

**Marsh/Mall Overlay Zone Management Plan  
November, 2007**

**BACKGROUND**

**The Penjajawoc Marsh/Bangor Mall Management Commission**

The Marsh/Mall (M/M) Task Force, the predecessor of the Management Commission, recognized that the land and the marsh in the M/M overlay zone has real value to the Bangor community both as a significant wildlife habitat and as an environment which offers many opportunities for outdoor activities.

In the “**RECOMMENDATIONS ON PUBLIC ACCESS AND MANAGEMENT**” section of the Final Report of the Task Force (May 2005), the Task Force stated that: “The development of a management and access plan for the Marsh/Stream area is an essential requirement for ensuring that the environmental, habitat, ecotourism, and recreational values of this complex are maximized. Such a management plan can identify and prioritize parcels suitable for acquisition or conservation easements, identify parcels that might be acquired by private developers as mitigation for their projects, develop and implement a plan for providing and managing public access, and ensure that the potentially competing values of habitat maintenance and recreational use are handled appropriately for the long-term benefit of the environment and the community.”

A logical outcome of this concern for the M/M area was a recommendation by the Task Force in its **FINAL REPORT** (May 2005) that a Marsh/Mall Conservation and Management Commission be established to carry out specific activities that would preserve, to the maximum possible extent, the environmental and recreational values of the M/M area as an asset to be enjoyed by all members of the Bangor community. This recommendation of the Task Force was implemented by the City of Bangor by adopting a New Article IV (Penjajawoc Marsh/Bangor Mall Management Commission) of Chapter 23 of the Code of Ordinances. Paragraph 23-29 of Article IV lists the following activities that the Commission is authorized to perform:

1. Develop recommendations for an overall management plan for the PJJ stream and Marsh overlay zone designed to preserve habitat and environmental values while permitting public access and use of the area
2. Develop recommendations for a public access plan to support appropriate recreational uses and ecotourism
3. Provide review and comment to developers on proposed commercial and residential development in the overlay zone for the purpose of providing advice and recommendations on how such developments can be designed to minimize their impact on the PPJ Marsh and stream
4. Develop recommendations on the expenditure of public funds (TIF) to be used for the purchase of property or conservation easements, public access projects, and water quality improvement efforts

5. Coordinate with other interested parties on issues and projects involving the overlay zone
6. Make recommendations to the City Council on other actions, including ordinance revisions and changes to the Marsh/Mall Task Force Report that may assist in the conservation of the PJJ Marsh.

### **Task Force Recommendations for the M/M Overlay Zone.**

In addition to recommending the establishment of a M/M Management Commission, the Task Force's Final Report also included recommendations that help to establish the general framework within which the management plan should be constructed. These recommendations can be broken down into the three areas discussed below.

#### **1. New General Land Uses for the M/M Area**

The Task Force made the following recommendations that were subsequently adopted in the City's land development code for the M/M overlay zone:

- a. Maintain the current Resource Protection Zone around the Marsh.
- b. Establish a new "no building" zone extending 175 feet from the current Resource Protection Zone. Traditional uses would be allowed in this area, but no building would be permitted.
- c. Require that subdivisions be "clustered" to reduce densities on the portion of the subdivision closest to the marsh.
- d. Allow the portion of the subdivided parcel closest to the marsh to remain privately owned, thus permitting traditional uses to continue.
- e. Given that most of the residentially zoned parcels in the study area are long with narrower road frontage, the City should design and adopt policies that promote connectivity between future residential developments.

#### **2. TIF Conservation Fund**

While the Task Force recognized that these general land use recommendations would provide additional protection to the zone's environmental and habitat values, they recognized that further protection could be provided through the purchase of property and/or conservation easements within the overlay area. Consequently, the Task Force recommended that a conservation fund be established through a Tax Increment Financing (TIF) program covering future commercial development within the M/M area. The Final Report of the Task Force stated: "As new commercial development occurs, the City should set aside 25% of the new taxes from such development for a period of 10 years, with the resulting funds to be used for the purchase of property or conservation easements, public access projects, and water quality improvement efforts. Property/easements should be acquired only from willing sellers."

### 3. Establishment of general priorities for land conservation

The Task Force established general priorities for the types of land to be conserved. These priorities were established based on considerations of development pressure and habitat types. Habitat considerations were informed by existing studies and information and the knowledge and background of individual members of the group. The types of land to be considered for conservation are, in decreasing priority:

- a. Grasslands and fields within 1000 feet of the southern end of the marsh near Stillwater Ave.
- b. Other grasslands and fields within 1000 feet of the Marsh/ Stream.
- c. Wooded areas within 1000 feet of the Marsh
- d. Grassland and forested land 1000 to 2000 feet from the Marsh/Stream.

The Task Force also stated that where conservation easements are acquired, these should also include, whenever possible, public access easements.

### THE MANAGEMENT PLAN

This management plan is to serve as a guide to help the M/M Commission make recommendations that will preserve the habitat and environmental values of the M/M Overlay Zone while permitting public access and use. The importance of preserving habitat within this zone is shown by the fact that it is considered one of the most valuable bird habitats in Maine. The marsh area contains a unique combination of a large, open marsh surrounded by wetlands, open fields, and forest. This environment attracts a spectacular variety of common as well as rare and uncommon birds, all easily observed. The nesting, resting, and feeding needs of a sizable majority of the inland nesting bird species in Maine are met in the overlay zone.

This plan, however, should be seen as a living and evolving document that will require refinement and revision as additional information becomes available. As such, it presents best management practices on the basis of our current levels of knowledge and expertise.

In order to preserve the habitat and environmental values of the M/M Overlay zone while permitting public access and use, the Commission must address the following two activities:

1. Identifying and prioritizing parcels suitable for acquisition or conservation easements, including parcels that might be acquired by private developers as mitigation for their projects.
2. Developing a plan for providing and managing public access

Procedures for implementing these activities are contained within the two major sections of the overall management plan: an **Environmental Management Plan** and a **Public Access/Recreation Plan**.

*Since the preservation of habitat within the Marsh/Mall Overlay Zone is the highest priority charge of the Commission, the activities specified within the Public Access/Recreation Plan should be carried out in such ways that habitat preservation is not adversely impacted by public access or recreational opportunities.*

## **Environmental Management Plan**

The three major components of the environmental management plan are listed below in priority order. Components 1 and 3 have received considerable attention from the Commission and are essentially complete at this time. Component 2 lays out the questions that must be asked and answered in order to complete the wildlife, plant, and habitat inventory of the marsh overlay district.

1. **Specific environmental values to be protected.** The members of the Mall/Marsh Commission each individually prioritized a variety of environmental values. These rankings were then summarized, discussed, and adopted by the Commission. The following prioritized values were agreed to:
  - a. Preservation and attraction of diverse animal species with special emphasis on endangered and threatened species.
  - b. Maintenance and preservation of diverse habitats supportive of native plant and animal species.
  - c. Preservation and improvement of marsh water quality through appropriate management of tributary streams.
  - d. Preservation of linked open space that will support animal movement into and within the ecosystem.
  
2. **Wildlife, plant, and habitat inventory of the marsh overlay district.** The application of the above values to the marsh overlay district will require surveying and cataloguing current and potential animal and plant species and associated habitat requirements. While some of this information is currently available, additional field work and documentation may be necessary. Some of the questions that must be asked and answered include:
  - a. What animal species currently are found in the district or might be attracted to it; which are endangered or threatened; which require specific habitat types currently available in the district; what specific threats exist to the continued presence of the species in the district?
  - b. What habitat types are currently present in the district; are these habitats of sufficient size to support targeted wildlife; are there specific threats to the continued presence of these habitats; how can such threats, if they exist, be managed?
  - c. What are the key sources of water flows into the marsh; what is the current quality of water reaching the marsh; if particular flows do not meet water quality standards, what are the stressors that account for this degradation and what steps can be taken to reduce them; if water quality is high, are there potential future threats that may degrade it?

- d. What is the minimum level of habitat connectivity required to support a diverse range of native animal species; is this connectivity threatened; if so, are there key parcels that should be targeted to maintain either internal connectivity within the marsh district or connectivity with other nearby/regional habitats?

Some possible key results of this inventory are:

- a. A map illustrating the location of major habitat types such as grasslands, wetlands, or forest and descriptions of the unique, protected, threatened, or endangered plant and animal species that do or might reside there.
  - b. A description of how each area is currently being used/managed (farmed, housing, open space, commercial development, forestry operations, recreation, etc.).
  - c. An identification of the parcels or ownerships that exist in each habitat.
3. **Guidelines for selecting lands to be preserved.** While recognizing that the Commission will not have sole discretion in determining which parcels in the Overlay district will be preserved for public use, it is important that criteria be established at the outset that can be applied when parcels become available for conservation. Through discussion among the members of the Commission and advice from conservation and wildlife experts, an initial set of criteria have been developed. These criteria support the prioritized environmental values set forth above by giving strong weight to specific habitat types that are uncommon in Maine, the need for habitat connectivity, and recognizing that certain parcels of potentially high value are under significant development pressure.

If more than one land parcel becomes available for possible acquisition, the following criteria, along with common sense and good judgment, will be used to determine which of the parcels should receive the higher priority for acquisition: (The criteria are not listed in any order of importance.)

- a. Fields adjacent to the marsh
- b. Uncommon habitat types
- c. Contiguous parcels
- e. Land most under threat of development
- f. Habitat types that support rare and endangered species

These criteria support the prioritized environmental values set forth above by giving strong weight to specific habitat types that are uncommon in Maine, the need for habitat connectivity, and recognizing that certain parcels of potentially high value are under significant development pressure.

## Public Access/Recreation Plan

The purpose of the access plan is to support appropriate recreational and ecotourism uses in the marsh/stream complex.

### Public Access

Public access will essentially be provided by a trail system throughout the overlay district. This trail system should be developed in close collaboration with the Bangor Land Trust and the Bangor Trails Committee. Any trail system that is developed should be for the primary purpose of supporting appropriate recreational pursuits within the Overlay District, taking into account the differential impacts of active and passive recreation on the quality of the habitat and the wildlife that uses it.

At the present time, public access to the Overlay District is available, but limited. The City Forest and Essex Woods provide access near the Southern and Northern ends of the district. In addition, the Bangor Land Trust has acquired two parcels between Essex Street and the marsh and another West of the Kittredge Road which provide opportunities for expanded access. The long-term goal is to interconnect existing and planned trail systems on these properties. This effort should be closely coordinated with the master plan currently being developed by the Bangor Trails Committee, a joint venture of the Bangor Land Trust, Bangor Beautiful, and the City.

### Recreation Plan

A recreation plan for the overlay district should take into consideration uses currently allowed or planned on properties that are currently open to public use. The experiences of the City of Bangor and the Bangor Land Trust on these properties will assist in identifying both the level of demand for certain recreational uses and their impacts. The recreation plan, while important, must be seen as subsidiary to the environmental plan. As this plan develops, the following steps should be taken:

1. **Evaluate the appropriateness of various active and passive recreational pursuits that could be supported within the district.**

The following questions should be addressed:

- a. What recreational activities are appropriate/inappropriate within the district; are there activities that may be appropriate at certain times and places, but not others?
  - b. What are the access and support needs for these activities?
  - c. How will the necessary facilities be maintained and policed?
  - d. How can adjacent private properties be protected?
2. **Inventory existing official and unofficial recreation opportunities in the Marsh District.** A map should be created showing current recreation activities by type. These may include hiking trails, boat access locations, horse and biking trails, and snowmobiling trails.

3. **Develop a description for a proposed future recreational plan and provide a rationale for the selections made.**
4. **Develop a series of recommendations for achieving this plan, such as:**
  - a. Land or easement purchases for the creation of trails (See **Public Access** above) or other facilities.
  - b. Cooperative agreements with existing trail owners and managers (snowmobile clubs or stables, for example).
5. **Investigate the maintenance issues related to the proposed recreation plan, such as:**
  - a. Signage
  - b. Drains, bridges, and other trail maintenance
  - c. Security and enforcement of rules
  - d. Trash pickup

### **Other Management Issues**

#### **Water Quality**

Water quality in the Penjajawoc stream from just below the outlet of the marsh to its confluence with the Penobscot River is of concern and is the focus of a Watershed Management Plan that is under development and planned for completion and approval early in 2008. Four Commissioners are members of the Stakeholders Group involved in the development of this Watershed Management Plan. In addition, some members of the Commission are also members of a Penjajawoc Stream Team that will be monitoring the health of the Stream both currently and in the future as the water quality improvement recommendations for the stream are put into practice.

At the present time, we have insufficient data to evaluate the quality of water that flows into the Marsh or the impact of historic and adjacent uses on water quality. We understand that the Stream Team plans to expand its water quality monitoring to the Marsh and its inflow streams.

These water sources include the water flow from the sealed City landfill as well as five small streams that feed into the Marsh. We applaud and support the interest of the Stream Team in gathering this essential data. Monitoring the water quality of sources for the marsh will be an important part of helping the Commission to preserve and improve the water quality through appropriate management of tributary streams. Monitoring marsh water sources will also be an important element of the habitat inventory of the marsh area.

## **Invasive Plants**

Management of invasive plants on any parcels under public ownership or in conservation status will be an essential element of preserving the environmental values of the district. As such lands are preserved, each parcel should be surveyed for invasives and a directed management or eradication strategy should be developed and implemented. Wherever possible, the Commission should support and assist private landowners in the district in similar efforts to mitigate the harm of invasive plant species.

## **Implementing Resources**

Implementing an overall environmental management and public access plan for the district will require a variety of funding sources and mechanisms. The following may either be available or should be considered:

1. Tax Increment Financing – Management Fund

As part of the legislation creating the Commission, the City Council also created a management fund to be used for the purpose of acquiring property, conservation easements, public access easements, water quality improvement projects, and other public improvements that will benefit the ecological, recreational, and water quality values of the Penjajawoc Marsh and Stream. As new development occurs in the designated commercial area Northwest of Stillwater Avenue, 25% of the new taxes generated by this development will go into this fund annually for a period of ten years. The fund has the potential of producing significant revenue over time, beginning in the second half of calendar year 2008.

2. Grants

A variety of grant sources are available for use in land preservation/conservation and/or the implementation of a public access plan. Among these are the Land for Maine's Future Program, federal grants for wetland and habitat protection, Maine Department of Transportation Grants for alternative transportation modes such as trails, and State Land and Water Conservation grants for open space and recreation. Many of these grant programs either require local matching funds or are more likely to be awarded if matching funds are available.

3. Mitigation for Private Development

Private development elsewhere in the watershed, or, to a lesser extent, elsewhere in the region, may be required to provide mitigation for wetland impacts. In such an instance, the developer may find it appropriate to purchase or otherwise conserve a parcel within the district. This normally includes a requirement that the property be owned or a conservation easement be held by a third party such as a municipal government or land trust.

#### 4. Private Parties and Organizations

Private individuals and organizations can be another source of financing conservation efforts. The Bangor Land Trust has recently acquired a number of parcels in the district. Other individuals may be willing to donate funds or property to this effort. In particular, developers/owners in the district may find it advantageous to donate the open space required when residential subdivisions are created to a third party. Such private efforts and donations should be encouraged.

#### 5. City Funding Sources

In addition to the TIF funding discussed above, other sources of City funding may be or become available for conservation, public access and use, and water quality improvements in the district. This may include impact fees for development in the Mall area, stormwater conservation fees associated with new development, and, potentially, general fund contributions.

## 6. Trail Easements in New Subdivisions

Based on its preliminary work, the Bangor Trails Committee has indicated a strong preference for a trail located to the West of the Marsh that would link the City's Essex Woods property to the Bangor Land Trust's Walden-Parke Preserve with its existing connection to the City Forest. One of the recommendations of the Task Force was to require the potential to interconnect residential subdivisions located between the Marsh and Essex Street. As projects are reviewed by the Commission, this recommendation should be implemented by working with developers to insure that a public trail easement is provided and to seek developer commitment to install the trail to City standards.