

GRAND LAKE MEADOWS HISTORICAL MAPPING

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Grand Lake Meadows is a historically and ecologically significant wetland in New Brunswick. This research studied Grand Lake Meadows through the analysis of historical maps held at the Provincial Archives of New Brunswick. The map analysis aimed to uncover previously unknown societal and geomorphological information about the area. Once the historical maps were identified, analyzed and georectified, they were posted on the Internet and made accessible through dynamic web-based map mashups using OpenLayers and Web Map Services. A series of supporting web pages were created to encourage site visitors to explore the Grand Lake Meadows historical maps through a series of puzzles and quizzes created with Hypertext Preprocessor, JavaScript, and Scalable Vector Graphics. The website aims to support existing initiatives which promote awareness of the significance of this area.

Au Nouveau-Brunswick, les prés du Grand Lac Meadows est une importante zone humide du point de vue historique et écologique. L'analyse de cartes historiques conservées aux Archives provinciales du Nouveau-Brunswick a permis la présente recherche sur les prés du Grand Lac Meadows. L'analyse des cartes visait à découvrir des renseignements sociétaux et géomorphologiques précédemment inconnus au sujet de la région. Lorsque les cartes historiques ont été identifiées, analysées et géorectifiées, elles ont été affichées sur Internet et rendues accessibles par l'entremise de cartes composites Web dynamiques en utilisant OpenLayers et les Services de cartographie Web. Une série de pages Web d'appui ont été préparées pour encourager les visiteurs du site à explorer les cartes historiques de la zone humide des prés du Grand Lac Meadows à l'aide d'une série de casse-têtes et de jeux-questionnaires qui ont été créés à l'aide d'un préprocesseur d'hypertexte, de JavaScript et de graphiques vectoriels évolutifs. Le site Web vise à appuyer les initiatives en place qui font la promotion de la sensibilisation et de l'importance de cette région.

1. Introduction

A map as a visual representation of a place in time can often communicate historical information to a reader more quickly and simply than text [University of Saskatchewan 2013]. As place names and boundaries change over time, a series of historical maps are an excellent medium to follow this migration path [Miller-Wilson 2013]. The maps used in this research are primary source documents. These maps communicate the thoughts, ideas and technology of the time period and its inhabitants, providing a powerful sense of history and its complexity. The historical maps included in this research date back to the 1700s in the area of Grand Lake Meadows (GLM).

Located in central New Brunswick (NB), GLM is considered a historically and ecologically significant area. It is the largest freshwater marsh/wetland in

the province with a total area of over 5000 hectares [Paponnet-Cantat and Black 2003]. The boundaries of GLM as used in this research follow the definition put forth by Washburn and Gillis Associates Ltd. [1996], who defined the area of GLM as being bound on the east by the Jemseg River and to the north by various bodies of water including Grand Lake, Back Lake, Maquapit Lake, French Lake and two extensive thoroughfares—the Main Thoroughfare and the Lower Thoroughfare. The southern extent of the GLM area is bound by the Saint John River, and the western limit is bound by a road that connects McGowan's Corner to Lakeville Corner [Washburn and Gillis 1996] as shown in Figure 1.

GLM is known for its diverse ecology and abundant wildlife, especially its waterfowl during the spring and fall migration [GNB 2013]. This diversity is due to three factors; the presence of Grand

Lake, extensive floodplains and the presiding water levels over the growing season [GNB 2013]. The GLM project area consists primarily of a broad flat floodplain and wetland meadow with elevations ranging from sea level up to 16 m [Paponnet-Cantat and Black 2003].

While GLM contains a diverse ecology and an abundance of wildlife, with many species being found only within this region of NB, a rich history of human settlement also exists, with records dating as far back as 6000 years [Paponnet-Cantat and Black 2003]. Settlers were attracted to GLM for several reasons: the system of rivers and lakes provided relatively easy transportation and fresh fish year-round; rich, moist soil found in GLM was excellent for planting crops; and the moderate climate and rich ecosystem