

INCREASING WATERFOWL PRODUCTION
ON
NATURALLY OCCURRING ISLANDS WITHIN THE DEVILS LAKE WMD

Wetland Management District
Devils Lake, North Dakota

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INTRODUCTION

The current outlook for waterfowl populations is not encouraging. Mallard populations have reached an all-time low. Intensive farming practices have drastically reduced the quantity of wetlands and upland cover available to nesting birds. High predation rates are significantly curtailing nesting production, and many local populations are no longer self-supporting.

The recent documentation of high nest density and nest success on islands in North Dakota offers a bright spot in an otherwise bleak picture. In an effort to tap the production potential of islands, a survey was conducted in the spring of 1985 to locate public and privately owned islands existing within the Devils Lake Wetland Management District (WMD). Under the guidance of John Lokemoen of the Northern Prairie Wildlife Research Center, a wide array of physical and vegetative data was gathered on each island which met survey standards. Preliminary results indicate that several islands have excellent waterfowl production potential.

Of great concern was the significant number of islands found during the survey that initially appeared unproductive but are only in need of minor physical alterations to obtain greater productivity. Many of these islands were excluded from the survey and all consequent investigation because of some minor disqualifying physical characteristic. Many of those characteristics can be easily rectified by waterfowl managers.

Waterfowl managers cannot afford to overlook the production potential and the economic feasibility of developing tracts such as those mentioned in this report. For instance, by merely raising the water level of a wetland or by physically removing cattail peninsulas, nesting islands of 5 to 8 acres can be created. Less expensive than construction of new islands, these actions would be very cost efficient based on a duck/dollar ratio, particularly when compared to current management techniques.

Recommendations

The basic objectives of this report are:

1. Document the existence of "islands" necessarily omitted from the 1985 study.
2. Suggest realty options for tracts with production potential.
3. Identify those tracts needing physical manipulation to enhance waterfowl production potential.
4. Suggest alternative funding sources.

Numerous islands were omitted from the 1985 survey but have excellent production potential. If these tracts were not documented in the following text, their existence and the opportunity to develop their production potential would more than likely be lost forever. As islands continue to become more important in recruitment to waterfowl populations, so shall the documentation of the existence of island tracts.

Development of the production potential of many of the tracts in this report may require a change in present land ownership. Fee title purchase of the island tract and associated wetland by the the Fish and Wildlife Service is preferred, but such is costly and some tracts could be owned by unwilling sellers.

The purchase of island easements is an alternative that could insure future waterfowl production. It would be less expensive than purchase in fee and may be more acceptable to present landowners. The island easement must insure an adequate water level to encompass the island, guarantee access to the island, and provide permission to control predators.

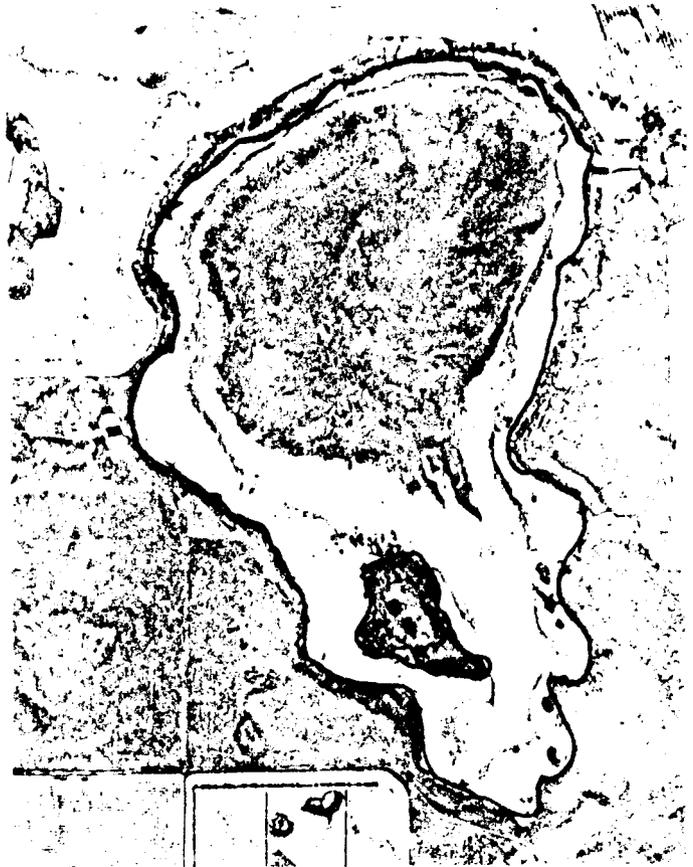
The main type of physical manipulation needed on most islands is the enhancement of the open water barrier. In some situations this can be best achieved by a dragline/dredge operation, while in other situations, it can be accomplished by raising the water level of the wetland encompassing the island. Such operations would produce substantial island acreage at a fraction of the cost of actual island construction.

Due to current fiscal constraints within the Service, funding from private organizations such as Ducks Unlimited should be sought to help develop the production potential of islands. Ducks Unlimited (DU) funding could assist the Service in enhancing the open water barrier encompassing islands. DU funding could also be used to purchase many potential island tracts since most tracts involve small acreages and are generally noncontroversial in nature.

The following consists of brief summaries and recommendations of those islands in need of some alteration of present status to achieve desired production levels.

BAKKEN ISLAND

T. 155 N., R. 71 W.
Section 5



Description:

This 8.0 acre island located in western Benson County is owned by the U.S. Fish and Wildlife Service. It lies 35 yards from shore in a Type IV-E-4 Wetland.

Field Observations:

This island was visited twice during the nesting season. Cattle trespass and the consequent destruction of nesting cover was extensive. All available nesting cover was heavily trampled and therefore of little value to waterfowl. Cattle gained access from the south across a narrow shallow band of open water. Buckbrush, wormwood, and various tall shrubs were the major plant species observed.

Recommendations:

The adjacent landowner should be contacted to prevent cattle trespass.

Fence installation along WPA boundaries should be considered to alleviate the problem.

The open water barrier along the southern shore of the island is inadequate to deter predators. The average water depth between the island and mainland is only 8-12 inches and is choked with emergents. A dragline/dredge operation is recommended to widen and deepen the open water barrier.

Funding by DU should be considered to enhance the open water barrier.

Herbicidal treatment of the dense emergent vegetation could enhance the open water barrier and serve as a temporary deterrent to predators until a dredge operation can be implemented. The dense clumps of Hawthorn on the island should be removed and replaced with vegetation such as low-growing shrubs and natives grasses which are preferred by nesting waterfowl.

BITTER LAKE ISLANDS

T. 152 N., R. 59 W.
Section 27



Description:

These three potential islands are located in central Nelson County and comprise approximately 8.0 acres. The "islands" lie in a 600 acre wetland of good quality. The tract is owned by E.F. Fox and Alice Rudh.

Field Observations:

The "islands" were visited during the 1985 nesting season and were determined not to have island status due to low water. The islands were actually elevated spots in the midst of wet meadow vegetation. The vegetative cover was of excellent nesting quality. Approximately 75 percent of the islands was covered with low growing shrubs while the remaining cover consisted of dense stands of native grasses. Abundant signs of mammalian predators were

observed on each island. Due to the high quality of nesting cover, potential island acreage, and wetland quality, the waterfowl production potential of this tract is held in highest regard.

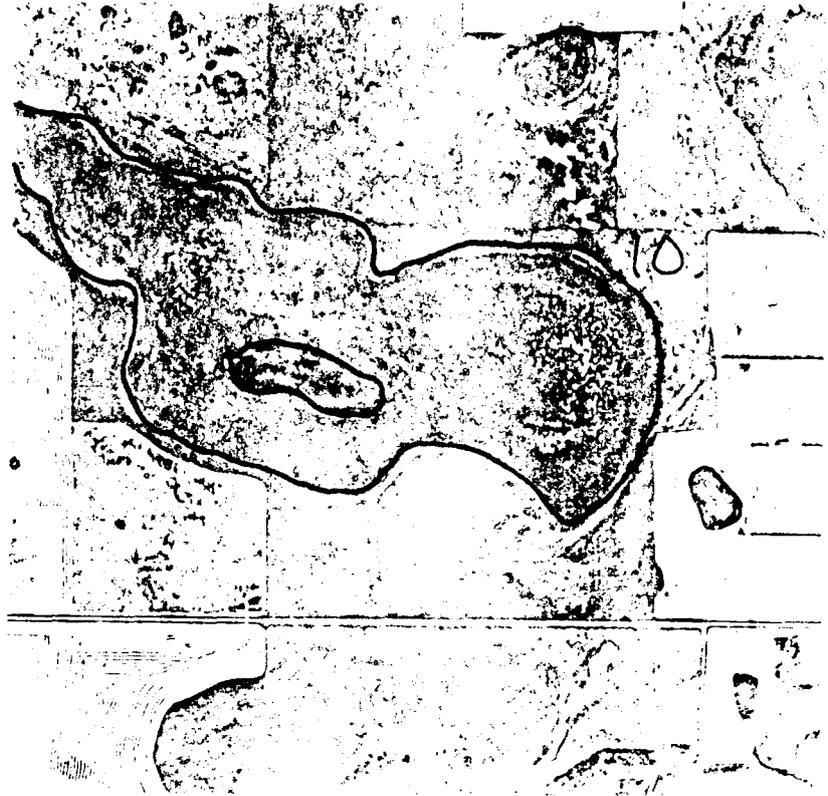
Recommendations:

If the water level of the wetland basin can be raised and thereby create adequate open water barriers around each island, fee title acquisition or the purchase of an island easement is strongly recommended. The wetland basin is contained by steeply sloped uplands and it appears that an additional 1-2 feet of water could be easily retained within the basin as indicated by the above aerial photo (August 1967).

Because so much can be gained by so little invested, it is recommended that the Service or outside agencies further investigate the exceptional production potential of this unique tract.

CALDERWOOD ISLAND

T. 162 N., R. 62 W.
Section 10



Description:

This 5.0 acre island is located in southeastern Ramsey County. It lies 100 yards from shore in a 160 acre Type IV-B-3 wetland. The island is owned by Willis Calderwood, Route 1; Crary, North Dakota.

Field Observations:

The island was visited twice during the 1985 nesting season. Buckbrush, wild rose, and native grasses, respectively, constituted the major vegetation types of the island. Seven waterfowl nests were found on the island despite abundant mammalian predation. The open water barrier encompassing the island is sufficient to deter predator ingress to the island.

Recommendations:

The island is only in need of predator control to obtain desired production levels. Fee title acquisition or the purchase of an island easement should

be sought to guarantee future predator control efforts. If the owner is unwilling to the above options, perhaps a simple annual agreement can be worked out enabling the Service to control predators. Due to the fact that the islands' physical characteristics are ideal, needing no physical improvements of any kind, the Service must enthusiastically pursue every alternative to implement a predator control program.

FILLMORE ISLAND

T. 154 N., R. 71 W.
Section 3



Description:

This 2.0 acre island is located in western Benson County 2 miles east of Fillmore. It lies 160 yards from shore in a Type IV-D-3 wetland of approximately 200 acres. The island is owned by Adolph Olson, Route 1, Esmond, North Dakota.

Field Observations:

The island was visited twice during the nesting season and was found to be flat and very low-lying. The abundance of moist soil plants and various pioneer plant species suggests frequent periods of inundation. The depth of the water encompassing the island was approximately 2-4 feet. It is believed that the water depth and distance from shore were responsible

for the lack of mammalian predators. The relatively wet nesting conditions as dictated by the low-lying topography of the island was believed to be the major factor deterring nesting. All nests discovered were established late in the nesting season when conditions on the island were considerably drier.

Recommendations:

Although currently of island status, the tract must be higher and drier to enhance waterfowl production. The island could be elevated by a dragline/dredge operation. Acquisition of the tract or the purchase of an island easement is recommended only if the island elevation is increased. Although expensive, such improvement would be more economically feasible than actual island construction.

HORSESHOE LAKE ISLAND

T. 155 N., R. 59 W.
Section 28



Description:

This 8.0 acre Walsh County island lies 75 yards from shore in a 140 acre wetland. The island is owned by Gordon Matajcek of Route 1, Brocket, North Dakota.

Field Observations:

The island was visited once during the nesting season and no nests were discovered. Heavy grazing by cattle was evident and probably deterred nesting attempts. Cattle access to the island was from the southwest across a narrow band of wetland choked with dense emergent growth. The existing vegetation of the island has excellent nesting potential if cattle are excluded from the island.

Recommendations:

This island has excellent waterfowl production potential due to its large 8.0 acre size, vegetative cover, and location in a quality wetland. The

purchase of an island easement or acquisition by the Service or other conservation agency is advocated.

A considerable percentage of the island is covered by tall shrubs, i.e., Hawthorn and chokecherry. These vegetation types are not conducive to waterfowl nesting and should be removed. Low growing shrubs such as gooseberry, wild rose, and buckbrush should be encouraged as replacement species.

Predator ingress to the island must be discouraged by creating a larger open water barrier on the southwest corner of the island. A dragline operation is suggested to widen and deepen this area. This simple operation would enhance the tract, creating an 8.0 acre island at substantial savings compared to the actual construction of an island of similar size.

ISLAND LAKE

T. 152 N., R. 71 W.
Section 34



Description:

This Ramsey County island of approximately 5.0 acres is owned by the U.S. Fish and Wildlife Service. It lies 25 yards from shore in a 120 acre Type IV-B-3 wetland.

Field Observations:

Tall shrubs, small trees, buckbrush, and various forbs, respectively, constituted the major vegetation types of the island. Abundant signs of mink and raccoon were observed and consequently no active waterfowl nests were found during the two visits to the island. The island is connected to the mainland via a narrow band of cattails. The water depth in this cattail band averaged only 2-4 inches.

Recommendations:

Since tall shrubs and small trees occupy 40 percent of the island, their removal would add considerably more nesting cover to the island. A prescribed burn of the island in the fall would dispose of the slash while ensuring the earliest green-up of nesting cover the following spring.

To prevent predator access, the band of cattails connecting the island to the mainland should be removed with a dragline. By just removing this narrow band of cattails, an island of approximately 5.0 acres will result. Again, DU funding could be requested for this worthwhile project.

LAKE IBSEN

T. 155 N., R. 68 W.
Section 9



Description:

This 8.0 acre island is located in Benson County, 3 miles south of Leeds, North Dakota. It lies approximately 150 yards from shore in a Type IV-B-2 wetland. The island is owned by the State of North Dakota.

Field Observations:

The island was field checked twice during the 1985 nesting season. Only one nest was found and it was later destroyed by a predator. Abundant signs of mammalian predators was observed on the island. Various species of moist soil plants, native and exotic grasses, and low shrubs, respectively, constituted the island vegetation types. Approximately 40 percent of the island was low-lying and consequently provided poor nesting cover.

Recommendations:

Waterfowl nesting potential of the island could be enhanced by improving the open water barrier encompassing the island. The island is presently

connected to the mainland on the northwest by a dense band of emergent vegetation. It is recommended that a dragline or dredge operation funded by an organization such as DU be implemented to create a deeper open water barrier.

A peninsula located just south of the previously discussed island has island potential if funding should be obtained to cut a large open water barrier through the existing wet meadow connecting the island to the mainland. The economic feasibility of developing this tract would merit consideration if equipment is brought in to work on the aforementioned project.

RICE ISLAND

T. 153 N., R. 69 W.
Section 23



Description:

This 3.0 acre island is located in west-central Benson County approximately 11 miles west of Minnewaukan, North Dakota. It lies approximately 100 yards from shore in a 160 acre wetland and is owned by the U.S. Fish and Wildlife Service.

Field Observations:

The island was field checked during the 1985 nesting season and has insufficient water encompassing it to be considered as an island. The water level within the wetland basin seemed to be abnormally low due to climatic conditions. Buckbrush, wild rose, and various native grasses were the major vegetative types. The vegetation is of excellent nesting quality and the island has great production potential if a larger open water barrier would

encompass the island. Abundant evidence of mammalian predators was observed on the island and on trails across exposed mud flats leading to the island.

Recommendations:

Excavation of the island periphery with a dragline is recommended. This action will ensure the tract of island status during years of low precipitation and enhance the open water emergent-free barrier to predators during years of normal precipitation.

The short-term control of emergent vegetation with herbicides could enhance the open water barrier until a deeper and more permanent open water barrier is developed.

SHEEP LAKE

T. 154 N., R. 69 W.
Section 5



Description:

This 2.0 acre island is located in west-central Benson County. It lies approximately 175 yards from shore in a Type IV-E-4 wetland. This island is owned by Ronald Lysne, Route 1, Brinsmade, North Dakota.

Field Observations:

The island was field checked twice during the 1985 nesting season. A dense concentration of waterfowl nests occurred on the island. Abundant signs of mammalian predators, especially mink, was evident as 14 of 17 nests were destroyed by mammalian predators. Buckbrush, wild rose, and native grasses, respectively, constituted the major vegetation types. Through conversations with the owner of the island, it was learned that the island has a history of dense waterfowl nests.

Recommendations:

This island has the potential of becoming an excellent waterfowl nesting area. The vegetation and physical attributes of the island are exceptional. Fee acquisition, the purchase of an island easement, or an agreement enabling the control of predators should be enthusiastically sought by the Service to ensure the exceptional waterfowl production potential of this island.

ULLYOTT ISLAND

T. 162 N., R. 59 W.
Section 33



Description:

This Cavalier County tract is located 4 miles northeast of Langdon, North Dakota. The "island" consists of approximately 6.0 acres and is partially encompassed by a 70 acre wetland. The tract is owned by the Service.

Field Observations:

The tract is connected to the mainland on its southwest side via a wet meadow. Access to the island was easily accomplished without the aid of hip boots. Native and tame grasses and various forbs were the major vegetation types observed on the island

Recommendations:

If funds can be obtained, a dragline could distinctly isolate the island from the mainland, creating a 6.0 acre nesting island. This operation would be costly due to the width of the existing wet meadow link between the island and mainland. DU funding could help defray the cost of this worthwhile development project.

Once the island is isolated from the mainland, the dense growth of emergents encompassing the island should be reduced. This can be done with a herbicidal treatment or varying other management techniques and will increase pair water while enhancing the integrity of the open water predator barrier.