCE							
	<u>High Quality Beaches</u>	<u>Scenic Character</u>	<u>Lake Champlain</u>	<u>Salmonid Fishery</u>	<u>Nature Interpretation Resources</u>	<u>Deep Sheltered Bay Areas</u>	<u>Varied Topography</u>	<u>Cultural</u>
Swimming	●	●	●					
Picnicking	●	●						
Camping	●	●	●	●	●	●	●	●
Boating		●	●	●		●		
Fishing		●	●	●		●		
Mooring for Deep Draft Vessels		●	●			●		
Hiking Bicycling		●			●		●	
Winter Recreation		●			●		●	
Environmental Education	●	●	●	●	●	●	●	●

The intensity of various uses proposed for Point Au Roche State Park has been addressed at several Ad Hoc Committee meetings and will be described later in this section. Again, the selection of a preferred intensity for proposed recreation uses at the park was based to a large extent on the application of the previously described general planning guidelines.

## 2. RECREATION DEMAND

Information on the demand for recreational uses proposed for Point Au Roche State Park is described in the introduction section of this report. The primary uses identified through analysis of demand are summarized in Table 8.

## 3. SPECIAL MANAGEMENT NEEDS

On occasion, there may be need for management of wildlife populations through programs of hunting or trapping. Such programs will be conducted with the cooperation and guidance of the Department of Environmental Conservation. They will be undertaken only when necessary to protect patrons and/or resources of the park from significant adverse effects of high levels of wildlife populations.

## D. PARKLAND USE CLASSIFICATION

### 1. PREFERRED USE CLASSIFICATION

The analysis phase of park planning leads to a matching of identified uses with resource character and capacity. Conversion of this "matching" into a park management plan can be accomplished through site-specific Park Land Use Classification: the identification of certain areas of the park for certain uses.

The preferred Park Land Use Classification for Point Au Roche consists of three areas: High, Moderate and Low Use Intensity. Intensity of use is dependent on both the type and extent of uses (Table 9). Day use and camping are considered intensive because of the extent of required access and service facilities (e.g. bathhouse, parking areas). Uses with much lower potential for significant alterations to resources are classified as moderate and low. Examples are: nature interpretation, hiking, photography, cross-country skiing, and scenic vista maintenance. The goal in management of these lower intensity types of uses is to bring people in contact with parkland resources without noticeable alteration of resource character.

Based on the analysis of the resource inventory, the park land has been classified as indicated in Figure 17. The area proposed for High Use is essentially the central upland portion of the park. This area, since it has been altered in the past and apparently does not contain any ecological resources of particular significance, has a greater suitability for the more intensive types of recreational use.

TABLE 8. SUMMARY LISTING OF DEMAND INDICATORS  
FOR POTENTIAL USES OF PT. AU ROCHE STATE PARK

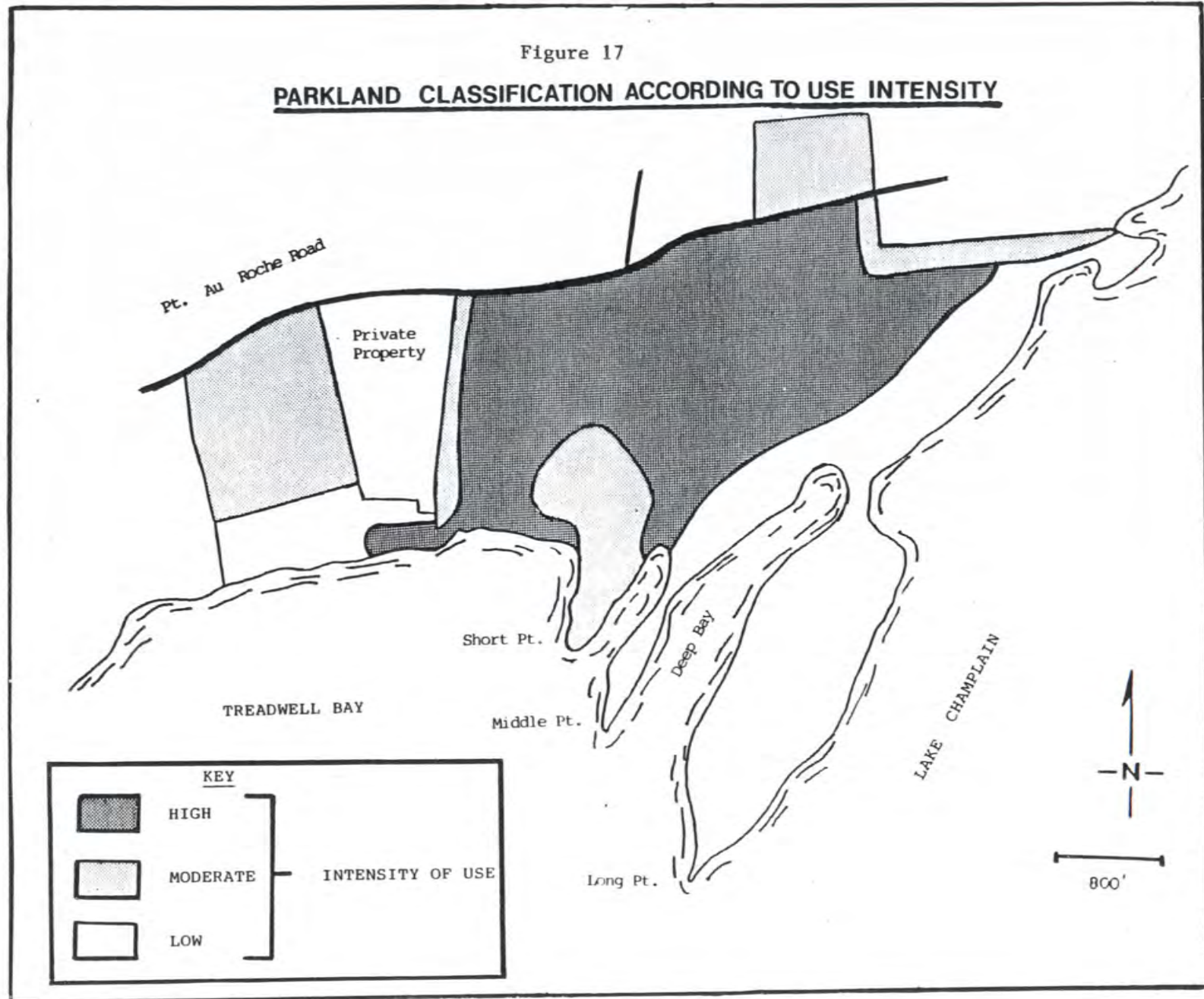
<u>ACTIVITY</u>	<u>INDICATOR</u>
Swimming	<ul style="list-style-type: none"> <li>. location and quality of beaches at Pt. Au Roche</li> <li>. history of unauthorized swimming at Pt. Au Roche</li> <li>. popularity of municipal and state beaches at Cumberland Bay</li> </ul>
Camping	<ul style="list-style-type: none"> <li>. Cumberland Bay State Park               <ul style="list-style-type: none"> <li>- crowded sites</li> <li>- attendance records</li> <li>- near shoreline of Lake Champlain</li> </ul> </li> </ul>
Fishing	<ul style="list-style-type: none"> <li>. DEC natural and artificial fishery programs</li> </ul>
Winter Recreation	<ul style="list-style-type: none"> <li>. SCRP</li> <li>. Present use of trails</li> </ul>
Environmental Interpretation	<ul style="list-style-type: none"> <li>. interest expressed by various groups</li> <li>. existing program</li> <li>. potential use by elementary and secondary schools</li> </ul>
Boating Facility	<ul style="list-style-type: none"> <li>. DEC/OPRHP program for lake access</li> <li>. popularity of Deep Bay</li> <li>. importance of boating access to day use and camping elements</li> </ul>

Table 9.  
Land Use Classification Within Pt. Au Roche State Park

<u>Activity</u>	<u>Use Classification</u>		
	<u>High</u>	<u>Moderate</u>	<u>Low</u>
Camping: tent/trailer sites	X		
walk-in sites	X		
Swimming	X		
Boating Access	X		
Fishing Access	X		
Field Games	X		
Playground	X		
Trails: Hiking	X	X	X
Bicycling	X	X	X
Interpretive	X	X	X
Snowshoeing	X	X	X
Cross-country skiing	X	X	X
Picnicking	X	X	
Relaxation	X	X	X
Nature Education			X
<hr/>			
<u>Other</u>			
Maintenance Facility	X		
Reforestation	X	X	
Nursery		X	
Vista maintenance	X	X	X
Buffer Areas (Parkland Boundaries)		X	

Figure 17

PARKLAND CLASSIFICATION ACCORDING TO USE INTENSITY



Low intensity use areas, on the other hand, do possess important scenic, historic and ecological resources which could be adversely impacted by intensive uses. Specific areas within this category include:

(1) The Southwestern park shoreline area. St. Armand's Beach is a recognized gathering place for waterfowl and is returning to a more natural dune system.

(2) Long Point/Deep Bay Area. This peninsula, which is on the eastern side of the park, and Deep Bay have a particular scenic beauty. The Long Point shoreline contains vistas to Vermont and the Adirondack Mountains. Both the scenic setting and the shelter of Deep Bay attract boaters for mooring (on an informal basis). The gravesite of Hiram Conner, an early resident of the Point Au Roche area, is also situated on Long Point.

(3) High Ridge Area. This area runs from the tip of Middle Point along the eastern park shoreline to Mooney Bay. Its rough topography precludes any extensive development. The area contains mature cedar forest and the park's highest elevations, which provide highly scenic vistas of Lake Champlain, Deep Bay and distant mountains. Foundations of some of the first structures built in the Plattsburgh area are also found here.

Moderate intensity use areas are those used as buffers along property lines, maintained for scenic vistas and the picnic/hiking areas immediately adjacent to the bathing complex.

## 2. EVALUATION OF ALTERNATE USE CLASSIFICATIONS

Since designation of certain areas of park land for certain types of uses is an action which will influence the type and extent of uses associated with park development and operation, alternatives to the above described preferred classification were evaluated. The alternatives were essentially "No Action", or a no classification approach, and designation of low or moderate use intensity areas as high intensity.

### a. No Classification

The primary purpose of developing a land use classification scheme is to provide guidance for future management and use of the park. Failure to prepare and adopt a park land classification plan for Point Au Roche would indicate an unwillingness to recognize the character and limits of park land resources with respect to recreation opportunity. Without resource identification, capacity evaluation and land classification, sensitive park land resources are more vulnerable to the adverse effects of more intensive recreation activities. For this reason, the "no classification" option was rejected.



b. Alternative Classification Strategies

The preferred land classification is based primarily on resource character and capacity. It allows development of some upland brush areas as intensive use areas and limits the kind and intensity of use that can occur in more ecologically sensitive areas, such as the eastern part of the park and the western beach/dune system. One alternative to the preferred would be to provide intensive recreation use (e.g. ballfields, camping) within the more sensitive areas which are recommended for a low intensity of use. This alternative was rejected not only because it is inconsistent with Point Au Roche's Scenic Park Classification but because it is contrary to the proper planning practices of directing development toward areas more capable of accepting such development and away from areas with high conservation capability.

Another alternative is to place the intensive uses within moderate use areas. The moderate intensity use areas are situated in three portions of the park - (1) western upland area, (2) behind eastern-most beach, and (3) northern buffer zone. Not only would placement of intensive use in these areas be inconsistent with resource character, but such development would not relate functionally to other proposed uses. For example, development of camping loops in the area north of Point Au Roche Road would obviously place campers in an area remote from other uses such as swimming.

Identification of high intensity use areas should not be interpreted as areas without limits to development. On the contrary, the high intensity use areas are likely to possess soils with limitations to the kinds and amount of development. Future investigation of soils will help determine the extent of these limits and the feasibility and desirability of engineering designs to manage limitations.

E. ALTERNATIVE PLANS

1. PRIMARY ALTERNATIVES

Conceptual alternatives were developed and evaluated by OPRHP staff in conjunction with the Ad Hoc Committee for Pt. Au Roche State Park. These alternatives, which were made available for public review and comment through the scoping process, differ in the type and intensity of proposed uses.

Comments made on the alternatives during the scoping process focused on the feasibility and number of alternatives. Some individuals felt that the two alternatives on either "end" of the range of proposed plans were not feasible and should not be considered. While both of these alternatives have drawbacks either in terms of not providing recreation commensurate with identified public needs or in terms of potential adverse effects on the environmental resources of the park, it is reasonable to include them for consideration and comparison. There are no legal requirements which preclude OPRHP from adopting any of the four identified alternates.

Consideration was also given to increasing the number of alternatives. As stated in comments (Dawson, J., 1984) submitted during the scoping meeting for the Draft Plan and DEIS, differences in perspective do exist within the Ad Hoc Committee with regard to the grouping of certain elements within the alternatives. Those elements are (1) camping and (2) cabins. Consideration was given to expanding the number of alternatives to include one which did not include cabins and provided only primitive campsites. The additional alternative is not included among the alternatives described herein because both the camping and cabin elements, if included in the final plan, will be constructed in later phases of the overall development, and also updated evaluations of need and environmental compatibility will be conducted prior to their design and implementation.

(NOTE: As a result of comments received on the DEIS and Draft Plan and of a reassessment by OPRHP, the cabin colony is no longer a component of the Master Plan.)

The alternatives described in the scoping packet have been slightly modified for this Master Plan. Analysis of alternatives can be split into two parts. First, there is the determination of whether or not to adopt a plan. The adoption of a plan (i.e. the proposed action) would provide guidelines for future park development, operation and resource management, while the "No Action" or "No Plan" option would obviously not provide such guidance. The "No Action" alternative as described within the scoping packet was actually a plan. It was assumed that by not adopting a plan, management of the park would continue as it has for the past decade. Selection, however, of the "No Action" alternative simply means there will be no plan. It does not mandate that existing uses continue. Indeed, under a no plan option, development proposals from municipalities, special interest groups, individuals or private firms would be considered by the OPRHP on a case by case basis. Adoption of a Master Plan signifies not only agency approval of the conceptual plan for development but also agency recognition of the character and limits for use of the park resources. In the absence of a plan then, park land resources are more vulnerable to inadvertent adverse effects of future development. OPRHP does not consider the "No Action" alternative a viable or feasible option since the agency would not meet its stewardship responsibilities, the spirit of which is described in Park and Recreation Law.

The four conceptual alternatives are as follows:

#### Description

Alternative 1 Uses would be essentially the same as now exist (Figure 18). These include hiking, cross-country skiing, and outdoor orientation programs by various groups. The park would also serve as a resource for natural history study and interpretation by educators, students, and the general public.

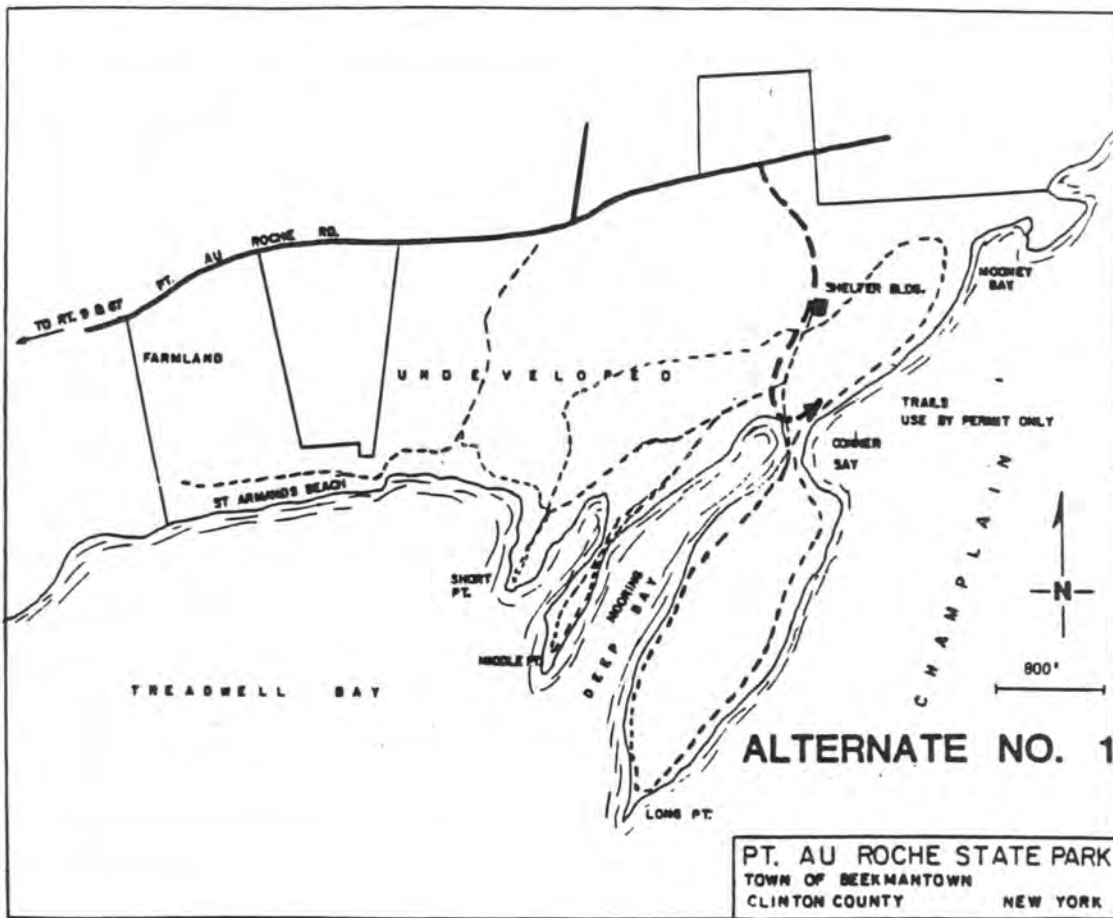


Figure 18

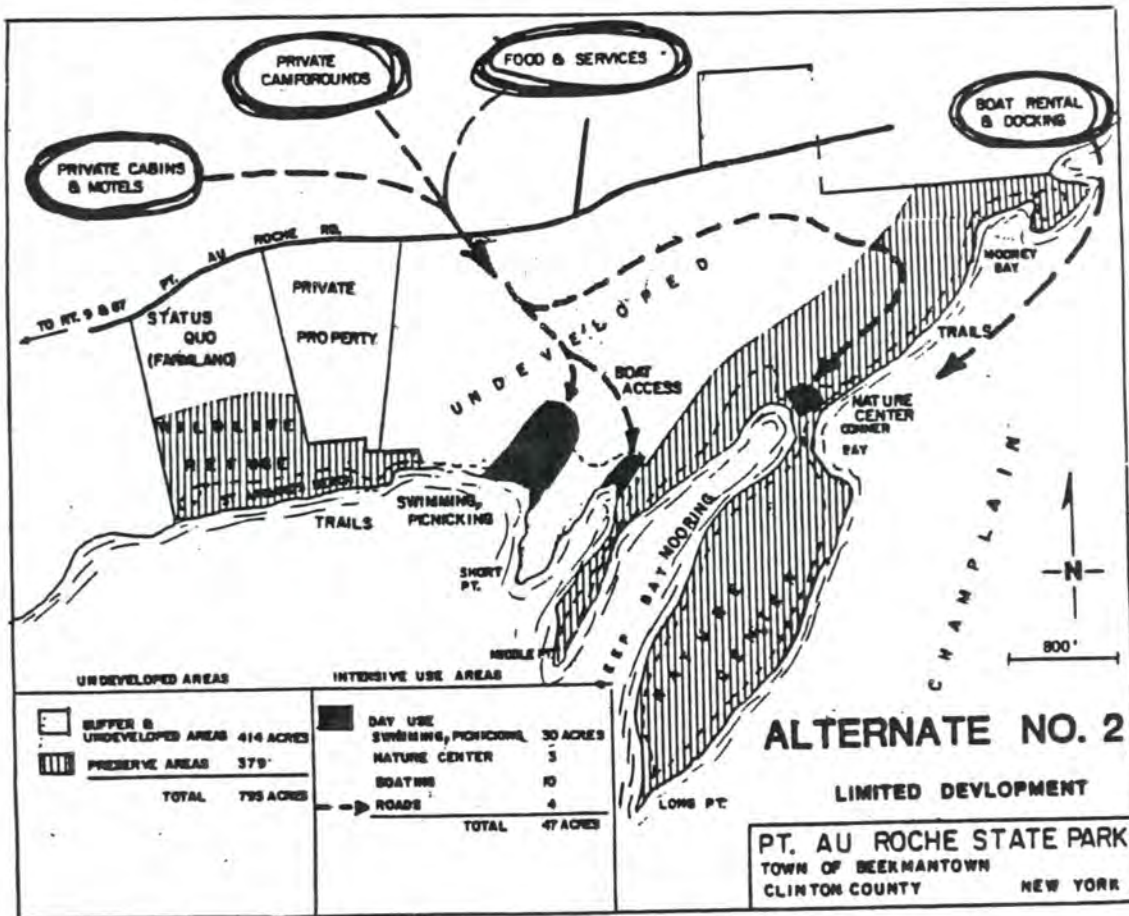


Figure 19

Leasing of portions of the park for scenic vista purposes would continue. Deep Bay would continue to be used (informally) as a mooring area for deep draft vessels. While considerable interest and demand for swimming has been demonstrated for many years, contact recreation would not be allowed at Pt. Au Roche because of health and safety concerns associated with the absence of a program and staffing.

Alternative 2 Development would be limited to those facilities necessary for access to park resources (Figure 19). While bathing facilities (for 1000 bathers), picnicking, and boater access facilities would be developed, camping, boat rental, and retail sales would be provided outside the park by the private sector. Emphasis would be on day use activities, although group camping (primitive) might be allowed under permit. Wildlife refuge and nature preserve concepts would be primary program elements.

Alternative 3 This alternative (Figure 20) is directed toward a balance of environmental and socio-economic considerations. It is an attempt to meet the recreational needs of the public while protecting to the maximum extent possible the resources of the park. Development could include up to 210 campsites, and swimming and picnicking facilities for 1000 day users. Mooring and pumpout facilities would be provided for deeper draft vessels. Also a boat launch would be provided. Another possible element in this alternative is a rental facility for boats with up to 10 hp motors.

Alternative 4 The primary criterion for design of this alternative (Figure 21) would be meeting identified demand and maximizing facility development. This alternative would include the elements of the moderate alternative but would also call for a substantially greater number of campsites (600) and bathers (2000) accommodated. Construction and operation of a large craft marina would also be a plan element.

## 2. OTHER ALTERNATIVES EVALUATED.

In addition to the alternatives described above two other alternatives were examined. Clinton County Planning Office submitted a proposed plan which would provide day use activities, nature education programs, cabins and campsites (walk-in type). A Draft Plan prepared by the TISP&RC shortly after Point Au Roche was acquired was also evaluated. This latter plan was similar to

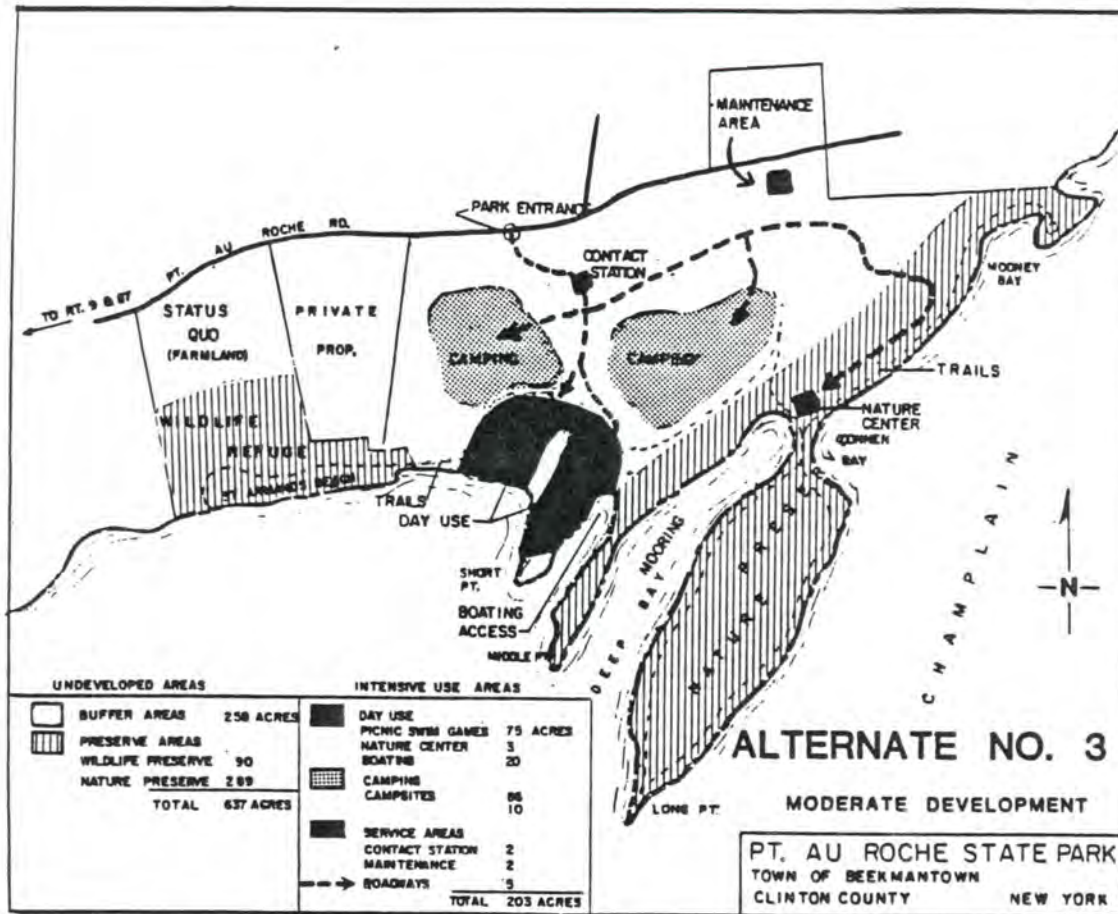


Figure 20

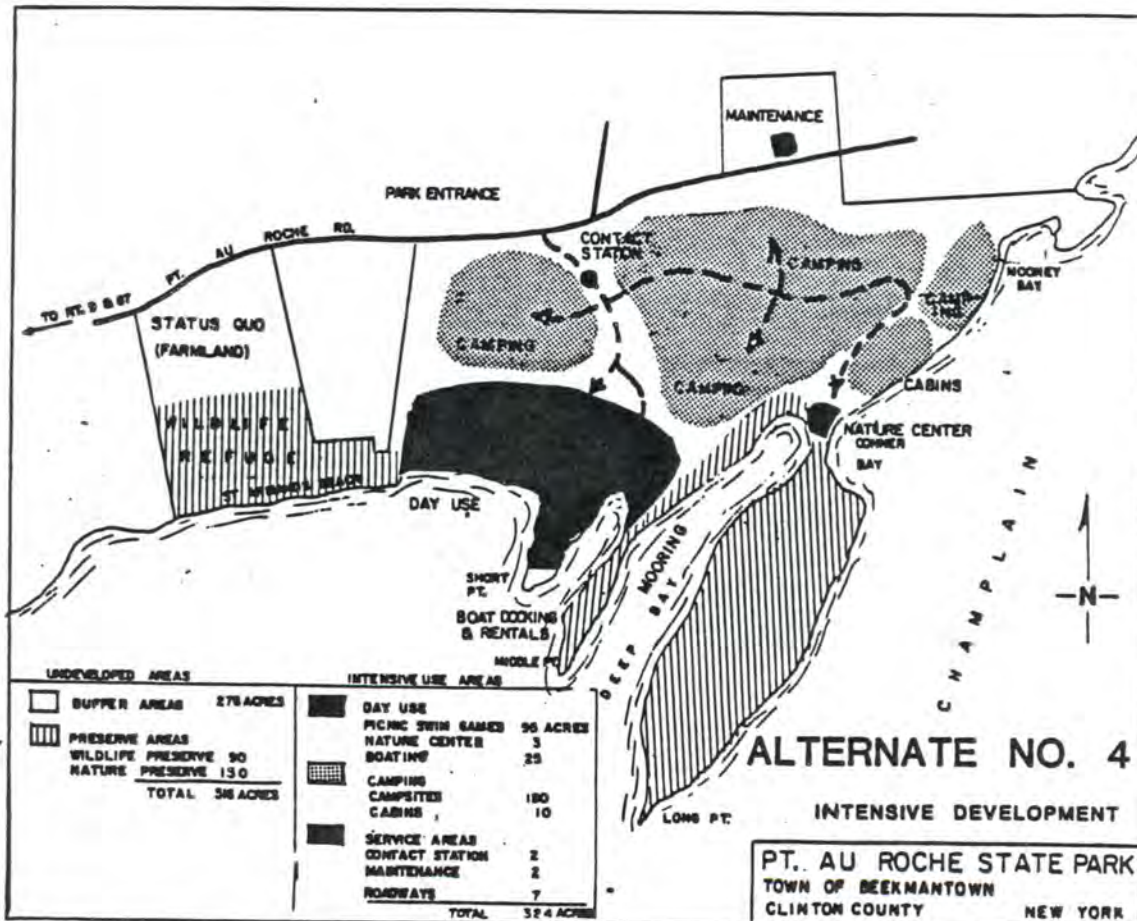


Figure 21

Alternative 3, except that it included both a boat launch and marina within Deep Bay.

### 3. SELECTION OF THE PREFERRED ALTERNATIVE.

Each of the alternatives were evaluated according to criteria developed by the TISP&RC and the Ad Hoc Committee for Point Au Roche State Park. These criteria and a summary of the analysis of the various alternatives are listed on Table 10. Alternative 3 has, with certain modifications, been selected as the Master Plan because it achieves the best balance between (1) meeting recreational needs of patrons and providing economic/employment benefits to the community, and (2) protecting the scenic and natural resources of the park and nearby waters of Lake Champlain. This Master Plan and its potential impacts are described in more detail in following sections.

### 4. LOCATION OPTIONS OF CERTAIN ELEMENTS IN THE MASTER PLAN

Within the Master Plan, various sites for the primary recreation elements were evaluated. The location alternatives for the nature center, bathing beach, camping and boat launch areas are listed in Table 11, as are the rationale for the selection of the preferred sites. With regard to the camping element, final location of loops in the designated area will be dependent on the findings from more detailed investigation of soils capabilities and limitations.

Table 10. Summary of Analysis of Master Plan Alternatives

Criteria	Meets identified recreation needs	Adequately protects environmental resources	Significant economic benefit to localities	Diversity of recreational opportunities	Meets 30% or less development criteria?	Possible effects on private enterprise?	Decrease in campsites at Cumberland Bay State Park?	Public Entrance Roads (Contact Stations)	Consistent with Parkland Classifications?
1	No	Yes	No	Low	Yes	No	No	1	Yes
2	No	Yes	Perhaps	Moderate	Yes	Yes	No	1	Yes
3	Yes	Yes	Yes	High	Yes	Yes	Yes	1	Yes
4	Yes	No	Yes	High	No	Yes	Yes	1	No
<u>Other Alternatives</u>									
County Proposal	Yes	Yes	Possible	Moderate	Yes	Yes	No	3	Yes
Early TISP&RC Plan	Yes	Yes	Yes	High	No	Yes	Yes	1	No

Table 11

Summary of Analysis of Alternative  
Locations for Proposed Uses

<u>Recreational Use</u>	<u>Alternatives</u>	<u>Preferred</u>	<u>Comments</u>
Nature Center	Headlands Office		The upland area near Connor Bay is preferred because of proximity to scenic and environmental resources. This location is easily served by existing roads and would not noticeably intrude upon natural, open character of Long Point.
	Corner Bay	X	
	Long Point		
Bathing Beach	West Treadwell Bay		East Treadwell Bay presents some limitations to beach development: small bedrock outcropping and potential for weed growth in easternmost section. Development would also substantially alter pond wetland system behind beach. The Middle Treadwell beach area has less constraints and maximizes scenic vista views. West Treadwell (former St. Armand's Beach) area is dune regeneration area. Other shoreline areas too steep or ecologically sensitive.
	Middle Treadwell Bay	X	
	East Treadwell Bay		
	Other Shoreline		
Camping	Long and Middle Points		Providing camping on Long and Middle Points would not be consistent with protection of resource character. Camping in westernmost portion of park would substantially alter scenic vista from Pt. Au Roche Road and not functionally relate to other proposed uses. Central upland area is former farmland reverting to forest and is excellent location functionally.
	Central Upland Areas	X	
	Western Portion		
Boat Launch	Treadwell Bay		Middle Bay area preferred because it would minimize potential conflicts with swimmers (Treadwell Bay) and operators of deep draft boats (Deep Bay). Moorings and boat launching facilities, together, may exceed limited capacity of Deep Bay.
	Middle Bay	X	
	Deep Bay		