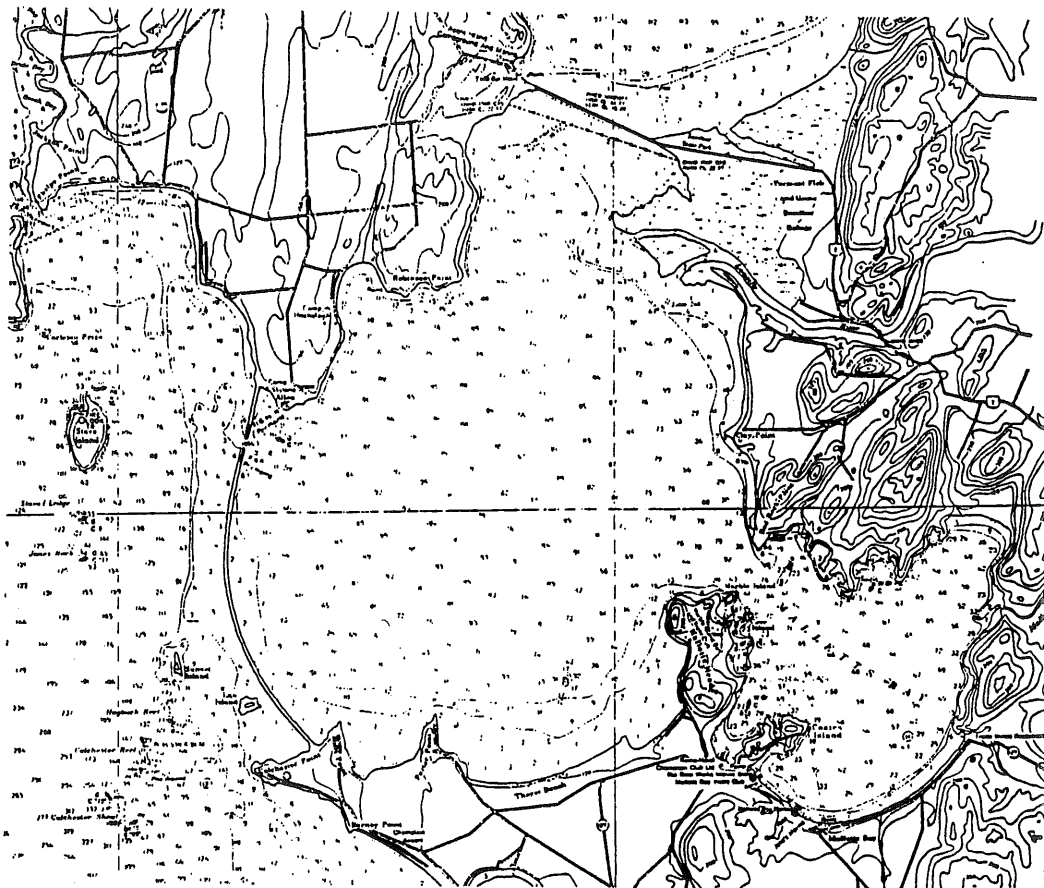


Malletts Bay Recreation Resource Management Plan

Executive Summary



Prepared by
T.J. Boyle and Associates

for
Lake Champlain Management Conference

October 1995

**Lake Champlain
Basin Program**

This demonstration report is the sixth in a series of reports prepared under the Lake Champlain Basin Program. Those in print are listed below.

Lake Champlain Basin Program Demonstration Reports

1. *Case Study of the Town of Champlain.* Yellow Wood Associates. October 1993.
2. (A) *Demonstration of Local Economic/Other Community Impacts.* Community Case Studies for Economic Plan Elements. The City of Vergennes, Vermont. Economic and Financial Consulting Associates, Inc. October 1993.

(B) *Demonstration of Local Economic/Other Community Impacts.* Community Case Studies for Economic Plan Elements. Appendix. The City of Vergennes, Vermont. Economic and Financial Consulting Associates, Inc. October 1993.
3. *The Archeology on the Farm Project.* Improving Cultural Resource Protection on Agricultural Lands: A Vermont Example. Jack Rossen. May 1994.
4. (A) *The 1992 Fort Ticonderoga-Mount Independence Submerged Cultural Resource Survey. Executive Summary.* Arthur Cohn. May 1995.

(B) *The 1992 Fort Ticonderoga-Mount Independence Submerged Cultural Resource Survey.* Arthur Cohn. May 1995.
5. *Implementation, Demonstration, and Evaluation of BMPs for Water Quality: Application Methods ("Manure Injections") for Improved Management of Manure Nutrients.* Bill Jokela, Sid Bosworth and Don Meals. September 1995.
6. (A) *Malletts Bay Recreation Resource Management Plan.* T.J. Boyle and Associates, Resource Systems Group, Associates in Rural Development and Engineering Ventures. October 1995.

(B) *Malletts Bay Recreation Resource Management Plan. Executive Summary.* T.J. Boyle and Associates. October 1995.

(C) *Review and Relevant Studies. Malletts Bay Recreation Resource Management Plan.* T.J. Boyle and Associates. October 1995.

(D) *Natural and Built Resources Inventory: Data Documentation. Malletts Bay Recreation Resource Management Plan.* Associates in Rural Development. October 1995.

(E) *Survey Implementation and Analysis. Malletts Bay Recreation Resource Management Plan.* Resource Systems Group. October 1995.

(F) *Institutional Review and Analysis. Malletts Bay Recreation Resource Management Plan.* Engineering Ventures. October 1995.

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Executive Summary

Project Objective

The objective of the Malletts Bay Recreation Management Plan project is to determine how the public waters of Malletts Bay can be managed in the best interest of the citizens of the State. The resulting recreation plan will be utilized by the Town of Colchester to manage and regulate recreation use of Malletts Bay.

Project Process

The Malletts Bay Recreation Management Plan is to be developed as two phases. This report reflects Phase One which includes three steps: Inventory and Assessment, Analysis and Recommendations, and Policy Formation. Phase II will involve two steps: Decision Making Model Development and Implementation.

Phase One: Inventory, Assessment and Policy Formation

1. **Inventory and Assessment** involved several information gathering studies of Malletts Bay including:
 - **Natural and Built Resource Inventory:** Mapping of resources on Geographic Information System (GIS) from existing databases.
 - **Institutional Review Analysis:** Documenting the federal, state and local laws, policies, rules and authority for Malletts Bay.
 - **Review of Relevant Studies:** Reviewing all relevant federal, state and town plans, studies, reports, and programs to determine the impacts of findings, recommendations and actions on Malletts Bay.
 - **User Survey, Use Counts, Public Attitude Survey, and Key Informant Interviews:** Conducting intensive user survey on six days through the Fish and Wildlife Fishing Access, at Marinas, and from shoreline residents. A total of 552 surveys were completed. Use counts were conducted through fly-overs in morning and afternoon of each survey day. A general attitude survey was conducted by telephone of 83 Chittenden County residents. Eighteen key persons in Malletts Bay representing various recreation groups, local businesses, and grassroots advocacy groups, were interviewed.
 - **Public Informational Meetings:** A series of ten Public/Steering Committee Meetings and Workshops were conducted throughout the planning process.
2. **Analysis and Recommendation** involved developing a **Recreational Use Analysis** summarizing the results of the Inventory and Assessment and forecasting the recreational and facilities needs and potentials.
3. **Policy Formation** involved making recommendations to address the issues and opportunities identified in the Inventory and Recreational Use Analysis, and developing **Management Objectives and Strategies** and an **Economic Analysis** evaluating their economic impacts.

Phase Two: Decision Making and Implementation Techniques

Phase Two is dependent upon future approval and funding and will include two major steps:

1. **Decision Making Model Development:** A computer model to allow analyzing how a change in one variable or strategy could impact others.
2. **Implementation:** The development of a Harbor Improvement Plan and recommended revisions to Town plans, regulations, and programs and Rules adopted by the Water Resources Board.

Framework for the Management Plan

The project development has been closely guided by a **Steering Committee** composed of eight community members and the Town Planner representing a diversity of recreational, commercial, and shoreline resident interests.

The process of developing a recreation management plan for Malletts Plan is based in part upon the **Visitor Impact Management** planning framework through which we explore recreational carrying capacity, not as a fixed number, but as a correlation of social perceptions and physical constraints, to determine unacceptable impacts.

Study Findings

Typical Mix of Activities and Boats in Use on Malletts Bay

Touring, sailing and fishing make up the majority of boating activity on Malletts Bay. However the Bay accommodates a diversity of other recreation types including water skiing, nature enjoyment, swimming, paddling, personal watercrafting, scuba-diving, windsurfing, and rowing. Motorboats are the leading category of boat type used in the boating activities, accounting for two-thirds of the total, with sailboats making up nearly a quarter. Canoes, kayaks, windsurfers, personal watercraft, and others make up the remaining 10%. Over half of all boats are 21 feet in length or less, while 39% are 22'-32' in length, leaving 8% in the greater than 33' size class.

Typical Number of Boats in Use on Malletts Bay

The data indicates that an average peak hour usage on weekends is two to three times greater than that of weekdays. The data also shows that the busiest boating hour of any given week is likely to be 2:30 p.m. to 3:30 p.m. on a Saturday. On a typical Saturday on Malletts Bay, we would anticipate a maximum number of boats active during any one hour to be around 170, and a cumulative number of 400 boats for the day.

Existing Recreation Use Areas and Mixes

All areas of Malletts Bay are utilized at some point of the day on busy summer weekends. The central part of the Outer Bay is the area where 24% of respondents spent the most time. The central part of the Inner Bay was reported by 16% of respondents as the area where they spent the most time. Nearly 14% of respondents spent most of their time outside of Malletts Bay in the Broad Lake. The north shore of the Inner Bay is popular for a diversity of uses identified by 12% of respondents as the area where most time was spent. In the Outer Bay, Thayers Beach is a common destination for motorboats, both from within Malletts Bay and from the Broad Lake, who will anchor in the shallow waters, swim and picnic on their boats. Existing winter recreational use areas, include the southern shore of the Outer Bay, popular area for ice fishing, as are parts of the Inner Bay. Snowmobilers travel all over the bay mostly accessing from the southern shore and both the Inner and Outer Bays. Ice skating occurs when conditions are suitable, often in East Spaulding Bay.

Existing Access and Navigation Patterns

The number of boaters accessing the Bay is evenly split between the marinas, the Malletts Bay Fish and Wildlife Access, and from private shoreline property. East Spaulding Bay, which includes the Public Fish and Wildlife Access Area and two marinas, was recorded as the most frequent beginning location of trips, followed by the area east of Coates Island where the remaining marinas are located. Seventy-five percent of boat trips begin in the Inner Bay while over 55% of respondents reported areas of the Outer Bay or the Broad Lake as where they spent the most time. Major patterns of navigation are from the East Spaulding Bay and East of Coates Island areas through the Narrows and splitting into three primary direction, straight to the Cut to access the Broad Lake, sweeping south to Thayers Beach (mostly motorboats) and dispersing throughout the Outer Bay. Most winter recreationists gain access via private property in Niquette Bay and off Porters Point. The Fish and Wildlife Access Area does allow winter access, however the general pattern of ice ridges in the Narrows often renders travel to the Outer Bay dangerous or impossible.

Malletts Bay Study Area

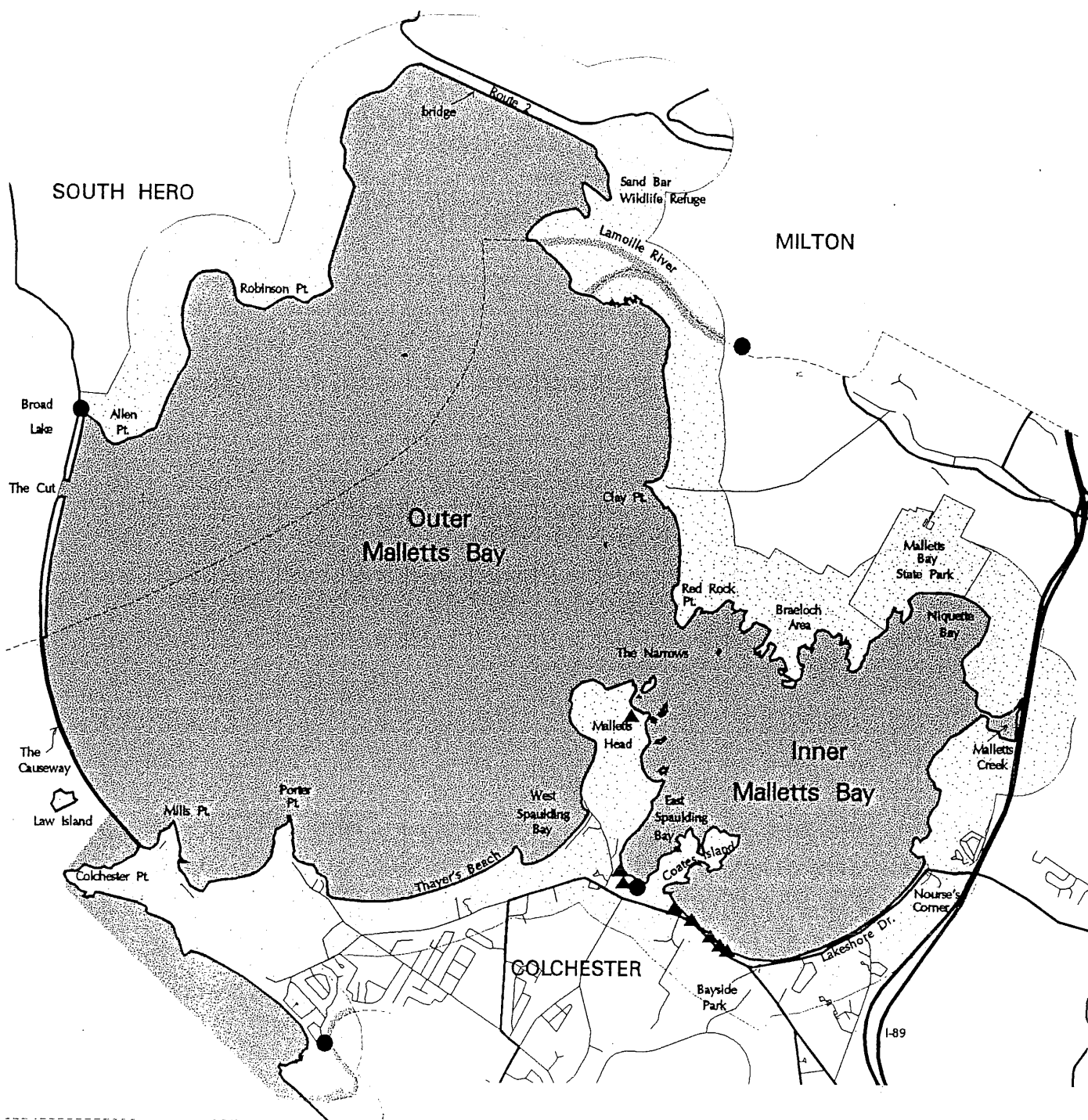
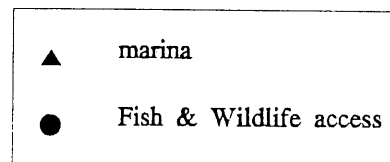


Figure 1

RD/GIS
Associates in Rural Development, Inc.



Issues, Objectives, and Management Strategies

Boating Conflicts and Safety Concerns

Issue Description: Approximately 20% of survey respondents reported having a conflict with other users of Malletts Bay. The most prevalent conflict reported was between motorboaters in regard to boating courtesy and obeying the "rules of the road". Problems with personal watercraft were the second most reported conflict expressed by all types of boating groups and shoreline residents. The greatest number of conflicts (34%) were reported to occur in the Narrows between the Inner and Outer Bay while the central area of Inner Bay accounted for 17%.

Management Goal: Minimize conflicts among recreationists and maintain the highest degree of safety among bay users.

Key Indicator Standard: Achieve a level of 15% or less of survey respondents reporting a conflict or problem with other users of Malletts Bay.

Monitoring: A standardized user survey and use count should be conducted every year to monitor boating conflicts.

Management Objectives

1. Develop public education on boating safety and courtesy.
2. Provide management strategies that specifically address high conflict locations.
3. Improve consistency and coordination of enforcement.
4. Separate conflicting uses by space and/or time when possible.
5. Increase regulation as a last resort.

Management Strategies

1. **Public Education: Boating Rules and Courtesy**
 - a. Post, distribute, and broadcast public education posters of simplified boating rules and courtesy.
 - b. Annual social events where participants of different recreation activities can meet each other.
 - c. **Public Education: Empowering Citizens to Speak Up**
 - 1) Create a Malletts Bay Watch Program.
 - 2) Encourage direct communications between citizens.
 - 3) Sponsor a letter-writing campaign to personal watercraft manufacturers to improve mufflers.
2. **Conflict Hot Spots: The Narrows and the Central Area of the Inner Bay**
 - a. **The Narrows:** Conduct a well publicized and monitored temporary installation of navigational buoys by the Coast Guard. If effective, consider permanent installation.
 - b. **The Central Area of the Inner Bay:** A combination of management strategies of dispersing access, public education and separating uses by time and space are proposed to address the conflict and safety concerns of the central area of the Inner Bay (discussed in other sections).
3. **Enforcement:** The Coast Guard has initiated a number of meetings with the enforcement entities on Lake Champlain to coordinate efforts.
4. **Separating Conflicting Uses by Space or Time**
 - a. The 200' distance requirement is an existing regulation.
 - b. An area for water skiing has already been designated.
 - c. Identify an area for personal watercraft "stunt riding."
 - d. Improved public education suggesting no anchoring, fishing or water skiing in the Cut during busy weekends.

Perceived Crowding

Issue Description: 62% of survey respondents perceived crowding. A recreation planning standard of 65% perceived crowding or greater is a capacity limit. According to the 65% benchmark, this response of 62% of respondents reporting perceived crowding signifies a problem. The actual locations with high levels of perceived crowding has direct relevancy for managing recreation use. The central area of the Inner Bay, East Spaulding Bay and the Narrows each were the areas most frequently identified as crowded. The issue of perceived crowding should not be viewed in isolation. The implications are that strategies for management should go beyond simply freezing in time the number of boats and activity, but should address the patterns of activity, seeking to disperse access and use to take better advantage of the Outer Bay and reduce the conflicts and perceived crowding in the Inner Bay and the Narrows.

Management Goal: Ensure high quality recreation experience, maintaining a diversity of uses limited only by safety considerations, perceived crowding, and minimized impacts on the natural resources.

Key Indicator Standards: Reduce and maintain a level of 50% or less survey respondents reporting perceived crowding.

Monitoring: A user survey should be conducted every year to monitor perceived crowding on the standard nine point scale.

Management Objectives

1. Public education on methods to reduce perceived crowding in Malletts Bay.
2. Specifically address locations where perceived crowding is the highest.

Management Strategies

1. **Public Education: Crowded Locations and Times**
 - a. Post public education posters alerting boaters of the busiest use times.
 - b. Post schedule of sailing races, fishing derby's, and other special events.
 - c. Provide information on less crowded areas.
2. Strategies to reduce boating conflicts (addressed in other sections).
3. Disperse boating access (addressed in other sections).
4. Limit the amount of surface area devoted to moorings (addressed in other sections).
5. Limit the number of boats and manage the pattern of use (addressed in other sections).
6. Explore the potential of dredging the Sand Bar (addressed in other sections).

Public Access

Issue Description: Inadequate public access to the waters of Malletts Bay including access for small motorized boats, non-motorized boats, pedestrian, swimming, shoreline fishing, and bay viewing is a concern expressed by many. The Malletts Bay Fish and Wildlife Access Area is inadequate to meet demand. The location of the Fish and Wildlife Access Area and all the marinas compounds boating conflicts and perceived crowding.

Public Access to the Water from the Shore is Limited to: The Malletts Bay Fish and Wildlife Access Area is the only free public boat launching site providing direct access to Malletts Bay limited to 184 parking spaces.

Public Access to the Shore from the Waters is Limited to: Marinas provide some dock space for transient tie-up, usually for a small fee. Facilities, once on shore, are very limited.

Public Access from Inland to the Shoreline for Viewing, Fishing, and Swimming is Limited to: Bayside Park experiences extensive use by the Town Recreation programs, but limited public use; the Causeway has limited accessibility, and no parking; Malletts Bay State Park is planned to include a Nature Center, trails, and picnicking but there is no schedule for implementation; Marble Island Resort has plans for a fishing pier as part of their expansion, likely delayed due to fire.

Winter Access to the Ice is Limited to: Malletts Bay Fish and Wildlife Access Area (however ice ridges through the Narrows generally prohibit travel to the Outer Bay from the Inner Bay). Ice fishing vehicles often access across private property by "handshake agreement" off Porter's Point in the Outer Bay and Niquette Bay in the Inner Bay.

If boating access were increased in the Inner Bay without the implementation of management strategies we would expect a compounding of existing conflicts and perceived crowding particularly for the high use areas of the Inner Bay including: East Spaulding Bay, the central area of the Inner Bay, and the Narrows. Additional parking spaces or the development of a new ramp at the Malletts Bay Fish and Wildlife Access Area would have the most direct impact on increasing peak use level and conflicts.

Management Goal: Provide adequate public access for a diversity of water and shoreline uses identifying locations with suitable lake and shoreline conditions and where facilities will improve use patterns, decrease boating conflicts, and perceived crowding.

Monitoring: Questions regarding user satisfaction with access and facilities locations should be included in the user surveys conducted every year.

Management Objectives

1. Reduce pressure on the Malletts Bay Fish and Wildlife Access Area.
2. Reduce the amount of boating conflicts and perceived crowding in the Narrows by providing additional public access to the water from the shore for small motorized boats in the Outer Bay and non-motorized boats on the north shore of the Inner Bay.
3. Enhance the existing and provide additional public access to the shore from the water particularly addressing the transient boaters seeking short-term anchorage or berths, and connections to the shoreline.
4. Enhance the existing and provide additional public access to the shore from inland, particularly for swimming, shoreline fishing, bay viewing, pedestrians, and bicyclists.

Management Strategies

1. **Public boat access to the water from the shore.**
 - a. Do not increase the capacity of the Malletts Bay Fish and Wildlife Access Area, but provide the following improvements: restrooms, washdown area for control of aquatic nuisances, parking clarification, and the attendants to take more control in directing traffic.
 - b. Install directional signage for all public access points in and around Malletts Bay.
 - c. Post maps of all area access points at each area public access.
 - d. Develop a new small motorized boat access in the Outer Bay. Potential locations: at the southern end of the Causeway OR at Thayers Beach (Rosetti property).
 - e. Develop a car top launch access for non-motorized boats along the northern shore of the Inner Bay. Possible locations: Malletts Bay State Park OR Nourses Corner.
 - f. Encourage public use of commercial lakeshore properties. However, do not substantially increase public boat access to the south shore of Inner Bay.
2. **Public access to the shore from the water.**
 - a. Develop public anchorage area, dock, public restrooms and pedestrian access between Coates Island and Bayside Park.
 - b. Develop a public dock at the proposed Malletts Bay State Park.

3. **Public access to the shore from inland:** swimming, shoreline fishing, and viewing.
 - a. **Thayers Beach** could provide for an extensive public beach for swimming and viewing.
 - b. **Bayside Park:** Remove the fee and entry booth and determine the potential of developing a small parking area on the bay side of the road, winter access drive, and another dock or pier for shoreline fishing.
 - c. Parking at the **southern end of the Causeway** would improve accessibility for shoreline fishing.
 - d. Develop a boardwalk, fishing pier and/or public viewing area **between Coates Island and Bayside Park.**
 - e. A fishing pier is included in the expansion plans for **Marble Island.**
 - f. Implement the plans for the **Malletts Bay State Park**, with the potential additions of a dock and car top launch access.
 - g. Encourage commercial lakeshore properties to provide public access to the shore through incentives.
4. Develop a **Harbor Improvement Plan** as part of Phase Two.

Cultural Heritage Resources and Tourism and Hospitality Facilities

Issue Description: Relative to the high use level in Malletts Bay there are surprisingly few services and facilities, walkways, restaurants, overnight lodging, and shops. Likewise, there are numerous cultural heritage resources that have not been inventoried and made available for public viewing. The Lakeshore Redevelopment Committee was recently formed to address the question of how to improve the Lakeshore Drive area to bring the quality of tourism facilities up to the level of the scenic setting of Malletts Bay. The vision of the Bay Project will include an improved and revitalized Lakeshore Drive in a village style and a possible "Baywalk" along a new retaining wall in the Bay. The many existing historic buildings and structures (many of the "camps") that exist along the Bay could be the focus of exciting tourism initiatives once the resources have been inventoried and interpreted.

Management Goal: Develop recreation and tourism opportunities improving the local economy and complementing the scenic setting of the bay.

Management Objectives: Support and coordinate with the efforts of the Lakeshore Redevelopment Committee. Promote the identification and designation of historic and cultural features for publicizing and protection.

Management Strategies

1. Concentrate much of the public shoreline facilities for bay viewing, strolling along the water's edge, and shoreline fishing in the area between Coates Island and Bayside Park to **coordinate with the Lakeshore Redevelopment.**
2. Encourage marina owners to upgrade their facilities.
3. Prepare a Malletts Bay brochure.
4. Schedule summer and winter bayside events and festivals.
5. Encourage Lake Champlain Bikeways Committee to establish a bicycle route through the Malletts Bay area.
6. Encourage Lake Champlain Paddlers Trail Committee to highlight Malletts Bay.
7. Identify key historic themes relating to Malletts Bay such as "Seasonal Tourism" and "Industry," then inventory, evaluate, and interpret.
8. Develop a detailed archaeological sensitivity map.
9. Increase awareness of local heritage through the public schools.
10. Work with Lake Champlain Basin Cultural Heritage Office to coordinate Heritage Tourism Initiatives.

Water Quality and Aquatic Nuisances

Issue Description: Water quality and the presence of aquatic nuisance species have a direct effect on the recreation experience. In the open-ended comments of the user survey, 51 of a total 149 comments included concerns regarding water quality and aquatic nuisance plants. Of greatest concern in Malletts Bay is the level of fecal coliform and E. coli bacteria. Trends in sampling results suggest that several locations within the Inner Bay regularly contain fecal coliform and E. coli bacteria at densities higher than those limits set by the Vermont State Health Department as safe for recreational waters. The presence of aquatic nuisance plants ("weeds and algae") was the second most frequently expressed concern in the open-ended comments of the survey. Eurasian watermilfoil is present in Malletts Bay, but not pervasive. At this point no zebra mussels have been reported in Malletts Bay; however, the Vermont Department of Environmental Conservation (DEC) expects there will be sightings by the summer of 1995. Sea lamprey management control methods are being effective.

Management Goal: Improve and maintain the water quality of Malletts Bay to ensure safe water contact recreation activities. Prevent the introduction/spread of non-native, nuisance aquatic species in Malletts Bay.

Key Indicator Standards: Maintain test results below the State Standards for fecal coliform and E. coli bacteria. Identify standards for aquatic nuisances after one year of monitoring.

Monitoring: Continue the annual Water Quality Monitoring Program. Establish an Aquatic Nuisance Monitoring Program.

Management Objectives

1. Identify and address water quality septic issues.
2. Develop public education on water quality septic issues.
3. Coordinate aquatic nuisance monitoring and control strategies in Malletts Bay.
4. Develop public education on aquatic nuisance species.

Management Strategies

1. Continue the Water Quality Monitoring Program.
2. Increase public education on the regulations against dumping of boat holding tanks.
3. Increase the Coast Guard "Courtesy Inspection" to include checking the closure of the "Y" valve on boat holding tanks.
4. Include public restrooms at the existing Malletts Bay Fish and Wildlife access.
5. Provide cost sharing for marinas to improve their pumpout facilities.
6. Provide public education pamphlets to all shorefront residents on "best management practices" for shoreland improvements and development.
7. Develop a Malletts Bay Aquatic Nuisance Coordinator pilot project.
8. Develop a wash down station at the Malletts Bay Fish and Wildlife Access Area to control the spread of Eurasian watermilfoil and zebra mussels.

Fish, Wildlife, and Wetlands

Issue Description: Shoreline areas identified as Natural Heritage Inventory sites include: the wetlands on the south side of the Lamouille River, along Malletts Creek, and between Mills and Porters Points, and Clay Point, the entire northern shoreline of the Inner Bay (Braeloch area), the Malletts Bay State Park parcel, the islands off Malletts Head, and the knob on the northwest shore of Malletts Head. There are no specific mapped aquatic habitat or more specific wildlife habitat data.

Management Goal: Manage the ecological communities to provide continuing social and environmental benefits. No decline in abundance or diversity.

Key Indicator Standard: At this point, not enough information is available to set standards.

Monitoring: Establish an Indicator Species Monitoring Program.

Management Objectives

1. Minimize adverse environmental impacts of water based recreation.
2. Promote the identification, designation, and protection of rare, threatened, and endangered species and significant natural communities.
3. Provide public education on best management practices for habitat enhancement and protection.

Management Strategies

1. Identify **Conservation Water Management Zones** at Malletts Creek and the water surface area abutting the wetlands between Mills and Porter Point and the south bank of Lamoille River.
2. Conduct a **comprehensive bay-wide study** to determine and refine information regarding critical fish and wildlife habitats and wetlands to be protected.
3. Establish an **Indicator Species Monitoring Program**.
4. Identify **priority parcels** for public acquisition, protection and conservation easements.
5. Revise the town regulation of the **Shoreland Overlay district** to include "best management practices".
6. Coordinate an annual shoreland revegetation event.

Marinas, Moorings, Docks, and Anchorages

Issue Description: The number of moorings associated with marinas and boating associations along the southwest shore of the Inner Bay has been a growing concern, specifically potential conflicts with navigation, increased congestion, reduction in usable space for recreation activity, poorly marked and illegally placed moorings, and visual impact. The only restriction on the number of boats associated with a commercial mooring is the current zoning regulation which requires one off-street parking space per berth. Residential marinas are required to have a minimum of 150' lake frontage for 5 boats and 30' for each additional boat. All the marinas and boating associations of Malletts Bay are located on the south and southwest shores of the Inner Bay, accommodating approximately 800 boats, fairly evenly split between moorings and dock slips.

Once moorings occupy an area, that water surface is no longer available for any recreational use. Likewise the location of dense moorings can have direct impacts on the boating patterns affecting the level of perceived crowding and boating conflicts. Utilizing a regression model correlating perceived crowding and peak usage and calculating the average percent of marina boats in use, we can determine what percentage of an increase in marina berths and private berths would raise perceived crowding to the 65% benchmark. However, the data upon which the regression model is currently based is extremely scant. Further monitoring will build confidence in the model.

According to the pending town mooring regulations, moorings must be accessed within 1000' across private property by the shoreline resident or by others with permission or rights of way from the landowner. Should it be determined that there is a strong correlation between perceived crowding and peak hour boat usage, the number of private berths could be limited by the linear feet of shoreline, with varying ratios to reflect the suitability of the zone to moorings or recreation activities.

Docks at marinas and boat clubs provide efficient accommodations, decreasing the surface area and visual impacts of the volume of boats. Several public meeting attendees and key informants suggested marinas should be encouraged to accommodate all boats in dock slips, excepting those requiring greater depth.

Two Special Anchorage Areas are designated in the Inner Bay: one east of Malletts Head and the other east of Coates Island.

Management Goal: Ensure adequate berthing and anchorage for seasonal and transient boats in appropriate locations where they will not conflict with recreation uses and will not compound boating conflicts, perceived crowding, and visual impacts.

Monitoring: Require every boat berth to be registered annually with the Harbormaster noting boat owner's name and berth location, and means of access. Review monitoring results of survey conducted every year and correlate perceived crowding and peak boat usage, to determine if limits on berth spaces are justified.

Management Objectives

1. Identify area for high density and low density boat berthing and suggest limits to commercial and private boat berthing.
2. Encourage the most efficient layout of boat berths in appropriate locations.
3. Provide adequate boat berthing and anchorage for seasonal and transient boaters.
4. Identify areas where boat berthing should be prohibited.

Management Strategies

1. Establish a means to limit the number of berths at marinas and boating associations, based upon a regression model of peak hour use and perceived crowding if there is a strong correlation after at least two more summers of data collection.
2. Review marina and boating association development plans for expanding existing or proposing new berthing facilities for impact on boating patterns, perceived crowding, and boating conflicts particularly in the Inner Bay.
3. Dense mooring fields with public transient moorings to be identified east of Malletts Head and east of Coates Island.
4. Private berths to be limited to 1 berth per 100' of shoreline frontage along Thayers Beach to minimize impact on this valued recreation area.
5. No berths permitted along the shoreline of Malletts Bay State Park, along the south shore of the Lamoille River, along Malletts Creek, and between Porters and Mills Points to protect critical wetland habitats.
6. Limit all moorings to be within 500' of the mean low water mark.
7. Mooring Tackle
 - a. Paint fluorescent orange.
 - b. Enforce regulation requiring I.D. on tackle.
 - c. Encourage manufacturer of permanent moorings to explore breakaway top.

Implementation of the Recreation Management Plan

The following steps are suggested as the means for implementing the Mallets Bay Recreation Management Plan including:

- The identification of the local administration responsible for overseeing the implementation.
- The integration of locational management strategies into one map of Water Management Zones with associated policies for each zone.

Local Administration of the Mallets Bay Recreation Management Plan

Establish The Mallets Bay Harbor Commission with the primary function of overseeing the implementation of the Malletts Bay Recreation Management Plan. The Commission's responsibilities would include:

- Overseeing the implementation of the Recreation Management Plan.
- Prioritizing and initiating the management strategies.
- Research funding opportunities for implementing the management strategies.
- Coordinating the monitoring efforts and comparing the data with the Key Indicator Standards.

- Coordinating the preparation and distribution of educational materials.
- Reviewing all proposed waterfront redevelopment projects in an advisory role reporting to the Planning Commission.
- Update and revise the Malletts Bay Recreation Management Plan every five years.

Water Management Zones

(See attached map of Water Management Zones.)

The purpose of the Water Management Zones is to coordinate the management strategies with locational aspects. The policies associated with the Water Management Zones should ensure a diversity of uses of Malletts Bay, while:

- Minimizing boating conflicts and perceived crowding.
- Providing adequate access.
- Identifying areas for enhancing cultural heritage resources and tourism opportunities.
- Improving and maintaining water quality and addressing aquatic nuisances.
- Protecting critical habitats.
- Managing marinas, moorings, docks, and anchorages.

Conservation Water Management Zone:

Purpose: To protect areas with scenic values, plant and wildlife habitat, and wetlands, maintaining high water quality and natural shoreline conditions.

Location: Four separate areas are identified as Conservation Zones: Malletts Creek, Lamoille River and Sand Bar Wildlife Refuge, waters off of the Malletts Bay State Park, the area between Mills and Porters Points.

Policies:

- No additional mooring or anchoring of boats permitted beyond those that were existing at the time of acceptance of the plan.
- No additional docks, floats, or boat lifts beyond those that were existing at the time of acceptance of the plan.
- Can develop public facilities, providing for the appropriate uses of nature enjoyment: i.e., dock for tie-up at Malletts Bay State Park.
- Acquisition of land and permanent conservation restriction on abutting land is encouraged.
- In order to preserve the natural shoreline and wetland functions, activities and alterations such as structural shoreline protection should not be allowed.
- A potential car top launch site at the Malletts Bay State Park.

Low Intensity Use:

Purpose: To maintain areas with scenic and natural habitat values, maintaining water quality while providing for low intensity uses that will not detract from these values.

Location: These areas are the water area extending 500' into the bay from the mean low water mark of predominantly residential shorelines. The entire shoreline of the Outer Bay and the northern shoreline of the Inner Bay, with the exclusion of the areas identified as Conservation Zones.

Policies:

- Moorings to be within 500' of the mean low water mark.
- Encourage the use of community docks, piers and floats.
- Encourage shorefront property owners to use native species revegetation and non-structural shoreline protections as preferred methods.

- Configuration of moorings and location of activities and alterations shall not significantly interfere with public use and enjoyment of the public waters.
- Potential public boat accesses are identified in the Low Intensity Use Zones: small motorized and non-motorized boat accesses at the base of the Causeway by Mills Point, OR along Thayers Beach at Rosetti's property.

High Intensity Recreational Use:

Purpose: To provide, maintain, and enhance areas for high intensity boating and services that support that activity.

Location: The southwest area of the Inner Bay from Nourse's Corner to the top of Malletts Head including the special anchorage areas and high traffic areas of the Inner Bay, with the exception of the water along shoreline from Bayside Park to the base of Coates Island, and the innermost water surface of East Spaulding Bay which is proposed as Village/Commercial Use.

Policies:

- Proposed activities or alterations will be permitted that enhance the quality and safety of recreation boating activities.
- Planning and management decisions regarding this area will prioritize mooring fields, public shoreline access such as waterfront parks, beaches, and other water-dependent facilities that support recreational boating and enhance public access.
- Planning and management decisions regarding this area should focus on reducing boating conflicts and perceived crowding.
- Manage moorings densities along the shorefront from Nourse's Corner to Bayside Park to minimize impacts on navigation and recreation use particularly swimming.
- Improve and maintain water quality of levels suitable for water-contact recreational activities.
- Potential public access is identified at Nourse's Corner for car top launch sites.

Multi-Purpose Use:

Purpose: To accommodate a diversity of water-based recreational activities on the large expanses of unobstructed water.

Location: The large expanses of unobstructed waters in Inner and Outer Malletts Bay.

Policies:

- Safely accommodate the diversity of water-based activities, including new sports.
- Establish areas and times for races, tournaments and special uses to avoid conflicts: i.e., sailing races, fishing tournaments, water skiing events, and personal watercraft "stunt riding."
- Maintain the area free of moorings and other obstructions to water-based recreationists.
- Planning and management decisions for this area will prioritize unobstructed water for multiple water-dependent recreational activities from alterations and activities that threaten boat safety, and increase boating conflicts or perceived crowding.

Commercial Use:

Purpose: Maintain and enhance bayside commercial facilities to efficiently accommodate the diversity of water-based recreationists in a scenic, well-maintained setting, while promoting the local community economy.

Location: The southwest shoreline of the Inner Bay extending into the bay 500' from the mean low water mark from Coates Island to Bayside Park, and the innermost area of East Spaulding Bay.

Policies:

- Coordinate with the Lakeshore Redevelopment efforts.
- Encourage and upgrade the provision of support facilities for water-based recreationists.
- Upgrade and maintain boat storage areas, loading and unloading, and servicing of recreational craft.
- Encourage facilities for public access to the shoreline (including visual and pedestrian access).
- Enhance and maintain high water quality.
- Plan for installation of a sewer system.
- Strict controls on fuel handling facilities.
- Do not increase capacity of the Fish and Wildlife Access Area.
- Continue to monitor peak boat usage and perceived crowding. If strong correlation, consider placing limits on the number of berths.
- Utilize Fish and Wildlife Access Area and marinas as education outlets.

Navigational Routes, Channels, and Fairways:

Purpose: Maintain safe water passage from high density moorings in the Inner Bay, through the Narrows and on to the Cut, or to Thayers Beach.

Policies:

- Educate about high-use periods or summer weekend days from 11 a.m. - 3:30 p.m. when the uses within the Narrows should be navigation only: enforcement to discourage fishing, water skiing, or anchoring. Educate on these activities being illegal in the Cut at anytime.
- Enforce no-wake zone.
- Keep free of any obstructions other than navigation aids.
- Install and monitor temporary navigation markers in the Narrows as suggested in the Management Strategies under Boating Conflicts.

Proposed Water Management Zones

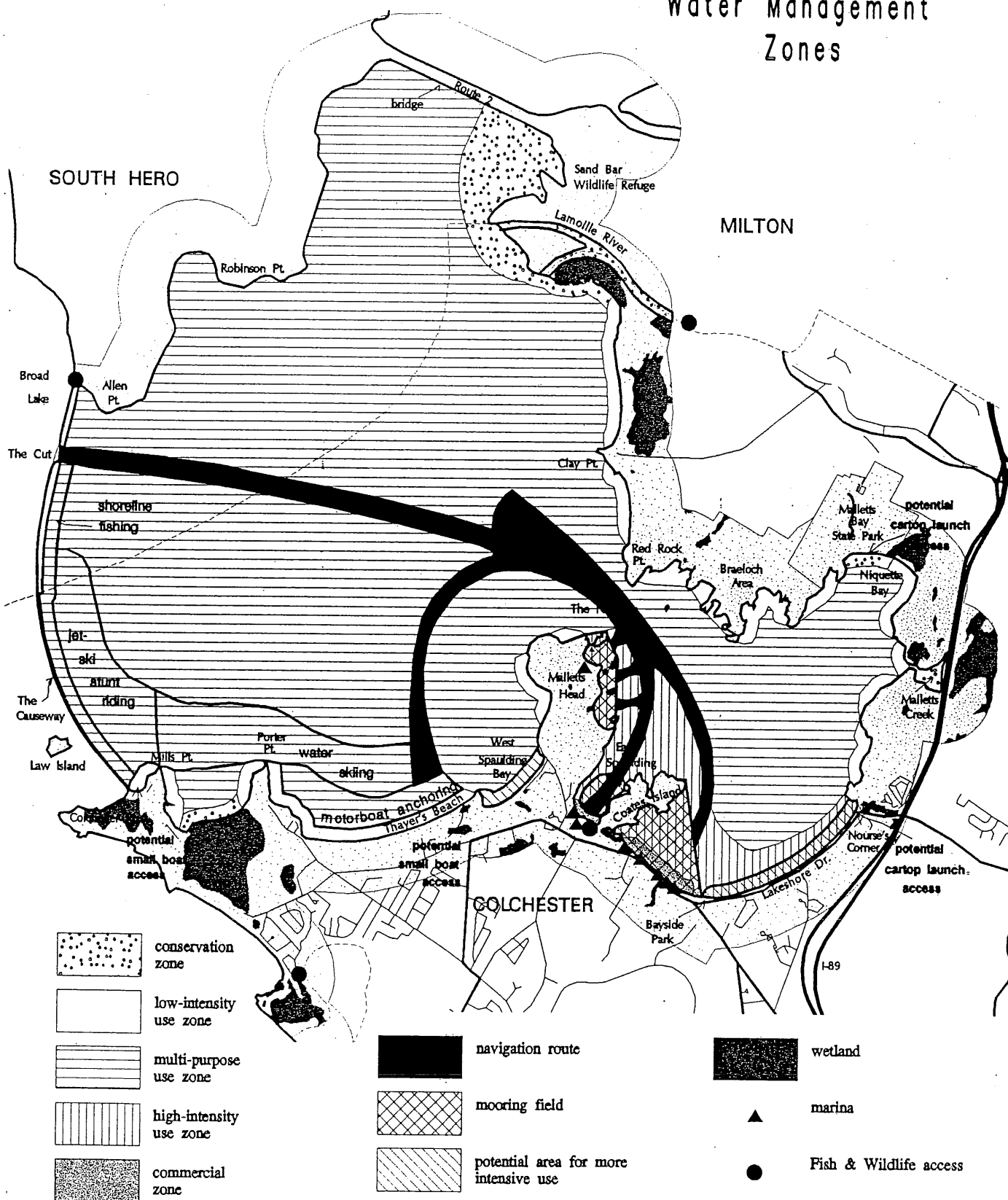


Figure 18