The Position of the
Mattabeseck Audubon Society

with regards to

Proposal by the
Town of Portland, Connecticut
for a road, parking lot,
and boat launch site
at Wangunk Meadows

November 30, 2004

Title: **The Position of the Mattabeseck Audubon Society with regards to a Proposal by the Town of Portland, Connecticut for a road, parking lot, and boat launch site at Wangunk Meadows**

Biome: **Alluvial Flood Plain**

Reviewed by: **Mattabeseck Audubon Society**
November 30, 2004

1. Introduction

The Town of Portland, Connecticut, has developed a tentative proposal for a road, parking lot, and boat launch site at Wangunk Meadows.

2. The Natural Characteristics of a Flood Plain

The Connecticut River is a mature river that is actively widening its valley floor by lateral erosion of fully developed meanders. Through Central Connecticut, the river flows through broad lowland, where the flood plain reaches its greatest development. Over bank flow is substantial and channel migration is prevalent. The water holding capacities of flood plains are well known. They absorb volumes of water and become saturated before the ultimate rise and overbank flow of the river. It is the passage and movement of water through a flood plain that is its essential characteristic. After floodwaters recede, the flood plain continues to discharge water into the river, enabling it to retain a steady rate of flow during drier months.

High flood levels over 6 meters above mean sea level occur during any month of the year. Severe summer floods are uncommon but they have occurred several times during one season; in 1973 in late May and July; in 1969 in late May, and twice in August. June was the month of the 1984 flood. There are 350 years of recorded flood stages of the Connecticut River. Prior to 1936 the largest flood of record was the 1854 flood. Since 1927 the 1854 flood has been nearly equaled or exceeded five times—1936, 1938, 1955, and 1984. Therefore, five of the six greatest floods in a 350 year span have occurred in the past 50 years.

An interesting fact is that the measured volume of water flowing past a particular cross section of Connecticut River channel per unit of time has constantly increased in proportion to a measured amount of rainfall. What this means, simply, is that today

it takes less rainfall to move the river to flood stage than in any of the past years of record keeping. This is due to over development of the river valley. Flood water storage capacity is constantly being chipped away. Because there are only seven major natural flood storage areas in the entire Connecticut River Basin: The Wangunk Meadows being one of them, this is a serious problem.

Flood plain forests and ground vegetation slow the effects of floods through interception and surface detention. Areas with good ground cover yield little sediment compared with barren areas. Sheetwash, the overland flow of water, and raindrops impacting on soil without vegetation cover may produce sediment yields many times greater than the load derived from normal bank erosion. Removal of vegetation will lead to exaggerated bank erosion. It must be emphasized that erosion by rare great floods is not greater than that achieved by a succession of more moderate flows, of the type that occur seasonally.

There are two basic types of flood plain. As the river meanders, the channel frequently cuts into older deposits. The high flood plain occurs most often next to the channel, and its vegetation differs ecologically from the low flood plain. The forests here resemble those of upland soils. Almost all of the high flood plain has been cleared and very little is now forested.

The low flood plain is characterized by the dominance of silver maples and the common occurrence of cottonwoods. Low flood plains are most prominent on riverbanks, stable meander scrolls, and low levees; they also form part of the inner flood plain and the ridges and sloughs on the inner flood plain.

The flood plain under consideration for a boat launch in Portland consists of an inner flood plain and a back marsh. When the river spreads from its deeper channel, the overflowing water slackens in velocity because of its shallower depth. As a result, the material that had been held in suspension by the water is deposited and left behind when the river recedes. The coarser sedimentary particles accumulate along the banks of the channel forming natural levees a little higher that the rest of the valley floor. This natural levee tends to impede drainage on the outer parts of the flood plain and helps to produce back marshes.

There is a natural slough on the flood plain adjacent to the proposed boat launch site. Sloughs are some of the most ecologically significant features of a flood plain. They fill with water when the River level rises above their inflow level, but they do not drain when the River falls. These sloughs are floristically interesting, exhibiting a well-defined vegetative regimen. These low-lying undrained depressions attract Common Snipe *Gallinágo gallinágo,* Solitary Sandpiper *Triínga Solitária*, Lesser Yellow legs *Trínga flápes,* and waterfowl.

The State of Connecticut Department of Environmental Protection recognizes flood plains as habitats of special concern.

3. Decision:

The decisions leading to the final configuration of the proposed boat launch should be reflective of the aims and long-term purposes of the Silvio O. Conte National Fish and Wildlife Act of 1991. The law charged the Fish and Wildlife Service with an important task: to study the entire 7.2 million acre Connecticut River watershed and create a new national fish and wildlife refuge. One of the purposes of the Refuge is "to conserve, protect, and enhance the natural diversity and abundance of plant, fish and wildlife species and the ecosystems upon which these species depend within the Refuge."[1] The Wangunk Meadows is a special focus area of the Silvio O. Conte National Fish and Wildlife Refuge. "Several rare bird species such as the sora rail, black rail and yellow-breasted chat have been recorded from this site. Many species of wading birds and waterfowl use the marsh, while the floodplain forest provides breeding habitat for many species of migrant landbirds. The Service will work with partners such as the Connecticut Department of Environmental Protection, The Nature Conservancy and local land trusts to protect the site through cost sharing grants for conservation easements and fee title acquisition."[2]

4. Reasons for Concern:

1. Destabilization of the natural levee and increased erosion along the River's floodway.
2. Introduction of fill to construct a road and a parking lot—will this have any deleterious effect on valley storage (flood water storage)?
3. The flood plain is recovering from post-agricultural disturbance and will gradually advance through stages of ecological succession, until ending in the more permanent establishment of native species of trees and shrubs. The complete removal of riparian vegetation will disrupt this succession.
4. The use of impervious material for the roadway and parking area.
5. The roadway to the boat launch site goes through an ecologically sensitive slough.
6. The boat launch site is directly adjacent to the Mattabeseck Audubon Society's Floodplain Natural Conservation Area. MAS does not want any overspill, parking, or vehicular traffic on the Conservation Area.

1. *The Silvio O. Conte National Fish and Wildlife Refuge Action Plan*

2. *The Silvio O. Conte National Fish and Wildlife Refuge Action Plan and Environmental Impact Statement,* October 1995.

5. Recommendations:

The Mattabeseck Audubon Society recommends the following :

1. Minimize vegetation removal to only the amount necessary for construction of the boat launch.
2. Re-landscape with vegetation native to Connecticut's flood plains.
3. Use pervious surface material where possible.
4. Devise a maintenance plan to deal with flood debris and silt accumulation. There must be responsible removal offsite of non-natural material deposited during flood episodes.
5. Devise an alternative to the roadway leading to the boat launch site. Get a right-of-way from an adjacent landowner south of the site, or redesign the roadway to minimize impact on the slough that is the main and most-sensitive physical feature of the floodplain adjacent to the launch.
6. Remove existing gravel path-roadway and associated PCV pipe bisecting the slough. Establish a no-cut buffer zone around the slough (for growing season; may be partially cut in late Fall to accommodate skating).
7. Establish an educational feature (may be incorporated into the proposed observation deck-pavilion). This would consist of explanatory signage describing flora and fauna and the morphology of a flood plain. The State of Connecticut has done this at other boat launch sites, such as Barn Island Wildlife Management Area, North Stonington; Hammonasset State Park, Madison; Great Island, Old Lyme, etc.
8. Establish a wooden post barrier on the side of the boat launch adjacent to Mattabeseck Audubon Society's Floodplain Natural Conservation Area.

The Mattabeseck Audubon Society maintains a neutral position with regards to the development of a boat launch site in the Wangunk Meadows. However, should the proposal for the Wangunk boat launch prove unfeasible at some point during the permitting process, Mattabeseck Audubon Society suggests an alternative site. One such site exists in Cromwell, Connecticut, at the south end of River Road (Middletown Quadrangle, USGS map) on land owned by the Town of Cromwell. Cooperation between 3 towns: Portland, Cromwell, and Middletown, with the support of the Connecticut Department of Environmental Protection could provide a public launch site for all three towns, more economically and with less impact on riparian habitat.

Prepared by: Lawrence Cyrulik
13 Bell Court, Portland, CT 06480
Conservation Committee Chairman, Mattabeseck Audubon Society,
a chapter of National Audubon Society