

**FERC ENDANGERED RESOURCES INVENTORY  
SUMMARY REPORT  
High Falls Reservoir, Marinette County, Wisconsin**

Report to  
Wisconsin Department of Natural Resources  
Rhinelander, Wisconsin

**INTRODUCTION**

High Falls Reservoir is a 1498-acre hydroelectric project located in Marinette County on the Peshtigo River. Forestland associated with this project and under Wisconsin Public Service Corporation ownership totals 2953 acres. Botanical surveys for endangered, threatened, and special concern terrestrial and shoreline plants were performed on the flowage and associated WPSC lands.

**METHODS**

A list of anticipated plant species for the dam site was compiled based on the Wisconsin Rare Vascular Plant Working List, actual rare plant sightings by county and habitat, and known habitat present on the dam. This list is included with this summary report.

Surveys were performed on associated WPSC lands and on the shoreline of the flowage. All survey sites were accessed on foot. In accord with the list of anticipated plant species, specific habitats on associated lands which would be most likely to contain listed species were surveyed in detail. Shoreline sites were selected on a random basis. A map of these survey sites is included with this summary report. On associated lands, these detailed surveys involved identification of all plant species encountered during a meander throughout the target habitat. For shoreline sites, all species within a plot would be identified. This plot would cover an area roughly rectangular in shape that in its length paralleled the water line and in its width extended onto shoreline that is beyond the reach of high water. The plot would be 10 meters in length and 3 meters in width. Population densities were estimated using the Braun-Blanquet scale. These detailed surveys are recorded on the Field Survey Forms included with this summary report.

**RESULTS**

The survey was conducted in mid August of 1992. A cool spring has delayed the flowering of plants in this area by as much as three weeks from the norm. Frost damage of late June was evident on some species, most notably on *Pteridium aquilinum var pubescens*.

The vegetation of the shoreline presented no unusual species. In fact, the species present included many associated with a more stable shoreline community. These included *Philonotis sp.*, *Onoclea sensibilis*, *Chelone glabra*, *Sphagnum magellanicum*, *Anemone canadensis*, and *Saxifraga pennsylvanica*. Nevertheless, it evidenced the impact of human activity and the disturbance of inundation. About 10% of the shoreline is developed, mainly in resorts and private residences. The forest has experienced logging, as is evident in the absence of trees over 50 years of age. Numerous stumps are visible in the shallows. Some shoreline species such as *Impatiens capensis*, *Sium suave*, and *Lycopus americanus* are invasive or opportunistic.

The vegetation of the associated forestlands presented some habitats of promise, particularly rock outcrops, and open fields dominated by grasses and *Carex*. Access proved to be a problem, as much of the land surrounding WPSC land is privately owned and well posted against trespass. Local folk advised against attempting passage through some of these lands. One irate landowner his equally irate spouse were encountered after accidentally trespassing on their land in effort to reach a prime rock outcrop at site 03-4. As a result, a few targeted sites were not within reach. These included a

mixed conifer swamp and a nearby bog at T33N, R18E, S35. All sites surveyed presented no listed plants. However, both the open fields and the rock outcrops contained plants associated with certain listed species, and gave all of the appearance of suitable habitat. The open fields, particularly site 17-1 had associates of *Arabis missouriensis*. The rock outcrops also had associates of *A. missouriensis*, most notably *A. laevigata*, a close relative both in genus and appearance. The swamp at site 12-9 and the upland at site 17-7 both contained a mixture of species not normally allied with anticipated listed species. These included numerous species indicating the recent disturbance of logging, in the case of the upland, or of inundation, in the case of the swamp. Other habitats on the associated forest lands, being dominated by *Quercus ellipsoidalis*, *Pinus resinosa* in plantation, and young *Populus tremuloides*, were less than suitable for listed plants, and were not surveyed in detail.

Non-plant listed species were not in evidence.

### CONCLUSION

Despite the non-evidence of listed species in the sites surveyed, the presence of some plants associated with listed species in the open fields and the rock outcrops suggests the possibility, albeit remote, that listed plants exist in these habitats. These would most likely be *Arabis missouriensis* and, to a lesser degree, *Botrychium ternatum*.

The failure to access the sites mentioned above is, at it's worst, a mild disappointment. Judging by the lack of listed plants in similar habitats in the associated lands, and the WPSC Stand Descriptions, it is not likely that listed plants would be in evidence.

To maintain the present status of vegetation and habitat, current management schemes are appropriate. To maintain the remote potential for listed plants seen in rock outcrops and open fields, protection of these habitats might be considered.

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