

**GRAND LAKE MEADOWS WETLAND
EDUCATION PROGRAM**

TEACHER'S WORKSHOP

October 21, 2005

FINAL REPORT

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TANTRAMAR WETLANDS CENTRE

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Introduction

In 2003 the Grand Lake Meadows Project Management Committee (GLMPMC), lead by the New Brunswick Department of Natural Resources (NBDNR) implemented a Grand Lake Meadows Wetland Education Program. Funding for this program was provided through compensation dollars for habitat loss in Grand Lake Meadows from the construction of the new portion of the Trans-Canada highway in Jemseg. The initial phase of this project involved the creation of an education program for Grade 4-12 students. This program was designed to raise awareness of the natural and cultural significance of Grand Lake Meadows as a Provincially Significant Wetland. In 2004 the New Brunswick Wildlife Federation completed the education program content and delivered it to the GLMPMC and NBDNR. In 2005, NBDNR implemented the second phase of this project which involved organizing a workshop to introduce the Grand Lake Meadows Wetland Education Program to teachers from schools throughout the Grand Lake region. The workshop was organized and delivered in Fredericton by staff from the Tantramar Wetlands Centre on October 21, 2005. This report provides the results of this workshop along with recommendations for the future direction of the program.

Workshop Content

The Grand Lake Meadows Wetland Education Program was designed to be particularly relevant to schools that are in the vicinity of Grand Lake. The primary goal of this program is to increase awareness of the value of this wetland among students and teachers who live near the site. Grand Lake Meadows is one of the largest freshwater wetlands in the Maritimes and is the largest piece of wetland habitat in New Brunswick. The area encompasses 3000 ha and is located within Grand Lake which is the largest freshwater lake in NB. Due to its size and natural and cultural significance, Grand Lake Meadows was one of the first wetlands to be designated a “Provincially Significant Wetland” by the Province of New Brunswick.

Grand Lake Meadows is an important piece of Saint John River floodplain habitat dominated by seasonally flooded shrub wetland, permanently flooded marsh and floodplain forest. The size and habitat types within the Meadows make it home to several rare plants and animals including, false nettle, buttonbush and the yellow rail. The area is an important breeding and staging area for waterfowl and numerous songbird species breed in the region. Most common New Brunswick mammals are found in the area and it is particularly well known for a healthy moose population. Several fish species including, alewife and American eel spawn in the shallow marshes of Grand Lake.

Culturally Grand Lake Meadows is steeped in history and provided subsistence for First Nation communities and early European settlers. Jemseg is the site of the first European trading post on the Saint John River and Fort Jemseg. One of the most important New Brunswick collections of First Nation artifacts was also discovered in Jemseg. Today many people derive income from activities such as fiddlehead harvest and eel fishing in the Meadows and the area provides many recreational opportunities.

The goal of the Grand Lake Meadows Wetland Education Program was to provide teachers and students with activity- based classroom resources that highlight the natural and cultural significance of the region. It was important to make this program experiential since this type of learning is proven to have long lasting impacts on students. The program was designed to be easily deliverable by teachers so that it will be used in the classroom on a regular basis.

The underlying theme of this program is “Through the Seasons” since as the seasons change so do the wetlands of Grand Lake. At different times of the year Grand Lake Meadows has particular natural values and functions and human interactions with this wetland are closely tied to the seasons. The goal of the workshop held on October 21, 2005 was to introduce the program to teachers and provide them with the classroom resources to deliver the program in their schools. The workshop agenda was as follows:

***Grand Lake Meadows Education Program
Teacher Workshop
AGENDA***

***Welcome and explanation of the day
“The Wetlands of Grand Lake” slide presentation and discussion
Activity Sessions
What this program can do for you!
Lunch and field trip
Distribution of resource kits and wrap up***

Teachers were first introduced to Grand Lake Meadows with a PowerPoint presentation that provided them with background information for the day’s activities. Then teachers worked through each of the activities for the three grade levels. All of the teachers at the workshop participated in all three activities to provide them with information that they could share with colleagues that may teach different grade levels.

Grade 4-5 Activity - “Tales from the Meadows”

Children at this age respond well to visual and sensory experiences. The approach with this age group is to combine sensory experience with storytelling to link natural history information with words to visually illustrate the connectivity between wetlands and humans. The activity for this age group uses poetry to illustrate the natural history and cultural significance of Grand Lake Meadows. Seating students around an artificial campfire, poems are read and students must identify the plant or animal that is being described from a picture sheet. Props such as replica tracks and eggs further enhance this activity.



Grade 6-8 Activity – “Marsh Munchers”

At this age students develop greater skills in abstract and creative thinking. They can also understand the interplay of environmental and human systems in greater depth. The approach at this age level concentrates on exploring wetland animal adaptations and biodiversity. In this activity students examine animal specimens such as tracks and scat and make conclusions about what the animal eats, its trophic level and how it is adapted to life in Grand Lake Meadows.

Grade 9-12 Activity – “Road Rage”

The approach at this age level is to use a debating technique to illustrate the many issues surrounding the conservation of Grand Lake Meadows and the potential impacts of the new highway on the site. At this age students possess the skills to act as responsible citizens and the goal is to promote a stewardship ethic in these young people. The activity entitled “Road Rage” helps students understand the complicated process of balancing human needs and nature in wetland conservation.



In the afternoon teachers were taken on a field trip to Jemseg. The field trip showed teachers the footprint of the new highway and provided them with a sense of the wetland damage that occurred. Teachers then traveled along a trail that provides access into some

seasonal wetland and floodplain forest associated with Grand Lake Meadows. Teachers were shown several natural features on the trail along with suggested activities they could do with their students such as sampling aquatic invertebrates or bird watching. Finally we showed the teachers the upper portion of the Meadows where the area meets with the Portobello Creek National Wildlife Area.



Upon their return to Fredericton teachers were provided with classroom resources including a CD with all of the activities and the PowerPoint presentation, a binder with paper copies of the activity descriptions and activity sheets. Each school received a Grand Lake Meadows Wetland Education Kit containing items to augment the activities including replica tracks, scat and eggs, a CD of frog calls, a wetland guide, duck guide and other items such as tree rounds.

Participation

With the assistance of education supervisors from School Districts 17 and 18 all schools that were within the vicinity of Grand Lake were invited to participate in the workshop. To keep numbers manageable the teachers were asked to send one representative per school with some of the largest schools being permitted to send two teachers. A total of 38 teachers from 31 schools participated in the workshop. Provided below is a list of schools and teachers that attended:

School	Location	Grade	Teacher(s)
Alexander Gibson Memorial	Fredericton	4-5	Yvonne Aubut
Barker's Point	Fredericton	4-5	Elaine Bernard, Tania Bannister
Cambridge Narrows	C. Narrows	4-5	Jill Merritt
Chipman Elementary	Chipman	4-5	Angela Boudreau
Chipman Forest Avenue	Chipman	9-12	Jill Yates
Coles Island School	Coles Island	3-4	Marilyn Graham
Connaught Street	Fredericton	4-5	Jessica Lagace, Annette Stehouwer
Devon Middle	Fredericton	6-8	Suzanne Gallant, Chris Piers
Douglas Elementary	Fredericton	4-5	Louise LaBerge
Fredericton High	Fredericton	9-12	Diane Goodwin, Tammy Lawlor
Gagetown School	Gagetown	4-5	Kathryn Downe
Garden Creek School	Fredericton	4-5	Mark Slack
Harold Peterson Middle	Fredericton	6-8	John Pomeroy
Hubbard Avenue	Fredericton	4-5	Christina LeBlanc
Keswick Ridge	Keswick	6-8	Martin McNutt
Leo Hayes High	Fredericton	9-12	Jane Ogilvie, Greg Peters
Minto Elementary/Middle	Minto	4-8	Joanne Hartt, Lori Thurrott
Minto Memorial High	Minto	9-12	Joy McKinney
Nashwaaksis Memorial	Nashwaaksis	4-5	Calvin Anderson
Nashwaaksis Middle	Nashwaaksis	6-8	Mark Gallant
New Maryland Elementary	New Maryland	4-5	Liza Richard
Oromocto High	Oromocto	9-12	Erma Brien, Maxine McConnell
Park Street School	Fredericton	4-5	Erin Gallagher
Priestman Street School	Fredericton	4-5	Wendy Sinclair
Ridgeview Middle	Fredericton	6-8	Karen Gibson
Royal Road Elementary	Fredericton	4-5	David Carson
South Devon Elementary	Fredericton	4-5	Kevin Porter
Gesner Street Elementary	Fredericton	4-5	Natasha Spencer
Harvey Elementary	Harvey Station	4-5	Marcia Fletcher
Summerhill Elementary	Fredericton	4-5	Travis Drillen
Geary Elementary	Geary	4-5	Bev White

In total, 23 elementary school teachers, 7 middle school teachers and 8 high school teachers attended the workshop. The high number of elementary school teachers reflects the higher proportion of elementary schools in the region.

Evaluation

This workshop was well received by teachers who found the content extremely worthwhile for teaching their students about Grand Lake Meadows and increasing their awareness of the significance of this natural area. Teachers also indicated that this education program supported many science and social studies curriculum outcomes including exploring natural ecosystems, improving language skills and enhancing local history knowledge. Teachers were asked to fill in an evaluation form and the results of this evaluation are provided below:

Parameter	Teachers who responded ‘Very good’ (%)	Teachers who responded ‘Excellent’ (%)
Effectiveness of presenters	30	70
Workshop organization	18	82
Quality of resources	9	91
Value of workshop in increasing awareness of Grand Lake Meadows	18	82
Overall workshop quality	15	85

Specific comments that teachers made regarding the workshop included:

“I thought this was an excellent workshop – a great source of resources and classroom activities.”

“Can’t wait to share the info with my students, what a great treat!”

“Very interesting workshop. An enjoyable day. Extremely well organized. Thank you for your efforts!”

“Thank you for the great opportunity to learn about our surrounding areas.”

“It was very informative and Grand Lake Meadows is very accessible to the school.”

“Thank you – I really feel like I’ve connected with nature today, and heightened my respect of it in the process.”

“Very intelligent, effective way to spend the mitigation dollars. Ultimately this should reach the largest number of New Brunswickers.”

“One of the most useful professional development days I’ve attended.”

Recommendations for the future of the Grand Lake Meadows Wetland Education Program

Based on the response to this teacher's workshop it is recommended that the Grand Lake Meadows Wetland Education Program be made available to more New Brunswick teachers. Grand Lake Meadows is a Provincially Significant Wetland and this education program has demonstrated its value in promoting the importance of these areas in our Province. This program also has value within the classroom, providing teachers with much needed local resources pertaining to science and social studies. Future workshops could be organized for different times of the year such as winter or spring to provide teachers with a different perspective of the Meadows.

In partnership with the New Brunswick Department of Natural Resources the Tantramar Wetlands Centre is working with the New Brunswick Department of Education to place the Grand Lake Meadows Wetland Education Program CD contents on the NB Department of Education Portal. This will make the program content available to teachers throughout the Province.

It is also recommended that the walking trail located across from Grimross Island be maintained. This trail and picnic shelter was constructed several years ago but has not been maintained since. The trail provides a fantastic access point and field trip opportunity to teachers who are interested in taking their students out to Grand Lake Meadows as a follow up to their classroom activities. The site provides opportunities to view seasonal wetland, floodplain forest and the shrub wetland that dominates the Meadows.