



**Ducks Unlimited
Canada**



**Wetland Conservation into the Future
NSHCF15-30 Final Report
2015/2016 School Year**

Submitted to:

Habitat Conservation Fund
Wildlife Division, Nova Scotia Department of Natural Resources

Submitted by:

**Education Specialist,
Ducks Unlimited Canada**



**Ducks Unlimited
Canada**

Wetland Conservation into the Future NSHCF15-30 Final Report 2015/2016 School Year

Table of Contents

1. Executive Summary	3
2. Project Goals and Objective.....	4
3. Description of Activities Completed.....	7
4. Project Results	8
5. Project Assessment.....	9
6. Communications and Marketing/Media.....	14
7. Conclusion.....	14

Appendices

- Appendix A** Pictures of DUC's Wetland Education Programs
- Appendix B** List of Classes Acknowledged by the NSHCF
- Appendix C** DUC Wetland Education resources (kits)
- Appendix D** DUC Wetland Education Feedback Form
- Appendix E** DUC Wetland Education Feedback

Wetland Conservation into the Future

NSHCF15-30 Final Report

2015/2016 School Year

1. Executive Summary

During the 2015-2016 school year, with the support of organizations such as the Nova Scotia Habitat Conservation Fund, Ducks Unlimited Canada was able to deliver wetland education messaging through DUC's Project Webfoot, Wetland Centre of Excellence, and youth group education programs, attending teacher conferences, and community events.

Through the WCE program, DUC was able to continue to work closely with school staff at Nova Scotia's first Wetland Centre of Excellence, Somerset and District Elementary School (SDES). All SDES students participated in several wetland conservation action projects, which included a nest box workshop and monitoring, in class education programming and guided field trips to Miner's Marsh in Kentville and a newly designated stewardship wetland site closer to the school. The Nova Scotia Habitat Conservation Fund directly funded the field equipment and education materials for the nearly 200 students at SDES as well as community partners involved in the project.

In addition to evolving the WCE program in N.S., your support also allowed us to reach a total of 28 grade 4 classes (629 students) in Nova Scotia with the Project Webfoot experience. The Nova Scotia Habitat Conservation Fund directly funded bussing subsidies, field trip delivery costs and education resources for 18 classes (419 students) along with their teachers and family members' students to engage in experiential learning in wetland education.

Wetland Centre of Excellence and Project Webfoot field trips were scheduled during the fall of 2015 and spring of 2016, with each field trip session lasting from 2 to 2.5 hours. Field trips were offered at 3 sites this year and involved 1 full time Ducks Unlimited Canada staff, 1 Ducks Unlimited Canada summer student, and 2 delivery partners: Friends of the Cornwallis River Society (Miner's Marsh, Kentville), and the Shubenacadie Provincial Wildlife Park (Shubenacadie). Classes participated in hands-on activities, such as bird watching, dipping for and identifying aquatic invertebrates with nets, nature hikes, and playing ecological based games. The hands-on element of the program gave youth the opportunity to fully experience a wetland, instilling an appreciation for these natural habitats.

The total number of students reached through the Project Webfoot and Wetland Centre of Excellence programs was approximately 829 students (629 PW, 200 WCE). DUC reached an additional 5,000 youth and public through education outreach programs, community events and trade shows.

Feedback forms were measured on three categories; administration (registration), resource kit, and field trip experience. All categories indicated a high level of student and teacher satisfaction with the Project Webfoot program. On a 5 point rating scale (excellent, good, average, poor, very poor), 100% of respondents in Nova Scotia rated the overall field trip program and resource kits in terms of educational value as either "excellent" or "good". With the exception of 1 class, all classes reported that the bus subsidy assisted with the travel to their field site (who were able to walk to their site). We consider all feedback when planning to improve the program for future years.

2. Project Goals and Objectives

Goal:

Our goal is to create and provide new engaging opportunities to inspire youth and the public to conserve wetlands into the future. DUC aims to increase youth awareness about the importance of wetlands and engage community environmental organizations to be involved in wetland conservation and education. To reach this goal, DUC will engage young Nova Scotians and provide opportunities for them to learn about the values of wetlands as well as current threats to wetland habitats while empowering youth to take action become stewards of wetland habitats.

Result:

Despite the multifaceted value of wetlands (both environmentally and economically), the public view of wetlands is not always fully appreciated or understood. Overlapping with the Nova Scotia Wetland Policy, education and awareness of wetlands needs to coincide with wetland conservation work (both research and on the ground projects). Through education and awareness, youth and public can better understand why wetland conservation work is important, but also how they can become involved to take action in their own communities. A better understanding and awareness of wetlands combined with the support that DUC's wetland education programs provide aims to create behavior shifts for a more environmentally active and society.

The short term results of DUC's wetland education program are outlined below followed by a briefing on the long term results of wetland education. The individual results of these programs are outlined in the objectives below, however 2 aspects of this program that are unique and contribute to our project goal are described below.

During the 2015/2016 school year, DUC provided a vast array of opportunities for both youth in public schools and general public. These opportunities involved Project Webfoot, Wetland Centres of Excellence, and public events such as those outlined in Objective 3 and 5, below. We reached our goal of providing new initiatives to portray the importance of wetlands and their conservation, which included incorporating a new technology based education resource (*i-Biome*, see Appendix C) as well as partnering with several organizations during events such as World Wetlands Day (Feb. 2, 2016) and Duck Day (July 9, 2015), both held at the Shubenacadie Wildlife Park.

In addition to engaging with youth and public, we hosted an education training day at Tantramar Wetlands Centre of Excellence that engaged like minded individuals and organizations. This training day is a day where several education partners come together in a professional development setting to learn best methods to engage youth in wetland conservation. This day was highly successful with 5 attendees from Nova Scotia, 13 from New Brunswick, 1 from Prince Edward Island, and 4 from Newfoundland and Labrador. Partnering with like-minded organizations as well as providing a professional development workshop strengthens our shared goal of awareness and understanding for wetland conservation by increasing our capacity and the value of our deliver methods and resources. See Appendix A for pictures of DUC's wetland education programs, WCE and PW in action.

Long term results of environmental education in general is often difficult to compile as it requires longitudinal studies relating to behavior and value shifts in people. Longitudinal studies are difficult due to the long term tracking of individuals who participated in programming, but also in determining cause and effect (i.e. if participating in an education program was the sole factor that lead to future participation in direct conservation work). However, the goal of wetland education is

to instill an awareness and passion for wetlands to encourage individuals to be environmentally conscious in their daily life regardless of their career choice.

This is where DUC's education programs provide value to the NS Wetland Policy- by bringing wetland awareness to the public forefront and in classrooms. By participating in DUC's education programs, participants have a better understanding of wetlands and their importance. This simple understanding and awareness is something participants may not have understood before and will at the very least be taken into consideration in future decisions each individual makes.

Additionally, the education resources on how to take action (see Appendix C for Taking Action booklet) provide a stepping stone for interested individuals. Despite the challenge with tracking long term results, the results are evident in society with policy change (e.g. the implementation of policies such as the NS Wetland Policy).

2015/2016 School Year Objectives:

Objective 1) Deliver a wetland education program to 75 schools classes in order to ensure that over two thousand students learn about wetlands as part of their habitat unit in the science curriculum.

Result: During the 2015/2016 school year, DUC provided 28 Nova Scotia grade 4 classes with the Project Webfoot program, 13 outreach programs to Somerset WCE, and an additional 7 programs to other classes for a total of 48 formal classes. Although this does not reach our objective of 75 classes, we were able to reach over 2000 through other initiatives such as special events (see list in Objectives 3 & 5).

Objective 2) Deliver two teacher workshops through conferences or professional development opportunities.

Result: DUC was successful in attending two teacher workshops while also providing additional professional development regular opportunities through the Wetland Centre of Excellence program.

DUC Education staff attended the Association of Science Teachers conference in Halifax, N.S. (Oct. 23/15) where we were able to provide attendees with material and resources on how to incorporate wetland education into their classes.

DUC Education staff also hosted a wetland education training day at Tantramar Wetland Centre of Excellence (May 2/16). DUC education delivery partners, WCE representatives, and summer students attended the day-long session where they participated in nature walks, bird watching, critter dipping, ecological activities, and educator presentations. Attendees were also able to share best practices during a group session.

Additionally, the Education Specialist regularly attended staff meetings at Somerset and District School WCE to engage teachers in the program and determine school needs and wants for action projects, education material, and class visits.

Objective 3) Deliver a wetland education program to five community youth groups.

Result: DUC delivered wetland education programs to 5 youth groups outside of the PW and WCE programs. This included Tantallon Elementary- Gr.1 class, Berwick Elementary – Gr. ½, 2 classes, Millbrook Early Education Centre (nest box workshop; 2 classes), Excel Afterschool Program, Northeast Kings Education Centre Volunteer Fair, and Acadia University DUC chapter training day in addition to several public events (see Objective 5 & 6). These wetland education programs included a presentation on wetlands and conservation and hands on activities adapted for each group.

Objective 4) Continue to partner with Somerset and District School in Berwick, the recently designated Wetland Centre of Excellence and support them in their wetland conservation and stewardship projects.

Result: During the 2015/2016 school year, the Education Specialist continued to provide wetland education training, experiential learning and local wetland projects. This involved attending staff meetings to identify ways in which the WCE program fits their school and curriculum needs. SDES WCE students participated in action projects that involved: a nest box workshop which included the construction and installation, wetland field trips and in class hands on workshops. See project result section comprehensive description of the SDES WCE program. See 4. Project Results for a more detailed description.

Objective 5) Increase awareness about the importance of wetland habitats to a healthy and diverse ecosystem and help them deliver conservation action projects

Result: Through our Project Webfoot and Wetland Centre of Excellence programs, we were able to work closely with Nova Scotia youth to teach them about the importance of wetland habitats and encourage them to take action. By providing local field trips by local education partners, classes are able to make connections to wetland conservation issues and projects in their own community. As DUC works on wetland projects across the province, we are able provide information and resources that are locally specific.

In addition to our formal education programs, DUC was able to deliver wetland conservation messaging through other public events including:

- Somerset and District Elementary School Community Day
- Stewiacke Expo
- Saltscapes Expo
- Nova Scotia Envirothon
- Halifax Sports and RV Show
- World Wetlands Day at the Shubenacadie Wildlife Park
- Duck Day Celebration at the Shubenacadie Wildlife Park
- Citizen Science Expo
- Volunteer Fair (Northeast Kings Education Centre)
- Miner's Marsh Anniversary Event

Objective 6) Engage with four community organizations through partnerships, resources and training to deliver wetland education initiatives throughout the province.

DUC believes building partnerships with like-minded organizations to work towards a common goal (in this case, wetland conservation and education) creates a stronger education program all in support of the Nova Scotia Wetland Policy.

During the 2015/2016 school year, we partnered with the Shubenacadie Provincial Wildlife Park, Friends of the Cornwallis River Society, Somerset and District School, and Tantramar Wetlands Centre to provide resources and training to participate in and deliver wetland conservation education through the Project Webfoot and Wetland Centre of Excellence programs.

Additionally, with increased staffing in Nova Scotia, DUC has connected with many more organizations. This includes involvement with the Nova Scotia Environmental Network (Environmental Education caucus), public events such as the DNR Woodlot owner of the year award, NS Envirothon, DUC Duck Day Celebration, and World Wetlands Day (in conjunction with Groundhog Day) at the Shubenacadie Provincial Wildlife Park.

3. Description of Activities Completed

2015/2016 School Year Program

<i>Wetland Centre of Excellence Task:</i>	<i>Period:</i>
Developed an education program plan for the Wetland Centre of Excellence Somerset and District Elementary School by hosting meetings with school staff to adapt the program to their needs, aligning with DUC's wetland education goals	September 2015, and adapted throughout school year
Implement action projects at local wetland sites. Students prepared throughout the school year for action projects with in class education programs and nest box building workshops. Action projects including water quality sampling, nest box installation and monitoring was conducted in May and June 2016.	Prepared throughout school year and implemented May/June 2016
Identified field equipment needs and purchased equipment for the WCE. This included education material (reference guides, owl pellets, and nature based material), equipment and construction at wetland site (e.g. dipping dock, gravel, nest boxes, etc.).	Throughout school year
Built partnerships with the local community groups such as Green Schools Nova Scotia and the DUC Valley Chapter in the area of the WCE for their involvement in the program. DUC also initiated contact with the Annapolis Valley Regional School Boards High School Options and Opportunities program as well as The Municipality of the County of King's Trails Assistance Program for future involvement.	Throughout school year
<i>Project Webfoot Tasks:</i>	<i>Period:</i>
Contact education partners (Shubenacadie Wildlife Park, Friends of the Cornwallis River Society) and provide them with field trip resources. Confirmed contracts and staffing. Received updates on their projects.	September 2015- March 2016

Contacted schools to register for the program and provided them with their pre field trip education kit for teachers to use before their wetland field trip.	September 2015-April 2016
Organized and delivered a wetland education training day for Wetland Centre of Excellence school representatives and Project Webfoot education partners. This was hosted at Tantramar Wetlands Centre.	May 2015
Wetland maintenance on field trips sites were minimal, and a few adaptations were made on site.	April-June 2016
Delivered NS PW classes via DUC staff and education partners to three sites (Shubenacadie, Kentville, Yarmouth)	April – June 2016
Received feedback forms from teachers and education partners. This feedback was compiled into a final report and sent to all partners.	June - September 2016
Delivered outreach program and teacher workshops throughout the year	September 2015- June 2016

4. Project Results

Somerset and District Elementary School Wetland Centre of Excellence

In 2014, Somerset and District Elementary School was designated as a Wetland Centre of Excellence at the DUC Valley Chapter Dinner event as a celebration of their wetland education accomplishments to date and intentions to continue to provide wetland education experiences for students through the WCE program. The SDES WCE is the first WCE in Nova Scotia and the first Elementary School to be designated as a WCE through this national DUC program.

During the 2015/2016 school year, the Education Specialist continued to provide wetland education training, experiential learning and local wetland projects. This involved attending staff meetings to identify ways in which the WCE program fits their school and curriculum needs. Field trips, class visits, cross-curricular lessons and materials were all identified as useful means of WCE projects.

In class education programs included visits from DUC staff and special guests on an array of topics. Students engaged in activities with taxidermy and bio-facts where they explored the characteristics of wetland animals, how animals are adapted to their habitat, and their role in the ecosystem. This included dissection of owl pellets, hands on taxidermy stations, and cross curricular lessons based on the students' experience during field trips (see Figure 1 and 2, Appendix A).

In addition to these hands on education programs that happened at the school, SDES students were able to apply their skills and knowledge during wetland stewardship field trips to Miner's Marsh in Kentville and for the first time- a wetland site designated as a stewardship site for the WCE project, Hutt's Marsh. Hutt's Marsh was identified as a wetland stewardship site due to its closer proximity to the school (in comparison to Miner's Marsh), its potential for enhancement and a pre-existing conservation agreement with the landowners and their receptiveness to the WCE program. With a wetland identified closer to the school, this allows students to longer and more frequent visits which supports the long term stewardship of this site. During the 2015/2016 school

year SDES students built 40 song bird nest boxes during a workshop day (see Appendix A for photos) and later installed them on site at Hutt's Marsh. A dipping platform was also installed on site to provide students with a safe and immersive method to conduct water sampling.

Project Webfoot

In total, 13 sponsors generously sponsored 28 classes towards the delivery of the in-class and field trip components of the 2015-2016 Project Webfoot program in Nova Scotia.

The Nova Scotia Habitat Conservation Fund enabled us to offer Project Webfoot classes by funding bussing subsidies for 25 classes and field trip delivery for 11 classes. As we acknowledge class sponsors based on our per class program costs of \$600, we recognize the Fund as the sponsor for 18 full classes. See Appendix B for a list of classes recognized as sponsored through the Habitat Conservation Fund.

In comparison to previous years, this year we were able to provide all of the classes with the complete Project Webfoot experience, including both the education resource kit and the field trip experience. This combination of in class resources and field trip experience provides classes with a complete complimentary education program that is designed to meet their curriculum needs and encourage classes to continue wetland education throughout the year.

Resources kits included interactive, hands-on lessons and activities that align with the gr. 4 science curriculum unit 'Habitats and Communities'. These resources encourage students to develop and foster their innate curiosity and appreciation for wetlands and conservation. This year a new field guide version of Marsh World was provided to classes as well as a web based wetland education program, *i-Biome*. I-Biome was piloted to a select number of teachers in Nova Scotia to determine its value and adjustments that need to be made. With the feedback that was received (see Appendix E and section 5: Assessment of this final report), this was an added value to the education resource kit and will be implemented in future years. See Appendix C for a list and pictures of the education resources provided to Project Webfoot classes before their field trips.

The field trip program was offered to all 28 classes through partnerships with local environmental organizations and provided students with the opportunity to participate in hands-on wetland activities at a local wetland site. The hands-on aspect of the program personalizes the experience for each student which helps to establish a lasting impression and appreciation for these natural habitats. Each class received a wetland field trip to one of the following sites: the Wetland Interpretive Centre at the Shubenacadie Wildlife Park, Miner's Marsh in Kentville, or for the first time, Broad Brook Wetland Park in Yarmouth. DUC hired a summer student stationed at the Wetland Interpretive Centre who assisted the Education Specialist with Project Webfoot delivery at the Yarmouth location, Shubenacadie Wildlife Park, and WCE field trips among other duties. This year DUC staff were able to deliver more Project Webfoot field trips in comparison to previous years due to increased staff capacity.

5. Project Assessment & Future Plans

Somerset and District Elementary School Wetland Centre of Excellence Project

WCE Assessment Methods:

As the Wetland Centre of Excellence program is designed as an in depth continual partnership with the designated school, the assessment of the SDES WCE program was measured primarily through qualitative means, while also considering quantitative measurements. The Education Specialist collected feedback (via both written surveys and conversation) during meetings which allowed DUC to adapt the program to the school's specific needs. We considered the number of

staff who participated in and their continued interest in WCE projects a measure of the WCE program.

Assessment Results:

All SDES classes participated in at least one WCE project or field trip during the school year and showed interest to continue WCE projects through surveys. Continuing from feedback last year, the wetland field trip site was established at Hutt's Marsh to accommodate scheduling and distance of field trips. This year, feedback from staff indicated a sheltered area and seating for students during their longer field trips would be an advantage. Teachers who participated in field trips to Hutt's Marsh (vs. Miner's Marsh) provided feedback on the natural appearance of Hutt's Marsh as well as the opportunities it provides for classes as a long term project. Feedback from teachers indicated the trail system at Miner's Marsh was more accommodating for the 'nature walk' aspect of the field trip.

Future Plans for WCE program:

Future plans for the WCE program are based on feedback from the initial year of the WCE partnership (2014-2015) and ongoing feedback from teachers throughout the school year. Future plans for the SDES WCE project include continuing to enhance Hutt's Marsh to accommodate class needs. This would include an outdoor classroom structure for shelter as well as seating which would provide more comfort for students to conduct longer stays on site. Feedback from SDES staff on the nest box project indicated that this project fits well with the science skills curriculum as students are able to apply observation, critical thinking and data collection techniques. As part of a research project, students will be conducting a research project to provide text and graphic material to install educational signs on site as well.

Project Webfoot

Assessment Methods:

Teacher feedback, combined with consultation with staff and delivery partners involved in this program via both interviews and feedback forms resulted in the following project results and future planning. Teachers and Education Partners were able to rank the Project Webfoot program on registration, education resources, field trip component and the value of the program in relation to the NS Science curriculum. See Appendix D for the feedback form provided to classroom teachers.

With the addition of 2 new education resources (the field guide, *Marsh World*, and an interactive web-based program, *i-Biome*) DUC conducted a survey on these materials and also restrictions that teachers face with outdoor education and field trips (see Appendix E- Education Survey Summary). Teachers were asked a series of questions relating to these issues as well as the education resources. With the *i-Biome* program, 38 teachers across Canada were given a access code to the program to provide feedback after testing the program. Four of those teachers were in Nova Scotia.

Assessment Results:

DUC registered and delivered 28 classes. In combination with other field trip and outreach programs, we reached 64% of our goal of 75 classes as we were unable to reach our sponsorship goal. Despite this lower percentage of formal classes reached, we were able to surpass our goal of youth engaged (over 2,000) by providing additional public community events such as those listed in Objectives 3 and 5.

Feedback forms (see Appendix D) were issued to most of the 28 classes who attended a field trip. The feedback response was 43% with 12 teachers completing the form. Of the feedback results received, teachers indicated a high level of teacher and student satisfaction in Project Webfoot

based on three categories (administration/ registration, resource kit, and field trip experience). On a 5 point rating scale (excellent, good, average, poor, very poor) 100% rated the overall field trip experience as either “excellent” or “good”. This feedback determined that activities offered through the field trip program are engaging, interactive, and memorable for students. The field trip component continues to be a positive educational experience for both students and teachers by complimenting school curriculum units and helping youth become more responsible citizens in the area of wetland conservation. See Appendix E for the overall provincial feedback results, including comments from teachers.

The national feedback on teacher restrictions and the new education resources, 95.8% of teachers noted that transportation is one of the main limiting factors when conducting field trips, which highlights the importance of this sponsored program in which teachers are provided with a bussing subsidy. Other reasons included workload to plan field trip, risk related concerns and lack of knowledge. Regarding the *i-Biome* program, it was well received and there were many requests for access to this program.

Future plans for the PW program:

Based on the feedback forms provided, we need to ensure feedback forms are provided during the end of a field trip to ensure they are completed. If this is not practical given the situation (e.g. bus was late, minimizing time), a follow up should be done with teachers.

Based on this assessment, DUC wishes to continue Project Webfoot programming and will prioritize areas based on the following criteria:

- a. Register PW classes enrolled in the previous year.
- b. Register new classes in the current year’s focus area: large urban areas where children might not otherwise have the opportunity to experience wetlands
- c. Request from sponsors to adopt a specific class
- d. Register all interested Grade 4 classes in one school before proceeding to a new school
- e.

Based on the national feedback, it is evident we continue to provide a bussing subsidy, guided field trip, liability insurance, and ease of registration for teachers with the education program as these are some of the main limiting factors for teachers when conducting field trips. Regarding the feedback on the *i-Biome* program, we will be implementing this and considering other technology based programs in the education resources moving forward.

For future years, we will continue to maintain revenue sources and encourage our supporters to continue their generous level of support. With the development of the WCE program in Nova Scotia with the addition of SDES we will also seek funding to expand the WCE program to reach a broader geographic audience in NS as well as provide stewardship and mentorship opportunities for high school students in the province.

6. Communication/Marketing and Media

After registering for Project Webfoot at the beginning of the school year, classes receive a certificate with their sponsor name and contact information in their education resource kit. Classes were encouraged to send letters, cards, and pictures to their sponsor.

During field trips, delivery partners displayed the visiting classes’ assigned sponsor (e.g. Nova Scotia Habitat Conservation Fund) on either a white board or sandwich board on site (depending on the site/location of the field trip). DUC staff or education partner staff/volunteers also acknowledge the class sponsor during the delivery of the field trip as well.

All donors are listed in DUC's Annual Report which is available online at www.ducks.ca/annualreport.

7. Conclusion

The second year of the implementation of the Wetland Centre of Excellence program in Nova Scotia was very successful. We will continue to support this program and expand its impact on local schools and community partners while supporting the students' engagement in wetland education to inspire them to become involved with conservation throughout their education and adult lives.

Project Webfoot remains a curriculum-based program that is enormously successful. Nova Scotia continues to be a priority area for the Project Webfoot program and has delivered over 26,000 grade 4 students within the province delivered to date. We aim to continue this program with your assistance.

We are extremely grateful to have the continual support of the Nova Scotia Habitat Conservation Fund. Meetings will be scheduled with SDES staff to continue to develop the WCE program. Project Webfoot registration for the current school year is well underway and we are confident that the program will continue to build on its previous successes. As such, the Nova Scotia Habitat Conservation Fund has been integral to the success of the Wetland Centre of Excellence and Project Webfoot programs' goal to expose youth to wetlands and encourage their conservation.

APPENDIX A

Pictures of DUC's Wetland Education Programs Supported by NSHCF 2015/2016



Figure 1: Example of cross curricular work created by Primary and Gr. 1 students based on their wetland field trip.



Figure 2: Example of in class education program at SDES WCE. This program incorporated wetland animal bio-facts for students to discover animals' characteristics and how they are adapted to their wetland habitats.



Figure 3: Gr. 4/5 field trip to Hutt's Marsh, May 2016. Students birdwatching on nature walk and critter dipping on dock



Figure 4: Song bird nesting box, built and installed by SDES students and volunteers at Hutt's Marsh as part of the WCE program



Figure 5: Student making an observation on a nature walk during a wetland field trip at Hutt's Marsh, May 2016.



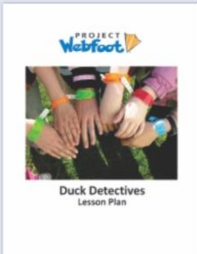
Figure 6: Identifying 'Marsh Monsters' while critter dipping on a wetland field trip at Hutt's Marsh, May 2016. Students learn first-hand about the biodiversity that lives in wetlands and their important role in an ecosystem.

APPENDIX C

1. Example of DUC Wetland Education Resource Material
2. Taking Action booklet

Resources to take back to school

You will receive the following resource package at the end of your wetland field trip to take back to the classroom.



Duck Detectives Lesson Plan



Teachers' Guide



Marsh World
AN INTRODUCTION TO WETLAND PLANTS AND ANIMALS



Wristbands
Link to Internet activity which allows students to download their own personalized certificate



New
Colourful, pocket-sized guide to wetland plants and animals. Class set.



Duck Detectives This unit explores migration and the need to protect habitats throughout Canada and North America. Introduces students to bird banding and its role in scientific research and accompanies this with a fun Internet activity looking at the lifecycles of ducks from different parts of Canada. Each student receives their own "band" and can download their own customized certificate from our website.



Wetland

BECOME A WETLAND HERO!

WE'RE CHANGING!
We are updating and developing new resources to share with you. This is the first of many changes that will be taking place over the coming year.

Introducing iBiome-Wetlands
iBiome-Wetlands is a curriculum-based, multi-award - winning game where students can explore wetland habitats and the plant and animal species that live within them. We have enclosed a Student Activity pages and information on how to access your Class License on-line.

Figure 1: An insert describing some of the wetland education resources Project Webfoot classes receive. This includes a 'Duck Detective' Lesson Plan, individual 'Marsh World' books for each student (new version this year!) as well as access to a new online resource, 'i-Biome'. All education resources are curriculum aligned and available in both English and French.

Please complete this questionnaire **before you leave your fieldtrip** and return to the fieldtrip delivery partner.

Name of school: _____ Date of visit: _____

Wetland Site Visited: _____

Please rate the following:	Rating Scale				
	Very Poor	Poor	Average	V. Good	Excellent
REGISTRATION					
1. Clarity of information you received on Project Webfoot.	1	2	3	4	5
2. Ease of registering your class in the program.	1	2	3	4	5
3. Did/Will your class send their sponsor a thank you such as a certificate, letter, artwork, pictures? YES { } NO { }					
RESOURCES					
4a. Did/Will you use the pre- and post-fieldtrip resources to help you teach your class about wetlands? Pre-fieldtrip resources { } Post-fieldtrip resources { } Neither { } DID NOT RECEIVE { }					
4b. If yes, please rate the value of the resources.	1	2	3	4	5
4c. What was the most useful resource(s)? <div style="display: flex; justify-content: space-between;"> <div> Pre-trip <input type="checkbox"/> Exploring Habitats & Communities teachers guide and poster <input type="checkbox"/> Wetlands and the World Create a Wetland World activity <input type="checkbox"/> How to Deliver a Wetland Fieldtrip guide <input type="checkbox"/> Taking Action guide </div> <div> Post-trip <input type="checkbox"/> Marsh World guides for each student <input type="checkbox"/> Duck Detectives lesson and wristbands </div> </div> Please explain why and/or give us suggestions of materials that would be more useful to you.					
5. Did you visit DUC website for information or download any resources? YES { } NO { } If yes, for what purpose did you visit?					
SITE/FIELDTRIP EXPERIENCE					
6. Appropriateness of the site for wetland education	1	2	3	4	5
7. Did the DUC bus subsidy assist in your travel to the field trip site? YES { } NO { } If yes, explain.					
8. Effectiveness of the activities in teaching your students about wetland issues and conservation.	1	2	3	4	5
9. Effectiveness of the staff/partners/volunteers .	1	2	3	4	5
10. Overall educational value of the fieldtrip.	1	2	3	4	5
11. Did the students enjoy the field trip?	1	2	3	4	5
12. Which activity was the <u>most useful</u> ? Why?					
13. Did/will the class participate in ongoing projects to take action for wetland conservation or conservation in general? YES { } NO { } If yes, how?					
14. Please provide us with additional comments about your wetland fieldtrip experience. <u>Please also use back of sheet:</u>					

Thank you for taking the time to fill out this form. It is greatly appreciated!
For more info or to return: fax 506-458-9921 or du_fredericton@ducks.ca

Project Webfoot Feedback Forms

Number of Project Webfoot Programs Delivered: 28

Number of Respondents: 12

Response Rate: 43%

Registration

Very Poor

Clarity of information you received on Project Webfoot?

Ease of registering your class in the program

Did/Will your class send their sponsor a thank you?

Resources

Pre-field trip
Resources

Did/Will you use the pre- and post-fieldtrip resources to help you teach your class about wetlands?

10

Rating

1

If yes, please rate the value of the resources

What was the most useful resource(s)?

Pre-trip

Exploring habitats and
communitites teachers guide
and poster

Wetlands and the world create
a wetland world activity

How to deliver a wetland field
trip guide

Taking action guide

Yes

Did you visit DUC website for information or download any resources?

4

Site/Fieldtrip Experience

1

Appropriateness of the site for wetland education

Did the DUC bus subsidy assist in your travel to the field trip site?

Effectiveness of the activities in teaching your students
about wetland issues and conservation

Effectiveness of the staff/partners/volunteers

Overall educational value of the feildtrip

Did the students enjoy the fieldtrip?

Yes

Did the DUC bus subsidy assist in your travel to the field trip site?

11

Poor	Average	Very Good	Excellent	Yes	No
		2	10		
		1	11		
				11	1

Post-fieldtrip resources	Neither	Did not Receive
12		

2	3	4	5
		8	4

	Post-trip
9	Marsh World guides for each student6
6	Duck Detectives lesson and wristbands4
6	
3	

No	Comments
----	----------

8 Create powerpoint to accompany
thank yous to sponsors

2	3	4	5
---	---	---	---

12

1	11
1	11
1	11
1	11

No

1

Additional Comments from Teacher Feedback Forms
Nova Scotia



Which activity was the most useful? Why?

- Bug dipping and looking through the microscope
- Critter Dipping-Hands on
- Critter Dipping-Real experience
- Critter Dipping-Habitat education
- There was not just one-all student are inner city with limited transportation-everything was valued
- Critter Catching
- Critter Catching
- Critter Dipping-experienced a variety of critters
- Loved critter dipping
- The tour of the park put into context-excellent explanation of food chains that Chloe gave us

Did/will the class participate in ongoing projects to take action for wetland conservation of conservation in general? If yes, how?

<u>Yes</u>	<u>No</u>	<u>Unsure</u>
8	1	3

- Hoping if time allows
- I will look for activities
- The website for other lessons
- Litter pickup
- As part of Grade 4 habitat curriculum
- We will look into it
- We'd love to come back
- We will discuss how to protect wetlands
- Tree planting

Please provide us with additional comments about your wetland experience

- Students were engaged and interested in looking for critters in the wetlands. We talked a lot about wetlands before we arrived to be prepared. Students talked about what insects would be in the water but I think they found it very useful to get an up close experience with what is actually in the water. Thank you for spending the morning with us, you were very patient, kind and knowledgeable. Thank you.
- Great job-students loved it-thank you

- A million thank yous- we loved it!
- Amazing that such a program is sponsored to allow us to come for free
- Very helpful and the students had lots of fun
- This was an amazing trip-very organized and the guides were well spoken. Looking forward to coming back next year-thanks
- Good amount of structure-the kids liked the freedom to explore
- Various levels of reading resources could also be helpful
- Our guide Katie was fantastic-kept kids and adults very engaged
- Chloe was an excellent guide-clear communication about the subject and expected behaviour