2023 Annual Marsh Report

I. Status of the Marsh in 2023.

This is the fifth year during which the level of the water in the marsh had been allowed to cycle naturally following cessation of the draining of the marsh prior to which the marsh was completely drained in the summer of each of three consecutive years. Nearly every month from September 2022 through July 2023 except October and December of 2022 and April of 2023 was drier than normal. Measurements of rainfall totaled monthly from September 2022 through July 2023 compared to 20-yr monthly averages for those same months at a rain gage station near the marsh averaged 75% of normal. From late fall 2022 to early summer of 2023 water levels in the marsh increased to fully flooded, i.e. the level of water was at or flowing over the top board in the water control device (WCD), beginning at the start of January 2023, a month and a half later than the previous year, and continuing to the first week in May 2023, about three weeks earlier than the previous spring. The depth of water in the marsh typically decreases over summer and into early fall.

As reported in the 2022 Annual Marsh Report beaver activity was first observed at the WCD on July 25, 2022. The beaver was in the process of building a dam at that time. By September 4, 2022 the beaver had amassed a dam with a surface area of about 4.6 sq m and a volume of about 3.4 cu m. The beaver has continued to add to the dam to the extent that the dam currently abuts the WCD on the west and south sides. The dam building effort of the beaver has succeeded in staunching though not completely stopping the flow of water through the leak in the WCD while precluding the removal of any boards in the WCD. As a result the beaver dam is at present seriously compromising the ability of the WCD to control the level of water in the marsh.

Trumpeter Swans used the marsh intermittently for foraging and resting throughout the winter of 2022-23. Data on swans during this period are based on the observations of Jim Vedder, Claudia Fullerton, and me. Swans were first observed at the marsh on 7 Nov 2022. They were last seen on 14 March 2023. The frequency of occurrence of the swans on the marsh in 2022-23 was 64%. Most (78%) of those sightings were of one pair of swans. As a result the average number of swans using the marsh in 2022-23 was 2.6 individuals. The maximum number of swans counted on the marsh at any given time was relatively low (4 birds).

Between 1 November 2022 and 31 March 2023 migrating and wintering ducks ranged up to 67 individuals. During this period the number of ducks exceeded 40 individuals 37% of the time. Between four and seven species occupied the marsh in the fall-winter of 2022-2023. Bufflehead averaged the highest count (10.6 ducks) during this time followed by the Ring-necked Duck (7.1 ducks) and the Mallard (6.2 ducks). At least four species of waterfowl, Mallard, Ring-necked Duck, Wood Duck, Hooded Merganser and probably Blue-winged Teal raised at least one or two brood(s) of ducklings depending on the species in the marsh in late spring/summer of 2023. A juvenile of at least one brood of the Pied-billed Grebe was seen by me in the marsh in the summer of 2023. Other marsh birds were counted at levels generally comparable to counts

in 2022. An American Bittern was seen or heard in the marsh six times by Karen Vedder or me in winter 2022 or spring-summer 2023. In late August of 2023 Jim and Karen Vedder saw two bitterns at the marsh.

II. Cattail Grooming Test.

In the late summer of 2022 Craig Staude and I cut cattails using an Aquatic Vegetation Groomer after the method recommended by Beule (1979) (see the 2022 Annual Marsh Report). This work was repeated in late summer 2023. To date cattails and the yellow-flag, *Iris pseudoacorus*, have been cropped in an area of over 60.4 m^2. Most of that area has remained cattail free in the summer of 2023.

III. Plans for 2024

The primary objective of the Marsh Committee in 2024 is the removal of the beaver dam (see below). In addition, cattail grooming will continue in the fall of 2023 until late fall and winter rains begin filling the marsh eventually denying access to cattails in deeper water. In 2024 the area of cattail grooming in the test area will be expanded. In addition, I will attempt to develop a method to control Yellow-flag. Beule's method is not effective in removing this species which is common in the test area.

IV. Recommendations

Because of the extremely adverse effect of the beaver dam on the functioning of the water control device Craig Staude and I drafted a proposal to remove the beaver dam. Craig presented the proposal at the 2023 Annual Meeting of the Three Meadows Homeowners Association. The Association approved the proposal. As recommended in the beaver dam removal proposal all boards will be taken out of the WCD at the same time the dam is removed effectively resulting in a total drawdown of water in the marsh. This action will allow removal of the material that the beaver has deposited on the downstream side of the WCD. The drawdown should also discourage the beaver from rebuilding the dam because there will no longer be water flowing through the WCD.

V. Literature Cited.

Beule, J. D. 1979. Control and management of cattails in southeastern Wisconsin wetlands. Technical Bulletin No. 112. Madison, WI: Department of Natural Resources. 40 p.

Submitted by,

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Date: 25 September 2023