

Responsible Tourism Case Study:  
An Impact Study of the Effects of Geocaching  
on Canada's Wetlands



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## A PROFILE OF CANADA AND MANITOBA

Canada became an independent country on July 1<sup>st</sup>, 1867 when it legally separated itself from Great Britain. Since then, Canada has adopted two national languages: French and English. Canada's estimated population as of July 2008 was 33,212,696 people.

Our experience in diversity with culture is what distinguishes us from other countries. About 200,000 immigrants a year choose to come to Canada above all other countries because of our value of diversity.

Canada is the second largest country in the world behind Russia. It is slightly less than three fifths the size of Russia and covers 9,984,670 km<sup>2</sup>. Canada is composed of ten Provinces and three territories:





Manitoba is one out of the ten provinces in Canada and is situated in the central region. It is one of three Prairie Provinces and is the furthest east of the three. Manitoba has borders that touch/connects with the American boarder, the Hudson's Bay, the northern territories, and eastern and western provinces.

Manitoba is mainly seen as flat but in reality it also has some big hills. For instance, our highest point in Manitoba is Baldy Mountain which stands 2727-ft. /831 m. It ranges from 490-ft. /150 m to 980-ft. /300 m above sea level. Manitoba lies in the Canadian Shield and, the north is considered Precambrian Shield. The North, (about 3/5 of the province) is tundra or permafrost (permanently frozen soil).

Before the settlement of people, a large part of Manitoba was one big flood plain or swamp so drainage ditches were put in to make the land suitable for cultivation. Almost all of the water in Manitoba runs to the Hudson's Bay.

Manitoba's population, as of March 2008, is 1,193,566 inhabitants. Starting with our Aboriginal people, Scottish settlers came, followed by the French and English. Eventually, we received immigrants from virtually every country in the world. Manitoba's capital is Winnipeg, a city full of diversity and culture.

Manitoba's weather ranges from extremely hot in the summers and to extremely cold during the winter season. In the summer the average temperature is 25 degrees Celsius and in the winter it is almost always below freezing. Over half of our annual precipitation falls in the summer. We also receive about 110cm – 140cm of snow per year. The further north you go however, the colder it gets.

## **A DEFINITION OF RESPONSIBLE TOURISM**

Responsible tourism is a type of tourism practiced by travelers and industry who make responsible choices when providing and choosing holidays destinations.

While on vacation, a traveler is playing an important role in discovering the destination and has a duty to help protect it by making small but important choices such as supporting the local, small shops in different communities in the area

As a tourist, you can practice responsible tourism by sharing your experiences with others to help convince them to also practice responsible tourism. You can follow designated trails instead of trudging through the delicate environment of some areas. Tourists should refrain from removing archeological finds and should always respect the rules and regulations set out by officials to protect that certain area.

When planning vacations, travelers should look into alternative modes of transportation to minimize carbon dioxide emissions. Another way to practice responsible tourism is it reuse, reduce and recycle.

Travel companies should be in the position to provide travelers with information on environmental issues surrounding different destinations and ways to practice responsible tourism.

**Basic guidelines for practicing responsible tourism include:**

- Protecting the Environment
- Benefiting local cultures and communities and communities
- Conserving natural resources
- Minimizing pollution

A prime example of an industry making a difference in responsible tourism can be found in the hotel industry. There is a Carbon Zero Hotel in Andalucía, Spain who is putting their efforts towards reducing the CO2 footprint because they are being, personally, affected by global warming. One of the many things that they are doing is heating their pool naturally instead of electrically. The hotel is partnered with an organization named CO2Balance which is aiding in Carbon Offset Programs.

Another example of responsible tourism would be in Sri Lanka. Soon tourists visiting the coast of Sri Lanka will have a chance to see the newly settled families whose lives were taken away by a tsunami. They'll have a chance to plant trees of food, medicinal, or economical value. The program is called "Trees for Life" and its goal is to get the hotel industry and its guests involved in rebuilding people lives.

A travel agency, by the name of CTS Horizon, which stands for China Travel Service, is doing its part in responsible tourism. They have been given the three star responsible tourism status from AITO, Association of Independent Tour Operators. They have 10 points that they are working towards to achieve responsible tourism, these points can be found on their website:

[http://www.ctshorizons.com/responsible\\_tourism.htm](http://www.ctshorizons.com/responsible_tourism.htm).

**Some of the points include:**

- Limiting the number of people travelling in order to limit any adverse impact on the community and environment
- Sending out brochures on request only to minimize the use of paper products.
- Offering customers the chance to offset their carbon emissions by adding a voluntary donation to their bill
- Raising awareness of important causes and global changes in destinations
- Offering alternative modes of transportation to minimize pollution from air travel
- Promote Responsible Tourism practices to suppliers.

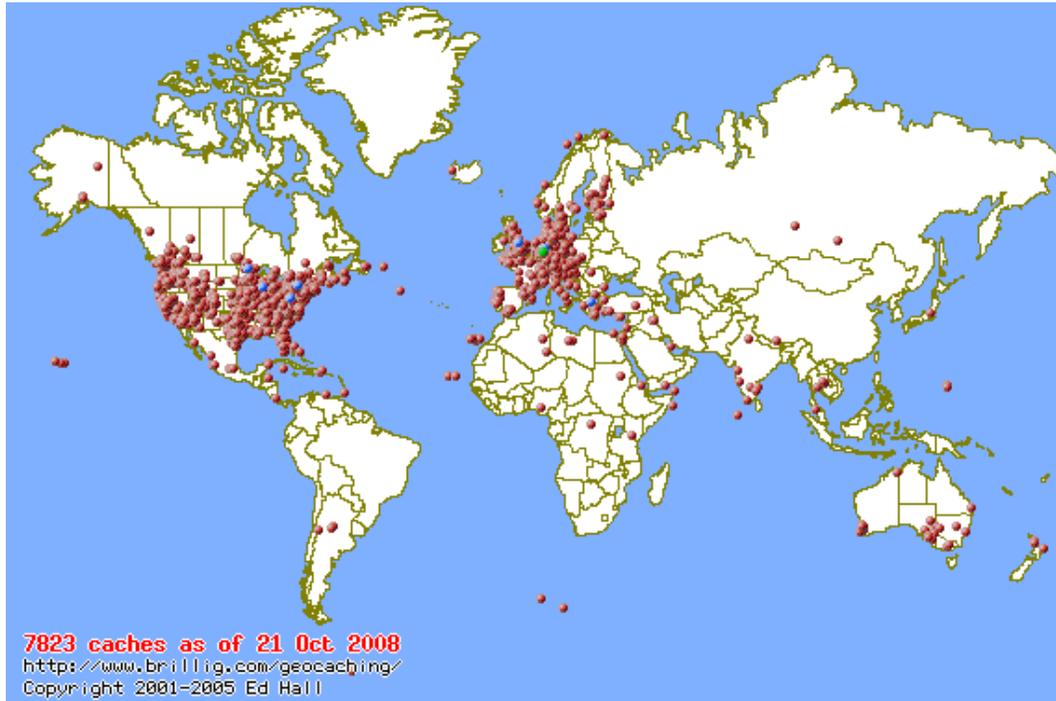
**THE PROBLEM**

Geocaching is becoming an increasingly popular sport all over the world. It is a game that can be played anywhere by anyone able to read the coordinates from a GPS (global positioning system) unit. The game often takes players into remote areas that are off marked trails, posing a threat to fragile ecosystems.

As GPS equipment becomes more affordable and more readily available, an increased number of people are venturing out into the geocaching world. Many parks and historical sites such as Parks Canada's Lower Fort Garry and Oak Hammock Marsh are taking advantage of this technology to lure more visitors to their locations. While the increase in numbers is advantageous for their sustainability as a tourist attraction, such an increase in visitors poses an immediate danger to the flora and fauna on site.

## WHAT IS GEOCACHING?

Geocaching is a world-wide scavenger hunt played by millions of people eager to get their hands on a prize, travel and explore. Geocaching is, believe it or not, a popular sport played in around 221 countries throughout the world.



The sport consists of hiding a cache, which is an item of your choosing of little monetary value that you place in a container that can withstand all different types of weather. The cache is then hidden.

The geocacher who hides the cache places the coordinates of the cache on a website devoted to the sport of Geocaching, so other geocachers can get the coordinates and use a global positioning system (GPS) to locate the cache.

Originally, Geocaching was referred to as "GPS stash hunts" or "GPS stashing". The name was changed to Geocaching on May 30<sup>th</sup>, 2000; for fear that the word "stash" could have negative connotations.

The first step to Geocaching is selecting a cache. Anything can be used as a cache; it can be a personal belonging or an item that you wish to track its voyage around the world. To track one of your items you'd have to put some sort of tracking device on the item or you can give it a travel buddy, otherwise known as a Groundspeak Travel Bug or a

Geocoin. A Groundspeak Travel Bug is actually not a real bug but an ID tag. When the Groundspeak Travel Bug is purchased the purchaser gets two tags, one that they keep and one that they place with the cache. The bug is equipped with a tag number. The purpose of the tag number is so that when another geocacher finds the bug they can have evidence that they actually did find it. The person who purchased the bug can keep track of their bugs' voyage, by the tag number, on geocaching websites. The purchaser can even give a request for his/her bug such as placing a little memo on it saying, "I want to go to France."



When a geocacher finds the cache, they can take an item from the box and replace it with an item of equal or higher value. If they choose to, they can take the bug and the item in which it is attached to. When they travel they can then put that bug inside another box and the bug will eventually make its way around the world, hopefully ending up one day at its desired location.

After you have chosen a cache, you find a type of plastic weatherproof container to store it in. You can hide your cache anywhere's but it must be in an area that you have permission to hide it in. After you have hidden it you must find out its coordinates, go on a Geocaching website(s) and enter in the coordinates so that other geocachers can try and find the cache. Geocachers find the caches using global positioning systems (GPS).



When someone finds a cache they must sign a logbook which shows who has found the cache and when. If you are FTF (first to find), you sign the logbook first and are recognized for finding the cache.

## THE WORLD OF GEOCACHING

Geocaching has its very own community. Some geocachers, when they're on a geocaching website, don't use their real names, they use screen names instead. Geocaching even has a bit of its own vocabulary. People who don't know about geocaching or find caches and don't know what they are are referred to as Geo-Muggles. Does it sound familiar? Muggles is the term used in the Harry Potter series to describe people who don't know about the magic. Well in this case, Geo-Muggles are people who don't know about the magic that is geocaching. Geo-Muggles may stumble upon a cache and take it because they don't know it's a part of a game. So, before reading this you could've been a Geo-Muggle and not even have known it.

When searching for a cache, people must use proper geocaching etiquette. A geocachers should never attract attention to him or the cache. The same rules apply to the hider of the cache. Many people have been arrested for looking suspicious. Some caches have even been destroyed by bomb squads.

The main rule with geocaching is one that people follow in their everyday lives, and that is the rule of ethics. Without that rule, the cachers would be a danger to themselves, others, and the environment. In addition to that, geocaching has three simple rules:

- choose a cache
- hide it properly
- record its coordinates on a geocaching website

## **Additional guidelines have been established in the Geocachers Creed:**

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### **THE GEOCACHERS' CREED**

#### **Safe • Legal • Ethical**

WWW.GEOCREED.INFO

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#### **When placing or seeking geocachers, I will:**

- 1. Not endanger myself or others**
- 2. Observe all laws and rules of the area**
- 3. Respect property rights and seek permission where appropriate**
- 4. Avoid causing disruptions or public alarm**
- 5. Minimize my and others' impact on the environment**
- 6. Be considerate of others**
- 7. Protect the integrity of the game pieces**

*The Geocachers' Creed is a voluntary set of guiding principles - it describes how geocachers in general act. It's designed to orient new players to the ethos of the geocaching community and to guide experienced players in questionable situations, so that everyone can enjoy geocaching.*

### **DIFFERENT TYPES OF GEOCACHES**

There are many variations of geocaching. A multi-cache is when a geocacher follows the coordinates as usual but when they reach the cache, it's not a cache at all. What they find instead are more coordinates and perhaps hints/instruction to the next location. Eventually the geocacher will find the awaited cache.

A Virtual Cache is a monument, such as a statue or some sort of landmark. A geocacher must answer a question using information that can be found on or around the monument. A correct answer sent by email is proof that the geocachers has actually found the cache.

## ENVIRONMENTAL ISSUES SURROUNDING GEOCACHING

Parks Canada is an organization that conserve and broadcasts nationally significant examples of Canada's natural and cultural heritage. They aid in the understanding and awareness of conserving natural and cultural heritage for the future generations. They describe their roles as being guardians, guides, partners and storytellers. Their commitments are to protect, present, and celebrate and to serve Canadians and our history.

Parks Canada for instance, banned geocaching for a period of time due to concerns for the parks' wildlife. Geocachers may steer off trail to find a cache and damage plant and wild life the park is trying to preserve. Parks Canada was in the process of creating a policy regarding geocaching in 2006. When the ban was lifted there were guidelines and regulations that had to be followed in order to continue geocaching in those specific areas. (See Appendix 1)

In Manitoba, there are many caches hidden in local marshes. Some public areas don't allow geocaching because not everyone who hides a cache hides it on a trail. They may hide it off course causing seekers to venture off into more sensitive parts of marshland causing the formation of geotrails- a trail created by hikers repeatedly walking in a certain unmarked area. Careless geocachers may cause damage by littering while on their hunt for a cache.

In addition, some geocachers may have to travel a great distance to reach the specific GPS coordinates given. To get to some remote locations, geocachers have to use vehicles adding to the already high gas emissions.

## WHAT IS A MARSH?

A marsh is a type of wetland, where land meets water. There are many types of wetlands that include bogs, swamps, ponds, etc. A marsh is unique however due to its' appearance and wildlife. There are two types of marshes, fresh water and salt water. Marshes are often flooded and when the surrounding area gets too dry, they can supply the needed water. In a salt water marsh case, they can protect neighboring areas from excessive salination.

A marsh in particular, is submerged by water that can range from being a few inches to a few feet. The clay at the bottom will however remain saturated. A marsh provides habitat for many animals, birds, plants, etc. such as cattail, reed, red-winged blackbird, great blue heron, sandhill crane, muskrat, and green frog, painted turtle, wood tick, dragonfly, and mosquito. On higher ground, a few trees can be found which add to the shelter and diversity of food for the wildlife. Most marshes are lower-lying places near lakes, streams, rivers, and contain grassy vegetation that can cope with wet conditions.

All of the vegetation must be very hardy, and must cope with ever changing water levels. The plants that live in marshes tend to have broad leaves because they do not need to worry about moisture loss, and spongy stems to help them move energy about the plant and to prevent rot. The spaces also help the plant oxygenate water which in the long run, aids all other wildlife in the marsh.



The animals that live there are all well adapted to the changing water levels and accustomed to making the necessary changes to serve their

needs. For instance, the birds in the marshes are usually aquatic and have long legs for walking or short webbed ones for swimming.

Marshes are vital to their own wildlife but also to neighboring areas and conscious efforts have been made to conserve these marshes. Paths have been built to stop tourist from destroying them while being captivated by them. They can also be destroyed by stray dogs, garbage, and just random carelessness.

## **HISTORY OF WETLANDS IN CANADA**

Canada could be considered a lucky country because it contains quite a good portion of the worlds' wetlands, even though that may be true, our country seems to be losing wetlands. The Gull Lake Wetlands in Manitoba are home to plants and animals just as every other marsh is, but in 1992 there were certain people who wanted to empty the marsh. By emptying the marsh it would allow the water to be brought into a lake in the surrounding area. The wetland seems to be home to some rare types of flowers and plants, so some people formed organisations to help protect the wetland and therefore protect the species living in the wetlands. Organisations are still hard at work today trying to preserve one of nature's most helpful gifts.

In the past, people didn't seem to realize how important marshes and wetlands were to our environment. Wetlands were thought of as mosquito infested wastelands in earlier years before their true benefits were realized. Wetlands are home to many unusual and unique plants and wildlife and Canada has already lost a good percentage of wetlands. Organisations should continue their efforts in supporting wetlands and maintaining them so as not to lose a natural benefit that we may sometimes take for granted, because in Manitoba, for instance, 70% of wetlands have disappeared since the 1990's.

## ROLE OF PLANT/ANIMALS/WATER IN MARSHES



Plants, animals, and water play an important role in marshes. Plants grow in the fertile environments of marshes; animals feed off of those plants and use the marsh as a habitat and a safe place to breed and the type of water that lies in the marshes affect what types of plants grow and what of soil is there.

The marshes obtain water by precipitation, such as snow and rainfall, by stream flow from nearby lakes, rivers and oceans, groundwater discharge and for the marshes close to the coasts, they can receive water from tidal action. Marshes not only receive water from streams but they also give water back into streams and they also give water back into the ground. The role that water plays is that it moves the different sediments along the bottom of the marshes and can create fertile soil, which create ideal areas for plants to grow and prosper. The water is also a habitat for aquatic mammals and insects.

Animals play a role in maintaining marshes also because they eat what the marsh produces. Animals eat the plants that are grown in marshes and some animals use those plants as a habitat for example small insects. Marshes are also a good habitat for insects because some insects like to live in the shallow waters of the marshes and the wet mud that the marshes produce. The marshes give animals the chance to their young in a safe environment because marshes can provide shelter from certain predators. Therefore, animals have the chance to increase their species population. Marshes also provide a habitat for some endangered creatures and a chance for those endangered creatures to breed and widen their population.

The role of plants in the marsh is to provide shelter and food for the wildlife that are attracted to the marshes. Numerous types and amounts of plants can grow in a marsh depending on the fertility of the soil and the different concentrations of minerals that are found in and about the water. Plants also have another important purpose and

that is to aid in the medical world. Some plants are used as ingredients in certain medicines that are created today.

Marshes play an extremely important role in today's environment by using the excess amounts of nitrogen and phosphorus found in polluted water.

## BIRD MIGRATION

Marshes are important to bird migration because they contain food sources and plenty of trees for migrating birds to rest in.



One Manitoban marsh is known for its songbird migration and bird watching. The Delta Marsh Bird Observatory, found in Manitoba, Canada and created by IBA (Important Bird Area), has been functioning bird observatory since 1992. The marsh is 22,000 hectares and is a tourist attraction for people who fancy bird watching. The types of birds that can be found at the Delta Marsh are birds such as the Tennessee and Myrtle Warblers and Northern Waterthrush, White-throated and Song Sparrows. The bird that is seen the most in the marsh is the Yellow Warbler.

The birds are banded, which means they receive a band around one of their legs that helps people track their whereabouts or identify the bird if it returns. The Delta Marsh receives 7,500 songbirds annually at their marsh. The times that tourists go to view the birds are during their spring coverage which runs from the beginning of May to the end of June and the Fall coverage which runs from the beginning of July to the end of September. The Delta Marsh experienced a milestone on May 8<sup>th</sup>, 2000 when they banded their 50, 000 bird which happened to be a Myrtle Warbler.

Many marshes are home to birds because they are so productive in foods for them and the environment of a marsh is a suitable habitat for birds. Birds also have another use for marshes and that is that they have a safe place to breed in. Why Marsh, located in the Wye Valley of Ontario, Canada used to be old farmland but now is a 1.5km by 4.5km marsh used by Wild Trumpeter Swans to breed in. The marsh started with 20 captive swans and now they have around 150 swans that roam the marsh.

Marshes are an excellent place for migrating birds to go to while on their way to warmer climates. Birds have an abundance of food and plenty of places to relax before they take off again. Birds also a safe place to breed and have their young in marshes. Migrating birds can also bring in lots of tourism to marshes during the bird watching seasons.

## RECREATIONAL ACTIVITIES

There is an abundance of activities that are performed in marshes, activities such as hunting, fishing, geocaching, and even painting. Hunting is a popular sport attracting many people. People hunt in marshland areas as well as in wooded areas.



There are numerous ways of hunting and there is a multitude of different animals that are hunted each year, such as Canadian Geese and different varieties of ducks. In all cases of hunting, there are generally guidelines that must be followed regarding quantity, and the appropriate times to hunt.

Bird watching is also an activity enjoyed in marshes. As previously mentioned the Delta Marsh Bird Observatory is a tourist attraction to those tourists who like to study and observe birds.

Fishing is also a sport that can attract people to certain marshes depending on what type of fish they are hoping to catch and if the marsh permits fishing. This activity is a great activity to share with family and friends.

Some artists may be attracted to marshes so that they can capture the beauty of the wildlife with a paintbrush, sketchpad, or camera lens. Marshes are beautiful places to go to, to paint, draw, and film and to take photographs because you have an array of plant life and wildlife to be your muse.

Many activities are available for the public to participate in at marshes. Some activities such as hunting, bird watching and fishing have certain seasons when they are allowed. Photography, painting, and drawing are types of activities that can be done all year long. Another activity that can be done in marshes is simply going for a walk along the different trails that some marshes offer or getting a guided tour of the marsh and learning about all the different plants and animals that call the marsh home.

## **WETLAND DESTRUCTION**

Wetlands are an important part of the earth's ecosystems because they act as natural water purifiers, meaning that they help clean polluted water by using the excess amounts of the chemical elements nitrogen and phosphorus. They can help minimize the damages that happen when storms arise and they help reduce flooding. Wetlands also provide a habitat and a safe environment for plants and animals. Even though wetlands are an important ecosystem, the number of wetlands has dropped.

Since the 1800's, a drastic percentage of 85% of wetlands have been destroyed due to agricultural uses. Around 25% of the earth's wetlands are found in Canada. About 14% of Canada's land is wetlands and 60% of wetlands in Canada are found in the provinces

Manitoba and Ontario and in the North West Territories but for how long will we even have wetlands?



About 70% of Canada's wetlands have been lost in certain areas. Wetlands are being wiped out because of land usage for the building of roads and highways. They are also being destroyed for the construction of residential housing and large facilities. The land usage has led to nutrient and toxic loading, destruction of wetlands vegetation, sedimentation and the water levels of the wetlands have been altered. Even the growing population is a factor in the destruction of wetlands.

Furthermore, apparently by the destruction of wetlands we could be forcing wild birds to fly and form a habitat in a domesticated area. Some wild birds have been infected with an illness known as the bird flu. Birds can come into close contact with other species and then infect them. With the loss of wetlands, birds can be forced to come into close contact with farm animals and farm animals supply numerous amounts of products for human consumption such as dairy product and meats.

By taking away wetlands, we are hurting the environment because 40% of endangered animals and plants reside in the wetland areas. Around 600 species of animals are found in Canada. By removing the wetlands, we are minimizing the already low numbers of certain species by taking away their habitat, their food, and their breeding grounds.

There are however groups and organizations that are fighting for the protection of the wetlands, such as the Canadian Conservation Company, DUC which stands for Ducks Unlimited Canada, along with other groups and organizations. We may not be able to imagine what the world would be like without wetlands but once they're gone, there's nothing we will be able to do about it. We won't have any natural water purification; we will have less protection against raging storms and less natural help during floods.

## DISTRIBUTION OF MARSHES THROUGHOUT THE YEARS



The distribution of wetlands throughout the years has changed. There could be many explanations for this. Whether it is global warming, or human interference, it is hard to say what is the main cause for change in distribution, but one thing is for certain, it varies. We have many different types of wetlands in this world, and they are adapted to where they are. Thus, they also react differently to changes and factors. Even though a wetland may not disappear, it can diminish. Timing is also everything. If a wetland receives a little too much rain at the wrong time of the year it could tip the balance.

Global warming has contributed with the melting of the ice caps. This melting is causing an abnormal rise in sea level and therefore, disrupting the wetland levels. It can also cause an abnormal amount of

blue-green algae to arise causing a lesser amount of oxygen to be produced. There is also a flip side as well though. Wetlands are also believed to be their own enemy, because wetlands contain natural vegetation, carbon monoxide from the plants is released. This would be called a natural emission. As wetlands throughout the earth become more common, they emit more carbon monoxide which in turn, affects the wetlands. So for many years the distribution has varied.

There are many forested bogs, non-forested bogs, and non-forested swamps throughout the northern hemisphere. As far as the southern hemisphere goes, it contains a fair bit of non-forested swamp with an extreme amount of forested swamp, and alluvial formations, the central part of our world contains a variety of wetlands but mainly contains non-forested swamps, and forested swamps. Antarctica is the only continent without any wetlands whatsoever.

## **CONSERVATION**

Harmony between wetlands and humans has been a key to keeping our wetlands intact. Many cultures have been able to keep this harmony but others have not and as a result, many wetlands have been drained which affects the overall distribution and population of worldwide wetlands. Wetlands are vital to the earth with their cultural and ecological values. Major restoration projects have taken place in Delaware Bay, the Skjern River (Denmark), Florida Everglades, Louisiana Delta, the Mississippi River basin, and the Mesopotamian Marshlands of Iraq.

There are many organizations that support/ are involved in wetland conservation such as CAB Abstracts, WWF, some Greenpeace, Ducks Unlimited Canada, and many others. One organization has even created a day for wetland awareness. Ramsar has made February 2<sup>nd</sup> (known to us as Groundhog Day) World Wetlands Day where they celebrate the world's wetlands. Their motto: "Healthy Wetlands, Healthy People" helps pinpoint their point of saying how the wetlands help humans in more ways than one. There are 158 countries involved in this organization, protecting 1, 742 wetland sites which equals out to 165 million hectares.

The world's largest Ramsar wetland is the 6,278,200 hectare Queen Maude Gulf Migratory Bird Sanctuary in Canada. Canada contains close to one-quarter of the world's wetlands. According to Ducks Unlimited

Canada, Canada contains more than six hundred species of plants, insects and animals that are dependent on our more than 1.27 million square kilometers of marshland. Through development we've lost up to 70% of our wetlands due to the drainage for agriculture or development of our urban cities. Some things that we can do to help conserve them are to separate our wet garbage from the rest (overall waste management), avoid using plastic, and if you are, to try and find some that are biodegradable.

## **OAK HAMMOCK MARSH**

One of the many things we have to be proud of here in Manitoba is that we boast one of the biggest and most well known marshes in the world. Oak Hammock Marsh has been a tremendous success story for Manitoba's ecologists, providing visitors with a wide variety of environmental experiences through their many programs and activities.

Oak Hammock Marsh has won several awards for its outstanding achievements including:

**2008** Award of Distinction (Interlake Tourism Association)

**2008** Conservationist Award (Manitoba Chapter, The Wildlife Society)

**2007** Canadian Association of Science Centres (CASC) – Best Outreach Program

**2006** [Air Canada Business of the Year Award](#) – Single Unit (Tourism Industry Association of Canada)

**2006** Sustainable Tourism Award (Interlake Tourism Association)

**2004** Award of Excellence for Environmental Education (EECOM)

**2003** Green Roof Award for Excellence, New Intensive (Green Roofs for Healthy Cities)

## THE HISTORY OF OAK HAMMOCK MARSH

Oak Hammock Marsh was formally known as St. Andrews Bog and was later renamed Oak Hammock Marsh by the settlers. These settlers would hang up hammocks between oak trees in the forest nearby to avoid the flood water. By the 1960's, Oak Hammock marsh was drained. The Bedson Lake is considered to be the deepest remaining area.

Ducks Unlimited Canada has played a big part in Oak Hammock Marsh's creation as a protected wildlife area. They started way back in helping to restore the marsh and are still helping today with their funding.

Before Ducks Unlimited aided in starting the center, Oak Hammock was also used as a bombing range from the Commonwealth Air Training Plan for 5 Years. Some visitors to the marsh were involved in such and reminisce about their experiences.



## DUCKS UNLIMITED



has saved around twenty-five million acres of wetland.

Ducks Unlimited Ltd. is an organization that is helping to conserve wetlands. Ducks Unlimited Ltd. was formed during the Great Depression, during the years 1937 and 1938 to be more exact. It was created when a group of men decided to raise money in the United States to help conserve wetlands based in Canada and ever since then this non-profit organization

A specific marsh that Ducks Unlimited is helping is Oak Hammock Marsh. Oak Hammock Marsh is the National Headquarters for the organization. On the grounds of Oak Hammock Marsh, you can even see the very first headquarters that was built for the Ducks Unlimited organization.

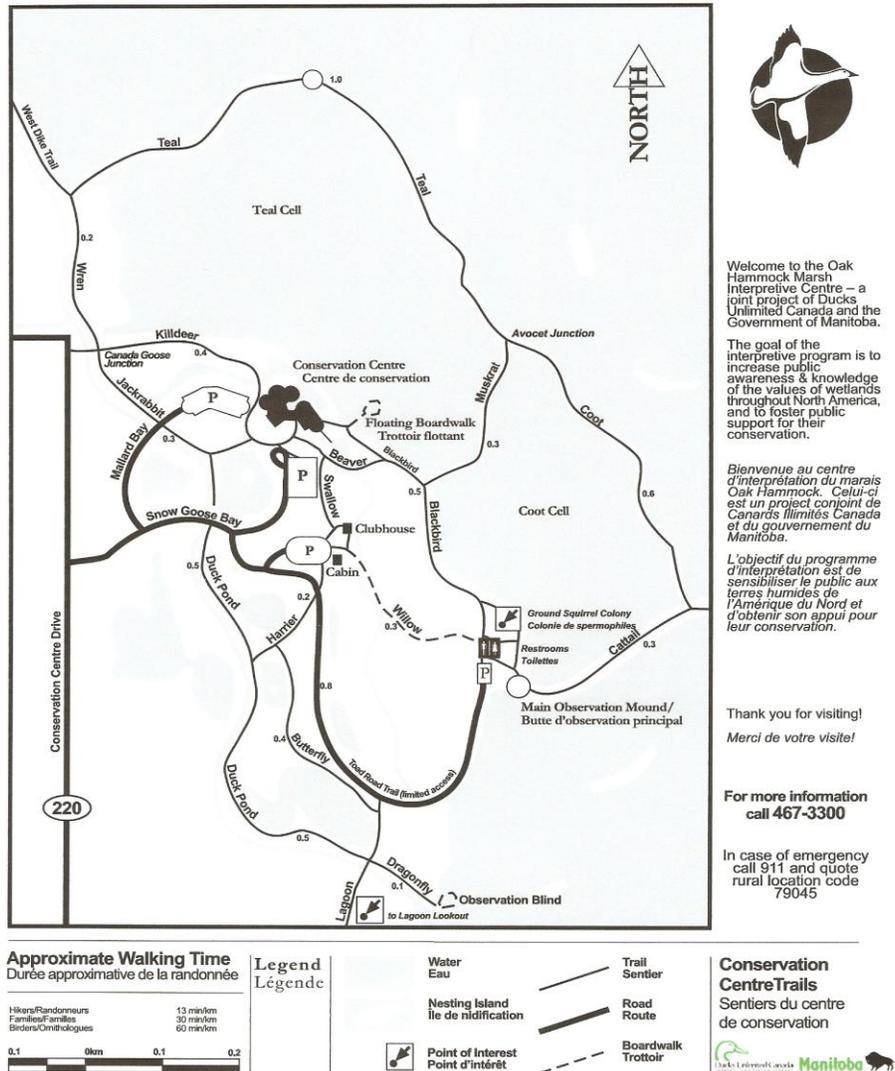
Duck Unlimited has ten beliefs/values. Here they are as stated from their website: <http://www.ducks.ca/aboutduc/beliefs/index.html>

1. Financial and other resources entrusted to DUC will be used effectively and efficiently.
2. DUC embraces innovation, learning and science-based actions to preserve and restore ecological functions with broad societal and environmental benefits.
3. Innovative, dedicated and competent volunteers and staff are essential.
4. Integrity, honesty and the trust and respect of the public are key for success.
5. Public policy and education are key to achieving DUC's vision.
6. Landowners and donors play a vital role in DUC's vision.
7. Mutually beneficial partnerships will be developed.
8. DUC uses grassroots organization to connect to individuals and communities and to inspire support from Canadians.
9. The rich heritage of waterfowling and the contributions of sportsmen and women to conservation are recognized and treasured.
10. DUC pursues collaboration versus confrontation, but not at the expense of our values or resources.

## THE MARSH

Oak Hammock Marsh used to be a huge marshland area covering 470 square kilometers. This present day the marsh is around 36 square kilometers.

The marsh formally known as St. Andrews Bog, has diminished in size mostly because of land usage. Farmers in surrounding areas have taken land from the marsh to use it as fertile soil for farming or to increase the size of their farm. The once huge marshland, which was said to reach the outer limits of Winnipeg just to Teulon, Manitoba, has been conserved by the efforts of many organizations; the most well-known would probably be Ducks Unlimited.



Welcome to the Oak Hammock Marsh Interpretive Centre – a joint project of Ducks Unlimited Canada and the Government of Manitoba.

The goal of the interpretive program is to increase public awareness & knowledge of the values of wetlands throughout North America, and to foster public support for their conservation.

*Bienvenue au centre d'interprétation du marais Oak Hammock. Celui-ci est un projet conjoint de Canards Illimités Canada et du gouvernement du Manitoba.*

*L'objectif du programme d'interprétation est de sensibiliser le public aux terres humides de l'Amérique du Nord et d'obtenir son appui pour leur conservation.*

Thank you for visiting!  
*Merci de votre visite!*

For more information call 467-3300

In case of emergency call 911 and quote rural location code 79045



Oak Hammock Marsh has thirty kilometers of walking paths to accommodate visitors. People visiting the marsh can take the paths to explore nature on their own or they can have a guided tour of the area with a knowledgeable tour guide who can answer your questions.

## WILDLIFE/PLANTS

There are numerous types of animals that can be found at Oak Hammock Marsh such as different types of amphibians, mammals, birds, fish, invertebrates and reptiles. The common amphibian that you can find at Oak Hammock Marsh would be frogs and toads, such as Family Hylidae, which we all know as tree frogs and Northern Leopard frogs.

There are approximately 30 different species of mammals found in the marsh area like the North American Beaver, the Gray squirrel and the White-tailed Jack rabbit. There aren't only animals that roam the marshland but some roam the waters of the marsh.

There is a variety of fish that call the marsh water home, fish such as Northern Pike, the Ninespine Stickleback and Emerald Shiner. Some of the smallest animals can be found in the waters of the marsh, animals belonging to the invertebrate family.

Members of the invertebrate family that can be found at Oak Hammock Marsh are snails, leeches, seed shrimp and crayfish. The reptilian family has one of the smallest numbers of species living in the marsh. There are a few turtles such as the Western Painted Turtle and the Snapping Turtle; there is also the Red-sided Garter Snake.

Not only are the marshland and the waters crawling with animals but the skies are flying with them. Some of the birds are common to the area while some aren't seen quite as often. There are certain birds that are migratory to the area and attract tourists at certain times of the year. The types of birds you can find in the marsh are the Canadian Geese and the Northern Shoveler.



Oak Hammock Marsh is also home to many different species of plants. Thousands of plants grow in marshy habitat provided. Some plants are even edible, such as cattails.

## THE INTERPRETATION CENTER



The building of the Oak Hammock Marsh's Interpretive Center started in 1991 during most of the freezing cold winter, and then continued later in the hottest part of the summer. A great deal of controversy arose surrounding the decision to build such a large structure on what was supposed to be an environmental site. To compensate for the land lost from the construction of the

building and the placement of parking lots, Oak Hammock purchased additional land to replace the lost habitat. Oak Hammock Marsh promotes responsible tourism by using the local economy's resources as much as possible.

The Center has a rooftop observation area which is accessible to all. It has an assortment of marsh plants to aid in the blending in of the center's unnaturalness. It is more welcoming to the local wildlife that calls the marsh their home and also provides the centers temperature. It keeps it cool in the summer and warm in the winter.

To be more eco-friendly, the interpretive center also manages their own waste. The waste water is cleaned and reused while the waste from washrooms is puts into different cells and composted. They also regulate their electricity used at the center. If a lot is being used in one area they will lower the level from another area to compensate so the energy level is always balanced, and doesn't exceed a certain amount of energy. Because of the possibility of migrating bird flying

into power lines they have all their energy coming to them underground.

## SEASONAL ACTIVITIES

Oak Hammock Marsh doesn't only offer guiding tours but they offer many fun activities for people to participate in while visiting the marsh. There are some unique activities for the seasons.

During the cold winter season the marsh offers many creative and fun activities for kids and adults to join in on. You can go snowshoeing and snow golfing. A very creative activity that they offer is human curling. Human curling is an activity played by using tubes; someone sits in the tubes and is launched down the ice towards the target just like the real game of curling. Visitors can also participate in Animal Tracking when they are visiting the marsh. Animal Tracking is an activity where you learn about the different animal tracks and the winter wildlife of the area.

Now for some of the summer fun activities, the marsh offers micro-video demos, which reveal marshland mysteries to curious tourists. There is also bird banding, where birds are marked so that they can be traced and identified. An activity that's usually a favorite for the kids is Critter Dipping. Critter Dipping is done using a net and a bucket. Kids can sit off the docks and search with their nets in the water and see what creatures they discover. Another activity done using the water resource of the marsh is canoeing. You can get a guided tour on the voyageur style canoes and learn about the marsh and its inhabitants. An important activity is the Nature Survey. The Nature Survey is a survey that helps educate people on the plants and animals in the area.

Not only are there activities for the winter and summer seasons but there are activities that can be participated in yearlong. Examples of such activities would be slideshows, movies, critter feedings, special presentations and even jeopardy. There are also crafts such as creating art masterpieces and face painting.

Oak Hammock Marsh has had geocaching available to the public since 2003. In that first year they had 2 caches and one was vandalized. Since then though, the marsh now has 35 caches. On average they get 40 geocachers a year who come to explore the marsh for hidden caches. Oak Hammock Marsh allows people to come and hide their own caches at the marsh, but they do have guidelines that have to be

followed. For example, you need to ask permission before you go and hide a cache in the marsh. They also like their caches to have an environmentally friendly message somehow related to the cache.

## INTERVIEW WITH JACQUES BOURGEOIS

A man who himself is an avid geocacher and works for a living at Oak Hammock Marsh, is Jacques Bourgeois. Jacques is the events communication and marketing coordinator at the marsh. He is also an active member of the Manitoba Geocaching Association. During a fieldtrip in the spring of '08 to Oak Hammock Marsh, we had the opportunity to ask Jacques to help us understand more about geocaching and its impact on Oak Hammock Marsh.

We began our interview with what we thought of as an easy question. "What is your favorite part of this job?" After a long moment of silence, Jacques answered "everything" and went on sharing fond memories of his days working at Oak Hammock Marsh. The scenery, the wildlife and plants are definitely a big part of who Jacques Bourgeois is today.

We were curious to know about some of the changes he has observed over the course of the years with respect to the number of tourists that visit Oak Hammock Marsh. We learned that when The Interpretation first opened, they regularly received a large amount of visitors but as the years progressed the numbers started to diminish. They now receive approximately 200,000 visitors. Their most frequent visitors are school groups that come for their educational programming.

We asked how OHM ensures that the environment is protected. Jacques was proud to give us a tour of the Interpretation Center pointing out each element of its environmentally friendly design. For example, they use ground water to cool the building and they put in special windows for the specific reason to protect the birds. They also have rules that must be followed such as no motorized vehicles and no hunting on OHM property.

We asked Jacques what he wanted to share with us on the subject of geocaching and he said that he found that geocaching is a way for visitors to come to Oak Hammock Marsh and see places that wouldn't normally see. For example there's a forest at Oak Hammock Marsh that a number of people don't know about. He believes that

geocaching is a positive activity for the marsh but that there shouldn't be too many caches because it could harm the environment.

## GEOCACHING PROS AND CONS

### Pros:

- Promotes Family Activity- Great activity for parents and kids to do together as a family whether on vacation or in the community.
- Promotes mobility and physical activity
- In gym curriculum: In Manitoba this year, the province installed a new gym curriculum where there is a certain amount of hours of physical activity that have to be performed in order to graduate. One of the activities deemed suitable for this curriculum is geocaching with a risk level of 4.
- Great way to experience nature
- Requires intellect – Certain types of geocaching require geocachers to answer skill testing questions or to read between the lines.
- Learn about different areas and what it takes to look after them
- Helps the tourism industry
- Gives and adrenaline rush/a thrill
- Don't have to travel very far to hunt- If you go geocaching in your own community you probably wouldn't even have to take your vehicle you could explore by foot or even bicycle.

### Cons:

- May cause damage to the environment ( if rules/regulations not followed) For example: When searching in the Arctic, people leave tire tracks behind which cause significant damage and it has a very slow recovery time.
- Geocachers may leave garbage behind

- Can be pricey if you have to travel – With the prices of gas these days, traveling from area to area in search of a cache may become very pricey.
- Gas emissions – With having to travel by vehicle, gas emissions are being released causing environmental damage.

## THE FUTURE OF WETLANDS

The future for wetlands is uncertain. Ecologists have many theories on what could happen but we will likely not know for sure until something happens and it's too late. Looking back on the rest of this report you can piece plenty of theories together concerning the wetlands future.

Global warming has become a major issue in our world and will affect everything. The rising heat due to our emissions affecting the ozone thus letting the sun's rays penetrate more and more is causing the melting of the polar ice caps. The ice being melted is causing an up rise in the sea-level. The rising sea-levels are then causing disruptions



in the water levels in our natural wetlands. It is also believed however that wetlands and our carbon monoxide emissions is a big contributor to global warming.

Tourism and urbanization play their part. We are constantly building and slowly destroying ecosystems for our personal gain.

The space from our projects comes out of our wetlands and other natural sites. Wetland destruction is becoming more popular as our modern edge kicks in. There has been a great decline in the amount of worldwide wetlands but other efforts of conservation counterattack this destruction.

On the brighter side, there has been a conscious effort made in the last little while to protect our valuable wetlands. Ramsar and other organizations have been dedicated a day to wetlands of the world. This dedication has lead to the protection of quite a few wetlands including major ones of great value to their region. As a result, they have been saved from destruction, development etc. Ordinary people have also made conscious efforts to cut down on their gas emissions, waste, and usual carelessness.

## THE FUTURE OF GEOCACHING

Geocachers can play a larger role by supporting Cache-in Trash-out events (CITO), in which geocachers join together in a specific location and clean it up by disposing of the trash they find during the course of their hunt.

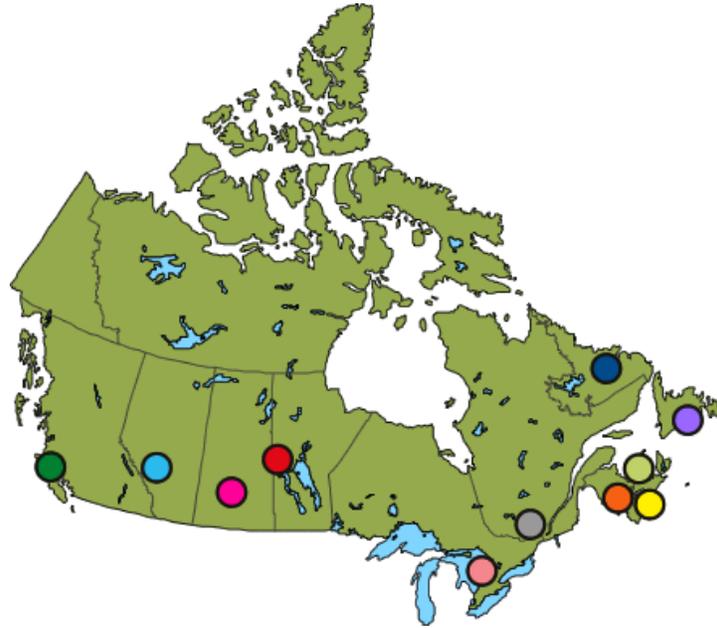
The Geological Society of America actively promotes Earthcaching. This variation of the traditional geocache hunt method is used to educate players about the earth, and to promote awareness of our planet's fragile ecosystems.

Jacques Bourgeois and the staff of Oak Hammock Marsh are hopeful that the wetlands will survive due to their commitment to conservation through education and their commitment to foster public awareness and knowledge of wetlands. They will continue their mandate to encourage public support for the conservation of wetlands through their innovative education programs such as responsible geocaching.

The Canadian Government has also caught the geocaching bug. "Geocache Your Watershed", developed by Environment Canada, began as a pilot project in the fall of 2006 with four schools across Canada participating. Since then, the project has expanded to include one high school in every province in Canada.



The goal of this project was to promote the discovery of local watersheds by students and the general public. The basic concept was to encourage high schools throughout Canada to research their watershed and develop stories or other promotional products that will be used to build geocaches. The students then hid these caches for the ever-growing "geocacher" community to discover - allowing their knowledge to be transferred in a fun and engaging way.



There are currently 11 Canadian schools participating in the program.

## **CONCLUSION**

Geocaching is a very exciting sport. It uses GPS technology and challenges the mind. It's such a diverse activity that it can be played all around the world, by people of all ages. However, there are some real problems surrounding geocaching. These problems are serious ones that can result in permanent harm to the environment.

When we first ventured out into the geocaching world, our focus was finding the prize. We were tunnel visioned and determined to find the cache we were looking for. We hastily made our way to the location indicated to us by the GPS and didn't even think of the plants we were trampling on to get there. As the research for the case study progressed we came increasingly aware of the importance of staying on marked trails. We began to proceed with caution when leaving the trails. We watched where we were walking so as to do as little damage to the ecosystem we found ourselves in.

Respecting the simple rules and guidelines mentioned above can all but erase the environmental impact of geocaching. By educating the public about the importance of respecting and conserving the natural habitats around us, geocachers young and old can continue to explore, have fun and get physically fit all without leaving a huge footprint on

the earth's ecosystems. There is no doubt in our minds that education is the key.

The environmentalists at Oak Hammock Marsh agree. They have dedicated their lives to creating awareness through education. We would like to sincerely thank Jacques Bourgeois and the staff of Oak Hammock Marsh for their help and support throughout the year. Their contribution to our project and to responsible tourism is immeasurable. We thank them for opening our eyes to a whole new world of environmental awareness.

The next time you find yourselves out enjoying nature whether it is for geocaching, camping or simply venturing out for a stroll, please remember:

***"We do not inherit the earth from our ancestors; we borrow it from our children."***

~Native American Proverb

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We would like to thank Oak Hammock Marsh and the Manitoba Geocaching Society for providing us with the photos for our project

APPENDIX 1



**Parks Canada Welcomes Geocachers:  
Come Explore With Us!**

**There are a few things you should know before getting started:**

Geocachers must travel on marked and maintained trails or in publicly accessible areas (e.g. picnic areas) at all times and ensure that natural and cultural resources are not disturbed.

All caches have to be available from trails or other publicly accessible areas.

Trade items are not permitted in caches. Instead, a message or story about the unique location where the cache has been placed is included in the cache for others to find. You can research message ideas at [www.pc.gc.ca](http://www.pc.gc.ca) or by contacting Parks Canada staff at the selected national historic site, national park or national marine conservation area.

Removing trade items will help prevent a cache from containing items that may attract wildlife.

Geocachers pay all applicable fees. (A list of applicable daily entry fees is available at [www.pc.gc.ca](http://www.pc.gc.ca)).

Geocachers who want to place a cache must meet with a Parks Canada staff person at the chosen national historic site, national park or national marine conservation area to obtain an authorization seal prior to placing a cache.

*Preparing for this meeting*

- Make sure that your cache container is watertight, is made of material that will withstand natural elements, is as small as possible, is neutral-coloured and has never been used for food.
- Bring along two completed documents: the note that you will place in the cache for others to find and the completed Cache Information Form

For more information, contact a Parks Canada staff person at the national historic site, national park or national marine conservation area where you are planning to geocache. For general information, please e-mail [geocache@pc.gc.ca](mailto:geocache@pc.gc.ca). We are happy to help you!

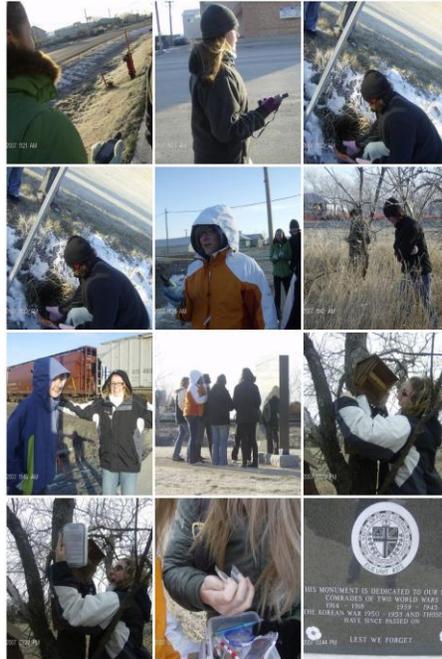
Geocachers are also encouraged to visit the Leave no Trace website at <http://www.leavenotrace.ca>. This website offers helpful principles for planning safe and environmentally respectful outdoor recreation activities.



*A complete version of the Parks Canada Guidelines for Geocaching – which set out a basic national direction for geocaching at national historic sites, national parks and national marine conservation areas managed by Parks Canada.*

# Responsible Tourism Case Study: An Impact Study of the Effects of Geocaching On Canada's Wetlands

## TEACHER NOTES



Global Travel & Tourism Partnership International Conference  
Canadian Academy of Travel and Tourism  
St. Paul's Collegiate Elie, Manitoba, Canada

Written and compiled by  
Academy School Coordinator  
Susanne Saiko-Gamble



## CANADIAN ACADEMY OF TRAVEL AND TOURISM LEARNING

### OUTCOMES

Learning Outcome	Related Skills & Knowledge	Learning Outcome	Related Skills & Knowledge
<b>Tourism Ambassador</b>	Knowledge of community & local/regional tourism	<b>Problem Solver &amp; Decision Maker</b>	Identifies problems and develops strategies to solve them
	Demonstrates professional attitude		Knows the steps and processes to problem solving
	Demonstrates a desire to learn and grow professionally		
<b>Effective Communicator</b>	Shares information in an effective and meaningful way using written, verbal and visual forms	<b>Information Processor, Organizer &amp; Time Manager</b>	Assesses and organizes relevant information
			Completes tasks on time
<b>Critical Thinker</b>	Analyses and constructs ideas, concepts and information related to tourism	<b>Adaptable Worker</b>	Flexible to changes in assigned work, workplace expectations, environment and technologies
	Communicates information in effective ways using a variety of forms		Demonstrates a willingness to learn new skills in response to changes in workplace demands and expectations
<b>Team Player</b>	Interacts with others in positive and constructive ways to achieve team goals	<b>Technology Literacy</b>	Demonstrates computer skills related to the workplace:
<b>Independent Worker</b>	Responsible and reliable in completing assigned tasks and maintaining professional behaviours		· Word Processing
			· Internet Researching
<b>Business System User</b>	Demonstrates competency with common workplace equipment	· Webpage Design	
		· Spreadsheets	
		· Email	
		· Graphic Design	
			· Photography/videography
			· Desktop Publishing

## INTRODUCTION

**Geocaching** is a high-tech outdoor treasure-hunting game in which the participants use a Global Positioning System receiver to hide and seek special containers called caches all over the world. The exact coordinates of its hiding place are posted on the internet for all to find. Today, well over 800,000 geocaches are registered on various websites devoted to this modern day game of hide and seek. Geocaches are currently placed in over 100 countries around the world and on all seven continents, including Antarctica. As the game rapidly increases in popularity, environmentalists and National and Provincial Park officials worry about the impact of this game on the flora and fauna. Seekers often wander off marked trails in search of their treasure resulting in the destruction of plant and wildlife. Is it possible for Geocachers and Environmentalists to work together and turn geocaching in to a model of Responsible Tourism?

## SPECIFIC OUTCOMES OF THE CASE STUDY

By the end of the lesson, students will be able to:

- Define Responsible Tourism
- Show an appreciation for Manitoba's fragile ecosystems
- Demonstrate mastery of various techniques in research
- Identify the challenges of Responsible Tourism Development
- Suggest strategies for creating awareness of the importance of Responsible Tourism
- Act as ambassadors for Responsible Tourism Development
- Implement aspects of Responsible Tourism in the activities they organize in their communities
- Produce written and visual presentation materials to promote the importance of Responsible Tourism Development

## CASE STUDY CONTENT AND CURRICULUM

The following resources are designed specifically for Tourism students in secondary schools. The activities outlined in this Case Study Project will help students develop skills in the following areas:

- Processing and organizing information
- Developing effective communication tools
- Investigating, interpreting and analyzing data
- Networking with industry professionals
- Teamwork
- Higher level thinking

- Implementing Information Communication Technology elements
- Promoting tourism in the community
- Modeling responsible tourism

## CROSS-CURRICULAR LINKS

Our Impact study on Geocaching at Oak Hammock Marsh has linked to the following subject areas

- Français
- English language Arts
- Geography
- History
- Career Technology Services
- Information Technology
- Physical Education
- Cinematography
- Photography
- Biology
- Earth Studies

## HOW TO USE THIS RESOURCE

A Case Study Project is an excellent tool to engage students in a hands-on authentic activity. In this case the topic of Responsible tourism creates an extra layer of environmental awareness that is transferable to many subject areas. All of the following activities can be adapted for use with most case study topics.

### ACTIVITY 1- WHAT IS A CASE STUDY?

*Learning outcomes: Effective Communicator, Critical Thinker, Team Player*

a. Most students have no prior knowledge of case studies. Begin by showing the students sample documents that can be found at:

[http://gttp.org/html/student\\_cases.html](http://gttp.org/html/student_cases.html)

b. In small groups, have the students study the samples and ask them to identify the common parts of the case study documents.

c. Review the document entitled “How to Write a Good Case study that can be found at:

<http://gttp.org/docs/HowToWriteAGoodCase.pdf>

- d. Have the students make up a rubric that could be used as an assessment tool for a Good Case Study.
- e. Ask each group to choose one case study that they will assess using their rubric. This exercise will help them familiarize themselves with the essential parts of the Case Study Project and aid them in the planning and development of their own case study.

## **ACTIVITY 2- WHAT IS RESPONSIBLE TOURISM?**

*Learning outcomes: Effective Communicator, Critical Thinker, Team Player, Business System User, Independent Worker, Technology Literacy*

- a. Using Appendix 2, engage the students in a guided discussion on Responsible Tourism. The questions provided should draw on their prior knowledge of the topic as well as push them to consider aspects of the topic that may be new to them. Use open ended questions that will encourage discussion and the sharing of opinions as well as generate new sets of questions to discuss.

How to use the grid:

- Each student writes their name in one of the boxes along the top row
  - The questions are given to the students one at a time. Give the students time to reflect on the question. Each student will write their answer down in the box below their name.
  - Once all the students have answered the question they will share their answers with the group.
  - The other group members will then write down their teammates answers in their respective boxes
  - Once all the members of the group have answered, they must come up with a single answer that included everyone's ideas. This requires a fair amount of discussion within the group and will force the students to ask for clarification and paraphrase each other. It is an excellent tool to teach effective group discussion.
  - The questions should start off easy and progress into topics that require higher level thinking.
  - The teacher can assess each team member individually based on the information written in their particular grid.
- b. Following the group discussion, the students are ready to research the topic of Responsible Tourism. Each student is asked to prepare a short essay defining Responsible Tourism and explaining its importance.

### **ACTIVITY 3- WHAT IS GEOCACHING?**

*Learning outcomes: Effective Communicator, Critical Thinker, Team Player, Business System User, Technology Literacy, Information Processor, Organizer & Time Manager*

- a. The students were divided into teams of 4 and asked to produce a short YouTube type video on geocaching that would attract teenagers to the sport. They studied existing samples and made lists of what they liked and didn't like about the videos
- b. Each team was asked to submit a plan for their particular video. Once the plan was approved, they set out to make a storyboard for their video using the information in appendixes 3 and 5
- c. A rubric was compiled by the class to be used as an assessment tool for the completed videos

### **ACTIVITY 4- A STUDY OF THE ENVIRONMENTAL IMPACT OF GEOCACHING**

**Learning outcomes: Effective Communicator, Critical Thinker, Business System User, Technology Literacy, Information Processor,**

Why would geocaching be banned in some places? Find articles that give examples of such situations and give explain the opinions of both the geocachers and those wanting to ban geocaching. You will need to produce:

- a minimum of 3 newspaper or internet articles that address the topic of the environmental impact of geocaching
- a summary of each article clearly stating the position of each party involved
- a conclusion including your personal position on geocaching bans

### **ACTIVITY 5- A STUDY OF CANADIAN MARSHLAND**

**Learning outcomes: Effective Communicator, Critical Thinker, Team Player, Business System User, Technology Literacy, Information Processor, Organizer & Time Manager**

- a. This study should include photos and charts. I have made suggestions bellow on how you can break up the project. This project will prepare us for our visit to Oak Hammock Marsh. Be sure to use the Case Study Research log (see appendix) to keep track of your sources.
  - What is a marsh?

- What are the roles of water, plant and animals?
  - Where are the world's wetlands located?
  - How has the distribution of wetlands changed over the years?
  - What are the problems affecting wetlands above and below the water
  - What is the role of the marsh in bird migration
  - What is the history of wetlands in Canada?
  - What types of recreation happen in a marsh?
  - Talk about wetland destruction
  - Talk about wetland conservation
  - What is the future of Wetlands?
- b. Prepare a PowerPoint presentation of your findings. Your presentation should last approximately 20 minutes. You will be assessed using the CATT rubric on oral presentations.
- c. You have already outlined what you will have in your presentation. Now it's time to design an original template for your presentation and put together your PowerPoint. The template should reflect the theme of sustainable tourism and should have something do with marshes or geocaching. Take your time and be creative. The template you chose will set the tone for your whole presentation!

## **ACTIVITY 6- THE INTERVIEW**

Learning outcomes: **Effective Communicator, Information Processor, Organizer & Time Manager**

- a. Prepare a series of interview questions you will use to gather information from the staff at Oak Hammock Marsh. Your questions should be open ended questions (no yes or no answers) that will give you an insight into the importance of practicing responsible tourism. Each team will need to prepare at least 10 questions. You will be assessed using the CATT interview Rubric.
- b. With the data collected during the course of your interviews, write a newsletter article in which you will share your findings with the school community. Your article should include a photo and at least one quote from an employee of Oak Hammock Marsh regarding responsible tourism. You will be assessed using the Written Report Rubric (see Appendix)

## **ACTIVITY 7- GEOCACHING FIELD TRIP**

Note to the brave:

This is one of the most fun and frustrating activities you can do with your students. I highly encourage it. There are many sites on the internet that give great instructions for first-time geocachers. I have listed some below. If this is your first experience with hand-held GPS (Global Positioning System) units, I highly recommend that you become very familiar with your units. We use a Garmin version which is very user friendly. Ideally you will want one per person but my students also enjoyed going out in small groups when it was necessary.

It is also important to prepare for failure. It looks like a simple straightforward activity but unless you have an unlimited amount of time to search, the reality is that you may not find what you are looking for on the first try. The person that did the hiding will often give clues to help you. Print these clues and take them with you.

This kind of activity can be done with students of all ages. I have taken students in grades 7 through 12 geocaching and it is always a big hit! There are so many caches hidden in the world that the chances are good you have several hidden nearby and the students can go on foot.

In the fall of 2007, my students and I piloted a new GPS activity at Lower Fort Garry, a National Historic Site of Canada. ([http://www.pc.gc.ca/lhn-nhs/mb/fortgarry/index\\_e.asp](http://www.pc.gc.ca/lhn-nhs/mb/fortgarry/index_e.asp))

They were trying to determine if bringing in such a high-tech game would get teenagers to want to visit the park again. The coordinates given to the students brought them to different buildings on the site where they had to engage in conversation with the costumed employees in order to get information necessary to get their next coordinate. This was an amazing way for the students to gain knowledge of their heritage. The program was very well received by my students and we have recommended that they make it part of their regular school programming.



**Here are some websites that will help you get started:**

<http://www.factsfacts.com/geocacher.htm>

<http://www.geocaching.com/>

[www2.hawaii.edu/~ricky/etec/sboardtemplate.html](http://www2.hawaii.edu/~ricky/etec/sboardtemplate.html)

**APPENDIX 2- GROUP DISCUSSION GRID**

<b>Questions</b>	<b>Group member names</b>				<b>Summary</b>
	<b>Name:</b>	<b>Name:</b>	<b>Name:</b>	<b>Name:</b>	
1.					
2.					
3.					
4.					

## APPENDIX 3- THE STORYBOARD

Developed during the [pre-production stage](#) and used throughout the [production](#) and [post-production](#) stages, a storyboard is a series of diagrams that are used to depict the composition of a video segment. Each diagram consists of: a sketch of the video image; a brief description of the visual; notes for the camera operator; the details of the desired audio that will accompany the visual; and an estimate of how long the segment will be. The storyboard cards are then placed in order to provide the foundation for capturing the proper footage and for making the correct editing decisions. Here is an example of what a storyboard card might look like.



Sequence # 29  
 Visual Description: Graduation caps being tossed  
 Estimated Time of Take: 10 sec.  
 Notes: "If you work hard, you can succeed." (panning across the raised hands of the cheering students)

### Why is a Storyboard Necessary?

When sequenced, the storyboard diagrams should act as a guide for the production and post production stages of producing a video. Without a well defined storyboard collection, the director's job becomes unmanageable.

The storyboard becomes a valuable tool for everyone involved with the production. When the director, camera operator, [talent](#), and editing team all have the same understanding of the goals of the video, a quality production becomes obtainable.

Creating a storyboard also allows the production team to experiment with different ideas and sequences before taping any segments. Individuals can sketch and explain their visions of what the flow of presentation should be. During the pre-production stage, adjustments can be made to the projections of the completed video, which will save valuable production and post production time. The production and editing teams do not need to guess as to what type of footage might be needed and how it might all fit together. If the proper segments are recorded, as called for by the storyboard, the editing process should flow smoothly.

The other advantage of having individual storyboard cards is that it can be re-shuffled into an order that will facilitate the production stage. Once the desired order of the segments are identified for the final product, the director can then rearrange the order of the cards to plan how to record each segment while minimizing the number of equipment and set changes.

## How do I Create a Storyboard?

In the Storyboard Template section, you can see what a storyboard might look like. Variations of this storyboard can be made to suit your needs, but should include these basic sections: sketch, video information, audio information, camera operation instructions, the time of the segment, and a segment number.

### Sketch

This area is for drawing the image that the camera operator should try to capture during shooting. The sketch is very important because it shows an example of the shot composition that is desired. The shot selection might call for a "medium" shot, but since people have different standards for shot compositions, the sketch is the only way to see what type of shot is expected.

The sketches of the storyboard do not need to be detailed, but should be accurate enough so that there are no mistakes of capturing "long shots" when "close-ups" were called for.

### Sequence Number

Fill this in last after you have determined the order of the shots. If you later decide to change the order, just cross out the old number and record a new number. The order will be important for the editing team so that they know exactly which shots follow each other. With the sequence number identified, you can rearrange the order of each storyboard card to allow you to plan how to efficiently capture your footage during the production stage.

### Shot Description

This will contain a description of what the director will be instructing the camera operator to capture on tape. This will help to explain details that cannot be shown by a single sketch. You might decide to use some of the terms used to identify the basic camera shots, such as, extreme close up, medium shot, or long shot in conjunction with your descriptions. If these camera shot terms are new to you, go to the [Basic Shot Selection](#) section to see examples.

### Transition In/ Transition Out

A [transition](#) is the process of changing from one shot to the next. Identifying your transitions in your storyboard will make editing much easier. By looking at these lines, the production team can tell if they have variation between shots. Comparing the transition "out" of one shot with the following transition "in" of a different shot helps to ensure a sequence of shots that will not confuse the audience. In the [Basic Shot Selection](#) section, further explanations of transition options are provided.

## Video Image

This line can be used to provide a classification of the starting video image: print graphic, computer generated graphic, title, action shot, scenic shot, two person dialog, interviewee response, etc. See the [Basic Shot Selection](#) section for more details on the types of graphics or titles that you might consider. It is not critical to use exact terms of different shot types, but it is helpful to develop a scheme for how this entry will help you classify the video image type. It will be up to you to decide how you use this field.

## Audio Recorded

As the video image is recorded, sounds can be recorded simultaneously. Notes can be made that the [built-in microphone](#), or the [external microphone](#) will be used. Sometimes, you may want no sound, other times you may want just background sounds. For example, if your visual will show children playing, you may want to include the sounds that you typically hear at a playground.

If you will be doing narration at the same time that you are recording the video footage, or recording someone speaking, you can make a note to see the [narration/script](#) section for further details of what is expected to be said.

## Added Audio

If you plan to add secondary audio during editing, you should make note of what kind of audio you will need. As an example, if you were showing shots of the process of donating blood at the Blood Bank, you might add a [voiceover](#) that explains the process that matches the visual that the viewer sees.

You can plan to add music, voiceovers, or recorded audio from another videotape; or it could come directly from an attached microphone. Keep in mind that during the editing process, this will not replace but add to the standard audio that you recorded during the taping of your visual.

## Estimated Time of Take

How many seconds do you anticipate this segment to be? This will help guide you during taping to make sure that you have segments long enough, or it can help the editing team make decisions to shorten recorded segments that might appear too long in the master tape.

## Narration/Script/Notes

If you need specific words said, you should write them here. You can also provide descriptions of the kind of responses you anticipate from an interviewee if you are

recording an interview. Use this section to describe further details that are essential to the shot that you are trying to get.

Remember, this is part of your pre-production planning. With more specific information here, you should have a clear picture of what to expect during production.

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## **Transitions**

When you edit your segments together, how you switch from one segment to the next is called a transition. You do not need special editing equipment to incorporate transitions between your shots. You can create many of your own transitions using well planned techniques using the features of the video camera.

As part of your storyboard, you may want to plan for specific transitions into or out of a segment. Here is a list of some of the transitions that you can consider for your video production.

### **Simple Cut**

This will be your most common transition since all it requires during editing is to stop or start the scene where it is convenient. This is effective for quickly changing settings or perspectives.

### **Black**

Editing in a second or two of "black" can help to provide a distinct break between scenes. When you watch television, you may notice that many times when a program goes to commercial, there is a moment of black just before a commercial starts. This helps the audience to know that the commercial is not part of the program.

### **Fade-in/Fade-Out**

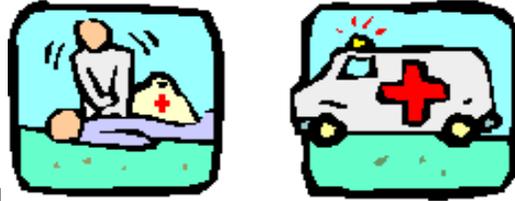
Many video cameras have a fade button. Using this feature helps to show the audience that the scene has changed or will change. The fade usually starts or ends with black.

### **Refocus/Defocus**

If your camera doesn't have a fade feature, you could use a technique where you start or end a scene out of focus. You may notice that many times when television programs display text information on the screen, they usually produce it over a defocused scene. Of course, to do this, you must learn how to manually focus your video camera first.

### Follow a moving object

To transition into a scene, you can try to record footage where you follow an object or person (that is not the main focus of the scene) moving across until you stop the camera and stay focused on your intended subject. From there you can record any scripted dialog. This helps to avoid having everything jump out at your audience as you transition between scenes.



Be careful in what you select as your transitions in and transitions out, particularly as you go from one "out" to an "in." If the transition out on one shot is a "medium shot, cut" you typically don't want to follow with a similar "cut, medium shot" on the transition in of the next shot. If you have the same type of shots following each other, you need to further examine the details of the segments to make sure that this similarity won't confuse the audience.

There are many more ways that you can transition, and the above examples are just a few to help get you started.

### Graphics Insert

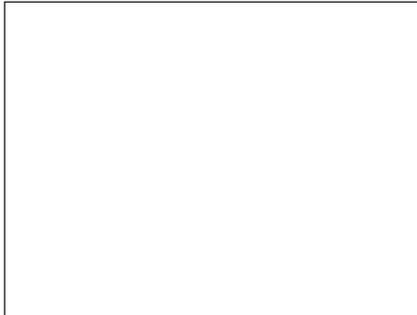
Sometimes it helps to show important points with a graphical visual aid. With matching examples and verbal descriptions, you can be sure that your audience will know that you just made an important statement because you backed it up with a graphical image. For example, if you want students to remember key points, you can present a graphic that has the points numbered and sequenced.

On the other hand, you can take advantage of certain graphics to help add information so that you do not necessarily have to have someone verbalizing all the details.

### Editor Created Titles

The linear editing system does have the capability to add [titles](#) to a video segment. This is an easy way to produce title screens on colored backgrounds, or to add captions to enhance certain images. You might want to add a caption that shows the name of the person that the viewer is seeing. Keep in mind, however, that the built-in title functions are nothing like word processors and you may find your options rather limiting.

**APPENDIX 4- STORYBOARD TEMPLATE**



Sequence # \_\_\_\_\_

Shot Description: \_\_\_\_\_

\_\_\_\_\_

Transition In: \_\_\_\_\_

Video Image: \_\_\_\_\_

Audio Recorded: \_\_\_\_\_

Added Audio: \_\_\_\_\_

Transition Out: \_\_\_\_\_

Estimated Time of Take: \_\_\_\_\_

Narration/Script: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

R. Okazaki (May 1998)



Sequence # \_\_\_\_\_

Shot Description: \_\_\_\_\_

\_\_\_\_\_

Transition In: \_\_\_\_\_

Video Image: \_\_\_\_\_

Audio Recorded: \_\_\_\_\_

Added Audio: \_\_\_\_\_

Transition Out: \_\_\_\_\_

Estimated Time of Take: \_\_\_\_\_

Narration/Script: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

R. Okazaki (May 1998)