Bar Harbor Project Center
Sound Archive: Acadia National Park
BH14 1403

An Interdisciplinary Qualifying Project
Submitted to the faculty of Worcester
Polytechnic Institute
in partial fulfillment of the
requirements for the Degree of
Bachelor of Science

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Aug 1, 2014

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Abstract: The preservation and archival of current natural soundscapes is an ever growing science. Natural soundscapes around the world are changing due to a wide assortment of noise pollutants, predominantly man-made. The objective of this project was to record and archive the natural sounds of Acadia National Park as well as to create a comprehensive tagging system to categorize these recordings. This was done using a surround sound microphone, and by implementing a thorough index containing a multitude of relevant tags. The results of this project confirmed the value of a tagging system. It also acted to set a baseline for recording procedures and best practices for future projects. This group's work created a foundation that sets the way for future expansion.

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Executive Summary

Due to the currently changing state of global soundscapes, action is needed to preserve natural sounds. Archiving these sounds is a necessary action for the preservation of these soundscapes, and may prove valuable for future research. Recording and archiving is critical to the documentation of ecosystems and their changes.

Acadia National Park is a rich environment that is being damaged by noise pollution. The purpose of this project is to create a database of natural sounds recorded in the Acadia National Park lands, as well as to lay the foundation for a metadata index to tag and identify these sounds

This document summarizes the sound archive project that was completed in Acadia National Park on Mount Desert Island, Maine. The study took place over a course of seven weeks from June 20th to August 2nd of 2014 during which a number of recordings were taken from sites around Acadia. These sites were chosen based on a variety of criteria including, but not limited to sites used in previous sound studies, characteristic sounds of Acadia, general site location, site accessibility, and acoustical zones/forestation levels. The zones were determined through use of 2003 forestation map (Figure 1), provided by the National Park Service, which was checked against our GPS site map (Figure 2). Recordings were also taken from the 4 recording sites used by the previous IQP (Figure 3). Besides these, the team recorded at an additional 25 different locations throughout Acadia, giving us a total site count of 29. The names of these site locations were one of the primary defining tags used in the tagging system. This system comprised of over 25 different recording specific tags including: Date, Day, Weather,

GPS Location, Site Name, Bit Rate, Sampling Size, as well as many others to produce a comprehensive index. The files themselves were not included in the system. The system was designed to be easily usable as an index for the recordings, which were stored externally on a series of hard drives.

The team used five different pieces of equipment. The equipment was as follows:

- TASCAM DR-680
- Core Sound Tetramic
- Core Sound PPA2 Pre-amplifiers
- Garmin E-Trex GPS
- SpeedTech Industries SkyMate SM8

These five devices were key in data and audio collection for the tagging system.

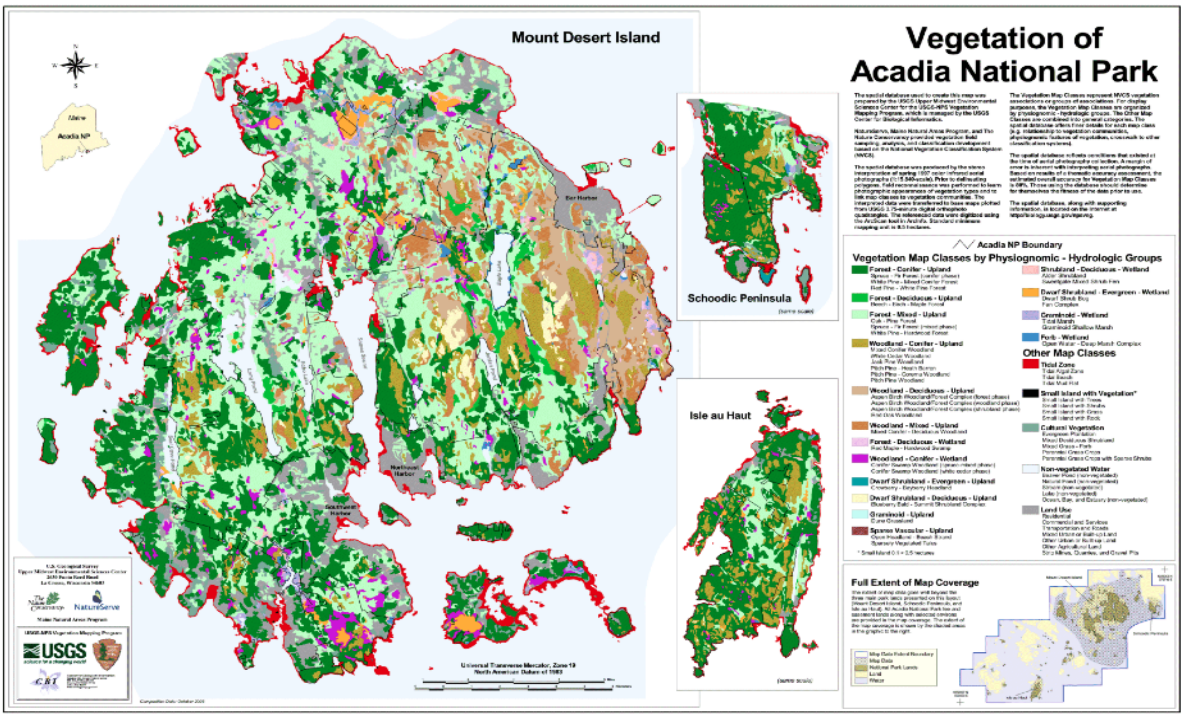

Figure 1: NPS Vegetation Map of Acadia National Park

Figure 2: Sound Archive Location Map

Figure 3: 2013 Sound Analysis Site Map

Chapter 1: Introduction

The mission of the National Park Service is twofold: to protect the natural environment, and make it accessible to all. The need to protect all parts of the wilderness, including sound, was initially outlined in the Organic Act of 1916. This act embodies the values of the National Park System: to preserve nature, and to provide the pleasure of observation without disrupting the natural progression.

Acadia National Park shares these values. Founded in 1929, the park was the first on the east coast. “Awed by its beauty and diversity, early 20th-century visionaries donated the land that became Acadia National Park.” (“Acadia National Park Maine,” 2014). Acadia consists of more than 45,000 acres of wilderness.

Unfortunately, this wilderness is no longer, and the original sounds are one of the lost features. “In 1972, the Noise Control Act required that the federal government enforce noise controls in work and other places, including national parks” ("Managing Soundscapes," 2012). Sound is considered one of the most delicate parts of an ecosystem, and can be a significant part of how one experiences the environment. Without the audio provided by different animals, the scenery becomes a picture on a wall. Many tourists travel to national parks across the United States “with the hope and expectation of experiencing natural sounds” (Lynch, Joyce, & Fristrup, 2011). Throughout the entire world there are around “10 million unique sounds produced by birds, amphibians, mammals, and insects” (Carlson, 1996). Bryan Faehner, associate director of the National Parks Conservation Association, believes "the uniqueness of a national park and the special experience you can have at a park is less special … if you can't listen to the

amazing songs of migratory birds [and other such sounds]" (Streater, 2009). Acadia intends to address this loss by protecting what is left of the original soundscape.

In order to help Acadia with its commitment, the team had two goals. First, the team created a sound database that can be accessed by the National Park Service. The Library of Natural Sounds at the Cornell Laboratory of Ornithology provides an excellent model (Carlson, 1996). Second, the team filled the database with a quantity and variety of audio recordings from the Park for a database. In addition to these two goals it will pave the way for database expansion.

With this database and its contents, exhibits were created for the Visitor's and Nature Centers. These exhibits provided a proof of concept for future educational projects. These exhibits also acted as a new attraction, engaging visitors with a new experience. Such exhibitions will also allow handicapped people, who may not be able to hike or bike, access to Acadia.

These goals distinguish the project from previous IQPs. In the 2012 sound IQP, natural areas were tested for their acoustic qualities (Maino, Schrader, & Bianchi, 2012). In the 2013 sound IQP, measurements were taken describing the sound pollution in the park (Costi, 2013, Acadia Soundscape Analysis). In comparison, the team created an audio database that encompasses a broad and diverse range of total raw audio as possible. This unedited catalog of sounds was documented for future use. With it the Park can create unique exhibits that will preview experiences found throughout Acadia. In turn, these exhibits will attract more visitors and will also document the current soundscape.

Chapter 2: Background

Sound is a significant portion of the natural world. Sound can alter how environments are perceived. Sound can influence people's moods and also affect the people and natural world around it. As such, sound can be used in many ways. In the 1900's, sound started to become a new topic of research. In a recent study, an Oxford psychologist shows that different sounds can change how chocolate tastes. "[They] were significantly able to change the rating of the bitterness and sweetness of the food depending on the sound they were listening to," (Spence, 2012).

There are a wide variety of sounds. Among these sounds, natural sound comprises a significant portion. Throughout the entire world there are around "10 million unique sounds produced by birds, amphibians, mammals, and insects" (Carlson, 1996).

Unfortunately, these sounds are in danger of being drowned out by human activity such automobiles, industrial machinery, and other forms of interference. So, recording these natural sounds is very important not only to document the soundscape but also for use in research (Brandes, 2008). Sound is especially important in the exploration and enjoyment of national parks and other natural areas.

National parks are a place where natural sounds are predominant compared to many other areas. Unfortunately, the soundscapes in national parks are losing their purity. This loss does not bode well. These soundscapes are changing through a combination of time and human influence. Every year, tourists across the world travel to National Parks "with the hope and expectation of experiencing natural sounds" (Lynch, Joyce, & Fristrup, 2011). In 1998, a survey was conducted within the national parks. The results

showed that more than 70% of Americans felt that "providing opportunities to experience natural quiet and the sounds of nature was a very important reason for having parks and preserves" (Haas and Wakefield, 1998). If the parks can not provide these signature soundscapes, then the park might lose its reputation for clean and pure sound, its support network, and possibly some of its uniqueness.

There has been legislation to help preserve these soundscapes. The National Park Service first addressed sound as a major environmental concern in 1978 ("Managing Soundscapes," 2012). U.S. National Park Service passed a Director's Order in 2000 with the intent of protecting the soundscapes in the National Parks. The directive orders action to begin to mitigate damage to the natural soundscape and to begin documenting the impact of sound changes in the parks.

> "These park planning efforts will (1) describe the baseline natural ambient sound environment in qualitative and quantitative terms; (2) identify sound sources and sound levels consistent with park legislation and purposes; (3) identify the level, nature and origin of internal and external noise sources; (4) articulate desired future soundscape conditions; and (5) recommend the approaches or actions that will be taken to achieve those conditions or otherwise mitigate noise impacts." (Stanton, 2004).

Efforts were taken to get involved parties to decrease impact, such as changes in visitor behavior and automotive usage within park borders. One problem specific to Acadia is small aircraft noise. A strategy employed in Acadia to reduce noise pollution and maintain soundscapes was to limit the number of small aircraft tours that fly over the national park (Lynch, Joyce, & Fristrup, 2011). These noises can also be dangerous to

wildlife and can hinder the satisfaction experienced by visitors (Brown, Reed, Dietz, & Fristrup, 2013).

The challenge of preserving soundscapes is becoming more difficult as threats to the environment, such as these, grow ("Managing Soundscapes," 2012). It is necessary to document these soundscapes in an archive so we have a record of their current conditions. This archive can also be used to study changes in the soundscape. When these sound changes occur, it is impossible to obtain the original sound unless it is maintained in a record.

Some methods of storage have proven to help document the soundscape. Sound archiving, for example, is an extremely efficient way to store sound, and natural sound is no exception (Huber, 2013, Modern Recording Techniques). By archiving natural sound recordings, the National Park Service is able to store data and retrieve it. The Park Service can then use this stored information for research or to create educational projects to promote the park. Such an archive can be built in any format, depending on the attributes required.

There are many ways to store sound, though recording technique is critical to all of them. It is possible to store recorded audio in analog or digital formats. Most modern technology follows digital formatting at this point. Both analog and digital have their respective advantages. One advantage of analog storage is that the quality of the recording can remain intact for generations. On the other hand, one major advantage of digital storage is that more data can be stored on a device and digital audio can be written in analog with the proper equipment (Huber, 2013, Modern Recording Techniques).

Metadata tagging is another important component of keeping records in large archives. There are many programs that allow the user to tag general information. The Audio Engineering Society uses many different standard tags. Some of these tags include date and time, GPS location, creator, and file ID Number (Audio Engineering Society, 2011). Our team plans to use these tags and others to provide as much information to a user as possible. Some other important tags that we will include in our IQP are: bitrate, sampling size, featured sounds, and weather conditions.

The WPI IQP program first became involved with Acadia National Park in 2012. Prior teams had projects concerning sound, as well. The two previous sound projects dealt with the interaction of sound and environment. Specifically, the first project dealt with sound art and natural area acoustics, and the second with soundscape analysis (Maino, Schrader, & Bianchi, 2012). The 2013 team dealt with the soundscape analysis. They used recording equipment that could analyze decibel and frequency levels. In order to find the least affected locations, the team measured ambient sound levels at five different locations throughout Acadia National Park. After retrieving the data, the team compared their findings to a 2005 study conducted by the Department of Transportation to check whether the places had similar sound pollution as the DOT 2005 reference guide (Costi, 2013, Acadia Soundscape Analysis).

In comparison, the team's goal was to document the natural soundscapes of Acadia. To do this, the team took different sets of sound recordings around Acadia. Instead of studying the sound, as the predecessors did, the team gathered as much audio as possible and built an archive framework for future use. The equipment that the group used consisted of a Tetramic, four preamplifiers, and a four-channel sound recorder, as

well as some metadata software. This system allowed the group to record high quality sound, and the software allowed for organized archival. The team went further to create a sound exhibition for the visitors, as well.

Sound exhibits have been used successfully in the past. The National Cryptologic Museum included a sound collection in their Vietnam War exhibition (2009, Vietnam War Exhibit). Similarly, the University of Edinburgh School of Physics and Astronomy held a sound exhibition in 2011. The exhibit combined “soundscapes and artwork to examine how we are affected by industrial and urban noise.” During the opening weekend over 1000 people visited this exhibit ("SOUND success in Glasgow," 2011). These types of exhibits demonstrate the success of sound installations. Our team feels that Acadia’s beauty and immense audio diversity will drive the success of this project.

In the recent years the National Park Service developed an online storage system. The Integrated Resource Management Application (IRMA) is used as an online database for storing a variety of file formats. IRMA contains files ranging from audio to formal research studies to scientific data.. However, the audio files that are on IRMA are difficult to access and are not suitable for educational purposes (“National Park Service IRMA Portal (Integrated Resource Management Applications)”). Another issue is the sheer quantity and file space required by a digital archive, especially when sound files are involved. As such, the Acadia National Park Service would like us to create a new database specifically for Acadia’s sound. While this project will certainly be the work of many people over a long span of time, we want to lay the framework for a successful sound archive for the future.

Chapter 3: Methodology

As was mentioned in Background, soundscapes are always changing due to human influence and natural causes. The team created a sound archive for Acadia National Park. To do this the team collected sounds throughout Acadia. These recordings were archived using metadata software. The recordings were documented with short descriptions, and these served to organize and classify the sound for further use.

3.1 Site Selection

There were several factors to consider when considering where the team needed to record. These factors included site safety and accessibility to recording site as well as target sound. Some other factors also included equipment, software, and relevant procedure.

3.1.1 Site Safety and Accessibility:

Site safety was important because the goal of the project was to record the purest and unsullied sounds of Acadia. Site safety was a consideration for two reasons. First, safety for personnel and equipment was important. Second, each site has allowed the team to learn how to use the equipment and prepare for more exposed recording locations. The team felt that it was best to get recordings as unaffected by human activity as possible, but not at the cost of personal safety. Not only must the site where the team was recording be safe, but the accessibility of the recording site was also very important.

The journey to the recording site was also an important consideration of the team because Acadia National Park consists of different types of terrain - mountains, forests, and coastline. Hiking the many mountains of Acadia can be very strenuous.

3.1.2 Target Sound:

The team's last recording consideration was the target sound. Acadia is home to many different animals and soundscapes. The team hoped to capture some of these audio spectrums with unedited recordings. The team wanted to document the current untainted soundscapes. Unnatural sounds, like human voices or machines, can disrupt the purity of a recording. Some of the target sounds or soundmarks of Acadia are the boom of Thunder Hole, horses on carriage roads, and the winds of Cadillac Mountain. Other recording locations were determined through interviews with Park personnel. It was expected that some recordings captured signature sounds of Acadia. Other recordings also captured the soundscapes at other locations.

In order to help the team select locations for a good assortment of environments, a detailed vegetation map (figure 1) was used. Because the team wished to gather as varied a set of recordings as possible, this map was extremely helpful.

These three factors were the foremost considerations that the team and the park service must keep in mind when they record. It is worth mentioning that the prior WPI Acadia sound groups did some site analysis, and the team reviewed this information when making our selections.

3.2 Equipment, Testing and Relevant Procedure

The project employed a variety of audio equipment. The three primary pieces of equipment were: a TASCAM DR-680 Multitrack Recorder, 4 preamplifiers, and a Core Audio Tetramic. The TASCAM DR-680 is capable of recording four tracks simultaneously. These tracks come from the microphone's four omnidirectional heads that each sends a separate signal to one of the four preamps. From here the recorder combines the signal to create four unique tracks in a single file. These tracks can be outputted in many different formats.

The TASCAM recorder can output audio files in three different formats. These formats include "MP3" "WAV" and "BWF" file extensions. The team chose .wav file format. WAV is a common extension for high quality sound storage files. WAV files are usually compressed files with complex structures. These structures can consist of multiple overlapping tracks. In comparison, MP3 files are much simpler. However, due to the simplicity of the MP3 files, the tracks are combined, and are of lower quality. There are programs like "Audacity" and "Twisted Wave" are used to edit and analyze the files and they will be mentioned later on.

The MP3 and WAV file formats call for different storage strategies. The size of the sound recordings requires a large storage capacity. Files can range from 2 MB to 200 MB depending on the file format. A combination of the Excel spreadsheet and a physical hard drive system were most effective. The team created 2 copies of the files. The first was a raw .wav file, completely unedited, saved directly to the hard drive. The second

was a normalized copy. A stereo copy of the original file was also exported alongside the 4-channel went into the tagging software.

When on site, in order to gather much of the required data, extra equipment was used. The two pieces of extra equipment used by the team were a Garmin eTrex GPS unit, and a Skymate Speedtech SM18 Windspeed meter, which doubled as a thermometer.

The team considered using the National Park Service database IRMA for storing of these files. However, because of the shear quantity and size of these audio files, a physical hard drive proved to be the best option. IRMA is a very useful tool however storing over 15GB of audio is not feasible. The index on the other hand could be uploaded to IRMA as a reference for researchers or other interested parties.

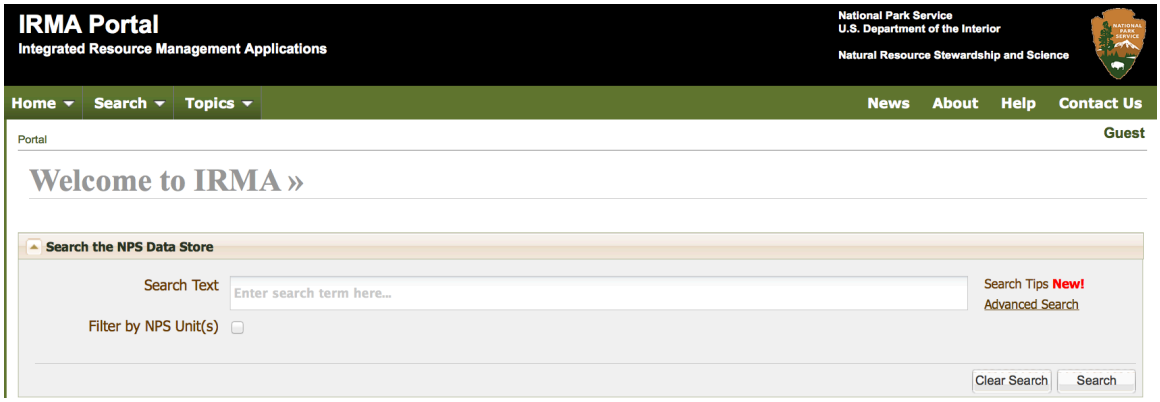

Figure 4: NPS IRMA Database

The equipment is listed below with more detail.

Tascam DR-680:

Portable Multitrack Recorder that has 8-track recording with a resolution of up to 24-bit/96 kHz. Also, 2-track recording resolution of up to 24-bit/192 kHz. Furthermore, it saves the recording in SD/SDHC cards in any of the following formats: BWF, WAV, or MP3. The DR-680 is capable of recording up to four tracks in the MP3 frequencies: 44.1, 48, 96, and 196kHz. Used quantization rates are 16-bit and 24-bit. MP3 files can be recorded at resolutions of 96/128/192/320 kbps

Figure 5: TASCAM DR 680

Core Audio Tetramic and Preamplifiers:

High quality omnidirectional microphone with four heads used to record sound in different directions. This mic allows the user to record one channel per head. The bit rates are 16 and 24 bit fixed, and 32 bit float. This mic can also sample at rates of 44.1, 48, and 96 kHz per second. Four Core Audio preamplifiers and a basic windscreen were used as well

Figure 6: Tetramic, Preamplifiers, and Windscreen

Garmin eTrex

The Garmin eTrex is common in fieldwork. This tool provides the GPS coordinates of the worker/visitor at any place or time around the world. The eTrex uses satellite signals to provide the most efficient pathway and directions to a certain place. This tool has been used in order to provide us with the accurate coordinates of the recording sites.

Figure 8: Garmin eTrex

SpeedTech Industries Skymate SM18:

The Speedtech SM18 digital windspeed meter is a convenient, small, accurate handheld unit. The unit is capable of recording current, average, and maximum wind speed, as well as temperature and wind chill. The meter was used in the field for both windspeed and temperature data. The unit was also conveniently water resistant.

Figure 9: SpeedTech Industries Skymate SM18

Tascam DR-40:

Basic portable flash-memory based audio recorder. It is small (size) and produces fair quality recordings: together this gives us more flexibility at some locations. The design allows for multidirectional sound reception and it has a comfortable grip. The design improves sound quality and ease of recording relative to other similar portable recording equipment. This item was only used on one occasion while Preamplifier hiss on the primary unit was being investigated. The data was pitched due to relatively low quality and only being in stereo.

Figure 10: TASCAM DR-40

3.3 Recording Procedure

From our equipment testing we encountered two challenges. First, distance was important. At a distance, birdsong and similar sounds on the recordings were faded in comparison to closer sources, despite being more uniformly audible in person. Second, the equipment required an experienced touch. The relationship between settings, dials, and other variables was not straightforward. Luckily, both of these problems were quickly fixed after a short time in the field, which allowed the team to gain the required experience.

All gear, save for the microphone stand, was stored in a waterproofed hiking bag for the duration of the project. The mic itself was also stored inside a water and shock proofed container. When not in use and in a covered area, the bag was left open to the air

to avoid condensation being trapped within the bag, or other such adverse conditions. On site, the bag top was opened and peeled down to allow access to the recording equipment. The mic line was disconnected and the mic restored in its case between locations. The preamplifiers, mic line, and observation headphones remained connected to the Tascam unit.

Once a site was chosen, the stand would be set up, the unit turned on, and the mic connected. Only after the mic was connected would the output be turned on. This can be done by simply pressing pause, which will begin gathering sound through the mic, but not yet recording it to a file. While in this state, the levels were monitored, and the gain and trim were set accordingly to avoid maxing out the equipment during wind bursts. It was found that some recordings had a very low output level, despite having appropriate trim and gain. The issue was a levels setting that was accidentally turned down to -48db. When found, this was returned to the highest setting, -6db.

Similarly, some recordings were found to contain serious preamplifier hiss. It was established here that from then on, high gain should be consistently used, and all level changes done solely through trim. After some experimentation, it was found that the hiss was predominantly due to the preamplifiers being double-powered. This meaning that the microphone was being fed phantom power by both the Tascam unit, and the preamplifiers. The issue was resolved when the batteries were removed from the Core Audio Preamplifiers, allowing power to come solely from the tascam unit. During the period of experimentation, a handheld Tascam unit was tested as well. This was found to be generally inferior to the larger unit.

Figure 11: Images of the equipment and crew in the field

3.3.1 Trim and Level Adjustment

Recordings ranged from 30 to 300 seconds in length. A bitrate of 24-bits per second worked best. These specifications will also serve as tags after the files have been archived because the duration of a sound can be important. Some other audio considerations that the team considered were the sampling rate as well as the recorded content. The sampling rate was 48kHZ. This is a common sample size for professional recordings. The team also took notes on the happenings during recording in an audio journal.

3.4 Programs

As mentioned previously in section 3.2, programs like Audacity and Twisted Wave are used to divide the complex sound files into multiple parts, then output them in

a modified format. This allowed the team members to improve and clean up the recordings. The combination of Audacity and Twisted Wave gave the team the ability to edit the file without audio processing the original file. This was primarily to remove blank tracks created by the recorder output.

3.4.1 Audacity

Audacity, a free program for mac and windows users, allowed the group to analyze the audio files. The team used this program solely for analyzation of the sound due to the fact that Audacity would not export modified files in the necessary format. Audacity has features that allow the user to display graphs and charts containing helpful information concerning the audio. These graphing capabilities include Time vs Hertz and many others. This was helpful for the team, giving them tools they needed to analyze the files. One such use was in order to find which range the preamplifier noise affected the audio files.

3.4.2 Twisted Wave

Twisted Wave is a trial mac program similar to Audacity. The team was able to use this program on a month long trial, which was sufficient for their needs. Twisted Wave was ideal for the group, as it has many great features and has the needed output capabilities. It allows the users to edit and cut audio files with ease.

3.4.3 Excel

Excel is a well-known and popular program bundled with most of the operating systems. The team chose this program over many other programs to tag the audio files. Other considerations included Pumilio and Mp3tag. Excel was prefered to these programs due to its simplicity of use and timelessness. It is capable of delivering many great features, and is unlikely to become inaccessible or outdated in the future. One bonus of Excel is that the team will not need any sort of online server to store the data.The excel file simply acts as an index, with the actual audio files stored on a hard drive. Overall, Excel is a very simple and easy program that everyone knows how to use.

3.5 Tagging

Most of the tagging process was dealt concurrently with recording, while some was done once the recordings were finished. Data points such as GPS location, wind speed, temperature, and recording length were gathered and documented during the actual recording process. Other information was gathered afterwards. For example, forestation level was later checked against a detailed forestation map using the gathered GPS locations. The team used Microsoft Excel to tag and index the recordings. Excel has many features that enhanced the tagging process. When used as a metadata system, as many tags as the user wishes can be easily used to sort the files. Such tags include GPS location, site name, time, date, weather, format, bit rate, altitude, and characteristic sounds such as animals or the ocean. A number of additional tags were also considered and implemented. More and better tags make it quicker, easier, and more reliable to find the desired files in the database. Another feature of Excel that proved useful is its ability

to filter information. This feature makes searching the database on a number of specific criteria a simple task. When used in this way Excel proved to be the best option and provided similar results to programs such as the Library of Congress VideoMD and AudioMD archive software ("AudioMD and VideoMD - Technical Metadata for Audio and Video," 2011). The index of sounds is attached in Appendix B. This index also served as an audio journal.

An audio journal was also kept. There are many reasons to keep an audio journal. This audio journal served as a record of everything that was observed in the field, akin to a lab notebook. The journal the team used to take notes about the surrounding conditions while recording as well as to help them remember different tags about certain recordings. The team felt that keeping a notes section in this journal was key, as it allowed for better data tracking before the information could be entered into the Excel database. This was a tool that helped make the project more professional.

Below is the completed tagging sheet:

				Natural Tags													Technical Tags											
Recording Name:	Original Output Name	Date	Day	Weather	GPS Location (Longitude, Latitude)	Greater Area	Site Name	Site Number	Distance from Closest City (Miles)	Altitude (ft)	Wind Speed (MPH)	Temperature (F°/C°)	Characteristic Sounds	Terrain	Vegetation Level	Time of Day	Bit Rate	Sampling Size	Length of Recording	File Format	Quality Rating (1-5)	Equipment		4ch/Stereo	Site Picture	Is there a normalized/processed Copy	Comments	Data Location
00001 P	00001 P_140617_6ch	6/17/14	Tues	Sun, Wind	N 44°23.745', W 68°13.207'	Acadia National Park	College of the Atlantic - Pier		1				Waves on Rocks	Coast		8:37am	24	48k	1:55	.wav		TASCAM DR-680, Tetramic		6ch			Lower Frequency Predominant	Hard Drive
00002 P	00002 P_140617_st	6/17/14	Tues	Sun, Wind	N 44°23.745', W 68°13.207'	Acadia National Park	College of the Atlantic - Pier		1				Waves on Rocks	Coast		8:37am	24	48k	1:55	.wav		TASCAM DR-680, Tetramic		Stereo				Hard Drive
00003 P	00003 P_140617_6ch	6/17/14	Tues	Sun, Wind	N 44°23.745', W 68°13.207'	Acadia National Park	College of the Atlantic - Pier		1				Team Members	Coast		8:41am	24	48k	0:25	.wav		TASCAM DR-680, Tetramic		6ch				Hard Drive
00004 P	00004 P_140617_st	6/17/14	Tues	Sun, Wind	N 44°23.745', W 68°13.207'	Acadia National Park	College of the Atlantic - Pier		1				Team Members	Coast		8:41am	24	48k	0:25	.wav		TASCAM DR-680, Tetramic		Stereo				Hard Drive
00005 P	00005 P_140617_6ch	6/17/14	Tues	Sun, Wind	N 44°23.766', W 68°13.267'	Acadia National Park	College of the Atlantic - Forest		1				Team Members, Feedback	Forest		8:48am	24	48k	0:19	.wav		TASCAM DR-680, Tetramic		6ch				Hard Drive
00006 P	00006 P_140617_st	6/17/14	Tues	Sun, Wind	N 44°23.766', W 68°13.267'	Acadia National Park	College of the Atlantic - Forest		1				Team Members, Feedback	Forest		8:48am	24	48k	0:19	.wav		TASCAM DR-680, Tetramic		Stereo				Hard Drive
00007 P	00007 P_140617_6ch	6/17/14	Tues	Sun, Wind	N 44°23.766', W 68°13.267'	Acadia National Park	College of the Atlantic - Forest		1				Leaves, Crows, Chipunks	Forest		8:49am	24	48k	1:16	.wav		TASCAM DR-680, Tetramic		6ch				Hard Drive
00008 P	00008 P_140617_st	6/17/14	Tues	Sun, Wind	N 44°23.766', W 68°13.267'	Acadia National Park	College of the Atlantic - Forest		1				Leaves, Crows, Chipunks	Forest		8:49am	24	48k	1:16	.wav		TASCAM DR-680, Tetramic		Stereo				Hard Drive
00017 P	00017 P_140618_6ch	6/18/14	Wed	Cloudy	N 44°23.769', W 68°13.260'	Acadia National Park	College of the Atlantic - Forest		1	35	8	68°/20°	Wind, Crows, Waves	Forest		1:55pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		6ch			High Tide	Hard Drive
00018 P	00018 P_140618_st	6/18/14	Wed	Cloudy	N 44°23.769', W 68°13.260'	Acadia National Park	College of the Atlantic - Forest		1	35	8	68°/20°	Wind, Crows, Waves	Forest		1:55pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo			High Tide	Hard Drive
00011 P	00011 P_140618_6ch	6/18/14	Wed	Overcast	N 44°23.658', W68°13.167'	Acadia National Park	College of the Atlantic - Stream		1	54	8	64°/17°	Stream	Forest		11:40am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		6ch				Hard Drive
00012 P	00012 P_140618_st	6/18/14	Wed	Overcast	N 44°23.658', W68°13.167'	Acadia National Park	College of the Atlantic - Stream		1	54	8	64°/17°	Stream	Forest		11:40am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo				Hard Drive
00013 P	00013 P_140618_6ch	6/18/14	Wed	Overcast	N 44°23.745', W 68°13.207'	Acadia National Park	College of the Atlantic - Pier		1	10	8	64°/17°	Wind, Leaves, Waves	Coast		11:57am	24	48k	1:50	.wav		TASCAM DR-680, Tetramic		6ch			Low Tide	Hard Drive
00014 P	00014 P_140618_st	6/18/14	Wed	Overcast	N 44°23.745', W 68°13.207'	Acadia National Park	College of the Atlantic - Pier		1	10	8	64°/17°	Wind, Leaves, Waves	Coast		11:57am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo			Low Tide	Hard Drive
00015 P	00015 P_140618_6ch	6/18/14	Wed	Overcast	N 44°23.745', W 68°13.207'	Acadia National Park	College of the Atlantic - Pier		1	10	8	64°/17°	Wind, Leaves, Waves	Coast		12:08pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		6ch			Light Rain and strong winds	Hard Drive
00016 P	00016 P_140618_st	6/18/14	Wed	Overcast	N 44°23.745', W 68°13.207'	Acadia National Park	College of the Atlantic - Pier		1	10	8	64°/17°	Wind, Leaves, Waves	Coast		12:08pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo			Light Rain and strong winds	Hard Drive
00009 P	00009 P_140618_6ch	6/18/14	Wed	Sun	N 44°23.658', W68°13.167'	Acadia National Park	College of the Atlantic - Stream		1	54	6	64°/17°	Stream	Forest		10:25am	24	48k	1:44	.wav		TASCAM DR-680, Tetramic		6ch				Hard Drive
00010 P	00010P_140618_st	6/18/14	Wed	Sun	N 44°23.658', W68°13.167'	Acadia National Park	College of the Atlantic - Stream		1	54	6	64°/17°	Stream	Forest		10:25am	24	48k	1:44	.wav		TASCAM DR-680, Tetramic		Stereo				Hard Drive
00001	00001_140618_4ch	6/18/14	Wed	Sun, Clouds	N 44°18.452', W 68°11.617	Acadia National Park	Otter Point	1	5.4	31	15	68°/20°	Wind, Crashing Waves	Coast	Sparse Vascular Upland	2:52pm	24	48k	2:00	.wav		TASCAM DR-680, Tetramic		4ch		Y	Strong Winds	Hard Drive
00002	00002_140618_st	6/18/14	Wed	Sun, Clouds	N 44°18.452', W 68°11.617	Acadia National Park	Otter Point	1	5.4	31	15	68°/20°	Wind, Crashing Waves	Coast	Sparse Vascular Upland	2:52pm	24	48k	2:00	.wav		TASCAM DR-680, Tetramic		Stereo			Strong Winds	Hard Drive
00003	00003_140618_4ch	6/18/14	Wed	Sun, Clouds	N 44°18.410', W 68°11.447'	Acadia National Park	Otter Point	2	5.3	41	10	69°/20.6°	Crashing Waves	Coast	Sparse Vascular Upland	3:02pm	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		4ch		Y	Waves crashing on rocks	Hard Drive
00004	00004_140818_st	6/18/14	Wed	Sun, Clouds	N 44°18.410', W 68°11.447'	Acadia National Park	Otter Point	2	5.3	41	10	69°/20.6°	Crashing Waves	Coast	Sparse Vascular Upland	3:02pm	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		Stereo			Waves crashing on rocks	Hard Drive
00005	00005_140618_4ch	6/18/14	Wed	Clouds	N 44°18.548', W 68°11.333'	Acadia National Park	Otter Cliffs	3	5.2	57	8	68°/20°	Crashing Waves	Coast	Sparse Vascular Upland	3:19pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch		Y	Waves crashing on rocks	Hard Drive
00006	00006_140618_st	6/18/14	Wed	Clouds	N 44°18.548', W 68°11.333'	Acadia National Park	Otter Cliffs	3	5.2	57	8	68°/20°	Crashing Waves	Coast	Sparse Vascular Upland	3:19pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo			Waves crashing on rocks	Hard Drive
00007	00007_140619_4ch	6/19/14	Thurs	Clear	N 44°19.245', W68°11.315'	Acadia National Park	Thunder Hole	4	4.42	37	5	72°/22.2°	Crash of Thunder Hole	Coast	Sparse Vascular Upland	1:30am	24	48k	3:01	.wav		TASCAM DR-680, Tetramic		4ch		Y	Nighttime crash of Thunder Hole	Hard Drive
00008	00008_140819_st	6/19/14	Thurs	Clear	N 44°19.245', W68°11.315'	Acadia National Park	Thunder Hole	4	4.42	37	5	72°/22.2°	Crash of Thunder Hole	Coast	Sparse Vascular Upland	1:30am	24	48k	3:01	.wav		TASCAM DR-680, Tetramic		Stereo			Nighttime crash of Thunder Hole	Hard Drive
00009	00009_140619_4ch	6/19/14	Thurs	Clear	N 44°19.245', W68°11.315'	Acadia National Park	Thunder Hole	4	4.42	37	5	72°/22.2°	Crash of Thunder Hole	Coast	Sparse Vascular Upland	1:20am	24	48k	5:29	.wav		TASCAM DR-680, Tetramic		4ch		Y	Nighttime crash of Thunder Hole	Hard Drive
00010	00010_140819_st	6/19/14	Thurs	Clear	N 44°19.245', W68°11.315'	Acadia National Park	Thunder Hole	4	4.42	37	5	72°/22.2°	Crash of Thunder Hole	Coast	Sparse Vascular Upland	1:20am	24	48k	5:29	.wav		TASCAM DR-680, Tetramic		Stereo			Nighttime crash of Thunder Hole	Hard Drive

Recording Name:	Original Output Name	Date	Day	Weather	GPS Location (Longitude, Latitude)	Greater Area	Site Name	Site Number	Distance from Closest City (Miles)	Altitude (ft)	Wind Speed (MPH)	Temperature (F°/C°)	Characteristic Sounds	Terrain	Vegetation Level	Time of Day	Bit Rate	Sampling Size	Length of Recording	File Format	Quality Rating (1-5)	Equipment		4ch/Stereo	Site Picture	Is there a normalized/processed Copy	Comments	Data Location
00011	00011_140619_4ch	6/19/14	Thurs	Clear	N 44°19.751', W68°10.996'	Acadia National Park	Sand Beach	5	3.95	21	4	72°/22.2°	Waves on Sand Beach	Coast	Sparse Vascular Upland	2:00am	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		4ch		Y	Nighttime Waves on Sand Beach	Hard Drive
00012	00012_140619_st	6/19/14	Thurs	Clear	N 44°19.751', W68°10.996'	Acadia National Park	Sand Beach	5	3.95	21	4	72°/22.2°	Waves on Sand Beach	Coast	Sparse Vascular Upland	2:00am	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		Stereo			Nighttime Waves on Sand Beach	Hard Drive
00013	00013_140620_4ch	6/20/14	Fri	Sun	N44°23.257', W68°12.288'	Acadia National Park	Bar Harbor Greens	6	0	117	3	61°/16.1°	Town Green	Park	Land Use	9:44am	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		4ch		Y	Motor Vehicles, People	Hard Drive
00014	00014_140620_st	6/20/14	Fri	Sun	N44°23.257', W68°12.288'	Acadia National Park	Bar Harbor Greens	6	0	117	3	61°/16.1°	Town Green	Park	Land Use	9:44am	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		Stereo			Motor Vehicles, People	Hard Drive
00015	00015_140620_4ch	6/20/14	Fri	Cloudy	N44°21.091', W68°13.443'	Acadia National Park	Cadillac Mountain	7	2.68	1500	12	57°/13.9°	Winds of Cadillac Mountain	Alpine	Dwarf Shrubland - Deciduos - Upland	1:55pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch		Y	Winds, Birds, People	Hard Drive
00016	00016_140620_st	6/20/14	Fri	Cloudy	N44°21.091', W68°13.443'	Acadia National Park	Cadillac Mountain	7	2.68	1500	12	57°/13.9°	Winds of Cadillac Mountain	Alpine	Dwarf Shrubland - Deciduos - Upland	1:55pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo			Winds, Birds, People	Hard Drive
00017	00017_140620_4ch	6/20/14	Fri	Cloudy	N44°21.091', W68°13.443'	Acadia National Park	Cadillac Mountain	7	2.68	1500	12	57°/13.9°	Winds of Cadillac Mountain	Alpine	Dwarf Shrubland - Deciduos - Upland	10:21am	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		4ch		Y	Winds, Birds	Hard Drive
00018	00018_140620_st	6/20/14	Fri	Cloudy	N44°21.091', W68°13.443'	Acadia National Park	Cadillac Mountain	7	2.68	1500	12	57°/13.9°	Winds of Cadillac Mountain	Alpine	Dwarf Shrubland - Deciduos - Upland	10:21am	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		Stereo			Winds, Birds	Hard Drive
00019	00019_140620_4ch	6/20/14	Fri	Clear	N44°19.566', W68°18.315'	Acadia National Park	Somes Sound	8	2.44	25	4	61°/16.1°	Stream, Somes Sound	Coast	Forest Conifer Upland	11:20am	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		4ch		Y	Wind, Stream, Waves on Rocks, Lobster Boat, Traffic, Birds	Hard Drive
00020	00020_140620_st	6/20/14	Fri	Clear	N44°19.566', W68°18.315'	Acadia National Park	Somes Sound	8	2.44	25	4	61°/16.1°	Stream, Somes Sound	Coast	Forest Conifer Upland	11:20am	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		Stereo			Wind, Stream, Waves on Rocks, Lobster Boat, Traffic, Birds	Hard Drive
00021	00021_140620_4ch	6/20/14	Fri	Clear	N44°19.566', W68°18.315'	Acadia National Park	Somes Sound	8	2.44	25	4	61°/16.1°	Stream, Somes Sound	Coast	Forest Conifer Upland	11:23am	24	48k	0:30	.wav		TASCAM DR-680, Tetramic		4ch		Y	Lobster Boat	Hard Drive
00022	00022_140620_st	6/20/14	Fri	Clear	N44°19.566', W68°18.315'	Acadia National Park	Somes Sound	8	2.44	25	4	61°/16.1°	Stream, Somes Sound	Coast	Forest Conifer Upland	11:23am	24	48k	0:30	.wav		TASCAM DR-680, Tetramic		Stereo			Lobster Boat	Hard Drive
00023	00023_140623_4ch	6/23/14	Mon	Sun	N44°19.647', W68°17.255	Acadia National Park	Maple Spring Trail	9	2.54	321	1.4	72°/22.2°	Stream, Birds	Forest	Forest Mixed Upland	2:41pm	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		4ch	00023	Y	Light canopy winds	Hard Drive
00024	00024_140623_st	6/23/14	Mon	Sun	N44°19.647', W68°17.255	Acadia National Park	Maple Spring Trail	9	2.54	321	1.4	72°/22.2°	Stream, Birds	Forest	Forest Mixed Upland	2:41pm	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		Stereo	00023		Light canopy winds	Hard Drive
00025	00025_140623_4ch	6/23/14	Mon	Sun	N44°19'55.26", W68°16'55.54"	Acadia National Park	Maple Spring Trail	10	2.72	502	3	70°/21.1°	Stream, Birds, Eddies	Forest	Forest Mixed Upland	2:59pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch	00025	Y	Recording Location under Carriage Road Bridge	Hard Drive
00026	00026_140623_st	6/23/14	Mon	Sun	N44°19'55.26", W68°16'55.54"	Acadia National Park	Maple Spring Trail	10	2.72	502	3	70°/21.1°	Stream, Birds, Eddies	Forest	Forest Mixed Upland	2:59pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo	00025		Recording Location under Carriage Road Bridge	Hard Drive
00027	00027_140623_4ch	6/23/14	Mon	Sun	N44°20.200', W68°16.753'	Acadia National Park	Maple Spring Trail	11	3.07	829	2.2	72.8°/22.6°	Insect Chirping	Forest	Forest Mixed Upland	3:25pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch	00027	Y		Hard Drive
00028	00028_140623_st	6/23/14	Mon	Sun	N44°20.200', W68°16.753'	Acadia National Park	Maple Spring Trail	11	3.07	829	2.2	72.8°/22.6°	Insect Chirping	Forest	Forest Mixed Upland	3:25pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo	00027			Hard Drive
00029	00029_140623_4ch	6/23/14	Mon	Sun	N44°20.200', W68°16.753'	Acadia National Park	Maple Spring Trail	11	3.07	829	2.2	72.8°/22.6°	Insect Chirping	Forest	Forest Mixed Upland	3:29pm	24	48k	0:13	.wav		TASCAM DR-680, Tetramic		4ch	00027	Y		Hard Drive
00030	00030_140623_st	6/23/14	Mon	Sun	N44°20.200', W68°16.753'	Acadia National Park	Maple Spring Trail	11	3.07	829	2.2	72.8°/22.6°	Insect Chirping	Forest	Forest Mixed Upland	3:29pm	24	48k	0:13	.wav		TASCAM DR-680, Tetramic		Stereo	00027			Hard Drive
00031	00031_140623_4ch	6/23/14	Mon	Sun	N44°19.944',W68°16.909'	Acadia National Park	Maple Spring Trail	12	2.76	497	2	72°/22.2°	Dripping Water	Forest	Forest Mixed Upland	4:00pm	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		4ch	00031	Y	Stream and Dripping water	Hard Drive
00032	00032_140623_st	6/23/14	Mon	Sun	N44°19.944',W68°16.909'	Acadia National Park	Maple Spring Trail	12	2.76	497	2	72°/22.2°	Dripping Water	Forest	Forest Mixed Upland	4:00pm	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		Stereo	00031		Stream and Dripping water	Hard Drive
00033	00033_140624_4ch	6/24/14	Tues	Overcast	N44°21.711', W68°12.698'	Acadia National Park	Emery Trail	13	1.81	468	1	70°/21.1°	Rustle, Birds	Forest	Woodland Conifer Upland	3:49pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch	00033	Y		Hard Drive
00034	00034_140624_st	6/24/14	Tues	Overcast	N44°21.711', W68°12.698'	Acadia National Park	Emery Trail	13	1.81	468	1	70°/21.1°	Rustle, Birds	Forest	Woodland Conifer Upland	3:49pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo	S			Hard Drive
00035	00035_140624_4ch	6/24/14	Tues	Overcast	N44°21.618' W68°12.654	Acadia National Park	Emery Trail	14	1.92	575	2.27	69°/20.6°	Birds, Chipmunk, Rustling	Forest	Woodland Conifer Upland	4:07pm	24	48k	4:44	.wav		TASCAM DR-680, Tetramic		4ch	00035	Y		Hard Drive
00036	00036_140624_st	6/24/14	Tues	Overcast	N44°21.618' W68°12.654	Acadia National Park	Emery Trail	14	1.92	575	2.27	69°/20.6°	Birds, Chipmunk, Rustling	Forest	Woodland Conifer Upland	4:07pm	8	48k	4:44	.wav		TASCAM DR-680, Tetramic		Stereo	00035			Hard Drive
00037	00037_140624_4ch	6/24/14	Tues	Overcast	N44°21.643',W68°12.652'	Acadia National Park	Emery Trail	15	1.89	530	2	69°/20.6°	Birds, Rustle	Forest	Woodland Conifer Upland	4:19pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch	00037	Y		Hard Drive
00038	00038_140624_st	6/24/14	Tues	Overcast	N44°21.643',W68°12.652'	Acadia National Park	Emery Trail	15	1.89	530	2	69°/20.6°	Birds, Rustle	Forest	Woodland Conifer Upland	4:19pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo	00037			Hard Drive
00039	00039_140625_4ch	6/25/14	Wed	Overcast	N44°21.745',W68°11.688'	Acadia National Park	Beaver Pond	16	1.82	142	1	73°/22.8°	Stream, Birds	Marsh	Graminoid Wetland	9:16am	24	48k	0:34	.wav		TASCAM DR-680, Tetramic		4ch	00039	Y		Hard Drive
00040	00040_140625_st	6/25/14	Wed	Overcast	N44°21.745',W68°11.688'	Acadia National Park	Beaver Pond	16	1.82	142	1	73°/22.8°	Stream, Birds	Marsh	Graminoid Wetland	9:16am	24	48k	0:56	.wav		TASCAM DR-680, Tetramic		Stereo	00039			Hard Drive
00041	00041_140625_4ch	6/25/14	Wed	Overcast	N44°21.745',W68°11.688'	Acadia National Park	Beaver Pond	16	1.82	142	1	73°/22.8°	Stream, Birds	Marsh	Graminoid Wetland	9:22am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch	00041	Y		Hard Drive
00042	00042_140625_st	6/25/14	Wed	Overcast	N44°21.745',W68°11.688'	Acadia National Park	Beaver Pond	16	1.82	142	1	73°/22.8°	Stream, Birds	Marsh	Graminoid Wetland	9:22am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo	00041			Hard Drive
00043	00043_140625_4ch	6/25/14	Wed	Overcast	N44°21.745',W68°11.688'	Acadia National Park	Beaver Pond	16	1.82	142	1	73°/22.8°	Stream, Birds	Marsh	Graminoid Wetland	9:30am	24	48k	2:03	.wav		TASCAM DR-680, Tetramic		4ch	00043	Y		Hard Drive
00044	00044_140625_st	6/25/14	Wed	Overcast	N44°21.745',W68°11.688'	Acadia National Park	Beaver Pond	16	1.82	142	1	73°/22.8°	Stream, Birds	Marsh	Graminoid Wetland	9:30am	24	48k	2:03	.wav		TASCAM DR-680, Tetramic		Stereo	00043			Hard Drive
00045	00045_140626_4ch	6/26/14	Thurs	Rain	N44°21'41.88", W68°12'29.38"	Acadia National Park	Sieur de Monts Spring	17	1.81	200	1	59°/15°	Rain	Forest	Forest Mixed Upland	9:20am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch	00045, 00045-1	Y	Light Drizzle after rain storm	Hard Drive
00046	00046_140626_st	6/26/14	Thurs	Rain	N44°21'41.88", W68°12'29.38"	Acadia National Park	Sieur de Monts Spring	17	1.81	200	1	59°/15°	Rain	Forest	Forest Mixed Upland	9:20am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo	00045, 00045-1		Light Drizzle after rain storm	Hard Drive
00047	00047_140627_4ch	6/27/14	Fri	Sun	N44°26.566', W68°19.111'	Acadia National Park	Hadley Pt	18	6.79	66	0	66°/18.8°	Rustle, Birds	Forest	Forest Mixed Upland	9:22am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch	00047	Y	see 00085	Hard Drive
00048	00048_140627_st	6/27/14	Fri	Sun	N44°26.566', W68°19.111'	Acadia National Park	Hadley Pt	18	6.79	66	0	66°/18.8°	Rustle, Birds	Forest	Forest Mixed Upland	9:22am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo	00047		see 00086	Hard Drive
00049	00049_140627_4ch	6/27/14	Fri	Sun	N44°26.566', W68°19.111'	Acadia National Park	Hadley Pt	18	6.78	66	0	66°/18.8°	Rustle, Birds	Forest	Forest Mixed Upland	9:34am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch	00049, 00049-1	Y	see 00085	Hard Drive
00050	00050_140627_st	6/27/14	Fri	Sun	N44°26.566', W68°19.111'	Acadia National Park	Hadley Pt	18	6.78	66	0	66°/18.8°	Rustle, Birds	Forest	Forest Mixed Upland	9:34am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo	00049, 00049-2		see 00086	Hard Drive
00051	00051_140627_6ch	6/27/14	Fri	Sun	N44°25.654', W68°21.889	Acadia National Park	Thompson Island	19	0.9	16	12	67°/19.4°	Wind, Waves	Forest	Tidal Zone/Forest Mixed Upland	9:55am	24	48k	1:30	.wav		TASCAM DR-680, Tetramic		4ch		Y		Hard Drive
00052	00052_140627_st	6/27/14	Fri	Sun	N44°25.654', W68°21.889	Acadia National Park	Thompson Island	19	0.9	16	12	67°/19.4°	Wind, Waves	Forest	Tidal Zone/Forest Mixed Upland	9:55am	24	48k	1:30	.wav		TASCAM DR-680, Tetramic		Stereo				Hard Drive
00053	00053_140627_4ch	6/27/14	Fri	Sun	N44°25.654', W68°21.889	Acadia National Park	Thompson Island	19	0.9	16	12	67°/19.4°	Wind, Waves	Forest	Tidal Zone/Forest Mixed Upland	9:58am	24	48k	1:00	.wav		TASCAM DR-680, Tetramic		4ch		Y	With wind block	Hard Drive
00054	00054_140627_st	6/27/14	Fri	Sun	N44°25.654', W68°21.889	Acadia National Park	Thompson Island	19	0.9	16	12	67°/19.4°	Wind, Waves	Forest	Tidal Zone/Forest Mixed Upland	9:58am	24	48k	1:00	.wav		TASCAM DR-680, Tetramic		Stereo			With wind block	Hard Drive
00055	00055_140627_4ch	6/27/14	Fri	Sun	N44°20.002', W68°24.449'	Acadia National Park	Pretty Marsh	20	3	150	0	70°/21.1°	Birds	Forest	Forest Conifer Upland	10:31am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch	00055	Y	Airplane Rumble in background, see 00097	Hard Drive
00056	00056_140627_st	6/27/14	Fri	Sun	N44°20.002', W68°24.449'	Acadia National Park	Pretty Marsh	20	3	150	0	70°/21.1°	Birds	Forest	Forest Conifer Upland	10:31am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo	00055		Airplane Rumble in background, see 00098	Hard Drive
00057	00057_140627_4ch	6/27/14	Fri	Sun	N44°18.871',W68°23.588'	Acadia National Park	Pine Hill	21	2.5	250	2.5	74.2°/23.4°	Wind, Birds	Forest	Mixed Forest	10:56am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch	00057, 00057-1	Y	see 00089	Hard Drive
00058	00058_140627_st	6/27/14	Fri	Sun	N44°18.871',W68°23.588'	Acadia National Park	Pine Hill	21	2.5	250	2.5	74.2°/23.4°	Wind, Birds	Forest	Mixed Forest	10:56am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo	00057, 00057-1		see 00090	Hard Drive
00059	00059_140627_6ch	6/27/14	Fri	Sun	N 44°18'56.68", W 68°23'50.58"	Acadia National Park	Hodgdon Pond	22	2.4	232	5	74°/23.3°	Waterfall, Winds, Birds	Lake	Graminoid Wetland	11:15am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch	00059	Y	see 00091	Hard Drive
00060	00060_140627_st	6/27/14	Fri	Sun	N 44°18'56.68", W 68°23'50.58"	Acadia National Park	Hodgdon Pond	22	2.4	232	5	74°/23.3°	Waterfall, Winds, Birds	Lake	Graminoid Wetland	11:15am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo	00059		see 00092	Hard Drive
00061	00061_140627_4ch	6/27/14	Fri	Sun	N44°13.319, W68°20.240'	Acadia National Park	Bass Harbor Lighthouse	23	1	55	3	75°/23.8°	Bells, Waves	Coast	Land Use	12:09pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch	00061, 00061-1, 00061-2	Y		Hard Drive
00062	00062_140627_st	6/27/14	Fri	Sun	N44°13.319, W68°20.240'	Acadia National Park	Bass Harbor Lighthouse	23	1	55	3	75°/23.8°	Bells, Waves	Coast	Land Use	12:09pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo	00061, 00061-1, 00061-2			Hard Drive
00063	00063 combined horse sounds	6/28/14	Sat	Sun	N44.31589',W68.23431'	Acadia National Park	Wildwood Stables	24	2.97	233	3	80°/26.6°	Horses on Carriages	Land use	Land Use	11:36am	24	48k	3:38	.wav		TASCAM DR-680, Tetramic		4ch	00063, 00063-1, 00063-2		6 Recordings combined	Hard Drive
00064	00064 combined horse sounds N	6/28/14	Sat	Sun	N44.31589',W68.23431'	Acadia National Park	Wildwood Stables	24	2.97	233	3	80°/26.6°	Horses on Carriages	Land use	Land Use	11:36am	24	48k	3:38	.wav		TASCAM DR-680, Tetramic		4ch N	00063, 00063-1, 00063-2			Hard Drive
00065	00065_140628_4ch	6/28/14	Sat	Night	N 44°19'46.31", W68°10'53.52"	Acadia National Park	Sand Beach	25	4.19	25	0	73.4°/23°	Fish in stream	Beach	Graminoid Wetland	11:33pm	24	48k	2:04	.wav		TASCAM DR-680, Tetramic		4ch				Hard Drive
00066	00066_140628_st	6/28/14	Sat	Night	N 44°19'46.31", W68°10'53.52"	Acadia National Park	Sand Beach	25	4.19	25	0	73.4°/23°	Fish in stream	Beach	Graminoid Wetland	11:33pm	24	48k	2:04	.wav		TASCAM DR-680, Tetramic		Stereo				Hard Drive
00067	00067_140630_4ch	6/30/14	Mon	Sun	N44.31460', W68.34426'	Acadia National Park	Beech Mountain	26	2	344	3	82°/27.7°	Birds	Mountain	Woodland Conifer	12:18pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch	00067	Y		Hard Drive
00068	00068_140630_st	6/30/14	Mon	Sun	N44.31460', W68.34426'	Acadia National Park	Beech Mountain	26	2	344	3	82°/27.7°	Birds	Mountain	Woodland Conifer	12:18pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo	00067			Hard Drive
00069	00069_140630_4ch	6/30/14	Mon	Sun	N44.31460', W68.34427'	Acadia National Park	Beech Mountain	26	1.8	805	0.5	82°/27.7°	Birds	Mountain	Woodland Conifer	12:37pm	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		4ch	00069	Y		Hard Drive
00070	00070_140630_st	6/30/14	Mon	Sun	N44.31460', W68.34427'	Acadia National Park	Beech Mountain	26	1.8	805	0.5	82°/27.7°	Birds	Mountain	Woodland Conifer	12:37pm	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		Stereo	00069			Hard Drive
00071	00071_140630_4ch	6/30/14	Mon	Sun	N44.24107',W68.29968'	Acadia National Park	Seawall	27	3	4	7	70°/21.1°	Waves on Rocks	Coast	Forb Wetland	1:40pm	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		4ch	00071	Y		Hard Drive
00072	00072_140630_st	6/30/14	Mon	Sun	N44.24107',W68.29968'	Acadia National Park	Seawall	27	3	4	7	70°/21.1°	Waves on Rocks	Coast	Forb Wetland	1:40pm	24	48k	5:00	.wav		TASCAM DR-680, Tetramic		Stereo	00071			Hard Drive
00073	00073_140630_4ch	6/30/14	Mon	Sun	N44.24163', W68.30007'	Acadia National Park	Seawall	28	3	32	0	70°/21.1°	Birds	Coast	Deciduous Wetland	1:57pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch	00073	Y		Hard Drive
00074	00074_140630_st	6/30/14	Mon	Sun	N44.24163', W68.30007'	Acadia National Park	Seawall	28	3	32	0	70°/21.1°	Birds	Coast	Deciduous Wetland	1:57pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo	00073			Hard Drive
00075	00075_140701_4ch	7/1/14	Tues	Sun	N44.23144', W68.31416'	Acadia National Park	Wonder Land Trail	29	2	89	1.5	75°/23.8°	Insects, Birdsong	Shrubland	Woodland Conifer	10:06am	24	48k	4:20	.wav		TASCAM DR-680, Tetramic		4ch	00075	Y	Open Space. See picture	Hard Drive
00076	00076_140701_st	7/1/14	Tues	Sun	N44.23144', W68.31416'	Acadia National Park	Wonder Land Trail	29	2	89	1.5	75°/23.8°	Insects, Birdsong	Shrubland	Woodland Conifer Upland	10:06am	24	48k	4:20	.wav		TASCAM DR-680, Tetramic		Stereo	00075			Hard Drive
00077	00077_140701_4ch	7/1/14	Tues	Sun	N44.22974',W68.31294'	Acadia National Park	Wonder Land Trail	30	2.2	59	2	75°/23.8°	Birds, Ocean	Forest	Forest Conifer Upland	10:24am	24	48k	2:00	.wav		TASCAM DR-680, Tetramic		4ch	00077	Y		Hard Drive
00078	00078_140701_st	7/1/14	Tues	Sun	N44.22974',W68.31294'	Acadia National Park	Wonder Land Trail	30	2.2	59	2	75°/23.8°	Birds, Ocean	Forest	Forest Conifer Upland	10:24am	24	48k	2:00	.wav		TASCAM DR-680, Tetramic		Stereo	00077			Hard Drive
00079	00079_140701_4ch	7/1/14	Tues	Clear	N44.37648', W68.25032'	Acadia National Park	Eagle Lake	31	2	260	11	70°/21.1°	Frogs, Lake	Forest	Forest Mixed Upland	11:04pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch		Y	Heavy Wind Noise	Hard Drive
00080	00080_140701_st	7/1/14	Tues	Clear	N44.37648', W68.25032'	Acadia National Park	Eagle Lake	31	2	260	11	70°/21.1°	Frogs, Lake	Forest	Forest Mixed Upland	11:04pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo			Heavy Wind Noise	Hard Drive
00081	00081_140710_4ch	7/10/14	Thurs	Clear	N44.36239', W68.19565'	Acadia National Park	Beaver Pond	32	1.81	162	0	65°/18.3°	Frogs	Marsh	Graminoid Wetland	11:40pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch		Y	Jackson Labs audible in background	Hard Drive
00082	00082_140710_st	7/10/14	Thurs	Clear	N44.36239', W68.19565'	Acadia National Park	Beaver Pond	32	1.81	162	0	65°/18.3°	Frogs	Marsh	Graminoid Wetland	11:40pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo			Jackson Labs audible in background	Hard Drive

Recording Name:	Original Output Name	Date	Day	Weather	GPS Location (Longitude, Latitude)	Greater Area	Site Name	Site Number	Distance from Closest City (Miles)	Altitude (ft)	Wind Speed (MPH)	Temperature (F°/C°)	Characteristic Sounds	Terrain	Vegetation Level	Time of Day	Bit Rate	Sampling Size	Length of Recording	File Format	Quality Rating (1-5)	Equipment		4ch/Stereo	Site Picture	Is there a normalized/processed Copy	Comments	Data Location
00083	00083_140711_4ch	7/11/14	Fri	Clear	N44.32068°, W68.18853°	Acadia National Park	Thunder Hole	4	4.71	47	2	74°/23.3°	Thunder Hole	Coast	Sparse Vascular Upland	12:20am	24	48k	4:00	.wav		TASCAM DR-680, Tetramic		4ch		Y		Hard Drive
00084	00084_140711_st	7/11/14	Fri	Clear	N44.32068°, W68.18853°	Acadia National Park	Thunder Hole	4	4.71	47	2	74°/23.3°	Thunder Hole	Coast	Sparse Vascular Upland	12:20am	24	48k	4:00	.wav		TASCAM DR-680, Tetramic		Stereo				Hard Drive
00085	00085_140711_4ch	7/11/14	Fri	Sun	N44°26.566', W68°19.111'	Acadia National Park	Hadley Pt	18	6.79	66	1.5	85°/29.4°	Birds	Forest	Forest Mixed Upland	11:41am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch		Y		Hard Drive
00086	00086_140711_st	7/11/14	Fri	Sun	N44°26.566', W68°19.111'	Acadia National Park	Hadley Pt	18	6.79	66	1.5	85°/29.4°	Birds	Forest	Forest Mixed Upland	11:41am	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo				Hard Drive
00087	00087_140711_4ch	7/11/14	Fri	Sun	N44°20.002', W68°24.449'	Acadia National Park	Pretty Marsh	20	3	150	0	78°/25.5°	Birds	Forest	Forest Conifer Upland	12:20pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		4ch		Y		Hard Drive
00088	00088_140711_st	7/11/14	Fri	Sun	N44°20.002', W68°24.449'	Acadia National Park	Pretty Marsh	20	3	150	0	78°/25.5°	Birds	Forest	Forest Conifer Upland	12:29pm	24	48k	3:00	.wav		TASCAM DR-680, Tetramic		Stereo				Hard Drive
00089	00089_140711_4ch	7/11/14	Fri	Sun	N44°18.871',W68°23.588	Acadia National Park	Pine Hill	21	2.5	250	0	75°/23.8°	Birds	Forest	Mixed Forest	12:45pm	24	48k	4:00	.wav		TASCAM DR-680, Tetramic		4ch		Y		Hard Drive
00090	00090_140711_st	7/11/14	Fri	Sun	N44°18.871',W68°23.588	Acadia National Park	Pine Hill	21	2.5	250	0	75°/23.8°	Birds	Forest	Mixed Forest	12:45pm	24	48k	4:00	.wav		TASCAM DR-680, Tetramic		Stereo				Hard Drive
00091	00091_140711_4ch	7/11/14	Fri	Sun	N44°18.967', W68°23.843	Acadia National Park	Hodgdon Pond	22	2.4	232	0	78°/25.5°	Birds	Forest	Graminoid Wetland	1:01pm	24	48k	3:01	.wav		TASCAM DR-680, Tetramic		4ch		Y		Hard Drive
00092	00092_140711_st	7/14/14	Fri	Sun	N44°18.967', W68°23.843	Acadia National Park	Hodgdon Pond	22	2.4	232	0	78°/25.5°	Birds	Forest	Graminoid Wetland	1:01pm	24	48k	3:01	.wav		TASCAM DR-680, Tetramic		Stereo				Hard Drive

00099

3.6 Audio Post-Processing

After file tagging, the team had to post process a number of the recorded files. After the 4-channel surround sound files were captured, they were uploaded to a Macintosh workstation. From here, the team checked the quality of each recording. If the team found the recording was of sufficient quality, it was archived directly to the hard drive. If the file was found to contain significant aggregates or preamplifier hiss, then it was processed until it was high quality enough for archival. In the case of modified files, an original copy was also archived.

As mentioned previously in Section 3.3 the team used Audacity and TwistedWave as a standard editing software in this project due to the great features available. One Audacity feature in particular, the noise reduction profile, was extremely useful. The Noise Reduction Profile allowed the team to sample white noise in the file and identify it throughout the audio. Audacity then eliminated the white noise from that audio and made it sound smoother and cleaner, without affecting the ambient environment recorded.

Another software used by the team was TwistedWave. TwistedWave has many similar features to Audacity. The team's primary use of the program had to do with sound reduction in the file. TwistedWave allows the user to reduce unwanted noise in the file by selecting a frequency range, and reducing all ambient noise within it.

3.7 Archiving

The archiving process was also dealt with while tagging. Audio files were saved onto a hard drive after being recorded. This hard drive served as the database for the Acadia Sound Archive. The files were saved under a series of folders. Specific files could be found under the folder with the relevant site name. There is also a search bar where a user can find any file by the specific file name without going through the folders. This system of organizing makes finding a file very simple.

Chapter 4: Results

After spending almost two months in ANP, the Bar Harbor IQP has come to a close, and the team has reviewed their final results. These results consist of a comprehensive Excel Tagging system, a total duration of 6 hours of pure audio recording files, and a sound exhibit.

The set metadata categories used in the tagging system are fairly extensive, consisting of twenty-nine categories to define any given audio file. These categories are as follows: Recording Name, Original Output Name, Date, Day, Weather, GPS Location (Longitude, Latitude), Greater Area, Site Name, Site Number, Distance from Closest City (Miles), Altitude (ft), Wind Speed (MPH), Temperature (F°/C°), Characteristic Sounds, Terrain, Vegetation Level, Time of Day, Bit Rate, Sampling Size, Length of Recording, File Format, Quality Rating (1-5), Equipment, Model Number, 4ch/Stereo, Site Picture, Normalized/Processed copy, Comments and Data Location. Every file in our database has been tagged with relevant information in every category. In some cases, a slot may be left blank if the information of that category is unknown, such as if a piece of measuring equipment is not functioning at the time of the recording. The comments section may note equipment failure or other information that doesn't directly fit into a tagging category.

Using these categories, any user can easily search for sound files based on a number of criteria with minimal difficulty. For example, if the user wishes for sound files solely recorded on the top of Cadillac Mountain at night, they would be able to bring up

that selection with relative ease. Another example would be if a user wanted to find a selection of files at a certain location on a certain date. Such criteria can be searched for on the excel sheet, and then corresponding audio files can be subsequently retrieved from the hard drive database.

One of the interesting categories that the team came up with and found very useful and descriptive was the comment category. This category allowed the team to add extra information about the audio file that didn't fit within the other predefined categories. In other words, the comment section provides people with more options to search for, even when some of the contained information is not available throughout all files.

One of the major results is that the team has covered a large variety of landscapes at ANP. Using a vegetation map [See appendix C] to check locations, the team chose sites that would cover a variety of forestation types. The team gathered recordings from a number of these different vegetation zones, such as conifer forest or deciduous woodland, to wetlands, shrublands, and coastline. In order to gather these files, the general locations were chosen before hand based on a few criteria, including these forestation types, as well as proximity to other recording sites. Given the high variation in zone even in small areas, each recording's GPS location was checked and compared to the vegetation map to place a zone.

4.1 Exhibit

Sound exhibits are useful for allowing people to experience soundscapes that may be unavailable to them, such as those that may no longer be. Sound is an important part

of any location's aesthetic, and thoughtful use of sound in the right places, including many exhibits, can greatly enhance the feeling and effect of the exhibit as a whole. For our group's exhibit work, sound was our primary concern. There are many cases where sound is used to beautifully compliment the focus of an exhibit, but less commonly is the sound itself the focus.

Around the world there are already a number sound exhibits. One such exhibit is the 'Museum of Endangered Sounds', which is an audio-visual web exhibit containing a number of sounds. The exhibits mostly services museums, such as a few in San Diego, Paris and Valencia. Sound exhibits have been implemented and proven successful in an assortment of locations worldwide. Acadia National Park seems like yet another location where such an exhibit could be of value.

It was the team's intent to begin work on the exhibit at the Acadia Visitor Center. Unfortunately, access to the Visitor Center equipment was restricted during our stay. Despite this turn of events, the team was able to produce a CD mix of sounds for the Center to experiment with in the future.

4.2 Recommendations and Conclusion:

While our team strove to make our recordings of the highest quality possible, a number of issues were encountered. Some of these were due to gear issues in specific circumstances. The primary issue was, oddly enough, that the microphone was very sensitive. As such, some of our recordings are dominated by the sounds of wind through the surrounding trees. In other instances, the microphone's range was not ideal. This

would frequently lead to a sound, clear in reality, such as a bird or frog, not to be as audible in the recording compared to background noise.

While the Core Audio Tetramic is obviously a high quality microphone, the team believes it was not ideal given the high-wind field conditions it had been subject to. As such, it is recommended that time is taken to find another microphone better suited to the field conditions. Due to the strong wind in the park, it is also recommended that a good quality windscreen is found to accompany whatever microphone is chosen.

Another type of microphone that could be useful would be a shotgun microphone. These microphones are extremely effective at recording in a single chosen direction. These types of microphones are typically used for recordings birds and other animals at range. For this reason the team feels that this type of microphone could enhance the project.

Another issue that the team had trouble with was the windscreen. Windscreens are extremely important pieces of equipment while doing field recordings. For this project the team used a deadcat windscreen. There were two major problems with the particular windscreen. First, the windscreen was not designed for the Tetramic. The team encountered this as a problem because there would sometimes be gusts of wind that caused the windscreen to hit the microphone. When the windscreen hit the microphone it would cause a pop in the recordings. The second problem with the windscreen was that it was not thick enough to block heavy bursts of wind. Another useful tool for the Park Service would be an interactive map.

The team would also recommend to the National Park Service and future groups to try and make an interactive sound map. This could be something similar to Google

Earth in the sense that Google Earth shows pictures from different locations. This sound map would display sounds from around Acadia National Park and Mount Desert Island. As a user scrolls over the map they could select a sound and listen to the recording site. This map would need to be hosted on an NPS server along with MP3 versions of the team's recordings. Another feature of the map that would prove useful is the ability to request WAV versions of particular audio files. The team feels that this is an idea that would need further exploration.

During the process of recording, the team conducted an online survey containing ten questions total including general and specific questions. People participated from many places worldwide, including from the Middle East, the United States and some European countries. This makes sense given the affiliations in the IQP site group as a whole, and the fact that the survey was primarily spread via social media. As such, the results may be slightly skewed in terms of age group, or other factors.

The team started that survey in order to help the park's decision-making process. ANP has to know whether a sound exhibit would be a desirable addition, and whether it could provide a better experience to the visitors. The survey was mainly designed to gauge how important sound is to a visitor compared to other aspects of the park environment. This survey is attached in A

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01&rft.pub=Worcester+Polytechnic+Institute&rft.externalDocID=1705990&paramdict=en-US U7 - eBook U8 - FETCH-wpi_catalog_17059901: Worcester Polytechnic Institute.+HU&rft.series=Humanistic+Studies+of+Technology&rft.date=2012-01-01&rft.pub=Worcester+Polytechnic+Institute&rft.externalDocID=1705990&paramdict=en-US U7 - eBook U8 - FETCH-wpi_catalog_17059901: Worcester Polytechnic Institute. Web

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Appendix A: Additional Site Maps

WEST SIDE ACADIA
MOUNT DESERT ISLAND
Seal Cove Pond
Long Pond
Southwest Harbor
Bass Harbor
Big Heath
Lopous Point
WESTERN WAY
Great Cranberry Island
ACADIA National Park
HIKING & BIKING TRAIL MAP

EAST SIDE ACADIA
MOUNT DESERT ISLAND
Bar Island
Bar Harbor
Village Green
Eagle Lake
Southwest Valley
Sargent Mtn
Parkman Mtn
Penobscot Mtn
Cedar Swamp Mtn
Norumbega Mtn
Eagles Crag
Otter Creek
Seal Harbor
Northeast Harbor
Schoolhouse Lodge
Manchester Point
Bear Island
Ingraham Point
Hunters Head
Otter Point
Western Point
ATLANTIC OCEAN
SOMES SOUND
LEGEND

Appendix B: Survey Questions & Results

Q2

Export

What is your occupation?

Answered: 17 Skipped: 0

Responses (17) | Text Analysis | My Categories

Categorize as... | Filter by Category | Search responses

Showing **17** responses

Developer 6/24/2014 2:25 PM	View respondent's answers
Student 6/23/2014 1:48 PM	View respondent's answers
Student 6/23/2014 1:42 PM	View respondent's answers
Student 6/23/2014 11:34 AM	View respondent's answers
student 6/23/2014 10:12 AM	View respondent's answers
Student 6/23/2014 10:11 AM	View respondent's answers
Student 6/23/2014 9:33 AM	View respondent's answers
Student	

Q1

Export

What is your name?

Answered: 11 Skipped: 6

Responses (11) | Text Analysis | My Categories

Categorize as... | Filter by Category | Search responses

Showing **11** responses

Raed
6/24/2014 2:25 PM View respondent's answers

Ryan Carello
6/23/2014 1:48 PM View respondent's answers

Carly Giannini
6/23/2014 1:42 PM View respondent's answers

jeje
6/23/2014 10:12 AM View respondent's answers

Omar
6/23/2014 10:11 AM View respondent's answers

Luke Williams
6/23/2014 9:33 AM View respondent's answers

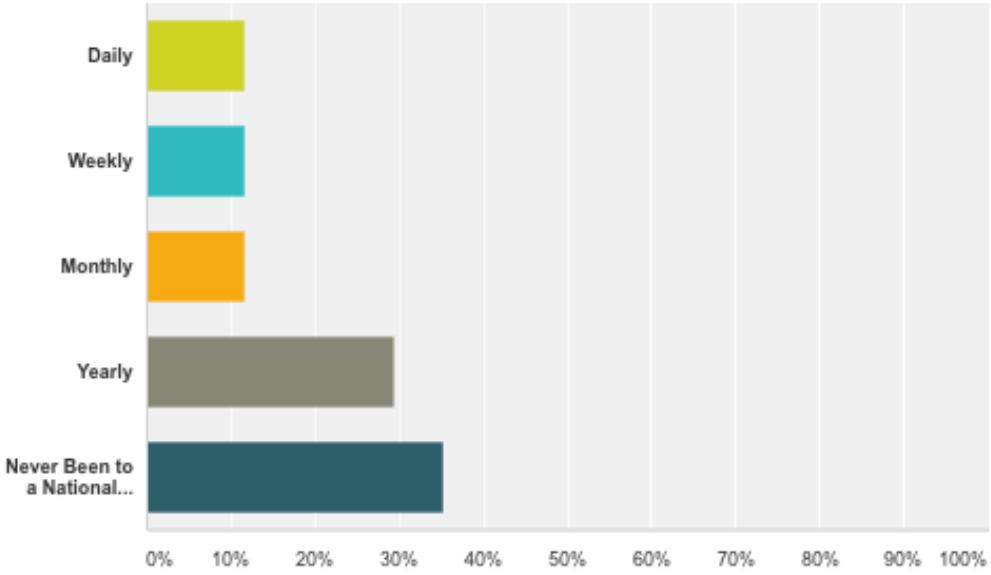
Jillian Proulx
6/23/2014 9:05 AM View respondent's answers

Andrew Kennedy

Q3 Customize Export

How often do you go to the national parks?

Answered: 17 Skipped: 0



Answer Choices	Responses	
Daily	11.76%	2
Weekly	11.76%	2
Monthly	11.76%	2
Yearly	29.41%	5
Never Been to a National Park.	35.29%	6
Total		17

Q4

Export

What would attract you to a park?

Answered: 17 Skipped: 0

Responses (17) | Text Analysis | My Categories

Categorize as... | Filter by Category | Search responses

Showing 17 responses

Animals
6/24/2014 2:25 PM View respondent's answers

Various site seeing attractions
6/23/2014 1:48 PM View respondent's answers

Activities to do
6/23/2014 1:42 PM View respondent's answers

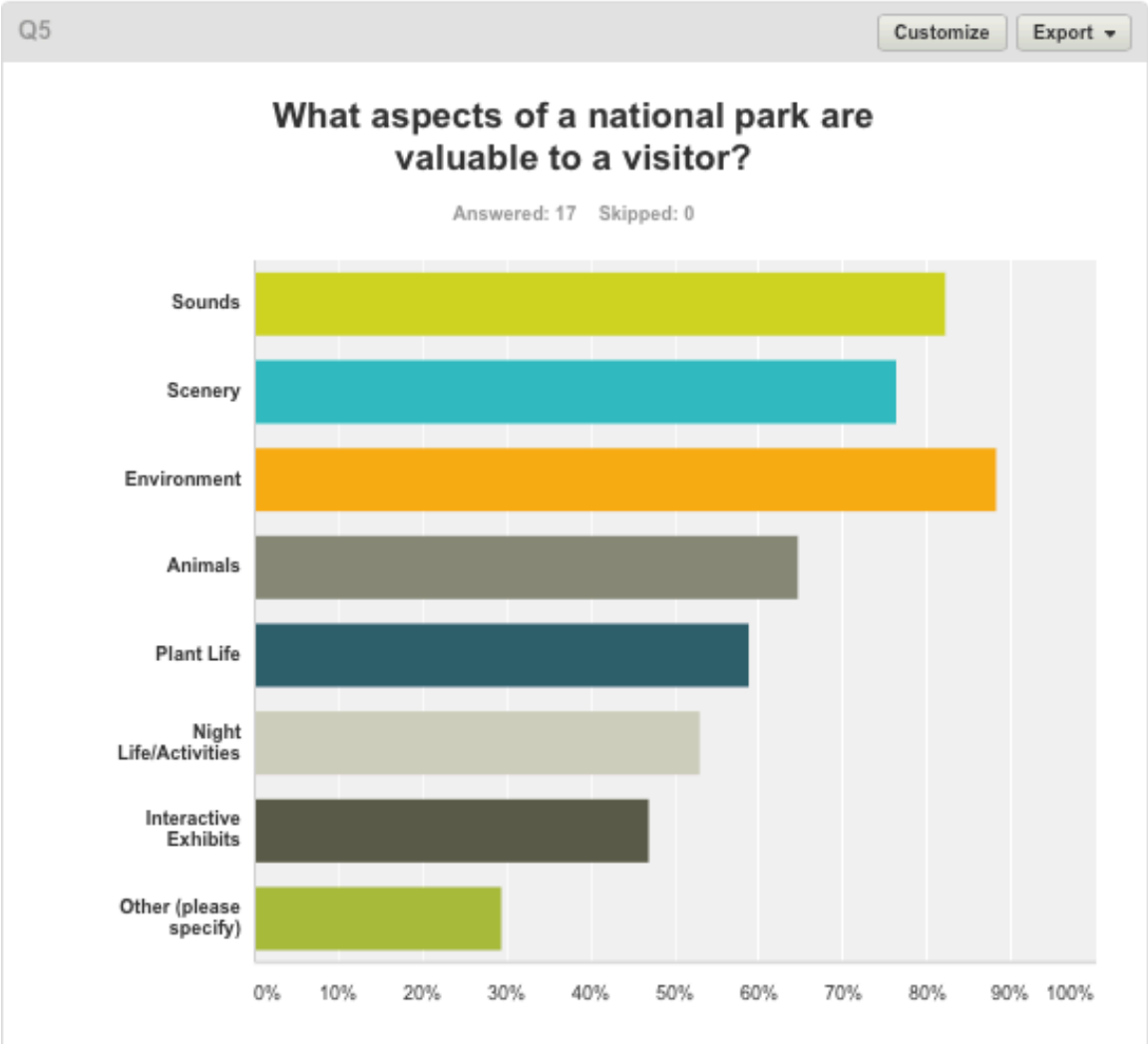
Nature, Hiking
6/23/2014 11:34 AM View respondent's answers

the trees
6/23/2014 10:12 AM View respondent's answers

The games and the founten
6/23/2014 10:11 AM View respondent's answers

Sounds, Animals, Scenery, Outdoor Activities
6/23/2014 9:33 AM View respondent's answers

The wind and the unique smell

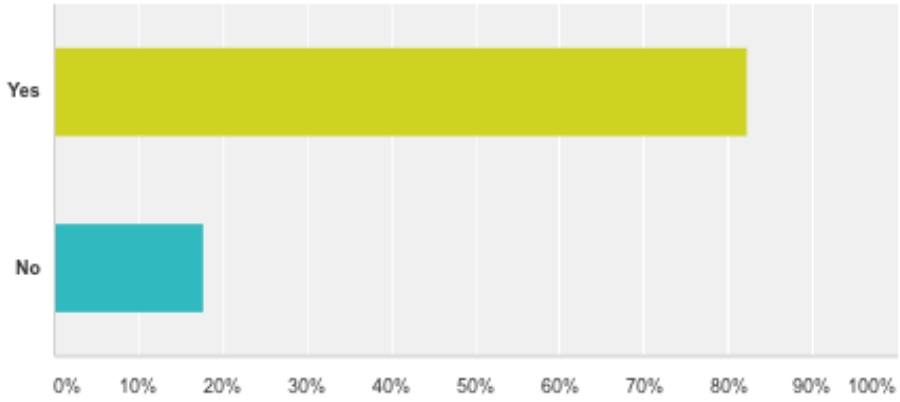

Q5
Customize
Export
What aspects of a national park are valuable to a visitor?
Answered: 17 Skipped: 0
Sounds
Scenery
Environment
Animals
Plant Life
Night Life/Activities
Interactive Exhibits
Other (please specify)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

Q6

Customize Export

Would you appreciate a national park that has a variety of sounds?

Answered: 17 Skipped: 0



Answer Choices	Responses	
Yes	82.35%	14
No	17.65%	3
Total		17

Q7

Export

Can you explain how would the sound exhibit make the national park batter?

Answered: 17 Skipped: 0

Responses (17) | Text Analysis | My Categories

Categorize as... | Filter by Category | Search responses

Showing 17 responses

sounds of nature always bring emotions , and that will make the visitors earl just their eyes
6/24/2014 2:25 PM View respondent's answers

Will let people who are incapable of traveling to certain spots hear the sounds
6/23/2014 1:48 PM View respondent's answers

It would give you a taste of what to expect before you go around to sites in the park.
6/23/2014 1:42 PM View respondent's answers

Allow for nature sounds to be heard that are not available at the time. Animal sounds would be cool.
6/23/2014 11:34 AM View respondent's answers

i think the sound will help the people who came alone to park, to be more relaxed
6/23/2014 10:12 AM View respondent's answers

When a sound plays on the background
6/23/2014 10:11 AM View respondent's answers

A sound exhibit could help to promote the park
6/23/2014 9:33 AM View respondent's answers

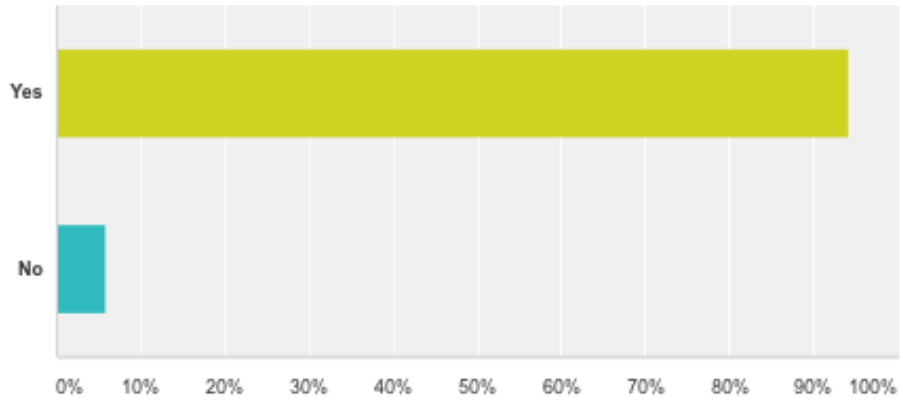
I think, Having a sound exhibit will make the park more accessible and reachable to people, it will give them the

Q8

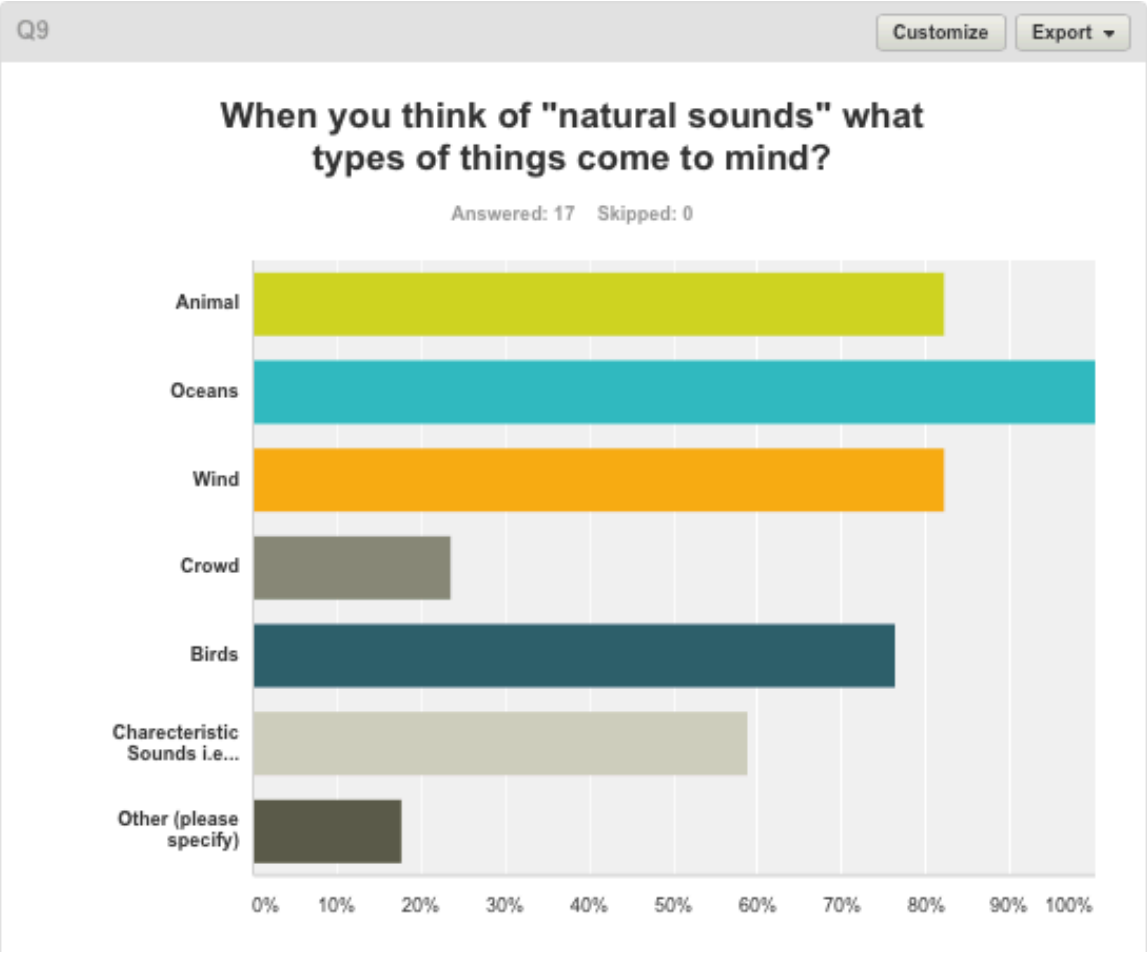
Customize Export

Would you appreciate if a park provided a sound exhibit that reflects the park uniqueness?

Answered: 17 Skipped: 0



Answer Choices	Responses	
Yes	94.12%	16
No	5.88%	1
Total		17

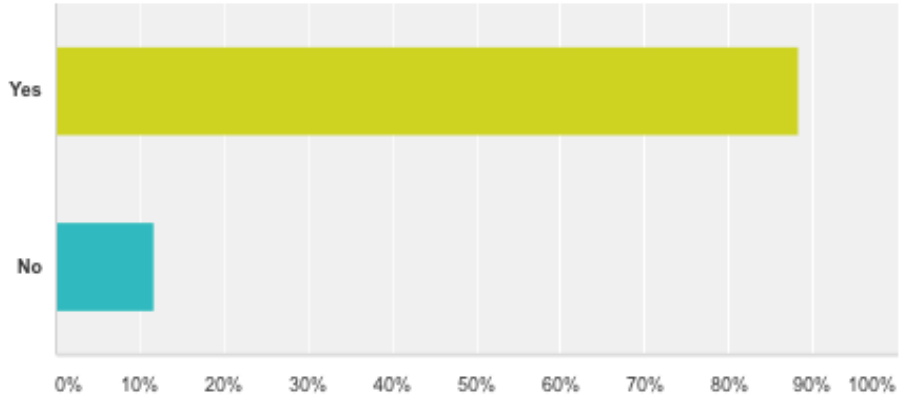

Q9
Customize
Export
When you think of "natural sounds" what types of things come to mind?
Answered: 17 Skipped: 0
Animal
Oceans
Wind
Crowd
Birds
Charecteristic Sounds i.e...
Other (please specify)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

Q10

Customize Export

Would you think that sound archiving would be beneficial?

Answered: 17 Skipped: 0



Answer Choices	Responses	
Yes	88.24%	15
No	11.76%	2
Total		17

Comments (13)