

A Master Plan For Swan Island



Prepared for:
The State of Maine
Bureau of General Services
And
The Department of Inland Fisheries and Wildlife

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EXECUTIVE SUMMARY

I. INTRODUCTION

Swan Island is located at the headwaters of Merrymeeting Bay in Sagadahoc County, Maine. Legally known as Perkins Township, it is a state owned property, under the jurisdiction of the Maine Department of Inland Fisheries and Wildlife (IF&W). The Island is a wildlife sanctuary, a wildlife management area, an abandoned 19th century village listed on the National Register of Historic Places, a recreational resource, an open space preserve on the edge of a growing community, and a natural resource located in a watershed which is the largest freshwater tidal estuary on the Atlantic coast.

The island was purchased in the 1940's by the State of Maine with Federal Aid to Fish and Wildlife Restoration Funds. Over the years, IF&W has maintained Swan Island for wildlife management purposes. By Department rule, it is a wildlife sanctuary where hunting and trapping are prohibited. It is unusual within IF&W's holdings because, along with the Maine Wildlife Park, they are the only places the department manages that provide organized visitor services.

During the period of state ownership, the village of Perkins has remained relatively untouched. Some of the buildings remain, and many of the agricultural fields have been maintained for wildlife and habitat diversity. The physical changes since the 1940s have been slow and gradual with a steady deterioration of the cultural resources. IF&W has recognized that the island is a valuable cultural resource and has recently led an effort that placed the Island on the National Register of Historic Places.

IF&W is managing the island which includes maintaining the infrastructure and welcoming visitors from the public. They have been interpreting the natural resources as well as the cultural features. However, the department's staff expertise is not in the historical and cultural areas, and funds are not available to fully develop programs for the public's benefit in these areas.

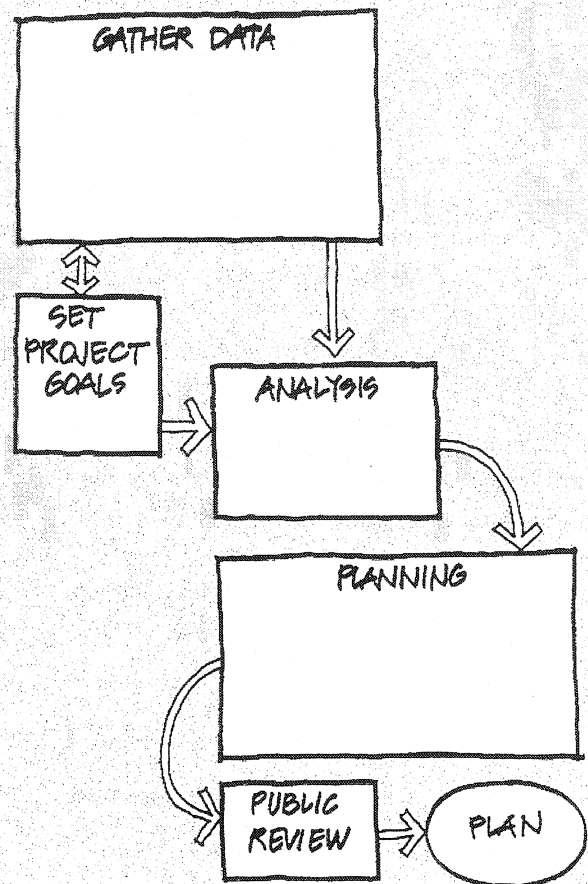
This master plan has been prepared to guide the decision making for the use and management of the Island. It will help to develop the optimal presentation for the wide variety of resources, while preserving the integrity of the natural and cultural features of the Island.

This plan reviews the existing conditions and programs on the Island to determine needs and opportunities. Recommendations are made for programming to take best advantage of the resources of the site while allowing for optimal wildlife habitat management. The recommendations contained in this report will help the Island reach its potential and make a significant and unique contribution to Maine's natural and cultural heritage.

II. THE PLANNING PROCESS

The Department of Administrative and Financial Services, through the Bureau of General Services (BGS) (the agency responsible for the implementation and overseeing of capital repairs and improvements to state-owned properties), in cooperation with IF&W, retained Mohr & Seredin, Landscape Architects, as consultants for the development of the plan. The identified task was to guide and facilitate a master planning process for Swan Island.

An inventory of existing conditions, and an examination of the current programming on the Island was the first of the process. Next, through meetings with IF&W staff, a public input meeting and interviews with key individuals, the program and goals and objectives of the Master Plan were



developed. This led to an analysis of the opportunities and constraints found on the Island, which were tested against the existing conditions and IF&W programming. Based on the analysis, the master plan makes recommendations for future programming, facility use and site improvements.

III. SUMMARY OF RECOMMENDATIONS

The recommendations for Swan Island have arisen from the planning process, and create guidelines for the improvement, management and stewardship of the island's resources. The principal objective of this process is the conservation of the Island's natural resources and the preservation of the cultural resources. All activities and changes must be evaluated in light of this objective.

Equally important is ensuring high quality services for the visitor. Providing fewer but higher quality services is more desirable and meaningful to the visitor, and ultimately better serves the Island resources and IF&W budget limitations.

Finally, all programming offered on the Island should be enriching or educational. It should reinforce IF&W policies and / or teach the public about the island's natural and cultural assets.

The following is a summary of the plan recommendations:

A. DEVELOP AND ENCOURAGE PUBLIC USE OF SWAN ISLAND AS AN EDUCATION CENTER.

Swan Island is a publicly owned property rich with natural and cultural resources that are both typical of the state, and unique due to the island's location. There are extensive opportunities for education about Maine's natural heritage, the area's history, and for demonstrating the interrelationship of nature and human development. Specific programming for the following is proposed:

1. Wildlife and Conservation Education
2. Historical and Cultural Education

B. PHYSICAL IMPROVEMENTS TO SWAN ISLAND

Physical improvements to the island and its infrastructure will be required to meet IF&W's maintenance and management needs, maintain the historic agricultural village, and fulfill and enhance the island's educational mission.

1. Recommendations to protect and stabilize the sensitive, rare, and endangered resources
2. Recommendations for the construction of physical improvements to the island and its infrastructure.
3. Recommendations for land use patterns to promote more efficient management of the Island.

C. MANAGEMENT OF SWAN ISLAND

IF&W needs to approach the management of the island in a manner which recognizes the budget and staff constraints while best accomplishing the mission set forth for the Island in this report and other reports (such as the in-house Swan Island Management Plan). This will maximize the value of the Island to the citizens of Maine, while allowing IF&W to accomplish the required upkeep maintenance and management that the Island requires to keep its resources healthy. The following are this report's management recommendations:

1. Establish criteria to better utilize staff expertise.
2. Develop guidelines for volunteer management.
3. Develop programs that promote the educational and informational focus of Swan Island.
4. Establish a framework that encourages partnerships with similar or complementary organizations.

I. INTRODUCTION

The impetus for developing a master plan for Swan Island was based on a number of needs identified by the Bureau of General Services and the Department of Inland Fisheries & Wildlife. Interest and use of the Island have been steadily growing and decisions about management were being made incrementally without long-term goals. IF&W has a Strategic Plan that sets forth departmental policies for management of the agency's resources, but the specific use and protection of the Island's natural resources were not included. The entire island was listed as a Historic District in 1995 in the National Register of Historic Places by the U.S. Department of the Interior, but plans for preserving or interpreting the historic aspects resource have yet been developed.

not developed

A vision for the future development of the Island was determined to be necessary to address staff concerns, and to ensure the Island continues to meet the mandates of the Department of Inland Fisheries and Wildlife, and to ensure proper management of the cultural resources. This Master Plan provides a framework and a context for the decision makers to proceed with the long-range planning for the island.

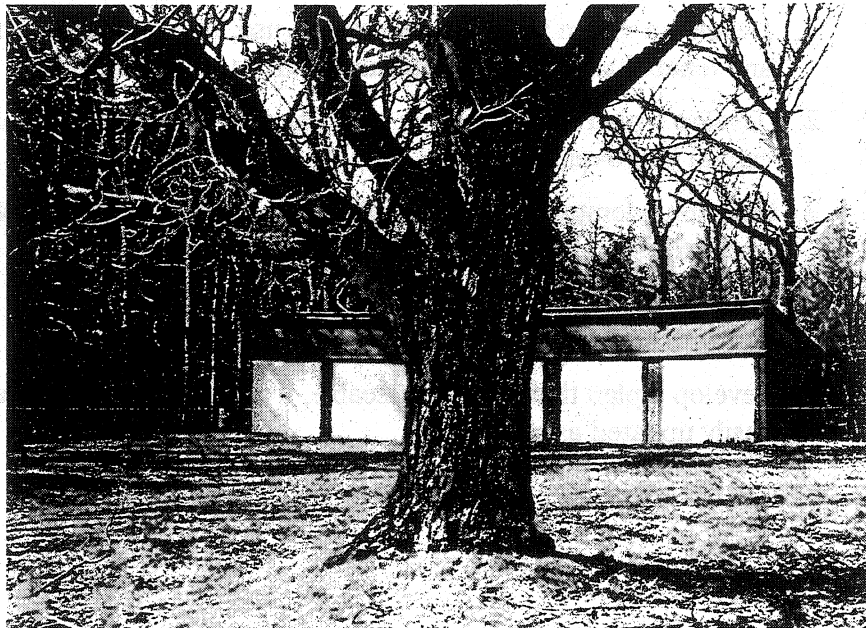
A. GOALS AND OBJECTIVES

At the outset of the project, IF&W staff and the planning committee established five key goals for the Master Plan based on the larger goals of the IF&W, but keyed specifically to Swan Island. These are:

1. Develop a vision for the preservation, use, resource management and rehabilitation of the cultural resources of Swan Island.
2. Develop a plan that will serve as a planning and financial tool for capital improvements.
3. Gain an understanding of the public's needs and wants for the island through the master planning process.
4. Develop a plan that will serve to inform the public about the State's stewardship of the island and its resources.
5. Develop a plan that will be a useable, living document that can be easily updated as needed.

The committee also set forth specific objectives for the plan. They are:

1. Develop a plan for optimal use of the island, while preserving and protecting the character and resources of Swan Island by:
 - ✓ • Protecting sensitive areas (wildlife, historic, scenic, and other natural resources)
 - ✓ • Encouraging use of the island for educational purposes (environmental and cultural)
 - Allowing continued limited recreational uses (camping, hiking, and picnicking)
2. Provide guidelines for partnerships with appropriate organizations by setting a framework for uses, volunteers and donations.
3. Determine appropriate uses for different areas of the Island.
4. Determine the carrying capacity for human use of the Island.
5. Review IF&W role as owners, managers, and staff.
6. Make recommendations for improvements, rehabilitation, maintenance of:
 - Structures
 - Utilities
 - Roads and trails
 - Fields
 - Unique natural areas.



IF&W Maintenance Workshop

B. DEPARTMENT OF INLAND FISHERIES AND WILDLIFE: STRATEGIC PLAN

IF&W has developed a *Strategic Plan* which was revised in December 1998. The plan identifies the principal functions of the Department and sets guidelines to develop and implement programs to address the needs of fish and wildlife resources. It also sets out priorities for performance-based budgeting. This master plan responds to several references of the Strategic Plan, ensuring that Swan Island is developed according to the Department's objectives as well as the greater vision of IF&W. The following briefly describes parts of the Strategic Plan that are directly relevant to Swan Island.

The Mission for the Department is founded by the enabling legislation, Title 12 MRSA section 701. This established the Department to preserve, protect and enhance the inland fisheries and wildlife resources of the State; to encourage the wise use of these resources and to ensure coordinated planning for the future use and preservation of these resources. The following directives of the Mission are especially relevant to Swan Island:

- "Maintain and enhance habitat features of special significance";
- "Manage game sanctuaries and wildlife management areas" and
- "Provide for the diverse use of fish and wildlife".

Among the ideas presented in the Vision of the Strategic Plan are the following:

- offering all people the opportunity to enjoy a diversity of fish and wildlife resources by fostering awareness and involvement;
- conserving, protecting and enhancing department resources; and
- responding to the needs of people by providing high quality services.



Nesting Box

Of special note are the frequent references to non-consumptive activities; that is, activities that do not involve hunting or fishing. These are the users of Swan Island.

Two Principal Goals of the Strategic Plan have influenced the Swan Island Master Plan. The goal for Information and Education is to increase the public's knowledge and understanding of the state fisheries and wildlife resources. A strategy of this goal is to develop a strong marketing and public information and education program to promote the benefits of fish and wildlife resources and enhance the perception of those resources

The other Principal Goal that influences this plan is from The Bureau of Resource Management. This states the intention to develop and implement programs to achieve the Department's long-range goals and objectives for the management and use of Maine's inland fisheries and wildlife. Among the strategies of this goal that impact Swan Island are:

- assessing status of species,
- conducting research,
- maintain and improve habitat and species abundance through...habitat improvement;
- maintain a connection with other agencies to solve problems of mutual concerns.

This Master Plan provides a basis for developing a program on the Island that supports the IF&W planning priorities. The focus is on developing a visitor centered resource while realizing the goals of the Department's Strategic Plan. The plan also recognizes the unique nature of Swan Island within the IF&W's holdings and provides guidance in those areas that IF&W is not traditionally familiar with.



Cemetery

II. INVENTORY

This initial phase of the master planning process is the gathering of information available about Swan Island to document the existing conditions and ecology of the Island. This includes information from IF&W records for the past 50 years, discussions with IF&W staff, and information from public meetings focussing on the master plan.

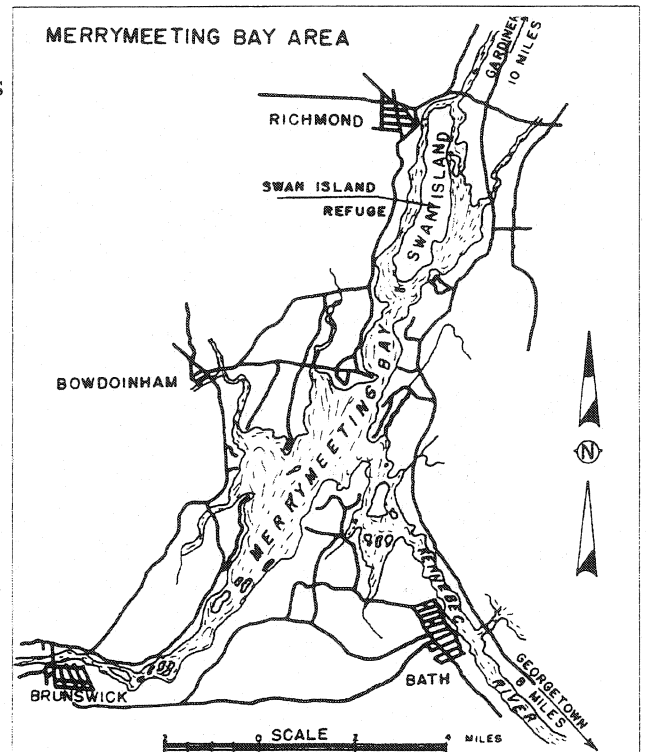
The result is an examination of the natural as well as the cultural elements of the Island. This develops a base understanding for how the Island has evolved and changed over time and what the agents of change are including human, climatic, geologic, hydrologic etc. the following is a summary of this information.

A. PHYSICAL FEATURES

1. **Natural Features and Site Characterization:** The Island consists of 1775 acres of mixed agricultural fields, a variety of upland vegetative cover types, tidal wetlands, small ponds and streams. *See Inventory Map 'Significant Features' following this section.*

Geography: Swan Island is located at the head of Merrymeeting Bay, in the Kennebec River. It is legally titled Perkins Township as an unorganized township. The Island is part of a greater area named by IF&W the "Steve Powell Wildlife Management Area". The town of Richmond (pop. 2,260) is across the river to the west and the town of Dresden (pop. 982) is to the east.

Merrymeeting Bay is located at the confluence of several rivers: the Kennebec, Androscoggin, Eastern, Abagadasset, Cathance and the Muddy Rivers. The Bay is the largest freshwater tidal estuary on the Atlantic Coast.



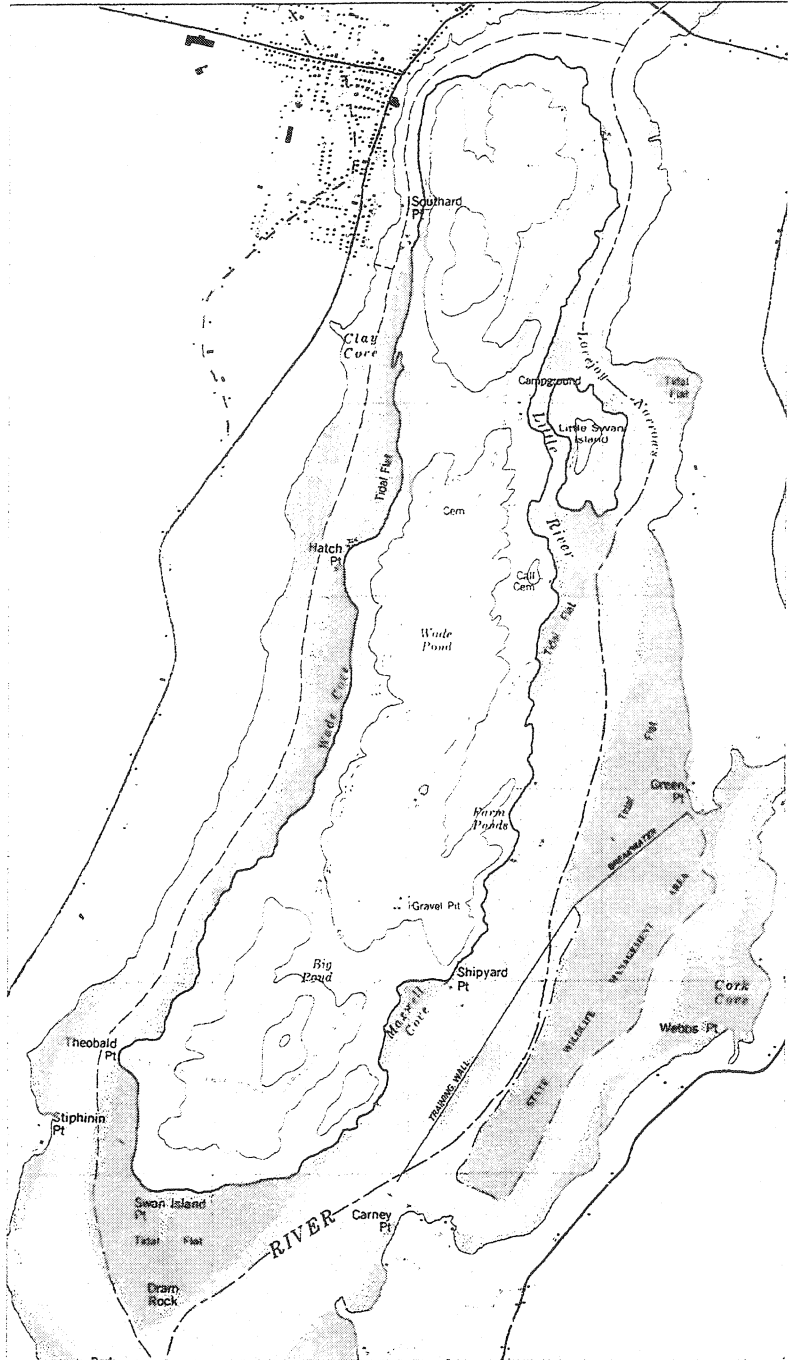
From a 1958 U. S. Department of the Interior, Fish and Wildlife Service map

The Island is approximately 4 miles by .75 miles in size, with total land area of 1,494 acres above the high tide line. Of this 1,235 is considered upland, with the remaining being wetland. There are approximately 520 acres freshwater tidal flats surrounding the entire Island, with the largest flats along the south and east shores.

The average elevation of the land is 40 to 60 feet above the high water mark. The highest elevation is 150 feet above the Kennebec River.

The Island runs in a north-south orientation. A ridge runs down the Island, roughly dividing the Island in an east-west configuration. The eastern side is gently sloping land, suitable for agriculture. The western side is steeper and contains most of the forested area.

Soils: According to the Natural Resource Conservation Service (formerly the Soil Conservation Service) there are 14 different soil types on Island, from imperfectly drained to sandy and ledge loam.



Vegetation: There are a variety of cover types on the Island:

230 acres of coniferous forest consisting of white pine, eastern white cedar, eastern hemlock and spruce;

197 acres of deciduous forest, including oak, maple, beech, birch and ash;

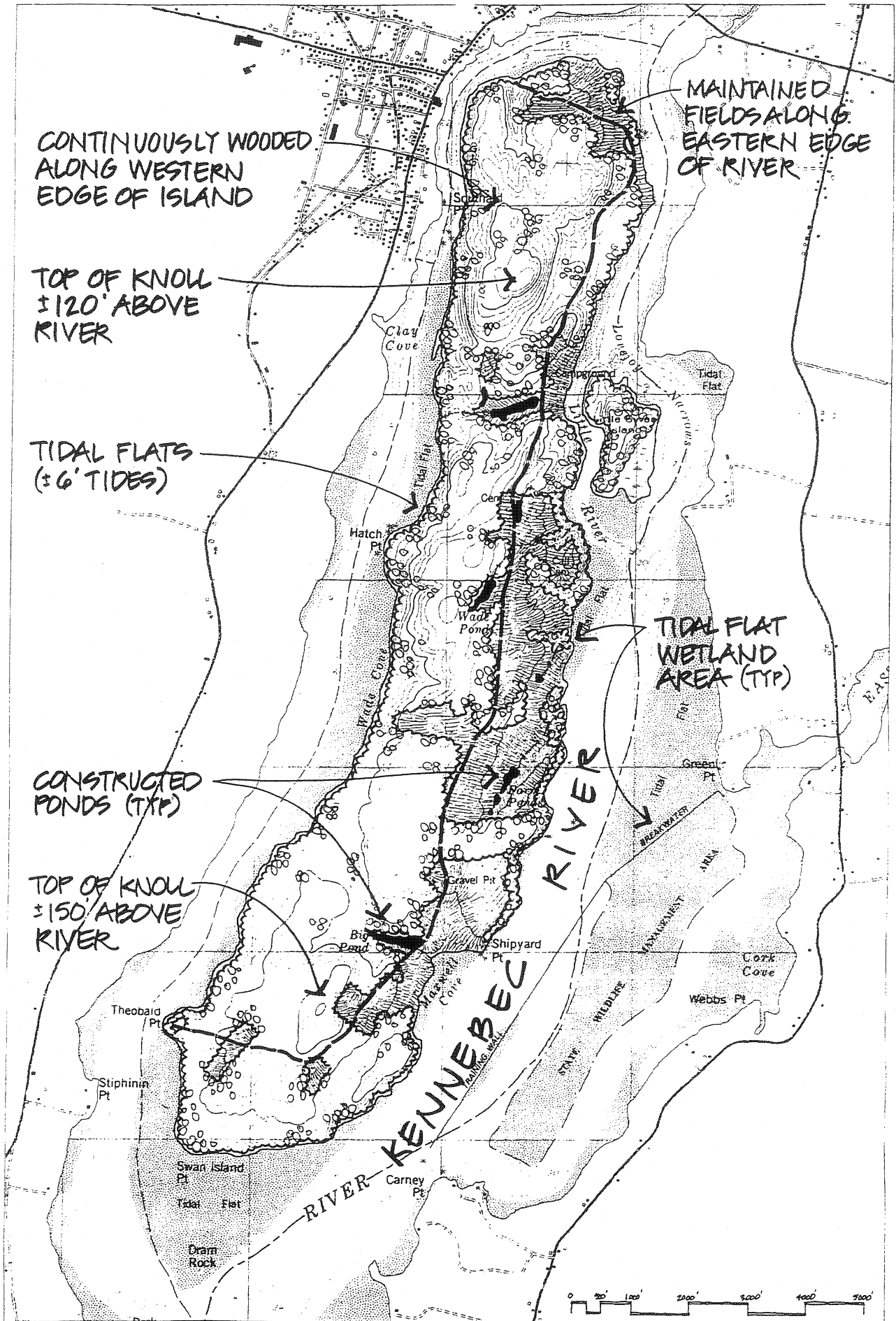
370 acres of mixed deciduous-coniferous forest;

230 acres of fields/grassland, plus approximately 44 acres of abandoned fields reverting to successional growth;

37 acres of inland wetlands;

520 acres of tidal flats





1. **Wildlife:** Swan Island supports a variety of wildlife habitats typical of mid-coastal Maine. Upland forest, freshwater wetlands and coastal environs provide a variety of habitats that support a full complement of wildlife species. Following is a review of IF&W objectives by species class taken from the Steve Powell Wildlife Management Area Plan.

a. **Birds:** Until recently, 230 acres of spring goose pasture were maintained by mowing. IF&W findings indicated that a much larger area was required to effectively attract fall geese and the program was discontinued.

In 1998 a mowing schedule was implemented to manage seven designated field units for grassland birds. Fields are mown in rotation to promote habitat quality and check succession growth.

Several small wetlands are maintained for waterfowl and wading bird habitat. Large numbers of ducks, primarily black ducks, mallards, blue and green winged teal, wood ducks and Canada geese seek these small marshes as nesting habitat.

Installation and maintenance of predator-proof waterfowl and songbird nesting boxes are provided for cavity nesting species such as wood ducks, hooded mergansers, blue birds and tree swallows.

Wild turkeys have become residents on the Island within the last ten years. Presently there are no specific management plans. Flocks will be informally monitored until specific management plans are made.

Many migrating birds are attracted to the Island because of its location and variety of habitats. These include neo-tropical migrants, passerines, shorebirds, raptors and other waterfowl.



Wild turkeys, 1998

a. **Small Mammals and Furbearers:**

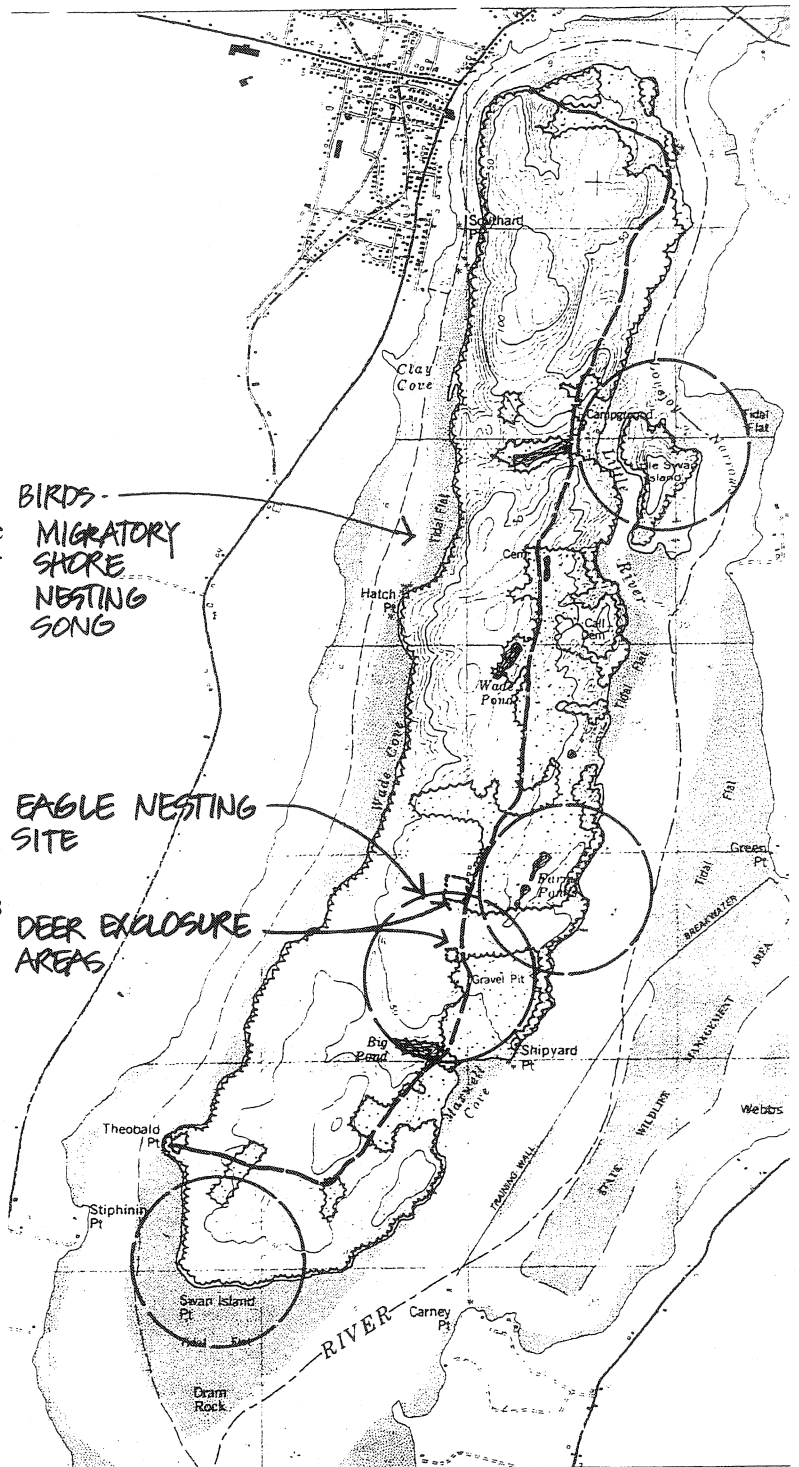
Although no specific management objectives are proposed for small game and furbearers, habitat improvement activities for waterfowl benefit other species such as fox, coyote, raccoon, muskrat and mink. Some small mammal species such as snowshoe hare are absent because of the overbrowsing of the understory by whitetailed deer.

b. **Large Mammals:** The deer population found on the Island represents a complex situation. Currently, natural processes are allowed to regulate the size and quality of the herd to demonstrate the effects of uncontrolled populations. This also provides the public the opportunity to observe the deer. The periodic overpopulation of deer on Swan Island has eliminated most of the vegetative understory which limits the presence of certain wildlife species such as ruffed grouse and snowshoe hare. Future efforts concerning winter feeding of deer will follow the IF&W "Supplemental Feeding of Deer in Winter" policy.

c. **Non-game and Endangered Species:**

There are seven essential habitats associated with bald eagle nests on the Island. The bald eagle is a federally listed threatened species and a state listed endangered species. Activities to minimize disturbance to the nests need to comply to the Amendment to Maine's Endangered Species Act: essential habitats, nesting and production monitoring and supplemental feeding, in cooperation with the U.S. Fish and Wildlife Service and the University of Maine.

Nesting boxes erected for cavity nesting waterfowl are also used by a variety of non-game species including flying squirrels, saw-whet owls, kestrels, tree swallows and various songbirds.

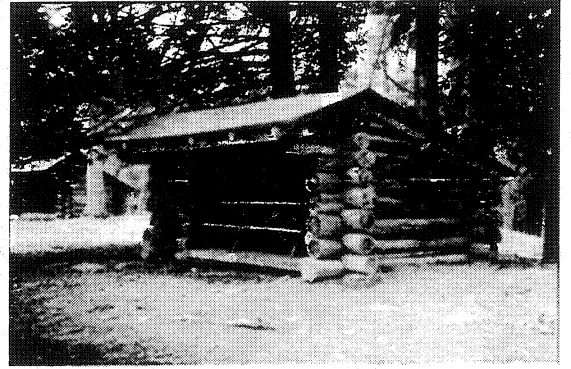


3. **Existing Development/Infrastructure:** These are the built features on the Island. See map *Inventory: Island Infrastructure.*

- a. **Boat Landings:** On the Richmond side of the river there is a small gravel parking lot with an entrance drive owned by IF&W for the purpose of serving Swan Island. There is also a dock and a small storage building at this location. An agreement with the town allows bus parking for larger groups in the adjacent town lot.

On the Swan Island side of the river, there is another docking facility and a small area for parking IF&W vehicles, along with a small storage building.

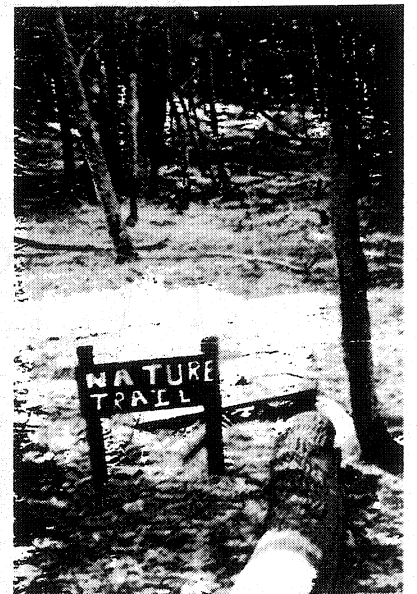
- a. **Roads and Trails:** Primary circulation on the Island consists of a gravel road, approximately 4.4 miles long, and two walking trails: the Beaver Pond Trail and the West Side Trail.
- b. **Campground:** The campground consists of Adirondack style shelters, fireplaces, outhouses, and a covered picnic shelter. It was constructed overlooking the area known locally as “Swan Alley” or “the Narrows” and is adjacent to significant cultural resources.
- c. **Gravel pit:** The gravel pit is actively used for Island needs, primarily road resurfacing.
- d. **Utilities:** Some utilities are available on the island. Electrical power and phone service are provided through a submarine cable. Water service is provided by the Richmond Water District and serves the Priest house which is the present IF&W office and staff residence.



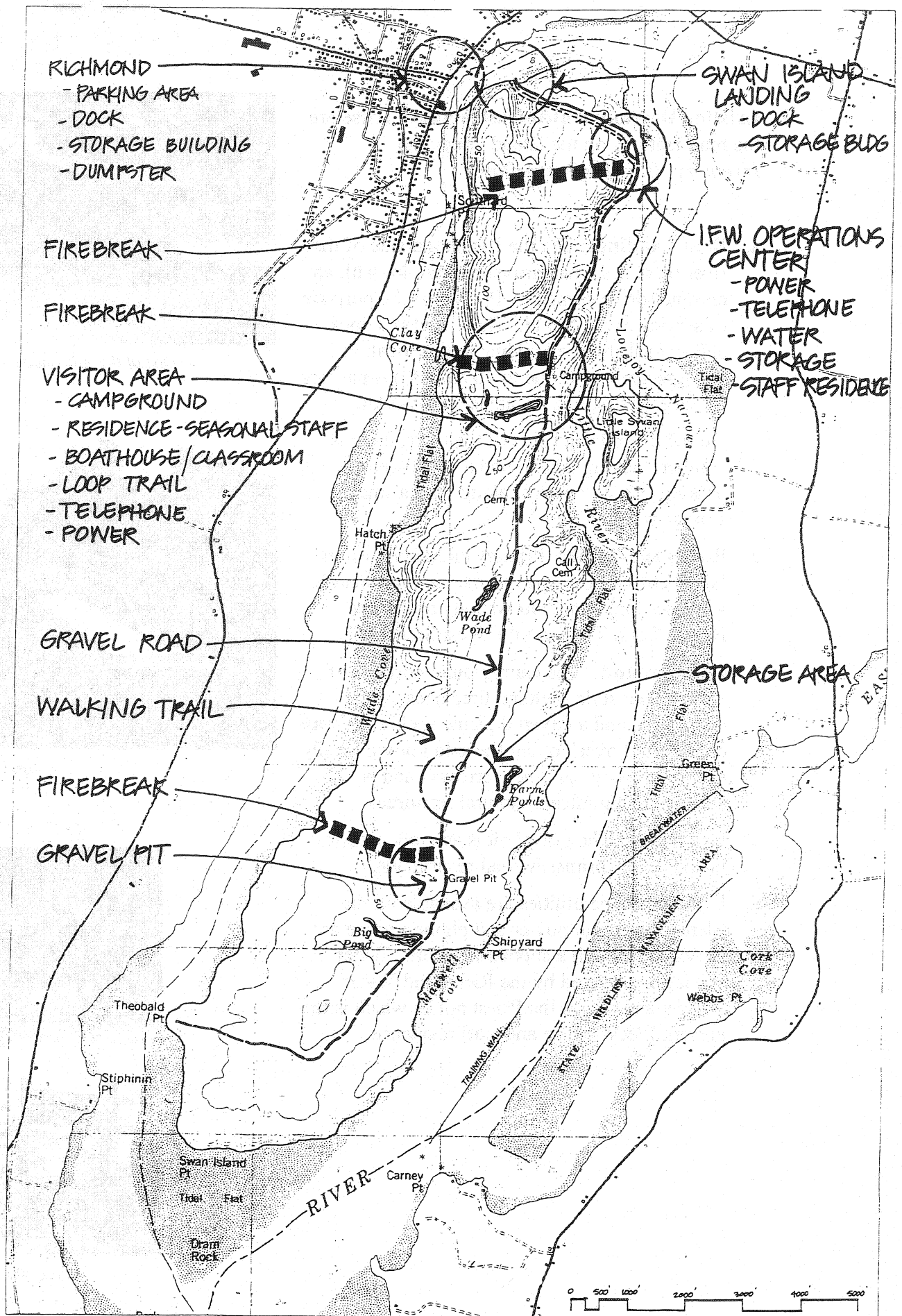
One of the Adirondack-style shelters



Island Boat Landing



One of the Island's trails



SWAN ISLAND MASTER PLAN

- a. **Historic Features:** see map following the section: *Inventory: Historical Features.*

Historic District: The entire island is listed by the U.S. Department of the Interior in the National Register of Historic Places as a Historic District. There are 34 contributing resources in the Historic District, including 8 buildings, 20 house sites, one landscape and 5 stone walls. there are 20 identified historic archaeological sites, including those associates with the ice industry. Finally, there are several prehistoric archaeological sites which are not included in the present Registration due to a lack of documentation; however future investigative work is anticipated for nomination of these features.

See Appendix B for the Registration Form for the National Register of Historic Properties for a complete description of these features.



The Tubbs-Reed House
Photo: Lloyd Ferris

Existing Buildings: there are several important historic buildings on the Island. As different names have been used over the years to identify houses, the names used in the Historic Register will be used in this report. The following is a brief inventory of buildings:

Tubbs-Reed House: This is the house closest to the island boat landing. It is in fair condition and has been undergoing stabilization measures. There are no utilities and it is not currently used.

Priest House: IF&W administrative offices and staff residence are located in the Priest House. It is in fairly good condition, and has telephone, water, heat, and electric services.



The Priest House
Photo: Lloyd Ferris

Gardiner-Dumaresq House: This is a saltbox design with previous as well as ongoing stabilization measures. There are no utilities and the house is in fair condition.

Robinson House: Seasonal staff often reside in this house. There is no running water, but it does have telephone and electricity.

The Boathouse: This building is occasionally used for meetins. This structure is in fair to poor condition and it has no utility services.

Lilly-Wade House: There are barns associated with the house which is in fair to poor condition and it is currently undergoing emergency stabilization measures. There is no utility service.

Maxwell-Tarr House: This building has no current use, and is in poor condition with no utility service. As this master plan is being completed, plans are being made to remove the house due to its poor condition.

See Appendix A for Floor Plans of Seven Buildings by Reed & Co. Architecture.



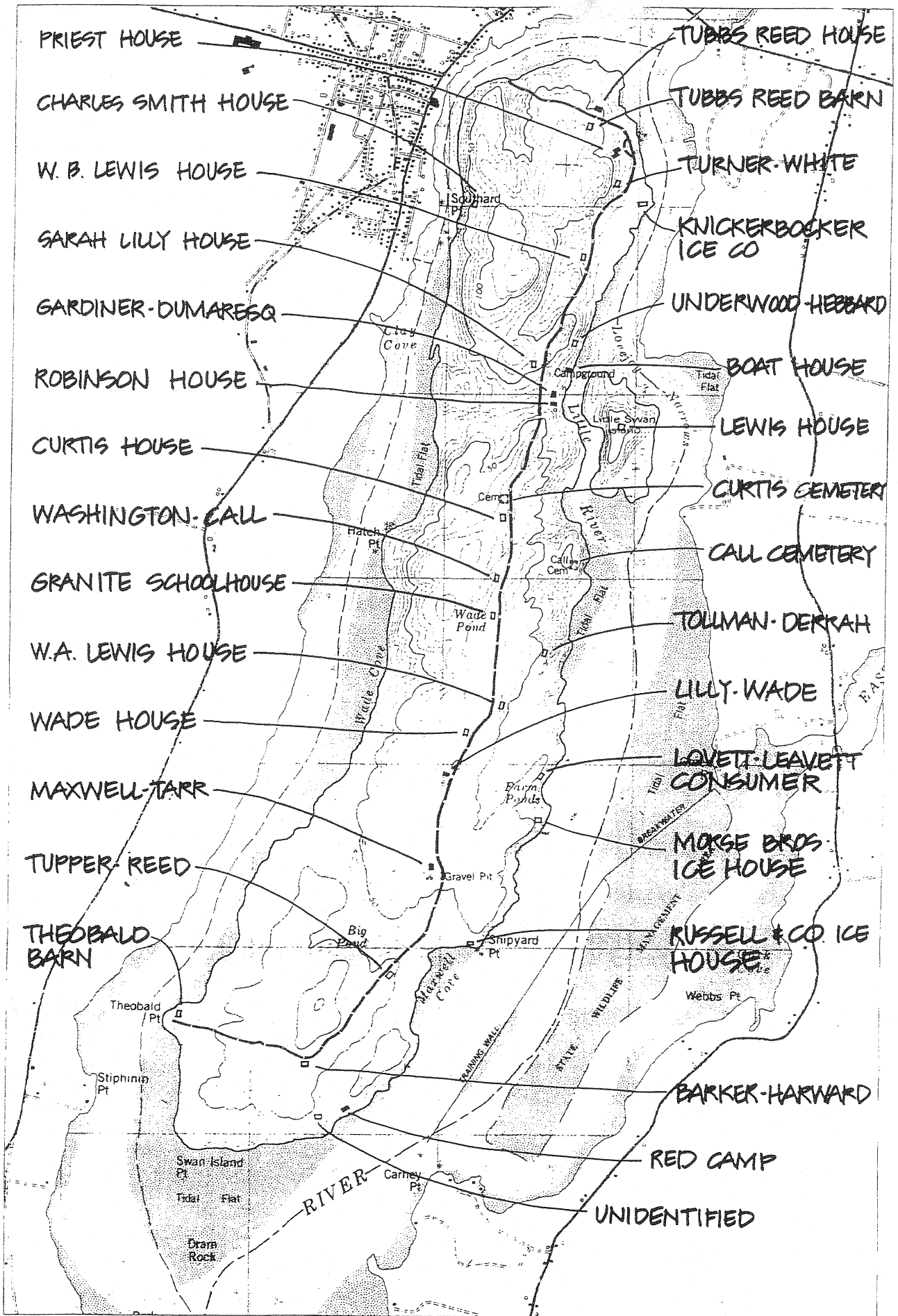
*Gardiner-Dumaresq House
Photo: Lloyd Ferris*



*Lilly-Wade House
Photo: Lloyd Ferris*



*Maxwell-Tarr House
Photo: Lloyd Ferris*



A. HISTORIC DEVELOPMENT

1. Pre-history

There is limited information about this long period of the Island's history. The following information is from a report written by the Maine Historic Preservation Commission which is included in its entirety in Appendix C.

The first inhabitants lived in the vicinity of Swan Island between 6,000 and 10,000 years ago. Evidence of earliest habitation on the Island has been found from cultures living between 4,000 and 6,000 years ago, during the Late Archaic Period.

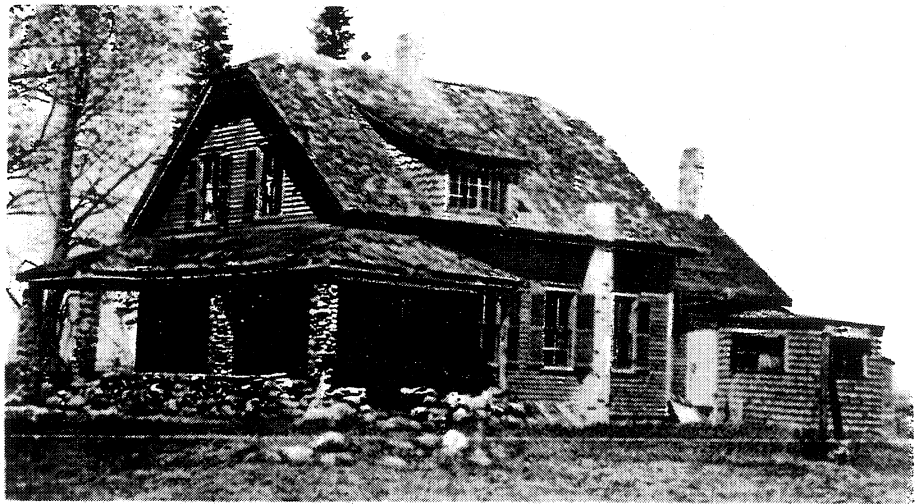
The next designated period of settlement was the Ceramic Period which began 3,000 years ago. Inhabitant of this time period were known to migrate seasonally and traveled in small groups.

The Contact Period began when Europeans arrived, which was approximately 1550 AD. There is more known of this time period because of surviving written descriptions and maps, however, extensive archaeological work remains to be done.

The sites associates with the pre-history of the Island are not included as part of the 34 contributing resources in the present listing of the National Register due to lack of data; however, Maine Historic Preservation Commission plans to pursue nomination of these sites in the future.

2. Colonial Settlement

The Island was inhabited until 1936, when regular ferry service ceased. The community subsisted by fishing, ice harvesting, wood cutting and farming. The community included a school, pharmacy, ice manufacturing, and several farms. The decline of the community was due to a variety of socio-economic factors including the advent of refrigeration, the decline of shipping in the river, the construction of a Richmond-Dresden Bridge, and the general decline of fishing and agriculture.



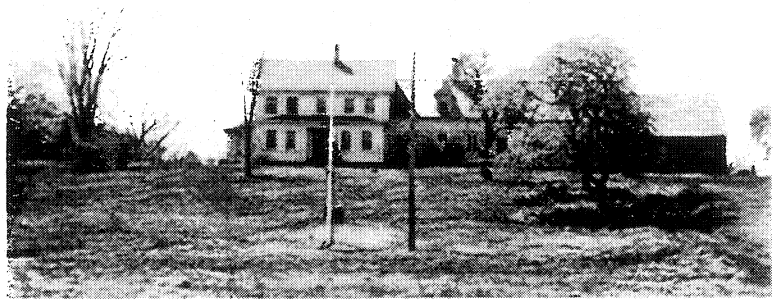
Tract 11 ~ W.A. Lewis Property Showing Main Building

Building no longer standing

National Register of Historic Places

The nomination to the National Register states the following:

- The Property is associated with events that have made a significant contribution to the broad patterns of our history. The Property embodies the distinctive characteristics of a type, period or method of construction. The Property has yielded, or is likely to yield, information important in prehistory or history.
- Specific areas of significance:
- Agriculture, architecture, archaeological/historic non-aboriginal; community planning and development; industry
- Period of Significance: The time period when the community developed the qualities that make it eligible for the National Register is 1763-c. 1940.



*Tract 12— J.H. & C.F. Wade Property Showing Buildings
Front View*

Building no Longer Standing



Tract 8— L.J. Premo Property Showing Buildings

Building no Longer Standing

3. IF&W Period

The land of Swan Island and Little Swan Island was purchased by the State of Maine with federal Aid to Fish and Game Restoration Funds in the early 1940s. It was under the jurisdiction of the State of Maine Department of Inland Fisheries and Game as a game management area. The total acquisition was completed in 1952.

The Island was designated as a Legal Sanctuary by the Maine State Legislature in 1929. In 1967 the Legislature repealed this designation. The “sanctuary” designation, however, is continued by Department (IF&W) rule.

As Perkins Township, the Island falls under the regulatory authority of The Land Use Regulation Commission (LURC). LURC has designated Swan Island as an Unusual Area Protection Subdistrict. This designation protects areas of significant natural, recreational, historic, scenic, scientific

or aesthetic value which are susceptible to significant degradation by man's activities, and for which protection cannot adequately be accomplished by inclusion in other subdistricts.

Some of the past projects and activities of IF&W on Swan Island include:

- 1948: 7 freshwater impoundments were created for breeding waterfowl.
- 1946-1953: waterfowl trapping and banding.
- 1952: Prior to this date, game research was held on the Island. The first deer research station in Maine was part of this project; deer trapping and relocation were part of this research. This was conducted to reduce the numbers on the Island and to respond to deer "stocking" requests from other areas. In 1952, this project was moved to the University of Maine at Orono. The staff on the Island was reduced to one resident laborer and part-time help.
- Management of large acreage of fields for goose management program.
- 1965: Visitor services, primarily the campground, were built, encouraging the public to come out to the Island. The permit/reservation system was implemented.
- 1971: IF&W named the area the Steve Powell Wildlife Management Area".
- 1977: Bald eagle egg transplant program.



1997 IF&W Annual Report Showing Dock & Shelters on East Side of Island

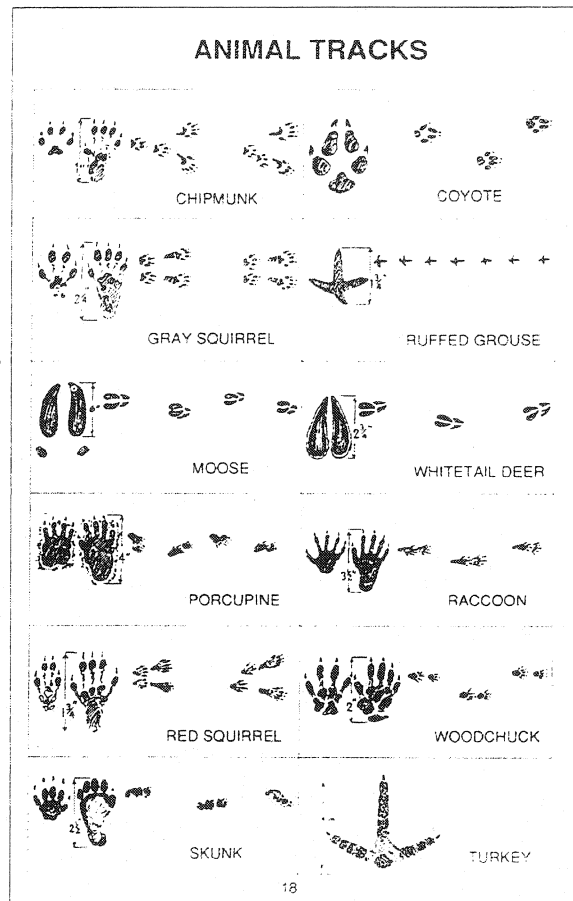
C. EXISTING USES

1. **Present Uses:** Swan Island has the following uses:

- Wildlife management area
- Wildlife sanctuary
- Historical / cultural interpretive property
- Public recreation area offering:
 - Boat service
 - Customized guided tours by IF&W
 - Self-guided tours
 - Overnight camping
- Planned organization activities including:
 - School tours
 - Maine Junior Guides testing area

2. **Users:** In general, most of the use by visitors is not actively planned by IF&W. Most of the users have “discovered” Swan Island and have developed their own program. Many ask for some assistance of staff, especially for transportation. Most of the people who use the island are:

- Daytime recreation users (including limited winter users)
- Overnight campers
- Organized school tours
- Organized recreation, outdoor or other groups (refer to table following this section).



3. **Island Promotion:** In recent years, IF&W has taken on a more proactive role in promoting the Island for public use including publicizing the island through the Maine Publicity Bureau.

A brochure is available to all visitors: “A History and Self-Guiding Tour of Steve Powell Wildlife Management Area”. This was developed in-house in 1991 and includes a history of the island, a self-guided tour, and illustrated animal silhouettes and tracks.

4. **Cooperative Arrangements:** Outside groups have taken an interest in Swan Island and have organized to provide a service or use the island. IF&W staff have worked with the following groups to enrich programming on the island:

- The Richmond Public School system has begun a partnership with IF&W to develop a K-12 environmental education program for their students. Rehabilitation of the Lilly-Wade house is proceeding to accommodate this program. They are operating in partnership with IF&W under a license agreement and a Memorandum of Agreement.
- Bath Iron Works (BIW) has partnered with IF&W as part of the Department's 'Adopt a Facility Program'. BIW has provided assistance with barge restoration, maintenance and annual winter storage.
- The organization, Friends of Merrymeeting Bay, has a Swan Island Committee whose purpose is to pursue alternative funding and to provide support. This group was especially active in the early 1990s when legislative funding cuts threatened the continued use of Swan Island.
- A non-profit organization, the Gray-Swan Wildlife Foundation was created to support the island and the Maine Wildlife Park. This group is presently inactive.



Farm Pond

D. INLAND FISHERIES & WILDLIFE MANAGEMENT

1. **Funding and Operations:** Swan Island does not have an itemized budget within the administration of IF&W; however, staff are able to closely approximate operational costs. The total annual operating cost is approximately \$75,000. During the 1999 season, approximately \$13,400 was received in visitor fees. See Appendix, "Swan Island Operational Costs Information."

The Island is managed by the Region B Administrative Unit of the Wildlife Division of IF&W in Sidney. Administrative, planning and visitor scheduling staff are located in this office. In general, the following staff perform most of the work on the Island with oversight by the Regional Wildlife Biologist:

- One part-time wildlife biologist
- Two part-time summer conservation aides (summers only)
- One part-time maintenance mechanic
- A part-time reservation clerk in the Regional Office

IF&W Staff are responsible for, but not limited to, the following tasks while on Swan Island:

- a. Providing boat transportation to and from the Island.
- b. Providing vehicular transportation for visitors throughout the Island
- c. Providing interpretive guided tours to visitors, usually a narrated truck ride.
- d. Providing guided tours for larger school groups.
- e. Providing support for overnight campers, which requires overnight staff and assistance with transportation and supplies.
- f. Maintaining and managing the cultural resources.
- g. Maintaining and managing the natural resources.
- h. Maintaining the Island's infrastructure.
- i. Performing IF&W duties related to wildlife management.

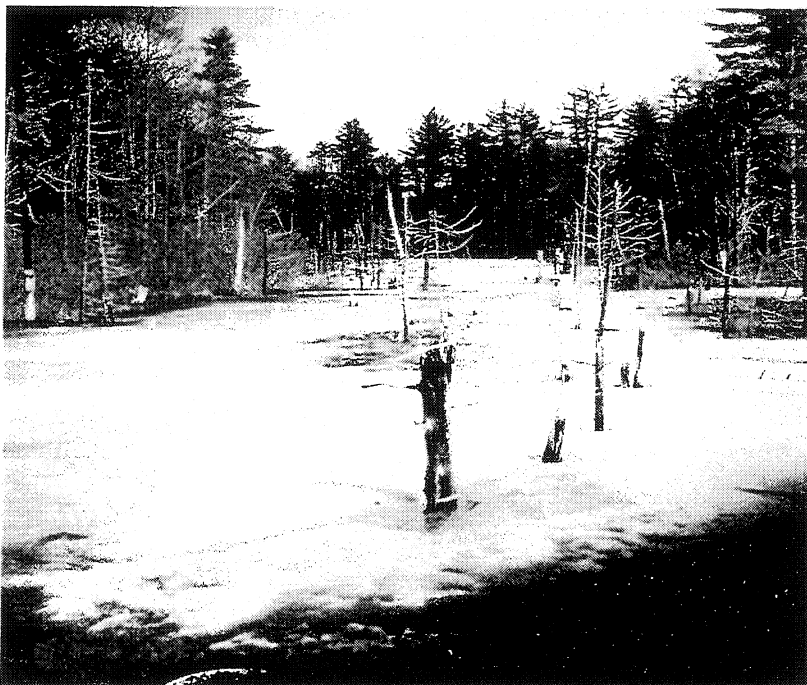


Split Firewood for Campers

2. **Volunteers:** There have been numerous offers by volunteers to perform tasks or programs on the Island. They have assisted with trail maintenance and provided other assistance to the conservation aides. However, due to lack of staff time to coordinate, volunteers have not been fully utilized.
3. **Visitation:** Over the past few years, there have been fluctuations in visitation and the revenue received. In 1996, the number of day visitors was at an all time high of 2,207 and the revenue received was \$7235. Fees were increased in 1997 and the numbers of visitors dropped but revenues collected were substantially higher. In 1998 there were 1331 day visitors and 787 overnight visitors. The total revenue received was approximately \$9,600. In 1999 there was an upswing in numbers of visitors to 1379 day, and 1191 overnight for a total of \$13,789. See chart in appendix "Public Use Statistics and Summaries" for a complete report on these figures.
4. **Reservations:** All visitation is controlled at the Regional Headquarters in Sidney. A seasonal clerk accepts reservations in mid-March for the season that extends from May 1 through Labor Day. It is open on a limited basis from Labor Day to the end of September.

5. **Regulatory and Environmental**

Considerations: Land uses on Swan Island are controlled by local, state and federal regulatory laws. Among these are the Land Use Regulatory Commission, the Natural Resource Protection Act and Shoreland Zoning. See the Appendix for applicable rules and regulations from the Swan Island Management Plan.



Wetlands on Swan Island

III. ANALYSIS

The analysis phase involves the detailed breakdown of the positive and negative attributes of the various facets of the island. The opportunities and constraints, arising from the Island's existing conditions are identified and listed below.

A. ANALYSIS OF EXISTING USES ON SWAN ISLAND

IF&W has been conducting wildlife management activities, providing visitor services including educational tours and managing the island's resources since the 1940s. A review of this follows:

Opportunities

1. WILDLIFE MANAGEMENT AREA

- Wetland and upland habitat management for resident and migrating species;
- A 'sanctuary' by Department rule, there is no hunting or trapping;
- Provides viewing opportunity for the public to observe wildlife in a natural setting.

2. HISTORIC PROPERTY

- Many levels of historic significance on Swan Island;
- Opportunity for interpretation, research, and education on historic issues;
- Most pre-historic sites have not been fully researched and explored;
- Some early colonial sites have not yet been fully researched and explored;
- Several extant farming features (residences, fields, hedgerows, etc.);
- Funding opportunities are available.

Constraints

- Negative public feedback to reducing deer population to island's carrying capacity;
- Eagle nests can be vulnerable to human disturbance;
- Lack of control of deer population has caused periodic over-population of deer; overbrowsing of vegetation is evident;
- Increased human use of river, has potential to disturb habitats on the Island.
- Care and interpretation of historic and cultural features are not included in the IF&W strategic plan;
- Many historic resources are quickly deteriorating – stabilization required;
- Property is vulnerable to degradation by overuse;
- Financially feasible compatible uses for historic structures have not been identified;
- There are no staff available to investigate alternative funding sources.

Opportunities

Constraints

3. PUBLIC USE

Boat Service to Island

- Schedule for boat ride to island is published in the Swan Island Brochure;
 - Additional boat trips are added by staff as needed;
 - By prior arrangement visitors may gain access to the Island by their own watercraft;
 - Boat trip acts to control numbers of visitors which helps to limit overuse of vulnerable areas.
- Biological staff operate the ferry, in addition to performing other duties, which is an inefficient use of professional time;
 - Visitors arriving by their own means are difficult to monitor;
 - Public safety issues are of a concern on the boat ride;
 - Handicap access issues due to size of boat, tides, etc.
 - Capacity of boat limits the number of people able to visit.

IF&W guided tours

- Tours are customized to each group, based on interest of visitors and IF&W availability;
 - High value of information exchange; especially useful as a conservation education component;
 - Fosters good relationship between I.F.W. and public.
- No published tour schedule, which often leads to inefficient use of staff time;
 - Lack of standardized tour;
 - Public safety concerns with truck ride during tour;
 - Compensatory time requirements for overtime work limit staff availability.

Self guided walking tours

- Nice walk: scenic, opportunity for viewing wildlife, historic features;
 - Slow, intimate contact with environment;
 - Tour guidebook available.
- Too long a walk for some (Island road is 4.4 miles long);
 - Many features not fully taken advantage of because they are not adjacent to road or trail, or not fully described in guidebook.

Opportunities

4. PLANNED ORGANIZATION ACTIVITIES

School Tours

- High quality tours, fun and educational;
- Fosters appreciation for environment and good relationship with IF&W;
- Good exposure for IF&W staff.

Maine Junior Guides

- Yearly two week testing area blends well with site;
- Quality experience with minimal IF&W staff time;
- Program relates well to IF&W program.

Constraints

- Sensitive areas including wetlands and eagle nesting area, need to be protected from overuse;
- Lack of IF&W staff or volunteers to conduct tours;
- School groups have limited time on visits.
- Separate camping area dedicated for Guides;
- Fire risk due to activities.

B. PHYSICAL CONDITIONS ANALYSIS

The physical plant of the island poses some of the greatest opportunities *and* limitations to the use and enjoyment of the island.

1. TRANSPORTATION

- boat trip creates a psychological break and separates the visitor from the mainland;
- The bottleneck created by the boat access, which helps to limit degradation due to overuse.
- The ferry is the "bottleneck" for Island access. All visitors, staff and materials must come through the landing at the Richmond side of the river. The scheduling of the ferry, safety issues and accessibility all serve as constraints to Island access;
- Transportation on the island is by foot or truck. Use of truck contributes to the workload for IF&W staff.

2. ROADS

- The gravel road is a significant organizing feature of the island as a central spine. The walking trails are important to bring visitors to remote parts of the island.
- The single gravel road and limited trail network restrain access to the far reaches of the island.

3. UTILITIES

- Underground electric and water serve the northern part of the island, which defines the area that will receive the most intense use;
- Electric telephone and water service improve safety and emergency response on the island.
- Funds limit the ability to provide necessary improvements. A restroom facility was designed, but the funds are lacking to complete the project.

Opportunities

4. MAINTENANCE FACILITIES

Constraints

- The existing maintenance facilities are inadequate and in poor condition, and impede efficient IF&W activities on the island;
- Trash is presently taken off the Island by staff and brought to Regional Headquarters for lack of any alternative; visitors “carry-on carry-off” their trash.



*Fuel
Tank*

5. CULTURAL/HISTORICAL FEATURES

- The entire island is listed in the National Register of Historic Places;
- This is a very rare, intact, 19th century farming village typifying an agrarian community;
- IF&W has maintained the former agricultural fields for wildlife habitat diversity; this has preserved the cultural agrarian 19th century landscape;
- A wealth of untapped, archaeological sites are mostly unexplored;
- A substantial amount of historical research in several different areas can be done, providing educational opportunities at many levels.
- The historic features are slowly deteriorating, and many need to be stabilized, restored, or rehabilitated (between the beginning of this project and the end, it has been determined that one of the remaining houses needs to be demolished because it has deteriorated beyond repair);
- Restoration or rehabilitation of the buildings is a substantial project, and long term maintenance costs need to be considered;
- Sizes of former agricultural fields are slowly diminishing (refer to illustration Agricultural Field Succession);
- Interviews with living former residents of the island should be done very soon, or the information will die with the residents;
- IF&W does not have the mission, expertise or funds to develop programs in this area.

6. LURC JURISDICTION

- LURC requirements may help to limit excessive development on the island.
- The designation by LURC as an “Unusual Area Protection Subdistrict” severely restricts development on the Island. This classification restricts the Island uses to those existing and provides for a layer of regulatory review for changes on the Island.

C. MANAGEMENT ANALYSIS

This is an evaluation of IF&W's management of the island primarily as a public visitor center

Opportunities

Constraints

1. IF&W STAFF DUTIES

- IF&W, acting as host, has maximum exposure to visitors, which gives a positive experience to visitors, good exposure for department, and allows for monitoring of activities.
- Staff time available at Swan Island is limited for budget reasons, and acting as taxi driver, ferry captain, customized tour guide, etc. may not be most efficient, effective use of professional staff;

2. VOLUNTEER ASSISTANCE

- Many volunteers offer help to perform duties on the island.
- No volunteer coordinator or list of tasks; volunteers sometimes choose the tasks, terms, and time frame for duties, sometimes leading to more work for staff, or help in areas not really needed;

3. FINANCIAL

Visitation Fees

- Low costs per person for visiting Swan Island, compared to other, comparable experiences in the Maine, (refer to comparison chart) an exceptional deal for the service.
- Optimum revenues are not being received.

Funding

- Many opportunities exist to apply to private or non-profit organizations for assistance with funding projects.
- There are no IF&W funds available or staff person with the time to research and apply for grants



1956

1966

1989

2. **Agricultural Field Succession.** The above are taken from aerial photographs in 1956, 1966, and 1989 and illustrate the progression of vegetative succession growth on the Island.

The agricultural fields are one of the character-defining features of this agrarian landscape. They have survived as a result of IF&W's management of the landscape for wildlife. The fields are mowed as a wildlife management technique, but it has the added benefit of maintaining the historical agricultural fields. Wherever the mowing has been stopped, natural succession has quickly taken over the open space. There has been a significant loss of fields over this relatively short time period.



IV RECOMMENDATIONS

The following recommendations for the educational program, physical improvements and management of the Island provide a conceptual strategy for the future of Swan Island. Future planning will involve developing the details for carrying out these recommendations.

A. ENCOURAGE PUBLIC USE OF SWAN ISLAND AS AN EDUCATIONAL CENTER.

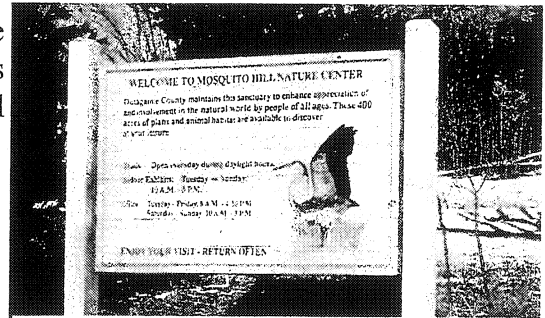
Swan Island is a publicly owned property rich with natural and cultural resources that are typical both to the State and TO nineteenth century agricultural communities, as well as unique due to the Island's setting. Extensive opportunities for education about Maine's natural resources, the Island's cultural history, and for demonstrating the interrelationship between the natural and cultural resources exist.

1. Wildlife and Conservation Education

Highlight and explain the role of Swan Island's fisheries and wildlife habitats to promote better knowledge and understanding of the state's natural resources with a comprehensive educational program which includes curriculum materials, signs and brochures.

- a. Use the Island for use as wildlife and conservation education, by defining outdoor demonstration areas and establishing an indoor classroom(s);
- b. Showcase the Department's fish and wildlife management issues and techniques through interpretive signs, brochures and educational programs;
- c. Utilize the Island as a research laboratory to foster an understanding of IF&W's responsibilities and roles in protecting wildlife and fisheries.
 - i. Direct state research activities to the Island as opportunities arise.
 - ii. Provide interpretive information for visitors explaining the research.
- d. Develop an education program with support materials for educators aimed at several different audiences including K-12 students, general public, and college level students.

- i. Prepare educational packets on different IF&W Island subjects for distribution to school groups. Pursue grants to hire a professional educator / writer. Coordinate this with the Maine State Learning Results and enlist the oversight of the Maine Historic Preservation Commission;
- ii. Prepare self-guided tours in brochure form emphasizing different aspects of Swan Island;
- iii. Identify outdoor demonstration areas with lessons and activities that can take place in each area;
- iv. Consider for future programming, more intensive educational opportunities such as college level curriculum or residential programs such as elder-hostels.



Interpretive Signage

2. Historical and Cultural Education

IF&W should develop and encourage Swan Island's use as an educational resource because of its historical and cultural aspects.

Develop a relationship with one or several historic preservation organizations to help define the educational goals, research goals, and future use.

- a. Work with Maine Historic Preservation Commission and other historic preservation groups to prepare an information and education strategy detailing the history of the Island and the history of the physical fabric present on Swan Island;
- b. Prepare self-guided tours, in brochure form, providing information on pre-historic and early colonial development;
- c. Develop an archaeological studies program involving students working with professionals;
- d. Gather 20th century historical data by interviewing surviving former residents of the Island, and uncovering old photographs and records. Preparing a living history of the community;
- e. Develop educational support materials for K-12 students as well as more advanced students;
- f. Identify outdoor and indoor demonstration areas (classrooms) with lessons that can take place in each area.

3. Natural and Cultural Resources Education: the Interaction

In order to provide a cohesive program on Swan Island it is important to tie the Wildlife and Conservation Education program with the Historical and Cultural programming. Specific educational programs should be developed to show the relationships between the two areas. Provide educational opportunities through tours, brochures, lectures and written text, to explain the relationship between the natural environment and the cultural development on the Island. Use this as an educational avenue to help explain the role of IF&W in contemporary life. Use the Visitor Center (see recommendation: Physical Improvements, New Construction, The Tubbs-Reed House) to highlight this connection.



Young Pine Succession Growth in Fields

B. PHYSICAL IMPROVEMENTS TO SWAN ISLAND

Physical improvements to the Island and its infrastructure will be required to fulfill the Island's educational mission, to meet IF&W's maintenance and management needs, and to maintain the historic agricultural village.

1. Protect and stabilize the sensitive and rare resources

- a. Continue to monitor and protect the bald eagle nesting sites;
- b. Continue to protect and monitor environmentally sensitive sites such as the wetlands, tidal flats, streams, etc.; take steps to identify sites and mitigate effects of over-use or problems from natural causes when necessary;
- c. Stabilize the existing historic structures to protect them from further deterioration;
- d. Using National Park Service Guidelines, prepare a plan for the treatment of the agricultural fields to assure historic integrity and continued wildlife use. Consult Maine Historic Preservation Commission for assistance.

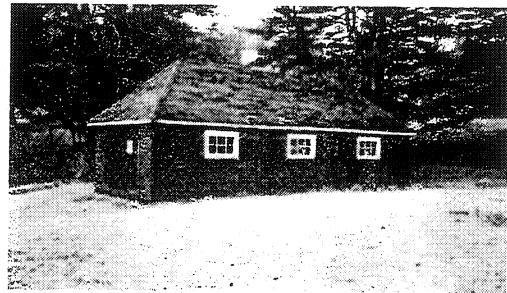


Historical Agricultural Field

2. New construction or improvements to the Island infrastructure:

Done

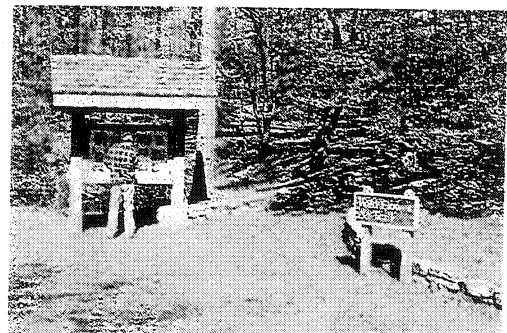
- a. Construct a simple but well-integrated visitor restroom facility;
- b. Construct a new maintenance facility near the Priest House; integrate a multi-use workroom/lab into the facility;
- c. Prepare in-depth feasibility studies for each building to rehabilitate for new uses. Coordinate with MHPC for preservation of historic integrity of buildings. The following are suggested uses for buildings:
 - i. Tubbs-Reed House: educational center/museum (historical and natural) for historic displays of historic photographs, found artifacts, conservation displays, as well as office and classroom / lecture space;
 - ii. Boathouse: Develop an accessible classroom space;
 - iii. Priest House, staff residences;
 - iv. Robinson House: Visiting naturalist, academic, dormitory space for educational groups or special uses in;
 - v. Lilly-Wade House: Partnership use. *with Richmond School*
 - vi. Maxwell Tarr House: It has been determined that the structure has deteriorated to the point where it cannot be restored, so it will be removed.



Utilize Boathouse as Classroom Space

- d. Expand the existing walking trails system to expose interesting aspects of the Island. Design trails with themes that provoke interest such as geology, a bog walk, wildlife habitats, or cultural sites;
- e. Develop an interpretive signage system in conjunction with the trails system and the trail guides/ brochures;
- f. When reconstruction opportunities arise, modify camping area to visually separate lean-to structures which have a rough, rustic character from the historic agricultural village area. The lean-tos should be clustered in the wooded area to the north of the field that they now occupy. This will situate them near the proposed rest room facility.

*Not
Some
Possible*



Develop Interpretive Signage System

3. Recommended Swan Island Land Use Zones

In order to protect Swan Island's sensitive resources while allowing ongoing visitors to the Island, and promoting efficient use of the IF&W Staff's time, the following land use zones are recommended: (Refer to the attached map)

a. Wildlife Sanctuary

The western and southern sides of the Island should be designated primarily as a wildlife sanctuary, with no developed uses other than those with minimal impact (such as walking trails)

b. Boat Landing Zone

This area comprises of the boat landing area along with associated support such as vehicle parking area and storage. This also acts as the gateway to the Island for the visitor and should have signage and other directional or orienting devices.



Road from Boat Landing to Tubbs-Reed House

c. Cultural Headquarters

The house that is the closest to the boat landing, the Tubbs-Reed House should be used as a display area or museum for information about the Island and its development.

d. IF&W Management Headquarters

The staff residence, and maintenance area should remain in the same vicinity that it is now, with necessary improvements.

e. Central Visitor / Recreation Area

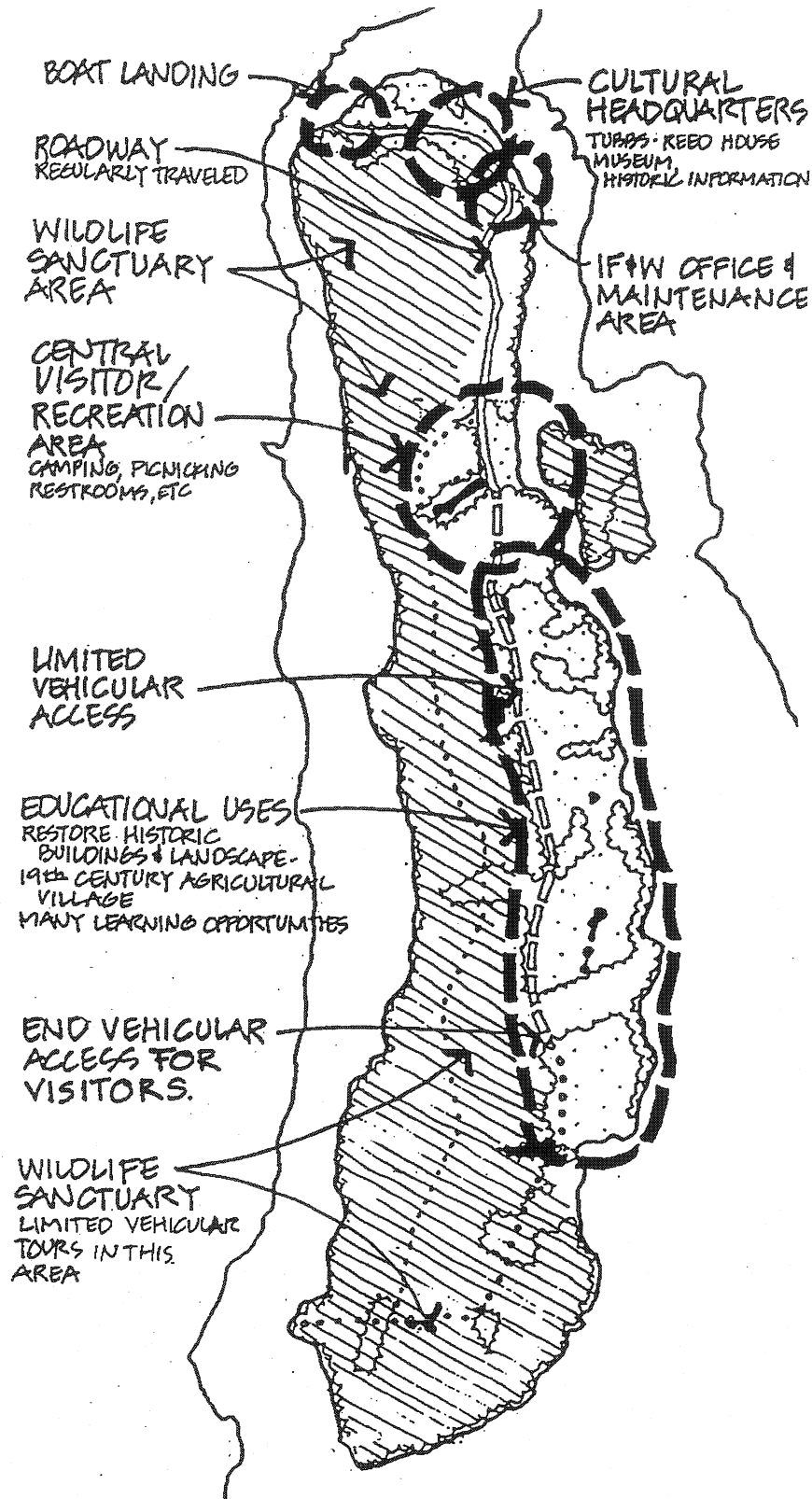
Picnicking, restrooms, and other intensive visitor uses should be concentrated in the vicinity of the campground.

f. Educational / Partnership Use Area

The areas on the Island south of the Central Visitor Area should be used primarily for educational purposes, including educational partnership headquarters located in the historic houses.

g. Circulation

Regular vehicular access for visitor tours should start at the Boat Landing, and end at the Maxwell-Tarr house area. Only limited tours by vehicle should go to the extreme south end of the Island. Walking trails should be developed, marked, and mapped throughout the entire Island.



*Proposed
Land Use
Map*

C. MANAGEMENT OF SWAN ISLAND

IF&W must approach management in a manner which recognizes the budget and staff constraints while best accomplishing the goals set forth for the Island in this report. This will maximize the value of the Island to the citizens of Maine while allowing IF&W to accomplish the required upkeep maintenance and management that the Island requires to keep the resources healthy.

1. Staffing

Establish criteria to better utilize staff time for maintenance and management of the Island, and to optimize exposure to the general public.

- a. Develop a transportation schedule for visitors which utilizes staff time efficiently:
 - i. Establish a set ferry schedule to and from the Island for individuals and small groups;
 - ii. Establish a guided tour schedule that is coordinated with the boat schedule. Develop a range of different guided tours that complement self-guided touring.
 - iii. Develop a brochure for the public with boat and tour schedules that describes IF&W services offered and visitor responsibilities.
- b. Encourage visitors to be more independent by encouraging self-guided tours. Maps, brochures, trails, and signs as well as a published tour schedule will help in this endeavor.

2. Take advantage of volunteer help

- a. Establish a written policy for the utilization of volunteer labor which states how tasks are identified, assigned, and what benefits if any the volunteers will receive in exchange for their labor;
- b. Develop a detailed list of tasks to be undertaken by volunteers. This should include seasonal and ongoing tasks as well special projects such as bridge building. Update this list periodically;
- c. Establish a paid volunteer coordinator position with the responsibility of recruiting and supervising volunteers;
- d. Publish a quarterly bulletin or newsletter which lists funding needs, volunteer tasks, ongoing projects and an article about a natural and cultural feature.

3. Develop programming that serves the mission of Swan Island and IF&W

- a. Publish educational information packets on a variety of subjects that are targeted to different age groups;
- b. Actively seek alliances with organizations whose focus is on the cultural landscape who can develop educational programs in the historical/cultural area;
- c. Integrate natural and cultural educational programs, encouraging an understanding of their interconnection;
- d. Discourage incompatible uses that do not contribute to the educational goals of the Island and which heavily utilize the Island's resources including staff time.

4. Establish a framework that encourages partnerships with similar or complementary organizations.

In order to offer the public educational programs that take full advantage of the resources of Swan Island, IF&W should encourage the development of partnerships. In return, the partnering organization must provide Swan Island with some benefit that cannot be obtained otherwise, such as the restoration of a building that they can use for their headquarters. Organizations selected to enter into partnerships must share common educational goals and should be selected to offer well-rounded programs to the public. Partnership agreements must contain the following:

- a. A thorough description of the proposed program;
- b. Identification of the benefits the Island will receive in return for partnership's use, such as money, the restoration of a building or other feature, or a defined set of tasks to be accomplished by volunteers;
- c. A description of the impacts upon the Island's resources such as wear & tear on buildings, soil disturbance, removal of vegetation, increased water use, more vehicular traffic, noise, etc.;
- d. Limitations of liability, or hold harmless clause and proof of insurance;
- e. Agreement of the services required from IF&W staff (transportation, utilities, trash removal, etc.)
- f. Agreement to provide IF&W with a yearly report that describes the previous year's activity (description of program, number of participants, financial report, etc.)

5. Evaluate funding options for Swan Island

In order to continue providing the public with a worthwhile and enjoyable experience, to halt the deterioration and loss of historic features and to provide better educational opportunities, all funding options should be explored:

- a. Consider establishing a separate funding entity for Swan Island to allow Swan Island to operate independently;
- b. Continue to work with the Department of Administration and Finance, the Bureau of General Services for capital improvements and repair of infrastructure;
- c. Pursue grants that can help develop new programs, pay for design and publishing of maps and brochures, or fund physical improvements. For example, pursue matching grants for National Register properties through Maine Historic Preservation Commission;
- d. Seek partnerships with organizations who will assist or contribute to the Island's infrastructure;
- e. Manage volunteers effectively to accomplish tasks;
- f. Use the quarterly bulletin (see Recommendation #2) to promote awareness of needs on the Island.

6. Monitor Number of Visitors to Swan Island

- a. Swan Island has exceptional value to the state because it is a wildlife sanctuary with relatively little human disturbance, and because of its quiet, pristine character despite its geographic location. In order to maintain these qualities, it is important to continue to monitor carefully the numbers of visitors to the island. The present reservation system and visitation policies are working well. It is recommended that the system not be changed to allow unrestricted or unmonitored public visitation.
- b. Over the past ten years there has been between 2,000 and 3,000 visitors per year. If, through partnership programs or added IF&W staff presence on the Island, there is an increased desire for significantly higher numbers of people, the numbers may be increase by 50%.
- c. If the visitation numbers do increase, the majority of the people should be encouraged to explore the areas between the boat landing and the present camping area. Access to the remaining part of the island should be allowed for smaller groups on foot or for guided educational purposes.
- d. The condition of the island should be assessed during periods of higher visitation. If there is a deterioration of the resource, the habitat, or the visitor experience due to the increased numbers of people, the allowed numbers of visitors should be returned to a manageable level.

7. Establish a Swan Island Management Committee

In order to evaluate changes, review partnerships, and monitor the relationship between IF&W and the historical organizations, a management committee should be established with the following parameters:

- a. The committee should be composed of 6 - 7 people, 3 -4 should be IF&W staff, one from the public, one from the Bureau of General Services and one from Maine Historic Preservation Commission;
- b. The committee should meet a minimum of twice a year and review, based on recommendations from staff working at Swan Island, all management procedures for the upcoming year for the Island, including boat and tour schedules, fees charged, education program goals, partnerships, number of visitors, and volunteer tasks and requirements;
- c. The committee is the planning tool that will keep the programs relevant and varied, and ensure the programs offered are high quality;
- d. The committee should review and update the Master Plan every 2 to 5 years to keep the document current.

D. CONCLUSION

Swan Island: The evolution of a landscape over time. This is a landscape that has witnessed a fascinating series of changes and evolutions. Human and natural forces have shaped this land by interacting over time. The human presence, starting in pre-history to the present IF&W management, is a continuum of changes involving peoples struggles to adapt to this relatively small Island located in one of Maine's great rivers. The forces of nature have molded this rugged Island, created the topography, the vegetation and landscape that now, only Island wildlife call home.

IF&W has been hosting thousands of people on the Island, and giving them an unforgettable experience. In recent years more is being demanded of the environment, pressures of increased use are mounting, and maintenance funding has not kept pace. As a result, the cultural resources are deteriorating. It is now time for a concerted effort to enhance the wildlife management of the Island, manage the cultural resources and interpret the entire program all who are interested.

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Memos, Documents, and Brochures

Correspondence: Swan Island Solid Waste Disposal Site

MDIFW, A History and Self-Guiding Tour of Steve Powell Wildlife Management Area.

Steve Powell Wildlife Management Area: Rules.

Maine Wildlife Park, Curriculum and Lecture materials

Swan Island: File Inventory, *1/1/98*

Correspondence: Friends of Merrymeeting Bay

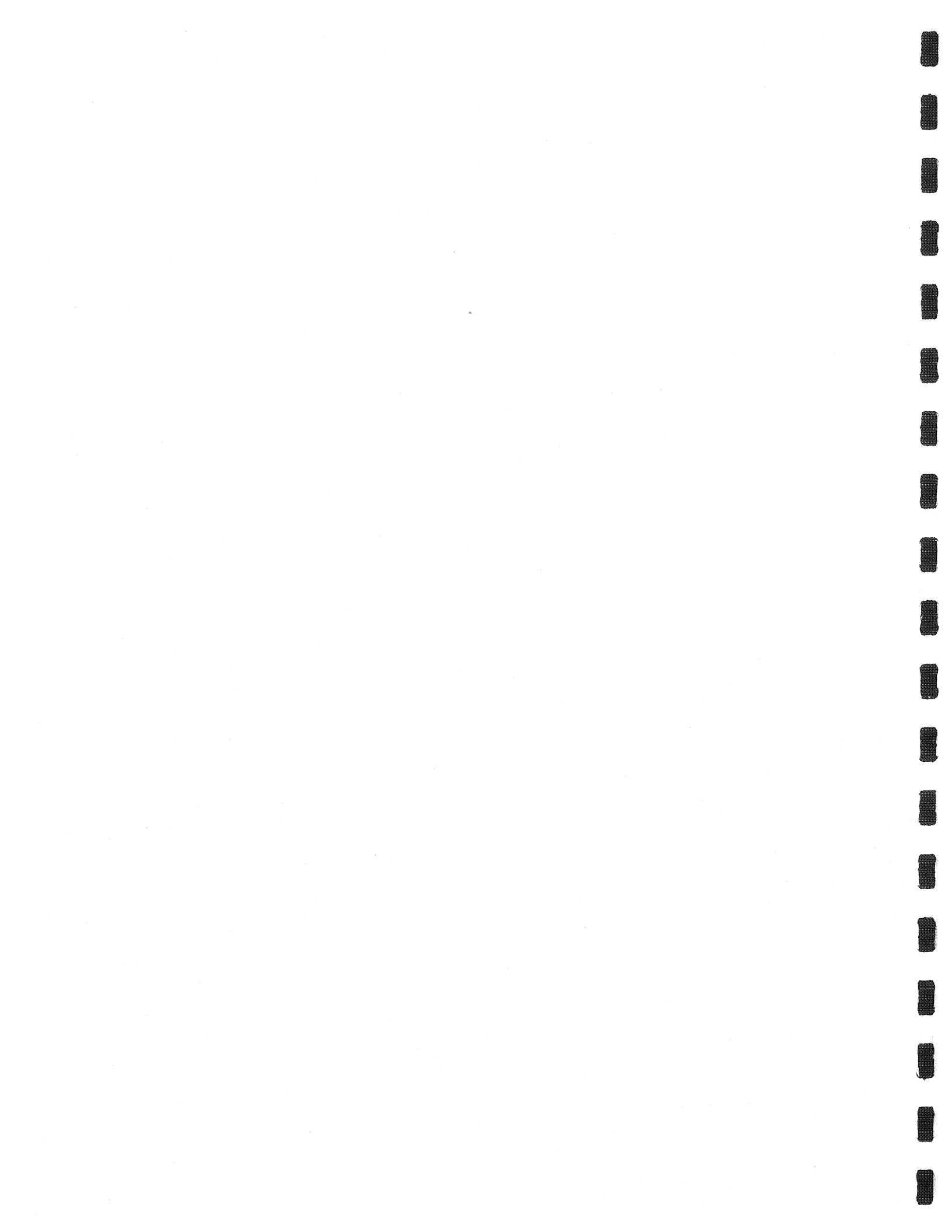
Correspondence: Maine Historic Preservation Commission

Titles and Deeds from Island Residents

Photographs

Lloyd Ferris, collection of black & white photographs of houses.

VI. APPENDIX



Native American Culture and Swan Island Arthur Spiess 1/13/99

Maine was first inhabited at the end of the last Ice Age, about 11,000 radiocarbon years ago. There is no evidence of these people in the Swan Island area. In fact their campsites are absent from Maine's major river valleys, probably because of extreme seasonal runoff.

After 10,000 years ago, after the climate had warmed, Maine forests developed. All Native Americans who have lived in Maine since have accommodated to dense forest cover. The Early and Middle Archaic, between 10,000 and 6000 years ago, are the first settlers in the immediate vicinity of Swan Island, with a major site on the mainland nearby. These people made gouges and axes for heavy wood working, and probably traveled in dugout canoes made from large trees. The river environment was also changing as relative sea level rose. The narrows around Swan Island had not yet been flooded by the tide and may have been a series of rapids, very attractive for seasonal fishing.

Archaeological surveys of the Swan Island property have shown that the earliest habitation on the island occurred during the Late Archaic period. A fist-sized cobble, grooved for use as a net sinker, is one of the artifacts recovered, so fishing remained important. These inhabitants belonged to one or more of several Late Archaic cultures between 6000 and 4000 years ago. They, too, made and traveled in dugout canoes. Several of these cultures, including the Small-stemmed point and Moorehead phase groups made intensive use of Merrymeeting Bay as it began to flood with tidal water, fishing for sturgeon and striped bass. We do not know what season of the year they were in the Swan Island area, because no subsistence remains have been recovered.

About 3000 years ago, Maine's Native American inhabitants adopted the use of pottery, made from local clay. From 3000 years ago to the arrival of Europeans, archaeologists designate the Ceramic period. One archaeological site on the southeast corner of Swan Island contains Native American ceramics from between about 1500 and 500 years ago. This site does not appear to be the location of a large, intensively used village; and people of this time (middle Ceramic period) mostly lived in small groups and moved seasonally. Development of the birch bark canoe, an invention that occurred just before the Ceramic period, about 4000 to 3500 years ago, allowed much greater mobility on small and medium sized waterways than had the dugout canoe.

The Contact period begins about 1550 A.D. with the arrival of Europeans and the few and incomplete written descriptions of Native American life. The people of the lower Kennebec river were called Etchemin. The Etchemin, who inhabited the Maine coast from the Kennebec eastward, are the primary ancestors of today's Maliseet-Passamaquoddy in eastern Maine and the New Brunswick. Their major Etchemin village on the lower Kennebec River may have been located just east of Bath. In 1611 Father Biard visited the site and was received by Meteormite, the chief, and 40 warriors armed with bows, arrows, and wooden shields. The west side of the Kennebec river, and the Androscoggin drainage, was home to a closely related tribe called the Abenaki. (Later the term Abenaki came to be applied more widely to the closely related groups and languages across most of Maine.) The Abenaki, at the time of European contact, farmed corn, beans and squash. Horticulture had been introduced into southwestern Maine about 1000 years ago. The Etchemin, however, did not farm and relied on hunting, fishing and gathering wild plant food. A census of Maine coast Native villages, recorded about 1605-1610, mentions a village of about 80 houses and 100 warriors (perhaps 400 people) on the lower Kennebec, and another village of eight houses and 40 warriors on the Eastern River in what is now Dresden. Archaeological survey on Swan Island has failed to find any evidence of a Contact period village.



Appendix B

Floor Plans for Seven Existing Buildings
Reed & Co. Architecture

SEVEN BUILDINGS ON SWAN ISLAND

RICHMOND, MAINE

Provided for

**NATHANIEL SALFAS, AIA
BUREAU OF GENERAL SERVICES**

STATE HOUSE STATION #77

AUGUSTA, MAINE

**REED & CO. ARCHITECTURE
30 PLEASANT STREET
PORTLAND, MAINE 04101**

FEBRUARY, 1999

TABLE OF CONTENTS

PRIEST-BLEN HOUSE

TACKHOUSE

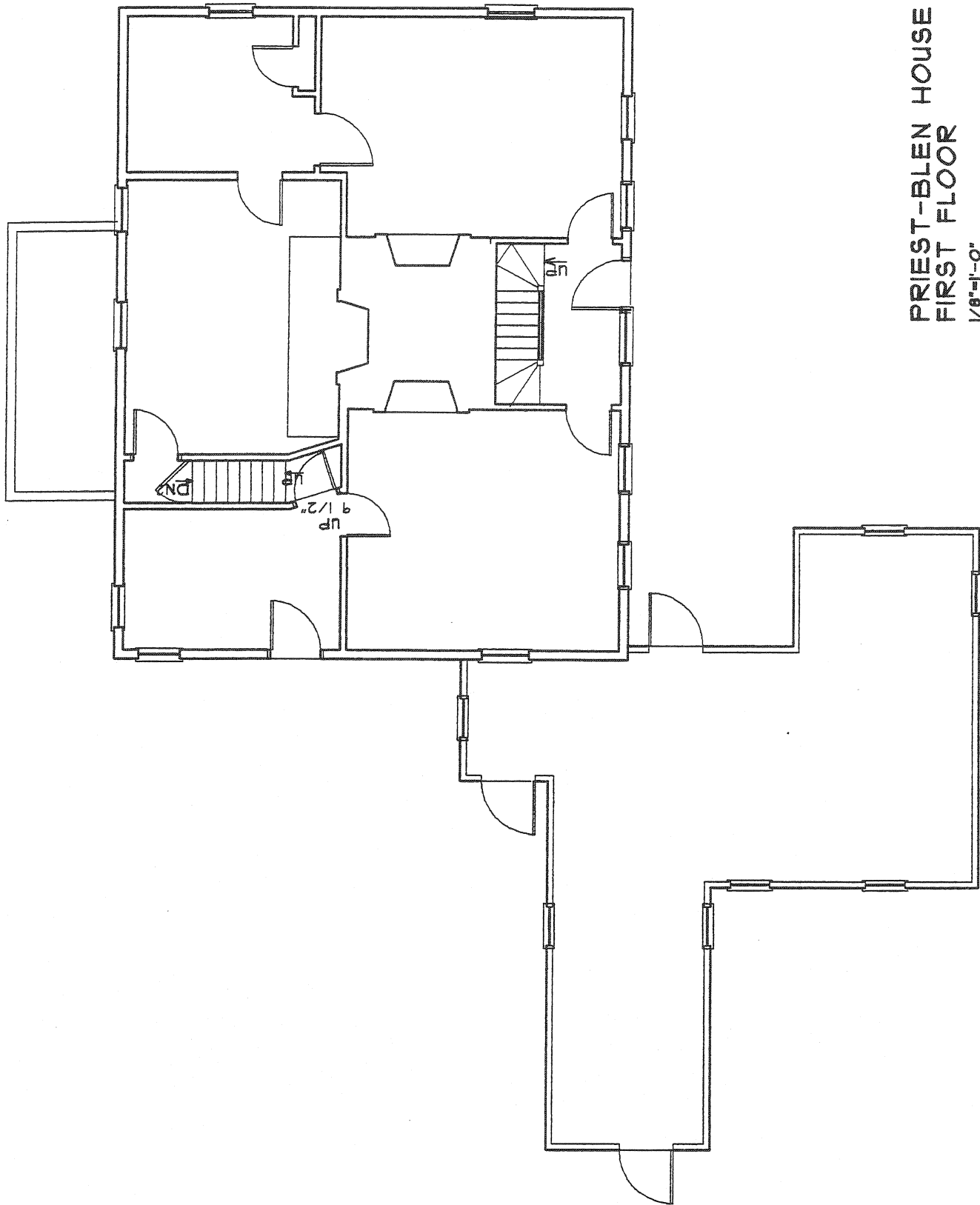
BOATHOUSE

GARDINER-DUMARESQ-HIBBARD HOUSE

ROBINSON-POWELL HOUSE

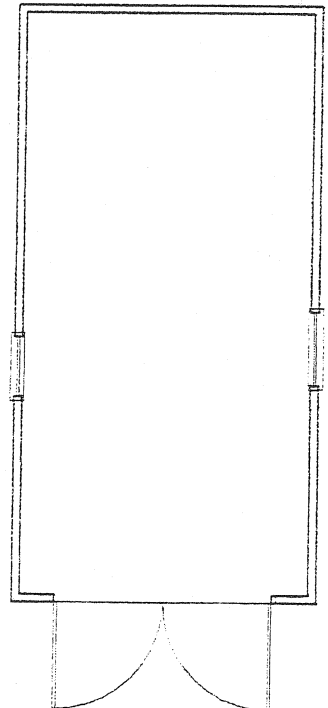
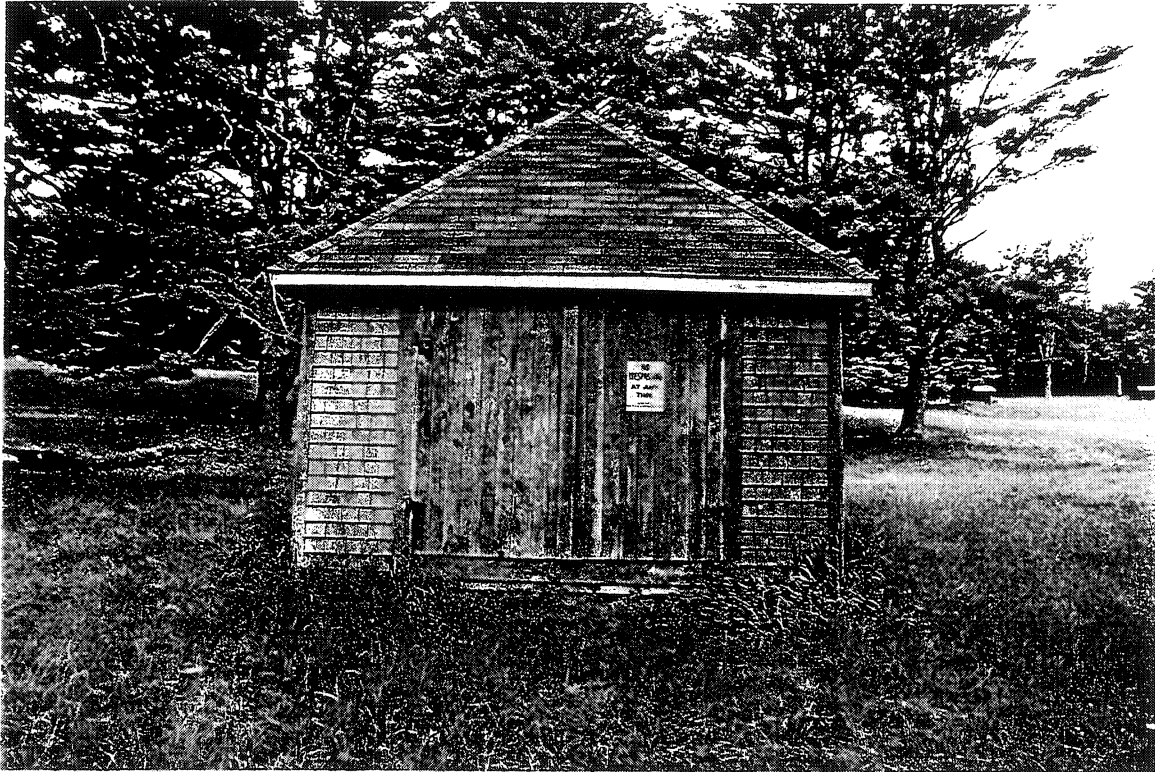
LILLY-WADE HOUSE

MAXWELL-TARR HOUSE

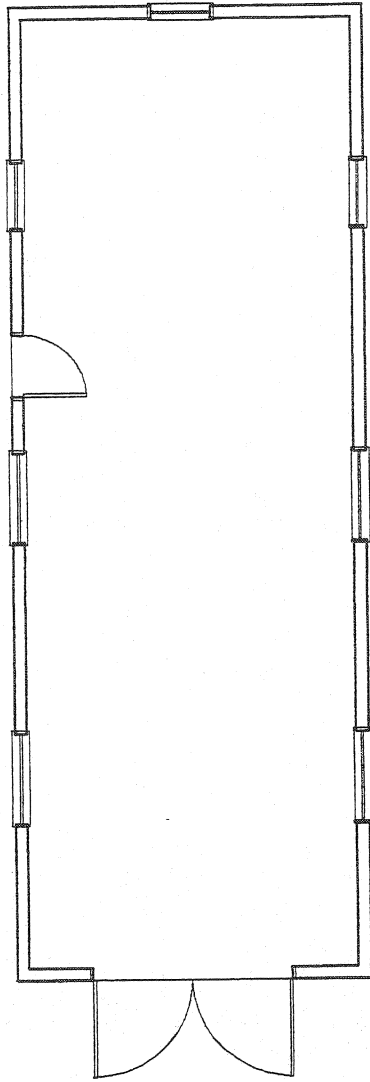


PRIEST-BLEN HOUSE
FIRST FLOOR
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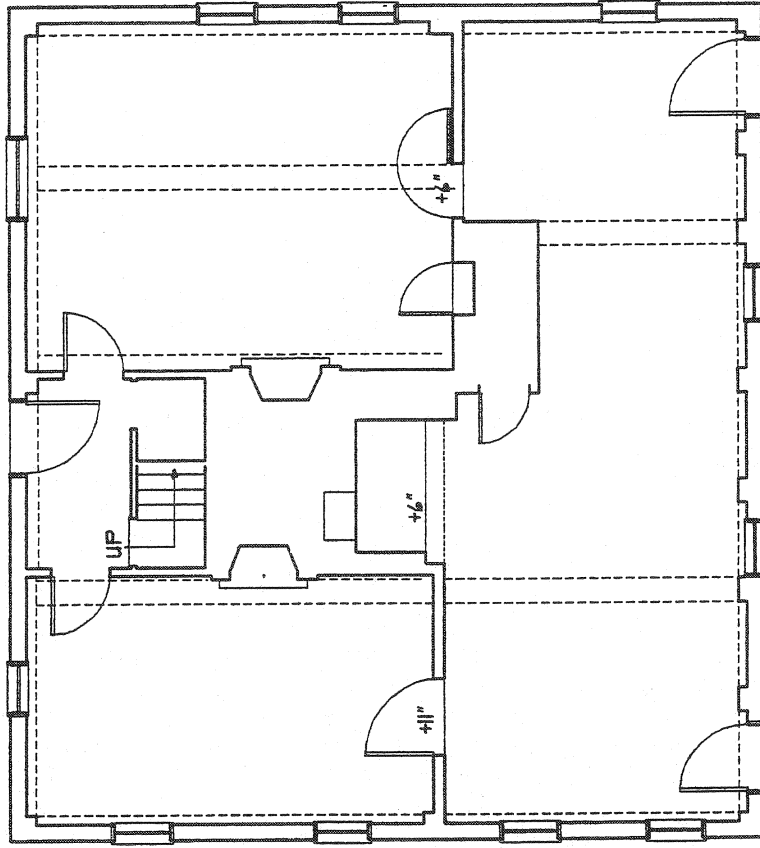
TACKHOUSE
OUTBUILDING
1/8"=1'-0"



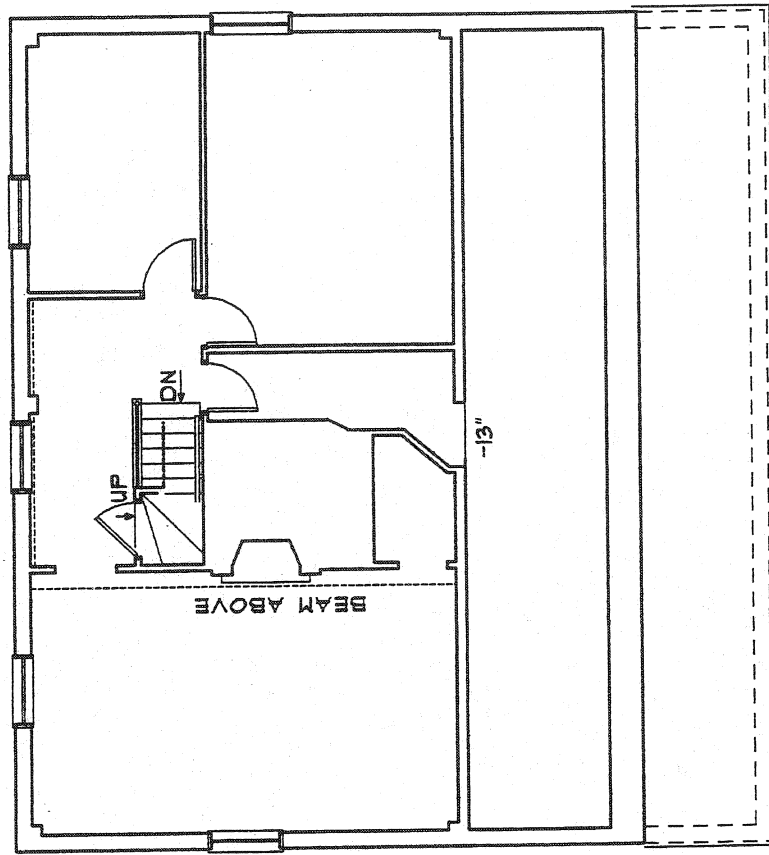
BOATHOUSE

1/8"=1'-0"



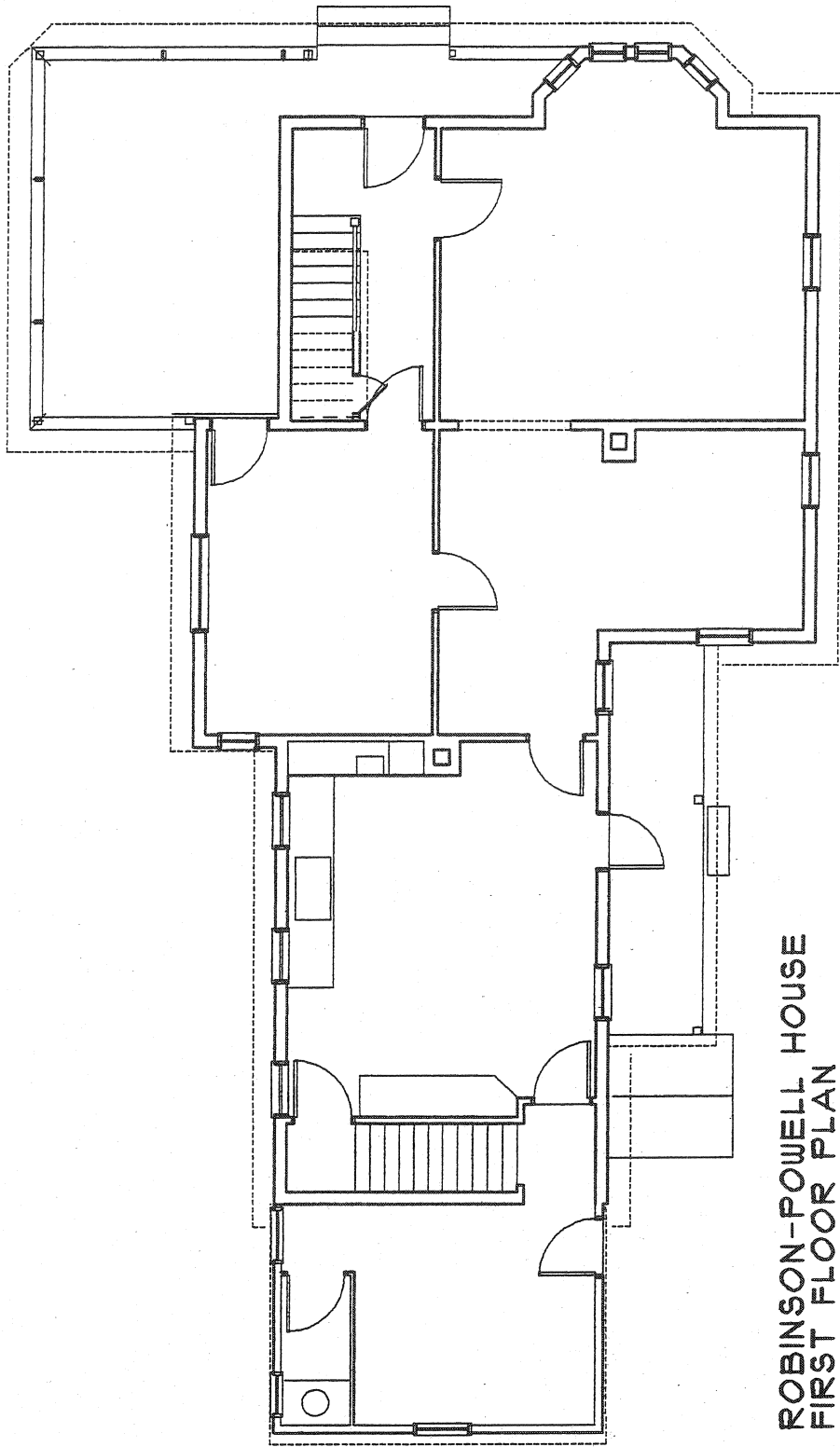


GARDNER-DUMARESQ-HIBBARD HOUSE
 FIRST FLOOR PLAN
 1/8"=1'-0"

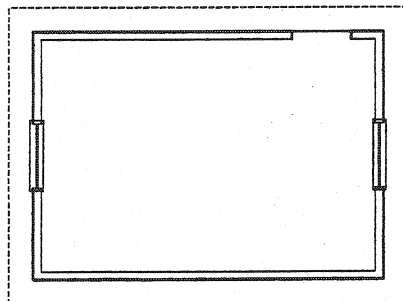


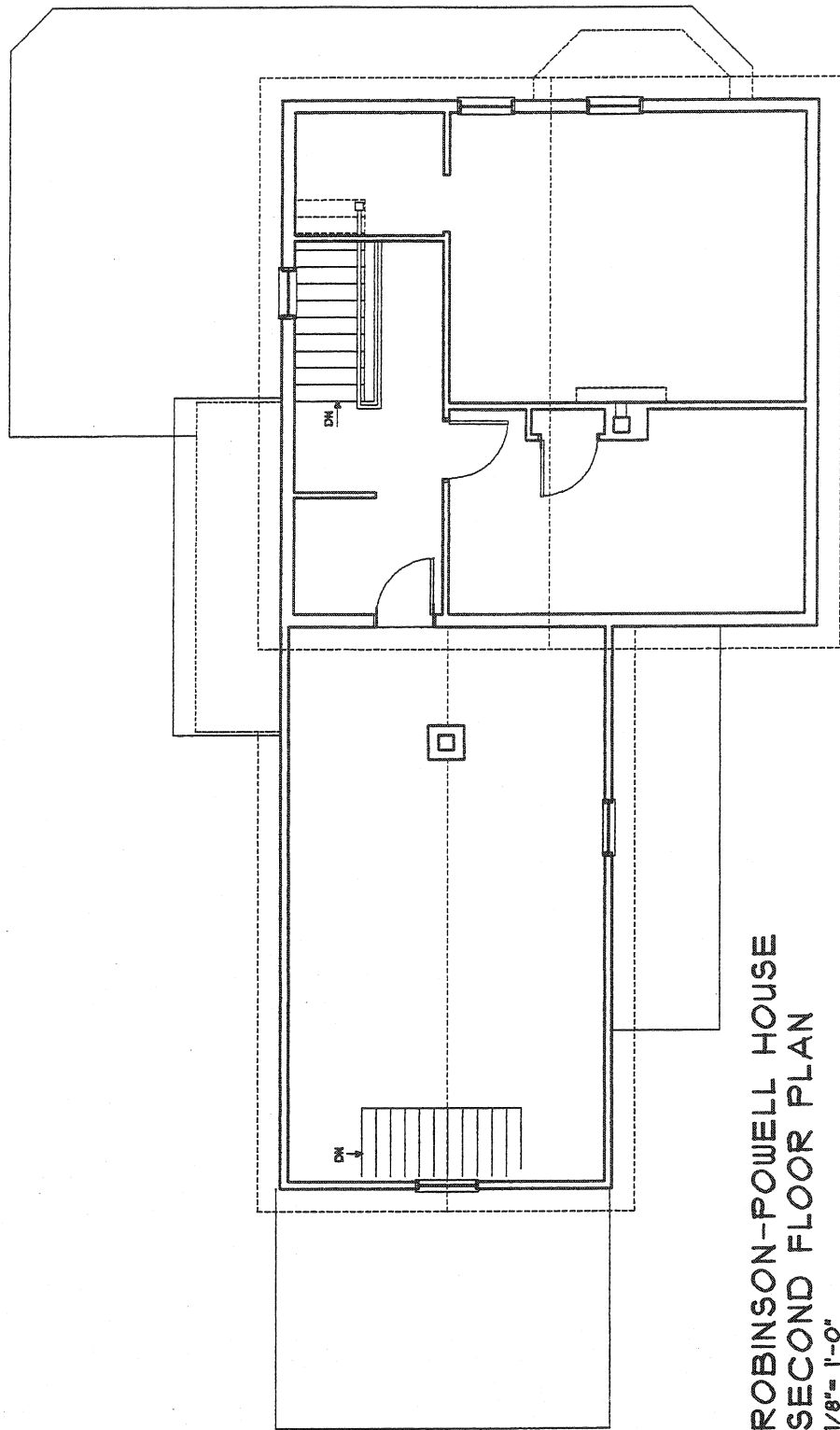
SECOND FLOOR PLAN
 1/8"=1'-0"



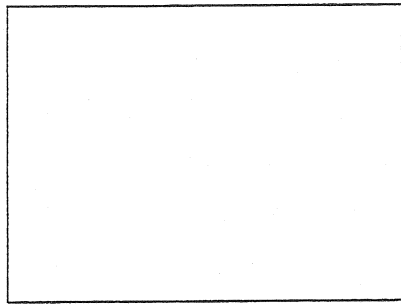


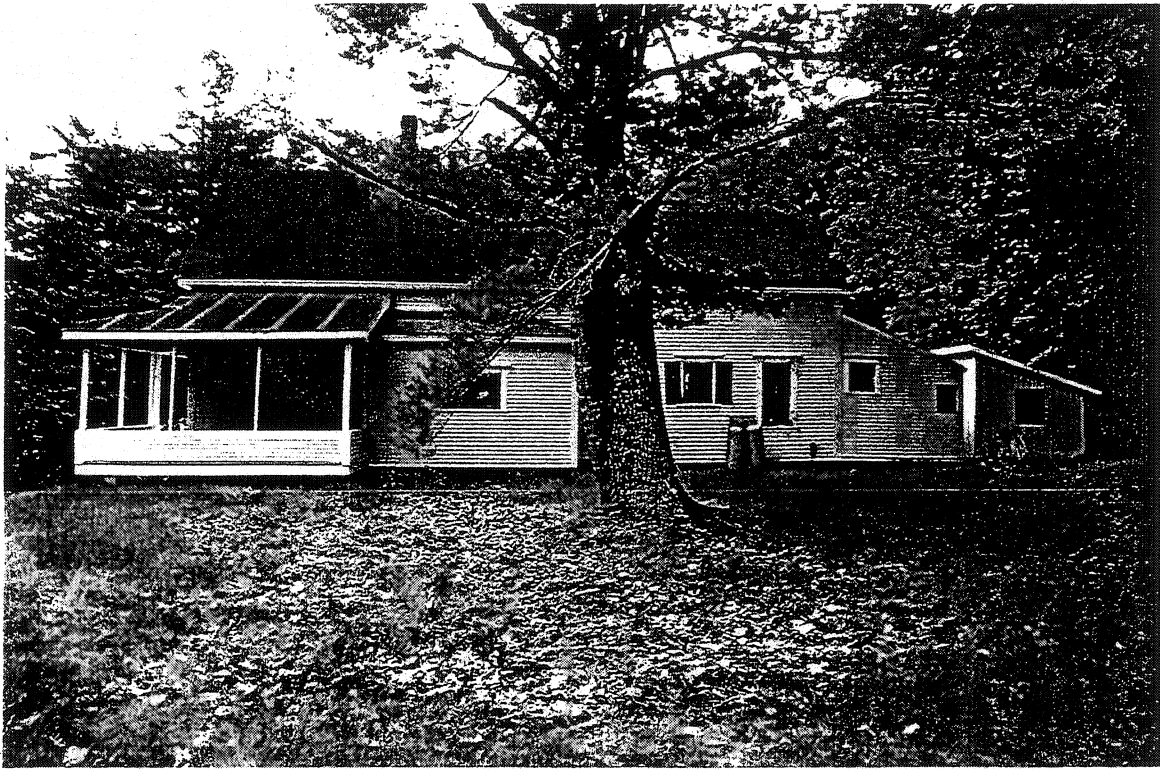
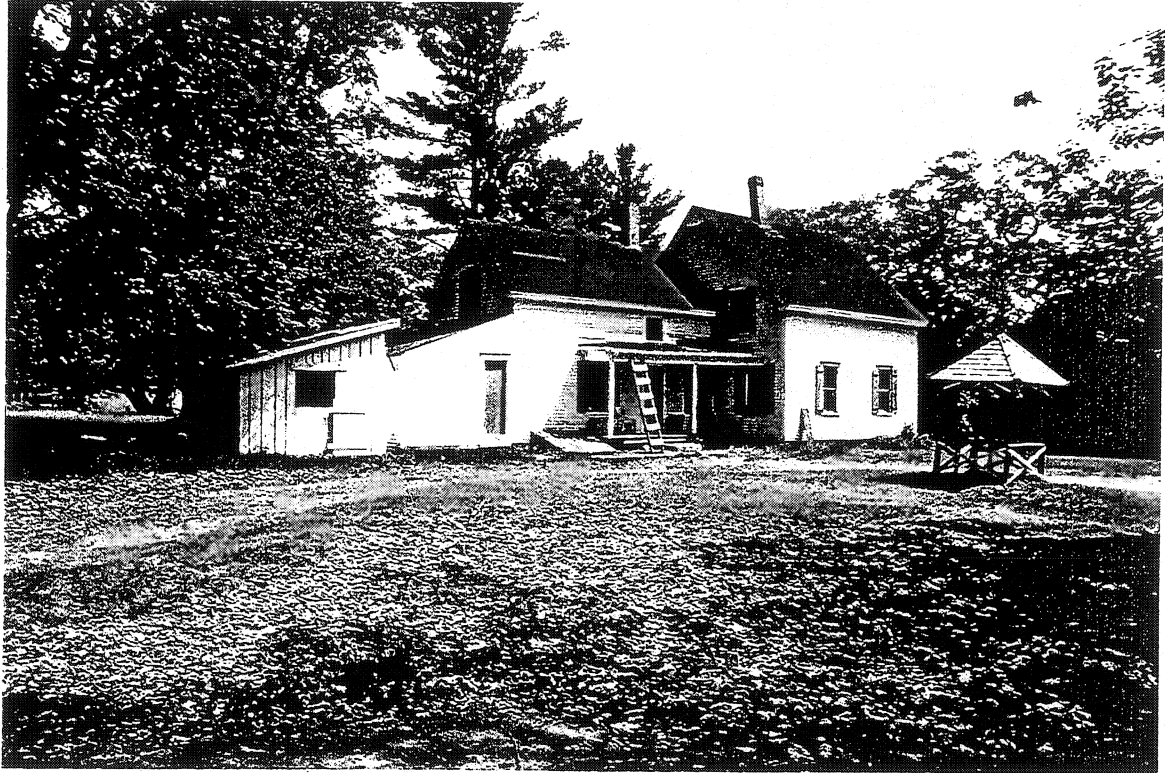
ROBINSON-POWELL HOUSE
FIRST FLOOR PLAN
1/8" = 1'-0"

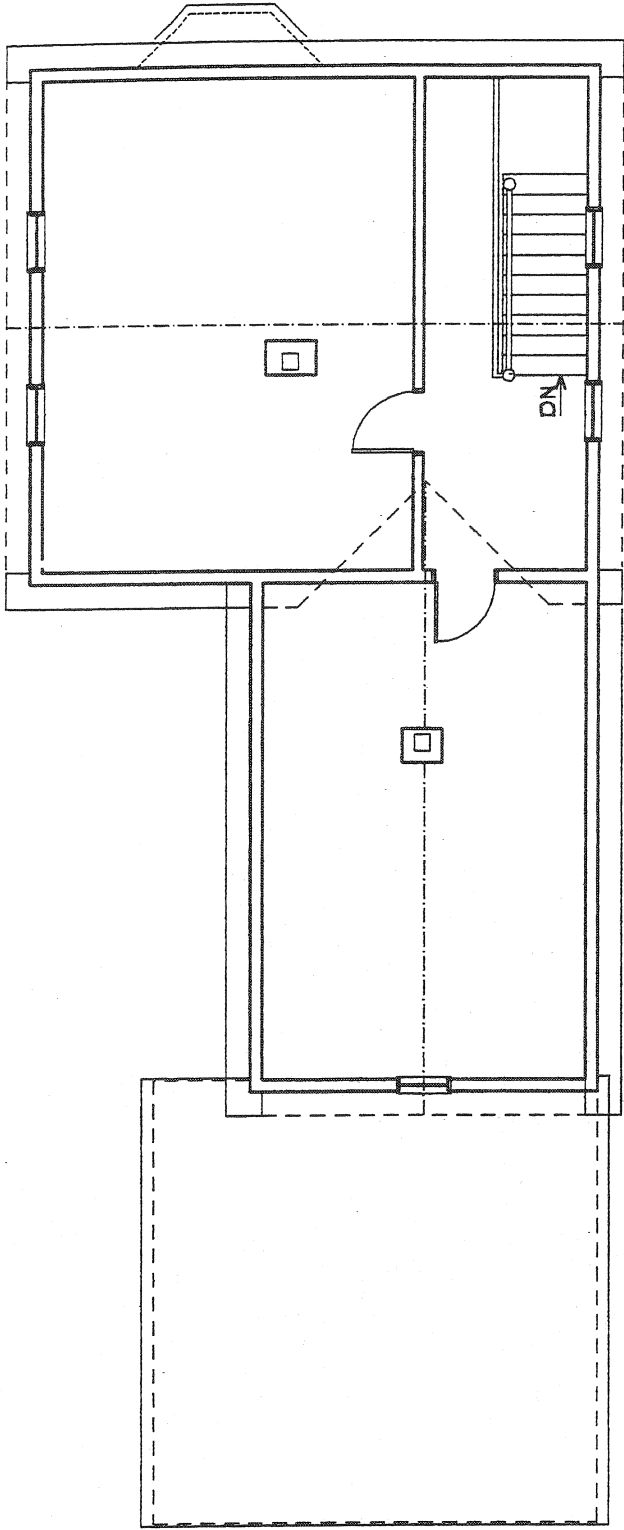




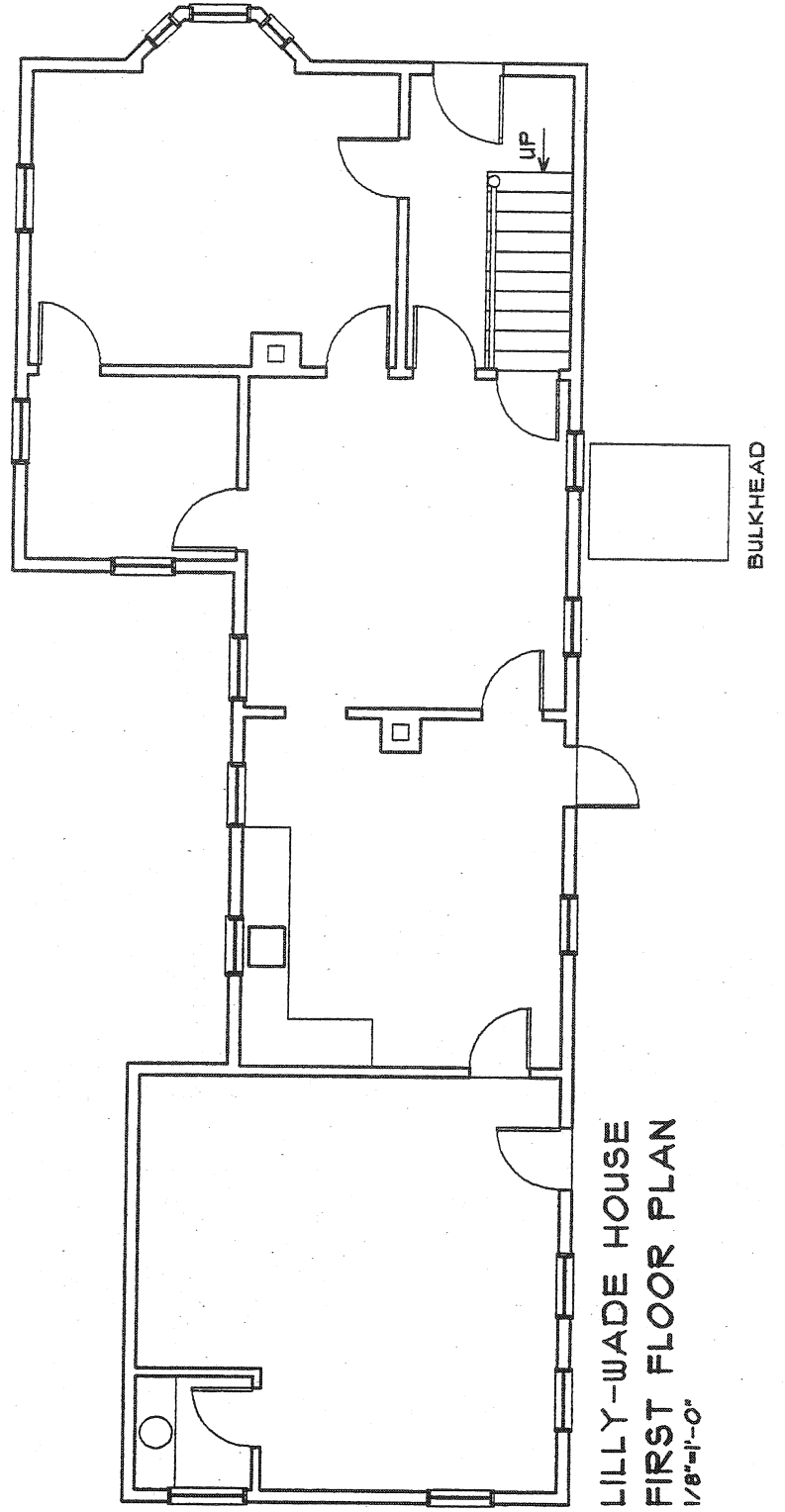
ROBINSON-POWELL HOUSE
SECOND FLOOR PLAN
1/8" = 1'-0"





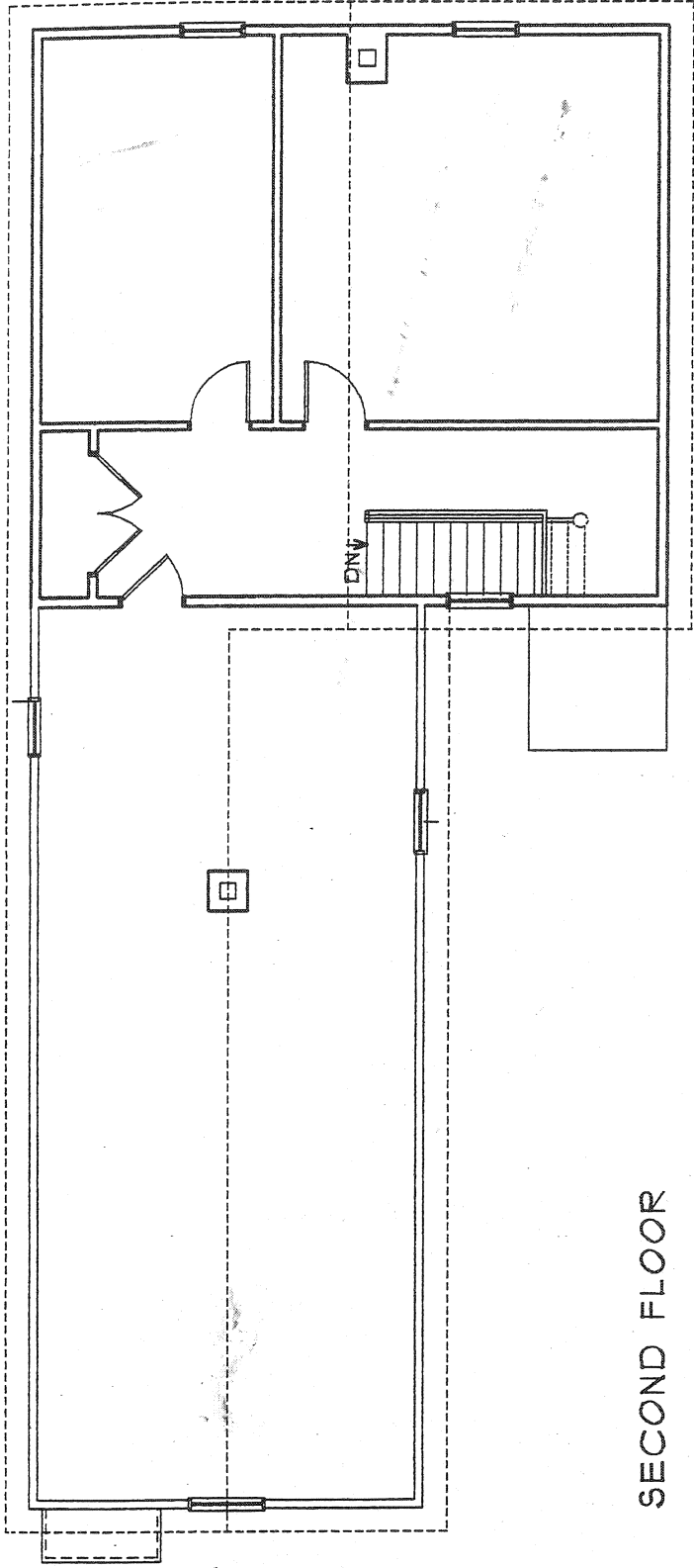


SECOND FLOOR PLAN

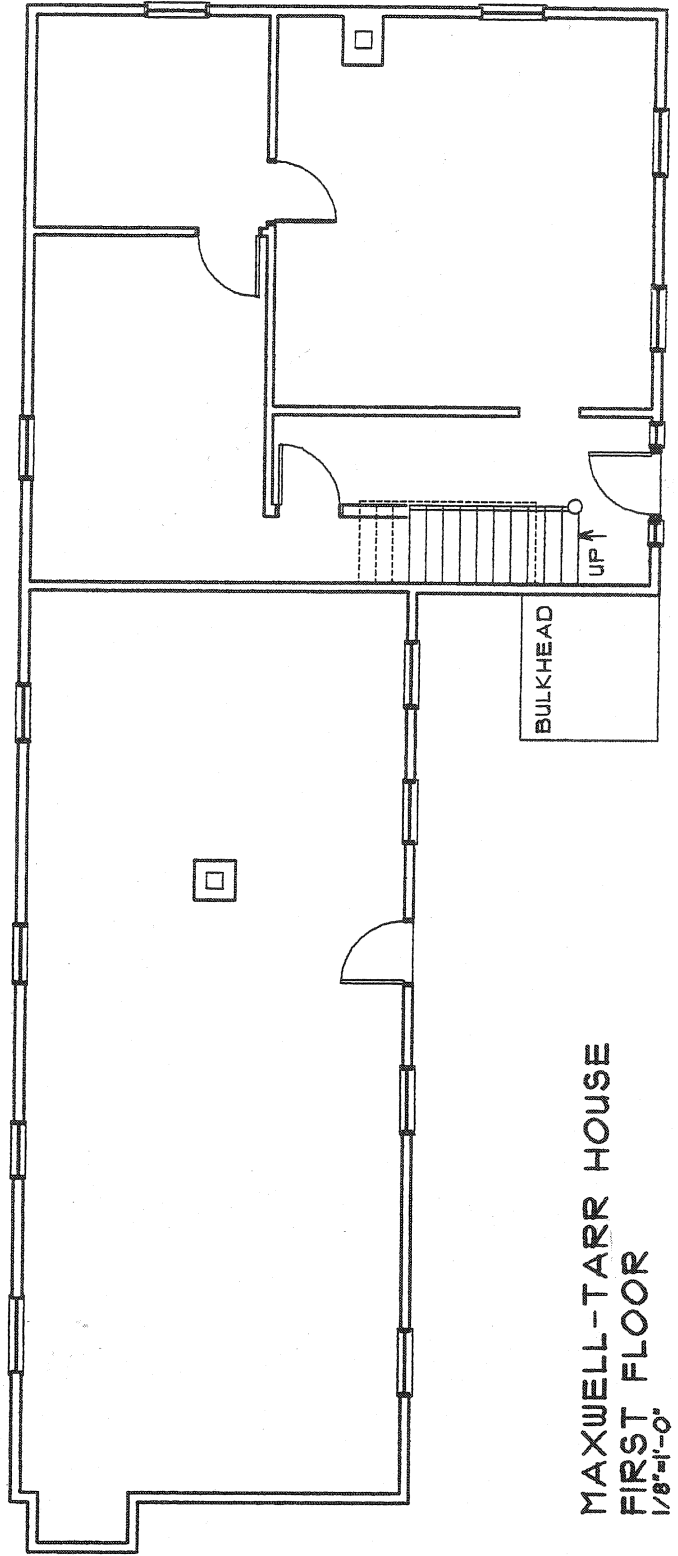


LILLY-WADE HOUSE
FIRST FLOOR PLAN
1/8"=1'-0"

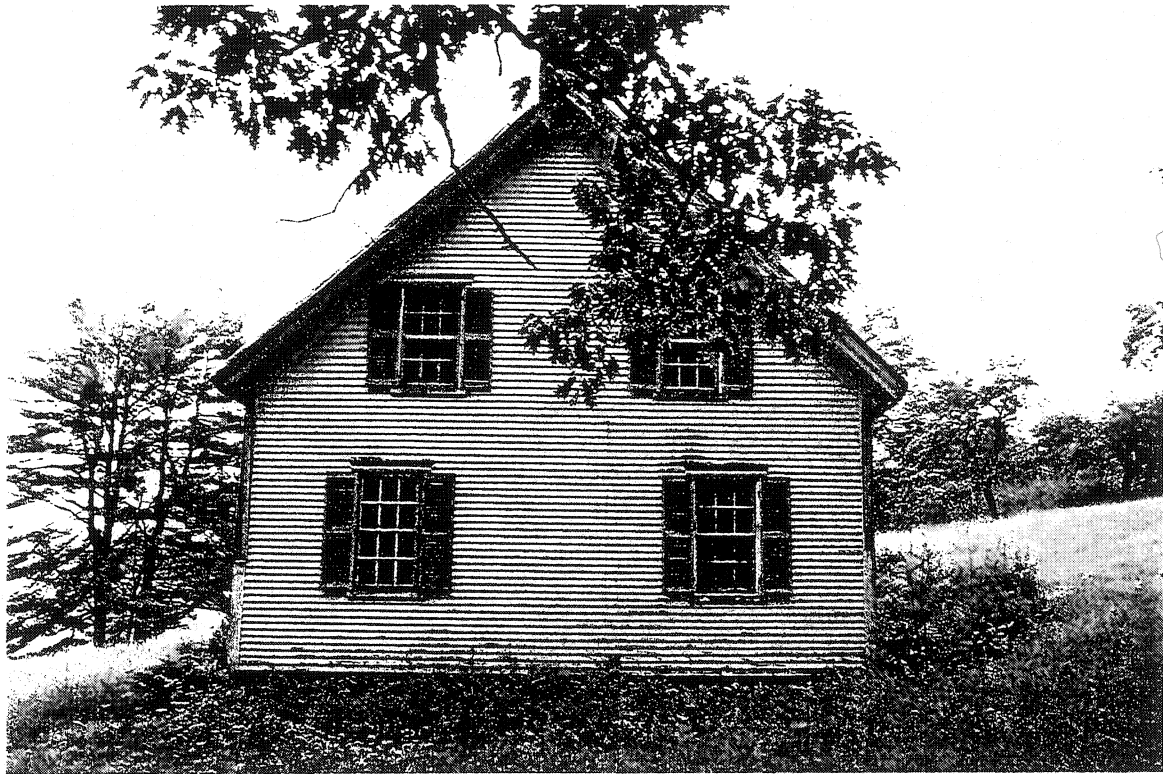


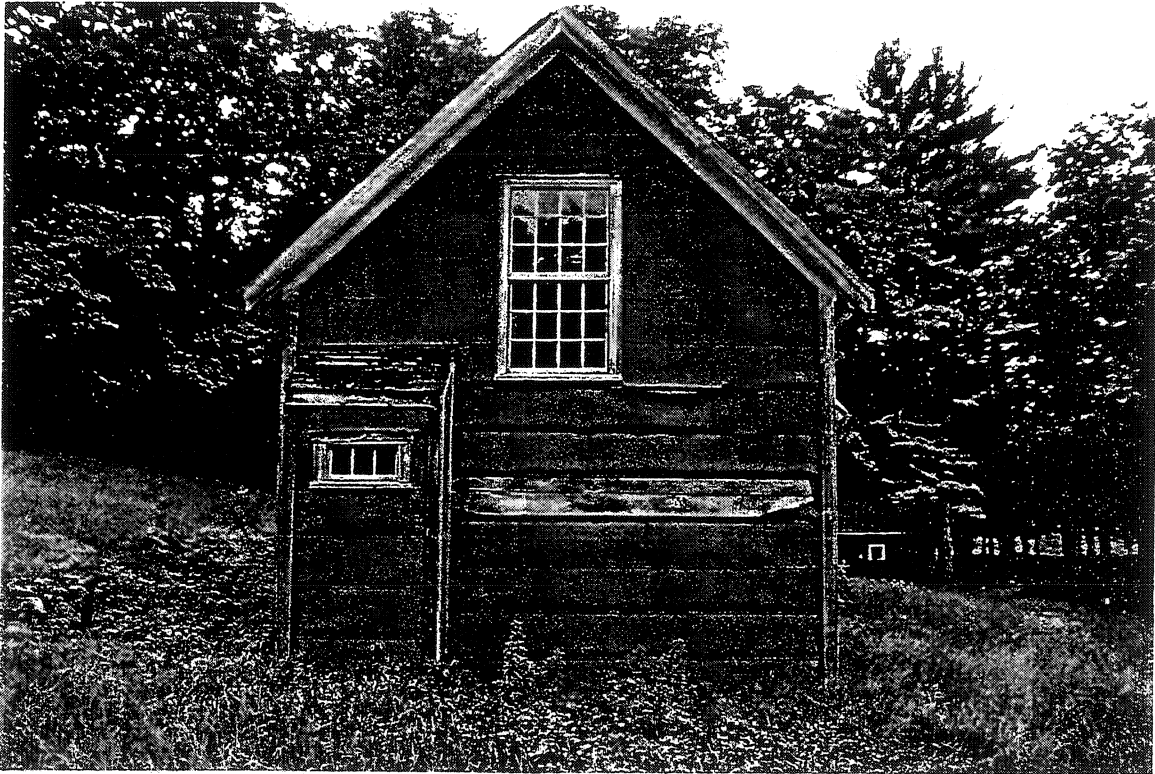


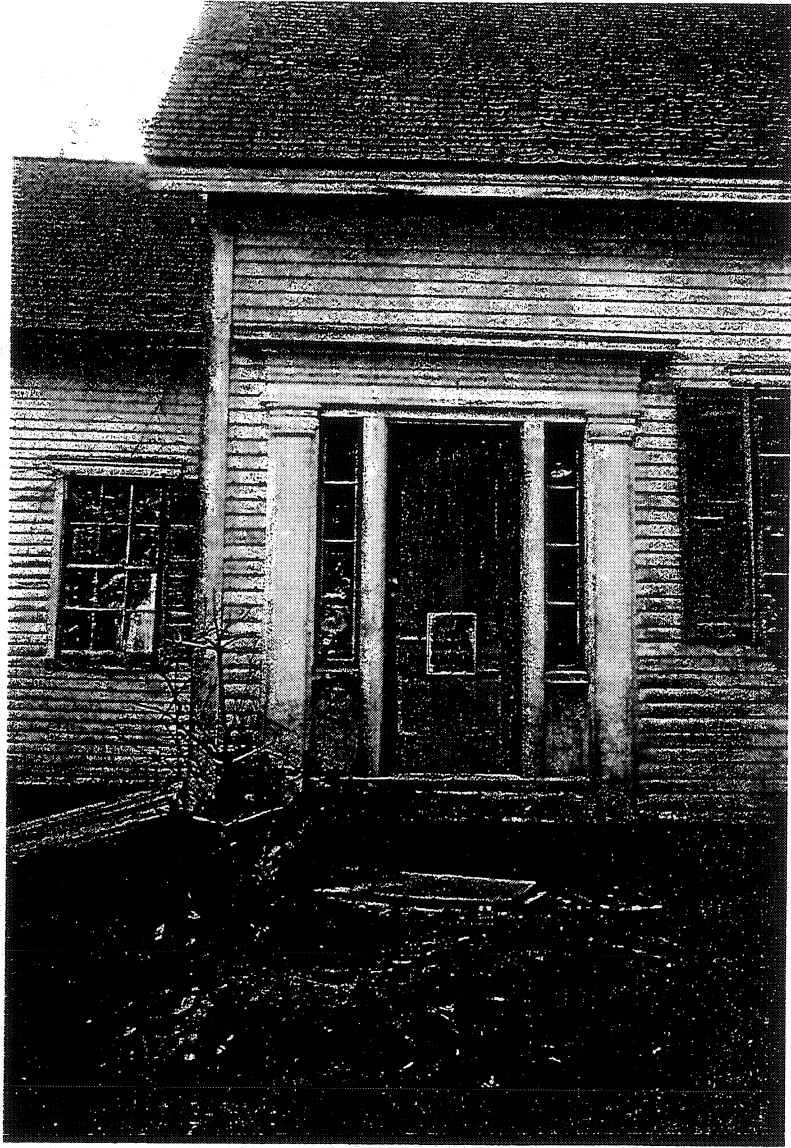
SECOND FLOOR



MAXWELL-TARR HOUSE
FIRST FLOOR
1/8"=1'-0"









United States Department of the Interior
National Park Service

National Register of Historic Places
Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Swan Island Historic District

other names/site number Perkins Township

2. Location

street & number Kennebec River, between Richmond and Dresden N/A not for publication

city or town Richmond vicinity

state Maine code ME county Sagadahoc code 023 zip code 04357

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

Signature of certifying official/Title Date
Maine Historic Preservation Commission
State of Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional comments.)

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

<input type="checkbox"/> entered in the National Register. <input type="checkbox"/> See continuation sheet.	<hr/>	Signature of the Keeper
<input type="checkbox"/> determined eligible for the National Register <input type="checkbox"/> See continuation sheet.	<hr/>	Date of Action
<input type="checkbox"/> determined not eligible for the National Register.	<hr/>	
<input type="checkbox"/> removed from the National Register.	<hr/>	
<input type="checkbox"/> other, (explain:)	<hr/>	

Swan Island Historic District
Name of Property

Sagadahoc, Maine
County and State

5. Classification

Ownership of Property
(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property
(Check only one box)

- building(s)
- district
- site
- structure
- object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
8		buildings
21		sites
5		structures
		objects
34	0	Total

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)

N/A

Number of contributing resources previously listed
in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

Agriculture/ Subsistence/Agricultural Field
Domestic/Single Dwelling
Funerary/Cemetery

Current Functions
(Enter categories from instructions)

Funerary/Cemetery
Landscape/conservation Area
Recreation and Culture/Museum

7. Description

Architectural Classification
(Enter categories from instructions)

Colonial
Federal
Late Victorian

Materials
(Enter categories from instructions)

foundation Stone/Granite
walls Wood/Weatherboard
roof Asphalt
other

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

SWAN ISLAND HISTORIC DISTRICT

SAGADAHOC, MAINE

Section number 7 Page 2

Lying at the head of Merrymeeting Bay in the Kennebec River, the Swan Island Historic District is comprised of the 1495 acres of land above the high tide line on Swan Island and Little Swan Island. Swan island is approximately four miles long and varies between one-half and three-quarters of a mile in width. The topography of the island is relatively hilly with an average elevation of between forty and sixty feet above the high water mark with peak elevations (at the northern and southern ends) exceeding one hundred feet above the Kennebec River. A steep embankment runs to the river along the west side of the island, while on the eastern side fertile fields spread gently down to meet the eastern branch of the Kennebec.

The island is roughly bisected by a road that runs from the landing at the northwest corner of the island to the southern end where it turns west and ends at Theobald's Point. In general, land to the west of the road is wooded, while that to the east is in fields. A number of stone walls run east-west across the island through woods and along the edge of fields. Areas of exposed ledge are found primarily on the west, north, and south ends of island, while loamy soil is in evidence in the eastern fields. There are several small man-made ponds located along the spine of the island.

Little Swan Island is located two-thirds of the way up and just off of the east shore of Swan Island. Just under thirty acres in size, the island is heavily wooded and rises to a height of forty feet above the high water mark. There are no standing buildings on Little Swan Island.

The District includes one late eighteenth century dwelling, one building dating from the first decade of the nineteenth century, two houses from the mid-nineteenth century, one house from the late nineteenth century, and a collection buildings dating from the first half of the twentieth century. Twenty historic archaeological sites are known to exist in addition to several prehistoric archaeological sites, none of which have as yet been fully excavated. In general, the integrity of the standing structures and historic rural landscape within the district is high. The 1907 United States Coastal and Geological Survey map and 1940's aerial photographs clearly illustrate how little the historic landscape has changed over the course of the twentieth century. Several of the islands' buildings have been neglected and are in need of immediate attention.

The archaeological sites identified within the district have high visibility and integrity and generally consist of dressed or undressed fieldstone footings, cellar walls, and chimney bases. Their excellent condition and easily observed structural characteristics are attributable to their substantial materials and well constructed masonry as well as to their relatively short lives as exposed sites. In the past decade they have shown no observable deterioration. Many of the sites correspond to house locations indicated on the 1858 wall map of Sagadahoc County.

United States Department of the Interior
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SWAN ISLAND HISTORIC DISTRICT

SAGADAHOC, MAINE

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There are thirty-four contributing resources in the district including eight buildings, twenty house sites, one landscape, and five stone walls. There are no non-contributing resources.

Inventory List

1. Tubbs-Reed Property.
c. 1800

Situated on a the second highest point on the island and overlooking the eastern branch of the Kennebec is the Tubbs-Reed House, a two story frame building thought to have been constructed about 1800 by Major Samuel Tubbs. The house is typical of Federal manner houses with its low pitched hipped roof, elongated windows, and symmetrical five bay fenestration on the main elevation. A massive chimney penetrates through the center of the cedar shingle sheathed roof. The entire house is sheathed in clapboards and rests upon a c.1969 poured concrete footing and foundation. Aside from the restrained cornice molding, the main (southeast) elevation of the house exhibits little decorative detailing. The twelve-over-twelve, double hung window sash and moldings are c.1969 replacements as are the four panel, two light door and surrounds. On both of the northeast and southwest facades are four asymmetrically placed window openings with twelve-over-twelve replacement sash and frames. The northwest facade contains five asymmetrically arranged window openings; again each containing twelve-over-twelve replacement sash and frames.

Inside, the house exhibits a number of Federal period elements; most notably on the second floor where plaster walls gently curve at the corners and areas of early nineteenth century patterned wall paper are still visible. Stenciling is visible on the floor planking at the top of the rather modest central staircase. Several period mantles with thinly molded entablatures and mantle shelves survive as do a number of early nineteenth century doors and hardware. Although areas of both wide accordian and thin sawn lathing are found on the second floor, a chronology of interior wall construction is unclear. The corbeled central chimney rests upon a large brick barrel vault in the cellar.

A number of alterations to the Tubbs-Reed House took place during the late 1960's including the replacement of the original footing and granite slab foundation with a poured concrete foundation, the replacement of six-over-six double hung sash and window frames, and the removal of an enclosed portico on the southeast elevation. An ell on the southwest side of the

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SWAN ISLAND HISTORIC DISTRICT

SAGADAHOC, MAINE

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house was apparently also removed during this campaign as was a large barn which stood just across the road. The house has never been plumbed, serviced by electricity, or centrally heated. Several pieces of furniture belonging to the Reed family remain in the house. During the mid-nineteenth century, the property comprised 120 acres at the extreme north end of the island.

The Tubbs-Reed House was built just after 1800 by Major Samuel Tubbs (1739-1810) of Berkeley, Massachusetts. Tubbs was reportedly commissioned a Major in the Massachusetts militia in 1776, and as a reward for his service during the American Revolution was apparently granted land at the head of Swan Island. It is interesting to note that Tubb's land grant appears to have been set off from Silvester Gardiner's Swan Island property. At various times, Tubbs is known to have served as selectman, assessor, town moderator, and school moderator for the Town of Dresden of which Swan Island was a part. Tubb's son Samuel, Jr. probably lived in the house until the 1830's when Captain David Reed married Drusilla (the daughter of Jonathan Tallman of Swan Island) and purchased the house. Drusilla Reed is listed as living in Swan Island in the 1900 Census as is her grandson Ralph who worked as a pharmacist in Richmond.

2. Priest Property . c. 1930

The Priest Property may have been subdivided from the Hebbard (or Gardiner) property on the north side of Perkins highway sometime during the late 1800's or early 1900's. On it stands a one and one-half story frame house with a gambrel roof and side ell (also with a gambrel roof). Sheathed in painted wood and asbestos shingle, this house features shed dormers, an enclosed porch, and two-over-one double hung sash. The Priest house appears to date from c. 1930 and presently functions as housing for Inland Fisheries and Wildlife staff. Three frame, gabled outbuildings are located southeast of the main house and are presently used by I. F. & W. for maintenance and storage. A large frame building with a shed roof and textured pressed metal sheathing known as the machine shop is located just across the road from the outbuildings. This building possibly dates from the 1940's.

3. Turner-White House Site.

Dry-laid fieldstone cellar containing a scatter of nineteenth/early twentieth century brick; maximum dimensions 40 feet north to south, 32 feet east to west.

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SWAN ISLAND HISTORIC DISTRICT

SAGADAHOC, MAINE

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4. Lewis House Site.

Dry-laid fieldstone cellar and ell footing containing a scatter of nineteenth/early twentieth century brick; maximum dimensions 50 feet north to south, 37 feet east to west; field-stone-lined wells 50 feet and 100 feet to the north of the foundation.

5. Underwood-Hebbard House Site.

Dry-laid fieldstone cellar with a small percentage of dressed granite; cellar T-shaped with maximum dimensions 41 feet east to west, and 40 feet north to south; field-stone lined well 10 feet to the northwest of the ell.

6. Boathouse.
c. 1900

The boathouse is a hip roofed, one story frame structure sheathed in wood shingle and located just north of the Gardiner Dumaresq house on the shore of the eastern branch of the Kennebec. Three six light, fixed-pane windows punctuate the north and south elevations of the building. No information is known about the boathouse's construction, however it does appear in a c.1900 photograph of the Gardiner-Dumaresq House.

7. Gardiner-Dumaresq Property.
c. 1763

Constructed by the Kennebec Proprietor Dr. Silvester Gardiner about 1763, the Gardiner-Dumaresq House is one of only several saltbox houses in Maine. Facing east to Swan Alley (the eastern branch of the Kennebec River), the two-story saltbox house is sheathed in clapboards and features a massive central chimney. The main (east) facade is symmetrically organized into three bays with a centrally located door just above grade. The cornice on the east elevation meets the architraves of the second floor windows, while the longer roof line slopes down to the top of the first floor on the west elevation. Four bays wide, this elevation contains two centrally located six-over-nine double hung sash, and two flanking doors. The north and south elevations both feature three nine-over-six sash set irregularly on the first floor, a six-over-six window on the second story, and one small one-over-one window on the attic story. All the windows and doors on the house appear to have been replaced during a restoration effort in the late 1960's. The house rests on a poured concrete foundation which dates from this same restoration campaign.

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SWAN ISLAND HISTORIC DISTRICT

SAGADAHOC, MAINE

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As is the case with the exterior, a number of significant alterations have taken place on the interior of the Gardiner-Dumaresq house. Much of the early plaster on the first floor of the building has been replaced with sheetrock. Flooring in the lean-to area also appears to have been replaced recently. A stone base featuring a brick lined barrel vault in the cellar supports the chimney breast. While several early mantels do survive, the fireplaces and hearths have been reconstructed or repaired with new brick and Portland cement in most cases. Very simply detailed timber casings survive in the four corners of the house on both the first and second floors. A modest central staircase provides access to the second floor of the house. Much of the historic plaster, molding, and flooring survives on the second floor as does the winding stairway which provides access to the attic area where virtually all of the historic roof framing system survives, remarkably intact.

In the late nineteenth century, the Gardiner-Dumaresq House had two-over-two double hung windows, a one-story projecting bay on the north elevation, and a Colonial Revival manner portico extending from the facade. These features were probably removed from the building in the late 1960's when an attempt was made to restore the house to its eighteenth century appearance.

Silvester Gardiner (1708-1786) apparently built the house about 1763 as a summer residence for his daughter Rebecca (b.1745) and her husband Philip Dumaresq (1737-1800) It is not known how much time these Boston residents spent on the island, but after the American Revolution Philip (a Loyalist) was sent into exile in the West Indies. According to Robert Hallowell Gardiner, Rebecca and Philip's son, James Dumaresq (b.1772) exchanged some land bequeathed to him in Pittston for the Swan Island farm that his grandfather had left to his uncle John Silvester John Gardiner. Although the land was described as being, "very good" James apparently did little farming, preferring instead to hunt and visit his cousin Robert Hallowell upriver at the Oaklands estate in Gardiner. Returning to Swan Island after one such visit in the autumn of 1826, James' boat struck a "flaw" and he was drowned.

After James' death, his son Philip Dumaresq and sister Jane Frances Rebecca Perkins appear to have used the property at Swan Island exclusively as a summer residence. In 1855, Philip's wife Margaret Deblois, daughter Frances, and a friend drowned while swimming in Swan Alley. Philip (a ship captain), was subsequently lost overboard and drowned in Long Island Sound on June 25, 1861.

Thomas Handasyd Perkins (after whom the Town Of Perkins was named) was introduced to Swan Island during by his wife Jane Frances Gardiner (daughter of James) in the 1820's. They

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SAGADAHOC, MAINE

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reportedly built a new house for themselves one hundred yards to the north of the existing house. This house was destroyed in 1839, after which time the Perkins stayed in the old house. Writing in 1863, Thomas Perkins, Jr. described the Gardiner- Dumaresq house and land of his youth as:

“... as firm and strong as a white oak frame and wrought nails ever stood, a most picturesque object with its great porch, huge chimney, and long, sloping roof ... On both sides of it, and to the rear , was a great grass field, while at the back was the virgin forest, which had never been cut but thinned from time to time ... the place (property) was a small one, only about two hundred acres.”¹

The Gardiner-Dumaresq property was purchased by Dr. E.C. Hebbard of Boston in 1900 who called it “Swango” after the reputed Abenaki name for the island. Hebbard appears to have subdivided the property during the early twentieth century. The State of Maine purchased the property from Ida M. Hebbard in the 1940's.

8. Robinson House and Shops. c. 1885

Located just south of the Gardiner-Dumaresq House, the Robinson House is a two-and-a-half story gable front frame building with connecting rear ell and shed. The house is sheathed in clapboards, rests on a brick foundation, and features modest Italianate elements.

The two bay wide front elevation of the house is oriented to the eastern branch of the Kennebec River and includes a wrap around porch through which access to the side hall is achieved. Both the porch and a first floor bay window are surmounted by a shed roof which is visually supported by Italianate brackets. The two-over-two double hung sash, found throughout the house, are surmounted by projecting Italianate hood moldings. A frieze (supported at each corner by simply rendered pilasters) runs under the eave on the north and south elevations of the house. The asphalt shingle roof on the main house and ell are both penetrated by centrally located brick chimneys.

A small porch on the rear ell is supported by simply carved posts and Italianate brackets set under the eaves. The pilasters and frieze found on the main house continue on the ell. One small window on the north and south sides of the ell interrupt the course of the frieze. A small lean-to shed is located at the back of the ell.

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Two frame out buildings are located just to the south of the main house. The larger of the two features an Italianate round arch six-over-six double hung windows and and crown molding on the gable end. Believed to have been constructed in the 1880's the building also has two-over-two double hung sash (similar to those on the main house) on its sides and double track mounted doors on the gable end. The smaller building has a row of four windows directly under the eave on both the east and west sides. A small hipped roof structure of recent construction stands above the well located in the middle of the looped driveway.

Little is known about the Robinson House, which appears to have been constructed sometime during the 1880's. James Alvin Robinson was born in 1862 and appears in the 1880 Census of Perkins as 25 years of age and a farmer. The 1893 Census lists Robinson as being a fisherman and in 1910 his age is given as 48 and he is referred to as a "carpenter, boat builder". The property upon which the Robinson house sits was sold to I.F.W. in the 1940's.

9. Curtis Cemetery.

Headstones dating from 1802 to 1968.

10. Call Cemetery.

Headstones dating from 1822 to 1864.

11. Curtis House Site.
by 1858

Dry-laid fieldstone L-shaped cellar containing nineteenth-century bricks; maximum dimensions 42 feet north to south, 74 feet east to west; bulkhead cellar entrance on south side of house; fieldstone-lined well approximately 50 feet south of the house; single-course fieldstone footing for a barn (15 feet by 25 feet) to the west of the ell.

12. Washington-Call House Site.
by 1858

Dry-laid fieldstone cellar and ell footing; maximum dimensions 75 feet north to south, 26 feet east to west; fieldstone-lined well with quarried granite cap 29 feet north of the house

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northeast corner; possible fieldstone footings for one or more outbuildings about 65 feet south of the south end of the ell; about 100 feet south of the possible outbuildings a fieldstone-lined well (to service a barn?).

13. **Tollman-Derrah House Site.**
by 1858

Dry-laid fieldstone cellar; maximum dimensions 27 feet north to south, 36 feet east to west; 4 quarried granite posts (one still in situ) east of former facade -- presumably supports for a porch; fieldstone-lined well 72 feet northwest of the northwest corner of the house; indistinct footing of a small outbuilding about 75 feet northwest of the well, with a steel water-pipe (twentieth-century) running northwest to a water-filled swale.

14. **Lewis House Site.**
by 1858

Dry-laid fieldstone cellar; maximum dimensions 18 feet north to south, 15 feet east to west; fieldstone bulkhead entrance to cellar on south side; poured concrete foundation 12 feet to east of house, measuring 8 ½ feet north to south, 6 feet east to west.

15. **Wade House Site.**
by 1858

Two abutting, off-set dry-laid fieldstone cellars; maximum dimensions 56 feet north to south, 29 feet east to west; poured concrete bulkhead cellar entrance at south end; poured concrete well-head 34 feet to the west (lining of well not visible); fieldstone footing for outbuilding to northwest of well, measuring 19 by 19 feet; fieldstone footing for another outbuilding 67 feet north of the 19 by 19 foot outbuilding, measuring 22 feet north to south, 14 feet east to west; poured concrete well-head 110 feet east of the cellars (lining of well not visible).

16. **Lilly-Wade House .**
c. 1860

Situated on the west side of the road, two-thirds of the way down the island is the one-and-a-half story frame Lilly-Wade House. This simple, clapboarded, side gable house has a one

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story bay window on the facade, and a two-part ell extending off the rear of the house. Projecting Italianate window moldings surround all of the two-over-two double hung sash on the house. The most notable decorative feature on the house is the delicately carved Italianate door surrounds. The house is currently in very poor condition with extensive wood deterioration on both the exterior and interior.

William Lilly appears in the 1860 Valuation of Real and Personal Property in the Town of Perkins as farming 20 acres of land and owning one cow. In the 1860 Census Lilly is listed as a thirty eight year old house joiner. Joseph Wade, a river fisherman, is thought to have lived in the house during the first decade of the twentieth century.

17. Lovett-Leavett-Consumer House Site.
c. 1880

Dressed granite, T-shaped cellar with a chimney-base and a brick cistern in the ell; maximum dimensions 38 feet north to south, 53 ½ feet east to west; two internal end-chimney bases in the house cellar with associated nineteenth-century bricks; fieldstone-lined well 187 feet to the west of the cellar; fieldstone footing 170 feet northwest of the cellar, measuring 31 feet north to south, 43 feet east to west (barn?).

18. Maxwell-Tarr House .
c. 1850

Located on a rise overlooking agricultural fields and Maxwell Cove (known as Whidden's Bay during the eighteenth century) on the southeast corner of the island, is the one-and-a-half story frame Maxwell-Tarr House. The side gabled house is sheathed in clapboards, has a side ell, rests upon a granite foundation, and features modest Greek Revival/Italianate transitional decorative elements. Chief among these is the side hall doorway on the main house which is flanked by three-quarter sidelights and carved pilasters that carry a heavily projecting crown molding. Other than a small three light clerestory window on the ell, six-over-six, double hung sash are the only windows found on the house. Simple crown moldings surmount all of the window openings. The asphalt shingle roof has a moderately steep pitch and large overhang. Significant areas of deterioration are to be found on both the exterior and interior of the house.

The property appears on the 1852 map of the Town of Perkins as belonging to E.C. Hatch who, in the 1860 Valuation of Real and Personal Property in the Town of Perkins, is listed as

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owning 44 acres of land. A ship captain, John Maxwell appears to have moved onto the property from Bowdoinham sometime during the 1870's. The 1878 Census lists him as owning 49 acres with a total value of land and buildings at \$775.00. The Maxwell-Tarr property was one of the last active farms on the island when the Tarr's resided there during the 1920's.

19. **Tupper-Reed Barn Site.**
c. 1800

Dry-laid fieldstone cellar with footings for wings on south and west; maximum dimensions (including wings) 105 feet north to south, 62 feet east to west.

20. **Tupper-Reed House Site.**
c. 1800

Dry-laid fieldstone cellar with a fieldstone chimney-base at its south end; maximum cellar dimensions 45 feet north to south, 25 feet east to west; fieldstone bulkhead on south side.

21. **Unnamed foundation.**
by 1858

Dry-laid fieldstone footing; maximum dimensions 47 feet north to south, 39 feet east to west.

22. **Barker-Harward House Site.**
1770

Dry-laid fieldstone cellar with associated eighteenth/early nineteenth-century bricks; approximate maximum dimensions 21 feet north to south, 20 feet east to west.

23. **Theobald Barn Site.**
c. 1880

Individual, widely-spaced fieldstones (12-foot centers) for a footing measuring 58 feet north to south, 39 feet east to west.

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24. Red Camp Site.

Collapsed frame building. Cut and wire nails observed on site.

25. Charles Smith House Site.
c. 1900

Collapsed late nineteenth/early twentieth-century house (nothing other than wire nails evident), originally clapboarded; nature of foundation undetermined (hidden by fallen walls and roof).

26. Sarah Lilly House Site.
c. 1850

Depression containing apparent fill, now alder-covered; no accurate measurements possible.

27. Day-Lewis House Site (Little Swan Island).
c. 1820

Dry-laid fieldstone cellar with fieldstone footing for ell running to the northeast; maximum dimensions of house and ell 18 feet northwest to southeast, 76 feet northeast to southwest; chimney-base of dressed granite in cellar; fieldstone chimney-base in ell; fieldstone-lined well 5 feet from southeast wall of ell; fieldstone barn foundation 65 feet to north of ell, with dimensions 24 feet north to south, 44 feet east to west, and a 15-foot-long fieldstone ramp nearly centered on the exterior of the south wall.

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Endnote

1. Proceeding of Massachusetts Historical Society, 2nd Series, Vol. VII, 1891, p. 431.

Swan Island Historic District
Name of Property

Sagadahoc, Maine
County and State

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- A** owned by a religious institution or used for religious purposes.
- B** removed from its original location.
- C** a birthplace or grave.
- D** a cemetery.
- E** a reconstructed building, object, or structure.
- F** a commemorative property.
- G** less than 50 years of age or achieved significance within the past 50 years.

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering

Areas of Significance

(Enter categories from instructions)

Agriculture

Architecture

Archaeology/Historic Non-Aboriginal

Community Planning and Development

Industry

Period of Significance

1763-c. 1940

Significant Dates

1763

1847

1871

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

Unknown

Primary location of additional data:

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository:

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The assemblage of resources that lie within the Swan Island Historic District comprise a remarkably well preserved historic vernacular landscape that reflects the agrarian community that flourished there from the 1760's until the second decade of the twentieth century. The district is eligible for National Register nomination under criterion A for its association with the history and development of this community, and criterion C for the significance of its architecture and distinctive agrarian landscape.

Swan Island's historic archaeological resources are eligible for listing in the National Register under criterion D for a number of reasons. The Euro-American sites of the eighteenth, nineteenth, and early twentieth centuries will all provide fundamental data on diet, trade patterns and standards of living. Material culture may reflect the beginnings, the agricultural heyday, and the rapid decline reflected in the historical record. As such, the extinct community of Swan Island/Perkins could easily become a laboratory for archaeological data on most of the periods of American history from a century before to a century and a half after the Revolution. There is nothing equivalent to this resource anywhere else in coastal Maine.

In addition to the important information contained in the known sites, it is expected that valuable data will be learned from the earlier and as yet unconfirmed sites. The Maine Historic Preservation Commission in the mid-1970s determined that Euro-American sites dating from the first settlement period (1604-1676) and the period of the frontier wars (1676-1759) are of the highest significance, due to their scarcity, to their vulnerability to erosion and development, and to the very limited information on them in the documentary record. For example, although a number of seventeenth century Maine sites have been or are being studied, very little is known about the domestic architecture of the period, none of which survives above ground. Thus, the site of Christopher Lawson's house and outbuilding will ultimately have the potential to yield important data on the architecture on Swan Island in the 1660s. Likewise, the site of houses referenced from 1719 and ca. 1750 will yield otherwise unobtainable information about residential structures in a (then) remote area during the frontier wars.

Beginning in 1995, the Commission-sponsored Upper Kennebec Archaeological Survey has turned its focus to the colonial sites on Swan Island as evidenced by primary documentary sources. The first phase of this initiative involved reconnaissance-level survey on the southeast corner of the island, where in one area considerable amounts of daub (an early type of mud-based plaster), as well as a few sherds of delftware and combed-yellow slipware were encountered; these could well be later seventeenth century in date. Another area yielded sherds of plain redware, trailing-slip redware, hand-wrought nails, English white saltglaze, and clay pipe-stems, all of early/mid-eighteenth century date. Further survey planned for the future will more intensively examine these areas to determine whether these artifacts are

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associated with domestic structural remains. It is likely that this nomination, and Swan Island's periods of significance, will be amended in the future to recognize the significance of the long colonial history of the property.

1605 - 1755

The first known Europeans to see Swan Island were a party of French explorers under Samuel de Champlain, who sailed up the Kennebec River in the summer of 1605. This expedition had been sent to the south and west from the St. Croix Island settlement, established a year earlier and barely clinging to survival, to try to identify a suitable alternative site for a permanent colony.¹ Champlain wrote of the expedition's northernmost penetration of the river:

Pursuing our route, we came to the lake [Merrymeeting Bay], which is from three to four leagues in length, where there are some islands, and two rivers enter it, the Quinibequy [Kennebec] coming from the north-north-east, and the other from the north-west [Androscoggin]...²

Two years later, in 1607, Champlain drew a manuscript map of New France clearly showing the Kennebec River and several large islands in its upper reaches, one of which may well be a depiction of Swan Island.³

In 1607 the English mounted their first effort to establish a permanent settlement in New England, the so-called Popham Colony.⁴ This was established at the mouth of the Kennebec River. Shortly after this site was selected, a party under Raleigh Gilbert sailed upriver as far as the future site of Augusta and passing Swan Island on each leg of the trip:

So we Sailed up into this ryver near 14 Leags... We fynd this ryver to be very pleasant with many goodly Illands.⁵

In fact, between Augusta and the sea there are not "many" islands, so this is clearly a reference, however oblique, to Swan and Little Swan Islands.

A map published in 1609 by Marc Lescarbot, showing much of New England and the St. Lawrence River, includes the clearly labeled "Kinibeki", with a large island near its confluence with the unnamed Androscoggin. The island, likewise unnamed, can hardly be any other than Swan Island,⁶ and it is assumed that Lescarbot's source of information was Champlain.

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The failures of the St. Croix (1604-05) and the Popham (1607-08) settlement efforts were a temporary deterrent to renewed colonial efforts in the northeast by France and England. Indeed, the next English presence on the Kennebec was the establishment within the Plymouth Patent, in 1629, of the Plymouth Colony's trading post at Cushnoc (Augusta).⁷ This was followed in 1649 by the Teconnet post in Winslow and the Nehumkeag post in Pittston, as well as the Clarke and Lake Company in Arrowsic in 1654.⁸ From mid-century on, the lower Kennebec, particularly south of Merrymeeting Bay, became the focus of numerous Anglo-American farmsteads.

Swan Island officially enters history in a deed dated 1667 from the local Indians Abbagasset and Kennebes to Christopher Lawson, a prominent entrepreneur and land agent representing Boston mercantile interests on the Kennebec. He may well have sought to set himself up in the fur trade (note the reference to an outbuilding, below, which could have been a storehouse for trade goods and pelts). This 1667 deed references:

One island lying & adjoining in the River of Kennebeck commonly called & knoune by the Indians Capeanagusset, and by the English commonly called & knoune by the name of Swann Island...⁹

The origin of the name Swan Island is not certain, but it is not derived from the presence of that kind of bird. Bartholomew Gosnold sailed the Maine coast in 1602, recording in detail the natural resources he observed, including "Fowles". Swans are not among the fifteen species of birds listed.¹⁰ Notwithstanding the reference to the Indian name "Capeanagusset" above, another tradition claims that "Swan" is a slightly shortened version of the Indian name "Swango".¹¹ This is very close to the word "sowangan", meaning the bald eagle.¹² "Eagles" head Gosnold's 1602 list of Maine birds. If this derivation of the place-name is correct, it is coincidentally appropriate, given that Swan Island has been and continues to be one of the more important breeding areas in the northeast in the post-DDT era (after 1972) of the bald eagle.

In 1668 Lawson used Swan Island as collateral for a loan of £110.3.0 from the wealthy Boston merchant Humphry Davy, referencing "... my now [new] dwelling house... with one out house [outbuilding]."¹³ Four years later, in 1672, Lawson defaulted on the loan and transferred title to Swan Island "with the house and all appurtenances" to Davy.¹⁴

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By the 1680s the Pejepscot Company, a prosperous group of Boston merchants, had gained title to the island, to supplement its large land holdings on the lower Kennebec. In 1714 this company was acquired by the Company of Pejepscot Proprietors.¹⁵ Two years later seven of the partners transferred title to the island to the eighth partner, Adam Winthrop.¹⁶ Throughout the last quarter of the 17th century and the early years of the 18th, there is no record of Anglo-Americans using the island for any purpose, let alone residing there. In this, the land title record reflects the historical record, as Anglo-American Maine was devastated by decades of frontier wars beginning in 1675. For two generations from that point on, and particularly after 1689, Anglo-American Maine from the Kennebec valley eastward was effectively abandoned (the only important exception being the ill-fated Fort William Henry of 1692-96 at Pemaquid). It was not until the waning days of the frontier wars, that prospects for the permanent settlement of Swan Island significantly improved.

In 1719 the Pejepscot Proprietors hired Captain Joseph Heath to survey the Kennebec River. From this survey Heath generated a detailed map of the river, which indicated the existence of a building near the southeast corner of Swan Island. This may have been the residence of Henry Edgar who, reportedly, lived at the southeast corner of the island between 1719-1723.¹⁷ A letter from Edward Hutchinson (one of the Pejepscot Proprietors) to Governor Samuel Shute dated September 7, 1719 makes reference to a tenant at Swan Island who had,

“.....Employed two Indians to bring some things up for him, after they had delivered then drove away one of his oxen and killed it which so discouraged the people (settlers) they dont think themselves safe without some force to cover them for the present.”¹⁸

The mention of oxen indicates that the settler was probably engaged in some type of subsistence farming and/or logging. That year or the next, Fort Richmond was constructed by the Pejepscot Proprietors near the western bank of the Kennebec opposite the northern end of Swan Island. While the presence of the fort was intended to encourage European settlement in the area, the island appears to have been uninhabited for a number of years after 1723. In a deposition he gave in 1754 Thomas Percy of Georgetown claimed have resided on Swan Island in 1730.¹⁹

Jacob Holyoke became the trustee for Adam Winthrop's ownership in the Pejepscot Proprietors in 1741 and on April 18, 1750, he sold Swan Island and Calf Island (Little Swan) to Captain James Whidden for £533, 6s, 8d. Whidden's purchase of Swan Island represented the first permanent settlement on the island and anticipated the creation of the Town of Frankfort (Dresden) by the Kennebec Proprietors in 1752. Swan Island and Little Swan Island became part of the Town of Frankfort upon its creation.

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In September 8, 1750, the Whidden farm (located at the southeast end of the Swan Island) was reportedly attacked by a group of Abenaki Indians who took a number of captives. In memorializing Lt. Governor Spencer Phips for relief on May 29, 1751, James Whidden recounted that:

“ ... early in the Morning his House was surrounded with a party of Indians to the number of Twenty or thereabouts, who in a hostile manner did enter into the house, destroying an Plundering all his furniture, and carried away all that they could of any Value; your Memorialist with his wife saved themselves by getting down into the cellar, which they had but time to do without putting their cloaths to cover their nakedness....²⁰”

This vivid account goes on to list the thirteen people taken captive including Whidden's two sons, a daughter and son in law (Noble), their seven children, and two servants. The assault was apparently in response to the killing of an Abenaki Chief by the English near Boston. Most of those taken captive were reportedly sold in Quebec. Whidden's son Solomon died during the ordeal while his other son Timothy, returned to Swan Island in 1751. Eleanor (Franny) Noble, who was educated at a convent school in Montreal, also returned to live on Swan Island in 1761 for a time at the age of thirteen. Her brother Joseph remained in Quebec. Despite the attack of 1750, James Whidden chose to stay on Swan Island. Writing just before the American Revolution, the Reverend Jacob Bailey of Dresden claimed that Whidden's land on Swan Island was so fertile that he was able to raise fifty bushels of wheat from one bushel of seed.²¹ In 1752, Captain Whidden conveyed to Jacob Wendell of Boston, “One full half of Swan Island in Merrymeeting Bay and one half of the buildings thereon for £266, 6s.”

1756-1847

In 1756, the Kennebec Proprietors granted 325 acres of this same land to Whidden on, “...the southerly part of Swan Island b. by line across island a little northward of the Bay of Whidden now stands.”²² At the same time, the northern two-thirds of the island and Little Swan Island was granted to Dr. Silvester Gardiner, the second largest shareholder of the Kennebec Proprietors (a well capitalized group of Boston investors who bought out the earlier Plymouth proprietors). The so-called Kennebec Purchase consisted of one and a half million acres of land extending from the northern limits of Bath to the northern boundary of Cornville above Skowhegan.²³ Historically, both the Plymouth and the Pejepscot Proprietors claimed ownership of the territory at the head of Merrymeeting Bay including Swan Island. Holyoke's sale of Swan Island to Whidden in 1750 appears to have been contested by Gardiner and the Kennebec Proprietors who forced a compromise which resulted in the 1756 partition of the island.

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In addition to Swan island, Silvester Gardiner controlled an enormous amount of the Kennebec Proprietor's land and managed to secure a monopoly of the stores and the operation of a supply sloop which sailed between Boston and the Kennebec settlements. Local historian Danny Smith has observed that when subdivisions of company land were made, Gardiner secured the best lots for himself. A 1763 survey map of Pownalborough clearly shows the boundary running roughly east-west in line between the Gardiner and Whidden lands. This same property line is delineated on the 1907 United States Coastal & Geological Survey map, and, it is visible today as a tree line on the east side of the road immediately north of the Maxwell-Tarr house (see inventory and accompanying map).

During the late 1750's James Whidden's land was subdivided several times. The earliest of these subdivisions was a 50 acre plot on the southern tip of the island sold to James Wyman for £53, 6s, 8d in 1758. The same year Whidden sold 210 acres to his son Timothy and 80 acres to his daughter Abigail Noble, the wife of Lazarus Noble. These early subdivisions at the south end of the island appear to have been of irregular shape and largely defined by topography. Several extant stone walls running southeast through the woods on the east side of the road correspond with this early period of subdivision. (See map)

Sometime between 1756 and 1763, Silvester Gardiner built a house on the eastern shore of the island (about three fourths of the way up the island) directly across from Little Swan Island. The location of this house must have been chosen for its proximity to moorings in the navigable channel between Swan Island and Little Swan (known as Swan Alley). Gardiner is thought to have built the house as a summer residence for his second daughter Rebecca and her husband Philip Dumaresq who were married in 1763. A house is indicated on this site on a 1763 survey map of the Pownalborough lands. General Henry Dearborn (a commander in Benedict Arnold's ill fated expedition to Quebec), is reported to have stayed at the Dumaresq house en route to Fort Western late in the summer of 1775. The Gardiner-Dumaresq house, as it is known, is still extant and survives as the oldest building on the island. A loyalist, Silvester Gardiner lost most of his land in Massachusetts after the Revolution. However, his son-in-law Oliver Whipple, a lawyer, found a flaw in the proceedings sequestering his land in Maine and successfully reclaimed those lands acquired through the Kennebec Proprietors.

In 1786, Silvester Gardiner died in Newport, Rhode Island, and his Swan Island property was left to his second son, John Gardiner. In 1796, Little Swan Island was sold to William Lewis by John Gardiner's older brother William for \$185.00²⁴. Philip and Rebecca Dumaresq's son James lived on the property until the autumn of 1826 when he drowned in a boating accident on the Kennebec.²⁵

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Another prominent person in addition to Silvester Gardiner that is associated with Swan Island is Jacob Barker. Barker was born on the south end of the island (Barker-Harward site) in 1779 to Quaker parents Robert and Sarah. After finishing school in New Bedford Massachusetts Barker moved to Nantucket. During the War of 1812, he is said to have negotiated large loans for the United States Government to help finance the war effort. Barker was also involved in a number of business ventures including a shipping partnership with Swiss financier Albert Gallatin and the establishment of the first successful line of steamships in 1825.²⁶

Swan Island appears to have had a well established population of farmers, woodcutters, and fisherman by the late eighteenth century. The 1766 Census of Pownalborough indicates that there were probably at least eighteen people living on the island that year.²⁷ The Call, Chapman, Cushing, Gardiner, Goodwin, Harward, and Lewis families all are recorded as having owned land on Swan Island at the turn of the eighteenth century. Cultivation of the land by these residents seems to have taken place primarily on the eastern side of the island where the land is loamy and most fertile. This side of the island probably also afforded the early settlers easy access to the river and moorings for sailing vessels.

Swan Island residents appear to have been relatively prosperous during the first decades of the nineteenth century. Several retired sea captains are known to have settled on the island during this period. During the early years of the nineteenth century, the American Revolutionary veteran Major Samuel Tubbs (d.1810) had a Federal manner house built on the northern head of the island overlooking both channels of the Kennebec. The prominently situated Tubbs (Reed) House survives as the second oldest building on the island.

1847 - c. 1940

By the 1840's the residents of Swan Island were reportedly dissatisfied with the high tax rates levied on them by the Town of Dresden. While there seems to have been significant opposition from the "mother town" to the secession, the inhabitants of Swan Island prevailed, and on June 24, 1847, the act incorporating Swan Island and Little Swan Island as the Town of Perkins was approved by Governor John W. Dana. The town was named after Col. Thomas Handasyd Perkins, Jr., a wealthy Boston china merchant who married Jane Frances Dumaresq (the grand daughter of Philip and Rebecca Dumaresq). Introduced to the island by his wife in the 1820's, Perkins is credited with having been instrumental in facilitating the establishment of the township. Thomas Perkins is perhaps best known as the patron of the Perkins Institute for the Blind in South Boston. Thomas and Jane Frances were summer residents on the island until his death in 1854.

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The two decades following incorporation appear to have been prosperous ones for the Town of Perkins, with agriculture being the mainstay of the economy. Cultivation of the land was extensive, with significant crops of wheat, barley, corn, and oats being harvested annually. According to the 1850 Census, the population of Perkins was 84 and the economy was almost completely based on agriculture.²⁸ Peleg Call (brickmaker) and George Call (carpenter) are the only grown men not listed as farmers. By 1860, the population had peaked at 95 and by 1864 the total combined value of personal property and real estate in Perkins was listed as \$29,637. Apart from farmers, the 1860 Census of Perkins lists William Hebbard as physician/eclectic, Peleg Reed as Engineer of Mill (presumably in Richmond), J. Roberts as ship carver, Celine Saunders as dressmaker, Zoraida Reed as teacher, Moses Call as blacksmith, and William Lilly as house joiner. According to Town Reports, a frame school house with a split granite underpinning was constructed just south of the public cemetery for \$300.00 in 1853. In 1854, enrollment in the school was 15 with students ranging from 4 to 20 years in age, and by 1863 the number of students attending school in Perkins had risen to 30. The school was reportedly used for religious services, town meetings, and writing schools on occasion.²⁹

The 1860 Return on Neat Cattle and Sheep recorded that 129 sheep and 67 head of cattle were being raised in the town. By 1864 the number of cattle had risen to 74 and the islands' sheep population had nearly quadrupled to 466. This marked rise in the sheep population was, perhaps, due to the Civil War and the resulting need for woolen garments to clothe Union soldiers. In 1859, two vessels (the Constitution [1000 tons] and the Elvira Owen [873 tons]), were listed as being "owned in Perkins". Shipbuilding appears to have taken place on Swan Island since at least the late eighteenth century. The first vessel listed as being built on the island was the 167 ton Brig Polly constructed at Shipyard Point in 1790 and owned by Thomas Harward. Between 1790 and 1877, over a dozen sailing vessels were launched from Swan Island. Spring fishing appears to have been a popular off-season activity on the island in the mid-nineteenth century. The Perkins Fish Committee recorded that during the 1850's, approximately 200 barrels of shad was being landed on Swan Island annually.

By the 1850's, Swan Island had been fully subdivided into roughly rectangular farm plots running east-west across the island (parallel to the 1756 Kennebec Proprietors division of the Whidden and Gardiner lands), ranging in size from 10 to 160 acres. The exception to this rectangular layout are the irregularly shaped plots subdivided from the Whidden property at the south end of the island during the 1750's.³⁰ The 1860 Agricultural Schedule of the Census lists 915 of the 1300 acres in Perkins as being "improved".

In contrast to the eighteenth century settlement of Swan Island, which was primarily concentrated on the southeast corner, the population of nineteenth century Perkins was distributed along the length

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of the island. A system of small interconnected roads linking the north and south appears to have developed early in the nineteenth century as all areas of the island were settled. Houses on Swan Island built during the nineteenth century were oriented to the roads as opposed to the river, as had been the case during the eighteenth century. The settlement of White's Landing (now Richmond), beginning about 1815 seems to have induced Swan Island residents to develop the landing at the northwest corner of the island. By the second half of the nineteenth century regular ferry service to Richmond had been established from the landing and a brick kiln (which is said to have produced the bricks for the Hathorn Block in Richmond) was in operation nearby. In 1879, "all gates and bars were ordered taken down" and a series of smaller roads were formally linked to create the "Perkins Highway" connecting the Harward property at the south of the island with the town landing at the north. In 1889 the Perkins highway districts was formed. The course of the present road generally follows the 1879 alignment.

Perkins experienced economic and population decline in the years immediately following the Civil War. This decline is illustrated in the Valuation of Real and Personal Property figures for the Town of Perkins which in 1860 listed a total value of land and buildings in the town as \$20,049. By 1870, the figure had dropped to \$14,865. During the same period the population of Perkins dropped from its 1860 high of 95 to 71 in 1870. Between 1864 and 1870 the number of sheep on Swan and Little island decreased from 466 to fewer than 70.

The establishment of a Sagadahoc Company ice house (20,000 ton capacity) at Shipyard Point in 1871 appears to have provided a much needed boost to the economy of Perkins. By 1879, Dr. C.G. Underwood was operating a second ice house (capacity 12,000 tons) on the eastern shore near the head of Swan Island, and in the early 1880's the Consumer ice house (capacity 27,000 tons) was established just north of Shipyard Point. The ice industry on Swan Island was large enough to attract a number of workers and a significant amount of revenue to Perkins. A large boarding house was constructed north of Shipyard Point during the 1880's to accommodate workers from the Consumer operation (see Lovett-Leavett-Consumer House site.) About this time, C.G. Underwood constructed an ostentatious Italianate house with crenelated towers several hundred meters south of the Underwood ice houses. The Underwood residence was destroyed by fire in the 1930's.

The year-round population of Perkins grew slightly to 78 in 1880, but thereafter began to steadily decline as agriculture and the ice industry waned. By the late 1880's there were less than 150 acres of land under cultivation and by 1900 only one ice company was still operating on the island. The 1900 Census recorded the population of Perkins at 61 and listed L.R. Call, merchant, J.H. Wade, smith, Ralph Reed, Pharmicist, and William Lewis, fisherman as living in Perkins. Fewer than half of the families in Perkins were actively engaged in farming at the turn of the century. By 1910, the island's

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population had dropped to 39 and only one family was still farming on the island. On July 1, 1918 there were not enough people to fill the town offices and the Town of Perkins ceased to exist, becoming Perkins Plantation. During the Depression much of the property was lost to mortgage or tax foreclosures. Ferry service to Swan Island was discontinued in 1936 when the Richmond-Dresden Bridge was completed.

There does appear to have been a significant summer population during the late nineteenth and early twentieth centuries including Prudence Hibbard (widow of Dr. W.W. Hibbard), Mary Saunders, and Mortimer Priest. It is interesting to note that Swan Island had summer residents beginning with Philip and Rebecca Dumaresq in the eighteenth century more-or-less continuously until the twentieth century, when it was taken over by Inland Fisheries and Wildlife. The eighteenth and early nineteenth century summer population of Swan Island significantly pre-dates the rusticators who came to Maine in great numbers after the Civil War.

Long interested in acquiring land with which to undertake waterfowl management in Merrymeeting Bay, the Department of Inland Fisheries and Wildlife began buying the farms on the island during the early 1940's. By the 1950's, the only remaining piece of private land was the Curtis cemetery which was, subsequently, sold to the Department. The maintenance of the island's historic land use pattern is in large part due to the protection provided by Inland Fisheries and Wildlife. Today approximately 900 acres on the island are forested while 400 acres remain in open fields which are mowed by I.F. & W. workers on an annual basis. This ratio of forested to open land is nearly equivalent to the land use pattern visible in c. 1940 aerial photographs of the island. During the late 1960's, the Inland Fisheries and Wildlife undertook the restoration of both the Gardiner-Dumaresq and Tubbs-Reed Houses. The Robinson House and Priest House are both used to house Inland Fisheries and Wildlife workers.

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Endnotes

1. St. Croix Island International Historic Site was listed in the National Register October 15, 1966.
2. Champlain, Samuel de, Discovery of the Coast of the Almouchiquois as far as the Forty-Second Degree of Latitude, and Details of the Voyage, in George Parker Winship, ed., Sailors Narratives of Voyages along the New England Coast (Boston, 1905), 70-71.
3. Champlain, Samuel de, manuscript map of New France, 1607 (Library of Congress, Geography and Map Division, Vellum Chart Collection #15), reproduced in Emerson W. Baker, et. al., eds., American Beginnings: Exploration, Culture, and Cartography in the Land of Norumbega, Plate 2 (Lincoln, Nebraska, 1994).
4. The site of the Popham Colony was listed in the National Register on February 16, 1970.
5. Davies, James, The Relation of a Voyage unto New England, in George Parker Winship, ed., op. cit., 169.
6. Lescarbot, Marc, Figure de la Terre Neuve, grand riviere de Canada, et cotes de l'ocean en la Nouvelle France, in his Histoire de la Nouvelle France, 1609 (National Archives of Canada, NMC 97952, reproduced in Emerson W. Baker, et. al., eds., op. cit., 99.
7. The Cushnoc trading post site was listed in the National Register on October 16, 1989.
8. The Clarke and Lake Company site was listed in the National Register on November 21, 1978. The sites of the Teconnet and Nehumkeag posts are currently undergoing intensive-level archaeological survey.
9. Records of the Colony of the Massachusetts Bay in New England, Vol. 5, ed. By Nathaniel B. Shurtleff (Boston, 1854), 399.
10. Gasnold, Bartholomew, To the Honourable Sir Walter Raleigh, in George Parker Winship, ed., op. cit., 48-49.

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11. Allen, Charles Edwin, History of Dresden, Maine (Lewiston, 1977), 113.
12. Eckstorm, Fannie Hardy, Indian Place-Names of the Penobscot Valley and the Maine Coast (Orono, 1941, reprinted 1960), 140.
13. Nathaniel B. Shurtleff, ed., op. cit., 400-401.
14. Ibid., 402.
15. Kershaw, Gordon E., The Kennebeck Proprietors, (Portland, 1975), 18-19.
16. York Deeds, Book VIII, Fol. 178-179.
17. Thayer Correspondence, Deposition of Henry Edgar, Sept. 27, 1754
18. Fleming, Richmond on the Kennebec, p. 115.
19. Allen, op. cit., 95
20. Pejepscot Papers, Vol. V, Maine Historical Society.
21. Bailey, Rev. Jacob, Personal Diary, 1774.
22. York County Records, Vol. 30: Fol 112
23. Smith, Danny, Genealogy of the Gardiner Family., Gardiner, Maine.
24. Fleming, John Daly, Richmond on the Kennebec., p.117
25. A detailed account of this incident can be found in Early Recollections of Robert Hallowell Gardiner., 1936
26. Allen, p.98
27. A Return and True Representation of the West Side of the Town of Pownalborough, June 19, 1766

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28. 1860 U.S. Census.

29. Allen, p.839

30. These subdivisions are illustrated on the 1907 U.S.C. & G.S. map of the Kennebec River
from Abagadasset Point to Court House Point.

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Section number 9 Page 2

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- Winslop, George Parker, ed., "Sailors Narratives of Voyages Along the New England Coast." Boston, 1905.

Swan Island Historic District
Name of Property

Sagadahoc, Maine
County and State

10. Geographical Data

Acreage of Property 1,495.22

UTM References

(Place additional UTM references on a continuation sheet.)

1	19	437770	4881780
Zone	Easting	Northing	
2	19	435880	4875100

3	19	434080	4875620
Zone	Easting	Northing	
4	19	436140	4881900

See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Rober L. Bradley, Archaeologist/James Hewat, Architectural Historian

organization Maine Historic Preservation Commission date September, 1995

street & number 55 Capitol Street, Station #65 telephone 207/287-2132

city or town Augusta, state Maine zip code 04333-0065

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A USGS map (7.5 or 15 minute series) indicating the property's location.

A Sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items

(Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name Department of Inland Fisheries and Wildlife

street & number State House Station #41 telephone 207/287-3371

city or town Augusta, state Maine zip code 04333-0041

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form should be sent to the Office of Management and Budget, Paperwork Reduction Project (2012-0041), Washington, DC 20503-2972.

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VERBAL BOUNDARY DESCRIPTION

Swan Island Historic District is comprised of Swan and Little Swan Islands occupying the Land Use Guidance Zoning Map SA001, Plan 1, Lot 1. See map.

BOUNDARY JUSTIFICATION

The boundary of the district is defined by the high tide water line on Swan Island and Little Swan Island. The District is discontinuous and is separated by a narrow stretch at the eastern branch of the Kennebec River.



JOHN WEINRICH + RICHARD BURT ARCHITECTS
ARCHITECTURE + PLANNING

Architectural Survey of the
Tubbs-Reed House on Swan Island
for the
Maine Bureau of General Services
December 5, 1995

Introduction:

This report on the Tubbs-Reed house is based on several site visits and meetings on site with Mr. Charles Dyke of the Maine Department of Inland Fisheries and Wildlife and Mr. James Hewitt of the Maine Historic Preservation Commission.

The building is presently not in stable condition. It is experiencing rapid deterioration, and it is at risk for structural failures and loss of significant historic features. Immediate attention is called for.

The Department of Inland Fisheries and Wildlife or the Bureau of General Services should implement a comprehensive survey and maintenance schedule for the building and its immediate site. The value of constant observation, documentation and maintenance cannot be stressed enough for preserving the long-term integrity of this building and its historic character.

The Department of Inland Fisheries and Wildlife should work toward identifying a specific program of proposed use for the building and site, so that present and future rehabilitation efforts can accommodate those uses. Issues of possible conflict between proposed uses and the historic preservation of the building need to be identified and resolved.

Historical Issues:

Swan Island is presently in the process of being nominated to the National Historic Register of Historic Places by the Maine Historic Preservation Commission, and this building is a significant contributing part of the Historic District nomination.

The original two-story building (circa 1810) has apparently had alterations, additions and removals throughout its history. The most recent alterations were new roofing, installed circa 1988. An extensive "renovation" was undertaken circa 1968, of which there is no known documentation.

Although the two-story structure has had alterations from the original construction, there are many elements that are of original construction and from the building's early history. The large chimney with its stone and brick arched base, although damaged, appears to be mostly original. The kingpost roof truss system also appears original. Many newer changes are apparent: the recently placed concrete foundation is both poorly constructed and not historically appropriate, the doors and window sash and frames are recent replacements. The main entry was probably far more elaborately ornamented than the presently existing door.

Scope of Study:

This study is intended to provide the Bureau of General Services with information about the Tubbs-Reed House, specifically for planning and budgeting purposes relating to structural integrity and exterior conditions. Weinrich + Burt Architects have taken considerable care in performing the observations contained in this study. However, we make no representations in regards to latent, unobserved or concealed defects or problems which may exist. The contents of this study are made in the best exercise of our judgement and ability.

Similarly, the Budget Estimates contained in this study cannot be exact in nature, due to many unknown variables. Weinrich + Burt Architects, using reasonable judgement in developing budget estimates, are not responsible for actual costs.

Recommendations:

The recommendations of this report are two-phased. Phase 1 is intended only to stabilize the existing conditions of the building, principally addressing exterior and structural issues, and to protect the building from further deterioration.

Phase 2 would entail an effort that would comprehensively rehabilitate the building in its entirety, as well as addressing issues of proposed use. For Phase 2 work, James Hewitt has recommended that a complete Historic Structures Survey be completed, and that design work be undertaken with the consultation of a buildings conservator approved by the Maine Historic Preservation Commission.

The actual scope of work appropriate to Phase 2 can only be determined in the context of a Historic Structures Survey and further discussions with the owner and the Maine Historic Preservation Commission. The nature and extent of Phase 2 rehabilitations would be influenced by decisions about: the proposed use of the building, the appropriate amount of intervention, re-introduction of elements not present, and the budget of the project. These issues are beyond the scope of this report.

Both phases of recommended work are intended to be consistent with the U.S. Department of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*.

Most of the Phase 1 work that we are recommending consists of maintenance, rehabilitation, and replacement in kind of existing materials and finishes. The exceptions, which would alter the building's appearance are the addition of storm windows and doors and gutters, all of which could be removed at a later date.

Phase 1 Recommendations:

1. Existing grade conditions slope towards the building at most locations. This has caused excessive moisture in the basement, and inward failure of the concrete foundation at several locations. The most severe of these failures is near the middle of the east wall. The foundation cracks are coincident with steel tube columns cast into the foundation, most likely part of the shoring effort of the 1968 work. Regrading away from the building at all locations and subsurface drainage must be provided to correct the cause of these problems. A concrete buttress will be required at least at the most severe foundation crack to stabilize the situation. Regular monitoring of the foundation for any continuing movement will be necessary. More effective ventilation of the basement areas should be provided and a vapor barrier at the basement floor should be considered to control migration of ground moisture to the wood structure.
2. The existing white cedar roofing is a substandard grade for roofing use (knots are exposed to the weather), the roofing ventilation and ridge treatment are inadequate, and the chimney flashing is incomplete. The roofing should be removed and replaced with a suitable material. We further recommend the application of gutters with conductors connected to the subsurface drainage. These would be of metal, of simple design but not intended to appear as original historical elements.
3. The two king-post trusses that span across the attic to support the roof appear to have been compromised by being notched to accept additional support for the second floor ceilings. We recommend analysis of the structure and installing corrective elements, likely bolted metal plates.
4. The masonry chimney needs immediate attention. The stone base has cracked away from the rest of the base at two corners, and these areas must be rebuilt or repaired. The remainder of the stone and brick base is in need of repointing. A single layer of brick at the north end of the chimney is literally crumbling to the floor. It does not appear to be original and we recommend its removal. The chimney also requires repairs and repointing in the attic and above the roof. A weather-tight cap is recommended to protect the chimney from the top. Analysis of existing mortar should be provided in all areas to

insure compatibility of repairs with existing masonry.

5. The windows and their frames appear to have been installed in the 1968 renovations and are generally sound but in need of maintenance. One sash requires replacement and all sash should be reset and reglazed and the units prepared and painted. We recommend simple wood storm windows for additional weather protection and reducing maintenance.

6. There is significant water deterioration at both exterior doors, especially at the main entry. We recommend repairing the adjacent structure, the doorframes, thresholds and flashings as required, and providing simple wood storm doors for additional weather protection and security.

7. The clapboard siding and trim is generally in fair condition. Some cracked and damaged clapboards and trim boards require replacement and all exterior wood finishes should be checked for secure attachment to the building.

8. The sill at the main entry is in poor condition and requires replacement, and the finishes associated with this work will require replacement as well. The north end of the entry wall and the northwest corner post have serious deterioration that require extensive repair.

9. The clapboards at the east wall leave the lower 1" of the structural sill exposed to the weather. This condition must be corrected.

10. The building requires a comprehensive exterior finish restoration. This will include scraping all loose paint, providing sealant to all appropriate areas, and further identifying areas in need of further attention, as well as the application of primer and finish paint.

11. The existing granite steps (not original) at both doors have settled excessively. They should be re-installed in conjunction with regrading so that they function more effectively.

12. There is evidence of insect infestation in several locations, powder post beetle and bees likely among them. An inspection for their presence should be completed and a plan to control them implemented. Ongoing inspection should be part of a general maintenance program.

13. There are approximately 50 linear feet of 9 x 8 structural beams and approximately 100 linear feet of joists (some round and some square stock) that are deteriorated and must be replaced. In addition, the floor in the main entry foyer has been damaged by water. Since the flooring does not appear to be original, we recommend partial replacement as required.

Cost Estimates:

The two buildings have been estimated as separate projects. Some efficiency and cost savings could be realized if the work is undertaken on both buildings by the same contractor at the same time.

Probable Cost Summary for Tubbs-Reed House

Tubbs-Reed House-Probable Construction Costs:

Phase 1:

Excavation, grading, drainage	\$11,000
Foundation repairs	2,300
Roofing	4,950
Gutters	1,650
Masonry	9,000
Windows-rehabilitation and storms	6,100
Doors: repair damage and storms	3,850
Structural repairs	3,300
Siding and trim repair	4,900
Preparation and painting	8,250
Insect control	<u>2,250</u>
	Subtotal:
	\$57,550
Contingency 20%	<u>11,510</u>
	Total
	\$69,060

ProForma Estimates of Total Phase 1 Project Costs:

Construction:

Construction costs \$69,060

Fees/Services:

Architectural Fees (14.3%) \$9,875
Construction Inspection 3,000
Geotechnical Investigation 750
Testing Fees: mortar analysis 400

Pro Forma Estimated Total Project Cost: \$83,085

Architectural Survey of the
Gardiner-Dumaresq House on Swan Island
for the
Maine Bureau of General Services
December 5, 1995

Introduction:

This report on the Gardiner-Dumaresq house is based on several site visits and meetings on site with Mr. Charles Dyke of the Maine Department of Inland Fisheries and Wildlife and Mr. James Hewitt of the Maine Historic Preservation Commission.

The building is presently not in stable condition. It is experiencing rapid deterioration, and it is at risk for structural failures and loss of significant historic features. Immediate attention is called for.

The Department of Inland Fisheries and Wildlife or the Bureau of General Services should implement a comprehensive survey and maintenance schedule for the building and its immediate site. The value of constant observation, documentation and maintenance cannot be stressed enough for preserving the long-term integrity of this building and its historic character.

The Department of Inland Fisheries and Wildlife should work toward identifying a specific program of proposed use for the building and site, so that present and future rehabilitation efforts can accommodate those uses. Issues of possible conflict between proposed uses and the historic preservation of the building need to be identified and resolved.

Historical Issues:

Swan Island is presently in process of being nominated to the National Historic Register of Historic Places, and this building is a significant contributing part of the Historic District nomination.

The original two-story building (circa 1758), has apparently had several alterations, additions and removals throughout its history. The most recent alterations are new roofing, which was installed circa 1988. An extensive "renovation" was undertaken circa 1968, of which there is no known documentation.

The two-story section of the house appears to be the oldest, with a largely intact post and beam frame with exposed chamfered beams above the second floor. The second floor post and beam structure is cased at the first floor, and the structure of the first floor itself and the flooring has been replaced. The recently placed concrete foundation is poorly constructed and historically inappropriate. The brick and stone chimney, with arched base, is largely intact. However, the three first floor fireplaces are poorly executed and historically inappropriate replacements of the originals.

It is doubtful whether the windows and doors, and many other exterior elements are of the original construction. The entire "shed" section to the west is most certainly not of the original construction. Furthermore its floor, foundation, and roof structures were replaced in their entireties in the 1968 renovations.

Scope of Study:

This study is intended to provide the Bureau of General Services with information about the Gardiner-Dumaresq House, specifically for planning and budgeting purposes relating to structural integrity and exterior conditions. Weinrich + Burt Architects have taken considerable care in performing the observations contained in this study. However, we make no representations in regards to latent, unobserved or concealed defects or problems which may exist. The contents of this study are made in the best exercise of our judgement and ability.

Similarly, the Budget Estimates contained in this study can not be exact in nature, due to many unknown variables. Weinrich + Burt Architects, using reasonable judgement in developing budget estimates, are not responsible for actual costs.

Recommendations:

The recommendations of this report are two-phased. Phase 1 is intended only to stabilize the existing conditions of the building, principally addressing exterior and structural issues, and to protect the building from further deterioration.

Phase 2 would entail an effort that would comprehensively rehabilitate the building in its entirety, as well as address issues of proposed use. For Phase 2, James Hewitt has recommended that a complete Historic Structures Survey be completed, and that design work be undertaken with the consultation of a buildings conservator approved by the Maine Historic Preservation Commission.

The actual scope of work appropriate to Phase 2 can only be determined in the context of an Historic Structures Survey, and further discussions with the owner and the Maine Historic Preservation Commission. The nature and extent of Phase 2 rehabilitations would be influenced by decisions about: the proposed use of the building, the appropriate

amount of intervention, re-introduction of elements not present, and the budget of the project. These issues are beyond the scope of this report.

Both phases of recommended work are intended to be consistent with the U.S. Department of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*.

Most of the Phase 1 work that we are recommending consists of maintenance, rehabilitation, and replacement in kind of existing materials and finishes. The exceptions, which would alter the building's appearance, are the addition of storm windows and doors, which could be removed at a later date, and the addition of a new eave at the west, which is replacement of an element known to be of recent construction.

Phase 1 Recommendations:

1. Existing grade conditions slope towards the building in most locations. This has caused excessive water in the basement, foundation failure at the "shed" eave wall, and undermining of the footing at the northeast corner of the main house. Re-grading away from the building in all locations, and subsurface drainage must be provided. The foundation at the shed should be removed and replaced, and the undermined main footing must be re-supported. More effective ventilation of the basement areas should be provided and a vapor barrier at the basement floor should be considered, to control migration of ground moisture to the wood structure.
2. The existing white cedar roofing is a substandard grade for roofing use (knots are exposed to the weather). Also, it has been installed with less than adequate overhang at the perimeter, the ventilation of the roofing is inadequate, and the flashing at the chimney is not intact. The roofing should be removed and replaced with a suitable material, and adequate ventilation provided. Wood shingle roofing has been assumed for the replacement material for the purpose of the estimate.
3. There is not an adequate eave overhang at the west wall, and the water from the large roof area has severely damaged the wall of the shed, particularly at the doors. An adequate eave should be provided to protect this wall at the time the roofing is replaced. We further recommend the application of gutters with conductors connected to the subsurface drainage. These would be metal, of simple design but not intended to appear as original historical elements.
4. The masonry chimney needs immediate attention. The stone base has cracked at the northeast corner, the brick arch has spread and settled, and there is a section missing in the attic. We recommend these problems be repaired, as well as general repointing, flashing at the roof, and providing a weather-tight cap at the top. Analysis of the existing mortar should be provided in all areas to insure compatibility of repairs with existing

masonry.

5. Windows and frames are generally sound but in need of maintenance. We recommend the glass be reset and reglazed and the assemblies prepared and painted. Simple wood storms are recommended for additional weather protection and reducing maintenance. The attic window sash should be replaced with louvers to improve ventilation.
6. There is significant water deterioration at the three exterior doors and the adjacent structure. We recommend repairing the structure, doorframes, thresholds and flashings as required. The three exterior doors do not appear to be original to the house and the two at the west are damaged. We recommend providing simple wood storm doors for additional weather protection and security.
7. The clapboard siding and trim is generally in fair condition. There are some cracked clapboards in need of replacement and they should all be checked for secure attachment to the building. The northeast corner has extensive deteriorating of the corner post and surrounding sheathing. This area will require extensive repairs.
8. The building needs a comprehensive exterior finish restoration. This will include scraping all loose paint, providing sealant to all appropriate areas, and further identifying areas in need of further attention, as well as the application of primer and finish paint.
9. There is evidence of water damage to the window and second floor structure at the east side of the south parlor. The water source should be identified and repaired, and the cased beam showing signs of decay should have a temporary post added until more extensive repairs can be completed.
10. There is evidence of insect infestation in several locations, powder post beetle likely among them. An inspection for their presence should be completed and a plan to control them implemented. Ongoing inspection should be part of a general maintenance program.

Budget Estimates:

Cost estimates for the two buildings have been estimated as separate projects. Some efficiency and cost saving could be realized if the work is undertaken on both buildings by the same contractor at the same time.

Probable Cost Summary for Gardiner-Dumaresq House

Probable Construction Costs:

Excavation, grading, drainage	\$11,000
Moisture control-basement floor	1,100
Foundation	5,500
New roofing, and eave reconstruction	6,800
Gutters	800
Masonry	9,000
Windows-rehabilitation and storms	4,600
Doors: repair damage and storms	4,950
Siding and trim repair	4,600
Preparation and painting	6,800
Insect control	<u>2,250</u>
	Subtotal:
	\$57,400
Contingency 20%	<u>11,480</u>
	Total
	\$68,880

Pro Forma Estimate of Total Phase 1 Project Costs:

Construction:

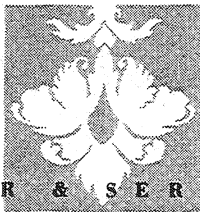
Construction costs \$68,880

Fees/Services:

Architectural Fees (14.3%) \$9,850
Construction Inspection 3,000
Geotechnical Investigation 750
Testing Fees: mortar analysis 400

Pro Forma Estimated Total Project Cost: \$82,880





M O H R & S E R E D I N

Landscape Architects, Inc.

Appendix E

Swan Island Master Plan Committee Meeting #1

Date: March 10, 1998

Present: George Matula, MDIFW (GM)
James Hewat, MHPC (JH)
Charles Dyke, MDIFW (RD)
G. Keel Kemper, MDIFW (KK)
Stephen Mohr, M&S (SM)

Eugene Dumont, MDIFW (GD)
Kathleen Leyden, MSPO (KL)
Nathaniel Salfas, MBGS (NS)
Lisa Kane, MDIFW (LK)
Tatyanna Seredin, M&S (TS)

1. Introductions: a committee member directory is enclosed.
2. Stephen Mohr (SM) briefly discussed the planning process (inventory, goals, analysis, planning) and the committee role
3. Nat Salfas (NS) stressed that the master plan will be a working, living document, that will need to be reviewed and updated regularly
4. NS asked about the scope of the project. It includes Swan and Little Swan Island, should it include Lines Island? Gene Dumont (GD) says no, Lines Island is part of a different system of State properties
5. Why was the decision made to develop a master plan for Swan Island?
 - Rusty Dyke (RD): Swan Island has been used more for recreational and educational purposes since the mid 70's than strictly as a wildlife management area.
 - Not fully utilized for educational purposes.
 - Don't have a firm handle on where to go, and pressures are increasing.
 - Several issues have come to the forefront which prompted the decision:
 - a. Island has recently been nominated & adopted to National Register of Historic Places
 - b. The need for a new restroom facility has brought forth many questions: what capacity should it have, where should it be, is there a vision for what SI should be, or are incremental decisions being made with no vision?
 - c. Richmond School approached IFW to form a partnership to use the island for educational purposes. This seemed like a positive step, with great potential for funding for improvements, but IFW wasn't in a position to make decisions on what to do next.
 - d. Gray - Swan non-profit board was established to act as a fund-raiser for Swan Island and the Maine Wildlife Park (formerly Gray Animal Farm), with the goal to be self-sufficient, not so much dependency on State Funds.
 - e. Kathleen Leyden (KL) asked if the fundraising potential would be influenced if the carrying capacity for the number of visitors to the island is lower or higher.

6. GD: Swan Island is an enigma; it is truly unique. IFW owns 90 properties in the state, Swan Island is the only property that is a sanctuary, an island, a recreational area with a campground. It is almost like a state park.
7. NS: Is there a mission statement for IF&W? Does State Planning Office have a strategic plan? Mohr & Seredin to track down copy and distribute. (See enclosure)
8. James Hewat (JH): The Island seems a source of tension, because it isn't self sufficient.
9. GD: Island is a source of frustration for IFW, which is not a rich agency. Island doesn't come close to realizing its potential. IFW is afraid to make wrong decision in moving to realize potential.
10. NS: BGS should be able to support island's physical plant - IFW just realized that BGS has a responsibility here, and now is proceeding.
11. NS: The master plan should enable Swan Island to stay ahead of publicity and the overall economy
12. Lisa Kane (LK): Need to justify any costs to her department. Education is not always only benefit considered. Need to demonstrate good public relations, receive appreciation and feedback. Education as key to understanding the Island IF&W this is the point.
13. RD: Volunteerism - Lots of people calling to volunteer, lack of staff to coordinate -
 - Maine Conservation Corps.
 - Save Maine
 - Friends of Merry meeting Bay
 - Richmond Middle School - community service
 - Swan Island - Gray Animal Farm Group
 - Town of Richmond (NS and JH are Richmond residents, have personal interest)
14. Fact that it's an island doesn't lend itself well to volunteerism. Transportation is difficult to coordinate
15. IFW-Responsible for safety and liability. Almost daily violate the number of visitors permitted, which is 60.
16. RD: IFW is customizing & accommodating almost everyone in non-traditional manner.
17. NS: Island may have a zoned set up with different uses allowed in different areas
18. TS: Reviewed preliminary inventory mapping with entire group.
19. What do committee members wish to see from the plan?
 - a. NS: Financial tool for capital improvements, preservation of Island, landscape, and buildings.

- RD: Maybe some buildings are in such poor shape, they should not be fixed at all.
 - JH: The island is on the National Register as a district, all buildings are important, it's important as an intact 19th century community
 - GD: Not all buildings have had use to IFW, in the past the department has looked at preserving the structures which had use to them first
 - JH: Impressed at how IF&W has recognized historical value.
 - GD: Never realized fields' importance culturally, until this morning.
- b. KL: The island is a place of beauty, wildlife, a place to study. The carrying capacity of the island seems important. The master plan should reflect protection of important features while allowing maximum number of users. It should be recognized that it's part of the town of Richmond.
- JH: Is the 60 person limit based on environmental reasons or available staff, RD says staff.
 - SM: An important question to ask is at what point does it degrade?
 - NS: The psychological capacity is important to consider, also. Should the atmosphere be peaceful & quiet, or should it be more active-park-like, with concession stands, etc?
- c. KL: Maybe IF&W doesn't manage Island?
- RD : Whose responsibility will be Education? IF&W as landlords? Or programming by outside entity?
 - JH: Is there another state entity who should be managing the visitors?
 - RD: IFW had earlier discussions with the Department of Conservation, noticed a glaring difference in vision. DOC saw hundreds of camping sites, etc
- d. GD: Need to maintain wildlife, need a development plan to conscientiously manage, looking to the plan to provide a guiding hand because of its importance culturally.
- e. GM: Perhaps the island should encourage an interpretive type of use, wildlife education, develop "Stellar Wildlife Viewing Areas"
- RD: Short of Bald Eagles, all the wildlife is in everyone's back yard but here you can observe in natural setting. See deer up close & personal - makes a special experience.
 - KK: Conservation education will bog IFW down, if we work as educators it takes us away from our role as biologists. IFW used to go into classrooms - now we teach teachers. Perhaps here, "we provide the classroom, you bring the teachers."
 - JH: Maybe the way to interpret the Island is self guided.
 - KK: Cumberland Island, Georgia has some similar aspects. It has a regularly scheduled ferry service, and the island interprets itself.
 - LK: There needs to be justification in what department does. Will increased access to the island mean more work for the staff?
 - RD: We've sold Swan Island to public - now we need to sell it to State Government.
20. SM: Do we need to appoint a Chair for this committee, or do we act as equals?
- Decision was made to act as equals, with NS and RD being the project coordinators. At a later date we may want to re-open this discussion for a public representative. GD suggested maybe an upper - level commissioner can be spokesperson, which all agreed was appropriate.
-
21. Next Meeting: **April 6, Site Walk, Meet at dock in Richmond at 9:00**
April 13, Committee Meeting, 9:00 a.m. (This meeting has been postponed)

SWAN ISLAND PUBLIC MEETING

Date: June 4, 1998

Present:	Alice Nap, (PB)	Doug Reed (RMS)
	Betsy Ham (FMB)	Steve Pelletier (PB)
	Stephen Mohr	Tatyanna Seredin
	Nathanel Salfas	Lisa Kane
	G. Keel Kemper	Rusty Dyke
	<u>James Hewat (MHPC)</u>	<u>Junior Maine Guides (2 Representatives)</u>

1. Nat Salfas opened with a discussion of the purpose of study and project.
2. Rusty Dyke reviewed IF&W role and study context.
3. Stephen Mohr presented Planning Process for Master Plan.
4. Tanya Seredin presented study phases:
 - a) Asked for character defining elements as seen by public; results posted on board (see attached list)
 - b) Asked for public comment:
 - 1) Alice: Idyllic; nice picnic and walking area, beautiful and private, bucolic/spirit of Maine.
 - 2) Betsy: Gives sense of Merrymeeting Bay, sense of wilderness, very different experience from driving mainland edge. It embodies linkages between adjacent communities.
 - 3) Jr. ME Guides: Wonderful, safe camping experience; very isolated and primitive character; sense of wilderness and being off the beaten path (70 people-aged 5 -16 years). Island gives a sense of history of Maine.
 - 4) Doug: Great wildlife education spot; good history lesson on personal/local level. Educational opportunities; island experience, but it is convenient.
 - 5) Doug: Wants to see more use; particularly for education. Wants to restore Rowe-Wade house for use by school. Want environmental studies program on island.
5. See attached summary of public comments taken at meeting.

Public Comments:

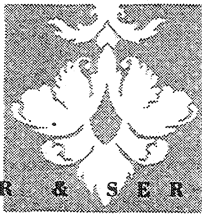
Thoughts about what is specific about Swan Island

- Beautiful place for gatherings - spirit of Maine - resource available
- Opportunity to experience Merrymeeting Bay
- Sense of Wilderness - different from mainland
- Link between surrounding towns encourage more involvement
- Safe place for camping (for youngsters)
- Sense of history
- Kids see wildlife for real
- Personal historical connection
- Educational opportunities
- Island experience - not civilized (but convenient)
- Extinct town
- Topography

Public Comments:

Things people want to see happen at Swan Island

- Students utilize island
- Restore Lilly Wade House
- Channel resources
- Environmental studies
- Protect island - not change face of island
- Ownership through investing time
- Allow private foundations to use - know what state's position will be
- Legal situation for use
- Balance use of maintaining character
 - IF & W, state, landlords, private
 - IF & W - excellent job to date
 - Important for IF & W to continue to manage - aware of right balance
- Secondary is recreational use (don't want to tip too far)
- OK to parcel out
 - Currently IF & W manages wildlife secondary
- Don't want to challenge existing character
- Support for deer management on island?
 - Bring island to carrying capacity for deer?
 - Historical, educational, wildlife (deer) balance
 - Prehistoric - legends



M O H R & S E R E D I N

Landscape Architects, Inc.

file copy

**Swan Island Master Plan
Committee Meeting Minutes
November 13, 1998**

Present:

George Matula, IF&W
Keel Kemper, IF&W
Rusty Dykes, IF&W
Nat Salfas, BGS
Stephen Mohr, M&S
Pam Griffin, M&S

GENERAL

The meeting was called to review the issues for the Master Plan and to set a schedule for completion of the project.

The proposed dates for additional meetings are as follows:

December 3rd - 1:00; a draft master plan document with policy and guidelines will be handed out and the committee will discuss key plan issues.

January 7th - 1:00; review revisions to above document and review final plans.

These meetings will be at the Bureau of General Services, State Office Building.

Please contact us as soon as possible if these meeting dates cannot fit into your schedule.

ISSUES DISCUSSED

A. SM began meeting by listing the key issues that the Master Plan (MP) still needs to address. They are as follows:

1. Partnerships: Who, what and how can these be formed. This is a source of additional staffing and financial assistance however, there are potential problems. A policy addressing the issues is necessary. The intent is to be program oriented rather than personality driven, to ensure longevity of programs.
2. Resolve issues regarding the educational mission vs. wildlife management. (eg. deer herd reduction).
3. What is the carrying capacity of the island and identify user groups.
4. What are costs including staffing and maintenance budgets resulting from plan recommendations.

B. Maintenance: the only way that maintenance occurs presently is if staff takes it upon themselves; there is no regular maintenance funding or schedules. NS: maintenance should be given a budget and this should be part of the Master Plan.

C. The intent of the MP is to raise issues while recognizing there may not always be clear answers or recommendations. Some issues will remain as questions or problems, but it is important to raise them at this time.

The first question is: should IF&W be managing the Island or is it more appropriate under DOC? It is a unique resource for IF&W and poses some challenges as a result (especially the historic/cultural resources) but the fact that it is a wildlife refuge places it in the hands of IF&W. The agency also manages several other properties. The possibility of joint management was discussed but not endorsed.

D. M&S has dimensions from Dick Reed on the buildings and will produce drawings.

E. There should be a building committee in some capacity which will have oversight of the built properties on the Island.

F. Other partnerships have been successful. A program for "watchable wildlife" (Stellar Wildlife Viewing Areas?) was funded with private/state/federal money.

G. The deer question is an important one. Many people are attracted to the Island because of the overwhelming presence of deer. However, the deer are quite undernourished because the island vegetation cannot support the numbers. The sentiment at the meeting is to include regulation of the the deer population in the Master Plan and to approach it as proper technique for wildlife management. It is being done successfully in other areas of the state and the feeling is that the public is gaining in understanding the reasons for taking action.

H. The education program needs to be focused. Again relating to the deer, the message is mixed presently because IF&W is supposed to be demonstrating proper management techniques and letting the deer overwhelm the Island's resources is not proper management. Other issues include deciding how much of the Island's resources should be part of a self-guided tour vs. the current staff guided tours. The present system is great PR but overwhelms the staff.

The current education proposal (with the Richmond School s) was recognized with an award from the Maine Principals Association for Excellence in Education. However there was some confusion within the Town of Richmond as to what is actually taking place.

I. It would be useful if Swan Island was identified in the upcoming IF&W Strategic Plan as a demonstration project. This would create more awareness of the Island and could create a possibility of more funding. There was also some discussion about IF&W moving more towards more of a stewardship role with their properties.

J. The level of individual assistance staff currently offers visitors is overwhelming to current levels of staffing. There is a need to examine the most cost efficient and practical ways to assist the public and to ensure that they continue to visit while ensuring staff is used properly and fairly.

ACTION REQUIRED

Committee members to notify M&S of acceptability of schedule and date.

Swan Island Master Plan
Meeting Minutes
12/3/98

Present: Gene Dumont
Rusty Dyke
Keel Kemper
Lisa Kane
Tanya Seredin
Stephen Mohr
Pam Griffin

The next meeting date is January 7. One week prior to this date, a draft plan will be circulated which we will discuss at the meeting on the 7th. Please call if there is anything you would like to be sure is included in the plan. A final meeting date will be determined on this date. After this review, the draft plan will be submitted to the Division Director and Commissioner.

The purpose of the December 7 meeting was to discuss issues about Swan Island and its management. These issues are based on discussions by the Committee in previous meetings, interviews, and Mohr & Seredin experience as planners. The goal is to be able to come to a conclusion on key issues in order to present them in the master plan.

I. Prioritization of Competing Uses

Discussion:

SM said that Swan Island offers fisheries and wildlife, natural, cultural and recreational resources. As an effort to maximize management efficiency and create long-term policies, how does IF&W prioritize these wide-ranging and sometimes competing resources of the Island? He suggested that wildlife management be the main focus because it is most prominent in IF&W priorities.

GD responded that there is no prioritization. A balance is sought. IF&W has attempted to prioritize in the past but it has led to problems. There was discussion about the interdependent relationship between cultural resources and wildlife needs - such as the fields.

KK said that wildlife management is obviously the priority in other management areas. RD said that at Swan Island the cultural resources have been elevated to be as important as the wildlife management. GM said that IF&W is very interested in Swan Island and has a high interest in managing it correctly and recognizes that some of it's resources are beyond the expertise of IF&W.

Conclusion:

The determination of this meeting was that IF&W priorities will continue to take precedence, but the potential of the other resources needs to be more fully realized in a manner which is suitable for Swan Island.

A. Wildlife Management Issues

Discussion:

Deer: There is a problem with numbers of deer including loss of understory. In the past, deer have been encouraged to come to the Island. People are attracted to the Island to see the deer, but not as much as in the past. GD said there has been no hunting since 1890 and restricting the numbers is more complicated than it first appears. The herd size cannot be controlled due to their ability to move freely back and forth from the mainland and public pressure is against such a movement. There are fewer deer now than in previous years. It is not that attractive to them because of the scarcity of food. Also, the island is not a refuge. This is a word with specific connotations. It is a wildlife management area. Grassland Birds: there is consideration towards providing a better habitat for grassland birds; this primarily involves different mowing procedures. Grassland birds are declining (presumably from loss of habitat?).

Conclusion:

This discussion leaned toward not restricting deer herd because of the difficulties described but not to encourage more deer by feeding.

B. Recreational Facilities Issues

Discussion:

SM suggested that offering camping as part of the program is not supported by the IF&W mission. The service takes up staff time that could be better spent elsewhere such as improving wildlife habitats. This is the only location where IF&W offers camping and requires separate administrative duties.

There was some discussion that perhaps camping is not an essential service; however, overall the sentiment leaned toward keeping camping. RD stated that camping is a valued service and does not pose an overwhelming problem to staff. A staff person has to stay each night and this is overtime; however, the feeling is that this is an accommodation that is not overwhelming. The type of people that camp are highly appreciative of the island's resources. There are however, ways to tighten up the schedule so that staff does not have to be available at all hours. This has to start at the reservation desk and with the

brochures that are handed out to people. RD would like to offer a better educational experience to these people. A design for the restroom has been completed. The current thought is that it will probably be located on the top of the hill near the lean-tos. IF&W is concerned about negative outfall from would-be campers if it is eliminated, and IF&W prefers to keep people satisfied.

Conclusion:

Camping, although not really consistent with IF&W's mission and it requires an excessive amount of staff time, does not significantly erode the Island's resources and is a popular recreational amenity.

C. Cultural Resource Issues

Discussion:

RD expressed strong interest in developing the potential of these resources. KK expressed reservation about their expertise in this area. PG had spoken with Bob Bradley of the Maine Historical Preservation Commission. Bob said that the agency is very committed to Swan Island and is very happy to work with IF&W. He suggested that they may want to formalize their role with IF&W by entering into a written agreement. He also stated that there is more work to be done with the prehistory archaeological sites in order to nominate them to the Historic Register. LK said one of the buildings could be a museum/visitor center. There are funding sources that can be considered such as the Maine Humanities Council. KK stated that grant writing is difficult for current staff levels and is not within their expertise.

Conclusion:

The potential for educational programming about the cultural resources, including archaeological resources, on the Island has not been fully realized. However, present staff levels and expertise do not lend themselves towards improving the management of these resources in any significant manner.

II. Island Management

A. Volunteers

Volunteers can be a significant source of expertise and additional staff. There are also significant supervisory and safety issues. A volunteer coordinator could manage this area of management.

B. Education

The desire to get away from intensive "hands on" procedures was expressed. The discussion centered on how to offer a quality educational program that does justice to the numerous topics of interest that the Island offers. Lack of staff is always a consideration.

Current programming centers on two target audiences: the visiting public and school groups. There are two brochures. A booklet that was designed in the early 80's and a leaflet that was recently designed.

LK offered ideas about the program at the Wildlife Park. The public is offered a self-guided tour. School groups are offered a more in-depth program which has been designed to provide a quality educational experience and is correlated with state learning results. A teacher packet is prepared for school groups. There is a schedule that is offered (with some flexibility).

There are shared concepts that each site communicates such as threatened and endangered species. However, the different sites lend themselves toward teaching a different lesson about these concepts. The programs should be complementary.

Commitment to school groups was expressed. This includes the need for a well-designed educational program as well as making the schedule a bit more rigorous which would free up staff time to offer a higher quality service. Accomodating everyone has been the past policy and there have been good reasons for doing so; however, this has pitfalls and it does not seem to be working well because of the burdon imposed on staff. Some accomodation is good, but there must be a framework that staff can work within.

The Island can apply to BGS to be a demonstration program; BGS has some money for specific programs.

C. Revenue

The Island does generate revenue which currently goes to the IF&W general fund. The wildlife park is self-supporting. Should the Island become a self-supporting program? (Requires more financial analysis).

D. Partnerships

There are several potential partnerships pending. Although the idea of partnerships is a good one and can lead to expanded opportunities, the need to be careful was clearly expressed. SM stated that the master plan would provide guidelines (structure and criteria) for ensuring that any partnership agreement truly benefited IF&W's mission. One of the most important conditions is that IF&W always maintain the lead role in any

venture. Staff should always be the ultimate supervisor and keep a close relationship with all programming.

Existing partnrships appear to be positive. The Richmond school program on the Island is a continuing to be developed and is operating with a license agreement which requires annual renewal. This winter a memorandum of agreement will be developed. BIW has been a very positive partnership. Jim Favreau is the contact person at BIW.

Please call Pam if you would like to make any changes or additions.

STEVE POWELL WILDLIFE MANAGEMENT AREA

1999 SEASON

PUBLIC USE STATS AND SUMMARIES

Swan Island Financial Summary 1999

1999	# Day Visitors	# Camp Nights	Reservation Fees	Day Use Fees	Camping Fees	Total \$ Received
May 1 - June 19	748	383	\$754.07	\$2,458.00	\$1,855.83	5,067.9
June 20 - Sept 4	577	610	\$436.09	\$1,844.00	\$4,695.00	6,975.09
Sept 5 - Oct 2	54	198	\$0.00	\$232.50	\$1,103.50	1,336
TOTALS	1,379	1,191	\$1,190.16	\$4,534.50	\$7,654.33	13,378.99

Swan Island User Summary 1989 - 1999

YEAR	# DAY VISITORS	# OVERNIGHT VISITORS	TOTAL \$ RECEIVED
1999	1379	1,191	\$13,789.99
1998	1331	787	\$9,632.58
1997	1585	985	\$11,575.45
1996	2205	1,265	\$7,656.70
1995	1712	951	\$7,372.50
1994	2336	552	\$6,367.00
1993	2005	706	\$7,235.00
1992	1809	472	\$6,015.00
1991	1641	234	\$4,791.00
1990	1618	604	\$6,712.00
1989	2207	566	\$7,863.00

SWAN ISLAND USER GROUP STATS AND SUMMARIES

1999

DAY USE	School Groups		Other Groups		Misc. Visitors		TOTALS (Day Use)	
	Visitors	Percent	Visitors	Percent	Visitors	Percent	Visitors	Percent
May 1 - June 19	587	78%	93	12%	68	10%	748	54%
June 20 - Sept 4	54	9%	310	54%	213	37%	577	42%
Sept 5 - Oct 2	0	0%	30	56%	24	44%	54	4%
TOTAL USE	641	29%	433	41%	305	30%	1379	100%

OVERNIGHT USE	Group Camp Nights		Misc. Camp Nights		TOTALS (Overnight Use)	
	Camp Nights	Percent	Camp Nights	Percent	Camp Nights	Percent
May 1 - June 19	355	93%	28	7%	383	31%
June 20 - Sept 4	383*	58%	277	42%	660	53%
Sept 5 - Oct 2	163	82%	35	18%	198	16%
TOTAL USE	518	78%	340	22%	1,241	100%

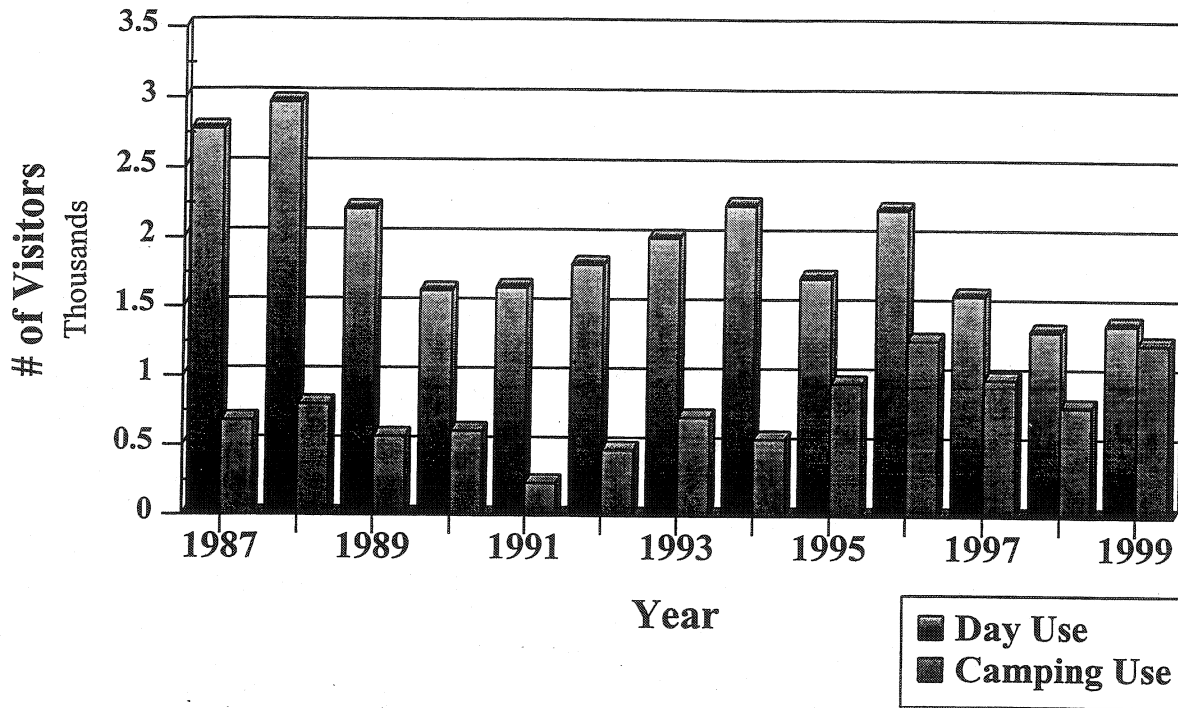
* Does not include Junior Maine Guides (Approximately 300 campnights)

1999 SEASON	DAY USE	OVERNIGHT USE
May 1 - June 19	66%	34%
June 20 - Sept 4	49%	51%
Sept 5 - Oct 2	21%	79%

TOTAL OCCUPANCY (All Uses Combined)			
1999	Max Allowable	Actual Use	% Occupancy
May 1 - June 19	3000	1131	38%
June 20 - Sept 4	4620	1187	26%
Sept 5 - Oct 2	1680	252	15%

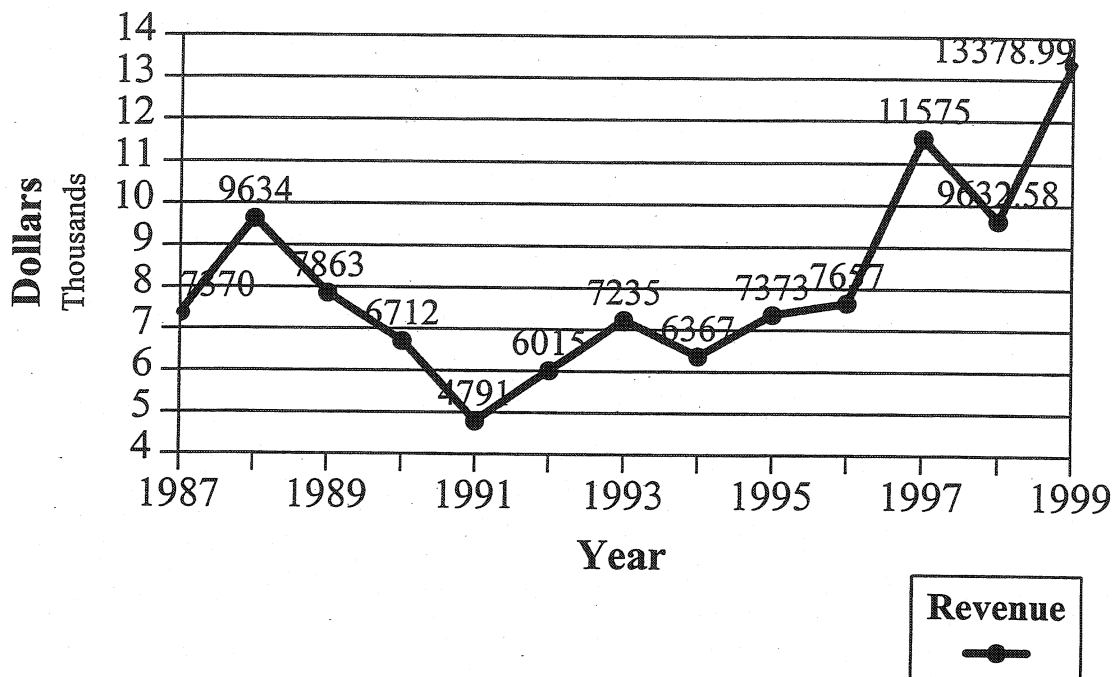
Swan Island Public Use Trends

A Thirteen Year Summary



Swan Island Revenue Trends

A Thirteen Year Summary



STEVE POWELL WILDLIFE MANAGEMENT AREA

1998 SEASON

PUBLIC USE STATS AND SUMMARIES

DEC 23 1998

SWAN ISLAND USER GROUP STATS AND SUMMARIES

1998

DAY USE	School Groups		Other Groups		Misc. Visitors		TOTALS (Day Use)	
	Visitors	Percent	Visitors	Percent	Visitors	Percent	Visitors	Percent
April 26 - June 20	489	93%	9	2%	27	5%	525	100%
June 21 - Sept 5	28	4%	351	55%	258	41%	637	100%
Sept 6 - Oct 3	62	37%	71	42%	36	21%	169	100%
TOTAL USE	579	45%	431	33%	321	22%	1331	100%

OVERNIGHT USE	Group Camp Nights		Misc. Camp Nights		TOTALS (Overnight Use)	
	Camp Nights	Percent	Camp Nights	Percent	Camp Nights	Percent
April 26 - June 20	260	93%	19	7%	279	100%
June 21 - Sept 5	281	62%	171	38%	452	100%
Sept 6 - Oct 3	37	66%	19	34%	56	100%
TOTAL USE	578	73%	209	27%	787	100%

1998 SEASON	DAY USE	OVERNIGHT USE
April 26 - June 20	65%	35%
June 21 - Sept 5	59%	41%
Sept 6 - Oct 3	75%	25%

TOTAL OCCUPANCY (All Uses Combined)			
1998	Max Allowable	Actual Use	% Occupancy
April 26 - June 20	3420	804	24%
June 21 - Sept 5	4680	1089	23%
Sept 6 - Oct 3	1740	225	13%

Swan Island Financial Summary 1998

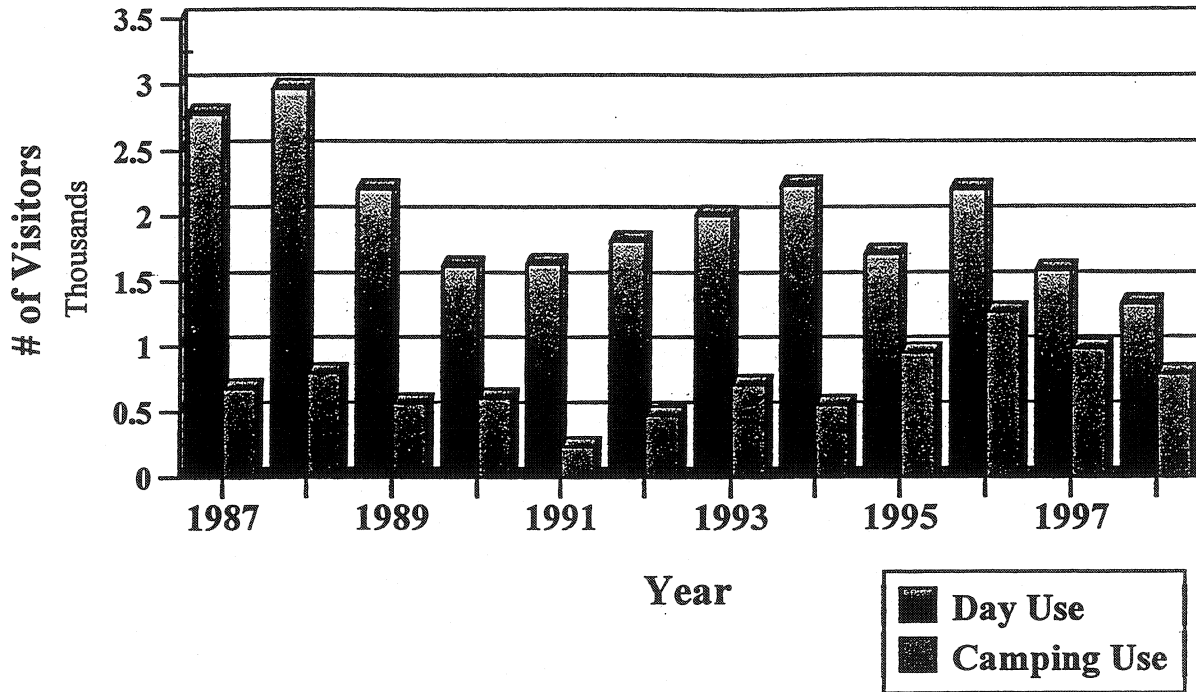
1998	# Day Visitors	# Camp Nights	Reservation Fees	Day Use Fees	Camping Fees	Total \$ Received
April 26 - June 20	525	279	\$331.00	\$1,549.00	\$1,367.00	3,247
June 21 - Sept 5	637	452	\$105.00	\$2,406.50	\$2,899.00	5,410.5
Sept 6 - Oct 3	169	56	\$39.08	\$636.50	\$299.50	975.08
TOTALS	1,331	787	\$475.08	\$4,592.00	\$4,565.50	9,632.58

Swan Island User Summary 1988 - 1998

YEAR	# DAY VISITORS	# OVERNIGHT VISITORS	TOTAL \$ RECEIVED
1998	1331	787	\$9,632.58
1997	1585	985	\$11,575.45
1996	2205	1,265	\$7,656.70
1995	1712	951	\$7,372.50
1994	2336	552	\$6,367.00
1993	2005	706	\$7,235.00
1992	1809	472	\$6,015.00
1991	1641	234	\$4,791.00
1990	1618	604	\$6,712.00
1989	2207	566	\$7,863.00
1988	2967	798	\$7,369.50

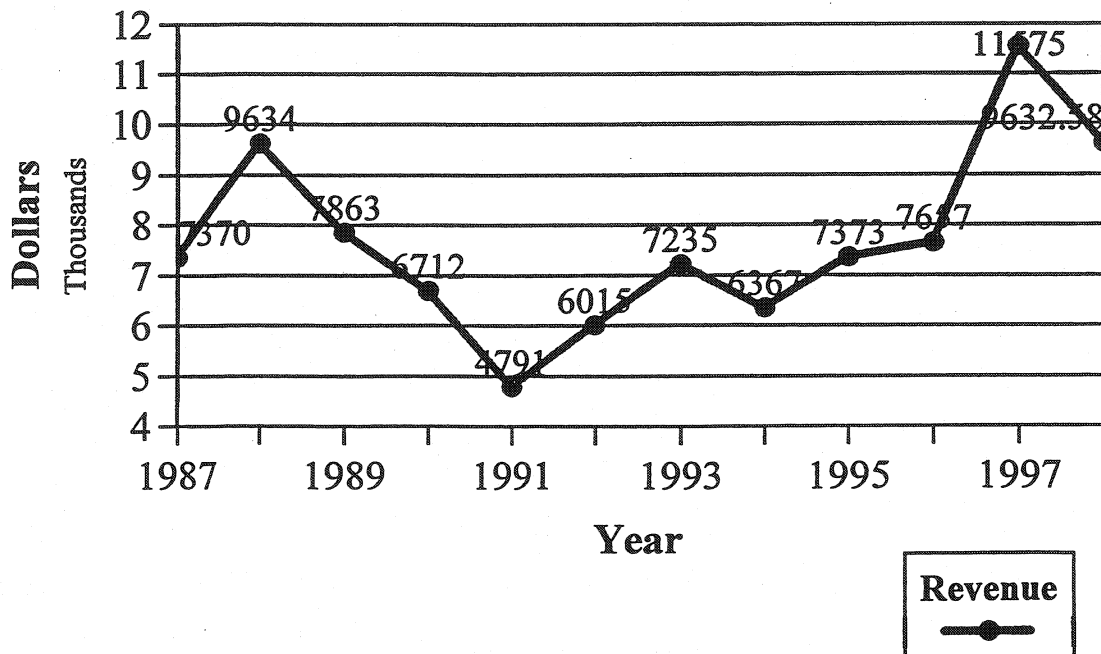
Swan Island Public Use Trends

A twelve Year Summary



Swan Island Revenue Trends

An Eleven Year Perspective



Appendix G

Steve Powell Wildlife Management Area Swan Island Operation Costs Information (1 Year) Estimate

REGIONAL WILDLIFE MANAGEMENT PROJECT

Federal Aid Jobs

Project Services (Study I)

Administration and Coordination:	(110 man days)	=	*	\$ 17,213.00
Public Appearances:	(2 man days)	=		\$ 252.00
Repairs to Equipment:	(11 man days)	=		\$ 2,044.00

Habitat Management (Study II)

Buildings:	(21 man days)	=		\$ 3,280.00
Roads and Trails:	(53 man days)	=		\$ 9,334.00
Public Use Facilities: **	(17 man days)	=		\$ 2,964.00
Vegetation Control:	(23 man days)	=		\$ 4,287.00
Fire Breaks:	(1 man day)	=		\$ 197.00
Nest Structures:	(2 man days)	=		\$ 400.00
Custodial Functions:	(63 man days)	=		<u>\$ 11,038.00</u>

Sub Total = * \$ 51,009.00

State Jobs

Miscellaneous Activities Project (State)

Public Use Facilities:	(165 man days)	=		<u>\$ 23,514.00</u>
<i>(campground & day use related activities)</i>				

Sub Total = \$ 23,514.00

Total Cost = \$ 74,523.00

* Does not include Region B administrative costs (Regional & Asst. Regional Biologists)

** This work item includes docks, floats, pier, boats, mainland parking lot.

Notes:

Swan Island currently does not have its own itemized budget, nor does the regional budget data base contain itemized Swan Island jobs or expenses. Swan Island operating costs (personal services, maintenance expenses, vehicle expenses, etc.) are imbedded in the Region B budget and make up a percentage of the various regional federal aid and state job items.

The above itemized expenses represent an attempt to accurately dissect direct Swan Island operating costs from the Region B budget database. Unless otherwise noted, line item expense totals include all expenses including personal services, vehicle/equipment expenses and other miscellaneous expenses associated with a particular line item.

Appendix B

Local, State and Federal Environmental Regulations
Affecting Wildlife Management Areas

Below is a summary of the local, State and Federal environmental regulations which may have a bearing on upland and wetland management activities conducted on Department owned wildlife management areas.

A. Local Environmental Regulations

1. Municipal Shoreland Zoning: regulates activities within 250 feet, horizontal distance, of the normal high-water line of any great pond, river or saltwater body; within 250 feet, horizontal distance, of the upland edge of a coastal wetland or freshwater wetland; and within 75 feet, horizontal distance, of the normal high-water line of a stream. Also applies to any structure built on, over or abutting a dock, wharf or pier, or other structure extending beyond the normal high-water line of a water body or within a wetland. 38 MESA Section 438-A(1)
2. Local Zoning/Local Ordinances: Before conducting management activities, it is wise to check with the municipality to determine if they have established any local zoning or ordinances which would affect your planned management activity. An example of this would be a local timber harvesting or forestry ordinance.

B. State Environmental Regulations

1. Conservation of Endangered Species: allows the commissioner of MDIFW to identify areas providing physical or biological features essential to the conservation of the species and which may require special management consideration. The commissioner may also develop guidelines for the protection of species designated as endangered or threatened. In addition, no projects may be carried out which will significantly alter the habitat...(or) violate protection guidelines set forth.

2. Timber Harvesting Notification: a landowner is required under 12 MESA Section 8883 to file a notification of intent to harvest forest products.
3. Confidential Stumpage Sales Report: any owner of forest land who sells stumpage...shall render...(a) report to the Director (Maine Forest Service)...stating the species, volume and stumpage price per unit of measure for each transaction and the municipality or township where the stumpage was located.
4. Forest Practices Act: establishes the standards for clearcutting and for forest regeneration following timber harvesting as per 12 MESA c. 805, Sub-c. III-A.
5. Natural Resources Protection Act: regulates dredging, bulldozing, removing or displacing soil, sand, vegetation or other materials; draining or otherwise dewatering; filling, including adding sand or other material to a sand dune; or any construction, repair or alteration of any permanent structure as per 38 MESA Section 480-A-S. This applies to all "protected resources" which include: coastal sand dune systems, coastal wetlands, significant wildlife habitat, fragile mountain areas, freshwater wetlands, great ponds or rivers, streams or brooks as defined.
6. Dam Maintenance Act: requires dam owners to notify the Department of Environmental Protection, in writing, 90 days prior to any alteration or discontinuation in the use of the dam. The owner is also required to maintain the water level at the established normal water level.

C. Federal Environmental Regulations

1. Fish & Wildlife Coordination Act (16 USC 661 et seq.; 48 Stat. 401): provides that public entities under Federal permit or license that propose to modify any stream or other water body shall coordinate with the Secretary of the Interior through the U.S. Fish & Wildlife Service. In addition to preventing losses to fish and wildlife resources, such projects also shall provide for the improvement of these resources.

2. National Environmental Policy Act, 1969 (NEPA) (42 USC 4321 et seq.; 83 Stat. 852): declares a national policy to promote efforts which will prevent or eliminate damage to the environment. It requires that for all major Federal actions (or Federally funded actions) significantly affecting the quality of the environment, a detailed Environmental Impact Statement (EIS) must be prepared.
3. River and Harbors Act, 1989 (33 USC et seq.; 30 Stat. 1151): authorizes the Corps of Engineers to issue permits for construction across any navigable water, excavating or depositing material in navigable waters, and anchorages causing obstruction.
4. Clean Water Act (CWA) (33 USC 1251 et seq.; Stat. 816) Section 404 (Deposition of Dredged or Fill Materials): authorizes the Corps of Engineers to issue permits for the discharge of dredged or fill material into navigable waters. It is the responsibility of the Environmental Protection Agency to regulate the designation and use of the area for the disposal of authority in the issuance of these permits.
5. Endangered Species Act, 1973 (16 USC et seq.; 87 Stat 884): provided a means for the conservation of the ecosystems upon which threatened and endangered species depend and to provide a program for the protection of such species. It requires that all Federal agencies (Federally funded) review their actions to determine if they may affect a listed species or its habitat.
6. Flood Disaster Protection Act, 1973: regulated placement of structures in flood hazard areas.
7. Executive Order 11988--Flood Plain Management: action shall be taken to reduce the risk of flood loss, to minimize the impacts of floods...and to restore and preserve the natural and beneficial values served by floodplains...
8. Executive Order 11990--Protection of Wetlands: action shall be taken to minimize the destruction of wetlands and to preserve and enhance the natural and beneficial values of wetlands...



EXCERPTS FROM:

The Secretary of the Interior's
Standards for the Treatment of
Historic Properties

with

**Guidelines for
the Treatment of
Cultural Landscapes**

U.S. Department of the Interior
National Park Service
Cultural Resource Stewardship and Partnerships
Heritage Preservation Services
Historic Landscape Initiative
Washington, D.C.
1996



Introduction

The Secretary of the Interior's Standards for the Treatment of Historic Properties and the Guidelines for the Treatment of Cultural Landscapes

The Secretary of the Interior's Standards for the Treatment of Historic Properties and the Guidelines for the Treatment of Cultural Landscapes provide guidance to cultural landscape owners, stewards and managers, landscape architects, preservation planners, architects, contractors, and project reviewers prior to and during the planning and implementation of project work.

The Secretary of the Interior is responsible for establishing professional standards and providing advice on the preservation of cultural resources listed in or eligible for listing in the National Register of Historic Places. In partial fulfillment of this responsibility, the Secretary of the Interior's Standards for Historic Preservation Projects were developed in 1976. They consisted of seven sets of standards for the acquisition, protection, stabilization, preservation, rehabilitation, restoration, and reconstruction of historic buildings.

Since their publication in 1976, the Secretary's Standards have been used by State Historic Preservation Officers and the National Park Service to ensure that projects receiving federal money or tax benefits were reviewed in a consistent manner nationwide. The principles embodied in the Standards have also been adopted by hundreds of preservation commissions across the country in local design guidelines.

In 1992, the Standards were revised so that they could be applied to *all* historic resource types included in the National Register of Historic Places--buildings, structures, sites, objects, districts, and landscapes. The revised Standards were reduced to four sets by incorporating protection and stabilization into preservation, and by eliminating acquisition, which is no longer considered a treatment. Re-titled *The Secretary of the Interior's Standards for the Treatment of Historic Properties*, this new, modified version addresses four treatments: preservation, rehabilitation, restoration, and reconstruction. The *Guidelines for the Treatment of Cultural Landscapes* illustrate how to apply these four treatments to cultural landscapes in a way that meets the Standards.

Of the four, Preservation standards require retention of the greatest amount of historic fabric, including the landscape's historic form, features, and details as they have evolved over time. *Rehabilitation* standards acknowledge the need to alter or add to a cultural landscape to meet continuing or new uses while retaining the landscape's historic character. *Restoration* standards allow for the depiction of a landscape at a particular time in its history by preserving materials from the period of significance and removing materials from other periods. *Reconstruction* standards establish a framework for re-creating a vanished or non-surviving landscape with new materials, primarily for interpretive purposes.

The *Secretary of the Interior's Standards for the Treatment of Historic Properties*, revised in 1992, were codified as 36 CFR Part 68 in the 12 July 1995 *Federal Register* (Vol. 60, No. 133) with an "effective" date of 11 August 1995. The revision replaces the 1978 and 1983 versions of 36 CFR 68 entitled *The Secretary of the Interior's Standards for Historic Preservation Projects*.

Preservation Planning and the Treatment of Cultural Landscapes

Careful planning prior to treatment can help prevent irrevocable damage to a cultural landscape. Professional techniques for identifying, documenting, and treating cultural landscapes have advanced over the past twenty-five years and are continually being refined. As described in the National Park Service publication, *Preservation Brief #36: Protecting Cultural Landscapes*, the preservation planning process for cultural landscapes should involve: historical research; inventory and documentation of existing conditions; site analysis and evaluation of integrity and significance; development of a cultural landscape preservation approach and treatment plan; development of a cultural landscape management plan and management philosophy; development of a strategy for ongoing maintenance; and, preparation of a record of treatment and future research recommendations.

In all treatments for cultural landscapes, the following general recommendations and comments apply:

☒ Before undertaking project work, research of a cultural landscape is essential. Research findings help to identify a landscape's historic period(s) of ownership, occupancy and development, and bring greater understanding of the associations that make them significant. Research findings also provide a foundation to make educated decisions for project treatment, and can guide management, maintenance, and interpretation. In addition, research findings may be useful in satisfying compliance reviews (e.g. Section 106 of the National Historic Preservation Act as amended).

☒ Although there is no single way to inventory a landscape, the goal of documentation is to provide a record of the landscape as it exists at the present time, thus providing a baseline from which to operate. All *component landscapes* and *features* (see definitions below) that contribute to the landscape's historic character should be recorded. The level of documentation needed depends on the nature and the significance of the resource. For example, plant material

Defining Landscape Terminology

Character-defining feature - a prominent or distinctive aspect, quality, or characteristic of a cultural landscape that contributes significantly to its physical character. Land use patterns, vegetation, furnishings, decorative details and materials may be such features.

Component landscape - A discrete portion of the landscape which can be further subdivided into individual features. The landscape unit may contribute to the significance of a National Register property, such as a farmstead in a rural historic district. In some cases, the landscape unit may be individually eligible for the National Register of Historic Places, such as a rose garden in a large urban park.

Cultural landscape - a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. There are four general types of cultural landscapes, not mutually exclusive: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes.

Ethnographic landscape - a landscape containing a variety of natural and cultural resources that associated people define as heritage resources. Examples are contemporary settlements, sacred religious sites, and massive geological structures. Small plant communities, animals, subsistence and ceremonial grounds are often components.

Feature - The smallest element(s) of a landscape that contributes to the significance and that can be the subject of a treatment intervention. Examples include a woodlot, hedge, lawn, specimen plant, allee, house, meadow or open field, fence, wall, earthwork, pond or pool, bollard, orchard, or agricultural terrace.

Historic character - the sum of all visual aspects, features, materials, and spaces associated with a cultural landscape's history, i.e. the original configuration together with losses and later changes. These qualities are often referred to as character-defining.

documentation may ideally include botanical name or species, common name and size. To ensure full representation of existing herbaceous plants, care should be taken to document the landscape in different seasons. This level of research may most often be the ideal goal for smaller properties, but may prove impractical for large, vernacular landscapes.

☒ Assessing a landscape as a continuum through history is critical in assessing cultural and historic value. By analyzing the landscape, change over time -the chronological and physical "layers" of the landscape -- can be understood. Based on analysis, individual features may be attributed to a discrete period of introduction, their presence or absence substantiated to a given date, and therefore the landscape's significance and integrity evaluated. In addition, analysis allows the property to be viewed within the context of other cultural landscapes.

☒ In order for the landscape to be considered significant, character-defining features that convey its significance in history must not only be present, but they also must possess historic integrity. Location, setting, design, materials, workmanship, feeling and association should be considered in determining whether a landscape and its character-defining features possess historic integrity.

☒ Preservation planning for cultural landscapes involves a broad array of dynamic variables. Adopting comprehensive treatment and management plans, in concert with a preservation maintenance strategy, acknowledges a cultural landscape's ever-changing nature and the interrelationship of treatment, management and maintenance.

Defining Landscape Terminology

Historic designed landscape - a landscape that was consciously designed or laid out by a landscape architect, master gardener, architect, engineer, or horticulturist according to design principles, or an amateur gardener working in a recognized style or tradition. The landscape may be associated with a significant person, trend, or event in landscape architecture; or illustrate an important development in the theory and practice of landscape architecture. Aesthetic values play a significant role in designed landscapes. Examples include parks, campuses, and estates.

Historic vernacular landscape - a landscape that evolved through use by the people whose activities or occupancy shaped it. Through social or cultural attitudes of an individual, a family, or a community, the landscape reflects the physical, biological, and cultural character of everyday lives. Function plays a significant role in vernacular landscapes. This can be a farm complex or a district of historic farmsteads along a river valley. Examples include rural historic districts and agricultural landscapes.

Historic site - a landscape significant for its association with a historic event, activity or person. Examples include battlefields and presidential homes and properties.

Integrity - the authenticity of a property's historic identity, evinced by the survival of physical characteristics that existed during the property's historic or prehistoric period. The seven qualities of integrity as defined by the National Register Program are location, setting, feeling, association, design, workmanship, and materials.

Significance - the meaning or value ascribed to a cultural landscape based on the National Register criteria for evaluation. It normally stems from a combination of association and integrity.

Treatment - work carried out to achieve a particular historic preservation goal.

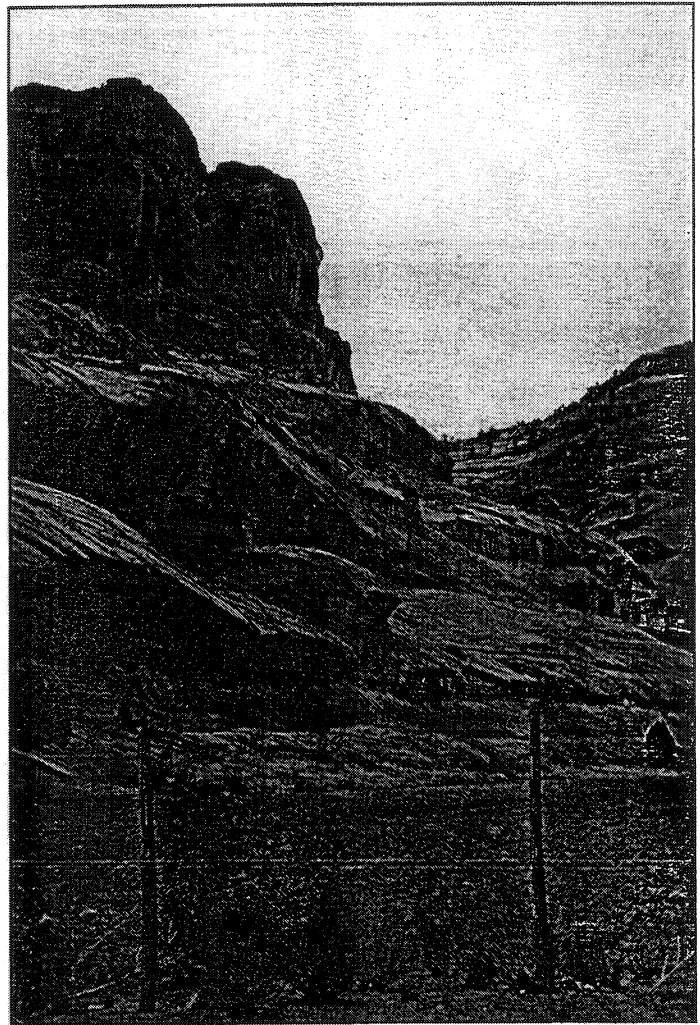
Some Factors to Consider When Selecting An Appropriate Treatment for a Cultural Landscape Project

The Standards are neither technical nor prescriptive, but are intended to promote responsible preservation practices that help protect our Nation's irreplaceable cultural resources. They cannot be used to make essential decisions about which contributing features of a cultural landscape should be retained and which can be changed. But once a specific *treatment* is selected, the Standards can provide the necessary philosophical framework for a consistent and holistic approach for a cultural landscape project.

A treatment is a physical intervention carried out to achieve a historic preservation goal -- it cannot be considered in a vacuum. There are many practical and philosophical variables that influence the selection of a treatment for a landscape (see discussion, pages 4-8). These include, but are not limited to, the extent of historic documentation, existing physical conditions, historic value, proposed use, long and short term objectives, operational and code requirements (e.g. accessibility, fire, security) and anticipated capital improvement, staffing and maintenance costs. The impact of the treatment on any significant archeological and natural resources should also be considered in this decision making process. Therefore, it is necessary to consider a broad array of dynamic and interrelated variables in selecting a treatment for a cultural landscape preservation project (see sidebar opposite titled, "Preservation Planning and the Treatment of Cultural Landscapes.")

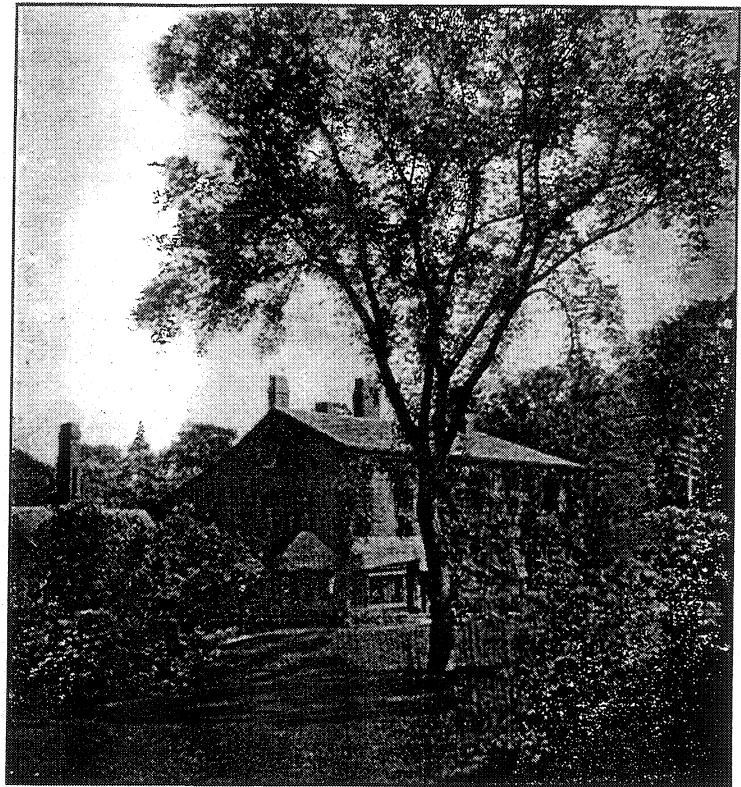
For some cultural landscapes, especially those that are best considered ethnographic or heritage landscapes, these Guidelines may not apply. However, if people working with these properties decide that community coherence may be affected by physical place and space--or if there is potential for loss of landscape character whose significance is rooted in the community's activities and processes (or other aspects of its history)--this guide may be of service.

✘ **Change and Continuity.** There is a balance between change and continuity in all cultural resources. Change is inherent in cultural landscapes; it results from both natural processes and human activities. Sometimes that change is subtle, barely perceptible as with the geomorphological effects on landform. At other times, it is strikingly obvious, as with vegetation, either in the cyclical changes of growth and reproduction or the progressive changes of plant competition and succession. This dynamic quality of all cultural landscapes is balanced by the continuity of distinctive characteristics retained over time. For, in spite of a landscape's constant change (or perhaps because of it), a property can still exhibit continuity of form, order, use, features, or materials. Preservation and rehabilitation treatments seek to secure and emphasize continuity while acknowledging change.

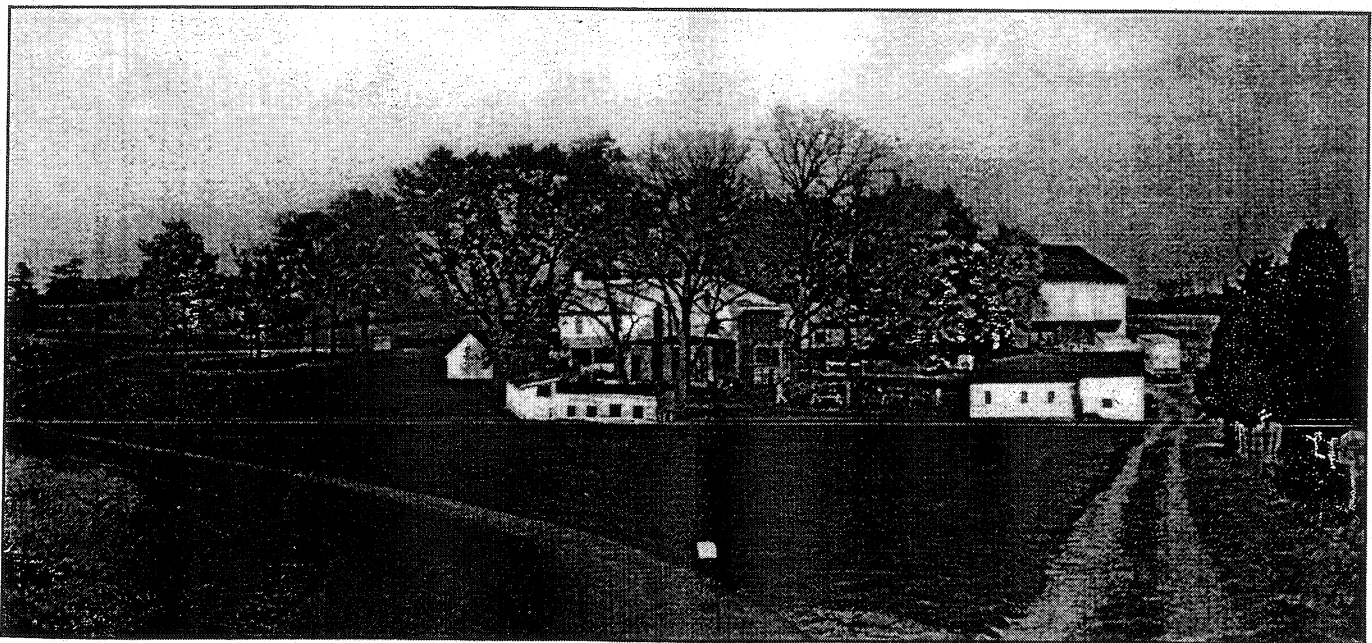


A remarkable record of human occupation exists at Canyon de Chelly National Monument in Chinle, Arizona--a vast mosaic of human activity through time, up to the present-day Navajo. Through preservation, an emphasis is placed on the cultural continuum, thus accommodating change and continuity. (author, 1996)

☒ **Relative Significance in History.** A cultural landscape may be a significant resource as a rare survivor or the work of an important landscape architect, horticulturist or designer. It may be the site of an important event or activity, reflect cultural traditions, or other patterns of settlement or land use. This significance may be derived from local, regional, or national importance. Cultural landscapes may be listed in the National Register of Historic Places individually or as contributing features in a historic district. In some instances, cultural landscapes may be designated National Historic Landmarks by the Secretary of the Interior for their exceptional significance in American history.



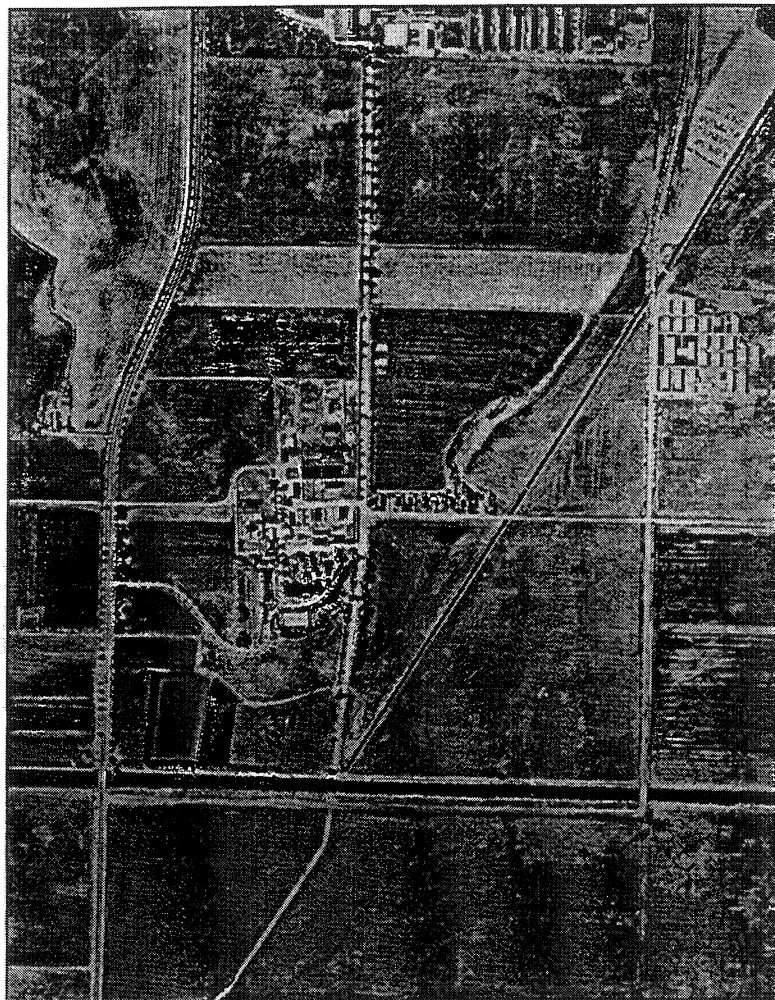
"Fairsted," in Brookline, Massachusetts, was the home and office of Frederick Law Olmsted, Sr., his sons, and his successors from 1883-1979. Olmsted is widely recognized as the founder of the profession of landscape architecture in the United States. As a historic property, Olmsted's home and office, is associated with the firm's work, but it is also significant for its landscape which illustrates Olmsted's suburban design principles. The property was designated a National Historic Landmark on May 23, 1963. (FLONHS)



Before a treatment was selected for the Piper Farm at Antietam Battlefield, it was important to understand that the farm complex had a high level of integrity for its turn-of-the-century development. In fact, if the landscape was "restored" to the period of the battle, it would have resulted in the removal of this farm complex and subsequent loss of significant history. (author, 1994)

✧ **Geographical Context.** The surroundings of a cultural landscape, whether an urban neighborhood or rural farming area [see center top left and right], may contribute to its significance and its historic character and should be considered prior to treatment. The setting may contain *component landscapes or features* (see definitions, page 9) which fall within the property's historic boundaries. It also may be comprised of separate properties beyond the landscape's boundaries, and perhaps those of the National Register listing. The landscape context can include the overall pattern of the circulation networks, views and vistas into and out of the landscape, land use, natural features, clusters of structures, and division of properties.

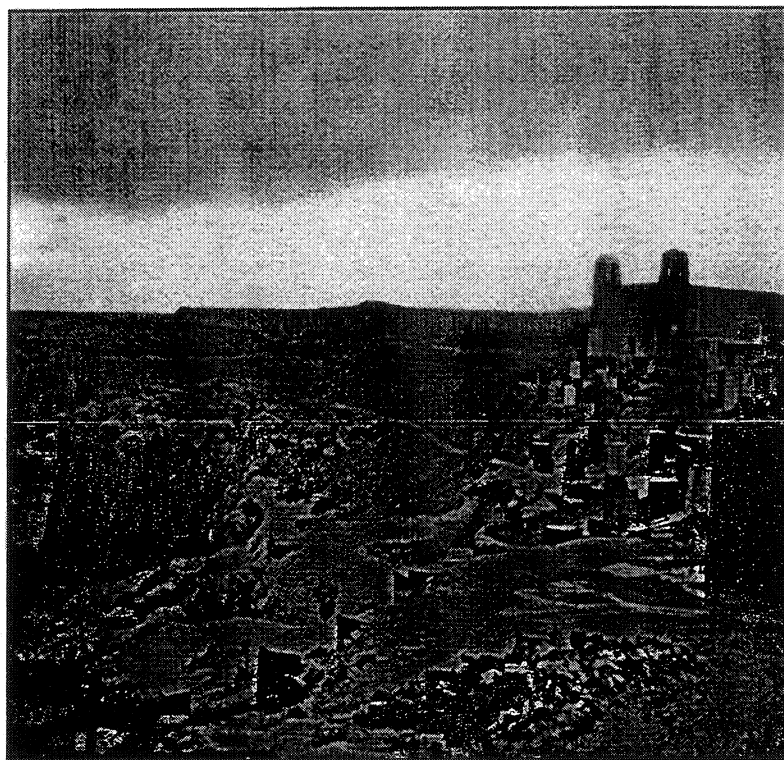
✧ **Use.** Historic, current, and proposed use of the cultural landscape must be considered prior to treatment selection. Historic use is directly linked to its significance [bottom left], while current and proposed use(s) can affect integrity and existing conditions. Parameters may vary from one landscape to another. For example, in one agricultural landscape, continuation of the historic use can lead to changes in the physical form of a farm to accommodate new crops and equipment. In another agricultural property, new uses may be adapted within the landscape's existing form, order and features.



Two aerial photographs [center top left and right] of the changing geographical context at Rancho Los Alamitos taken a half century apart, from expansive farm lands to suburban subdivision-- is eminently clear. This dramatic change to the property's context will have an effect on future planning and treatment recommendations. (Rancho Los Alamitos Foundation)

Acoma Pueblo, [opposite] located 60 miles west of Albuquerque, New Mexico, is one of the oldest, continuously inhabited villages in the United States, dating back over 1,000 years. Many of its historic uses are still evident in the village today as reflected by the traditional construction of adobe-masonry architecture, outside ovens and outhouses. (author, 1996)

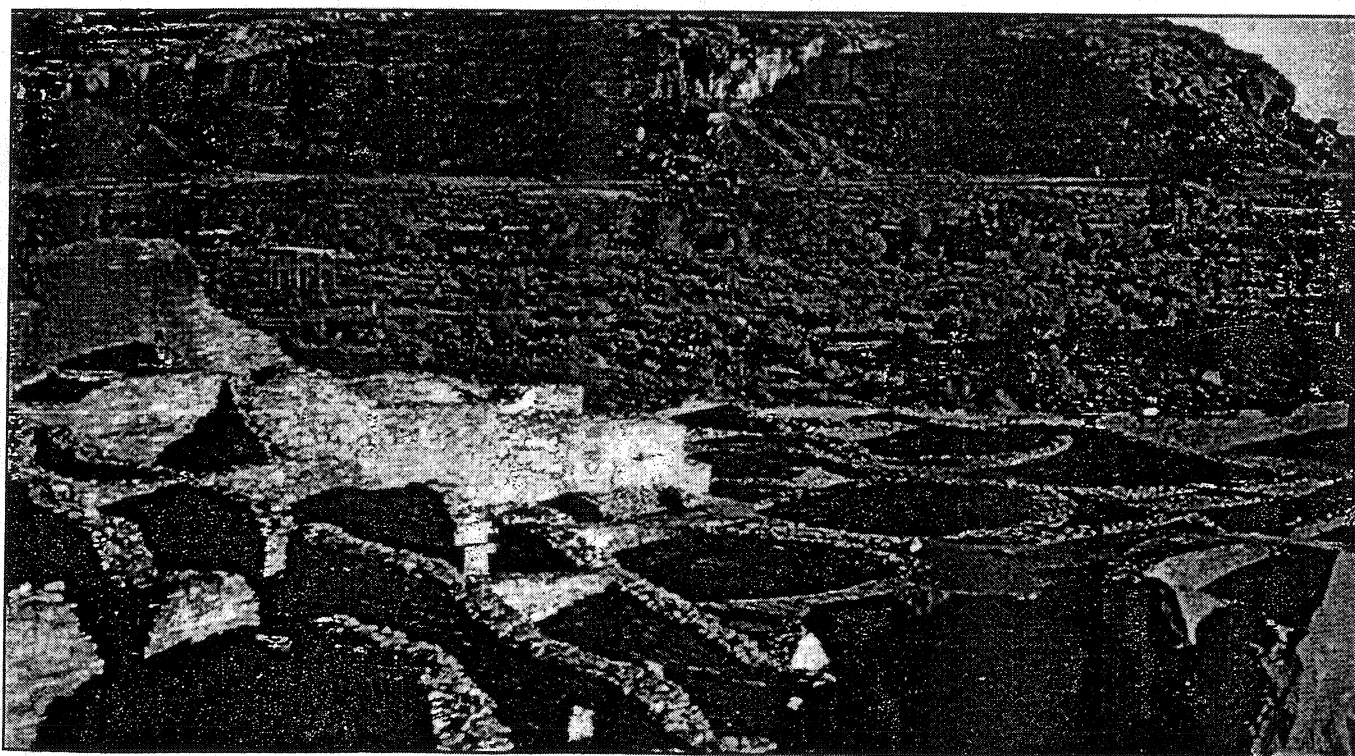
The core of this Anasazi complex at Chaco Culture National Historical Park, Bloomfield, New Mexico, [opposite page bottom] has been preserved and protected since it was designated a National Monument in 1907. (courtesy NPS)





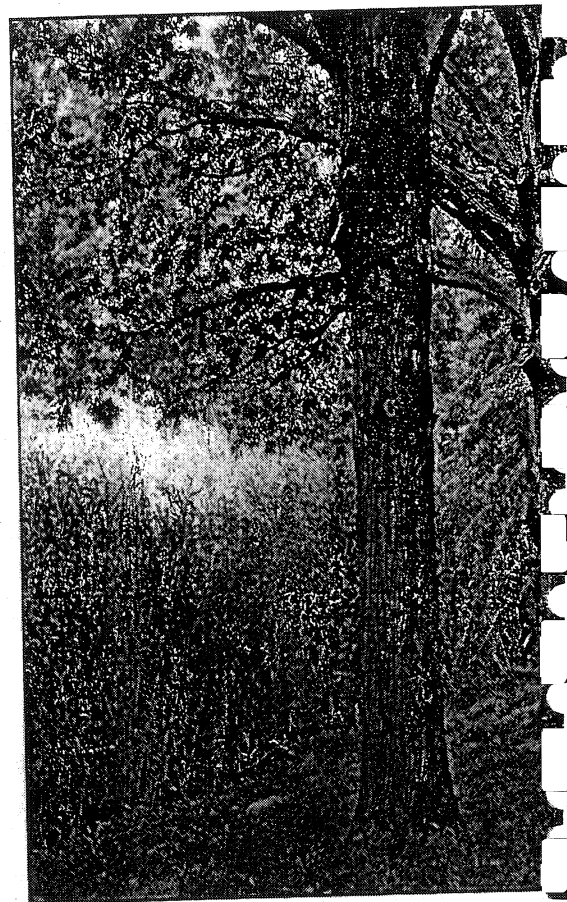
☒ **Archeological Resources.** Prehistoric and historic archeological resources may be found in cultural landscapes above and below the ground [below] and even under water. Examples of prehistoric archeological resources include prehistoric mounds built by Native-Americans. Examples of historic archeological resources include remnants of buildings, cliff dwellings, and villages; or, features of a sunken garden, mining camp, or battlefield. These resources not only have historical value, but can also reveal significant information about a cultural landscape. The appropriate treatment of a cultural landscape includes the identification and preservation of significant archeological resources. Many landscape preservation projects include a site archeologist.

☒ **Natural Systems.** Cultural landscapes often derive their character from a human response to natural features and systems. The significance of these natural resources may be based on their cultural associations and from their inherent ecological values. Natural resources form natural systems that are interdependent on one another and which may extend well beyond the boundary of the historic

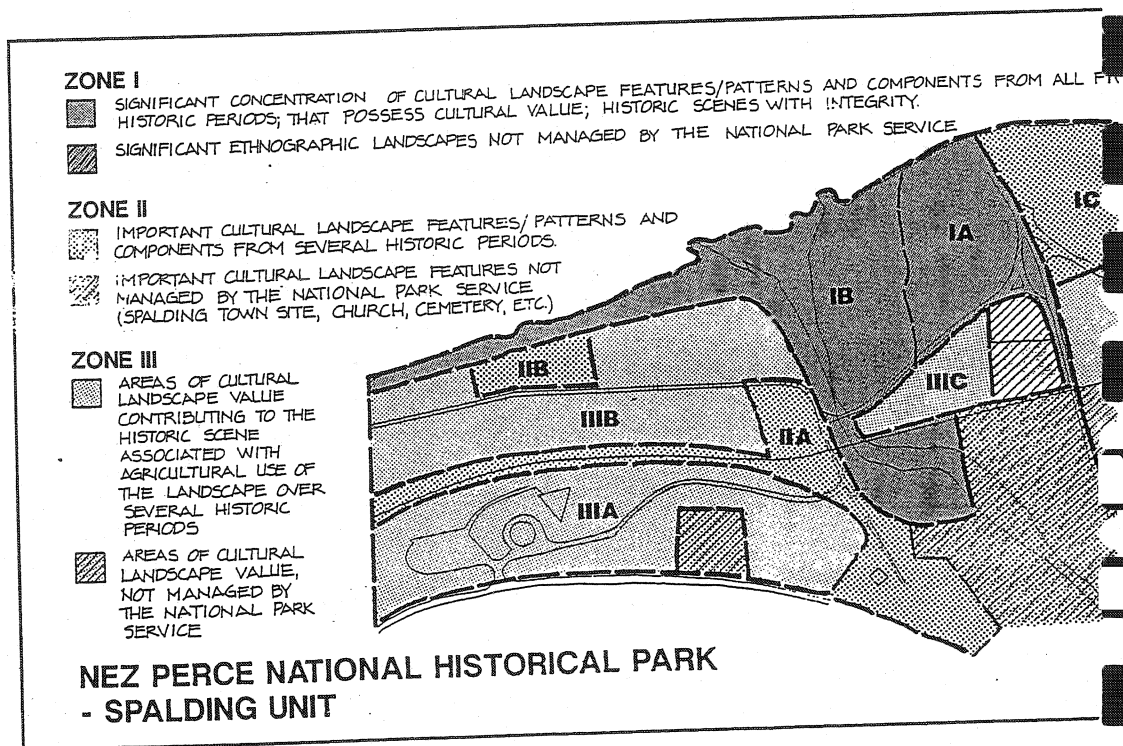


GUIDELINES FOR THE TREATMENT OF CULTURAL LANDSCAPES

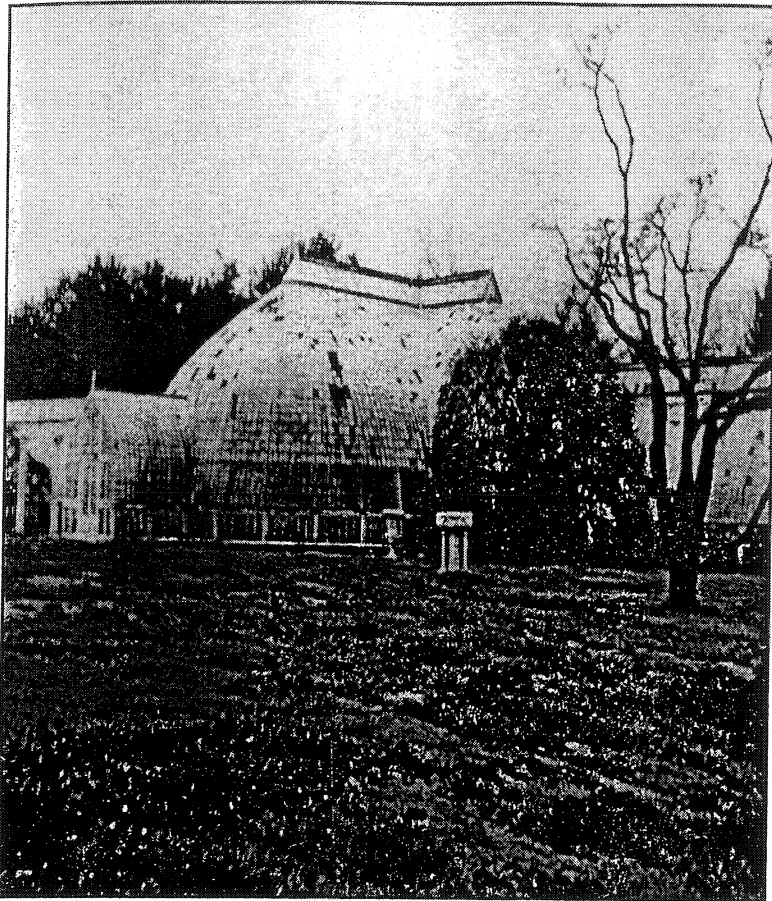
property. For example, these systems can include geology, hydrology, plant and animal habitats, and climate. Some of these natural resources are particularly susceptible to disturbances caused by changes in landscape management. Many natural resources such as wetlands or rare species fall under local, state, and federal regulations which must be considered. Since natural resource protection is a specialized field distinct from cultural landscape preservation, a preservation planning team may want to include an expert in this area to address specific issues or resources found within a cultural landscape. Natural systems are an integral part of the cultural landscape and must be considered when selecting an appropriate treatment.



Invasive plant materials such as Phragmites [opposite] have overtaken sections of the water's edge along the Emerald Necklace Parks in Boston, Massachusetts diminishing the park's historic character. While developing a rehabilitation plan for the parks, both natural systems and cultural resource values are being considered. (author, 1989)

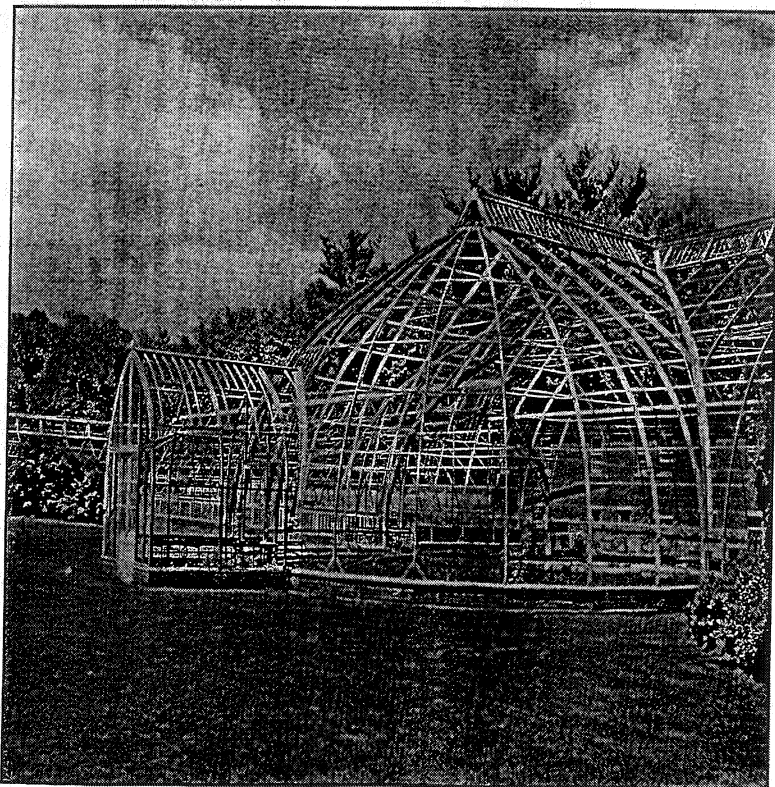


The management strategy for Nez Perce National Historical Park, Spalding, Indiana, divides the landscape into zones that considers significant concentrations of cultural landscape features and patterns; representation from historic integrity. (courtesy NPS)



⊠ **Management and Maintenance.** Management strategies are long-term and comprehensive. They can be one of the means for implementing a landscape preservation plan. Maintenance tasks can be day-to-day, seasonal, or cyclical, as determined by management strategies. Although routine horticultural activities, such as mowing and weeding, or general grounds maintenance, such as re-laying pavement or curbs, may appear routine, such activities can cumulatively alter the character of a landscape. In contrast, well-conceived management and maintenance activities can sustain character and integrity over an extended period. Therefore, both the management and maintenance of cultural landscapes should be considered when selecting a treatment.

⊠ **Interpretation.** Interpretation can help in understanding and “reading” the landscape. The tools and techniques of interpretation can include guided walks, self-guided brochures, computer-aided tours, exhibits, and wayside stations. Interpretive goals should compliment treatment selection, reflecting the landscape’s significance and historic character. A cultural landscape may possess varying levels of integrity or even differing periods of significance, both of which can result in a multi-faceted approach to interpretation. In some cases, interpretation and a sound interpretive strategy can inform decisions about how to treat a landscape.

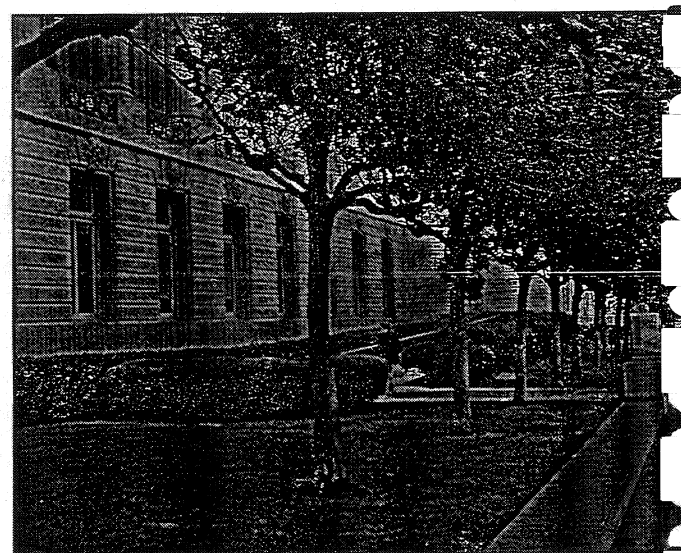
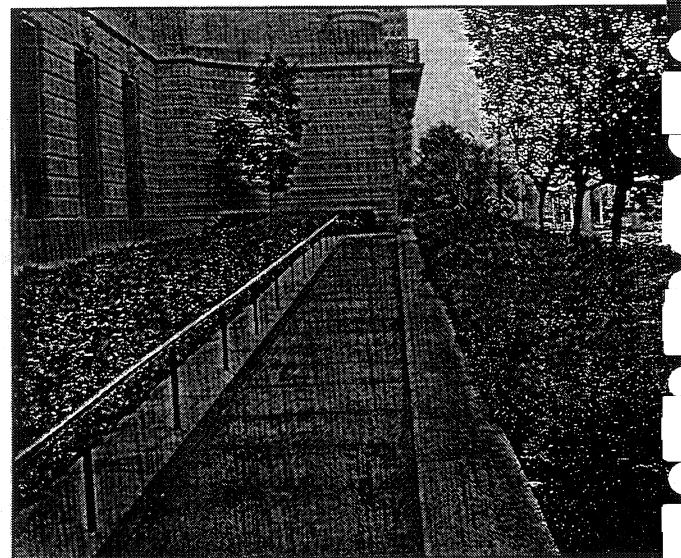
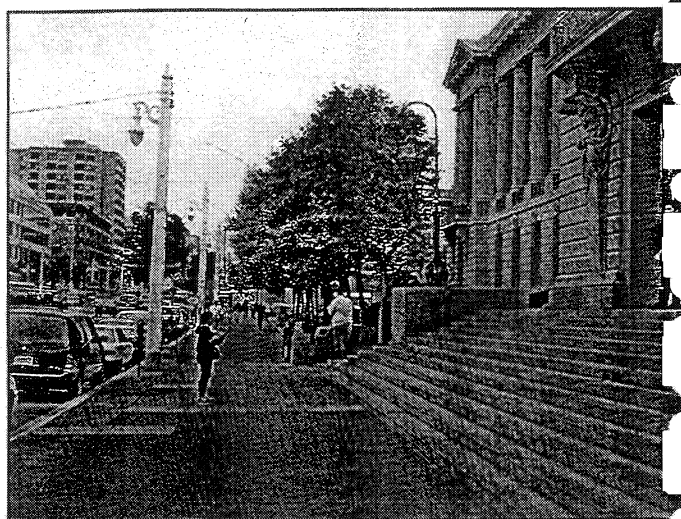


The Lord and Burnham greenhouse at Lyndhurst in Tarrytown, New York, now stabilized and protected is interpreted as a ruin. The 1881-structure contributes to the landscape’s significance and its future treatment and management are an integral part of a current Historic Landscape Report. (Lyndhurst archives and author, 1990)

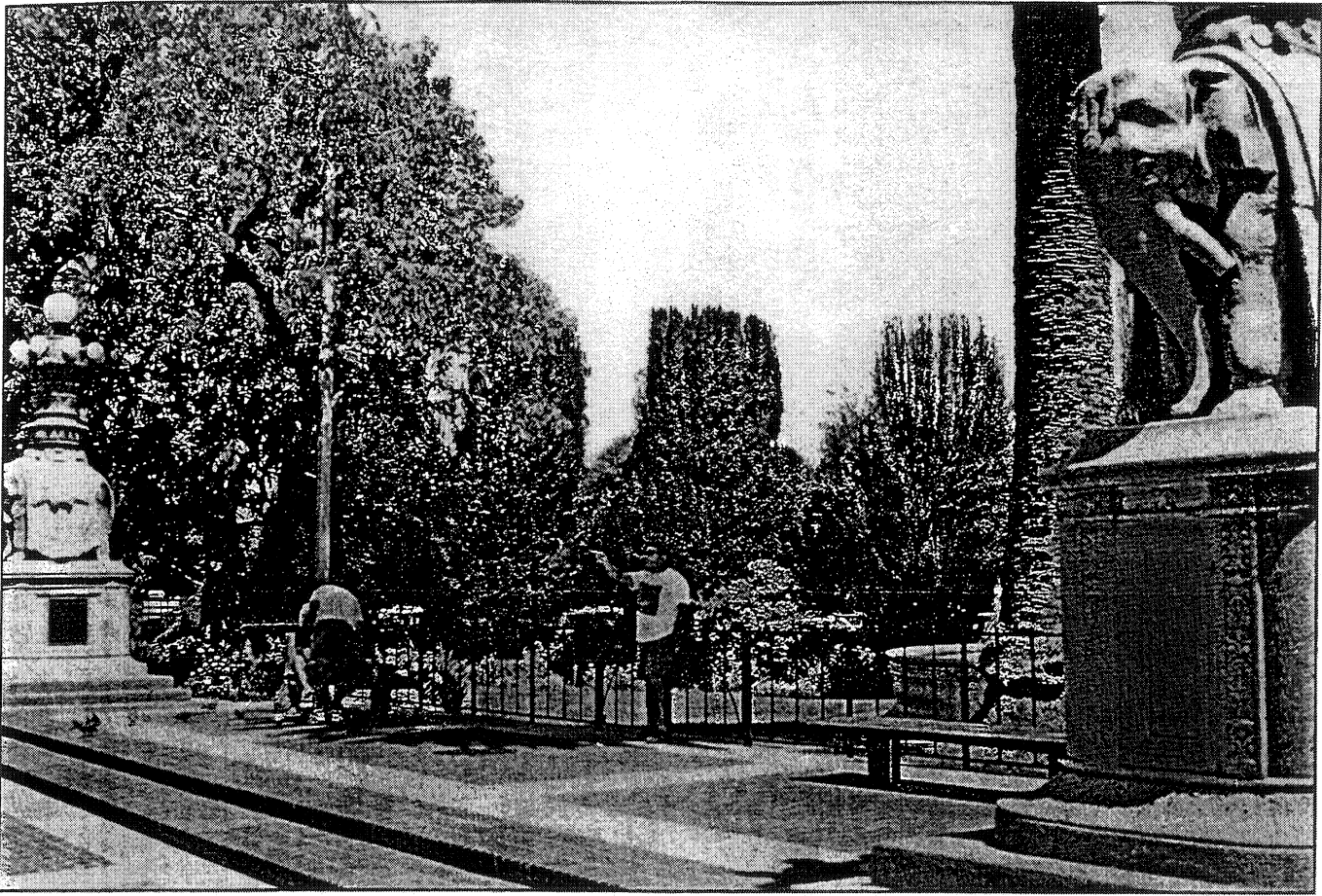
Special Requirements. Work that must be done to meet accessibility, health and safety, environmental protection or energy efficiency needs is usually not part of the overall process of protecting cultural landscapes; rather this work is assessed for its potential impact on the cultural landscape.

☒ **Accessibility Considerations.** It is often necessary to make modifications to cultural landscapes so that they will be in compliance with current accessibility code requirements. Accessibility to certain cultural landscapes is required by three specific Federal laws: the Architectural Barriers Act of 1968, Section 504 of the Rehabilitation Act of 1973, and the Americans With Disabilities Act of 1990. Federal rules, regulations and standards have been developed which provide guidance on how to accomplish access to historic areas for people with disabilities. Work must be carefully planned and undertaken so that it does not result in the loss of character-defining features. The goal is to provide the highest level of access with the lowest level of impact on the integrity of the landscape.

☒ **Health and Safety Considerations.** In undertaking work on cultural landscapes, it is necessary to consider the impact that meeting current health and safety codes (for example, public health, life safety, fire safety, electrical, seismic, structural, and building codes) will have on character-defining features. For example, upgrading utility service, storm or sewer drainage systems requires trenching which can disturb soils, plants and archeological resources. Special coordination with the responsible code officials at the state, county, or municipal level may be required. Securing required permits and licenses is best



To comply with the ADA, an accessibility solution was provided for at San Francisco's City Hall. The design preserves the historic hedge along the building foundation, and conceals the new ramp behind a new hedgerow. When viewing the main building elevation, the symmetry of the facade and its foundation planting have been preserved. (author, 1993)



These unique historic lightposts at a small park in Sausalito, California, have been preserved. An integral part of the project work included a code-required upgrade and improvement of the fixtures for energy efficiency. (author, 1993)

accomplished early in project planning work. It is often necessary to look beyond the "letter" of code requirements to their underlying purpose; most modern codes allow for alternative approaches and reasonable variance to achieve compliance.

✘ **Environmental Protection Requirements.** Many cultural landscapes are affected by requirements that address environmental issues. Legislation at the federal, state and municipal level have established rules and regulations for dealing with a variety of natural resources-- including water, air, soil and wildlife. Work predicated on such legislation must be carefully planned and undertaken so that it does not result in the loss of a landscape's character-defining features. Securing required permits and licenses should be considered early in project work, and special efforts should be made to coordinate with public agencies responsible for overseeing specific environmental concerns.

✘ **Energy Efficiency.** Some features of a cultural landscape, such as buildings, structures, vegetation and furnishings, can play an energy-conserving role. Therefore, prior to undertaking project work to achieve greater energy efficiency, the first step should always be to identify and evaluate existing historic features to assess their inherent energy conserving potential. If it is determined that such work is appropriate, then it needs to be carried out with particular care to insure that the landscape's historic character is retained.

Using the Standards and Guidelines for the Treatment of Cultural Landscapes

The *Secretary of the Interior's Standards for the Treatment of Historic Properties* are designed to be applied to **all** historic resource types included in the National Register of Historic Places--buildings, sites, structures, landscapes, districts, and objects. *The Guidelines for the Treatment of Cultural Landscapes* apply to a *specific* resource type: landscapes.

The *Guidelines* have been prepared to assist in applying the Standards to all project work involving the treatment of cultural landscapes; consequently, they are not meant to give case-specific advice or address exceptions or rare instances. Therefore, it is recommended that the advice of qualified cultural landscape preservation professionals be obtained early in the planning stage of the project. Such professionals may have expertise in landscape architecture, landscape history, landscape archeology (ex. pollen analysis), forestry, horticulture (ex. pomology, natural resources, archeology, architecture, engineering (e.g. civil, structural, mechanical, traffic), cultural geography, wildlife, ecology, ethnography, interpretation, material and object conservation, landscape maintenance and management or other related fields. Historians are generally part of the specialized team, and bring expertise in the history of landscape architecture, architecture, art, industry, agriculture, society, etc. Project teams are often directed by a landscape architect with specific expertise in landscape preservation. This is not to say that all cultural landscape projects require a team representing all of these disciplines. It is recommended that professionals in disciplines relevant to the landscapes' inherent features be represented.

The *Guidelines* apply to cultural landscapes of all types, sizes, and materials. The *Guidelines* begin with an overview and description of the larger organizational elements of the landscape (spatial organization and land patterns), followed by those individual features (topography, vegetation, circulation, water features, structures, buildings, furnishings, and objects) that may contribute to the landscape's historic character. A graphic symbol has been assigned to each of these organizational elements and character-defining features to allow the reader to readily locate a feature at a glance. (See pages 18-19)

Each of the four sections of this publication is devoted to one of the four treatments: preservation, rehabilitation, restoration, and reconstruction. Each section contains one set of standards and accompanying guidelines that

can be used throughout the course of a project. The four sections begin with a definition of the treatment, followed by the treatment standards, and a brief explanation of the philosophical framework from which to make educated treatment decisions. The distinct goals that comprise each treatment standard, (for example, "Identify, Retain and Preserve Historic Materials,") are first discussed in narrative form, and are then amplified in parallel "**Recommended**" and "**Not Recommended**" examples that follow. The sections are illustrated by case-study examples of project work, which include before and after photographs, historic documentation, plans, sections, perspectives and other illustrative materials.

The actions and techniques that are consistent with the Secretary of the Interior's "Standards for the Treatment of Historic Properties" are listed in the "**Recommended**" column on the left; those which are inconsistent with the Standards are listed in the "**Not Recommended**" column on the right. These examples serve to illustrate a variety of applications to project work; not every possible alternative can be included. Therefore, the *Standards and Guidelines* narrative introducing each section should be used as a **model process** to follow when considering and evaluating a particular cultural landscape and its potential compatibility with a particular treatment.

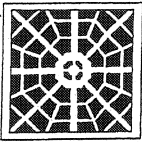
Finally, the publication concludes with two appendices. The first contains an annotated bibliography of selected readings in the areas of preservation planning and treatment. The second provides a directory of national organizations that can assist in the protection of cultural landscapes.

Organization of the Guidelines

Cultural landscapes are composed of a collection of features which are *organized in space*. They include small-scale features such as individual fountains or statuary, as well as patterns of fields and forest which define the spatial character of the landscape. Individual features in the landscape should never be viewed in isolation, but in relationship to the landscape as a whole. Each situation may vary, and some features may often be more important than others. For example, circulation may be an important historic element in one landscape, while in another it may have little if any significance.

Overall, it is the arrangement and the interrelationship of these character-defining features as they existed during the period of significance that is most critical to consider prior to treatment. As such, landscape features should always be assessed as they relate to the property as a whole. Thus, spatial organization and land patterns are always listed first in each section of the Guidelines.

Organizational Elements of the Landscape



Spatial Organization and Land Patterns refers to the three-dimensional organization and patterns of spaces in a landscape, like the arrangement of rooms in a house. Spatial organization is created by the landscape's cultural and natural features. Some form visual links or barriers (such as fences and hedgerows); others create spaces and visual connections in the landscape (such as topography and open water). The organization of such features defines and creates spaces in the landscape and often is closely related to land use. Both the functional and visual relationship between spaces is integral to the historic character of a property. In addition, it is important to recognize that spatial relationships may change over time due to a variety of factors, including: environmental impacts (e.g. drought, flood), plant growth and succession, and changes in land use or technology.



Vegetation features may be individual plants, as in the case of a specimen tree, or groups of plants such as a hedge, alley, agricultural field, planting bed, or a naturally-occurring plant community or habitat. Vegetation includes evergreen or deciduous trees, shrubs, and ground covers, and both woody and herbaceous plants. Vegetation may derive its significance from historical associations, horticultural or genetic value, or aesthetic or functional qualities. It is a primary dynamic component of the landscape's character; therefore, the treatment of cultural landscapes must recognize the continual process of germination, growth, seasonal change, aging, decay, and death of plants. The character of individual plants is derived from habit, form, color, texture, bloom, fruit, fragrance, scale and context.

Character-Defining Features of the Landscape

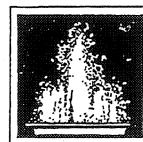
There are many character-defining features that collectively contribute to the historic character of a cultural landscape. These are as follows:



Topography, the shape of the ground plane and its height or depth, is a character-defining feature of the landscape. Topography may occur naturally or as a result of human manipulation. For example, topographic features may contribute to the creation of outdoor spaces, serve a functional purpose, or provide visual interest.

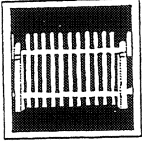


Circulation features may include, roads, parkways, drives, trails, walks, paths, parking areas, and canals. Such features may occur individually or be linked to form networks or systems. The character of circulation features is defined by factors such as alignment, width, surface and edge treatment, grade, materials, and infrastructure.



Water features may be aesthetic as well as functional components of the landscape. They may be linked to the natural hydrologic system or may be fed artificially; their associated water supply, drainage, and mechanical systems are important components. Water features include fountains, pools, cascades, irrigation systems, ponds, lakes, streams, and aqueducts. The characteristics of water features

and reflective qualities; and associated plant and animal life, as well as water quality. Special consideration may be required due to the seasonal changes in water such as variations in water table, precipitation, and freezing.



Structures, site furnishings, and objects may contribute to a landscape's significance and historic character. Structures are non-habitable, constructed features, unlike buildings which have walls and roofs and are generally habitable. Structures may be significant individually or they may simply contribute to the historic character of the landscape. They may include walls, terraces, arbors, gazebos, follies, tennis courts, playground equipment, greenhouses, cold frames, steps, bridges, and dams. The placement and arrangement of buildings and structures are important to the character of the landscape; these guidelines emphasize the relationship between buildings, structures, and other features which comprise the historic landscape. For additional and specific guidance related to the treatment of historic buildings, please consult the *Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*.

Site furnishings and objects generally are small-scale elements in the landscape that may be functional, decorative, or both. They can include benches, lights, signs, drinking fountains, trash receptacles, fences, tree grates, clocks, flagpoles, sculpture, monuments, memorials, planters, and urns. They may be movable, used seasonally, or permanently installed. Site furnishings and objects occur as singular items, in groups of similar or identical features, or as part of a system (e.g. signage). They may be designed or built for a specific site, available through a catalog, or created as vernacular pieces associated with a particular region or cultural group. They may be significant in their own right, for example, as works of art or as the work of an important designer.

Standards for Preservation & Guidelines for Preserving Cultural Landscapes

When the property's distinctive materials, features, and spaces are essentially intact and thus convey the historic significance without extensive repair or replacement; when depiction at a particular period of time is not appropriate; and when a continuing or new use does not require additions or extensive alterations, preservation may be considered as a treatment. Prior to undertaking work, a documentation plan for preservation should be developed.

Standards for Preservation

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

1. A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.
2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration necessitates repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

GUIDELINES FOR THE TREATMENT OF CULTURAL LANDSCAPES

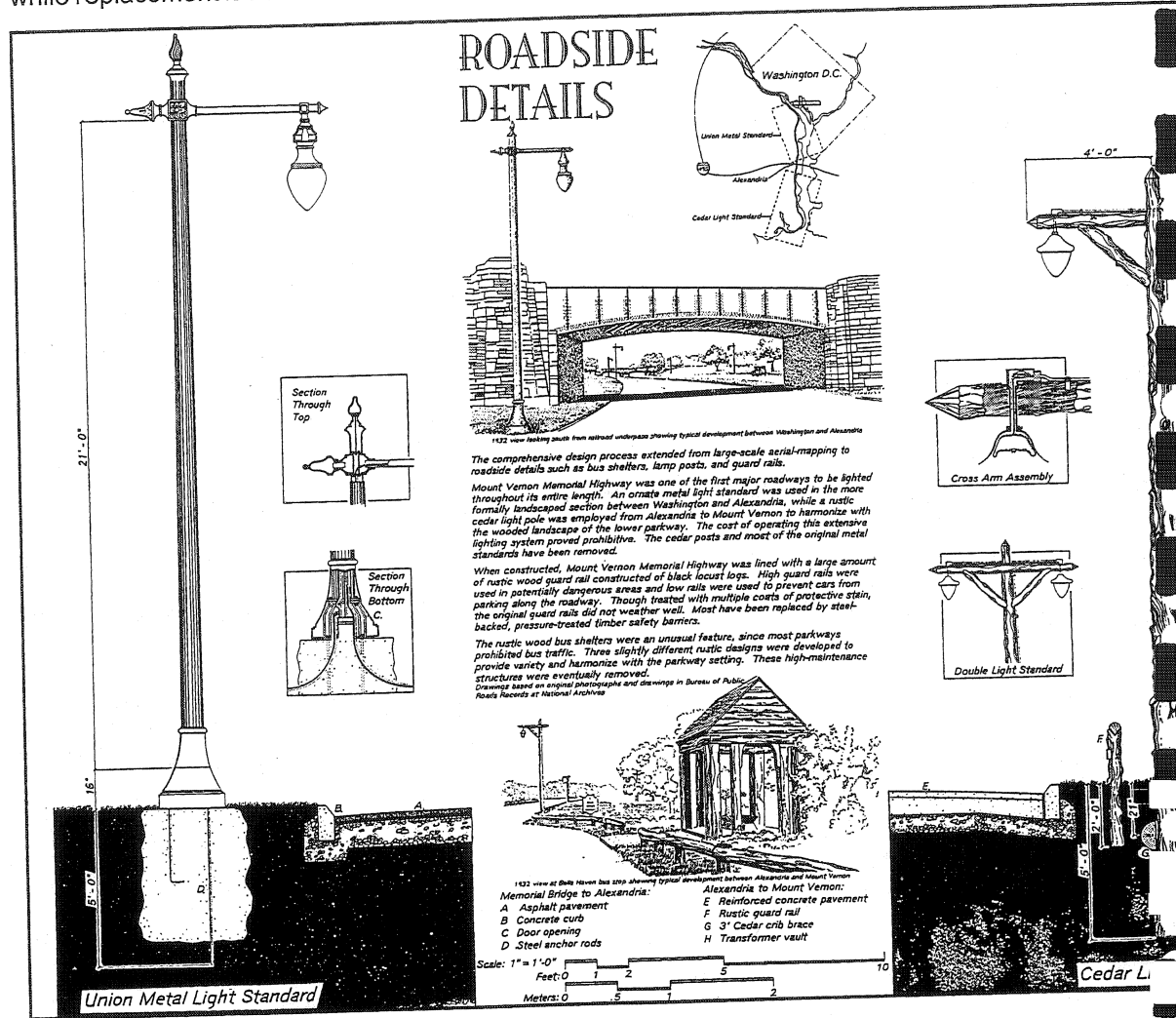
Introduction

In **Preservation**, the options for replacement are limited. The expressed goal of the **Standards for Preservation and Guidelines for Preserving Cultural Landscapes** is retention of the landscape's existing form, features and materials, provided that such actions will not result in a degraded landscape condition or threaten historic resources.

Preservation treatments may be as simple as basic maintenance of existing materials and features, such as the upkeep of a pedestrian path with a topcoat of crushed shells, or may be more involved; for example, preparing a cultural landscape report, undertaking laboratory testing (e.g. pollen analysis to identify past uses of the property or hiring conservators to perform sensitive work (e.g. repointing a serpentine garden wall). In all cases, protection, maintenance, and repair are emphasized, while replacement is minimized.

Identify, Retain, and Preserve Materials and Features

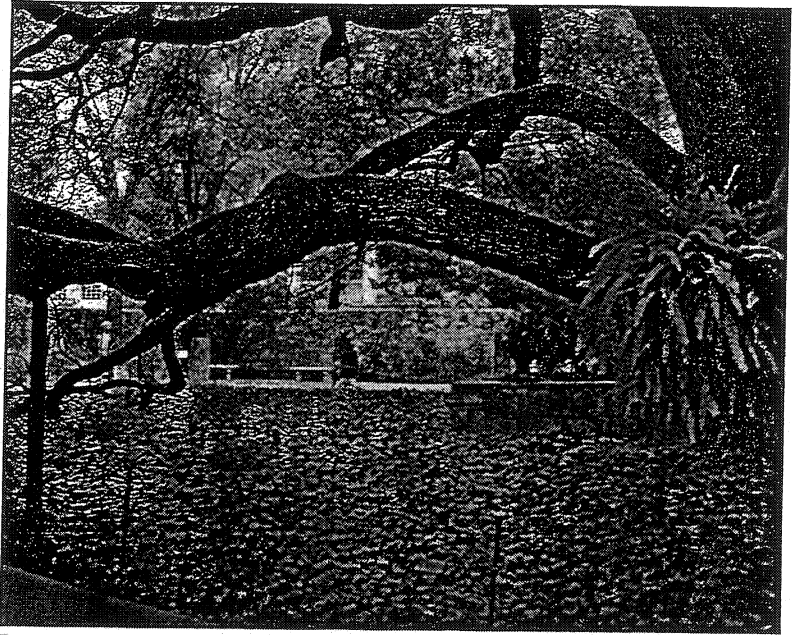
The guidance for the treatment **Preserve** with recommendations to identify the form of those features and materials that are landscape's historic character and were retained in order to preserve that character. The guidance on **identifying, retaining, and preserving** character-defining features is always guided by the organization and land patterns; features such as topography, vegetation, and circulation, such as an embedded aggregate pavement.



Historic road details were inventoried and documented along the George Washington Memorial Parkway where two light standards: an ornate metal post for more formally landscaped areas between Washington D.C. and Alexandria, Virginia, while a rustic cedar post from Alexandria to Mount Vernon to harmonize with its setting. (HABS, 1994)

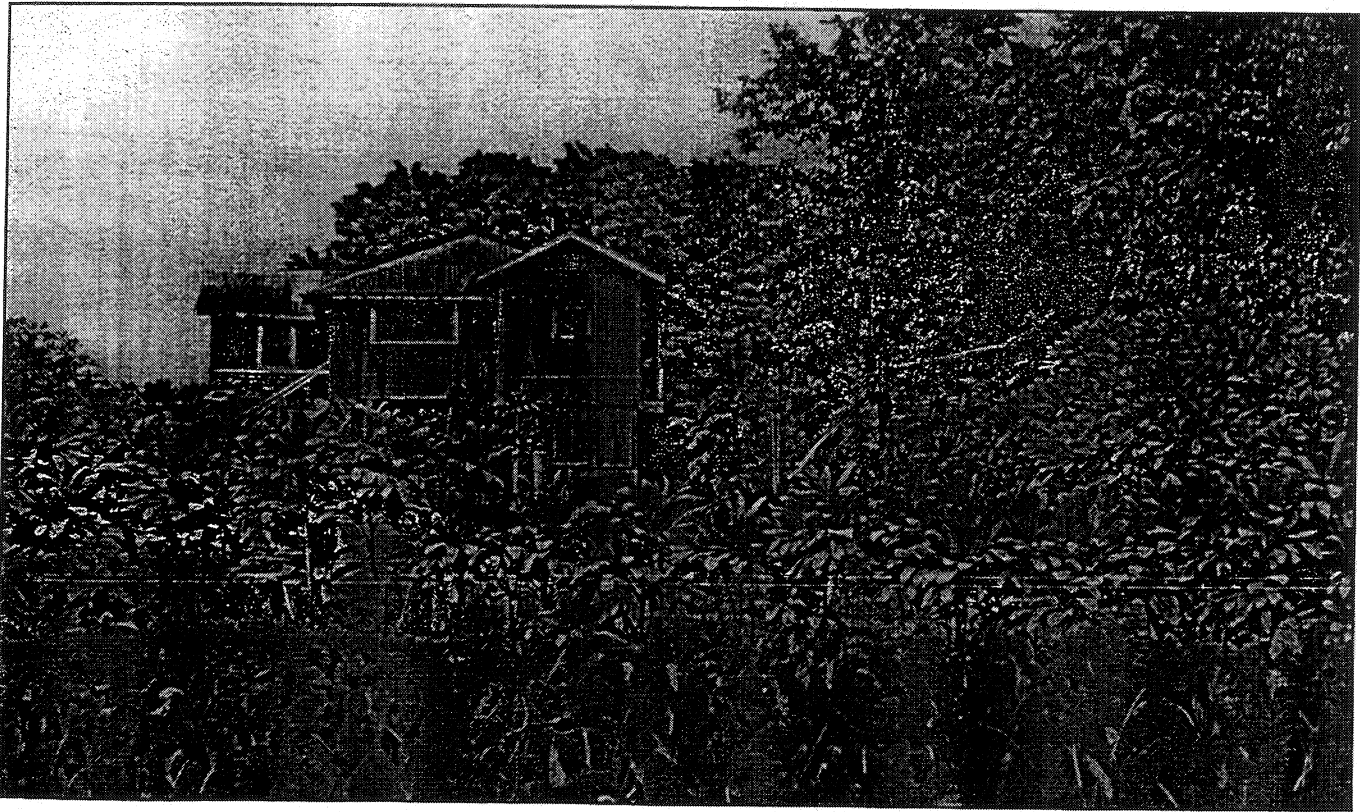
☒ Stabilize and Protect Deteriorated Historic Features and Materials as a Preliminary Measure

Features within a cultural landscape may need to be stabilized or protected through preliminary measures until additional work can be undertaken. **Stabilization** may include structural reinforcement of a rustic pergola, cabling of a tree, weatherization of a wooden garden bench, or correcting unsafe conditions. This work should always be carried out in such a manner that it detracts as little as possible from the cultural landscape's appearance. Although it may not be necessary in every preservation project, stabilization is nonetheless an integral part of the treatment **Preservation**; it is equally applicable, if circumstances warrant, for the other treatments. **Protection** generally involves the least degree of intervention and is preparatory to other work. Such actions would include the installation of temporary fencing around significant plant materials or the electrical grounding of a tree.



To preserve a century-old oak, a stabilization rod [see left side of photo] was applied to a limb that overhangs a pedestrian walk at the Alamo, San Antonio, Texas. (author, 1993)

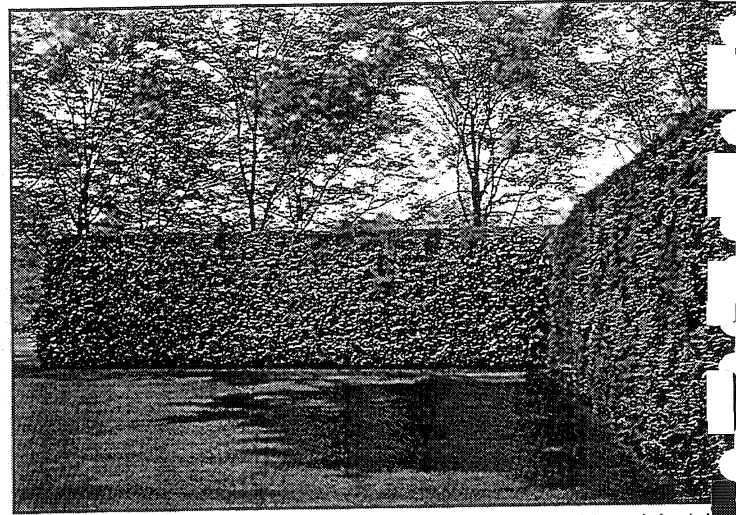
PRESERVATION



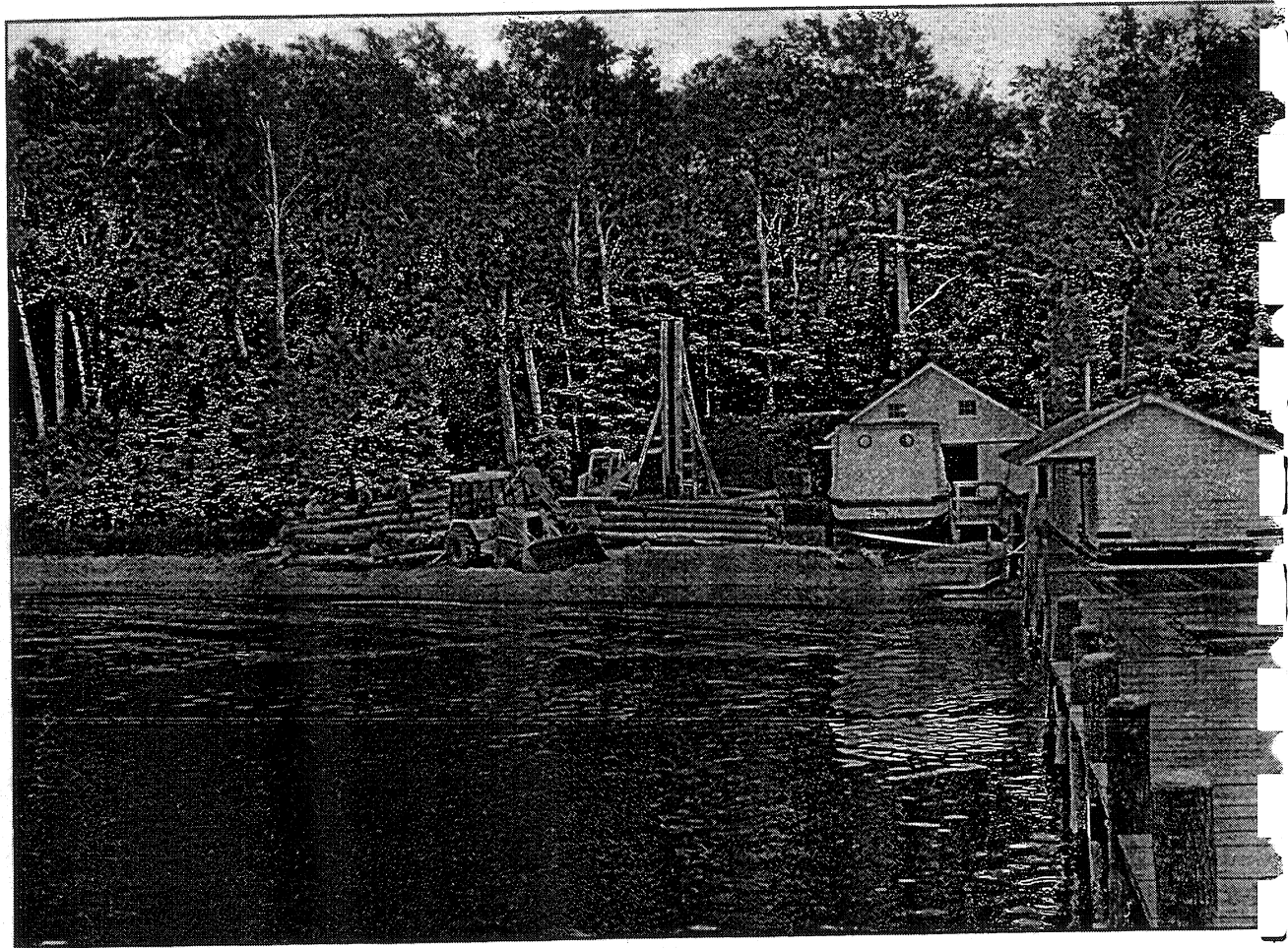
Taro patches are small hand-cultivated ponds, usually established as separate properties at the time of the Great Mahele or land division in the 1850s. In 1994, in an effort to protect this declining land use, the County of Maui, Hawaii, passed an ordinance granting tax relief to properties in taro production. (author, 1995)

☒ **Maintain Historic Features and Materials**

After identifying, protecting and stabilizing those features and materials that are important and must be retained, *maintaining* them becomes important. For example, maintenance includes treatments such as removing rust from an iron light standard, repointing a stone footbridge, re-application of protective coatings on a wooden patio deck; pruning to maintain the form of a hedge [see opposite]; monitoring the age, health and vigor of plant materials; or the cyclical cleaning of drainage inlets. As a foundation for these decisions, an overall evaluation of a cultural landscape's existing conditions should always begin at this level.



At the Irwin Miller House, Columbus, Indiana, the integrity of the original design by landscape architect Dan Kiley has been preserved by respecting the original intent and maintaining the height of the hedges at 8'-6". (author, 1995)



A contract with a modern concessionaire maintains some active fishing at a former family-owned operation, the Hokenson Brothers Fishery, at Apostle Islands National Seashore, Wisconsin. (courtesy NPS)

☒ Repair (Stabilize, Consolidate and Conserve) Historic Features and Materials

When the existing conditions of character-defining features and materials requires additional work, their **repair** is recommended. **Preservation** strives to retain the maximum amount of existing materials and features while utilizing as little new material as possible. Consequently, guidance for repairing a historic feature, such as vegetation, begins with the least degree of intervention possible, such as pruning a tree to lighten its canopy [see opposite]; or, in some cases, pruning back a shrub to the ground to encourage vigorous and healthy new growth. Similarly, within the treatment **Preservation**, portions of a historical structural system could be reinforced using contemporary materials. A capstone on a retaining wall, or a board in a wooden walkway, may be repaired with contemporary replacement parts. In all cases, work should be non-destructive, physically and visually compatible, and documented for future research.



This character-defining avenue of oaks in Forsyth Park, Savannah, Georgia, have been pruned to lighten their canopy, thus providing protection from severe storms. (author, 1996)

☒ Limited Replacement In Kind of Extensively Deteriorated Portions of Historic Features

If repair by retention of an entire historic feature and/or its historic materials proves impossible, the next level of intervention involves the **limited replacement in kind** of portions of historic features when there are surviving prototypes. For example, this might involve **replacing** dead shrubs in a bank planting with same-genus, species/variety shrubs; or, replacing missing fence members to match surviving components. The replacement material should match the historic both physically and visually. In all cases, substitute materials are not appropriate in the treatment **Preservation**. However, exceptions would include hidden structural reinforcement, new mechanical system components (ex. adding irrigation), and the lack of availability or hazardous nature of original materials. For example, when matching plant materials are no longer commercially available, may not be hardy to a region, or, are highly disease prone, substitute plants may be recommended. In these cases, it is important that all new



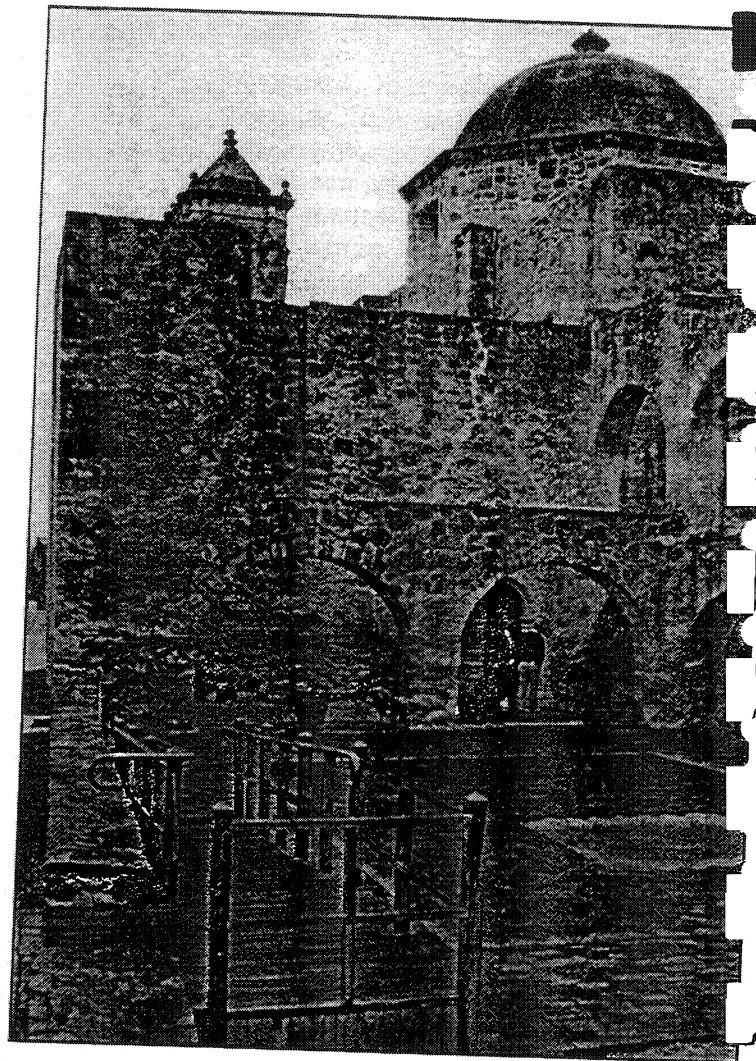
Castings were made to replace a limited number of lost finials along the perimeter fence of Lafayette Square, St. Louis, Missouri. (author, 1994)

material be non-destructive, identified, and properly documented for future research. Generally, in **Preservation**, substitute materials should be avoided, unless in-kind replacement is not possible.

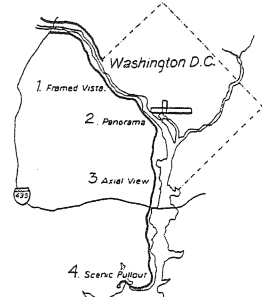
☒ **Accessibility Considerations/Health and Safety Considerations/Environmental Considerations and Energy Efficiency**

These sections of the **Preservation** guidance address work done to meet accessibility requirements; health and safety code; environmental requirements; or limited retrofitting measures to improve energy efficiency. Although this work is quite often an important aspect of preservation projects, it is usually not part of the overall process of protecting, stabilizing, conserving, or repairing character-defining features; rather, such work is assessed for its potential negative impact on the landscape's character. For this reason, particular care must be taken not to obscure, damage, or destroy character-defining materials or features in the process of undertaking work to meet code and energy requirements.

This easily-reversible accessibility solution has been installed at Mission San Jose, San Antonio, Texas. (author, 1994)



Guidelines for
Preserving Cultural Landscapes



PLANNED VIEWS

Early motor parkway designers faced the challenge of adapting traditional landscape architecture methods to the new speeds and scale produced by automobiles. The influence of romantic landscape painting and picturesque park design remained strong, but landscape compositions were simplified to be appreciated at higher speeds. The ability of automobiles to easily cover distances and climb hills gave parkway designers greater ability to seek out attractive scenery and dramatic viewpoints. GWMP's designers combined this new freedom with traditional design techniques to provide access to spectacular scenery and focus attention on dramatic views and symbolic vistas.

"The automobile has made necessary a broader treatment of intimate and confined views cannot be appreciated from a fast vehicle; simplicity and breadth are required. Different views must follow too closely upon one another, and the openings and through bordering woods or shrubbery must be of far greater. Every accent of the prospect and planting must be stronger because of the brief time in which it is seen."

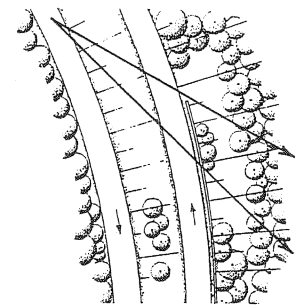
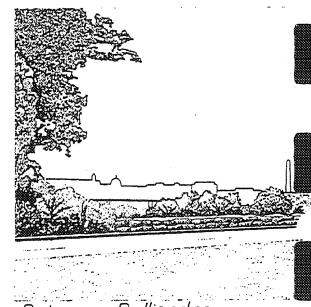
...Charles W. Eliot II, Landscape Architecture Quarterly, ...

Scale: 1
0 40 80 120 FEET 0 10 20

FRAMED VISTA 1

While pedestrians or carriage occupants could easily enjoy lateral views, motorists had to continually watch where they were going. As speeds increased, the emphasis on forward views became increasingly important. Parkway designers frequently combined a bend in the road with a break in the bordering vegetation to frame scenes off the main axis of the parkway. These "windows" were deliberately limited in width and number to avoid creating prolonged distractions.

GWMP designers employed this technique in dramatic fashion along the Potomac Palisades, where southbound motorists are treated to striking views of Washington, D.C.

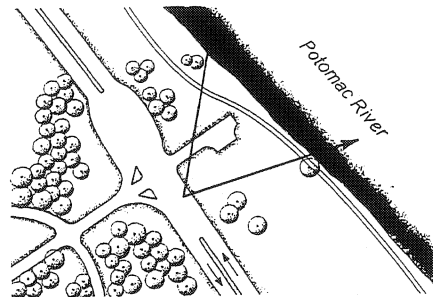
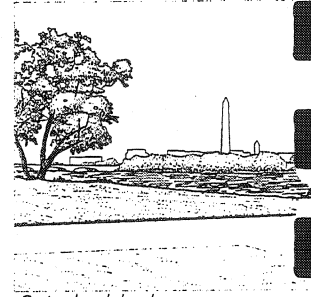



Potomac Palisades

PANORAMA 2

Parkway designers considered the relationship between the road and Washington's monumental core to be a matter of great aesthetic and symbolic significance. The approach to Washington was designed to provide a simple yet dignified transition between the informal parkway landscape and the grand spaces and neoclassical monumentality of the national capital.

Border plantings were kept to a minimum in order to provide expansive views across the Potomac River. The circulation system of Columbia Island was designed in part to slow down motorists so they would appreciate these views at a more dignified pace. When the parkway was originally built, the heights near National Airport provided another panoramic view of the city, but the roadway was moved to lower ground when the airport was constructed.

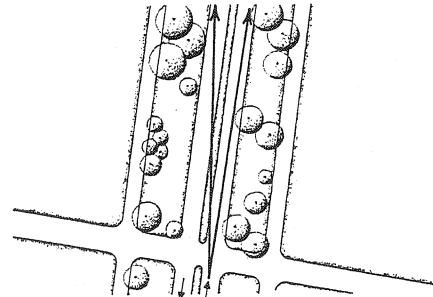
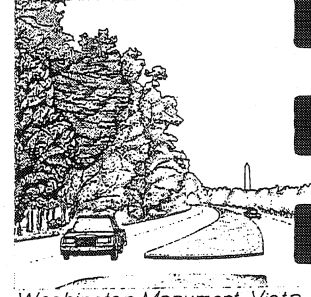
Columbia Island

AXIAL VIEW 3

The use of long straight avenues to direct attention to objects of interest was another classic design technique employed by parkway builders. This tactic was used sparingly, since the parkway was designed primarily as an informal landscape with continuous sweeping curvature and irregular naturalistic planting.

The most striking use of the classic axial view occurs just north of Alexandria, where one of the parkway's two long straight stretches points directly at the distant Washington Monument.

Tall rows of trees on either side of the parkway help focus the motorist's gaze while screening out surrounding development. This "Monument Vista" provides the first suggestion of formal Washington. It was strongly emphasized in the original parkway plans.

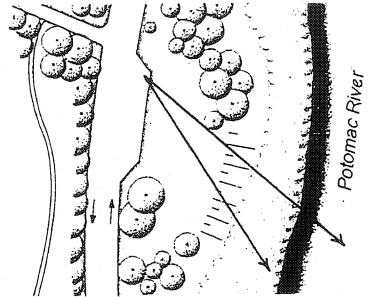




Washington Monument Vista


SCENIC PULLOUT 4

Small parking areas were provided at particularly scenic areas to provide motorists with an opportunity to safely pull off the roadway and enjoy the view. These scenic pullouts range in size from minor pavement widenings to extensively developed picnic areas complete with toilet facilities, tables, fireplaces, and interpretive signs explaining the adjacent historic and natural features.

The Hillcrest overlook provides an excellent view across the Potomac to Fort Washington, an imposing edifice that guarded the southern approach to Washington from 1808-1922.

Hillcrest Overlook



Anna Marconi-Betka, 1994

Early parkway designers faced the challenge of adapting traditional landscape architecture methods to the new speeds by automobiles. The identification and protection of historic planned views along the George Washington Memorial Parkway of the parkway documentation project. (HABS, 1994)

SPATIAL ORGANIZATION AND LAND PATTERNS
 Identify, Retain, and Preserve Historic Materials and Features

Recommended

Identifying, retaining and preserving the existing spatial organization and land patterns of the landscape as they have evolved over time. Prior to beginning project work, documenting all features which define those relationships. This includes the size, configuration, proportion and relationship of component landscapes; the relationship of features to component landscapes; and the component landscapes themselves, such as a terrace garden, a farmyard, or forest-to-field patterns.

Not Recommended

Undertaking project work without understanding the effect on existing spatial organization and land patterns. For example, constructing a new structure without researching a property's agricultural and development history which may have created new spatial divisions.

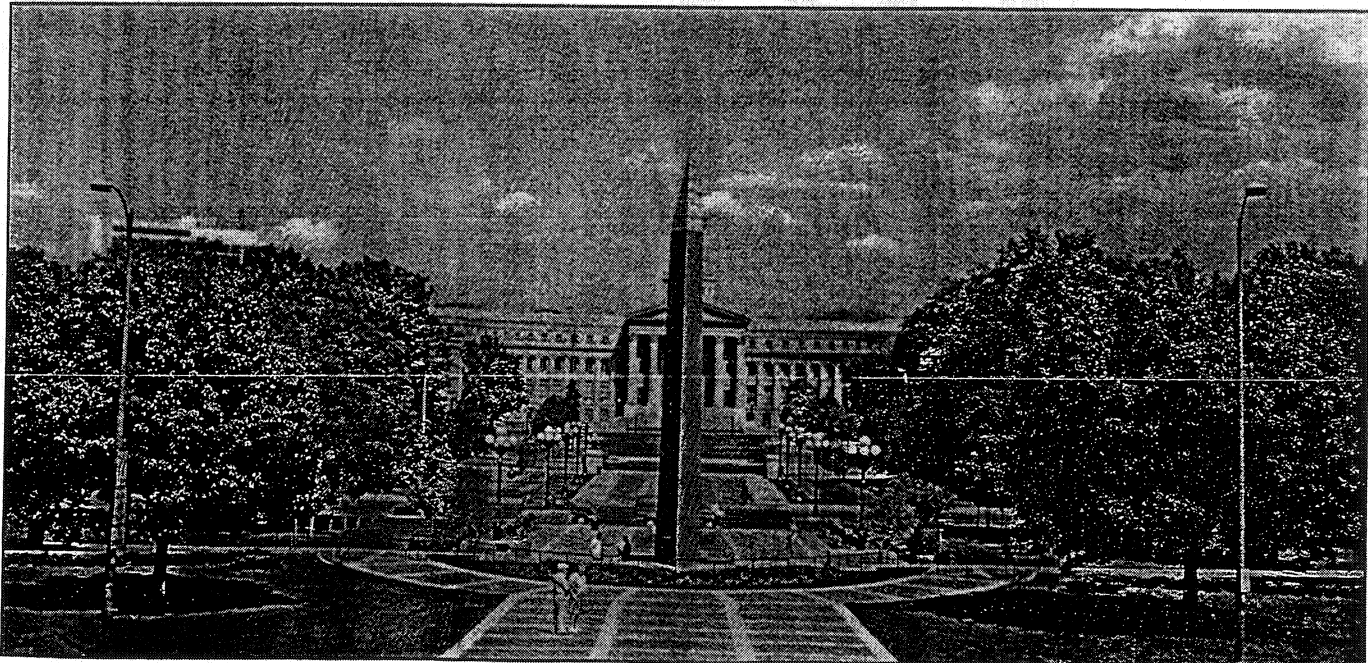
Stabilize and Protect Deteriorated Historic Materials and Features as a Preliminary Measure

Stabilizing deteriorated features that define spatial organization and land patterns, such as a deteriorating structure that separates a courtyard garden and a kitchen garden; a hedgerow along a farm's perimeter which has an insect infestation; or a collapsing dry stone wall along a scenic parkway.

Failing to undertake stabilization measures for deteriorating or fragile features, such as a cluster of farm outbuildings or an industrial complex, causing the loss of spatial definition and land patterns.

Protecting spatial organization and land patterns that extend beyond a landscape. Utilizing preservation tools such as acquisition, zoning, scenic and conservation easements.

Allowing spatial organization and land patterns to be altered through incompatible development or neglect.



The addition of this war memorial to the Civic Center in downtown Denver, Colorado, compromised the character-defining visual and spatial relationships of S. R. DeBoer's 1924 design for the plaza. (author, 1993)



Maintain Historic Features and Materials

Maintaining spatial organization and land patterns by non-destructive methods in daily, seasonal and cyclical tasks. For example, maintaining topography, vegetation and structures which define individual spaces or the overall pattern of the cultural landscape.

Failing to undertake preventive maintenance such as keeping volunteer tree and forest growth from spreading into open fields or meadows.

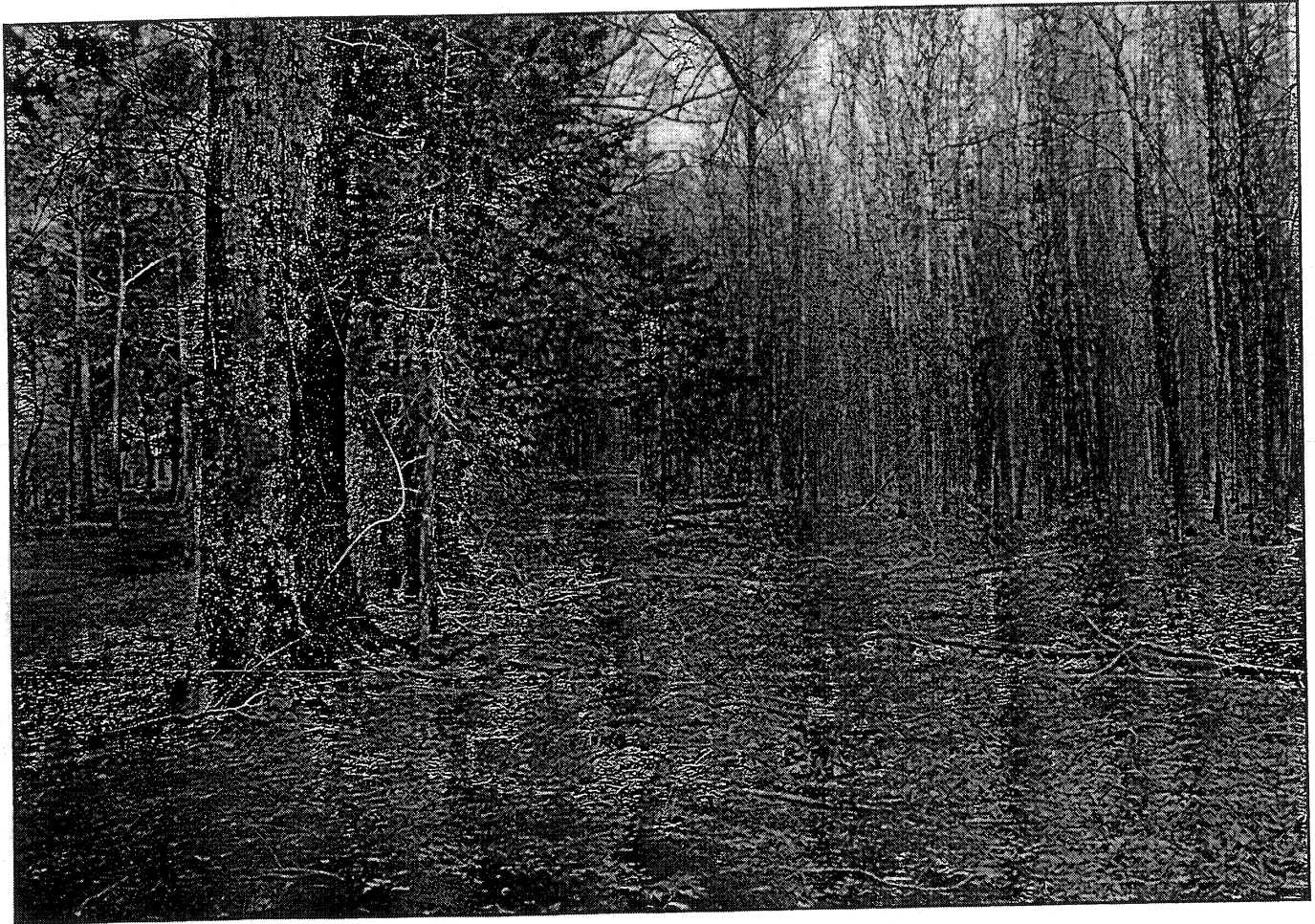
Utilizing maintenance methods which destroy or obscure the landscape's spatial organization and land patterns.

Repair Historic Features and Materials

Repairing spatial organization and land patterns by use of non-destructive methods and materials when additional work is required. For example, repairing structures, reclaiming open space from woody plant intrusion, or replanting vegetation to recapture the individual spaces or overall patterns of the cultural landscape.

Failing to undertake necessary repairs or remedial action, resulting in the loss of spatial organization and land patterns.

Replacing a feature that defines spatial organization and land patterns when repair is possible.



When historic land uses cannot be continued, maintenance practices, such as mowing or prescribed burns, may be used to prevent the succession of old fields. This image depicts the results of such a cyclical maintenance action in Arkansas. (NPS, 1996)

**Limited Replacement In Kind
of Extensively Deteriorated Portions of Historic Features**

Replacing in-kind deteriorating or missing parts of significant features that define spatial organization and land patterns. For example, replacing leaching tanks which define the interior spaces of a mining complex.

Failing to undertake the necessary in-kind replacements which may compromise the spatial organization and land patterns.



TOPOGRAPHY

Identify, Retain, and Preserve Historic Features and Materials

Recommended

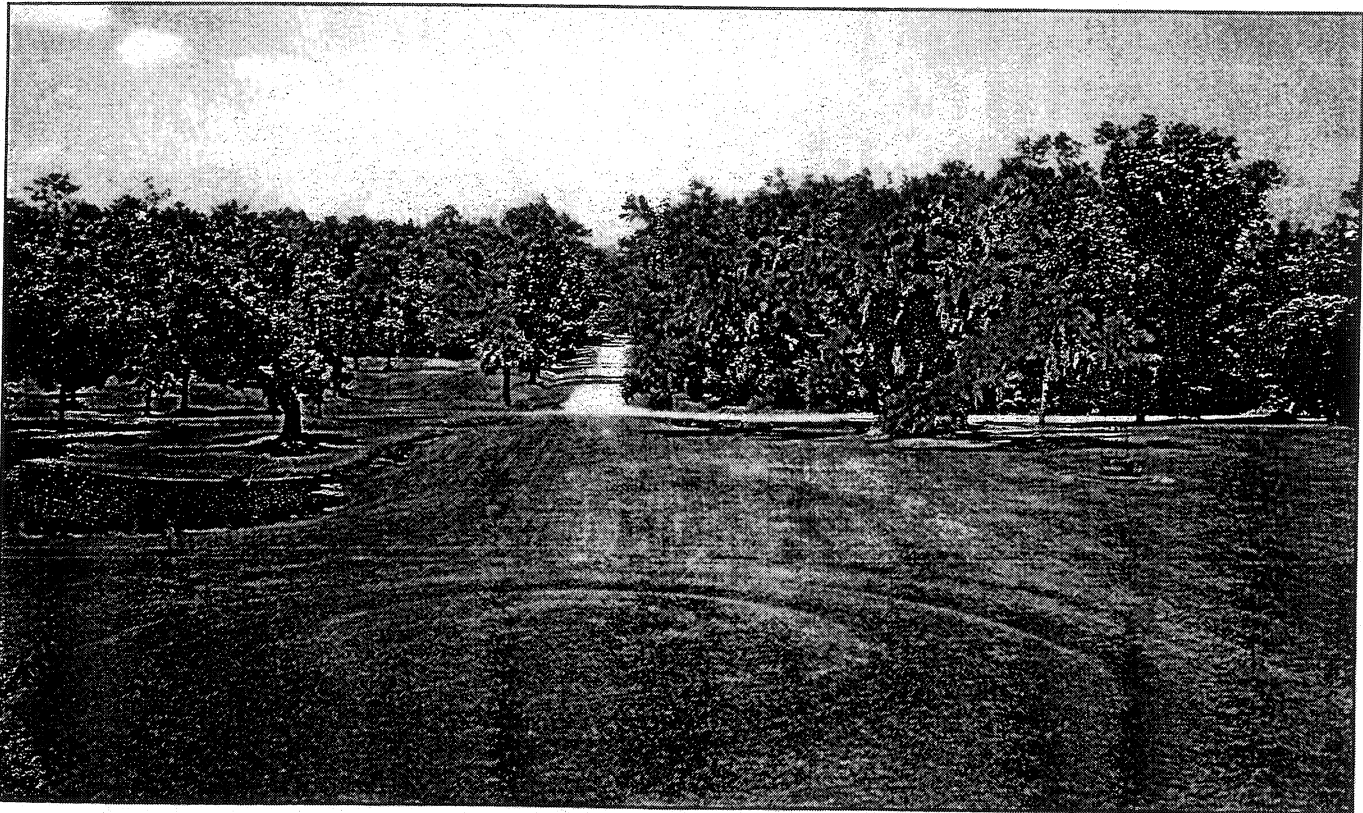
Identifying, retaining and preserving existing topography. Documenting topographic variation prior to project work, including shape, slope, elevation, aspect, and contour. For example, preparing a topographic survey.

Evaluating and understanding the evolution of a landscape's topography over time. Using archival resources such as plans and aerial photographs or, in their absence, archeological analysis techniques, to understand the historic topography.

Not Recommended

Executing project work that impacts topography without undertaking a topographic survey.

Executing project work without understanding its impact on historic topographic resources, such as watershed systems.



The landscape at Drayton Hall in Charleston, South Carolina, reflects seven generations of family ownership. This circular topographic addition along the approach road has been preserved. Future research is now underway to understand its date of introduction and the design intent. (author, 1994)

Stabilize and Protect Deteriorated Historic Features and Materials as a Preliminary Measure

Stabilizing and protecting topography in a manner that is appropriate to the character of the landform. For example, installing a temporary protective textile over an eroding slope or restricting access to fragile earthworks.

Allowing unstable topographic conditions to deteriorate without intervention. For example, permitting pedestrian access to further degrade threatened landforms.

Maintain Historic Features and Materials

Maintaining historic topography by use of non-destructive methods and daily, seasonal, and cyclical tasks. This may include cleaning drainage systems, mowing vegetative cover or managing groundhogs.

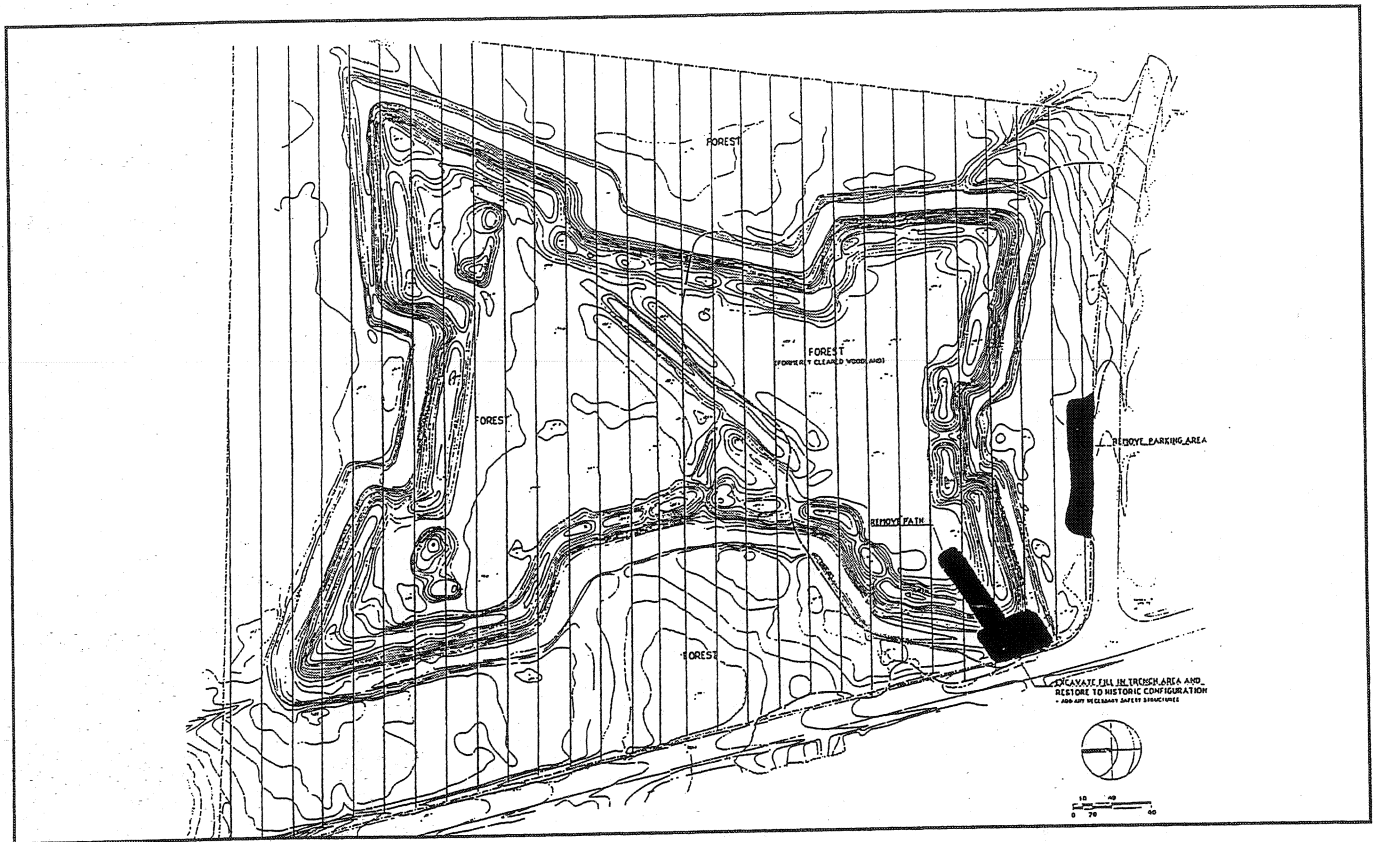
Failing to undertake preventive maintenance.

Utilizing maintenance methods which destroy or degrade topography, such as using heavily weighted equipment on steep or vulnerable slopes.

Repair Historic Features and Materials

Repair declining topographic features. For example, re-excavating a silted swale through appropriate regrading or re-establishing an eroding terrace.

Destroying the shape, slope, elevation aspect, or contour of topography when repair is possible.



To stabilize the earthworks at Fort Fisher in Petersburg, North Carolina, access has now been restricted to the fragile fort. A parking lot and trench area have been removed [see black areas] and stormwater runoff from local roads have been redirected. (NPS, 1989)

Limited Replacement In Kind of Extensively Deteriorated Portions of Historic Features

Utilizing a replacement material that does not match the historic material when the historic material is available. For example, using asphaltic materials to fill in natural sink holes in a turfed or soil area.

Replacing in-kind topographic features where there is extensive deterioration and damage. For example, minor filling and soil rejuvenation in areas of subsidence.

VEGETATION

Identify, Retain, and Preserve Historic Features and Materials

Recommended

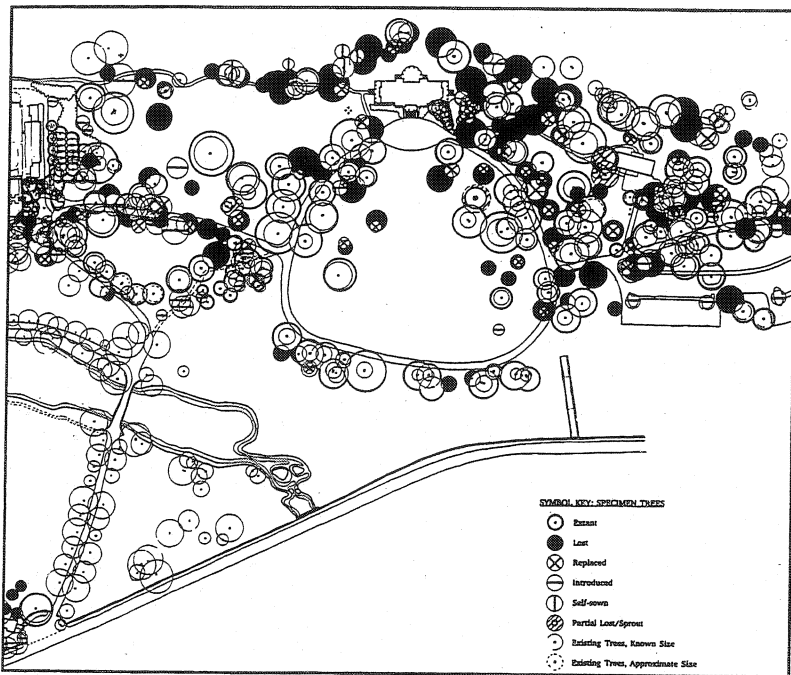
Identifying, retaining, and preserving existing vegetation; for example, woodlands, forests, trees, shrubs, crops, meadows, planting beds, vines, and ground covers. Documenting broad cover types, genus, species, caliper, and/or size, as well as color, scale, form and texture.

Evaluating the condition and determining the age of vegetation prior to project work. For example, tree coring to determine age.

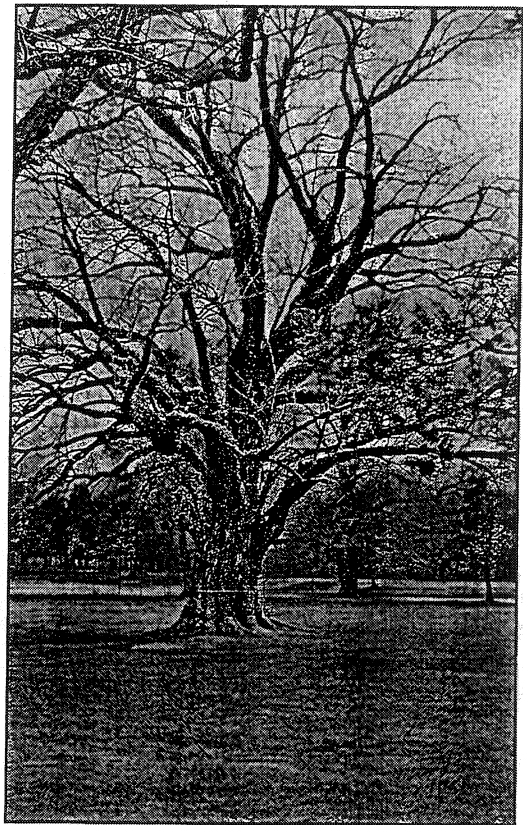
Not Recommended

Undertaking project work that impacts vegetation without executing an "existing conditions" survey of plant materials.

Undertaking work without understanding the significance of vegetation. For example, removing roadside trees for utility installations or indiscriminate clearing of vegetation.



To provide a basis for later treatment decisions, the existing vegetation within the core area of the Vanderbilt Mansion National Historic Site in Hyde Park, New York, have been inventoried and analyzed. This plan illustrates change in the specimen tree canopy from 1938-1991. For example, lost trees are shown with a black circle, while trees that were introduced are depicted with an "x." (LANDSCAPES, 1992)



A large Osage orange (*Maclura pomifera*) at the Arkansas Post National Memorial needs to be cored to establish its age. (courtesy NPS)



GUIDELINES FOR THE TREATMENT OF CULTURAL LANDSCAPES

Retaining and perpetuating vegetation through propagation using methods such as seed collection and genetic stock cuttings from existing plants to preserve the gene pool.

Failing to propagate vegetation from extant genetic stock, when few or no known sources of replacement are available.

Stabilize and Protect Deteriorated Historic Features and Materials as a Preliminary Measure

Stabilizing vegetation by staking, cabling, reinforcing, or other appropriate methods. For example, cabling a tree or limb to protect it against breakage from wind, ice, snow, or age.

Failing to stabilize threatened vegetation. For example, permitting the effects of severe weather conditions to damage or destroy vulnerable plant materials.

Stabilizing vegetation that serves to protect historic or archeological resources.

Removing vegetation from earthworks with subsurface archeological resources or removing large trees that shield marble burial markers from the effects of acid rain.

Protecting vegetation by controlling invasive or inappropriate volunteer plant materials. For example, utilizing mechanized removal, pruning, or approved herbicides.

Allowing invasive vegetation to thrive, leading to the damage and demise of historic vegetation.

Protecting below-ground root systems from soil compaction or protecting tree trunks and limbs from damage by equipment such as mowers, weed wackers and plows.

Failing to provide adequate barriers or alternative routes to protect significant vegetation from pedestrian, vehicular and heavy equipment traffic.

Maintain Historic Materials and Features

Maintaining historic vegetation by use of non-destructive methods and daily, seasonal, and cyclical tasks. This may include spring fertilizing, winter mulching or mowing an open field after it has gone to

Failing to undertake preventive maintenance of vegetation.

Utilizing maintenance practices which respect habit, form, bloom, fruit and color.

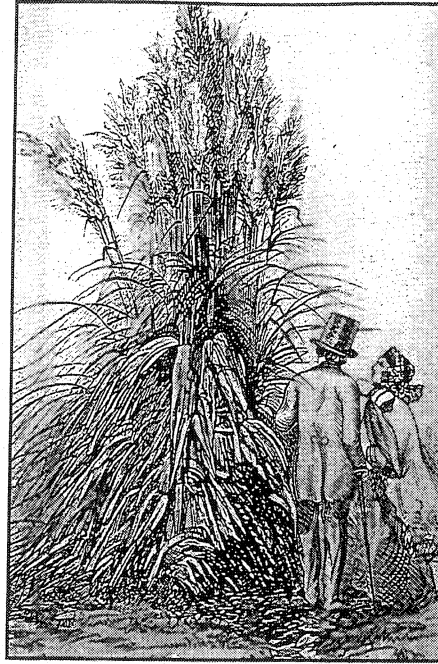
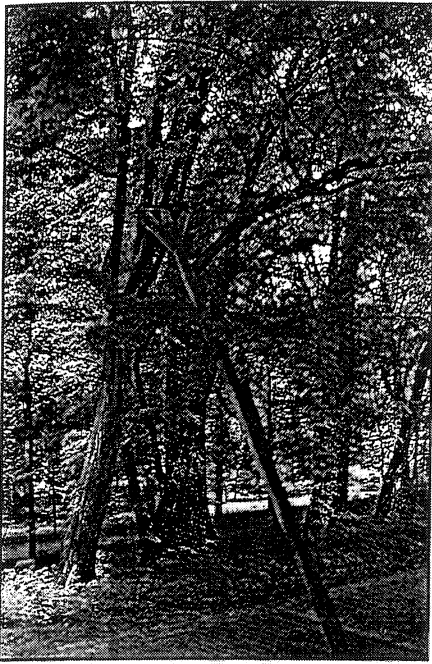
Utilizing maintenance practices and techniques that fail to recognize the uniqueness of individual plant materials. For example, rotating crops on an inappropriate schedule, or pruning plants which should be left "natural" into "shapes."

Utilizing historic horticultural and agricultural maintenance practices when those techniques are critical to preserving the historic character of the vegetation. For example, utilizing a specific mowing pattern at a country estate.

Employing modern practices when traditional or historic can be used. For example, using a modern textile to control weed growth when a natural material that was used historically is available.

Rejuvenating vegetation by corrective pruning, deep root watering or fertilizing, aerating soil, and/or grafting onto historic genetic stock.

Replacing or destroying vegetation when rejuvenation is possible. For example, removing a deformed and damaged plant when corrective pruning may be employed.



PRESERVATION

Preservation principles in the Standards have parallels world wide. This tree in a public park in Warsaw, Poland, [top left] was protected and stabilized following a recent storm. (author, 1994) Pampas grass, as depicted in this 1858 engraving, [top center] was often used as a bedding plant. Along the monumental core in Washington, D.C., some of the beds have been replaced in-kind [top right] as a result of their easy availability in the nursery trade.

Stabilize and Protect Deteriorated Historic Features and Materials as a Preliminary Measure

Stabilizing and protecting circulation features by temporary shoring methods until more permanent methods can be undertaken. For example, installing a temporary timber retaining wall or gabions to halt erosion until a permanent solution can be determined.

Failing to provide stabilization to circulation features. For example, allowing erosion from an unstable slope to cover a drive, ultimately resulting in a new alignment.

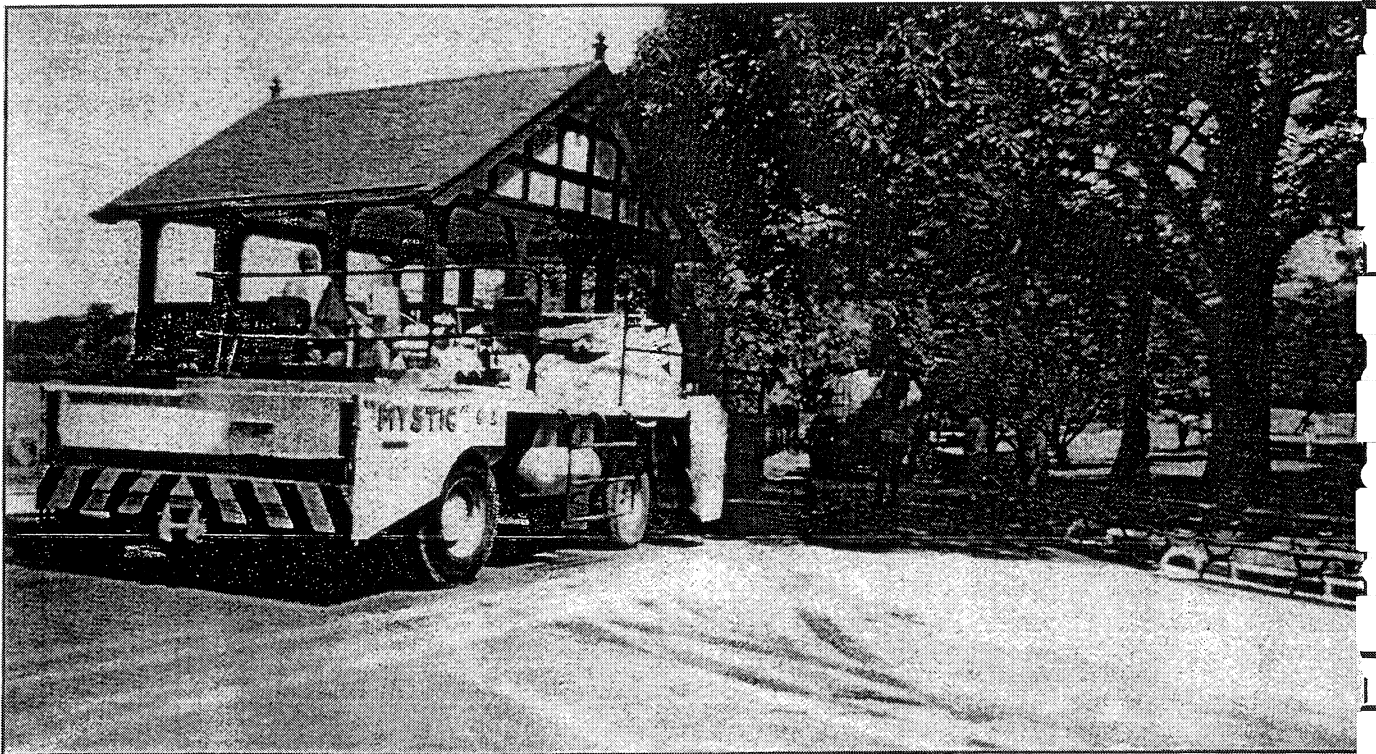
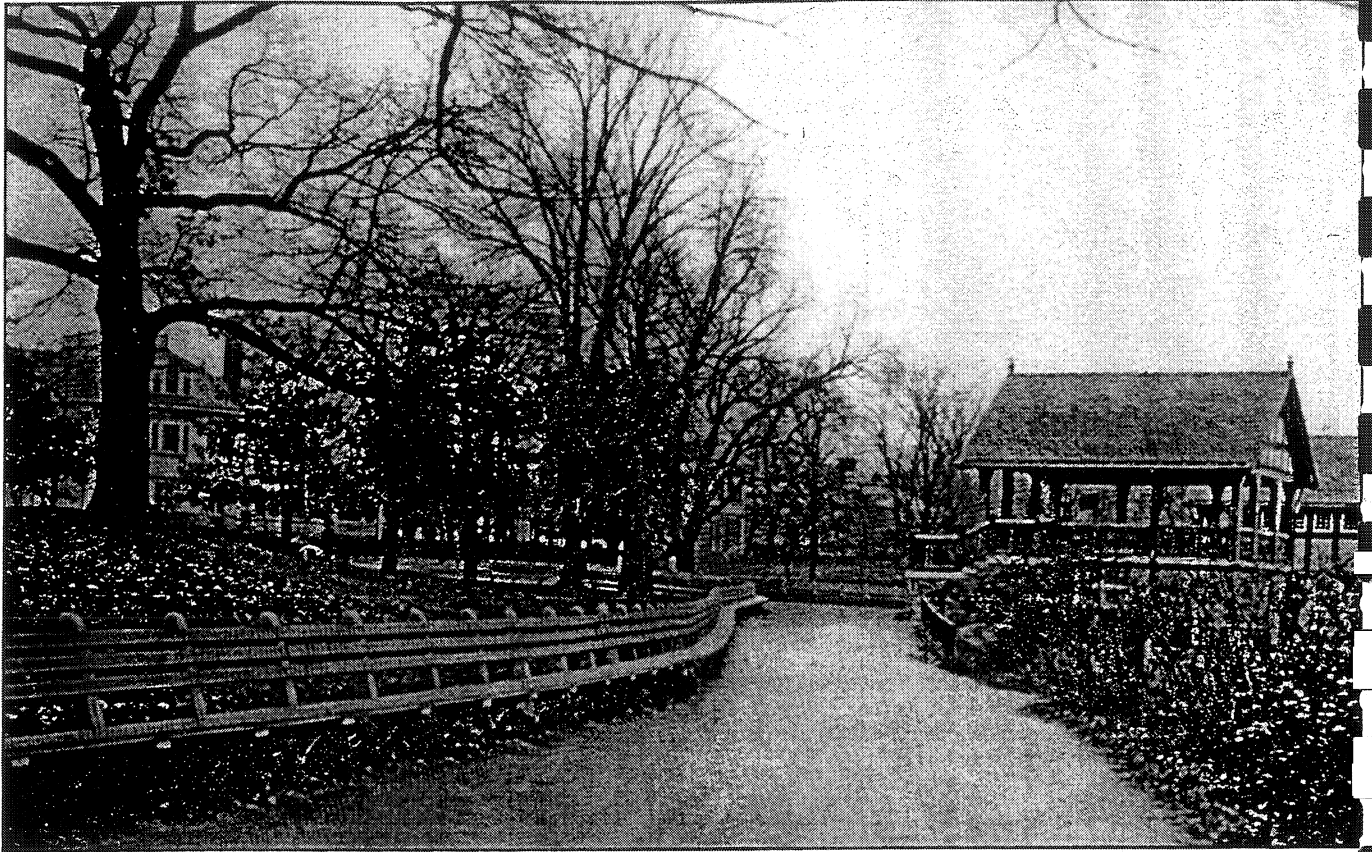
Protecting circulation features and materials by monitoring use. For example, restricting access to a prehistoric trail during periods of peak rainfall, or restricting high speed traffic from a leisure drive or parkway.

Failing to control the volume and intensity of use on circulation systems that results in damage or loss of features or materials. For example, allowing heavy loads on a historic trail.

Limited Replacement In Kind of Historic Features

Replacing in-kind a single plant or an entire plant grouping when the vegetation is too deteriorated or damaged to be saved. For example, infilling an individual plant in a windbreak, or perennials in a border, with historically appropriate plant materials.

Replacing vegetation that is beyond repair with new material when the historic plant is available.



As part of a preservation project, the walks around Boston's Jamaica Pond Park were repaired and resurfaced. A loose, crushed stone surface material (an embedded aggregate) was rolled into the asphalt surface, thus allowing for upgraded uses such as jogging, biking and snow removal, while retaining the historic character. (FLONHS and author, 1990)

CIRCULATION**Identify, Retain, and Preserve Historic Features and Materials***Recommended*

Identifying, retaining, and preserving the existing circulation systems prior to project work. All circulation features should be documented, from small paths and walks to larger transportation corridors such as parkways, highways, railroads and canals, as well as alignment, surface and edge treatment, width, grade, materials and infrastructure.

Evaluating the existing condition and determining the age of circulation systems. For example, utilizing aerial photographs and historic maps to date the introduction of carriage roads in an expanding rural cemetery.

Not Recommended

Executing project work that impacts circulation systems without undertaking an "existing conditions" survey.

Undertaking work without understanding the importance of circulation systems. For example, closing off historic roads and removing others, thus altering the historic circulation patterns in a fishing village.

Maintain Historic Materials and Features

Maintaining circulation systems through non-destructive methods in daily, seasonal and cyclical tasks. This may include hand raking, top dressing, or rolling surface materials.

Utilizing maintenance practices that respect infrastructure. For example, cleaning out debris from drainage systems.

Failing to undertake preventive maintenance of circulation features and materials. For example, using a snow plow across a coarse textured pavement.

Using materials such as salts and chemicals that can hasten the deterioration of surface treatments.

Allowing infrastructure to become dysfunctional. For example, permitting a failed drainage system to contribute to the degradation and loss of associated road surface.

Repair Historic Materials and Features

Repairing surface treatment, materials and edges. For example, by applying a traditional material to a stabilized subsurface base or patching a railroad corridor retaining wall.

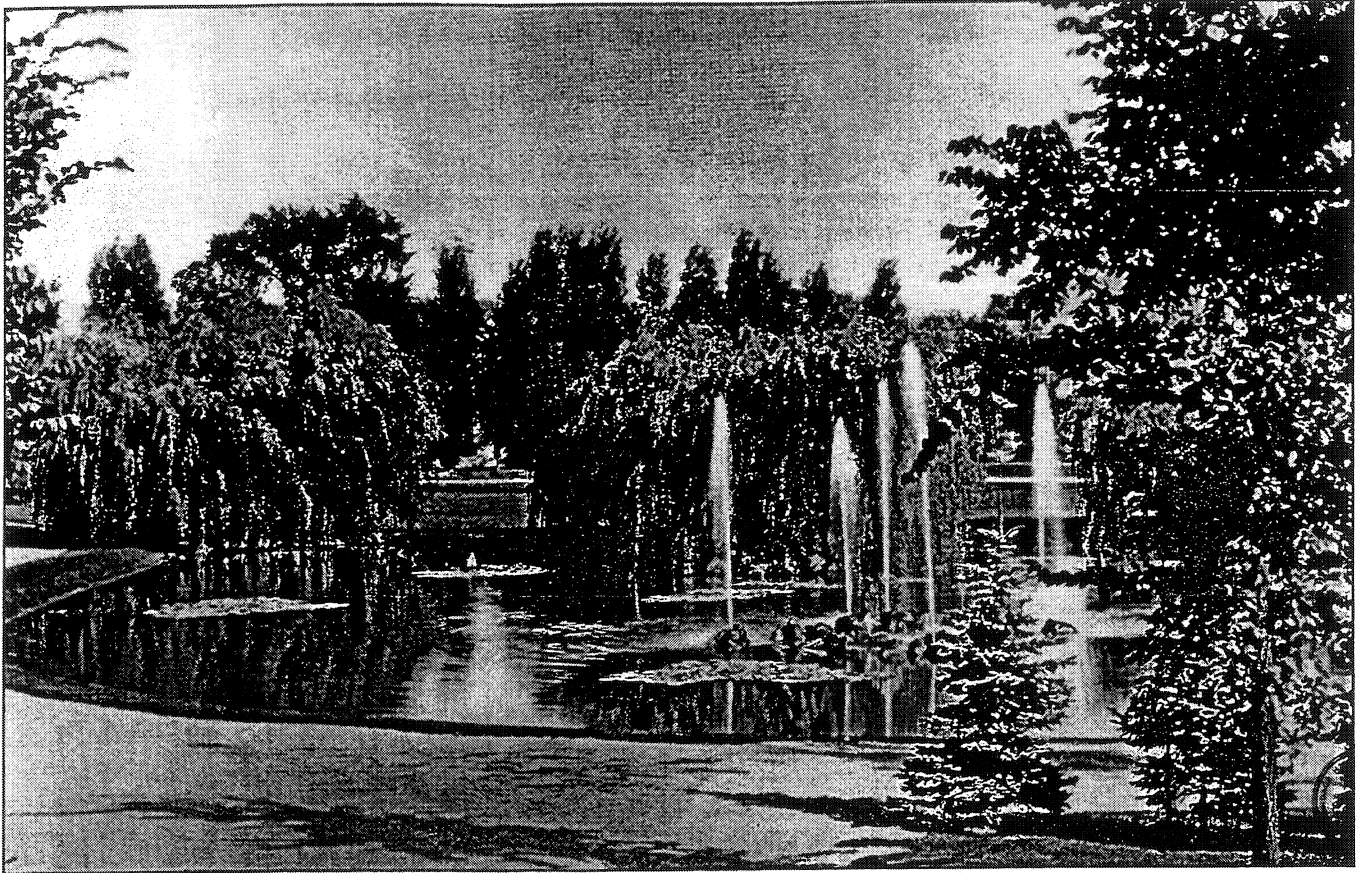
Replacing or destroying circulation features and materials when repair is possible. For example, removing damaged curbing that could be repaired during a road repaving project.

**Limited Replacement In Kind
of Extensively Deteriorated Portions of Historic Features**

Replacing in-kind circulation features or materials when they are too deteriorated or damaged to be repaired. For example, replacing a worn cinder path with a new material that matches the old in composition, design, color and texture.

Removing circulation features that are beyond repair when the historic feature or material is available. For example, installing new drainage inlets when the historic prototype survives.





In the 1980s, Star Lake in Lower Onondaga Park in Syracuse, New York, was filled-in without undertaking any research or analysis. This loss of this character-defining feature significantly altered the park's spatial relationships. (Onondaga County Historical Society and author, 1989)

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19 March 2008

Friends of Swan Island
PO Box 246
Richmond, ME 04357

Attention: Bruce Trembly, President

Reference: Gardiner Dumaresq House
Swan Island, ME

Dear Mr. Trembly:

On Thursday, 18 October 2007 I visited the Gardiner Dumaresq House on Swan Island to inspect the condition of the existing chimney. The following is a summary of my observations:

General Description

The Gardiner-Dumaresq House is a 2 ½-story residence with a partial basement. Constructed in 1759 as a "saltbox", there are five timber bents, two of which flank a large interior chimney. This chimney serves fireplaces at the first and second floor with multiple flues that angle inward toward the top of the house forming a large, complex, tapered masonry mass that is emblematic of the construction of the time that it was built. The chimney lands upon an east-west-spanning brick arch within the basement that is buttressed by granite walls on three sides.

During recent years, the Gardiner-Dumaresq House has been abandoned, though sporadic efforts have been made to maintain the property and make repairs on an as-needed basis. The top of the chimney has been truncated and roofed-over, so it is presently not visible from the exterior.

Noted Conditions

Several years ago, it was discovered that the base of the chimney had structurally shifted. This has had the following effects on the structure:

- The east side of the arch has shifted toward the east, causing the arch to crack in both the radial and diagonal directions. This spreading has pushed the granite that buttresses the east side eastward.
- The eastward moving granite has pushed against the first floor framing, spreading the east half of the floor eastward as is evident along the top of the east foundation.
- The eastward movement has forced the granite wall at the north end of the arch to elongate, causing it to crack. The crack has become wide enough that the chinkers (small stones) have fallen out of it and one can presently look through it.
- The eastward movement has also pushed a timber post at the southeast corner of the chimney off of its support- it presently hangs.
- The widening of the arch has also caused it to sag, allowing the supported chimney to compress downward and undergo stress redistributions that are inevitably resulting in internal cracks. The downward compression is also evidenced in the floors and walls that surround the chimney.
- A large timber has been placed below the arch as an attempt to stop its downward movement. The effectiveness of this isolated support is questionable.

If the above-noted movement continues unabated, it will result in the complete flexural failure of the arch, which will cause the east granite wall to topple or fold over and the arch to collapse. This may also damage the first floor framing to the east of the arch, which is currently undergoing significant stress as a result of the movements to date.

Because the brick arch and east wall support the major portion of the central chimney, loss of these elements will inevitably cause the collapse of the chimney into the basement, which would probably start suddenly and continue over a few hours to a few days, depending upon how much the house framing can restrain its lateral movement. If the chimney falls straight down, only the floor construction immediately around the chimney will likely be damaged. If the chimney leans toward the southeast, which is likely, the house may be irreparably damaged.

Recommendations

Relatively simple and straightforward measures taken now can stop the further movement and eventual collapse, and stabilize the chimney for the foreseeable future.

Careful construction of several east-west-running concrete- or brick-masonry walls on a concrete footing under the bottom of the arch placed directly below the load points would relieve the arch of the present overburden and greatly reduce or even eliminate its tendency to spread. This would restore the arch to a safe condition where additional measures such as localized pinning, grouting and earthen benching could be undertaken to further ensure stability.

Also, the unsupported timber post should be replaced or at least re-supported on a new pier or small footing.

Such measures would represent a small investment in this property and would assuredly prevent its untimely demise. Other than for the chimney base, the Gardiner-Dumaresq House is in a relative state of good repair, much thanks to the diligent efforts that both Friends and the State have made to date.

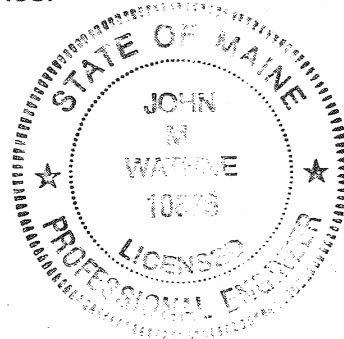
I trust that the above summary is helpful in understanding the current condition and immediate intervention needs of this significant and otherwise relatively sound historic structure.

Please contact me if we can be of further assistance.

Respectfully yours,



John M. Wathne, PE, President
Structures North Consulting Engineers, Inc.



WATER FEATURES**Identify, Retain, and Preserve Historic Features and Materials***Recommended*

Identifying, retaining and preserving existing water features and water sources such as retention ponds, pools, and fountains. Documenting shape, edge and bottom condition/material; water level, movement, sound and reflective qualities; and associated plants and animal life and water quality prior to work.

Evaluating the condition and, where applicable the evolution of water features over time. For example, assessing water quality and/or utilizing archeological techniques to determine the changing path of a watercourse

Not Recommended

Undertaking project work that impacts water features or hydrology, without undertaking an "existing conditions" survey. For example, filling in a pool that provides habitat for rare or endangered wildlife.

Executing project work without understanding its impact on water features. For example, placing a section of stream in a culvert or channel.

Stabilize and Protect Deteriorated Historic Features and Materials as a Preliminary Measure

Stabilizing water features by consolidating or reinforcing the form, bottom, or edge treatments. For example, bracing a slipped spill rock in a cascade.

Protecting water features by controlling inappropriate volunteer plant materials. For example, cleaning a pond by removing invasive plant materials.

Protecting water features from hazardous or toxic materials. For example, limiting agricultural fertilizers to minimize their impact on associated streams.

Failing to stabilize threatened water features. For example, permitting pedestrian access to further degrade threatened embankments.

Allowing invasive vegetation to thrive, leading to radical changes in water quality.

Failing to protect water features from point source, or runoff pollutants, toxins or wastes.

Maintain Historic Features and Materials

Maintaining water features by use of non-destructive methods and daily, seasonal, and cyclical tasks. For example, cleaning leaf litter or mineral deposits from drainage inlets or outlets.

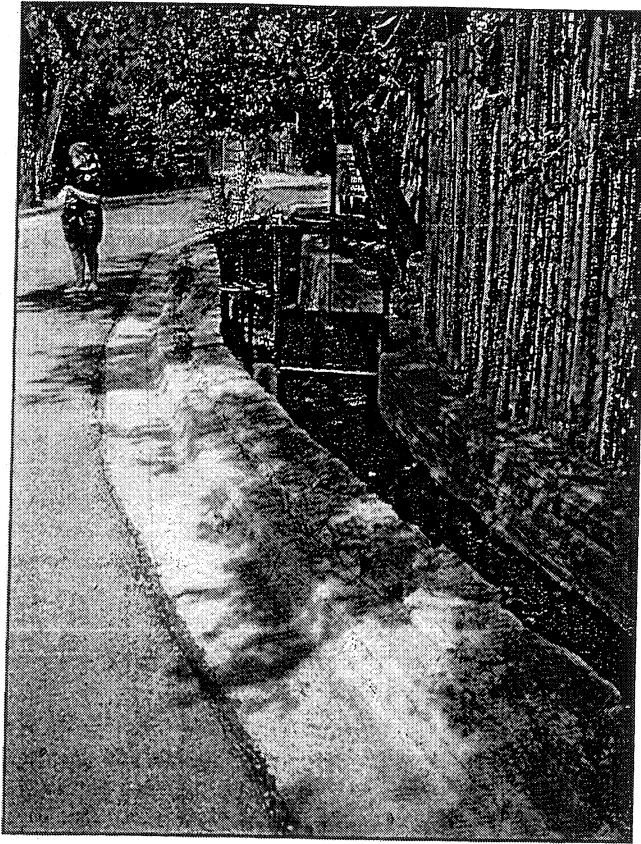
Maintaining a water feature's mechanical, plumbing and electrical systems to insure appropriate depth of water or direction of flow. For example, routinely greasing and lubricating gate mechanisms in a canal lock.

Failing to undertake preventive maintenance to water features.

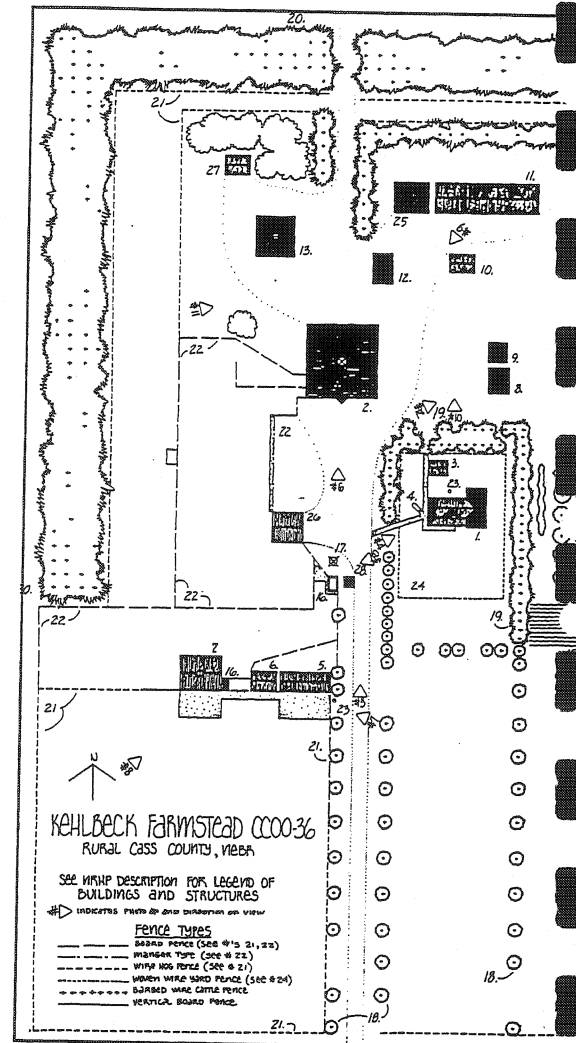
Utilizing maintenance methods which destroy or degrade water features, such as heavily weighted equipment in the base of a pond, thus destroying its fragile lining.

Allowing mechanical systems to fall into a state of disrepair, resulting in changes to the water feature. For example, failing to maintain a fountain's plumbing, thus altering its spray.





This integrity of this historic irrigation system in San Antonio, Texas, [above] has been preserved by keeping it clean of leaf litter and mineral deposits. (author, 1992) The plan for the Kehlbeck Farmstead in Cass County, Nebraska, [right] illustrates a well-planned and aesthetically arranged general farm complex of the twentieth century. Note the varied graphic techniques used to identify and document a variety of fence types. (National Register Files)



Repair Historic Features and Materials

Repairing water features by reinforcing materials or augmenting mechanical systems. For example, patching a crack in an irrigation ditch or repairing a failed pump mechanism.

Replacing or removing features or systems when is possible. For example, abandoning an irrigation system that could be repaired.

Limited Replacement In Kind of Extensively Deteriorated Portions of Historic Features

Replacing in kind a portion of a water feature when it is too deteriorated or damaged to be repaired. For example, installing coping stones in limited areas that match the old in composition, design, color and texture.

Replacing portions of water features using material when the historic material is available.

STRUCTURES, FURNISHINGS AND OBJECTS**Identify, Retain, and Preserve Historic Materials and Features****RECOMMENDED**

Identifying, retaining and preserving existing structures, furnishings and objects prior to project work--including gazebos and bridges, playground equipment and drinking fountains, benches, lights, statuary and troughs. Documenting the relationship of these features to each other, their surrounds, and their material compositions.

Evaluating the condition and determining the age of structures, furnishings and objects. For example, utilizing Historic Structure Reports and historic aerial photographs to understand the relationship of barns, windmills, silos and water troughs in a ranch compound or the placement of light standards and benches along park paths.

Retaining the historic relationships between the landscape and its buildings, structures, furnishings and objects.

NOT RECOMMENDED

Undertaking project work that impacts structures, furnishings, and objects without undertaking an "existing conditions" survey. For example, removing historic roadside

Undertaking work without understanding the significance of structures, furnishings and objects. For example, removing a pergola that defines a courtyard, or fence posts that delineate the limits of a horse farm.

Removing or relocating buildings, structures, furnishings and objects, thus destroying or diminishing the historic relationship between the landscape and these features. For example, taking down an estate's greenhouse, or removing a stone mile-marker from a historic road.

Stabilize and Protect Deteriorated Historic Materials and Features as a Preliminary Measure

Stabilizing structures, furnishings and objects by reinforcement or consolidation of their features or materials. For example, reinforcing a roof member of a bandshell or using an epoxy consolidant on a spalling masonry bench.

Protecting the features and materials of structures, furnishings and objects. For example, installing a fence around a deteriorating pumping station or placing a temporary shelter or box over a garden ornament in winter.

Failing to stabilize threatened structures, furnishings and objects. For example, permitting the effects of severe weather to damage or destroy vulnerable features.

Allowing vulnerable structures, furnishings and objects to remain unprotected. For example, failing to secure doors and windows of an abandoned boathouse, thus permitting vandalism or looting.

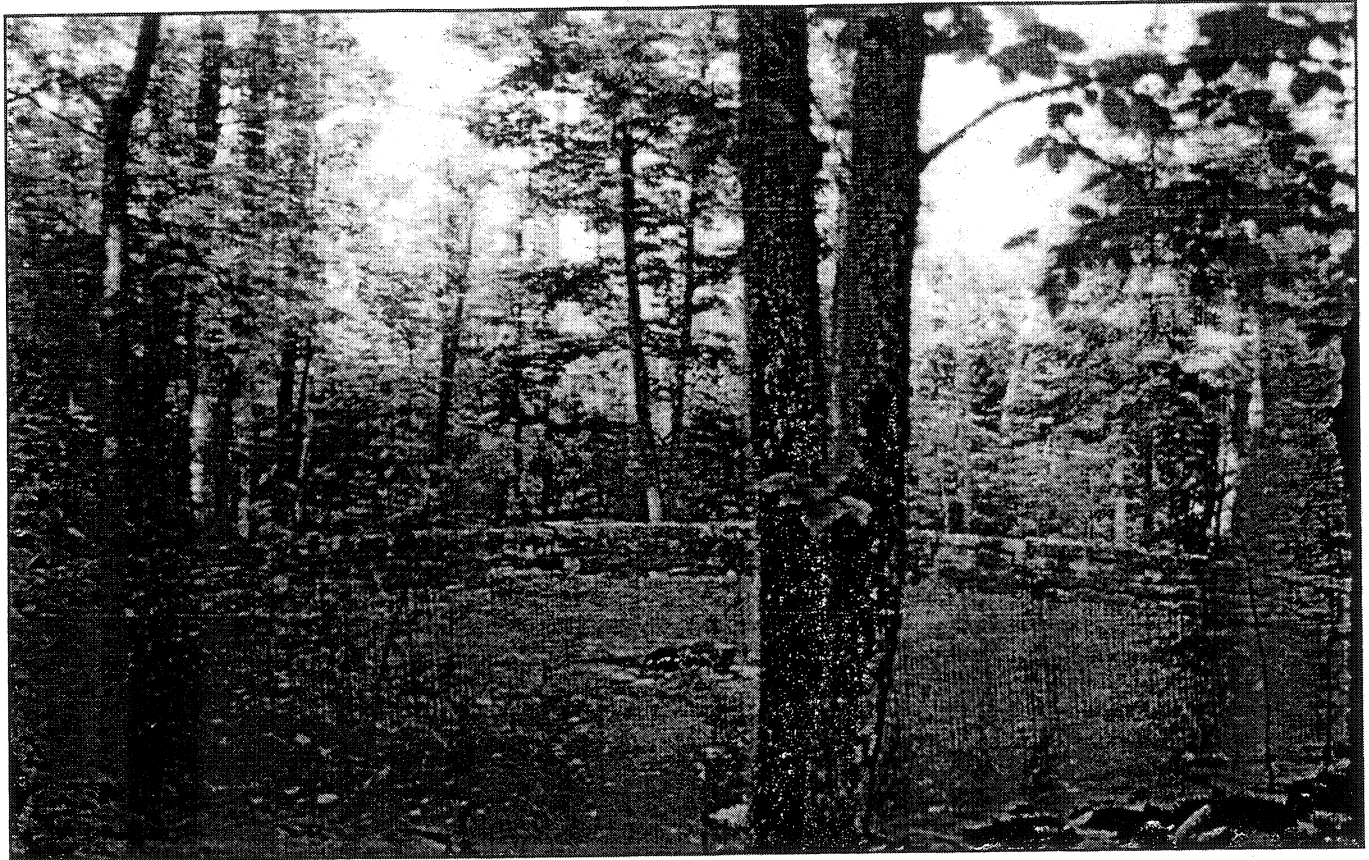
Maintain Historic Features and Materials

Maintaining structures, furnishings and objects by use of non-destructive methods and daily, cyclical and seasonal tasks. This may include cleaning, limited paint removal, or re-application of protective coating systems.

Failing to undertake preventive maintenance for structures, furnishings and objects resulting in their damage or loss. For example, failing to remove rust from an iron boot scraper which leads to its deterioration.

Utilizing maintenance practices and materials that are harsh, abrasive, or unproven. For example, using grit blasting on wood, brick, or soft stone, or using harsh chemicals on masonry or metals.





Top: Council rings are simple stone benches with fire pits in the center that resemble the kivas of the Pueblo Indians in the American Southwest. Landscape architect Jens Jensen typically placed council rings along a woodland edge—often where they are prone to successional overgrowth. By employing cyclical and seasonal clearing operations, the area around and within the council ring at the Clearing in Ellison Bay, Wisconsin, has been kept free of perennial weeds, and the stone masonry remains in excellent condition. (author, 1993)

Repair Historic Features and Materials

Repairing features and materials of structures, furnishings and objects by reinforcing historic materials. For example, returning the mechanism of a windmill to good working order or straightening bent wrought iron fencing.

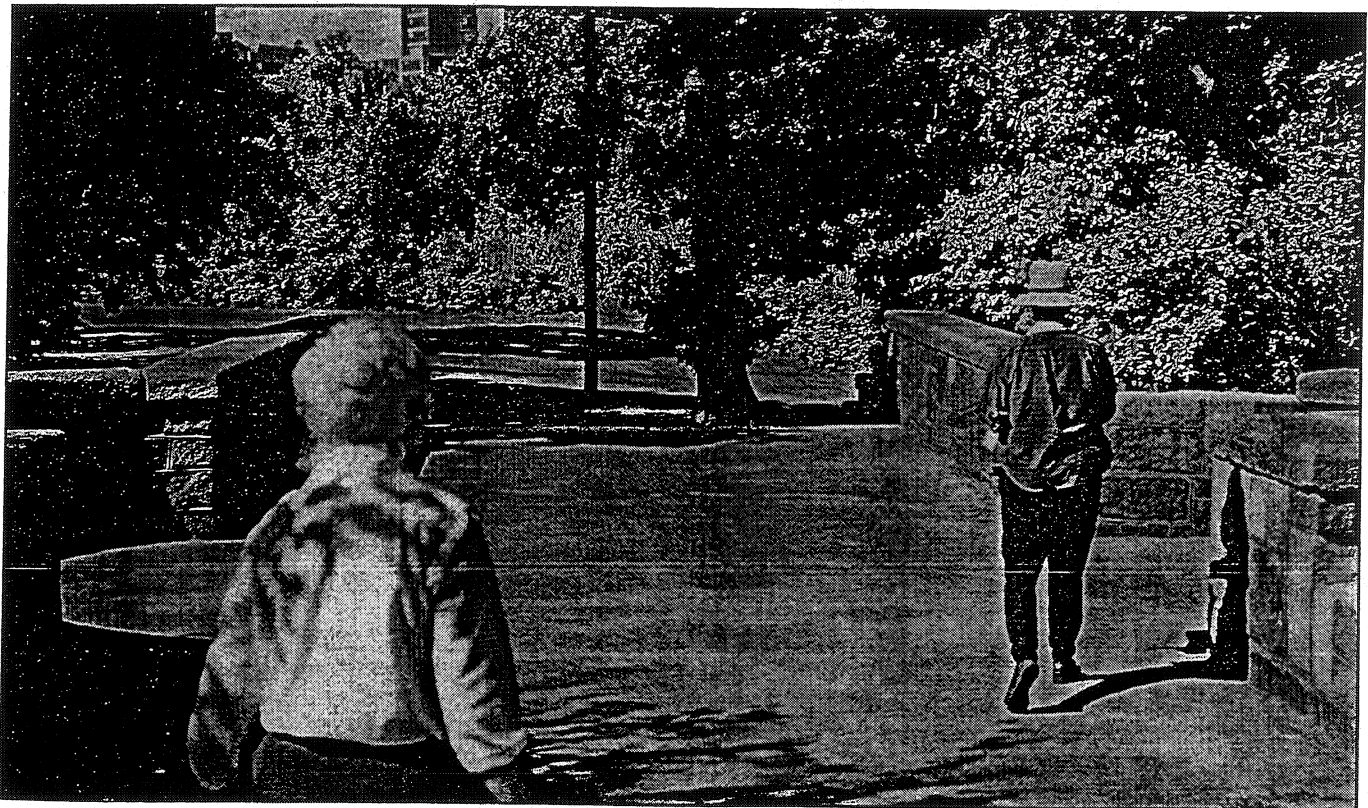
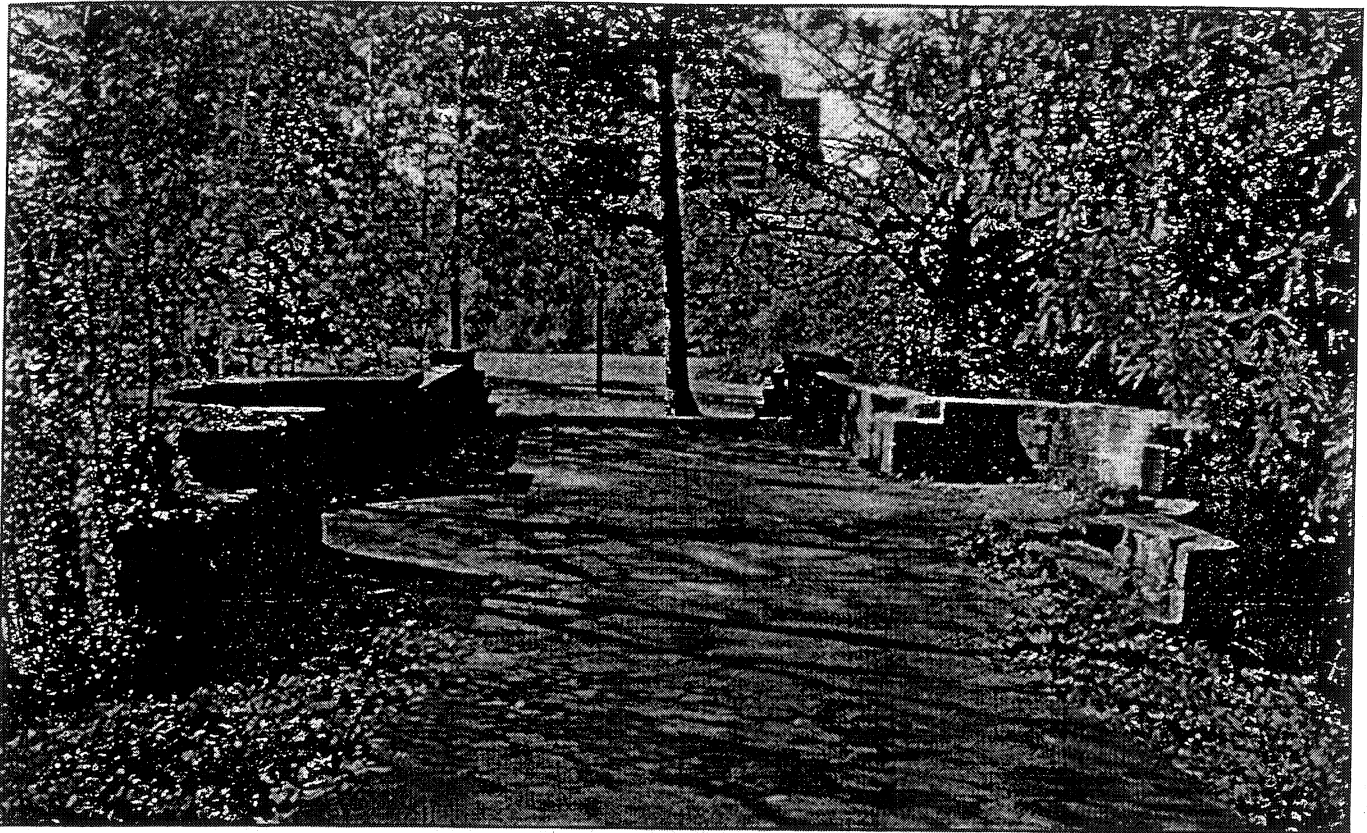
Replacing or destroying a feature of structures, furnishings or objects when repair is possible. For example, replacing a pavilion's tile roof with asphalt shingles or removing a broken historic light fixture rather than rewiring it.

Limited Replacement In-Kind of Extensively Deteriorated Portions of Historic Features

Replacing in-kind a feature of a building, structure, furnishing or object when it is too deteriorated to repair. New materials should match the old in composition, design, color and texture. For example, replacing broken wooden fence or bench slats, clapboards or shingles, window parts, or deck timbers in-kind.

Removing or replacing features of buildings, structures, furnishings or objects with new material when historic materials are available. For example, demolishing an ice house rather than re-roofing it, or failing to save and reattach the original portion of a stone statue, using a concrete replacement instead.

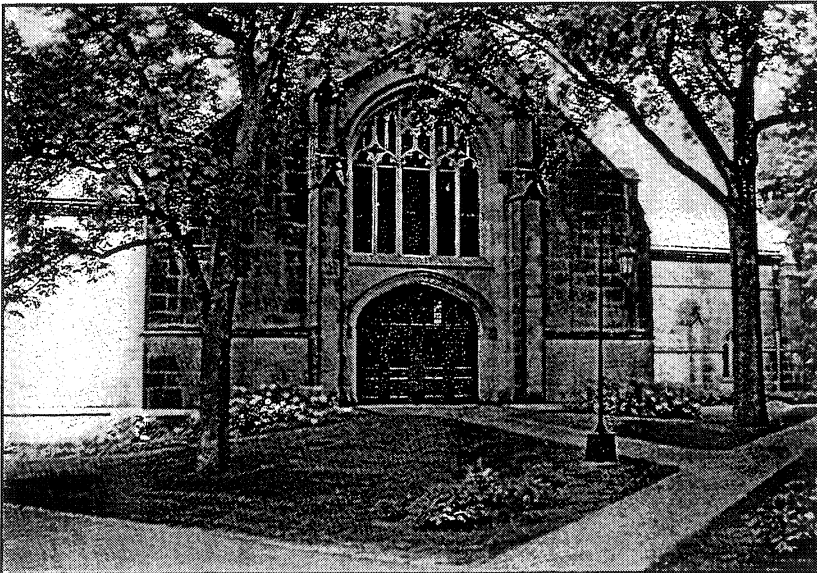
Adding "period"-looking buildings, structures, furnishings and objects.



Many of the stones from the Island Bridge along Boston's Riverway had fallen into the Muddy River below. As part of the preservation work, these stones were retrieved from the water and reused, in addition to several new stones that were cut to order to replace in-kind those that were lost. (author, 1988, 1994)



Although the work in the following sections is quite often an important aspect of preservation projects, it is usually not part of the overall process of preserving character-defining features (maintenance, repair and limited replacement); rather, such work is assessed for its potential negative impact on the landscape's historic character. For this reason, particular care must be taken not to obscure, alter, or damage character-defining features.



To meet ADA requirements, accessibility to the Houghton Chapel at Wellesley College has been provided from a secondary entrance. The landscape in this area possessed little integrity--thus, as part of this regrading operation, the historic granite stairs were buried below and preserved in-situ, below the new grade. (Carol R. Johnson Associates, Inc.)

ACCESSIBILITY CONSIDERATIONS

Recommended

Identifying the cultural landscape's character-defining features, materials and finishes so that accessibility code-required work will not result in their damage or loss.

Complying with barrier-free access requirements, in such a way that character-defining features, materials and finishes are preserved. For example, widening existing brick walks by adding new brick adjacent to it to achieve the desired width.

Not Recommended

Undertaking code-required alterations before identifying those features, materials and finishes which are character-defining and must therefore be preserved.

Damaging or destroying character-defining features in attempting to comply with accessibility requirements. For example, paving over historic concrete walks with blacktop.

Working with local accessibility and preservation specialists to determine the most appropriate solution to access problems which will have the least impact on character-defining features.

Providing barrier-free access that promotes independence for the disabled person to the highest degree practicable, while preserving significant character-defining landscape features, materials and finishes. For example, incorporating wider sidewalks only at intersections where ramps are being installed, leaving the main runs or historic sidewalks in place.

Finding solutions to meet accessibility requirements that minimize the impact on the cultural landscape, for example, retaining the original character-defining entrance steps and replacing the access ramp at a side or secondary entrance.

Altering character-defining features, materials and finishes without consulting with local accessibility and preservation specialists.

Making access modifications that do not provide a reasonable balance between independent, safe access and preservation of character-defining landscape features, materials and finishes. For example, replacing three foot wide stone, brick or historic concrete sidewalks with new, wider concrete sidewalks.

Making modifications for accessibility without considering the impact on the cultural landscape. For example, introducing a new access element (ramp or lift) that destroys the symmetry of a formal garden.

HEALTH AND SAFETY CONSIDERATIONS

Recommended

Identifying the cultural landscape's character-defining features, materials and finishes so that code-related work will not result in their damage or loss.

Complying with health and safety code requirements, in such a manner that character-defining features, materials and finishes are preserved. For example, recognizing standards for the application of pesticides or herbicides.

Removing toxic materials only after thorough testing has been conducted and only after less invasive abatement methods have been shown to be inadequate.

Providing workers with appropriate personal protective equipment for hazards found in the worksite.

Working with local code officials to investigate systems, methods, or devices of equivalent or superior effectiveness and safety to those prescribed by code so that unnecessary alterations can be avoided.

Upgrading character-defining features to meet health and safety codes in a manner that assures their preservation. For example, upgrading a historic stairway without destroying character-defining handrails and balustrades.

Not Recommended

Undertaking code-required alterations before identifying those features, materials and finishes which are character-defining and must therefore be preserved.

Altering, damaging or destroying character-defining features, materials and finishes while making modifications to a cultural landscape to comply with safety codes.

Destroying a cultural landscape's character-defining features, materials and finishes without careful testing and without considering less invasive abatement methods.

Removing unhealthful materials without regard to personal and environmental safety.

Making changes to cultural landscapes without first exploring equivalent health and safety systems, methods, or devices that may be less damaging to character-defining features, materials and finishes.

Damaging or obscuring character-defining features, materials and finishes or adjacent areas in the process of doing work to meet code requirements.

GUIDELINES FOR THE TREATMENT OF CULTURAL LANDSCAPES

Installing safety-related systems that result in the retention of character-defining features, materials, and finishes; for example, fire-suppression systems or seismic retrofits.

Applying the necessary materials to add protection to character-defining features, materials and finishes. For example, applying fire retardant, intumescent paint coatings to a deck to add thermal protection to its steel.

Adding new features to meet health and safety codes in a manner that preserves adjacent character-defining features, materials and finishes. For example, creating a fire access route along a derelict historic corridor.

Covering character-defining features with fire resistant sheathing which results in altering their visual appearance.

Using materials intended to provide additional protection, such as fire-retardant coatings, if they damage or obscure character-defining features, materials and finishes.

Radically changing, damaging or destroying character-defining features, materials and finishes when adding new code-required features.

ENVIRONMENTAL CONSIDERATIONS

Recommended

Identifying the cultural landscape's character-defining features, materials and finishes so that environmental protection-required work will not result in their damage or loss.

Complying with environmental protection regulations in such a manner that character-defining features, materials and finishes are preserved. For example, protecting historic vegetation in which rare and endangered species nest.

Working with environmental protection officials to investigate systems, methods, devices or technologies of equivalent or superior effectiveness to those prescribed by regulation so that unnecessary alterations can be avoided.

Reclaiming or re-establishing natural resources in a manner that promotes the highest degree of environmental protection, while preserving significant historic features, materials and finishes. For example, reclaiming a wetland to comply with applicable environmental regulations, while re-establishing the feature as it appeared historically. Undertaking environmental protection-required work

Not Recommended

Undertaking environmental protection required work before identifying character-defining features, materials and finishes which should be preserved.

Altering damaging or destroying character-defining features, materials and finishes while making modifications to a cultural landscape to comply with environmental protection regulations.

Making changes to cultural landscapes without first exploring equivalent environmental protection systems, methods, devices or technologies that may be less damaging to historic features, materials and finishes.

Making environmental protection related modifications that do not provide a reasonable balance between improved environmental conditions and the preservation of historic features, materials and finishes.

ENERGY EFFICIENCY

Recommended

Retaining and maintaining those historic energy efficient features or parts of features of the landscape. For example, maintaining vegetation which performs passive solar energy functions.

Improving energy efficiency of existing features through non-destructive means. For example, utilizing a recirculating system in a fountain rather than uncontrolled discharge to a storm system.

Not Recommended

Removing or altering those historic features or parts of features which play an energy conserving role. For example, removing a historic windbreak.

Replacing energy inefficient features rather than improving their energy conservation potential. For example, replacing an entire historic light standard rather than retrofitting the fixture to be more efficient.

Standards for Rehabilitation & Guidelines for Rehabilitating Cultural Landscapes

When repair and replacement of deteriorated features are necessary; when alterations or additions to the property are planned for a new or continued use; and when its depiction at a particular period of time is not appropriate, Rehabilitation may be considered as a treatment. Prior to undertaking work, a documentation plan for Rehabilitation should be developed.

Standards for Rehabilitation

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in a such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

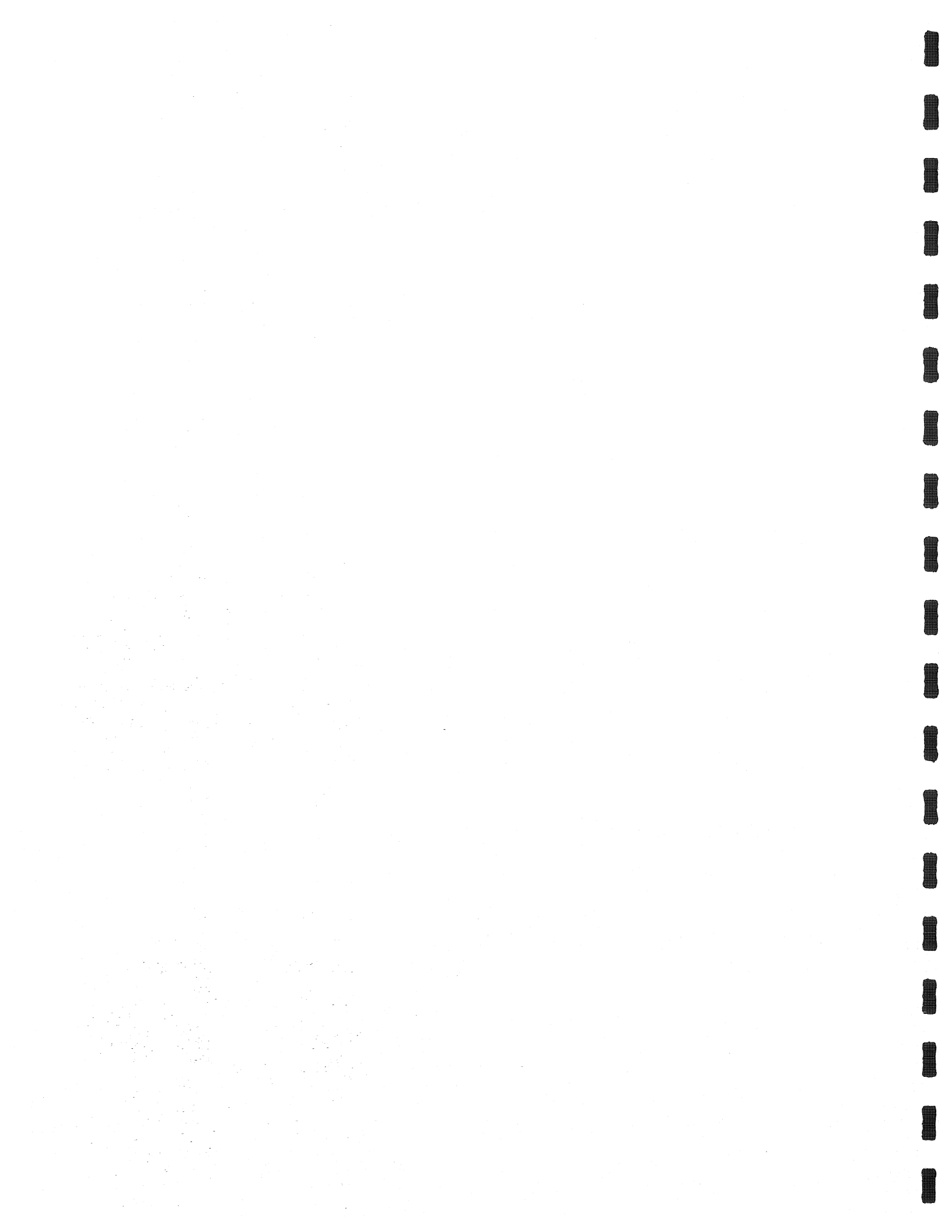
Standards for Restoration & Guidelines for Restoring Cultural Landscapes

When the property's design, architectural, or historical significance during a particular period of time outweighs the potential loss of extant materials, features, spaces, and finishes that characterize other historical periods; when there is substantial physical and documentary evidence for the work; and when contemporary alterations and additions are not planned, Restoration may be considered as a treatment. Prior to undertaking work, a particular period of time, i.e., the restoration period, should be selected and justified, and a documentation plan for Restoration developed.

Standards for Restoration

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

1. A property will be used as it was historically or be given a new use which reflects the property's restoration period.
2. Materials and features from the restoration period will be retained and preserved. The removal of materials or alteration of features, spaces, and spatial relationships that characterize the period will not be undertaken.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate and conserve materials and features from the restoration period will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Materials, features, spaces, and finishes that characterize other historical periods will be documented prior to their alteration or removal.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize the restoration period will be preserved.
6. Deteriorated features from the restoration period will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials.
7. Replacement of missing features from the restoration period will be substantiated by documentary and physical evidence. A false sense of history will not be created by adding conjectural features, features from other properties, or by combining features that never existed together historically.
8. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
9. Archeological resources affected by a project will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
10. Designs that were never executed historically will not be constructed.



SCHEMATIC DESIGN MANUAL
FOR THE PUBLIC TOILET FACILITY

WILDLIFE CENTER

SWAN ISLAND
RICHMOND, MAINE



Provided for:

NATHANIEL SALFAS, AIA
BUREAU OF GENERAL SERVICES
STATE HOUSE STATION #77
AUGUSTA, MAINE

REED & CO. ARCHITECTURE
30 PLEASANT STREET
PORTLAND, MAINE 04101
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DECEMBER, 1998



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INTRODUCTION

The purpose of this schematic design was to provide a solution to program outlined from several meetings. This design will be a basis for planning such a facility if future funding can be provided.

Currently, a master plan study is in progress. During this process, the building program may change. Therefore, this schematic design can be adapted.

The utilities that exist on the island are the first solution applied. Alternatives to these utilities have been outlined as options. These options may be appropriate in the future use of the island.



MISSION STATEMENT

This is a preliminary solution to provide a facility that is to replace the "job johnnies" and the abandoned open-pit outhouse. It will also provide water.

The facility is to serve the campground as well as the day visitors.

The appearance of this structure is intended to be simple and functional and to enhance the natural landscape, as the remaining historic buildings do.



PROGRAM OUTLINE

TOILETS	WOMEN	MEN
STALLS	2*	2*
SINKS WITH HOT AND COLD WATER	2*	2*
MIRRORS	*	*
BABY CHANGING STATION	1*	1*

OUTSIDE WASH

- DEEP SINK WITH HOT AND COLD WATER*
- DRINKING FOUNTAIN*
- HOSE BIBB*

SHOWERS

INDOOR OR OUTDOOR	2*	2*
-------------------	----	----

JANITOR'S CLOSET

- SERVICE SINK
- STORAGE

* ONE HANDICAPPED ACCESSIBLE

ISSUES:

UTILITIES

1. ELECTRICITY

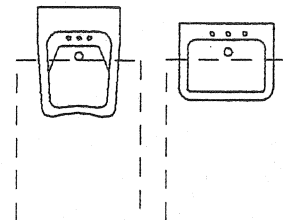
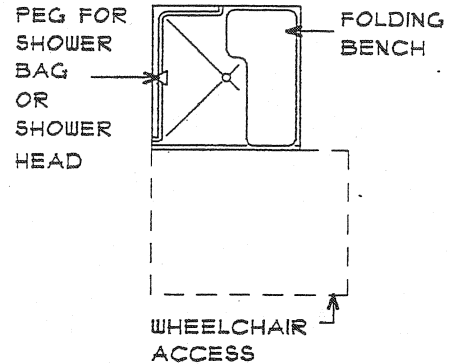
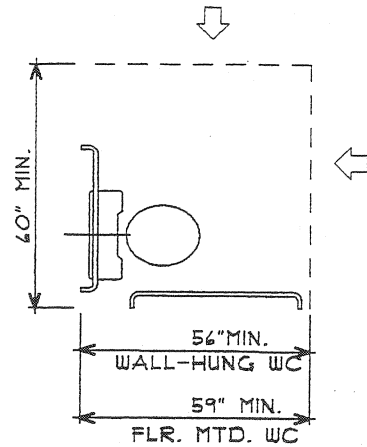
- SOURCE
- OPTIONS/ALTERNATIVES

2. WATER

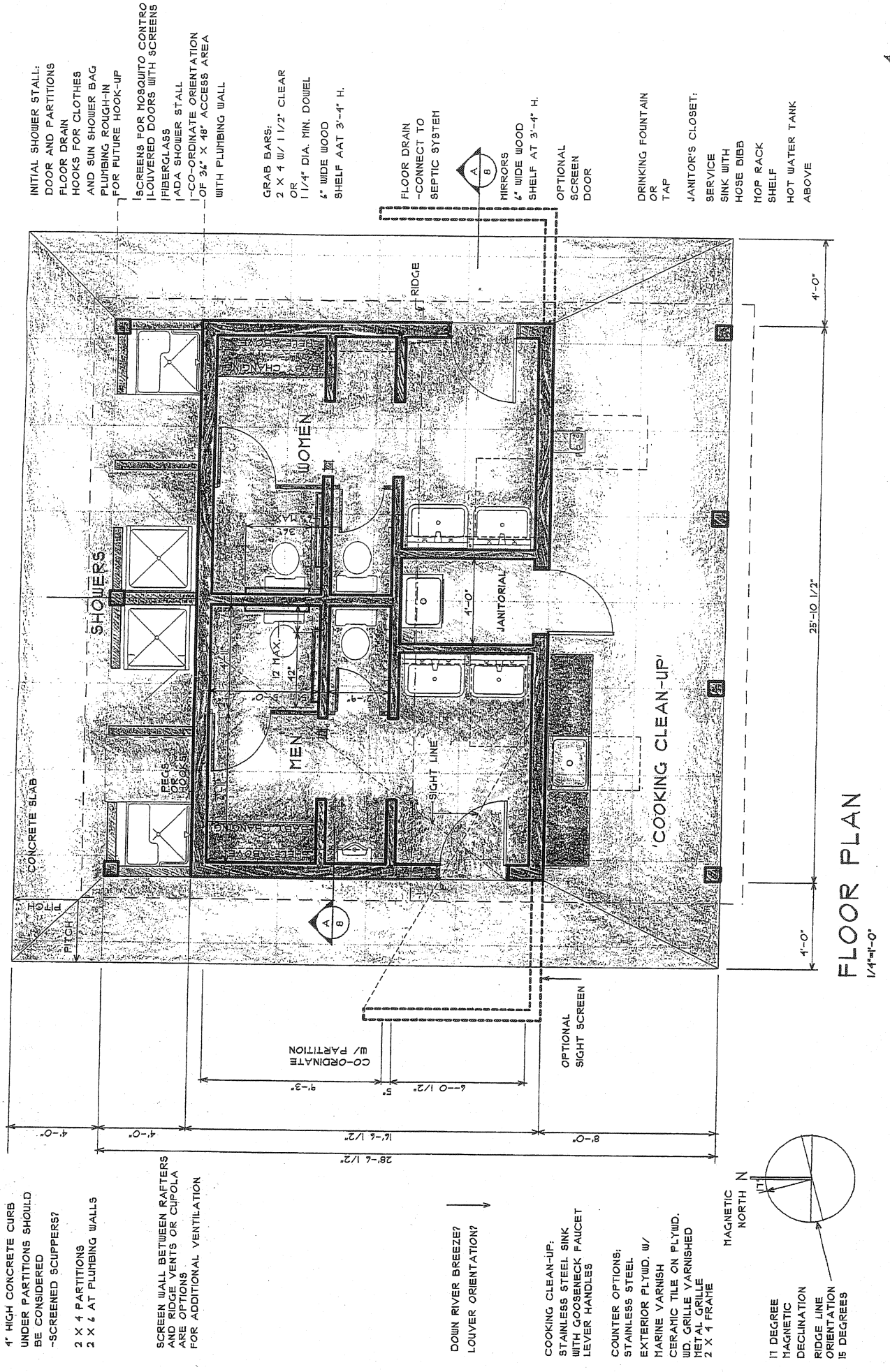
- SOURCE
- OPTIONS/ALTERNATIVES
- HOT WATER HEATING SYSTEM

3. SEPTIC

- EXISTING SEPTIC SYSTEM







INITIAL SHOWER STALL:
 DOOR AND PARTITIONS
 FLOOR DRAIN
 HOOKS FOR CLOTHES
 AND SUN SHOWER BAG
 PLUMBING ROUGH-IN
 FOR FUTURE HOOK-UP

SCREENS FOR MOSQUITO CONTROL
 FLOUNDERED DOORS WITH SCREENS
 (FIBERGLASS)
 ADA SHOWER STALL
 CO-ORDINATE ORIENTATION
 OF 3/4" X 48" ACCESS AREA
 WITH PLUMBING WALL

GRAB BARS:
 2 X 4 W/ 1 1/2" CLEAR
 OR
 1 1/4" DIA. MIN. DOWEL
 4" WIDE WOOD
 SHELF AAT 3'-4" H.

FLOOR DRAIN
 -CONNECT TO
 SEPTIC SYSTEM

MIRRORS
 4" WIDE WOOD
 SHELF AT 3'-4" H.

OPTIONAL
 SCREEN
 DOOR

DRINKING FOUNTAIN
 OR
 TAP

JANITOR'S CLOSET:
 SERVICE
 SINK WITH
 HOSE BIBB
 MOP RACK
 SHELF
 HOT WATER TANK
 ABOVE

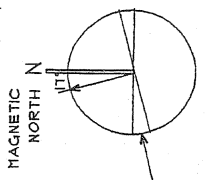
4" HIGH CONCRETE CURB
 UNDER PARTITIONS SHOULD
 BE CONSIDERED
 -SCREENED SCUPPERS?
 2 X 4 PARTITIONS
 2 X 4 AT PLUMBING WALLS

SCREEN WALL BETWEEN RAFTERS
 AND RIDGE VENTS OR CUPOLA
 ARE OPTIONS
 FOR ADDITIONAL VENTILATION

DOWN RIVER BREEZE?
 LOUVER ORIENTATION?

COOKING CLEAN-UP:
 STAINLESS STEEL SINK
 WITH GOOSENECK FAUCET
 LEVER HANDLES

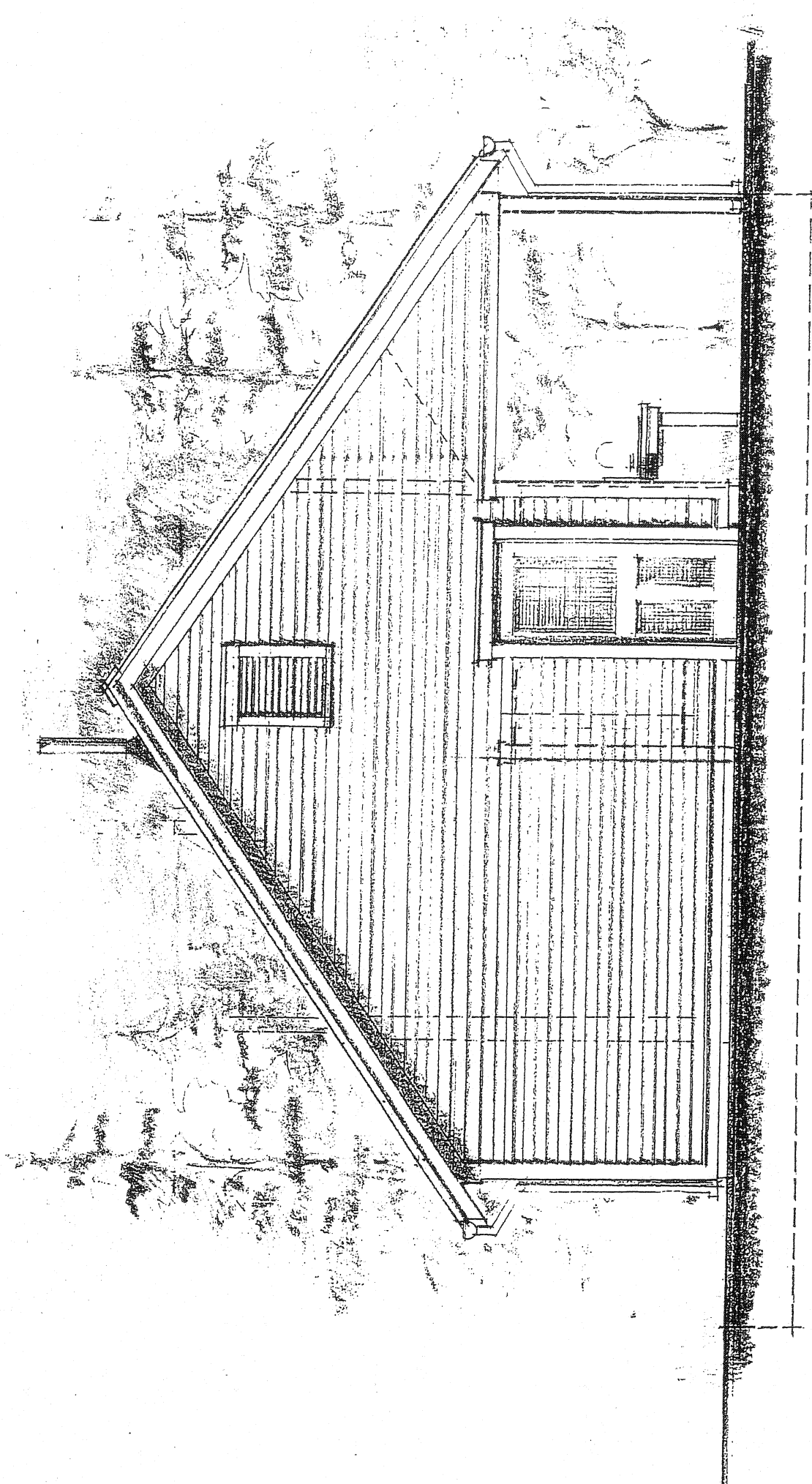
COUNTER OPTIONS:
 STAINLESS STEEL
 EXTERIOR PLYWD. W/
 MARINE VARNISH
 CERAMIC TILE ON PLYWD.
 WD. GRILLE YARNISHED
 METAL GRILLE
 2 X 4 FRATE



15 DEGREE
 MAGNETIC
 DECLINATION
 RIDGE LINE
 ORIENTATION
 15 DEGREES

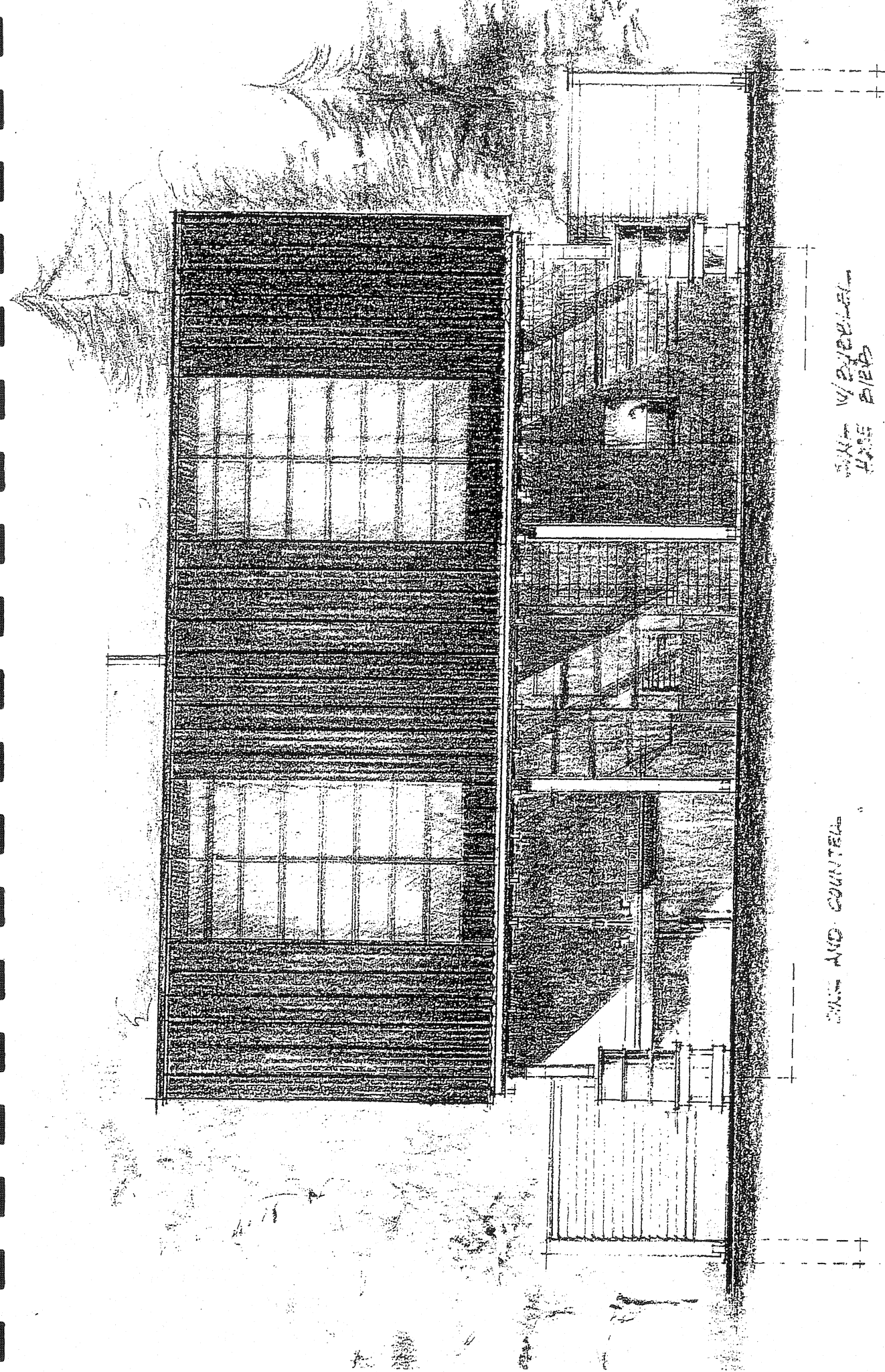
FLOOR PLAN
 1/4"=1'-0"





ENTRANCE ELEVATION



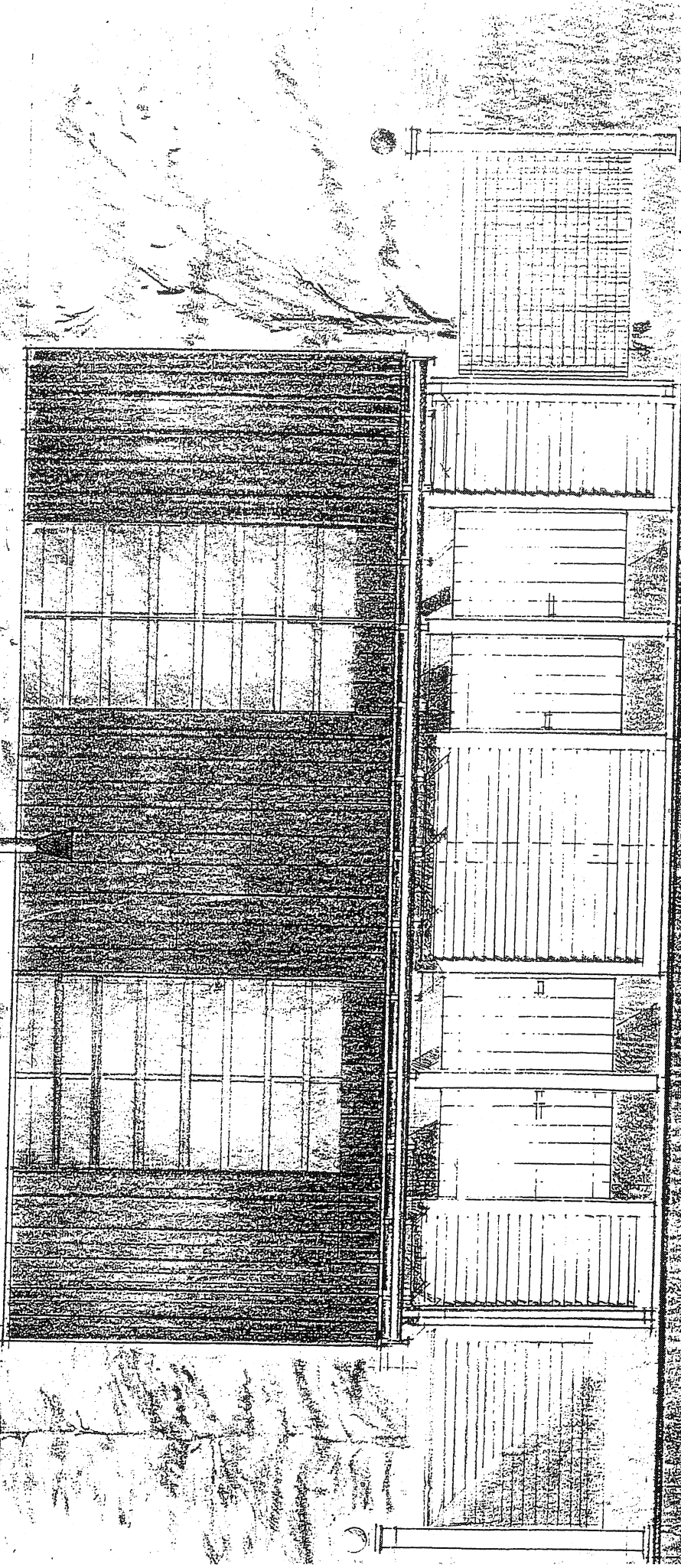


BASE AND COUNTER
BASE FLEET

BASE AND COUNTER

ELEVATION OF 'COOKING WASH-UP'

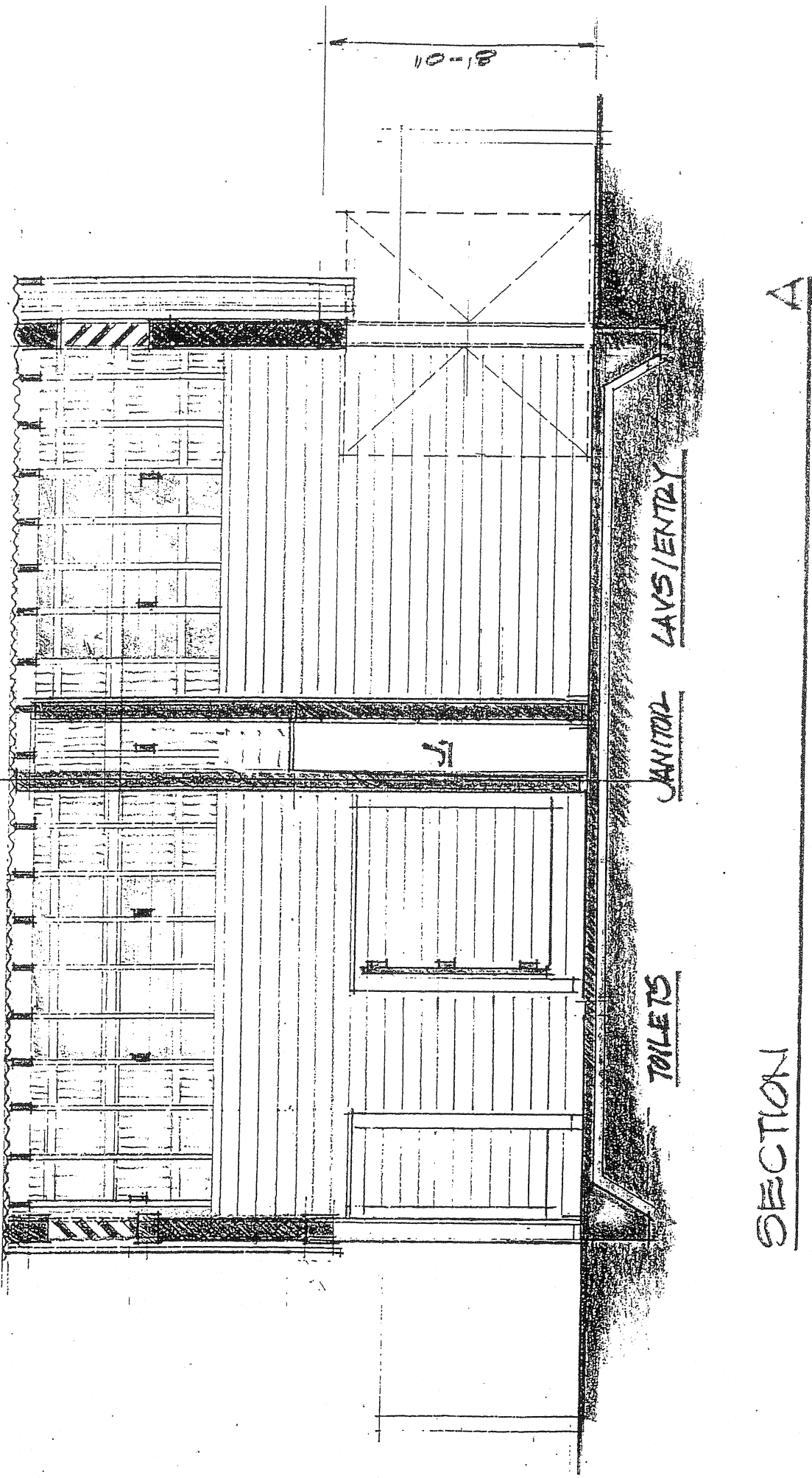




SHOWER ELEVATION

SECTION CHANGE

10-18



SECTION

A

Summary of Utility Requirements and Options

Water

The Town of Richmond is currently planning to replace the existing water line, which crosses Swan Island. This pipeline connects the town to a well in Dresden, across the Kennebec River.

The water supply to the campground facility has not been designed yet.

Septic

A donated septic system is in place, which has never been used. It is located several hundred yards downhill from the proposed toilet facility. It was sized for 100 person/uses per day. (We need to verify this.)

Electricity

The main power line is under the gravel road, which runs through the campground. Power supply to the Facility would require a transformer.

Existing power was provided by donation ten years ago. Future alterations and additions may possibly be donated.

Visitor usage:

Spring and fall school daytrips – 70-80 people maximum.

Campers vary from 2-14 persons to a maximum of a group of 60 for a weekend.

Option 1

Connect to the existing septic system. This is a 1,000- to 1,500-gallon capacity system.

Option 2

Connect to the existing CMP power line for lighting and heating water. Energy-saver bulbs should be used.

Option 3

Photovoltaic system for the code required illuminance. Building design to provide adequate daylighting. Only nighttime lighting would be needed. This option would only be considered if this were a demonstration for visitors. The cost of a PV system would be more expensive than the installation of the transformer.

Option 4

An additional PV system for pumping water. This option would be expensive.

- A. 4 low flush toilets and 1 urinal
4 lavatories, 1 janitor's sink, 1 "kitchen sink", 1 drinking fountain,
1 hose bibb
4 showers

- B. 4 composting toilet units (no water required)
4 lavatories, 1 janitor's sink, 1 "kitchen sink", 1 drinking fountain,
1 hose bibb
2 showers

Cranking or turning the compost would be required, probably weekly.

Compost could be used or deposited on the island.

Environmental advantages:

1. No use of potable water.
2. No pollution to the aquifer.

Option 5

Solar system for heating and storing domestic water. Initial cost of this system would be high; no cost estimate available.

Notes

1. Solar orientation needs to be considered.
2. Composting toilet bins need to be accessed for maintenance.
Floor plan layout may change to accommodate.

Locating the building on a sloping site would avoid a ramp to access the facility.

3. Consider wind power for pumping water. This is also an expensive initial investment. This should only be considered if wanted for a demonstration.
4. Location of water main needed. Design of water system to pump water from the main pipeline to the toilet facility has not been done.
5. Cost estimates for solar options could be prepared by a solar design company if there is a commitment to pursue these options.

SUMMARY OF WORK

1.00 Scope of Work

New public toilet facility for Swan Island.

1.01 Typical exterior wall construction

- A. 1/2" x 6" B grade red cedar clapboards, 4 inches to weather, back primed and stained/painted.
- B. Air infiltration barrier, sill sealer, and flashings.
- C. 1/2" exterior plywood sheathing or 1 x 6 diagonal board sheathing.
- D. 1/2" anchor bolts @ 4 ft. o.c.
- E. 2 x 4 wood studs at 16" o.c., 2 x 6 where required for plumbing.
- F. 2 x 4 pressure-treated sill plate.
- G. 1 x 6 v-groove t & g, back primed and exterior polyurethaned.

1.02 Typical interior wall construction

- A. 2 x 4 wood studs at 16" o.c., 2 x 6 at plumbing walls.
- B. 1 x 6 v-groove t & g boards, back primed and exterior polyurethaned.
- C. 3 1/2" acoustical insulation.
- D. 2 x 4 pressure-treated sill plate.
- E. Toilet partitions:
 - 1. 2 layers 3/4" A/C plywood, exterior polyurethaned.
 - 2. 4 x 4 posts on base anchor.
 - 3. Door of similar construction
- F. Shower walls - 1/2 marine grade plywood with battens on exposed oints, exterior polyurethaned.

1.03 Typical foundation walls and floors

- A. 6" min. thick concrete slab with 2 ft. deep frost walls.
- B. 2" rigid insulation; styrofoam vs. urethane (recycled).
- C. Seal floor, taper to floor drains.
- D. Reinforced vapor barrier.
- E. 12" crushed stone sub—base on gravel fill.

1.04 Typical roof construction

- A 2 x 8 wood roof joists 16" o.c.
1/2" plywood sheathing.
Asphalt shingles and felt paper

- B. Alternate roof –metal roofing
Fiberglass panels for daylighting
Furring strips per roof manufacturers spec

- C. Gutters and downspouts - aluminum vs. vinyl.

COST ESTIMATE

Shallow Foundation System		\$12,000
Plumbing		10,500
Electrical		1,000
Metal Roof (includes one fiberglass skylight per side)		8,500
Siding		
Pre-stained cedar, 290 s.f. @ \$1.40/l.f.	Material:	2,900
Pre-stained trim boards	Material:	1,500
	Labor:	5,000
Gable Louvers Pre-stained cedar.	Material and Labor:	1,000
Rain Gutter System	Material:	160
Framing Roof & Walls	Material:	6,000
	Labor:	9,000
Custom Door and Partitions	Material and Labor:	4,000
Paint Outside and Inside		<u>6,000</u>
TOTAL		\$67,560



Toilet facility has similar proportions to this existing historic outbuilding.



Abandoned outhouse

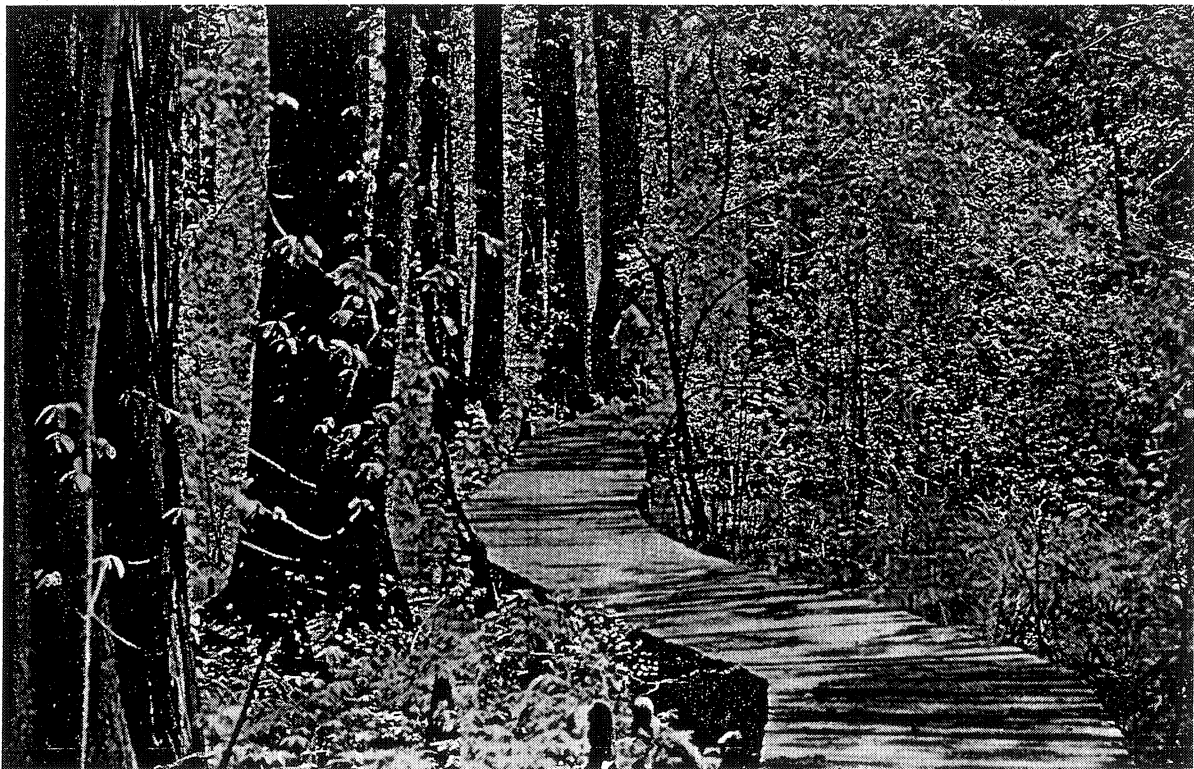


EXCERPTS FROM:

**Signs, Trails, and Wayside Exhibits
Connecting People and Places**

**By Suzanne Trapp
Michael Gross and Ron Zimmerman**

**Tanner Pilley and James Heintzman, Consulting Editors
Line Art by Sylvia Myhre**



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STEVENS POINT, WI 54481**

Principles for Success

Scotts Bluff National Monument illustrates several principles for creating effective signs, trail panels, and wayside exhibits.

Signs, trail panels, and wayside exhibits are part of a larger whole.

They are methods for experiencing a site and learning its stories. They seldom provide detailed or in-depth information, but they can provoke visitors to want more. Slide programs, interpreter programs, films, and books provide detail more appropriately to interested visitors.

The site manager must choose media that best meet the needs of visitors at that site. An interpretive plan for the site is needed.

Interpretation should always be based on a unified theme.

What is important about your site? Why has it been set aside? Though you may have many possibilities, choose a theme that reveals the meaning of the site to visitors. Each sign or wayside exhibit should fit into that theme.

Learning is best when it is closely associated with the experience.

Signs, trail panels, and wayside exhibits provide information about real things. Their purpose is to interpret concrete objects and experiences on the site.

Signs, trail panels, and wayside exhibits should be compatible with the site.

They should enhance the on-site experience, not detract from it. Selection of materials, proper placement, and design requires sensitivity and forethought. The worst trail panel or wayside is an irrelevant, undesirable one.

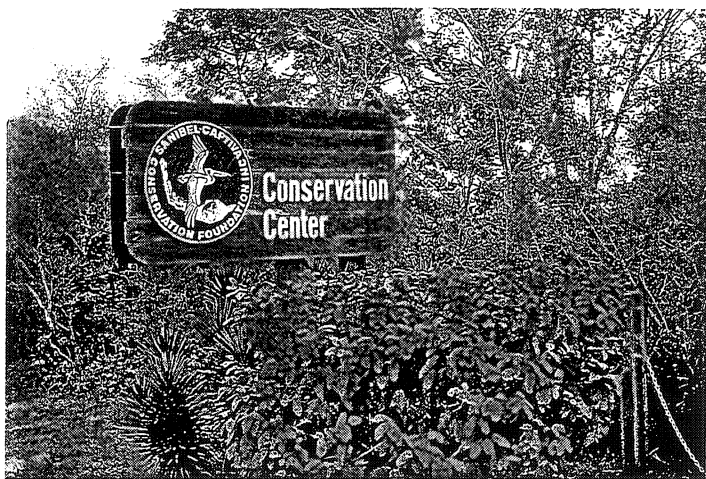
The best interpretation is short and concise.

The urge to add more subject matter may be strong, but must be resisted. Visitors want to experience the site. They will ignore long, complex messages. A good graphic with a short headline may be all that is needed.

As site managers and interpreters, we are custodians of the people's cultural and natural heritage. We are connecting them to their legacy. Signs, trail panels, and wayside exhibits can help make those connections.

Sign Panels

Sign panels can be created from many materials including metal, fiberglass, wood, concrete, and plastic. These materials can be made attractive and vibrant by variations of color, illumination, texture, and shape. Durability and aesthetics are the two main criteria for panel selection.



Sanibel Island, Florida

Michael Gross

Wood

Best Uses:

Where rustic, natural appearance is important.

Advantages:

Natural - blends with landscape.
 Three-dimensional, can be shaped and carved.
 Each sign is different.
 Ages gracefully.
 Convey endurance, permanence as they weather.
 Absorb gunshot.
 More easily constructed and repaired in-house.

Disadvantages:

More construction effort.
 Copies require equal effort.
 Easily carved by vandals.
 Detailed graphics more difficult and less durable.

Fiberglass Embedment

Best Uses:

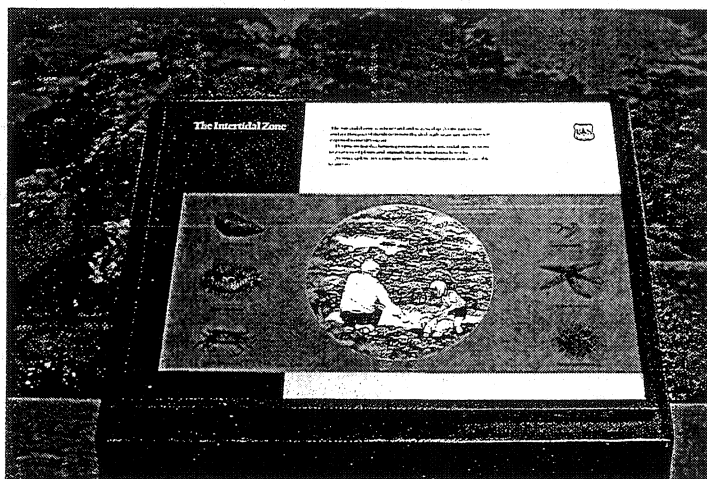
Where detailed graphics are needed, such as wayside exhibits and trail interpretation.
 Are very cost effective for directional or rules signs where many duplicates are needed.

Advantages:

Durable. Resistant to weather and vandalism.
 Copies easily made.
 Graphic detail.
 Wide range of colors.
 Can embed photographs directly (no half toning or color separation).

Disadvantages:

Doesn't accept photos well.
 Color subject to fading and yellowing.
 Requires framing and backing.
 Easily scratched, but can be buffed out with car wax.



Cape Perpetua Scenic Area, Oregon

Dahn Design

Metal

Best Uses:

- Memorials - cast metal.
- Road signs - painted metal.
- Small trail markers - etched or anodized.

Options:

- Painted surface (often silk-screened).
- Cast aluminum or iron.
- Etched or engraved.
- Anodized.

Advantages:

- Does not require framing or backing.
- Durability - resistant to weather and most vandalism.

Disadvantages:

- Some metals subject to rusting.
- Thin metals subject to gunshot.
- Usually expensive.
- Costs of duplicates usually remains high.
- Some choices "glare" in bright sun.



Fort Hartsuff, Nebraska

Michael Gross

Cast metal at a memorial to a Nebraska fort.

Metal-Micro Imaging

Best Uses:

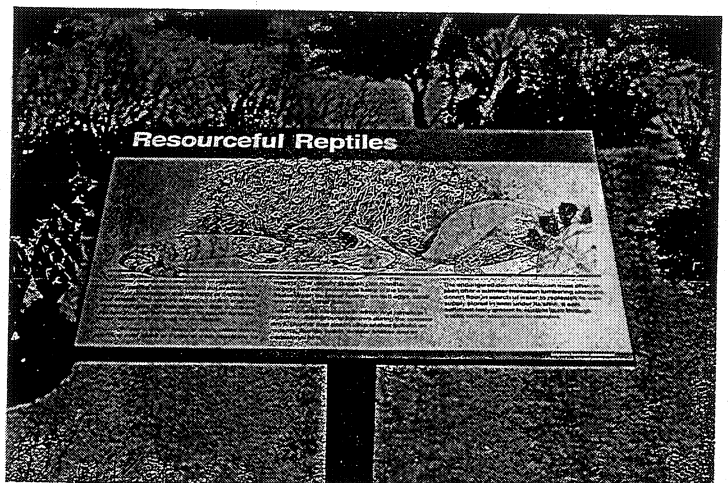
- Trail markers.
- Wayside exhibits.

Advantages:

- Requires no frames.
- Neutral dark bronze background.
- Durable.
- Fade-proof.
- Vandal resistant.
- Drawings or photos can be applied.

Disadvantages:

- Multiple copies don't significantly reduce cost.
- Limited color options.
- Does scratch (although easily covered with an eyebrow pencil).



Saguaro National Monument, Arizona

Tanner Pilley

Porcelain Enamel

Best Uses:

Where colorful and detailed graphics are needed as in zoos and other high use areas.

Advantages:

Ability to reproduce high resolution photographs and fine line art.

Vivid colors that do not fade.

Little maintenance required.

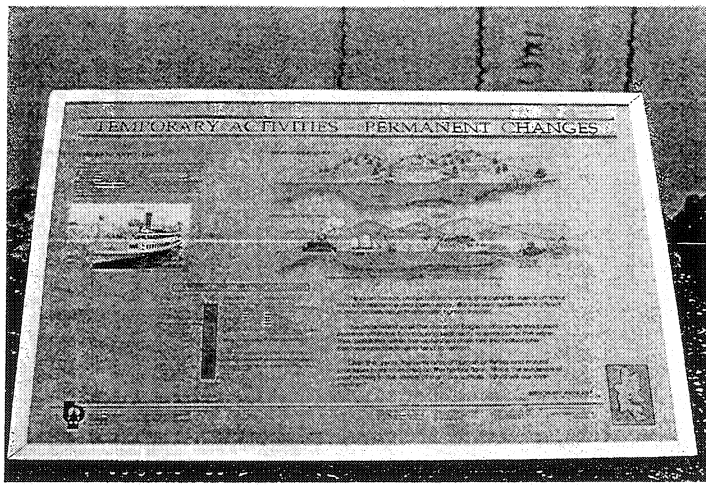
Equal or greater vandal resistance than other mediums.

Impervious to all natural elements.

Disadvantages:

Slightly more expensive than other mediums.

Requires framing or backing.

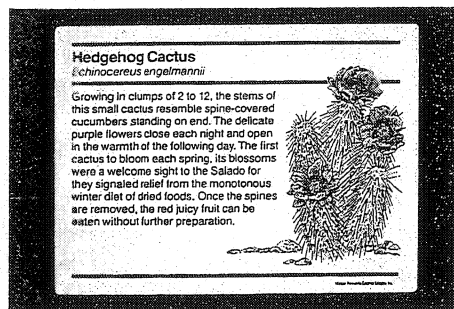


Bainbridge Island, Washington

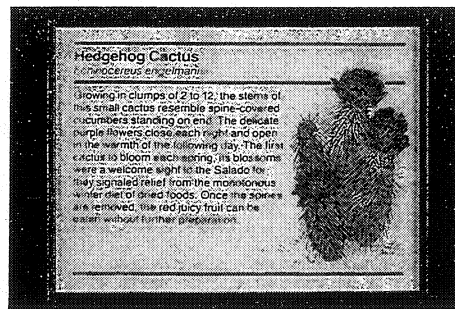
The Porcelain Company

Comparing Three Panel Materials

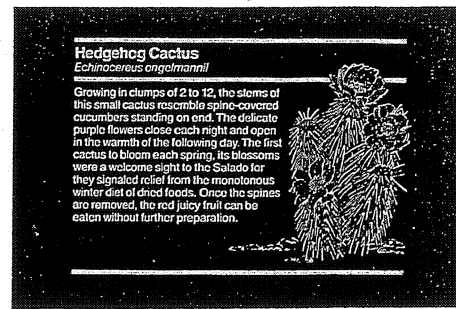
Porcelain Enamel



Fiberglass Embedment



Metal Micro-imaged



The same sign has been made in three different materials. There are slight cost differences in the three mediums that will vary depending on graphics and design. The interpreter is encouraged to consider factors besides cost when selecting interpretive materials.

Courtesy of Pilley Associates

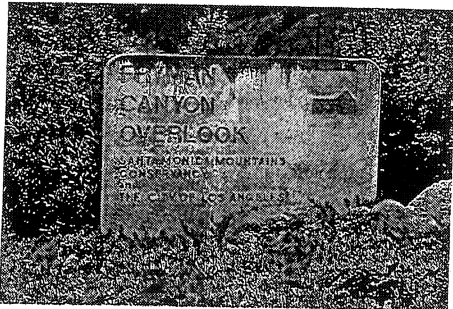
Other Panel Materials



Miami Metro Zoo

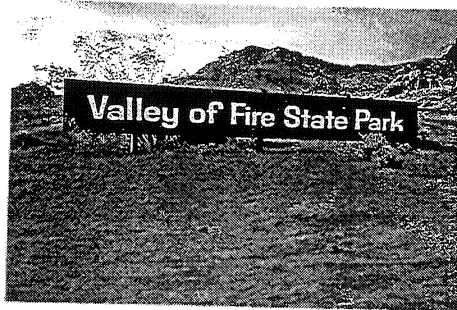
Suzanne Trapp

Sign makers can use a variety of materials. The Miami Metro Zoo sign combines ceramic cast relief figures mounted on wood and plastic inscription panels. The signs in Fryman Canyon Overlook and Valley of Fire State Park are made of concrete. The Rocky Mountain National Park entrance sign is made of cast fiberglass.



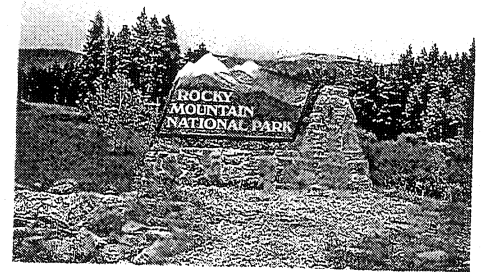
Los Angeles, California

Michael Gross



Nevada

Ron Zimmerman



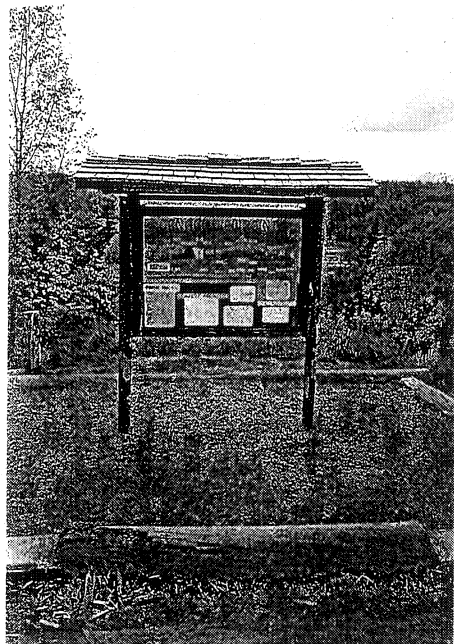
Colorado

Michael Gross

Panel Tips

- Inexpensive materials in large rectangles, such as a 4' x 8' sheet of plywood, should be avoided. This gives a billboard appearance.
- Avoid square panels. A 5 to 3 or 5 to 4 ratio is more visually appealing.
- Use panel materials that are appropriate to your site. Do not use highly reflective materials that create glare. Choose materials that are insect, salt, and water resistant.
- Select panel materials based on:
 - long term maintenance requirements/vandalism risk.
 - budget limitations or cost/benefit.
 - color and graphic needs.

A roof over a bulletin board or wayside exhibit draws the visitor into the shelter of the overhang. It creates a defined space where people feel protected.



Bulletin board at Denali Park, Alaska



Ron Zimmerman

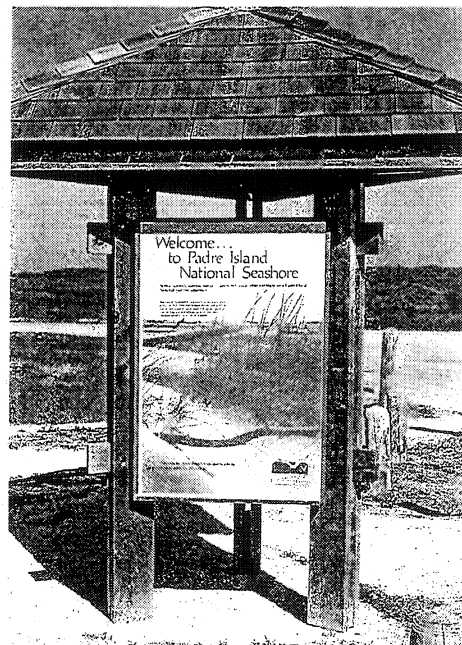
The shelter invites you to leave your car and study the information provided. It also protects the materials from the elements.



Moody Air Force Base, Georgia

Wilderness Graphics

A roof over a trailhead and orientation sign is an invitation to stop before starting on the trail.



Padre Island National Seashore, TX Michael Gross

How to Plan Signs and Wayside Exhibits

Develop an intimate understanding of the site. Special feelings you have will emerge in your interpretation.

Immerse yourself in the site. Are there special sensations or animal activities at a particular time of day or season? Can signs make visitors aware of them?

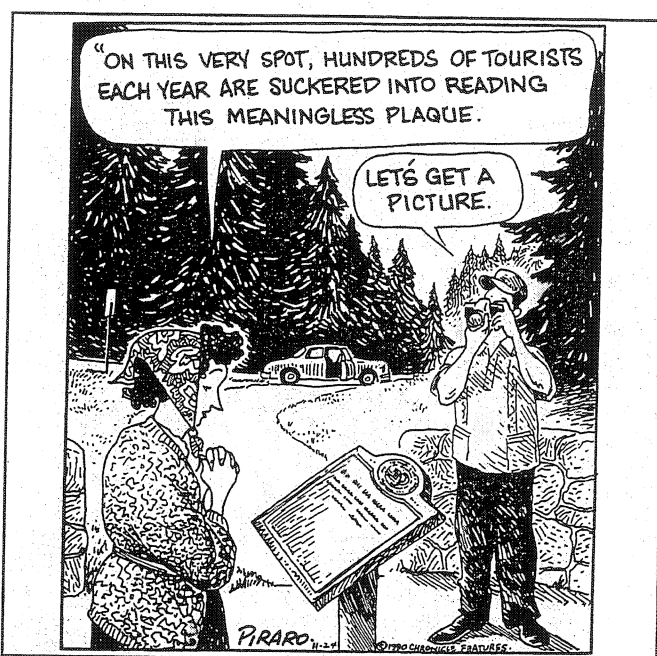
Investigate the facts. What stories are told about this place? Read. Talk to people who know.

Understand the visitor. Use surveys. Why do they come to this place? Take the perspective of as many of your visitors as possible. How does this place look from the level of a child or a person in a wheelchair?

Listen to visitors. Learn their questions, feelings, impressions. What do they want to know?

Define your purpose. Write your specific objectives in simple sentences. Your objectives may be to convey a fact, a feeling, or stimulate an action.

Create a sign that achieves your objectives in the most simple and elegant way.



The "Bizarro" cartoon by Dan Piraro is reprinted by permission of Chronicle Features, San Francisco, CA.

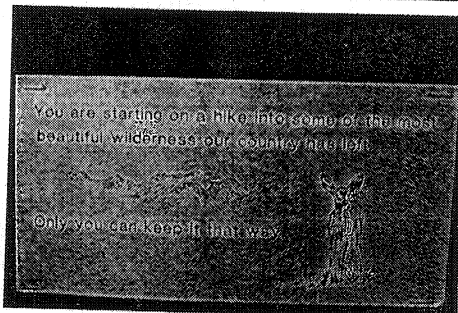
Communicating Rules With Signs

To the recreation-area manager, rules are purposeful, valuable, and necessary for the proper maintenance of the environment and for the protection of people. Recreationists, however, do not always recognize the worth of rules, because they do not agree with them, do not understand them, or simply do not know about them. Better methods are needed to tell what the rules are. (Ross and Mueller, *Communicating Rules in Recreation Areas*)

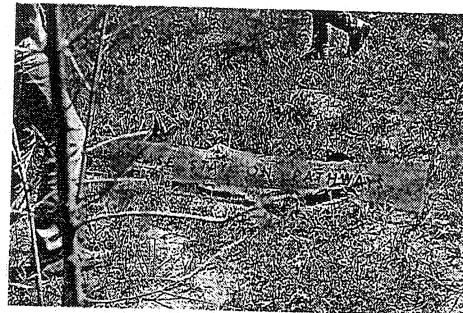
Recommendations for Communicating Rules

- Place rules where visitors are sure to see them. Entrances, bulletin boards, and especially restrooms, give visitors time to read them.
- Be provocative. Even when placed properly, signs will not be read unless they command attention through colors, graphics, and vivid, concise wording.
- State rules in a positive tone. A hostile or dogmatic tone will create resentment and noncompliance. Friendly graphics can support a positive tone.
- Give the reader reasons for the rules.

Information boards at trailheads are commonly used to communicate rules. They must command attention and appeal for compliance.



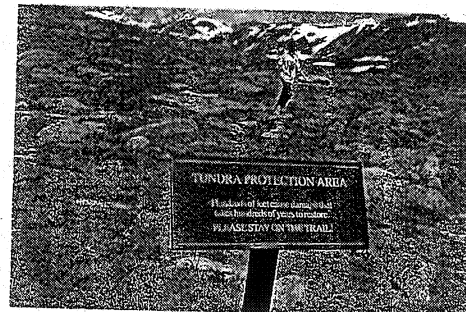
Olympic National Park, Washington



Uinta National Forest, Utah



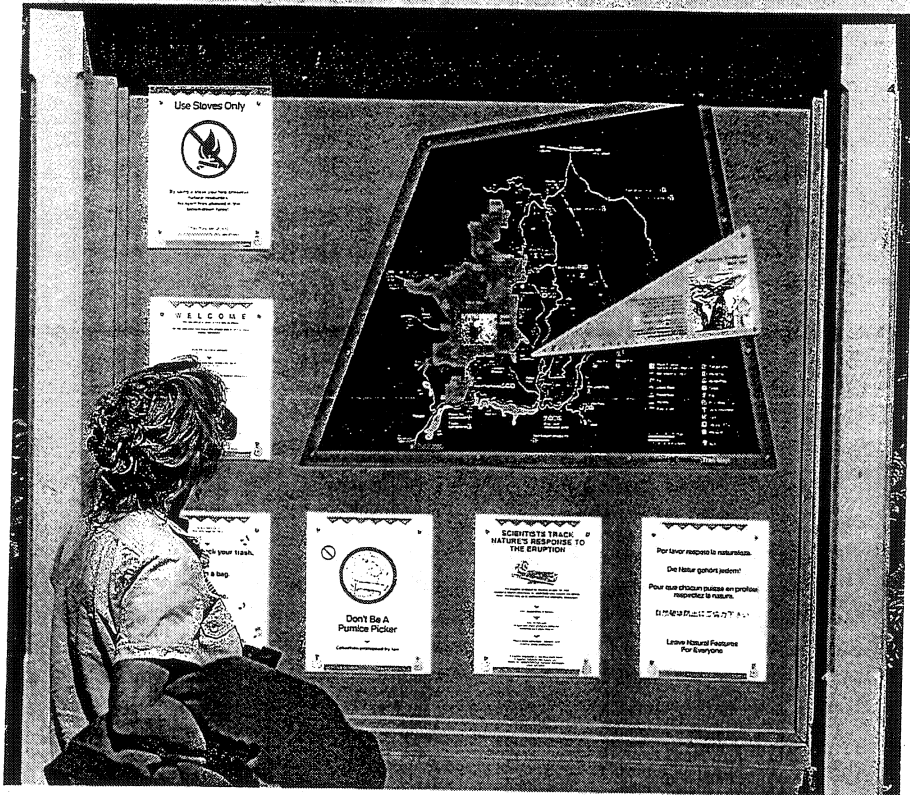
Clearwater National Forest, Idaho



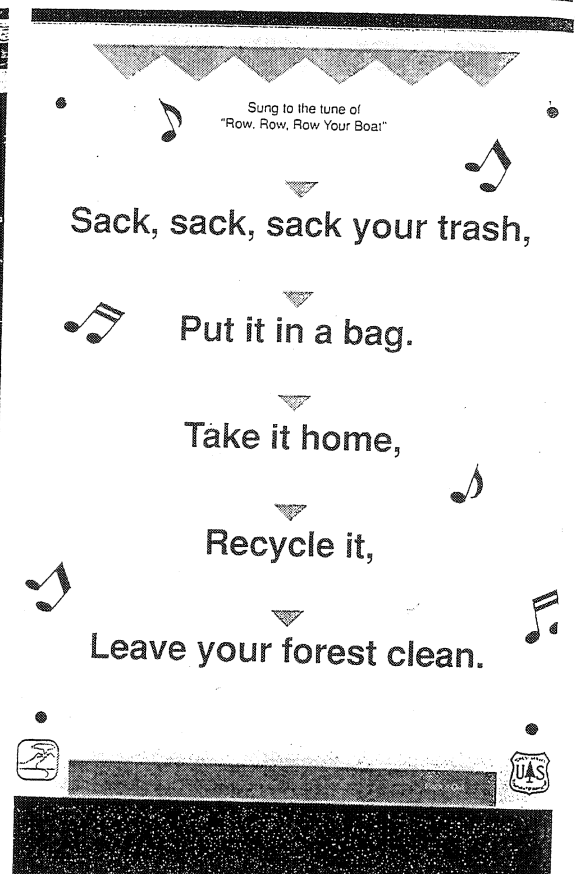
Rocky Mountain National Park, Colorado
Proper placement of signs can reduce destructive behavior.

Photos by Michael Gross

Information Boards



Mount Saint Helens National Volcanic Monument, Washington



Jim Gale, USDA Forest Service

Bulletin boards are among the most commonly used and neglected forms of visitor communication. The Mount Saint Helens interpreters approached bulletin boards from a new perspective. They renamed them "information boards."

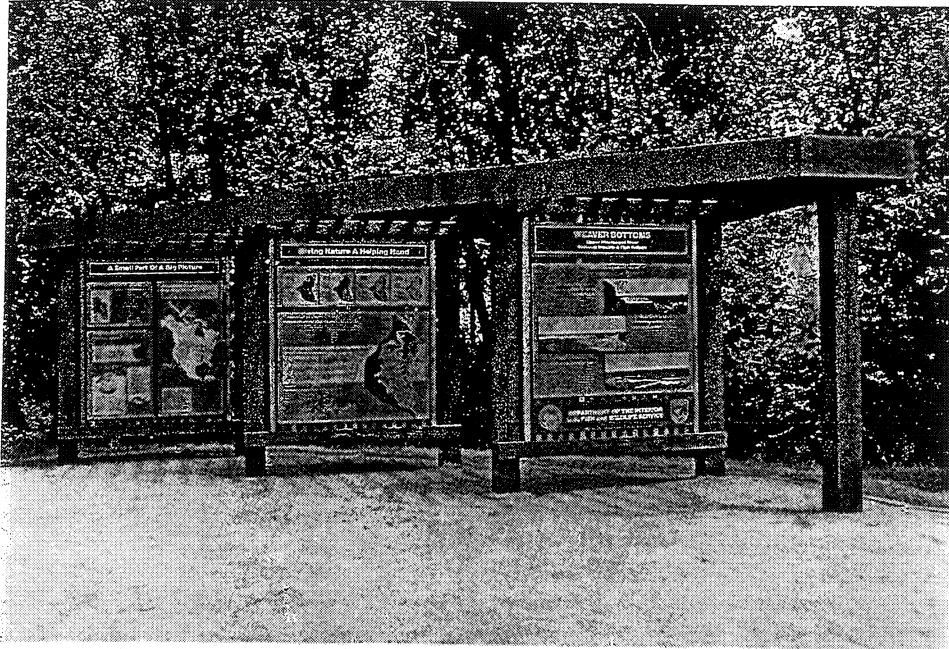
Tips for Information Boards

- Organize the board for quick scanning. Use headings, subtitles and symbols. Avoid cluttering the panel.
- Colors and shapes should be interesting and pleasing.
- Use vivid, active language in titles.
- Information should be site-specific and of immediate use to the visitor.
- Information boards should be kept current. Vigorously prune outdated material and replace with current and seasonal events.

This three panel kiosk, designed by the Fish & Wildlife Service National Sign Center, is silkscreened onto 3/4" high density plywood. The panels withstand submersion during

spring flooding. Panels are mounted individually which allows for easy removal for painting or repairing. They are mounted with "theft-proof" vandal-resistant screws. This com-

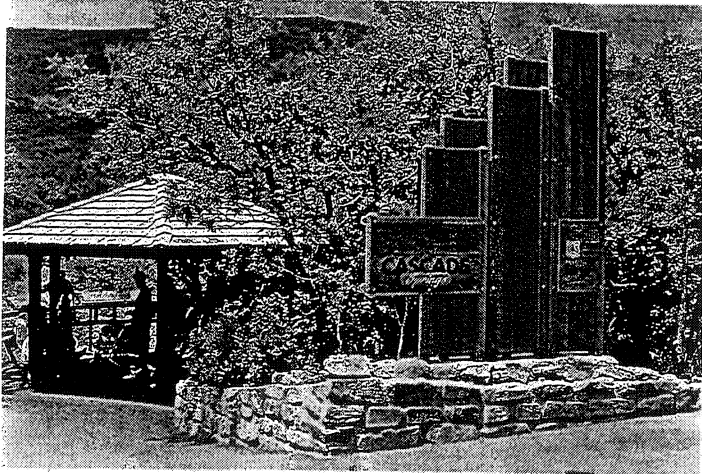
plex message is understandable because each idea is isolated on its own panel. Seasonal exhibits can be placed on removable panels.



Upper Mississippi River National Wildlife and Fish Refuge



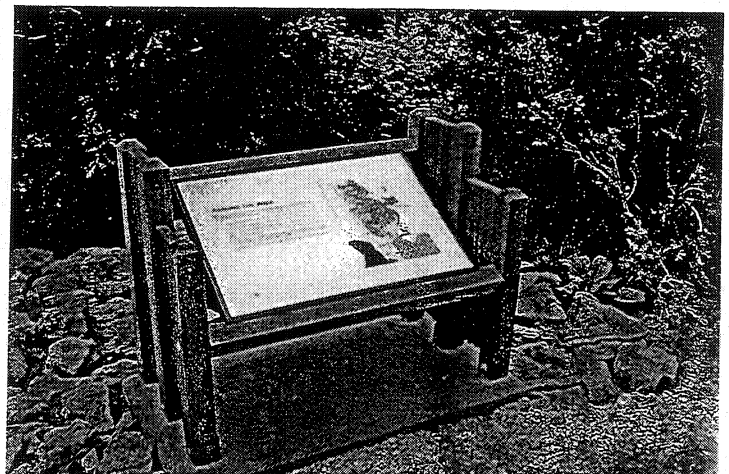
Henry A. Schneider



Unita National Forest, Utah

This trail uses metal and fiberglass signs mounted on wood supports and wood panel backing. The unity of design, from entrance sign to trail panels, shows sensitivity to the landscape.

Photos courtesy of Jim Peters, Interpretive Graphics, Signs and Systems



Accessibility Guidelines for Wayside Exhibits

These National Park Service guidelines were developed by Harpers Ferry Center, Division of Wayside Exhibits. Wayside exhibits should be accessible to all visitors.

Guidelines Affecting Mobility-Impaired Visitors

- Wayside exhibits will be installed at accessible locations wherever possible.
- Wayside exhibit panels will be installed at heights and angles favorable for viewing by most visitors, including those in wheelchairs. For standard NPS low-profile units, the recommended height is 30-34" from the bottom of the exhibit panel to finished grade; for vertical exhibits and bulletin boards the height is 24-28", depending on panel size.
- Trailhead exhibits will include an accessibility advisory.
- Wayside exhibits will have level, hard-surfaced exhibit pads.
- Exhibit sites will offer clean, unrestricted views of park features described in exhibits.

Guidelines Affecting Visually-Impaired visitors

- Exhibit type will be as legible and readable as possible.
- Panel colors will be selected to reduce eye strain and glare, and to provide excellent readability under field conditions. White should not be used for a background color.
- Selected wayside exhibits may incorporate audiostations or tactile elements such as models, texture blocks, and relief maps.
- For all major features interpreted by graphic wayside exhibits, the park should offer non-visual interpretation covering the same subject matter. Examples include cassette tape tours, radio messages, and ranger talks.
- Use the table on page 11 for letter sizes for the visually impaired.

Guidelines Affecting Hearing-Impaired Visitors

- Wayside exhibit panels will communicate visually, and will rely heavily on graphics to interpret park resources.
- Essential information included in audiostation messages will be duplicated in written form, either as part of the exhibit text, or in a publication.

Guidelines Affecting Learning-Impaired Visitors

- Topics for wayside exhibits will be specific and of general interest. Unnecessary complexity will be avoided.
- Wherever possible, easy-to-understand graphics will be used to convey ideas, rather than text alone.
- Unfamiliar expressions, technical terms, and jargon will be avoided. Pronunciation aids and definitions will be provided where needed.
- Text will be concise and free of long paragraphs and wordy language.

