

## **Ecological Descriptions of Atkinson's Prime Wetlands**

From the 2003 Prime Wetland Study

These wetlands were visited by Natural Resources Consulting Service, the study contractor, from August through October, 2002. These field observations were done during one of the worst droughts on record. Below are the contractor's comments on these prime wetlands.

### **Hall Farm Pond Prime Wetland**

Route 111 borders this wetland to the north and Hall Farm Road to the south. This 9.4-acre wetland has only few small inflow streams and the outlet culvert is partially blocked. Even with this partial blockage, the culvert inlet is at an elevation sufficient to maintain the health of this wetland. This culvert was located several feet above the water height during our investigations.

Though just under ten acres, this wetland shows very diverse features with open water, emergent, scrub-shrub, and forested areas. During our visits we observed several species of wildlife, including black ducks, red-tailed hawk, and many songbirds. A stand of *Decodon verticillatus*, (water-willow) was observed in this wetland. This is the host plant of the *Decodon* moth, a species listed as N2 (Nationally Imperiled) by The Nature Conservancy's web site (NatureServe).

There is a pull-off from Hall Farm Road that allows an observer to view most of the shallow open water and scrub-shrub areas of this wetland, thus providing excellent access and education/research point. At this observation point there are two fire hydrants where water can be pumped directly from the wetland.

Even with the partially constricted elevated culvert, this wetland appears to be very stable. There was previous beaver activity, as indicated by the beaver houses found in the wetland. The beaver damming activity appears to have been limited to the partial plugging of the culvert with mud and vegetative debris.

Although this wetland falls just below the 10-acre threshold, it possesses several exemplary attributes. These include potential habitat for an endangered species, undisturbed natural communities, and excellent access for general viewing or educational pursuits.

### **Hog Hill Brook Prime Wetland**

This wetland is a 17.5-acre long narrow wetland that is the result of a dammed stream, and is bordered by Island Pond Road and Chandler Drive. At the north end of the wetland, the inlet stream enters through a culvert under Island Pond Road from Hodges Mill Pond. The outlet for this wetland is at the south end at an approximately 20-foot-long earthen berm. There is beaver activity throughout the middle and southern portions of this wetland, where there currently is open water. The north portion of the wetland consists of a narrow stream and scrub

shrub/emergent plants. There is no direct access to this wetland for the general public, and therefore there is no area for education or research without seeking landowner permission.

There are several stone walls that run into and some that run across this wetland indicating that the berm is of relatively recent construction, and that this property was used for animal grazing or crop cultivation in the past.

### **Hovey Meadow Prime Wetland**

This wetland is an irregular-shaped pond and stream, bordered by Pope Road to the south and West Side Drive to the West. This wetland is located to the southwest of the Village Subdivision. Stewart Farm Pond print wetland drains into it from the northeast. Much of this wetland has emergent vegetation with some scrub shrub and a small amount of forested wetland section. There is a section of open water south of Wellington Circle. An earthen dam that may have been a farm road crossing in the past dams the water. Water does percolate through this dam and flows southwesterly, eventually exiting through a culvert under West Side Drive. Just east of this culvert the wetland dries up completely during the dry summer months exposing a cobble rock bottom with little to no vegetation. The unvegetated bottom indicates that flows are sustained until late in the season, and the cobble rock indicates that there are relatively high velocities in the stream. Moving easterly, the wetland becomes a forested pit and mound wetland with an intermittently distinguishable stream channel. The channel is definite near to the earthen berm. Upslope of the berm the wetland is open water and cattail swamp turning back into a forested wetland/mineral bottom stream at the inlet.

### **Stewart Farm Pond Prime Wetland**

This wetland is a shallow bottom, predominantly open water pond with emergent vegetation along the perimeter. There is definite beaver activity, with an active beaver dam at the outlet along the southwest side. There is also another impounded area on the southwest side that borders a logging road; the beaver activity could divert water across a low area, creating a second outlet to this wetland – but only during high flow periods. Along an inlet on the northwest corner is a curious stonewall structure that separated two neighboring herds of cows while allowing them to drink from the wetland that sits along a mineral/cobble bottom stream with surrounding forested wetland. The mill is only distinguishable by the rock foundation in the middle of the stream. The northern section of the wetland is vegetated with various reeds and cattails. Discussions with a local fisherman found that there are fish (such as catfish) found in this pond. A barred owl was flushed in the tall white pines located at the northwest sector of the wetland. This stand of mature pine and the adjacent red maple swamp provide ideal habitat for this species. There are some dead trees within the wetland showing that the water elevation wasn't always this high and that the rising water, possibly due to the beavers, may have killed them.

There is a development of homes surrounding this wetland on the westerly side and they are located mostly on high banks and overlook the open water that is more in the center of the

wetland. It appears that the mowed lawns of some of these houses extend to the wetland/pond edge, which may conflict with portions of the Shoreline Protection Act.

### **West Sawmill Swamp Prime Wetland**

This wetland is a very large wetland located along the northern border of the Atkinson Town line. The Town of Atkinson owns several parcels that border the westerly side of this wetland. Maple Avenue bisects the East and West portions of Sawmill Swamp with a section of fill and a culvert. Water flows from east Sawmill Swamp, through the culvert, and then north through this wetland and across the town border into Hampstead. Other ephemeral (intermittent) streams enter this wetland from the south and west. This wetland is not entirely located within the Town of Atkinson, 64 acres of the 130 acres are located within the Town with the remaining acres located in Hampstead.

This wetland has great diversity, varying from forested wetland, scrub shrub, emergent, and some shallow open water. The banks are fairly distinct for the most part with only limited areas of less distinct prime wetland jurisdiction near the south west corner where the wetland gradually transitions into a forested wetland. This wetland shows great animal diversity with sign of deer, coyote, beaver, various ducks, great blue heron, and many songbirds. There are several islands in the forested wetland. Upland Islands increase overall habitat diversity. One island is almost entirely located within the Town of Hampstead north of the Atkinson Town Line.

### **East Sawmill Swamp Prime Wetland**

This wetland is also a very large, diverse wetland. This wetland flows westerly through a culvert under Maple Avenue into the west portion of Sawmill Swamp, described above. Much of this wetland has shallow marsh emergent and scrub shrub vegetation (standing water) with very little open water (no floating-leaved aquatics). Several ephemeral streams located all along the boundary feed the wetland.

This wetland has great animal habitat. Bear scat was found along the north section of the wetland within a blueberry thicket. There was also sign of coyote, deer, many songbirds, and various ducks. The habitat throughout the wetland is diverse and much of the houses along this wetland are set far enough back to create a substantial buffer for wildlife.

There is some sign of illegal fill (mostly yard debris) found in this wetland along the southeast border at the bottom of a steep hill near Dearborn Ridge Road.

### **Wright Farm Pond Prime Wetland**

This wetland is located between Sawmill Road, Bittersweet Lane, and Kings Grant Drive. There is no direct public access to this wetland, and, therefore, access for research and education is low. However, this is a very diverse and interesting wetland. The diversity and interspersions of habitats range from a large forested wetland to scrub shrub, emergent, open water, as well as a large forested island in the middle of the wetland. This diversity creates great animal habitat. Animal

signs seen during several visits include deer, coyote, great blue heron, various ducks, beaver, and numerous songbirds.

The island is actually now a peninsula joined to the mainland with fill for access road to a community water well. The road has three culverts underneath allowing connection for the natural hydrology. The fill does not appear to have affected the wetland hydrology, and because of the narrowness of the fill and openness of the road, the island could still be considered fairly isolated from the mainland surrounding this wetland. This fill may have adverse impacts to resident wildlife as it provides an access to the island by subsidized predators, i.e., house cats, raccoons and skunks, who are predators for the native species.

There are two stream courses entering the wetland, one from the northeast and one from the east. The northeast stream forms a channel that eventually opens up into the open water of the wetland. The eastern channel drains into the forested wetland and does not form a significant channel.

There is an earthen dam at the outlet at the northwest corner that may have been created by beavers but fortified by people. This dam is approximately 20 feet long but very substantial. If this structure was breached or removed, the water in the wetland would drop several feet drying up the forested wetland section to the southeast.

There were several areas where filling of the wetland is occurring. This is mostly behind the residences along Summit Drive. There were several piles of lawn clippings and vegetative debris as well as dump piles within the wetland.

### **Bryant Brook Prime Wetland**

This wetland runs south along the border of Atkinson and Plaistow. Bryant Brook enters Atkinson from the east, crossing Line Brook Road. The wetland then flows south under East Road, along Bryant Woods Drive, and behind Bayberry Drive, heading under a railroad trestle as it exits the Town of Atkinson to the south. This wetland comes from several wetland fingers that finally develop into a brook that is held back by a large beaver dam (approximately 50 feet long) that spills into a cobble bottom stream course running under the railroad trestle. This wetland has several distinct features. In the south near the beaver dam there is a large span of open water with emergent vegetation along the borders.

Moving upstream, the wetland spreads into narrow swales that extend westward across Bryant Woods Drive. The southernmost stream is held back in one section by an earthen dam approximately 1400 feet from where the swale empties into the main section of Bryant Brook. This dam is approximately 100 feet long. This section of the swale continues to Little Rob Road.

The second swale heads more northwest from Bryant Brook and also extends across Bryant Woods Road. Passing through three culverts it becomes an area that has recently been disturbed by at least three months of continuous draining (as reported by a local resident). The area that had been

## Appendix B, Ecological Descriptions of Atkinson's Prime Wetlands

drained also had some filling and much of the vegetation had been completely removed. Shrubs and trees were cut down, leaving sticks, branches, and wood chips. Though drained, the area remained a wetland with the hydrology still evident.

Moving northward, the wetland becomes a forested pit and mound wetland extending out into an overgrown field along East Road. The wetland passes under a bridge under East Road. On the east side of East Road is a dry hydrant. The wetland continues northward along East Road and then behind some residences and across the town line. There was evidence of dumping of yard debris behind the residences along East Road. The predominant fill was lawn clippings, branches, and vegetative debris.