

## IV. Conclusions

The Town of Meredith is well-endowed with wetland and water resources, which enhance the generally low topography with a rich complexity of wildlife habitat. With 41.7% open water and 7.5% wetland, nearly half of Meredith contains habitat for water-dependent wildlife. Contrary to the findings of the Wildlife Action Plan (NH Fish & Game 2005), there is high quality habitat of state and regional significance away from Lake Winnepesaukee and Lake Winnisquam! The above report summarizes some of these attributes, such as the twelve exemplary wetland communities that form part of the prime wetland system in Meredith, the occurrence of three great blue heron rookeries, the presence of at least three osprey nest territories, a loon nesting area at Lake Wicwas, and remarkable migratory waterfowl stop-over habitats in a number of large shallow water wetland systems from Page Pond to Pemigewasset Lake.

Field findings in 2006-2007 have justified the NRI Phase I selection of aggregated natural resources into co-occurrence areas. With the exception of Hawkins Brook, each co-occurrence area was shown to have high quality natural resources such as prime wetlands, productive soils, groundwater discharge and recharge sites, and aquatic and upland wildlife habitat. Prime wetlands were contained within seven of the ten co-occurrence areas, the best agricultural land was found entirely within one co-occurrence area, the highest yield aquifers were within two co-occurrence areas, the best shallow water aquatic habitat was contained within six co-occurrence areas, and the best upland habitat within two co-occurrence areas. Hawkins Brook, while supporting a prime wetland and the highest yield aquifer in Meredith, was observed to be severely compromised, although it is currently serving a valuable role in mitigating nutrient and road salt run-off into Meredith Bay.

Perhaps the most significant justification of co-occurrence areas having above average natural resource value was the observation of wildlife species and wildlife habitat. High quality wildlife habitat was found in virtually all of the co-occurrence areas, as evidenced by the frequency of wildlife corridors and the diversity of species present. Nearly three-quarters of the 56 wildlife corridors identified in Meredith were located in or adjacent to co-occurrence areas. All of the mammal, > 90% of the bird, most of the fish, all of the reptile and all of the amphibian species recorded during the field surveys were found in one or more of the co-occurrence areas. Nearly all of the Odonate and most of the aquatic invertebrate diversity was found in co-occurrence areas. With the exception of the larger lakes in Meredith, all of the rare plants and animals and exemplary natural communities were found in the co-occurrence areas.

Do significant natural resources exist outside of the co-occurrence areas? On the basis of a small number of natural resource attributes they most certainly do. The most evident example is the large lakes and their immediate shoreline. All but one of the nesting loons pairs occur on the large lakes, as do all of the significant deepwater fish species such as lake whitefish, round whitefish, and rainbow smelt.

The large lakes support rafts of migratory waterfowl, where flocks of several hundred scoter, merganser, or brant are common in late fall. The large lakes supply Meredith with an unending supply of water-based recreation, which in turn fuels the local economy. What is clear, however, is that the positive attributes of the large lakes depend on the quality of the water; and water quality of the large lakes is, above all, contingent on the quality of the water coming into the lakes from tributaries that run through the co-occurrence areas.

As for upland habitat, there are also a number of areas that offer high quality wildlife habitat away from co-occurrence areas. The largely unfragmented forests in the Chemung District offer perhaps the best example of this. Most of the large, upland furbearers are present here as well as raptors and neo-tropical migrant passerines that require unfragmented forests. The upland habitats surrounding Pickerel Pond is another area where a number of unusual wildlife records have been documented, such as bobcat, northern goshawk, and Polyphemus moth. The northern highlands area near Old Center Harbor Road has been significant in the past for the documenting unusual birds such as varied thrush in 2006 and northern hawk owl in 2009. The proximity of open fields, brushy borders, and mixed woodlands attract these two winter vagrants, along with northern shrike, bohemian waxwing, and hoary redpoll. Finally, an oft-overlooked upland habitat area in Meredith are the islands in Lake Winnepesaukee, notably Three Mile, Bear, and Stonedam Island. At least one of these supports a wintering deer yard and two of them support rare plants.

Threats to the integrity of the co-occurrence areas are many, although most come in the form altering of the upland terrain within the CA. Long-term alteration involved in the building of roads or residential subdivisions is an obvious example, although even apparently “minor alterations” – i.e. ones that do not entail a permit from the state, can cause a great deal of damage. The latter includes tree cutting within a prime wetland buffer; the improper replacement of a culvert that effectively blocks the passage of water or wildlife; the dumping of toxic substances such as the storage of one or two old cars; the application of pesticides or herbicides in lawns or powerline rights-of-way; the use of excessive lighting around residences or commercial buildings; and the accidental (or purposeful) introduction of invasive plants that outcompete rare plants or eliminate native food sources for wildlife.

Many of these threats are already being addressed by the Meredith Planning Department and the Meredith Conservation Commission, yet more work still needs to be done. Placing permanent protections on land with high quality natural resources is but one strategy. Providing adequate regulatory standards for large development projects is another. The following section provides a brief description of recommendations strategies for protecting the high value co-occurrence areas in Meredith.

By no means is the list exhaustive; rather, it is meant to stimulate discussion about the possibilities of natural resource protection in the town.

On the whole, Meredith has done very well to provide its citizens with a conscientious integration of natural resource use and protection. Land use zoning, conservation initiatives, educational outreach forums, water quality protection projects, and recreation festivals, derbies, and fairs have all emphasized the need to cherish our natural resource base. The municipal infrastructure is well positioned to handle incoming projects with thoughtfulness and deliberation. During this time of slow development and financial restructuring, it would be wise for the Town to establish clear priorities for action that address permanent protection of those natural resources that will be required for the next century. With the experience, capacity and talent the Town has continued to demonstrate to the public at large, this task should be relatively easy to accomplish.



**Figure 19. Rodger Kruessman from the Trust for Public Land addresses a capacity crowd at Moulton's Farm before a final site walk at Page Pond that helped secure the funds needed to purchase the 550-acre Wilds Property – the heart of the Page Pond Co-Occurrence Area.**