

## WETLAND WILDLIFE ENHANCEMENT

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Following the agricultural drainage era of the early 1900's, vast acreages of previously farmed wetlands in Central Wisconsin reverted to public ownership through tax delinquency or resettlement. Federal, state and county authorities were entrusted with these public ownerships, and by the late 1930's properties such as the Necedah National Wildlife Refuge, Central Wisconsin Conservation Area (now Meadow Valley) and the Wood County Public Hunting and Fishing Grounds had received their identities. Along with "identities" came property managers and management programs.

Historically, wildlife management practices implemented on these publicly-owned lands in the "cranberry region" of Central Wisconsin have emphasized wetlands and wetland species. Managers set about "restoring" literally thousands of acres of drained and formed lowlands to their former wetland status by constructing dams, dikes and impoundments. Where possible, water was held at high enough levels to provide surface water throughout the year. Management consisted of periodic drawdowns and controlled burning to enhance or control wetland vegetation. Development dollars were obtained from an excise tax on sporting arms and ammunition (Pittman-Robertson Fund) and waterfowl stamp revenues. Waterfowl production and staging was emphasized to accommodate an increasing recreational demand.

With the notable exception of ducks, the wildlife response to agency wetland restoration efforts in Central Wisconsin has been a success story. This was made possible by the resilience and adaptability of Mother Nature's critters as well as having the good fortune of having projects located in the midst of extensive existing surface water cranberry developments that provided a source of "seed" as well as many other wetland benefits. Numerous wetland wildlife species such as aquatic furbearers (beaver, muskrat, etc.), waterfowl (Canada geese, some ducks, etc.) and many non-game species (herons, sandhill cranes, etc.) responded positively to these wetland enhancements. Had it not been for these early wetland restoration efforts, populations of these species would not be as abundant or as diverse as they presently are.

It we were to point out the single greatest failure and/or frustration that agency people have had to face in their wetland restoration-enhancement efforts in Central Wisconsin it would have to be our inability to increase local populations of breeding puddle ducks (mallards and teal). The continuous decline in our continental and Mississippi Flyway populations of ducks since the 1940's, coupled with an increased recreational demand have only served to heighten public and managerial disappointment. Although we've had some success in staging or attracting ducks to wetlands during spring and fall migrations, we've had to face failure in our ability to hold large numbers of puddle ducks locally for breeding purposes.

Since wildlife management is a relatively new science (only dating back to the 1930's) when compared with many others such as cranberry culture, we've had to "learn as we go" using traditional methods of trial and error. However, as with any science, we've also recognized the need for research and the delving into the intricacies of nature in our attempts to find solutions to problems. Perhaps if all the habitat requirements of a species were known, we'd then have sufficient insight as managers to address and correct problems.

In our efforts to conserve and enhance continental waterfowl populations in North America, research biologists have been studying the breeding biology of various species for almost 50 years. These efforts have been concentrated in "traditional" duck breeding areas such as the prairie pothole regions of the United States and Canada where 96% of all production occurs.

Research findings on breeding puddle ducks indicate that essential habitat requirements include 1) shallow seasonal and temporary wetlands, 2) 3-4 acres of upland nesting cover for each acre of surface water wetland, 3) fertile, clear water which is neutral to slightly basic - pH 8.0 - 9.0 and, 4) a protein lode or source within the water consisting of invertebrate larvae, snails, etc. that is available to hens during nesting and broods during the summer rearing period.

In attempting to compare our Central Wisconsin breeding duck habitat then with "the duck factory" situation in the prairie pothole region, one can see that the greatest habitat disparity occurs in water quality. Where "duck factory" water is clear, fertile and basic, our "Great Swamp" region of Central Wisconsin is characterized by having bog waters that are strained or dark in color, infertile, acidic (pH 4.0 - 6.0) and generally lacking in the aquatic invertebrates required for major duck production. We could go so far as to say that the very waters that make our region a top cranberry producer also appear to be the major limiting factor for puddle duck rearing. So what can we as wetland owners do to enhance our wetlands and wetland wildlife?

We as agency people have come to accept our wetland limitations as it pertains to breeding ducks at least until technology becomes available to provide realistic tools and procedures for change. However, our existing wetlands can continue to benefit many other wildlife species that have adapted to our Central Wisconsin area. Perhaps our best example of a recent adaptation is the Canada goose and its increase in breeding numbers over the past 20 years. Since it obtains its "protein lode" for reproduction by grazing on green vegetation similar to a cow, it has found your cranberry developments to be very suitable habitat. While this may not be desirable depending on individual growers tolerances, it does indicate a very positive response by a species to excellent wetland habitat.

We have attempted to enhance wetland habitat conditions on public lands using periodic drawdowns to provide plant foods for migrating waterfowl, controlled burning to control brush and release nutrients, water level manipulations and nesting island construction. While we feel these all have been of some benefit they have not been down without great expenditures of time and money.

We would like to pose the following suggestions to you that we feel could guarantee the continued existence of our wetland wildlife species in Central Wisconsin with a minimum of expenditures on your part.

- 1) Maintain every acre of surface water wetlands possible because of their benefits to all living things - including mankind.
  - 2) Mitigate wetland losses brought about by developments such as bed expansions, etc.
  - 3) Support legislation that restores wetlands such as Waterfowl Production Areas, Habitat Restorations areas, etc.
  - 4) Provide financial and moral support to private organizations attempting to conserve wetlands such as Ducks Unlimited, Wisconsin Waterfowlers Association, etc.
  - 5) Remain concerned about how important your wetlands are for wildlife.
  - 6) Continue to prove to the world that cranberry culture and wildlife can co-exist!
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