A Case Study of the Ottawa Valley Whitewater Rafting Industry: Standards and Risk Management

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Abstract

This qualitative case study identifies and discusses the standards and risk management practices of the Ottawa Valley whitewater rafting industry and the impacts of the government enforced *Special-purpose Vessels Regulations* are discussed. Data collection occurred using a single case study design, which included interviews and document analysis. This study found that internal, industry, and actual standards are influenced through a variety of sources. These standards were found to affect the risk management practices of commercial whitewater rafting providers. In general, these standards promoted a high level of risk management within the Ottawa Valley rafting industry. The *Special-purpose Vessels Regulations* were found to be non-influential in raising the risk management standards of the Ottawa Valley whitewater rafting industry.

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CHAPTER 1: INTRODUCTION

Risk is an inherent part of adventure recreation, and is often a main reason for participation in activities such as whitewater rafting. However, as an awareness of the need to mitigate risk in the adventure recreation industry has arisen in recent years, owners and managers are faced with the challenge of balancing the inherent risk in adventure recreation activities with risk management. At the same time, it would seem contradictory that adventure recreation participants seek to engage in programs in which elements of risk serve as motivation for participation, while concurrently feeling a need for their safety to be ensured. Is it even possible to offer a safe, yet risky experience for participants whose image of adventure is often falsely created and fueled by the popular media? Is this what sells adventure? Adventure recreation companies' pamphlets and brochures advertise excitement, thrills, adventure, fun, and exhilaration through participation in activities involving elements of risk. This research seeks to uncover how whitewater adventure recreation companies in the Ottawa Valley make decisions in adopting risk mitigating standards and regulations and their perceptions of how proposed standards and regulations impact their service provision.

There would be a limited need for standards and regulations if injuries were not occurring in adventure recreation. Studies of accidents and injuries in the New Zealand adventure industry highlight the current and past realities of pursuing adventure recreation, and suggest that an increased awareness of the realities of risk in offering adventure recreation activities is needed (Bentley & Page, 2001; Bentley, Page, & Laird, 2000). In a North American context, a study of The National Outdoor Leadership School's (NOLS) incident profiles calculates rates, causes, and severity of injuries

occurring during the operation of their trips which highlights the occurrence of risk on these types of experiences (Leemon & Schimelpfenig, 2003). Specific to the whitewater adventure recreation industry, studies have identified common injuries associated with whitewater kayaking (Fiore, 2003; Fiore & Houston, 2001) and rafting (Fiore; Whisman, 2003; Whisman & Hollenhorst, 1998) as well as the severity of these injuries and the impact that these activities have on the human body (Burrell & Burrell, 1982; Wallace, 1992).

In order to mitigate and prevent injuries and fatalities occurring in whitewater adventure recreation a variety of standards, regulations, qualifications, and policies can be implemented. Several studies have looked at the deficiencies of government-initiated regulation schemes (Chisholm & Shaw, 2004; Siderelis & Moore, 2006; Woolleven, Allison, & Higgins, 2007). However, these studies found that these regulation schemes were usually developed by officials with limited knowledge of the actual needs and practices of the activity for whom the regulations were intended. Previous attempts by the Canadian Government to regulate whitewater rafting have failed to address the increase in injuries and fatalities, and little research is available with regards to the effectiveness of government-initiated regulations in the whitewater adventure recreation industry. However, research into a government initiated licensing scheme in the United Kingdom offers some insight into the implications government regulations have for the recreation providers and the industry, particularly if the regulations are developed in response to a widely publicized incident (Woolleven et al., 2007). In New Zealand, the whitewater industry is highly developed and has a variety of government initiated accreditation processes and qualification standards for whitewater adventure recreation (Chisholm &

Shaw, 2004). Although qualification standards for adventure guides have been discussed in-depth throughout the literature (Ewert, 1985, 1987; Gass, 1999; Priest & Gass, 1997; Webb, 1999), whitewater adventure recreation providers currently employ unofficial industry qualification standards to show guide/leader competencies in the Ottawa Valley. No official standards for guide competency exist.

New regulations (*Special-purpose Vessels Regulations*) have been proposed to regulate commercial whitewater rafting across Canada. These regulations will govern all aspects of commercial whitewater rafting, from equipment requirements to record keeping procedures. The impacts and influences of these regulations and how they are similar to and differ from the current standards, qualifications, and policies practiced by whitewater adventure companies in the Ottawa Valley are the main focus of this research.

Purpose of the Study

The purpose of this case study was to explore current standards and risk management practices of the whitewater adventure rafting industry in the Ottawa Valley and the impact of the proposed *Special-purpose Vessels Regulations* on the risk mitigation practices of whitewater adventure rafting industry companies.

Research Questions

1. What are the factors affecting regulations, qualifications, and policies (i.e., standards) in the Ottawa Valley Whitewater Rafting Industry and how are they influential?
2. What are the differences between and among Ottawa Valley whitewater adventure industry companies' risk mitigation practices?

3. How will the proposed *Special-purpose Vessels Regulations* influence and change risk mitigation practices in whitewater adventure recreation companies in the Ottawa Valley?

Scope of the Study

This study focuses on the whitewater adventure industry of the Ottawa Valley and, in particular, the Rocher Fendu section. The Rocher Fendu section is the Ottawa River's most popular section for whitewater adventure activities. The Rocher Fendu section is situated near the town of Foresters Falls, Ontario, Canada. The rapid ratings at this section range from easy to difficult and the section is known internationally as a whitewater adventure destination. The Rocher Fendu section has an active and prosperous whitewater adventure industry that primarily offers daylong whitewater rafting trips, whitewater kayaking and canoeing instruction and courses.

Definition of Terms

Accident: An undesirable or unfortunate happening that occurs unintentionally or due to negligence and usually results in harm, injury, damage, loss, casualty, or death.

Incident: An occurrence or event that has or can lead to serious consequences for individuals, equipment, or entities (companies and industries).

Paddling: An activity (canoeing, kayaking, or rafting) occurring on water with a paddle.

Perceptions: The process of using the senses to acquire information about the surrounding environment or situation.

Policy: The guidelines established by individual companies, governmental or regulatory agencies with regards to operating safe whitewater adventure recreation experiences.

Regulations: Rules of law enacted and enforced by government agencies.

Risk: The actual or perceived danger that injury, damage, or loss will occur.

Standards: A level of quality or excellence that is accepted as the norm.

Qualification: A standardized skill that makes an individual suitable for a particular job. For example, a standard of first aid training for all outdoor guides.

Delimitations and Limitations

This study is confined to interviews of the owners and managers of companies operating whitewater adventure recreation in the Ottawa Valley. Owners and managers have the unique ability to create, accept and implement policy, regulations, and qualifications for their companies. In addition to interviews, document analysis of company river policy statements will occur. These river policy documents are the written policies and standards used by the various whitewater adventure recreation companies.

Data collection occurred between June and September 2008, which represents the major time period during which companies operate whitewater adventure recreation on the Ottawa River. Whitewater recreation occurs at other times but those times are not considered to be part of the peak season.

Adopting a single unit case study design has implicit limitations on the scope of possible generalization for the study's findings. One river industry does not represent the concerns of all other river industries, yet this research recognizes the value of studying a phenomenon in-situ and in relation to its environment. Binding the study to one specific location (Ottawa Valley), and to a specific group (owners and operators), allows the research to consider only those factors occurring within the case's scope. By not focusing on the generalizability of this study, the research did not detract from the detail that is

essential to understanding this phenomenon. This focus on the owners and operators of rafting companies only highlights the factors they see as important to this phenomenon. While the voices of clients and guides could have added another aspect to this research, it was deemed appropriate to focus on the owners and operators as they were the key decision makers in terms of risk management practices adopted by their respective companies. Similarly, a quantitative or mixed method approach may have added insightful elements to the outcomes of this research.

The researcher's role within the industry and his relationships with the company's representatives who took part in this study are influential factors that need to be considered. At the time of this research, the researcher was employed as a guide in the Ottawa Valley whitewater rafting industry, which offered a unique "insider" advantage to understanding the phenomenon. The opportunity offered the researcher connections to people and experiences in the industry on which to contextualize the study's findings. Being employed as a guide with one of the five companies that participated in this study could be interpreted as a conflict of interest. In response to this consideration, this study's research questions were designed to be non-evaluative of any of the companies as a specific entity. However, it would not be ethical on the part of the researcher to ignore or misrepresent where companies were lacking in their risk management or were functioning at a lower level than their peers in the industry.

This research could be considered limited by the design and methodology of the study. An ethnographic inquiry from the perspective of either a guide or a participant with each company could have added another area of concentration to this research. As previously mentioned, it was prudent to use a case study design to answer the research

questions as it was the impressions of the owners and operators that was most valuable in discovering how risk management works in the Ottawa River Valley.

Importance of the Study

There are several reasons why the study is important and timely. First, assessing the standards to which risk is managed and the processes to which risk standards are incorporated by companies sheds light on the continued process of risk management. In addition, emphasis is placed on whether companies can effectively manage the associated risks or whether outside regulations and policy are necessary within the industry.

Second, there are no common standards by which adventure recreation companies mitigate risk and run their programs. This research encourages the transparency of risk mitigation by whitewater adventure companies in the Ottawa Valley. This research shows the variety of ways in which government and industry standards are interpreted by different companies. At present, some companies promote their businesses as being safer than other companies. This research offers insight into these claims.

Third, this research is timely and pertinent due to the regulations the Canadian Federal government enacted in 2008 to regulate whitewater rafting across Canada. This study assesses the need for this form of government involvement in regulating whitewater adventure across Canada. The whitewater industry in the Ottawa Valley directly benefits from this research as it is the epicenter for whitewater recreation in Ontario.

Fourth, this research is important for the continued economic viability of a safe whitewater adventure industry in the Ottawa Valley. Whitewater adventure recreation is a financially lucrative business for adventure tourism in Canada and the Ottawa Valley.

This research aids in understanding how companies currently manage risk while maintaining their company's individuality which is a high priority for most companies.

Finally, I intend to share the results of this study with the whitewater adventure recreation companies involved with the study. My hope is that this work will encourage a greater connection between companies, helping them to manage risk equally, and plan for future restrictions from outside regulating forces, with the end result being that owners and managers "opt in" (Brown, 1999) to incorporating industry standards for risk mitigation.

CHAPTER 2: LITERATURE REVIEW

The whitewater adventure industry is a small part of the overall outdoor adventure recreation industry. Whitewater rafting, canoeing, and kayaking are the main activities on the Ottawa River. The decisions to accept or disregard regulations, qualifications, and policies used in risk management are made by business owners and managers. The purpose of this research is to explore current standards, qualification, and policies of the whitewater adventure industry in the Ottawa Valley. The literature review identifies the following topics: outdoor adventure recreation, whitewater adventure recreation, and discusses risk in terms of standards for regulations, qualifications, and policy. The realities of risk are looked at through incident cases and their ensuing results as well as injury trends, rates, and fatalities. A look at existing and proposed regulations, both within Canada and internationally, as well as standards for qualifications, accreditation, and licensing, will offer insight into the common practices of the whitewater adventure industry.

Outdoor Adventure Recreation

The origins of outdoor recreation can be found in the eighteenth century European pastime of exploring the Alps, the growth of the post-civil war camping movement in the United States, and city dwellers' overall dissatisfaction with urban life (Miles & Priest, 1999). People living in urban settings realized that pursuing activities in natural settings gave them pleasure, contentment, and a break from the stresses of life in all-consuming cities (Miles & Priest). The twentieth century brought more formalized outdoor recreation, and eventually, adventure education and programming (Miles & Priest). Outdoor adventure education is used as a tool in which both the activity and process of

participation can educate the group or individual. The desired outcomes and the participants' motivations for involvement are one basis for differentiating adventure recreation and outdoor adventure education. Both adventure recreation and outdoor adventure education are related in terms of the activities that they employ. However, outdoor adventure's purpose and benefits can facilitate both recreational and educational agendas (Crisp, 1998; Ewert & McAvoy, 2000).

The outdoor adventure education movement played an important role in the creation, acceptance, and subsequent value of outdoor adventure recreation. This came about through the work of influential outdoor educators, such as Kurt Hahn, and the subsequent Outward Bound (OB) movement, which is partially responsible for the creation of outdoor adventure education (Miles & Priest, 1999). Organizations such as OB continue to influence both the outdoor adventure education and the adventure recreation industry by setting standards for safety and the mitigation of risk. It is important to note the influence OB has had on outdoor adventure education and recreation in North America, as well as internationally. Outward Bound has established schools around the world with their motto of "to serve, to strive and not to yield" (Miles & Priest). The creation of additional adventure education programs, such as the National Outdoor Leadership School (NOLS) and Project Adventure (PA) reinforced the value of outdoor adventure education and adventure recreation.

> The spirit of adventure is best described by Raiola & O'Keefe (1999) as:
>
> ... adventure itself is a human need. More than a word, adventure is an atmosphere, an attitude, a climate of the mind.... adventure is the curiosity of

> people to see the other side of the mountain, the impulse in us that makes us break our bonds with the familiar and seek greater possibilities. (p. 46)

Ewert (1989) offers the notion that the deliberate seeking of risk and the uncertainty of outcomes typify the outdoor adventure recreation experience. According to Raiola & O'Keefe, an accurate definition of adventure education has not been created, but practitioners agree that elements of excitement, uncertainty, real or perceived risk, interaction with nature and effort are all important (Bunting, 1990; Ewert; Hollenhorst, 1986; Priest, 1990). These elements add to the value of outdoor adventure education and recreation.

Many of the more popular activities or pursuits within the outdoor adventure recreation field include climbing (rock and ice), canoeing, kayaking, rafting, skiing, and mountaineering. There are many other less common adventure activities, which in some cases push the elements of risk and excitement to extreme levels (e.g., base jumping or paragliding). These activities have lower participation rates which are partially a result of the necessary skills and money required for active participation in these activities (OIA, 2006).

Outdoor adventure recreation can be used as both a personal pursuit and/or as a commercial or service industry experience. It is important to recognize that there is a close relationship between adventure recreation and adventure tourism. Adventure tourism incorporates many of the same elements of adventure recreation, but differs in terms of the influence travel has on the adventure tourism experience. The practice of adventure has become commercialized through recreation and tourism to be a major economic driver in the worldwide tourism industry (Cloutier, 2000).

Active outdoor recreation is expected to increase as more people seek the "less beaten" path in years to come (Cater, 2006). In 2005, 161.6 million (72.1%) of Americans aged sixteen and over participated in an outdoor activity (OIA, 2006). However, the Outdoor Industry Association (OIA) found that in the United States there was a general decline in outdoor activity outings from 8.3 billion in 2004, to 7.3 billion in 2005.

Whitewater Adventure Industry

Industry Profile

A number of whitewater paddlesports activities constitute the whitewater adventure industry. The OIA (2006) found that 34.3 million Americans participated in all types of paddlesports in 2005, with the total adding up to 191 million outings. In comparison, 85.6 million Americans participated in bicycling, 13.5 million in backpacking, and 9.2 million in climbing during 2005 (OIA).

The whitewater adventure industry is made up of activities differentiated by the type of craft [boat], goal of the activity, and skill needed to participate. For this study, motorized craft will not be considered part of the whitewater adventure industry. This stipulation eliminates whitewater jet boat trips, and a variety of smaller motorized vessels from this study (e.g., whitewater jet-skis, motorized rafts). In New Zealand, jet boat trips have approximately double the participation rates of whitewater rafting (Bentley & Page, 2001) and can be considered part of the larger adventure tourism industry. According to the OIA (2006), whitewater rafting attracts almost one third of the whitewater adventure industry's participants. This is followed by canoeing and kayaking, and less popular activities such as river boarding and drift boating. Within each of these categories there is

significant variation in how people engage in the activity. Each of these paddlesports will be discussed in more detail in this next section.

Rafting

In the commercial whitewater river rafting business, an outfitter supplies personnel and equipment to transport people down a river on a raft (Leemon & Schimelpfenig, 2003). The outdoor activity of whitewater rafting is characterized by the inflatable rafts or catarafts used to carry people and equipment down a river. Whitewater rafting in the United States has over 9.8 million participants annually, with more than three million of these being considered "enthusiasts" (those who have rafted more than twice in the past year) (Fiore, 2003). The OIA (2006) stated the number of rafters to be 10.6 million in 2005, with 21 million outings. The total number of overall outings for rafting is low as most participants, on average, raft only once a year (OIA). The OIA found rafters to be primarily unmarried, male, and living in the western region of the United States. According to the OIA, rafting experienced its highest levels of participation in 2001 and 2002 (71 million outings) and has currently dropped to 1998 levels (19 million outings).

Research on commercial river rafting has primarily examined issues of safety (Bentley & Page, 2001; Bentley et al., 2000; Fiore, 2003; O'Hare, Chalmers, Arnold, & Williams, 2002) or the packaged adventure experience (Holyfield, 1999). Studies examining safety within commercial river rafting focus primarily on frequency and severity of incidents. Research on the packaged adventure experience in commercial river rafting has focused on how programs elicit and control desired emotional reactions from novice clients. Holyfield (1999) examined how commercial rafting outfitters

manufactured the novice client experience to manipulate the social-psychological consequences of novice risk taking. The novice risk taking experience is described as the adventurer not having the necessary skills and competence deemed essential to the adventure process. Holyfield's ethnographic research methods found that commercial rafting outfitters use a variety of tools and procedures to manufacture the adventure experience. These tools include: organizational scripts; guide training; guide culture; the process of withholding technical information from clients; polished narratives; managing emotional labor; humor; and establishing legitimate guide authority (Holyfield).

Guides act as key tools for creating and managing the client experience in commercial adventure recreation. Holyfield (1999) and Beedie (2003) found that guides play an active role in mediating the interaction between the adventure activity and the adventure setting for clients. Clients base their perceptions and interpretations of their experiences on how the guides react in certain situations (Holyfield). To illustrate this idea, Holyfield uses the example that guide humor and playfulness can sway client's feelings towards the positive after a particularly negative experience (i.e., swimming in a hydraulic).

Kayaking

Whitewater kayaking can be seen in advertising "hyping" everything from soft drinks to automobiles (Sanford, 2007). Participation in all types of kayaking is estimated to include 12.6 million Americans in 2005, with whitewater kayaking participation rates at 2.2 million in 2005, which is the lowest participation rate of all types of kayaking in the United States for the year of 2005 (OIA, 2006). This low level of participation is due in part to the specific nature of the activity. Kayaking is considered unique within the

paddling discipline, because unlike canoeist and rafters, kayakers are partially immersed in the water at all times and essentially "wear" their boats rather than ride on top (Sanford). Some whitewater kayakers believe that their kayaking can equate to a religious experience (Sanford). Whitewater kayaking takes two specific forms: river running and playboating. River running is paddling down a river through its various rapids. Playboating is characterized by kayakers spending their time at a specific set of river features to practice moves or tricks.

Canoeing

Participation in the United States for all forms of canoeing is estimated to include 20.8 million participants, with 83 million outings in 2005 (OIA, 2006). These numbers represent all canoeing related activities, including whitewater and flatwater canoeing. Whitewater canoeing constitutes a smaller part of overall canoeing activity. Limited data exist to reflect current distributions of whitewater canoe paddlers in Ontario and Canada. Whitewater canoeing can be broken down into tandem whitewater canoeing and solo whitewater canoeing. Tandem whitewater canoeing requires at least two paddlers in the same boat while solo boat canoeing is for one person. Solo canoes are generally smaller than tandem canoes and have specialized outfitting for a single paddler. Both tandem and solo whitewater canoeing can be modified for slalom racing to much the same specifications as whitewater kayak slalom racing. Like kayaking, whitewater canoeists can be found river tripping (including multi-day excursions) and playboating on rivers.

International Scale of River Difficulty

The international scale of river difficulty is a method of classifying the difficulty, skill requirements, and dangers associated with moving water. The scale is used

internationally, yet varies in regards to experience of the paddler and local opinion. The scale is best used to give a generalization of the difficulty of moving water (rapids) rather than a definite evaluation difficulty. The international scale of river difficulty should always be used in conjunction with a paddler's or trip leader's [guide's] experience and judgment of moving water features and water levels. Table 1 gives explanations for river difficulties from Class I to VI (Fiore & Houston, 2001).

Table 1

International Scale of River Difficulty with River Classifications from Class I through VI

River class	*Explanation*
Class I	Easy: waves small; passages clear; no serious obstacles.
Class II	Medium: rapids of moderate difficulty with passages clear. Most open canoeists should never tackle anything tougher than class II.
Class III	Difficult: rapids are longer and rougher than class II. Waves numerous, high, irregular; rocks; eddies; rapids with passages clear though narrow, requiring expertise in manoeuvring; scouting usually needed. Requires good operator and boating equipment.
Class IV	Very difficult: rapids are generally longer, steeper and more heavily obstructed than class III rapids. Waves powerful, irregular; dangerous rocks; boiling eddies; passages difficult to scout; scouting mandatory first time; powerful and precise manoeuvring required. Demands expert boatman and excellent boat and outfit.
Class V	Extremely difficult: exceedingly difficult, long and violent rapids, following each other almost without interruption; riverbed extremely obstructed; big drops; violent current; very steep gradient; close study essential, but often difficult. Requires best man, boat, and outfit suited to the situation. All possible precautions must be taken.
Class VI	Extreme and expedition: rapids which have rarely been run. Once such a rapid has been repeatedly run, it is usually reclassified as a class 5x. Risk to swimmers and boaters is extremely high.

The following section will focus on the concept of risk management and review the pertinent literature on risk management in the context of the whitewater adventure industry.

Risk Management

The increase in outdoor recreation participation (Cater, 2006) will raise the daily concern for operators trying to manage risk to protect clients, guides, and business value (Cloutier, 2000). It is not uncommon to find examples of adventure recreation fatalities and injuries in many sectors of the adventure tourism and recreation industries. Accounts such as: "In June 1999 four British tourists drowned during a rafting trip in Austria. A month later 21 people were killed whilst canyoning in Switzerland, a torrential flash flood swept down the valley, killing almost half of those on the trip (Cater, p. 317)", illustrate the potential hazards associated with adventure recreation. Clearly, there is an element of risk in these activities. Adventure activities are often characterized by their associated risks. This associated risk can be classified as perceived risk, often enhanced by the media and the risky portrayal of adventure activities. Perceived risk is the subjective judgment that a person makes about the characteristics and severity of a risk (Cloutier). The perceived risk associated with an activity can differ significantly from the actual inherent risk. Risk management seeks to address both the perceived and actual risk associated with adventure activities.

Participation in adventure activities involves handing over a significant part of the responsibility for that risk management to the adventure provider (Cater, 2006). Most people do not have the time to become proficient in many adventure activities. In effect they "go shopping" for expertise, buying skill, and giving the duty of care to someone who does have the right certificate or training (Cater).

It would seem that the obvious solution for reducing injuries and fatalities in adventure recreation is to eliminate the elements of risk. However, Cater (2006) explains

that a voluntary attraction to a degree of risk is inherent in pursuing adventure recreation activities. Several factors for client risk engagement have been studied, including sensation seeking (Ewert, 1989; Levenson, 1990; Robinson, 1985; Schuett, 1993; Straub, 1982; Zuckerman, 1984) and the illusion of control of one's mortality (O'Hare et al., 2002). Csikszentimihalyi (1975) suggests that the theory of flow can describe the satisfaction found from the positive feedback of balancing the skill required and the inherent challenge of an experience. Flow is defined as an experience "... of complete involvement of the actor with his/her [*sic*] activity" (Csikszentimihalyi, p. 36). Cater adds that complete involvement in an activity creates feelings of "fusion and fluidity" (p. 318). Priest and Bunting (1993) propose the Adventure Experience Paradigm as a model of flow at work in the adventure experience. This model attempts to illustrate the connection between risk (the potential to lose something of value) and competence (a combination of skill, knowledge, attitude, behavior, confidence and experience) in an activity (Priest & Bunting). In relation to the Adventure Experience Paradigm and Flow theory, Cater suggests:

> When competence for an activity is high, but the risk is low, a condition of exploration and experimentation is prevalent. Where the risk is increased, but competence decreased, adventure occurs, and when the two are matched there is the condition of peak adventure that corresponds to the balanced nature of flow suggested by Csikszentimihalyi. However, as the activity moves towards a condition of risk being greater than competence to deal with that risk, there is the potential for misadventure, and at levels of complete imbalance devastation and disaster may occur. (p. 319)

Cater (2006) also states that these models fail to adequately explain the negotiation of risk in the adventure experience. The conveyance and acceptance of risk can be implemented into all aspects of adventure recreation, from guide training to creation of government regulations.

Risk management is an all-encompassing process, not an individual technique or skill in the mitigation of risk (Cloutier, 2000). The risk management process consists of determining the acceptable risk exposure levels to guides and guests, identifying hazards, evaluating those hazards, implementing mitigation strategies, and planning appropriate responses to emergency situations (Cloutier). Within the outdoor recreation community, there is an emphasis on evaluation of risk management, both theoretical and practical. The results of this emphasis are present in both the literature and procedures adventure operators take in reducing and managing risk. The success and degree to which operators choose to manage risks are of significant importance to this research.

Adventure recreation has a relatively short history which results in limited litigation cases from which to draw direct legal rulings (Cloutier, 2000). Adventure recreation operations are susceptible to both statute and common laws (Cloutier). Statue laws applicable to adventure programs include such acts as the *Motor Vehicle Act,* the *Worker's Compensation Act, Canada Shipping Act, and National Parks Act*. Common laws influence legal-release contracts between companies and clients. Within the Canadian justice system, adventure operators must understand specific elements of this system, such as negligence, standard of care, the reasonable person, thin-skull rule, and disclosure among others. These concepts outline standards and practices to which companies need to adhere, to stay in accordance with legal rulings for business practices.

With these legal principles in mind, operators can implement a series of practical procedures and documents to mitigate their guest's exposure to unevaluated risks. Some common procedures utilized by adventure programs include safety talks, staff training and emergency situation practice (Cloutier, 2000; Holyfield, 1999). Specific documents have been created to communicate risk to both guides and participants. These documents include: risk management plans; trip plans; emergency response plans; emergency protocols for guides; waivers (identification of risk forms); contracts; and staff manuals. If effectively written, all of these documents and procedures can safe guard businesses and help in protecting clients (Cloutier; Holyfield).

It is often thought that activities such as tramping and bush walking (i.e., backpacking) have lower levels of risk than activities such as mountain recreation (Johnston, 1989) and whitewater rafting (Greenway, 1996; Hall & McArthur, 1991; McLaughlan, 1995; Weiss, 1991). This leads to potential misunderstanding about the total number of injuries and fatalities associated with low-risk activities. These activities have higher participation rates than high-risk activities, resulting in a larger number of incidents. Some people consider driving an automobile a low-risk activity. However, due to the total number of drivers, the incident rate outpaces even the most risky of adventure activities (Fiore, 2003). Understanding the occurrence of incidents both for their causes and in relation to other activities justifies the continual pursuit of effective risk management and aids in making the adventure industry safer.

Several models attempt to illustrate the variety of factors risk management needs to account for, and show risk management as a process. The Adventure Risk Exposure model (see Figure 1) separates risk factors and risk responses and shows how they

influence a participant's risk exposure (Brown, 1999). In applying this model to this study, a focus on risk responses (e.g., certification, guided, on-site briefing, and management) that address participant preparedness and the adventure environment is possible. This study will focus on only a small part of this model that illustrates the variety of factors involved in risk management, including elements of participant preparedness and the adventure environment.

Another model that can be applied to the process of risk management in the whitewater adventure industry is the Adventure-REACT Model of Managing Risk (Brown, 1999) (see Figure 2). This model shows the process of identifying risks, understanding how risk occurs, the loop process of adjusting standards and knowledge of risk, and the tracking of changes to risk management. The central point of this model is the influence of judgment, and how it affects the risk management process. This model originally used leadership judgment as that central point. For this research, the term judgment will not be looked at in terms of a leadership skill, but rather as a choice(s) made for addressing risk for an adventure activity. This research focuses on the judgments (perceptions) of owners and managers in incorporating aspects of regulations, qualifications, and policies into the implementation of their adventure activities.

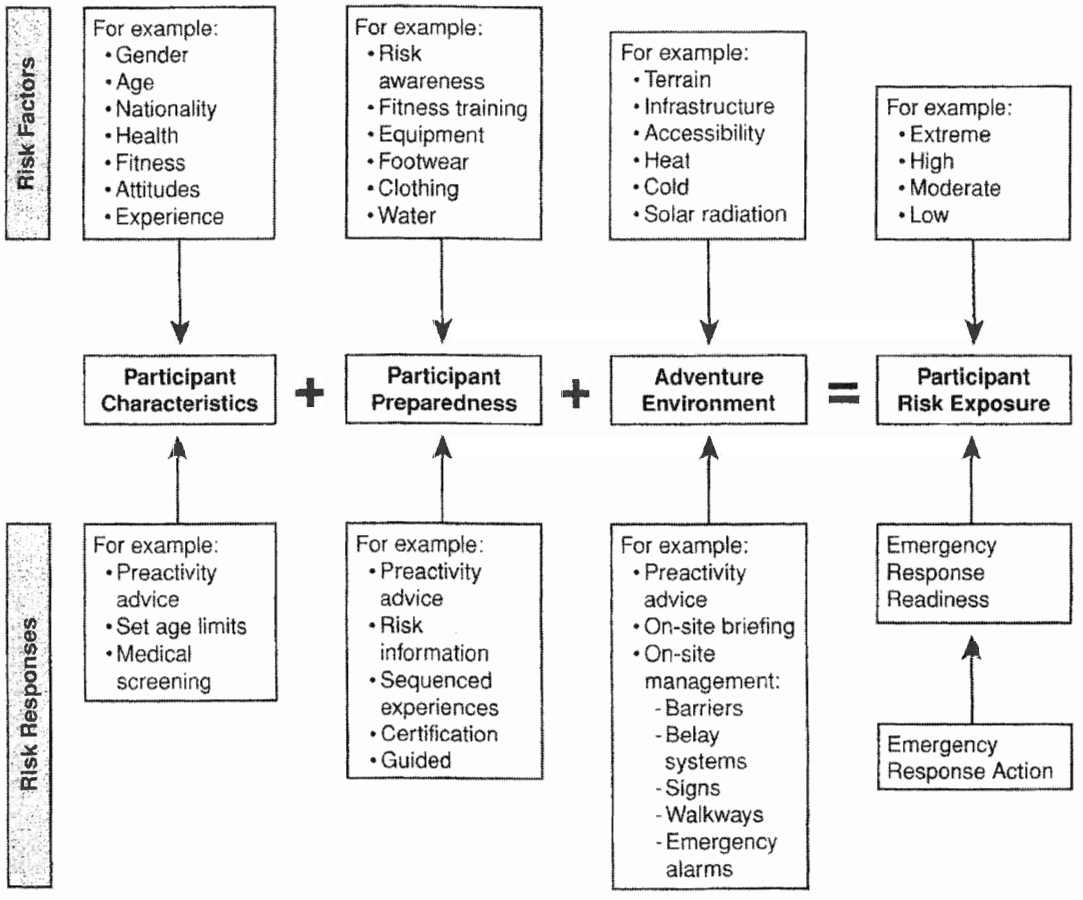

Figure 1. Adventure risk exposure model. (Brown, 1999)

The Adventure-REACT model identifies three paths which owners and managers can take in managing risk. First, they can conditionally opt in to adopting regulations, qualifications, and policies. By conditionally opting in, the model suggests that they adjust their adventure activities but incorporate additional experience, time, control, and information that contribute to their knowledge of the risks. The second path is to make the judgment to opt in and incorporate the regulations, qualifications, and policies into their practice. By choosing this path, a risk management plan can be developed and used as a tool for addressing risk. The third and final path is to opt out and not incorporate

regulations, qualifications, and policies into their practices. This path leads to the perpetual awareness of risks without the ability and intent to fully address and manage them.

These models aid in describing the risk to which participants in adventure recreation are exposed, and offers a process for managing those risks. This study only examines small portions of these models, which are part of the overall risk management situation in adventure recreation. The rationale for only looking at a limited section of risk management is due to the purpose of the study, which is to explore only current standards, qualification, and policies of the whitewater adventure industry. Actual incident cases that have particular implications to risk management in water based adventure recreation will be presented in the following section.

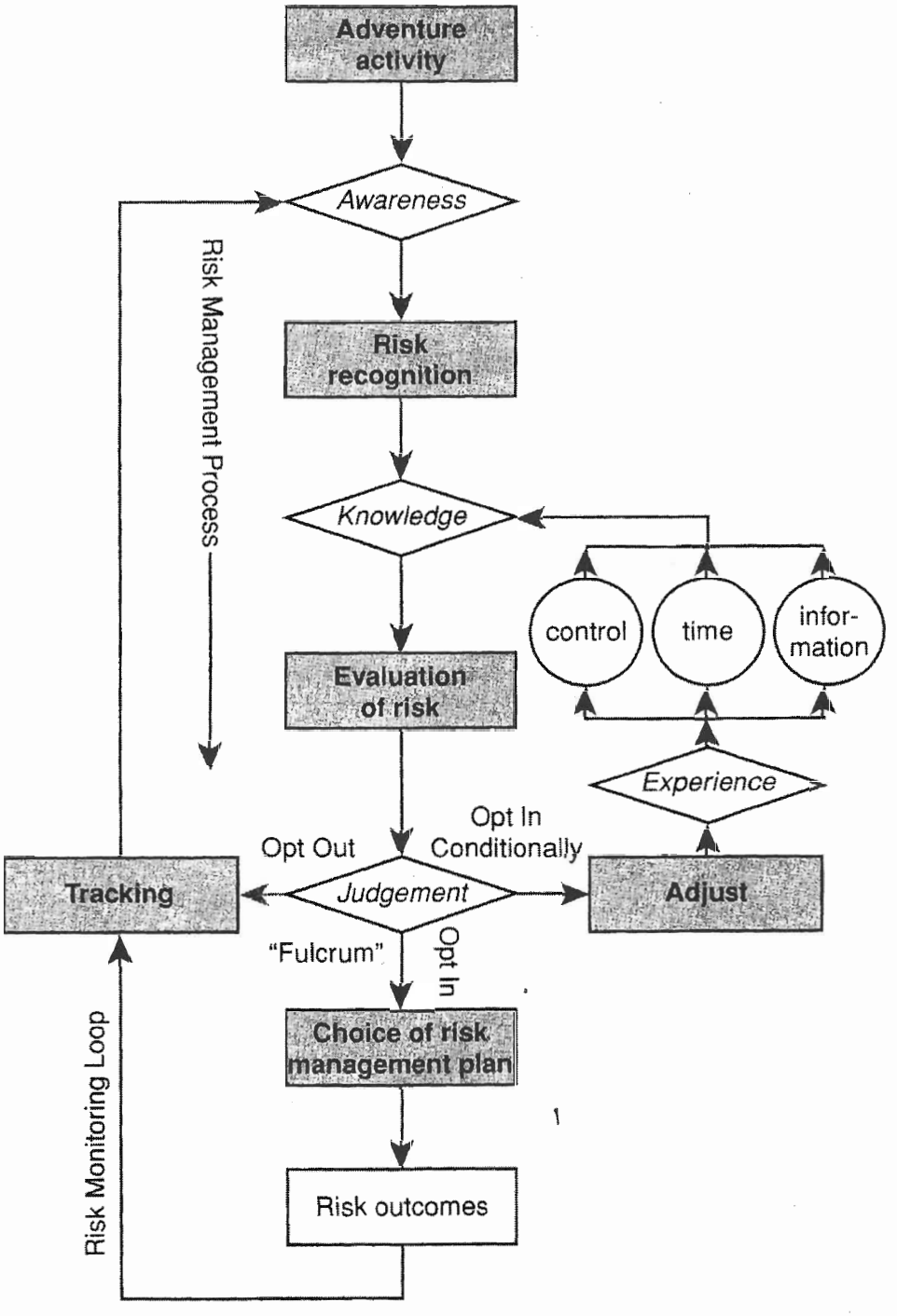

Figure 2. The Adventure-REACT model of managing risk. (Brown, 1999)

Incident Cases & Reactions

The following section offers cases in which risk management issues came into the public eye, through media outlets and industry outcry. These case studies were chosen because they offer insight into risk management in either the Ontario outdoor adventure industry or similar industries from around the world.

St. Johns School Lake Temiskaming

In Ontario, the Lake Temiskaming canoe disaster received global attention. One sunny Sunday morning, twenty-seven boys and four leaders from St. Johns School in Toronto, set off on Lake Temiskaming for their annual canoe expedition. By that evening, twelve boys and one leader were dead (Mullan, n.d.). The aftermath of the tragedy laid blame on all parties, including the school, the leaders, the canoe company and even the lake itself. Some think this incident permanently set back outdoor adventure education because of the fear that now lingers in regards to risk (Mullan). For the Ontario paddling and outdoor education communities, this incident spurred people in the field to look much more closely at what they do and initiated a systematic process of looking at risk (Mullan). For example, Project Dare, an Ontario outdoor education and recreation program changed many of its policies after the tragedy (Mullan). Project Dare introduced neoprene jackets and water temperature restrictions to manage cold water immersion on their own canoe trips (Mullan). Following the tragedy, the Ontario Recreational Canoeing and Kayaking Association (ORCKA) created a high quality recreation canoeing program to reduce the probability of a similar disaster. This was partially out of fear that the government would step in and regulate the activity and industry if they did not take the initiative themselves (ORCKA, 1997).

Lyme Bay

In 1994, a British outdoor adventure company was found guilty of corporate manslaughter (Geary, 1996). Eight students and a teacher from Southway School, Plymouth accompanied by two instructors from the St. Alban's Center, Lyme Regis embarked on an ocean coastal kayak trip. Slightly over eight hours later, four students were dead due to the lack of qualifications of the two instructors. According to Geary:

> In the Lyme Bay case the jury heard evidence that there was no specific recruitment criteria to become an instructor at the centre and that the two 'instructors' were not qualified to lead a sea trip. Indeed, the only canoeing qualification that they held was the British Canoe Union One Star certificate, the lowest level of competence that can be awarded and which is generally regarded as a mere encouragement test. (p. 6)

This incident sent ripples though the British adventure recreation community with many notable outdoor professionals commenting on the state of the industry. The national outcry following this incident resulted in the conviction of the center's managing director for manslaughter and later the introduction of the *Activities Centres (Young Persons' Safety) Act* (Woolleven et al., 2007). Following the Lyme Bay incident the action taken by the British Government has caused much turmoil and debate in the industry as to the utility and practicality of the Act. Manby (2003) wrote:

> When the Lyme Bay [*sic*] incident happened, the outdoor industry was so far down the road of mutual backslapping and complacency that it had to abdicate all responsibility for regulating itself and subjugate itself to 'centre-accreditation'. The result was a rush for paper qualifications and the loss of many experienced,

> but unqualified instructors. This abdication of responsibility extended to centre managers looking for qualifications over experience, despite this not being a legal requirement. People I know who run outdoor centres would rather employ experience over qualification any day but, because of the implied [*sic*] of assumed legal liability, they feel they cannot afford to take this risk! These centre managers now have to live with questionable appointments; they know that accidents will happen in the hills and on the lakes and on the rocks. But they have to be able to show that the correct pieces of paper are in place when the questions have to be answered after an accident. However, a more experienced, less qualified instructor might have had the intuition to have foreseen and prevented the accident. And then the outdoor industry has the gall to talk about risk management! (p. 21)

This commentary sheds light on two significant issues or traps into which the industry fell. The first is the complacency in which the outdoor industry found itself. This resulted in its inability to show that the industry could regulate itself after the Lyme Bay incident occurred. Understanding how complacency occurs is important and more research is needed to be able to identify indicators that may lead to complacency and narrow sightedness within long-term established organizations and industries. The second trap is the government's strict regulations following the incident. These regulations and the mandatory licensing of the industry set guidelines based on laws and litigation procedures rather than on the needs of adventure recreation. According to the guidelines, certifications were valued over experience, which was not the opinion of several outdoor operators and guides (Woolleven et al., 2007).

The scope and frequency of accidents and incidents are discussed in the following sections. These statistics of injuries offer further insight into the importance of risk management for adventure providers.

Injury

Adventure recreation has associated risk. When that risk is not managed, it can result in tangible damage such as physical injury from something dangerous or the psychological injury of never doing anything at all. One of adventure recreation's defining elements is the consistent presence of some form of risk, both perceived and actual. A main question that arises throughout the literature is whether the risk is worth the potential outcomes (Cater, 2006; Csikszentimihalyi, 1975). In the whitewater adventure industry there are both physical risks (rocks are hard) and psychological risks (never running the waterfall) that can affect both the practitioner and client. Understanding the injuries that occur sheds light on how they can be addressed with the variety of qualifications and regulations commonly employed within the outdoor adventure industry.

Whisman (2003), defines injury as something that, "occurs during the performance of a licensee's [outfitter's] services while underway [on the river]" (p. 1) that requires medical treatment by a licensed health care provider, excluding diagnostic analysis. The West Virginia Division of Natural Resources (DNR), a reporting authority for adventure tourism companies in the United States, defines injury as requiring a treatment procedure (e.g., setting a fracture, sutures, etc.) performed by a medical doctor, osteopath, registered nurse, or physician's assistant. Using these two definitions of what constitutes an injury, a working definition can be considered: any condition that occurs

between the put-in and take-out of a trip that requires medical attention that is more than simple first aid.

Injury Trends and Rates

The physical injuries and fatalities resulting from whitewater adventure activities catch the attention of the media more often than do the benefits of these activities. This publicity and emphasis on injuries and fatalities has in some cases created a negative picture of risk that typifies the industry for those with limited experience. In New Zealand, the media's publicity of whitewater fatalities has caused both education programs and recreation associations to believe in overstated and disillusioned rates in which injuries and fatalities occur (Chisholm & Shaw, 2004). There is risk associated with any adventure activity. However, the occurrence of that risk resulting in danger needs to be placed in perspective with other "safer" activities.

In the New Zealand adventure tourism industry, the bulk of injuries (70%) are caused while whitewater rafting (Hall & McArthur, 1991). Whitewater rafting occupies the largest proportion of the whitewater adventure industry with approximately ten million participants in the United States each year (Fiore, 2003; OIA, 2006). As a result, there is an abundance of data regarding injuries and fatalities in whitewater rafting. Other whitewater adventure activities have less data due in part to the smaller rates of participation and the unstructured and unmonitored settings in which those activities occur.

In 2002, a total of 88 injuries was sustained by rafting guests on eight American commercial whitewater rafting rivers (Whisman, 2003). The overall injury incidence rate in 2002 was 0.396 per 1000 user days, which is similar to the incident rate in 2001

(Whisman). Using Fiore's (2003) estimate of 10 million people participating in rafting each year and applying Whisman's injury incident rate, a substantial number of people sustain injuries in the industry each year. However, there is a flaw with the reporting of the data. Many companies are not reporting the actual injuries on their trips or are reporting minor afflictions that do not fit into other definitions of what constitute an injury (Whisman). For example, on three rivers there were no injuries reported for the 2002 season.

Rafting injuries can be divided into two main categories: injuries occurring while participants are in the raft, and injuries occurring while participants are outside of the raft. Those injuries occurring outside of the raft can further be separated into injuries caused by being in the water and injuries occurring on land. According to Whisman (2003) a large proportion of injuries sustained by commercial rafters occurred in the raft (42%). Injuries sustained on board the raft typically result from collisions between passengers in the raft, being struck by a paddle or other rafting equipment, or entanglement of extremities in parts of the raft (Whisman). Fiore (2003) found that slightly more than half of injuries (51%) occurred while the boater was in the raft.

According to Whisman (2003) the second most common cause of injuries occurred in the water after people were thrown from a boat while running rapids (33%). Passengers thrown from a raft are subject to the forces of water volume and speed, and turbulent water, in which they may encounter entrapments, floating debris, hydraulics or other hazards. The remaining injuries occurred on shore (9%), at other unspecified locations (7%) or were unreported where they occurred (9%) (Whisman, 2003). In Fiore's (2003) report, 40% of injuries occurred after a participant fell out of the raft and

into the river with the remainder of injuries occurring on shore (9%). According to Leemon & Schimelpfenig (2003), once a client is out of the raft the chance of them being injured increases with the possibilities of a foot entrapment, getting stuck in an undercut or strainer and being re-circulated in a hydraulic.

According to Whisman (2003), all rafting injuries fall into five main categories: sprains/strains; lacerations; contusions/bruises; dislocations; and fractures. Whisman found that the most frequently injured parts of the body involved some part of the face, including the nose, teeth, mouth, or eye. Knee injuries were prominent, as were injuries to the hip, leg and foot. Injuries to the ankle and arm, wrist and hand were also common.

Facial injuries occurred most often while in the raft and were caused by rafters hitting each other or their gear. Arm injuries were found to occur at a higher percentage in the raft and may be due to arms getting stuck in utility ropes and raft rigging. Injuries to the legs and feet commonly occurred when rafters were out of their boat. More of these injuries were sustained when rafters were in the water rather than onshore (Whisman).

In 2002, 40%-52% of injured participants required evacuation compared to the 1998 rate of 27% (Whisman, 2003). These evacuation rates are based on clients not being able to complete the proposed rafting trip because of injury and having to be either evacuated directly to the outfitter's base camp or a medical facility. By looking at the rates of evacuation of clients due to injury, the severity of the injury or injury frequency can be appreciated. These numbers indicate that almost half of all injured participants needed evacuation.

Most injuries sustained by whitewater rafting clients are not severe and would seem to be easily mitigated. There is debate as to whether these injuries can be eliminated

while maintaining the feeling of adventure. In terms of the Adventure-REACT model (Brown, 1999), companies allowing these minor injuries to occur would be either opting out or conditionally opting in to manage risk with their judgment to address the causes of these injuries.

Fatalities

Fortunately, fatalities are less common than injuries in rafting and occur at a rate of 0.55 per 100,000 user days (Fiore, 2003). Hall and McArthur (1991) reported that 50% of adventure tourism fatalities occur during a whitewater rafting experience. In the context of other outdoor activities, rafting has fewer fatalities than both whitewater kayaking or trekking. Walbridge and Tinsley (2000) identify two distinct types of fatalities. The first is the inexperienced rafter who gets caught in a situation above his/ her capability. The second, which is on the rise, is the highly accomplished rafter attempting extremely dangerous whitewater. A third factor not identified in the literature is the fatalities due to prior medical conditions. Table 2 shows a general comparison of the frequency of rafting fatalities compared to other outdoor adventure activities (taken from Fiore, 2003).

According to Fiore (2003), kayaking, rafting, and skydiving have the highest fatality rates. Relating these to the fatality rates of driving a car offers a basis for comparison. Rafting and kayaking have lower fatality rates than driving an automobile to the river to pursue a whitewater adventure activity.

The following section will review the literature pertaining to the sources and influences on standards that influence risk management in the commercial adventure setting.

Table 2

Fatality Rates in Popular Outdoor Recreation Activities and Automobile Driving

Activity	*Fatality rate per million participant days*
Kayaking	8.7-2.2
Rafting	4.5-8.7
Trekking	5-15
Skydiving	8.7
Scuba diving	3.1
Alpine skiing	0.57
Driving	152

**Assumes 1 day of driving is 100 miles.*

Regulations, Qualifications, and Policies

There are several schemes and evaluation opportunities directly aimed at meeting standards for the variety of skills adventure guides and instructors need. Certain skills are considered essential for the safe execution of an adventure program. However, a standard method of gaining and proving proficiency does not exist. The existing approaches to establishing guide or program proficiency include certification, accreditation, licensing, instructional award programs, and government regulations. Each of these areas will be discussed in more detail in this next section. No approach evaluates all aspects of outdoor recreation, from program delivery to guide ability, across the industry.

With the increase in popularity of whitewater adventure recreation, issues such as crowding, user conflicts, boater permitting, user safety, parking, human waste, water quality, resource monitoring, neighboring landowner relations, and government regulations, (to name a few) are making the management of this recreational setting

difficult (Siderelis & Moore, 2006). Popular whitewater rivers are among the most challenging and complex recreational settings to manage (Siderelis & Moore). A combination of government and association regulations, land use policies, and river specific policies is employed to manage the recreational setting.

The commercial adventure tourism environment, as described by Morgan and Fluker (2002), is a complex system of external and internal influences. Morgan and Fluker's model (see Figure 3) can be used as a framework for identifying the multiple paths of influence affecting the standards of the commercial whitewater adventure environment. Morgan and Fluker identify that operators do not govern all aspects of the commercial adventure tourism environment; rather there is a zone of operator concern and a zone of operator influence. The features described in Figure 3 are a generalized overview of the features influencing the commercial adventure environment and offer a context for the influences described in this section.

Certification

In response to increased injury rates, fatalities and a generally growing litigious society, the North American outdoor recreation industry moved heavily towards the certification of individual instructors (Gass, 1999). This movement was predominately led by some American universities and colleges offering outdoor adventure programs, and influential adventure educators such as Paul Petzoldt. By the late 1970s, the concept of individual certification had grown in the outdoor recreation community, influencing the creation of the Wilderness Education Association (WEA) in 1980 (Gass). The goal of the Wilderness Education Association was to verify leaders' judgment in delivering safe and quality wilderness programming. From this initial definition of certification, a broad

spectrum of certifying bodies has been developed to focus on the tangible skills used by an outdoor leader. A more accurate definition of certification is a systematic procedure ensuring that an individual meets or exceeds the minimum standards of competency, established and evaluated by a certifying agency (Ewert, 1985; Senosk, 1977). Certifying agencies allow for an individual leader to practice and implement only those skills evaluated by the agency with clients they are teaching and leading.

The introduction of certification into adventure recreation has aided the industry in identifying and evaluating the important skills an instructor and leader should possess. Certification was found to be flawed, mainly because it lacked the ability to identify and assess the "people oriented" skills, also know as *soft* skills, used by adventure instructors and leaders. These *soft* skills according to Priest & Gass (1997, p. 248) are the "elements such as instruction, facilitation, and communication skills of leadership." These elements of adventure leadership are more difficult to assess and evaluate when compared to the more popular technically oriented *hard* skills (e.g., canoeing strokes and first aid training) (Gass, 1999). In addition, the need for certification created problems such as: (a) the idea that certification would resolve participant safety and environmental degradation; (b) it tended to exclude uncertified but experienced people; (c) it could attract the wrong people for the wrong reasons; (d) it was unable to address the uniqueness of adventure programs, mainly due to diversity of programs, their geographical locations, varying environment, and other factors which make outdoor adventure activities distinctive; and (e) certification was time consuming and expensive (Attarian, 2001; Cockrell & LaFollette, 1985; Gass; Green, 1982).

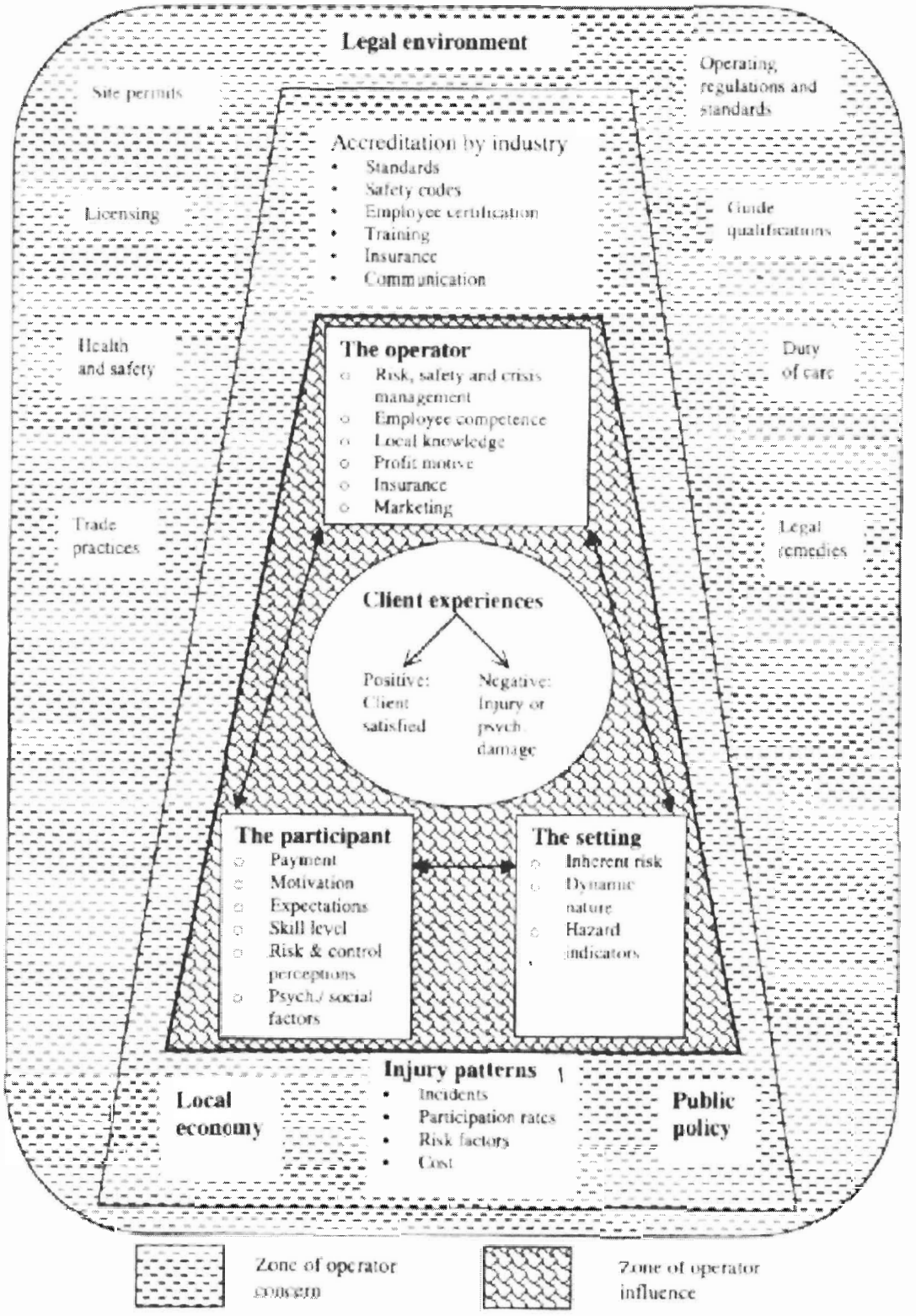

Figure 3. Commercial adventure tourism operating environment.

(Morgan & Fluker, 2002)

Due to the variety of restraining factors, the certification of instructors never fully materialized as a solution to meet all obstacles faced by the outdoor adventure industry (Gass).

Growth in the certification of outdoor instructors and leaders is expected to rise as the industry matures and expands by incorporating other activities (e.g., adventure racing, kite-boarding and base-jumping) (Ewert, 1987). In North America there are no formal or "blanket" certification processes or systems required for the outdoor adventure industry (Gass & Williamson, 1995). Instead, specific outdoor adventure activities have their own individual schemes to address the required skills needed to lead and teach the activity (Attarian, 2001). There are numerous agencies that have had tremendous success in creating informal standards within the industry (e.g., Wilderness Medical Associates (WMA) and Wilderness Medicine Institute (WMI) - Wilderness First Responder [WFR], American Mountain Guide Association [AMGA], and Rescue 3 International - Swiftwater or Whitewater Rescue Technician [SRT/WRT] trainings). To reiterate, the major issue of these programs is that they focus heavily on *hard* skills or the technical aspects of a specific skill set without addressing the *soft* or interpersonal skills necessary to effectively administer a program.

Accreditation

At the time when certification was scrutinized for its deficiencies, a new method of professional evaluation known as accreditation was in development with help from Outward Bound and the Association for Experiential Education (Gass, 1999). Formalized in the 1990s, it was thought that accreditation would provide greater benefits for outdoor

organizations and clients than certification was allowing (Gass). Accreditation was defined as the process by which all aspects of an adventure program could be evaluated in relation to meeting specific standards of operation (Attarian, 2001; Gass & Williamson, 1995), or the "recognition that a program or institution has met certain predetermined standards of operation" (Priest & Gass, 1997, p. 37). According to Gass, some of the benefits of accreditation include: (a) the achievement of appropriate standards of professional care without losing the flexibility on how to meet the standards; (b) stimulation of an internal learning process within the organization; (c) assuring a standard of quality for participants and insurance providers; (d) financial discounts on insurance premiums; and (e) the ability for a program to associate itself with other accredited organizations. This move towards auditing programs allowed for a holistic view of standards when considering everything from issues of safety to marketing.

There are currently a number of accrediting agencies that serve the outdoor adventure field, most notably the Association for Experiential Education. Lesser-known organizations, such as the Ontario Camping Association (OCA), conduct their own audits within specific segments of the outdoor recreation industry. The Association for Experiential Education's auditing process involves a four phase, seventeen step process for accreditation (see Appendix A). This process is set up in a way that the program's operators do much of the assessment themselves that is later verified by an external auditor. Gass (1999) emphasizes the importance of self-assessment as it allows programs to collect, review, and record materials related to the administration of recreation and experiential education programs. In addition to self-assessment, accreditation allows the program access to a pool of resources collected by the accrediting agency. This can be

very beneficial as it is an already established resource for organizations with limited research and development funding.

In North America, accreditation has become better suited to addressing the broader, procedural, comprehensive, and administrative issues of leading adventure programs (Gass, 1999). In other countries and adventure recreation industries, accreditation schemes have virtually dominated, setting informal standards such as the Outdoor Training Advisory Board (OTAB) and the New Zealand Outdoor Instructor's Association (NZOIA). These organizations, in addition to the National Qualifications Framework (NQF), are predominantly responsible for the development of a multi-layered audit system for the New Zealand adventure industry (Chisholm & Shaw, 2004). This system was initially created as a response to the media's publicity of exaggerated safety concerns within the industry. The New Zealand system of accreditation has created an industry where organizations seek power by marketing their specific accreditation scheme as the best. In addition, Chisholm & Shaw found that safety related statements made by these accreditation agencies may encourage customers and clients to be suspicious of those organizations not accredited by the various authorities. With consideration of the variety of accreditation schemes in New Zealand, what constitutes the most effective system? Chisholm & Shaw found that outdoor operators are not entirely benefiting from the current form of accreditation as it encourages programs to work towards meeting measurable objectives, which often results in neglect of the outdoor experience offered. Other forms of regulating guides and organizations are discussed in the following sections.

Licensing

The licensing of professional outdoor instructors has become popular in various regions of the United States and in some areas of the world. These systems, such as the New York Licensed Guide Program, permit instructors to work in the specific regions in adherence to their regulations. This form of licensing tends to evaluate the instructor's knowledge of an outdoor adventure activity and verifies that instructors have valid certifications. Several licensing programs require annual fees, proof of certification and mandatory exams.

In Great Britain, following a series of accidents and fatalities in the outdoor adventure industry, a program to license outdoor adventure operations was initiated. The House of Commons proposed a statutory regulation for the outdoor activity industry directed to programs dealing with people under the age of 18 years that incorporate "watersports" into their programs. Once this act passed it became known as the *Activity Centres (Young Persons' Safety) Act* and was regulated by the newly created Adventure Activities Licensing Authority (AALA). The AALA's goal was to enforce the act and to license centers and businesses that fell within its scope. Licensing was initially not welcomed by the British outdoor industry as it was seen as a method of control that ignored "appropriate experience" as a measure of instructor suitability (Woolleven et al., 2007). However, Woolleven et al., found that opportunities for children to experience sea kayaking in outdoor education have increased, in comparison to the popular perception that licensing reduces participation. Effective licensing schemes need to be researched and developed to effectively mitigate the negative thoughts associated with regulatory policies and designs.

Instructional/Guide Awards

A less common form of controlling standards in outdoor recreation is through recognized award programs. Award programs are similar to licensing and certification schemes but differ because they include both aspects of training and experience. The creation and administration of award programs are conducted by prominent industry associations or clubs, often including first aid training, mandatory technical skills, experience and assessment. The New Zealand National Raft Guide Award program is a multi-level program developed in 1996 on the recommendation from the New Zealand commercial whitewater rafting industry. The industry and the Maritime Safety Authority recommended that qualifications for raft guides and senior raft guides be mandatory. The award is divided into two main categories Guide and Senior Guide, and then into grade of rapid (grades 2 to 5). The award includes minimum basic first aid, technical rafting skills standards, client related skills, river management skills, whitewater rescue certification, and a requirement of trips and hours logged. To hold a National Senior Raft Guide Grade 4/5 award, a minimum 400 hours logged experience from at least 200 trips with 250 hours of guiding on grade 4/5 water is required. Legally, guides must hold a New Zealand Raft Guide Award to lead commercial river rafting trips in New Zealand.

Government Issued Regulations

Local and federal governments have become increasingly aware of the importance of the outdoor adventure industry as it grows both in rates of participation and economic contribution to the larger tourism industry. Adverse experiences can have significant negative repercussions on the adventure tourism and adventure recreation industry. Bentley and Page (2001) explain that safety is recognized as a key factor in the selection

of a destination for tourists. In 2003, the Canadian tourism industry generated $52 billion dollars in revenues with outdoor recreation seen as a critical component (Scott & Jones, 2006). Government influence and regulation can take many forms that directly and indirectly control aspects of the outdoor adventure industry. One of the more frequently found forms of indirect regulation are land use regulations which affect an activity's location. Regulations directly influencing the outdoor adventure industry are those initiated to address concerns of safety which have become increasingly publicized by the media (Chisholm & Shaw, 2004). This present study focuses on regulations, statutory acts and government policy (enacted or proposed) directly affecting or regulating the paddlesports and whitewater adventure industries in the Ottawa Valley. Regulations originating directly from government sources are discussed in the following sections.

Special-purpose Vessels Regulations

In the early 1980s a number of high-profile river rafting incidents in British Columbia caused the Canadian Federal Government and the Government of British Columbia to inquire into, and address safety concerns in the commercial river rafting industry (Canada-Gazette, 2007). Since 1987, the Canadian Government regulated the industry through the *Boating Restriction Regulations* (Canada-Gazette). Under these regulations, the operation of commercial river rafting was prohibited in specific waters unless a valid permit was acquired. The required permit was administered by the *River Rafting Standards,* TP 8643, Transport Canada (Canada-Gazette). Currently the only waters specified in the *Boating Restriction Regulations* are the rivers of British Columbia. The stipulations of the *River Rafting Standards* were the result of consultation with the rafting industry and province outlining "best practices" for the operation of safe

commercial river rafting. In addition, commercial river rafting was restricted by the Canadian National Parks under the *Canada National Parks Act,* through a permit system (Canada-Gazette).

The Canadian government's attempt to regulate the commercial river rafting industry resulted in only those rafting operations on specified waters in British Columbia adhering to the *River Rafting Standards,* a limited response to addressing safety on a national level (Canada-Gazette, 2007). This approach to regulating the industry left room for substandard operations to continue with no adherence to any of the above standards. In 1999, further river rafting incidents prompted the federal and provincial governments to re-address the non-effective standards and permit system. A single regulatory standard was proposed to ensure the safety of commercial river rafting in Canada.

The new proposed standard, *Special-purpose Vessels Regulations*, can be found under the *Canada Shipping Act, 2001* (Canada-Gazette, 2007). These regulations set out requirements for the safe operation of commercial river rafting in Canada. These regulations, once registered, will replace the requirements for river rafting currently found in the *Boating Restriction Regulations* and will repeal the *River Rafting Standards*. The proposed regulations incorporate industry best practices and address some of the following: (a) vessel and safety equipment requirements (e.g., helmets, lifejackets, and their equivalents, and when they must be worn); (b) operational requirements (e.g., safety briefings, first aid training, familiarization trips); and (c) the keeping of records for three years after trips, including names of guides and clients, trip and rescue plans, and contents of safety briefings (Canada-Gazette). For the full text of the proposed *Special-purpose Vessels Regulations* see Appendix B.

The *Canada Gazette* (2007) (the official newspaper of the Government of Canada) states that these proposed regulations will not severely affect the viability of the industry as the majority of operators currently adhere to similar standards. Proposed standards include: mandatory quick release harnesses on every guide; mandatory thermal protection for all participants in waters below 15 degrees Celsius; mandatory contents for first aid kits; minimum first aid training; guide age restrictions; the meticulous keeping of records; and non-specific whitewater rescue certification for all guides.

The compliance and enforcement of the proposed regulations will be achieved through the Small Vessel Inspection Program conducted by Transport Canada marine safety inspectors. Police and conservation officers will have the authority to respond to compliance and safety issues while engaged in their regular duties. The implications and perceptions of these regulations are of specific interest to this researcher.

River Rafting Standards, TP 8643

The *River Rafting Standards* were created by Transport Canada to regulate river rafting in Canada via a permit. These standards only applied to rafting on waters in British Columbia due to the *Boating Restrictions Regulations*. No other river rafting in Canada was regulated by the standards. The *River Rafting Standards* have been repealed and the *Special-purposes Vessels Regulations* are meant to replace it. The *River Rafting Standards* were written and enforced by Transport Canada. It is a document written in a similar manner to those meant to regulate marine vessels for commercial shipping. This focuses on such issues as: vessel markings; construction materials; capacity; machinery; equipment regulations; operational requirements; and accident reporting. These standards are primarily directed to the operation and equipment requirements of vessels and marine

craft. Stipulation 19.1 states, "every certificated Trip Leader and guide shall have in his possession and on his person a certificate, in the form of an identification card issued by the designated provincial authority and which certifies his qualifications while operating a raft, and shall produce the certificate for inspection on demand of a peace officer." The new *Special-purpose Vessels Regulations* are planned to take a more practical and recreation-based approach towards regulating the rafting industry.

New Zealand - Maritime Rule Part 80

New Zealand's *Maritime Rule Part 80* are standards and regulations directly aimed at New Zealand's adventure tourism industries of river jet boating and commercial river rafting. All commercial rafting operations in New Zealand must comply with the safety standards set out in *Maritime Rule Part 80* administered by Maritime New Zealand. *Maritime Rule Part 80* governs marine craft and establishes a code of practice for the safe operation of commercial river rafting. In contrast to other government regulations for adventure recreation, *Maritime Rule Part 80* is extremely specific in terms of regulating the operational procedures, necessary equipment, qualifications of guides and an auditing system. Limited research exists on the perceptions and levels of success that *Maritime Rule Part 80* has received since it has come into force on February 11, 1999. The New Zealand adventure industry has become saturated by a variety of audit systems and required standards (Chisholm & Shaw, 2004).

Other Vessel Regulations

Registration of recreation vessels (canoes and kayaks) in the United States is mandatory in Alaska, Illinois, Oklahoma, Iowa, Minnesota, Pennsylvania and Ohio (ACA, 2007). Canoe and kayak owners are currently required to register or pay special

taxes on their boats. According to the American Canoe Association (ACA), Connecticut, Oregon, Washington, Maine, New Hampshire and Montana are considering new registration requirements (2007). Many associations across the United States are pursuing campaigns to fight state laws requiring the registration of canoes and kayaks. The ACA (2007) is fighting state laws by arguing that,

> ...canoes and kayaks do not present the same enforcement burden and costs as do other craft. Canoes and kayaks are not capable of breaking speed limits or putting other waterway users at risk. Canoes and kayaks do not require expensive access ramps like larger craft, they do not emit hydrocarbon pollution into our waters, and because they are quieter, they are less likely to disturb wildlife and waterfront homeowners. States should encourage paddling as a non-polluting, healthy, mode of transportation and recreation. (p. 1)

Registration for vessels used in whitewater adventure recreation is still quite rare. Registration schemes such as the ones in the Untied States could seriously impact both the commercial whitewater adventure industry and the personal whitewater adventurer.

Pleasure Craft Regulations

Canadian Coast Guard regulations require safety equipment for all recreational water vessels. These include a paddle, personal flotation device, sounding device, bailer and floating heaving line. These regulations change regularly and influence all watercraft, both for commercial and recreational purposes. These regulations are enforced by Provincial and Federal agencies on all waterways. There are cases of canoeist and kayakers who have been fined for not adhering to these regulations in locations such as Algonquin Park and other popular recreation destinations. Whitewater kayakers and

canoeists have had trouble adapting these regulations to fit into their boats and style of paddling because of the size and weight restrictions on smaller recreational boat designs.

River & Trip Regulations

River environments are extremely fragile ecosystems. Many organizations and associations have initiated plans to regulate the use of these areas. In some cases, government or park regulations are used to bolster the influence and accountability to protect and regulate the areas (National Parks Service, 2007). Overcrowding and overuse in some areas, especially in the United States, have become a significant problem. The Colorado River, which flows through the Grand Canyon, is a perfect example of a river and trip specific regulation system. The National Park Service, U.S. Department of Interior, and Grand Canyon National Park River Permits Office control the use of one of the most popular whitewater adventure recreation rivers in the United States. These regulations set out requirements on watercraft type, quantity, capacities, registration, emergency equipment, and launch requirements (NPS). Restrictions have also been created to deal with camping, refuse, soap, portable toilets, fires, multiple trails, food preparation and water purification while on the river. For those who want to paddle the Colorado River, a lottery system was initiated to help manage the number of groups applying to go down the river. In some cases, groups have had to wait ten years for their permit come up. These river specific regulations and policies can directly impact whitewater adventure operators' business practices and public participation rates.

The various schemes for addressing possible standards (regulations, qualifications, and policies) available to the owners and managers of whitewater adventure recreation business give them a lot of choice to which they can ascribe. These

standards are the tools that adventure owners and managers have to manage their associated risks. Within the Adventure-REACT model, the judgment (decisions) that the owners and managers make to incorporate certain standards over others is delineated by three paths, which their risk management can take. If owner and managers choose to not incorporate any standards to address specific risks, they will continually be confronted by unmitigated risk. If they choose to conditionally opt in, they will remain open to the potential for some unmitigated risk. Finally, if owners and managers have chosen to opt in completely and incorporate the various possible standards, they put their company at a higher level of risk mitigation and are addressing risks to the best of their knowledge. By addressing risk to the best of their ability and knowledge they are creating a basis for an effective risk-mitigating standard for the industry as a whole.

Ottawa Valley White Water Adventure Industry

For paddlers, the Ottawa valley is the confluence for many of Ontario's and Quebec's most popular whitewater rivers. These popular rivers include the "Three Sisters" (Coulonge, Dumoine, and Noire) as well as the Kipawa, Petawawa, and Madawaska which all flow into the Ottawa River. The Three Sisters, Kipawa, and Petawawa are well known as whitewater canoe tripping rivers used by both recreation and outdoor education groups. The Ottawa River as well as parts of the Kipawa (in the spring), Petawawa, and Madawaska are used by rafting companies and play boaters throughout the warm weather. The Ottawa River is recognized internationally for its renowned deep spectacular rapids and warm water. Current data on levels of participation within the Ottawa Valley are lacking. See Appendix C for one rafting company's map of the Ottawa River and the names of the rapids.

Most people going to the Ottawa Valley for whitewater adventure activities are there to go rafting on the Ottawa River. There are approximately six rafting companies with primary operations focused on rafting a specific section (Rocher Fendu) of the Ottawa River. Many of these companies have additional operations focusing on paddling instruction and overnight paddling trips. Whitewater canoe and kayak tripping are primarily run by outside operations that travel to the rivers of the Ottawa Valley to conduct their trips.

Many rafting and paddling companies offer paddling instruction for either "in-house" or organizational certification. Some smaller companies run a variety of instructional programs at less frequent intervals throughout the season. In Ontario, recognized canoe and kayak instruction and certification are governed and administrated by the Ontario Recreational Canoe and Kayak Association (ORCKA), Whitewater Ontario (WO), Paddling Ontario and Paddle Canada (formerly the Canadian Recreational Canoe Association), among others. Specific certifications and qualifications for whitewater guides and instructors working in the Ottawa Valley are offered by a variety of sources. Many of the canoe and kayak certification programs for recreational paddlers have instructor levels for those wanting to teach for that organization. For whitewater canoeing, ORCKA has an instructor level (Moving Water Level II), which has become the unofficial standard for whitewater canoe instructors. The International Rafting Federation (IRF), a non-profit organization facilitating the growing demand of rafting around the world, is beginning to certify raft guides operating in the Ottawa Valley. For all instructors in the whitewater industry, minimum first aid and whitewater rescue certifications differ between companies. Some operations choose to require first aid skills

offered through companies such as Wilderness Medical Associated (WMA), Stonehearth Open Learning Opportunities (SOLO), SIRIUS or St. Johns First Aid. No legal requirements currently exist, although this could change with the implementation of the *Special-purpose Vessels Regulations,* which require a standard of first aid for raft guides. Certification for whitewater rescue is limited to courses offered through Rescue Three International and other smaller companies. Many guiding and instruction companies choose to offer "in-house" whitewater rescue training.

The Ottawa Valley whitewater adventure industry has less stringent qualification and regulation schemes compared to those of New Zealand and the United States. This does not indicate inexperienced or under qualified instructors and guides, but relates to the lack of official standards for both the recreational and commercial paddling sectors of the Ottawa Valley.

Conclusion

The choices made by owners and managers to incorporate regulations, qualifications, and policies into the practice of their whitewater adventure recreation define the levels to which they mitigate risk. What is not known are the levels (standards) to which the companies within the Ottawa Valley whitewater adventure industry are currently operating. By looking at the standards other whitewater adventure industries (e.g., New Zealand and the United States) have adopted, an overview of common industry practices has been illustrated within this literature review. Furthermore, newly proposed Canadian regulations and common certification agencies and qualification schemes highlight the potential level to which whitewater adventure companies can choose to operate. Limited literature focuses on acceptable standards for whitewater

adventure recreation in the context for the Ottawa Valley whitewater adventure industry. This research seeks to add insight into the current state of safety standards and future growth for further risk mitigation within the Canadian whitewater adventure industry.

CHAPTER 3: METHODOLOGY

This research used the qualitative case study research design to guide the study and the collection of data. This study used the qualitative data collection methods of interviews, document analysis, and field notes. Data analysis occurred using a computer based data management program (Atlas.ti), to help manage patterns found within the data. This chapter outlines the methodology, study design, and protocols used within the study.

Qualitative Research Paradigm

This study explored the current standards, qualification, and policies of the whitewater adventure industry in the Ottawa Valley and the impact of proposed risk mitigating regulations. This study used qualitative research methodology and research strategies to offer a dynamic and holistic approach to investigating the study's phenomenon.

This qualitative research took place in the natural setting of the case being studied (Creswell, 2003). As the researcher, I went to the study site (Ottawa Valley), which enabled me to develop a level of detailed understanding of the study site, participants, and situation. This involvement gave me the ability to understand the context in which the actual experiences of the participants occur (Creswell).

Data collected in qualitative research involves text data and image data (Creswell, 2003). Creswell states that, "the actual methods of data collection, traditionally based on open-ended observations, interviews, and document analysis, now include a vast array of materials, such as sounds, emails, scrapbooks, and other emerging forms" (p. 181). These new sources offer a wide variety of data in regard to the same phenomenon, especially

when multiple sources of data are required for the study. Qualitative data collection is considered interactive and humanistic (Creswell; Patton, 2002), increasing the active participation of participants and the researcher in the study.

Compared to the rigidity of quantitative research, qualitative research allows this study to be emergent - moving beyond the boundaries caused by experiment testing and survey data. Creswell (2003) explains that several aspects of a qualitative study emerge during the research process that in some cases change the research question as the researcher learns about the phenomenon. In addition to the emergent qualities of qualitative research it is fundamentally interpretive (Creswell; Patton, 2002). This means that as the researcher, I made an interpretation of the data gathered and reported the results as I viewed them as applicable to the research questions. Creswell explains the interpretive nature of qualitative research as: "... the researcher filters the data through a personal lens that is situated in a specific sociopolitical and historical moment. One cannot escape the personal interpretation brought to qualitative data analysis" (p. 182).

Qualitative studies often appear as broad panoramic examinations rather than as a micro-analysis of a phenomenon (Creswell, 2003). This holistic view by the researcher allows for intricate, interactive, and encompassing narratives which represents a high quality qualitative study (Creswell). As the researcher, I embraced my role in the research and my connection to the subject of study. Acknowledging the biases, values, and interests (reflexivity) epitomizes today's qualitative research (Creswell). Mertens (2003) explains that this allows honesty and openness to be valuable parts of research, recognizing that all investigation is laden with values.

Finally, qualitative research uses complex reasoning that is largely inductive allowing for the cycling back and forth between data collection, analysis, and the conclusions (Creswell, 2003; Patton, 2002). The qualitative researcher has many strategies from which to choose when conceptualizing a study. The choice is dependent on the participants (or site) and the researcher's goals (if any) for the study.

The Qualitative Case Study Research Design

Within qualitative research, a spectrum of designs can be used for a research study. Each design has its unique qualities and procedures for guiding the study. For this qualitative research, a case study design was used as the research design. The technical definition of case study research begins with the scope of a case study. According to Yin (2003), "a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p. 13). In other words, a case study design allows for the researcher to study the context in which the phenomenon of study occurs, believing that the context is highly pertinent to the phenomenon (Yin). This research examined the perceptions of qualifications and regulations as they occur in the Ottawa Valley whitewater adventure industry. This study further looked at the role in which the Ottawa Valley whitewater industry has uniquely influenced and incorporated qualifications and regulation standards into its activities. Yin states that:

> The case study inquiry copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result relies on multiple sources of evidence, with data needing to converge in a

> triangulating fashion, and as another result benefits from the prior development of theoretical propositions to guide data collection and analysis. (p. 13)

A case study is not only a data collection approach or a design feature, but a comprehensive research strategy encompassing all aspects from study design to data analysis (Yin). This research used the case study design not simply as a research tool but as a research design and methodology to guide this study.

The components of the case study research design encompass: (a) a study's questions; (b) its propositions, if any; (c) its unit(s) of analysis; (d) the logic linking the data to the propositions; and (e) the criteria for interpreting the findings (Yin, 2003, p. 21). According to Yin, this logical sequence connects the data to the study's initial research questions and in the end, to its conclusions. This logical sequence will help in taking the concepts (questions) and direct them to conclusions (results).

The first and probably most important step in understanding the purpose of the overall study is to clarify the type of questions on which the study is based. Study questions can fall into the typical who, what, where, why, and how configurations. This study looks to ask *how* qualifications and regulations (i.e. standards) are influenced and implemented and *why* differences in the adoption of qualifications and regulations exist among companies. Yin (2003) states that "how" and "why" questions are most appropriate for a case study research design.

According to Yin (2003), a case study design is best used when the research focuses on contemporary events and does not require control of the behavioral aspects of these events, making it appropriate for studying the current situation in and around the Ottawa Valley whitewater recreation community. Yin states that *how* and *why* questions

are explanatory and lead to case studies, histories, and experiments as the preferred research strategies. This study does not primarily focus on the historical aspects for the formation of the perceptions in the same way that it does not seek to formulate an experiment to test a hypothesis. This study seeks to examine the *how* and *why* questions through the analysis of a current phenomenon (state of the Ottawa Valley whitewater adventure industry).

Unit of Analysis (Bounding the Study)

Identifying the specific unit of analysis is essential in case study research as the context of the case cannot be understood without it. Yin (2003) states that in order to understand and fully state the unit of analysis, the researcher must identify those people within the group and distinguish them from those outside of it. By doing this, the researcher is able to identify the immediate topic of the case study and illustrate the context in which the study exists. For this study, both the rationale for the area of study (Ottawa Valley whitewater adventure industry) and who were asked to participate in the study (owners and managers) help in clarifying the unit of analysis.

Initially, to bind this study as a specific unit, the location in which this study occurs is important. The Ottawa Valley is the primary area of study because it represents a unique location where whitewater adventure recreation occurs in a densely concentrated area unlike anywhere else in Ontario. Most of Ontario's larger whitewater adventure recreation companies are situated in this area and their primary means of operation are on the Ottawa River. The Ottawa Valley is a geographical area with many rivers converging into the Ottawa River. The geographical considerations are not of primary importance for understanding the location, but help in picturing the influence this area has on outdoor

adventure recreation in general. Many smaller Ontario companies in the whitewater industry travel to the area to provide whitewater adventure recreation opportunities. As a result it was the ideal site for the recruitment of participants for this study.

The second part of identifying the unit of analysis for this study consists of the owners and managers of the businesses involved in whitewater adventure recreation on the Ottawa River as their primary business. The perceptions of owners and managers are of importance to this study because they are the individuals within the companies who are able to make decisions related to risk mitigation for their businesses. Their interpretations of the industry standards, government regulations and other qualifications commonly employed and the degree to which they act upon those interpretations are the intent of this study. Therefore, to qualify as a participant in his study, those owners and managers who make decisions in terms of policy documentation, risk management plans, and staff training were the study's main participants. The owners and managers who met the criteria were contacted with a letter of invitation (see Appendix D) asking if they would like to participate in the study.

Excluded from the study were the guides working on the rivers as well as companies, which only employ whitewater adventure recreation as a small part of their programs. Guides were not included in this study because of their lower level of influence on creating and establishing the company's policies in regard to qualifications and regulations. It could be argued that whitewater guides are integral parts in the practice of a company's policy.

Outdoor adventure companies that do not primarily focus on whitewater adventure recreation were not used in this study. The rationale behind the elimination of

these companies from the study is due to the potential influence that policy and regulation of non-whitewater recreation activities have on the organization's policy development and qualification needs. The elimination of these potential influences is best accomplished with the removal of those companies from the study who are not engaged in whitewater adventure recreation as their primary business focus.

Researcher's Role

The concept of reflexivity is unique to qualitative research. Reflexivity involves the researcher sharing his/her own perspective of the phenomenon in order for the reader to understand the researcher's role in the study (Denzin & Lincoln, 2000). In addition, Kvale (1996) states that expertise in the subject area is needed to perform effective interviews. As the researcher, I have been influenced by my past and current experience in the whitewater adventure recreation field. These past experiences have led to the study's questions and in accordance with these questions, the location and population for the study's research.

For the past seven years, I have worked in the outdoor recreation field in a variety of capacities. For the first three years, my work experience consisted of guiding lakewater canoe trips in Algonquin Park, Ontario for a summer camp. This provided me with experience as I quickly accumulated a large number of field days. At this same time, I was enrolled in the Outdoor Recreation, Parks and Tourism program at Lakehead University, in Thunder Bay, Ontario. This program gave me the theoretical skills needed for an in-depth understanding of the many facets of outdoor recreation. I first became interested in the risk management and policy concepts of outdoor recreation while participating in a class at Lakehead University. I stepped into my first outdoor recreation

management/ director role after only a few years of canoe tripping. At this point I was in the unique position to influence company policy with what I had learned about risk management and industry best practices at Lakehead University. During this time I created (with the help of others at the camp) a whitewater canoe instructional program and implemented it for two years. These initial steps in working in and understanding whitewater adventure recreation influenced my subsequent employment as a field instructor at Lakehead University. For the last few years, I have worked in many capacities in whitewater adventure recreation and training (certification) including as a program manager in a major outdoor recreation company in Ontario, where I was responsible for operating the company's programs and training its staff and clients. In this job, I was able to focus on issues of qualifications and regulations that influence the decisions that are made by owners and managers of the adventure recreation company.

As I enjoy teaching outdoor skills in an outdoor classroom, I pursued training through a multitude of organizations to gain qualifications as an outdoor instructor. I am currently a certified Wilderness First Responder (WFR), Provisional Swiftwater Rescue Technician (SRT) Instructor with Rescue 3 International, Conditional Technical Rope Rescue Technician Level Instructor with Rescue 3 International, and a Moving Water Level III Canoe Instructor with the Ontario Recreational Canoe and Kayak Association (ORCKA). In addition, I teach whitewater kayaking, rescue, and first aid to a variety of clients. With these skills, education and work experience, I am well positioned to explore the issues and relevant nuances of perceptions of standards in the whitewater adventure industry.

Data Collection Procedures

Data collection took the form of unstructured interviews of owners and managers of the whitewater adventure companies and document analysis of program policies related to qualifications and regulations; and field notes of activities on the Ottawa River. Triangulation was used to address concerns of validity and reliability in this study. Triangulation is the process of using multiple sources of data to confirm conclusions found in the study (Patton, 2002; Stake, 2000; Willis, 2007).

This research was conducted between the months of June and September 2008, which corresponds to the main operating season for whitewater adventure recreation in the Ottawa Valley. The exception to this is that document analysis occurred in part after the research in the field was completed. This next section will discuss the three main data collection tools.

Interviews

One of the most important sources of case study information is the interview (Yin, 2003). As the researcher, I used interviews to inquire about aspects of a phenomenon that I could not directly observe (Patton, 2002). Yin explains that the researcher has two main jobs to fulfill throughout the interview process: (a) to follow your own line of inquiry (reflected in the case study); and (b) to ask the actual (conversational) questions in an unbiased manner that also serves the needs of the case study.

Case study interviews are most commonly of an open-ended nature in which the interviewer can ask key respondents about the facts of a matter as well as their opinions about events (Yin, 2003). This open-ended setting allowed for easy conversational dialogue to occur and respondents to be more forthcoming (Yin). For this research,

interviews took the form of a focused interview in which the respondent was interviewed at a specific time set aside by both the respondent and interviewer (Merton, Fiske, & Kendall, 1990). Focused interviews can still remain open-ended and assume a conversational approach. However, "they need to follow a certain set of questions derived from the case study protocol" (Yin, p. 90). Open-ended (unstructured) interviews allowed me to question the respondent about my area of interest and to probe more deeply for specific content when needed (Bogdan & Biklen, 1998). The interview model used for this research is better described as a focused open-ended (unstructured) face-to-face interview procedure.

The interviews were conducted on an individual basis. The respondents were interviewed individually to encourage honesty and to allow the respondent to speak from their voice without the effects of outside listeners (Patton, 2002). In addition, individual interviews suited the geographical distribution of the various companies allowing me to travel to the respondents' business locations rather that organizing a focus group or larger group interview session. Individuals interviewed for this research were owners and managers whose main programs are whitewater adventure recreation operating out of the Ottawa Valley area. The respondents were purposefully selected because of their position to create, understand and manage policies within their companies/organizations. It was intended that two respondents be chosen from each company/organization, to equal no more than ten respondents in total. Six respondents, with only two from the same company, chose to participate. Creswell (2003) explains purposeful selection as, "the idea behind qualitative research is to purposefully select participants or sites .... that will best help the researcher understand the problem and the research question" (p. 185).

For this research an interview protocol (see Appendix E) was used to categorize questions used during the interviews. This interview protocol (or interview guide) allowed for considerable scope in asking a range of questions best suited to the topics. Questions in the interview protocol were omitted and modified to suit the flow and pace of the interview. The questions were not mandatory as they would be in a highly structured interview. The interview questions were written in a coherent manner devoid of academic wording to allow easy understanding by the interviewee. The interview questions were written as simply as possible to allow ease of answering. The interview questions were created to elicit descriptive responses from the respondent's not one-word answers. Asking clear, concise, simple questions that elicit descriptive responses allowed for limited misinterpretation of questions by participants.

All interviews were audio taped, with the permission of respondents (see Appendixes F & G for letters of introduction/ consent, and gratitude, respectively). Audio taping ensured that the researcher did not miss any information from the respondents (Kvale, 1996). By having a single person (the interviewer) transcribe all of the interviews, reliability amongst transcripts was maintained. Verbatim transcription of the audio taped interviews ensured that the detail of the oral interview was represented in the written text. The interview was typed on a computer into a standard word processing program. After transcription of all of the interviews occurred, a second edit to condense and format the transcripts allowed for emphasis of the general meaning of what was said (Kvale). This research does not require the detail of a sociolinguistic or psychological analysis. Therefore, editing the transcripts to eliminate unnecessary pauses or *hm's*, *um's* and *ah's* occurred. Long pauses that delineate meaning or context were included if

appropriate. This use of initial verbatim transcription with secondary editing ensured validity in the transcriptions.

Ethical considerations were maintained throughout the transcription process. The proper use of pseudonyms masked the true identities of the interviewees (Kvale, 1996). It was decided that within the text, interview respondents would not be identifiable between quotes. For example, consistent pseudonyms are not used to represent respondents but rather the titles of *Owner* or *Guide Manager* were used to denote the respondent's role within the industry. This choice was made to protect the identities of the respondents because of the small respondent population and the intimate relationship that respondents have of each other within this particular industry. It is the belief of the researcher that respondents and other key individuals with an intimate knowledge of the Ottawa Valley industry would be able to deduce respondent identities by following pseudonyms attached to quotes.

The interview recordings were copied onto a compact disc and safely stored by the research supervisor in his office for seven years. The recordings on the digital recorder were copied to a compact disk then deleted from the digital recorder. The interview transcripts never indicated the true names of the people interviewed. The interviews were not anonymous as the voices of the interviewees could be distinguished in the audio recordings. The transcribed interviews were emailed to respondents to verify the accuracy of the transcription. Participants were asked to contact the researcher in regards to any concerns within the transcriptions to ensure the process of member checking (Yin, 2003). Respondents did not contact the researcher to change or modify interview transcriptions through the member checking process.

Document Analysis

Many adventure recreation companies and organizations create policy guidelines that govern the management and operation of their programs. Yin (2003) indicates that documented information is likely to be relevant to every case study topic. The documents for this study (company operational guidelines and river policies) were used to augment the research. Documentation is an important element of multiple sources of evidence in corroborating data in a study (Yin). For this research, documents (operational guidelines and river policies) represent the decisions in regards to qualifications and regulations that have been made and written down. Whitewater adventure recreation programs' river policies and operational guidelines in the form of staff manuals and risk management plans were obtained and reviewed. These documents are company specific and are used as representations of standards within the specific companies. There is no specific standardized format in which these documents appear. They are widely referred to in the industry as a company's "river policy." Document analysis allowed for the reinforcement of information obtained from interviews that may have been omitted or did not emphasize points clearly.

Field Notes

Patton (2002) considers observations a fundamental aspect of all research methods. Direct observations did not occur, however, the researcher took field notes from his day-to-day workings in the industry. By taking notes on the routine of the practice of adventure recreation, the researcher attempted to capture the context of the perceptions of standards in relation to the specifics of the area of analysis. The intention for the use of

field notes was to allow for a view of the translation of perspectives into what is actually occurring on the river during the operation of whitewater adventure recreation.

The field notes took the form of reflective notes described by Creswell (2003) as the researcher's personal thoughts, such as "speculation, feelings, problems, ideas, hunches, impressions, and prejudices" (Bogdan & Biklen, 1992, p. 121). In addition to reflective notes demographic information about the time, place, and date of the field setting where notes take place were recorded (Creswell, 2003). Descriptive notes explained by Creswell as "portraits of the participants, a reconstruction of dialogue, a description of the physical setting, accounts of particular events, or activities" (p. 189) were not included in the field notes. The exclusion of these descriptive notes is to prevent the identification of the people, operations or circumstances that may have influenced the field notes. This excludes the ability for the notes to be linked directly to a person or company when used within the research. This exclusion eliminates the need for consent while observing what transpires on the river. In addition, these observations are not focused on people but rather on the operation and conduct of companies on the Ottawa River. Field notes were taken over the course of the summer guiding season. Field notes were not taken every day, but rather were taken as point form reflections or reflective narratives at a later time. These notes were recorded in a journal and were later included into the data analysis process by inputting them into the Atlas.ti program for coding.

During data analysis and after careful revision of the field note data, it was decided to exclude field notes as a primary source of data for this study. This exclusion was based on the resulting outcomes of the research and on the recommendations of the researcher's advisory committee. It was found that both the content and approach to the

collection of field note data did not accurately complement the other sources of data within the research. Thus they were not included in the remainder of this study.

Data Analysis Procedure

According to Yin (2003), the data analysis stage of case study research is the least developed and most difficult aspect of doing a case study. "Unlike statistical analysis, there are few fixed formulas or cookbook recipes to guide the novice" (Yin, p. 110). For this research, documents were used to reinforce the data in the interviews, supplementing, if necessary, any gaps or explanations found in the interview texts.

"The purpose of the qualitative research interview has been depicted as the description and interpretation of themes in the subjects' lived world" (Kvale, 1996, p. 187). Analysis for this study occurred as an ongoing process. Initial analysis during the interview occurred in three parts, which Kvale states occur during the actual interview. The first is the researcher thinking about what the subjects describe. The second part consists of the subjects themselves discovering new meaning to what they say. Third, during the interview, the interviewer condenses and interprets the meanings of what the interviewee describes (Kvale). These three initial aspects helped guide the interview questions but also helped in identifying themes in the data once they are transcribed.

The process of meaning condensation as described by Kvale was used to initially analyze the interview texts. Kvale's five steps to meaning condensation are: (1) the whole interview is read through to get a sense of the whole; (2) natural "meaning units" as expressed by the subjects are determined; (3) the theme that dominated the natural "meaning units" are stated as simply as possible; (4) interrogating the meaning units in

terms of the specific purpose of the study; and (5) essential non-redundant themes of the entire interview are tied together into a descriptive statement.

This method is the process of condensing expressed meaning into a more essential meaning (Kvale, 1996). By using meaning condensation, long, detailed statements were compressed into briefer statements in which the main sense of what is said can be rephrased into a few words. This allowed ease of use when comparing statements (meanings) between interviews and when manipulating the various segments of the data. In addition to meaning condensation for individual interview texts, the methods of correspondence and pattern matching were also used between the interview texts. Matching patterns and finding correspondence between the interview texts brings depth and insight into the reappearance of themes and concepts (Stake, 1995). Pattern matching occurred with the use of Atlas.ti computer software as a tool for organizing and managing patterns amongst the interview texts.

Verification

Qualitative research has historically been criticized for its lack of generalizability, reliability, and validity. This criticism, mostly from quantitative positivistic researchers, has allowed for a variety of methods to be created to ascertain and state how qualitative research can be generalizable, reliable, and valid. Four tests are commonly used to establish the quality of any empirical social research: (a) construct validity; (b) internal validity; (c) external validity; and (d) reliability (Yin, 2003). According to Yin, these four steps of verifying a study are more complex than, "... the standard validity and reliability concepts to which most students have been exposed, and each item deserves attention"

(p. 35). Yin recommends these tests should contribute to the whole research study and not simply the design phase.

Construct Validity

Construct validity is the idea of establishing correct operational measures for the notions being studied (Yin, 2003). According to Yin, three devices are available to increase construct validity in a case study. These are: (a) using multiple sources of evidence (triangulation) to encourage convergent lines of inquiry; (b) establishing a chain of evidence; and (c) having a draft of the case study report reviewed by key informants (Yin).

This study used multiple sources of data (field notes, document analysis, and interviews) to establish triangulation and reliability in the collection of data. By using these multiple sources of data the convergence of evidence allowed for a more accurate establishment of fact (Yin, 2003). Establishing a chain of evidence allows external observers (readers) to trace the steps of the research from the initial question to the ultimate case study conclusions (Yin). This study maintained a chain of evidence linking the questions, protocol, and citations of specific evidentiary sources as tools for the researcher in reporting the results. The final step in ascertaining construct validity is through the review of the draft case study by study respondents. Yin states that respondents offer insight and confirmation of essential facts and evidence presented in the report. The study was sent to a sample of respondents from the interviewed population, giving them the ability to make comments on the validity and reliability of the study's results.

Internal Validity

Internal validity is the process of establishing "a causal relationship whereby conditions are shown to lead to other conditions, as distinguished from spurious relationships" (Yin, 2003, p. 34). What this means is that explanatory case studies that seek to determine the inferred connection of relationships (those not observed) need to ascertain these connections by not discounting other possibilities. An example is:

> ...if the investigator is trying to determine whether event *x* led to event *y* .... and incorrectly concludes that there is a causal relationship between *x* and *y* without knowing that some third factor *z* may actually have caused *y*, the research design has failed in dealing with some threat to internal validity. (Yin, p. 36)

In dealing with this issue the procedure of data analysis on meaning condensation was used to accurately formulate meanings as well as the process of pattern matching to reinforce the conclusions in the data.

External Validity

This aspect of validity deals with establishing the area in which the study's findings can be generalized beyond the immediate case study (Yin, 2003). Using analytical generalization (Yin), which is the process of relating results to broader theory, external validity is ascertained. Simply relating the results to a theory or framework does not guarantee generalizability; the theory or framework should have been used by multiple studies that all show the same results (Yin). Risk management frameworks explained within the literature review offer a base from which to monitor the accordance or divergence of this study's findings when discussed in the results section.

Reliability

The role of reliability is to minimize the errors and biases in a study by allowing a later investigator to conduct the same case study over again (Yin, 2003). The idea of reliability is not to replicate the study's results with a different case study, but to do the same case study over again and arrive at the same conclusions and findings (Yin). The procedures undertaken in this study have been documented throughout in its methodology and results sections. From the formation of research question types, to the specific procedure for interviewing, all steps are illustrated allowing replication of the entire study.

Ethical Consideration

Using three sources of data for this study requires looking at possible ethical issues from different angles. Several steps were taken to secure permission where needed and to ensure no hardship in anyway came to anyone who was part of the study. The Brock University Ethics Review Board reviewed the protocol to ensure all the participants' rights were protected. Document analysis of company policy did not pose any ethical consideration. Privacy will be maintained of company policies and will be kept in a secure location (supervisor's office).

In this study, field notes (reflections) of my observations while participating in whitewater recreation during the study period were recorded. The researcher's reflective notes were only used as data of observations and cannot be directly linked to anyone.

Interview respondents were given a letter of introduction/ consent form detailing the purpose of this research and outlining that participation was voluntary and that all information would be kept confidential. In addition, the consent form clearly stated that

the use of a tape recorder in the interview. Pseudonyms were used for interview respondents and no company affiliations are mentioned in the letters.

No risk, either physical or emotional to participants, occurred as a result of this research that was any greater than what the participants would encounter in everyday life. Issues of confidentiality were maintained through the use of pseudonyms for interview respondents and reflective notes. A master document of the participants' real names, pseudonyms, contact numbers, and company/organization affiliations was kept by the supervisor. This list, in addition to field notes, interview transcripts and audio taped interviews were kept in a secure cabinet in the supervisor's office. These documents will be stored for seven years. The data collected for this study will only be used for the proposed research.

This study used the qualitative case study research design described above to guide data collection, analysis, and reporting. This study used the qualitative data collection methods of interviews, document analysis, and field notes (which were later omitted). Data analysis occurred using a computer based data management program (Atlas.ti) to help manage patterns found within the data. The following chapter outlines the results of data analysis and the practical considerations of conducting this specific study.

CHAPTER 4: RESULTS

The following chapter reports the results of this study. The results report emergent themes that are organized under the three main research questions: standards; risk management; and *Special-purpose Vessels Regulations*. Included within the results are specifics in regards to the procedures undertaken in data collection and analysis.

The results of this study were obtained by following the steps outlined in the methodology section of this study. The letter of introduction was sent to potential participants indicating the purpose of the study and detailing their role. Audio-recorded interviews were conducted at various locations within the Ottawa Valley. The purpose of the research and the consent for participation were explained to the participants prior to starting the interview. Document analysis of guide manuals and risk management plans were used to reinforce the interview and field note findings. Field notes were taken by the researcher throughout the summer rafting season, while working as an on-water raft guide with one of the companies in the Ottawa Valley. Based on the content of the research field notes, they were excluded as a complimentary data source from the results and discussion sections of the research. Data were analyzed using the Atlas.ti qualitative data management software. This software helped the researcher to manage themes and subthemes that naturally emerged from the various sources of data. This study's emergent findings are represented in this chapter.

The results of this study are organized into two main sections. The first section is a description of the particular case studied. This section adds the necessary context by describing the area, respondents, and industry for an outside reader. The description of the case includes a detailed depiction of the Ottawa Valley as indicated by the research

participants. In addition, the relevant roles and experience of the interview respondents as key informants for this study are shared. The second section focuses on the three main research questions guiding this case study. All of the results presented in this study were found to emerge from the data based upon the three distinct research questions. These emergent themes are therefore organized under the three specific research questions. However, there is much overlap and some themes can cut across the various sections and headings of this chapter.

The findings for this study are derived from two primary data sources. Table 3 represents the demographics of the companies that participated in both interviews and document analysis. First, six owners or managers from companies operating whitewater adventure rafting companies in the Ottawa Valley were interviewed. Of the six main companies operating commercial whitewater rafting on the Ottawa River, five companies participated in the study. Three owners and three guide managers were interviewed. Interviews occurred in arranged locations that suited both the researchers and the research participants' location and schedule accommodations. All interviews began with a discussion of the intent of the research and a presentation of the research participant's rights in accordance with the Brock University Research Ethics Board regulations. Each interview ranged in duration from one and two hours in length. Interview questions were guided by the interview guide/ interview protocol. Participants were asked initial questions pertaining to their personal experience and roles. These questions were followed by the pertinent research questions and their associated sub-questions as represented in the interview guide. Interview questions did change during the course of each interview as participants began to divulge specific information that required direct

and specific question rewording. However, no questioning went outside of the general area of the research guide. Interviews were recorded on a standard audiocassette and were later transcribed over a four month period after all interviews were completed.

The second data source consisted of policy documents such as guide manuals and river policies were requested. Two guide manuals from separate companies were obtained for use in this research. Those companies that consented to provide their documents are represented in Table 3. Companies were not always forthcoming with guide manuals and company documents. There could be many possible reasons for this occurrence. It is the feeling of the researcher that some companies have documents that are "works in progress" and are not officially published for "outsiders" to view, or that certain companies do not want written statements of their how they function to become public knowledge for various confidentiality and legal reasons.

Finally, field notes where initially planned as a third data source for this research but were excluded from the results for the following reasons. First, the field notes were found to not adequately describe field experiences and were thus lacking in their ability to complement results for this study. Secondly, the researcher was employed with one company on the river and that company's influence on the researcher offers certain elements of bias that could cloud this study's findings.

Table 3

Participation Demographics of Ottawa Valley Whitewater Rafting Companies

Company	Interviewed	Document Type
Company A	1 Owner & 1 Guide Manager	Guide Manual
Company B	1 Owner	Guide Manual
Company C	1 Guide Manager	Did Not Provide
Company D	1 Owner	Did Not Provide
Company E	1 Guide Manager	Did Not Provide
Company F	Did Not Participate	Did Not Participate

Study Context: The Ottawa Valley Whitewater Adventure Industry

The Ottawa Valley whitewater adventure industry has been described as a world leader and major international player in commercial whitewater river rafting for two reasons. First, the physical characteristics of the river and whitewater environment in which the rafting occurs (i.e., warm, deep, exciting rapids). The second reason is the specific characteristics of the companies operating commercial rafting on the river, including their relationships to each other, and how they, as a group, compare to other Canadian and international rafting companies.

The Rocher Fendu Section of the Ottawa River

Commercial river rafting occurs on the Rocher Fendu section of the Ottawa River. This section consists of two channels running parallel to each other. These two main channels are named the Main and Middle. There is a third channel (The Lost Channel) that is run at very specific water levels by one particular company. In the majority of cases when looking downstream the left side of the river is in Quebec and the right side is in Ontario. This provincial boundary, the road systems, and the location of the hydroelectric dams affect where companies put-on and take-off on the river. On the Ontario side, three major commercial rafting companies have put-in locations above the

first rapid. This is possible because of the main road (Grants Settlement Road) that runs in close proximity to the commercial rafting run. The companies operating from the Quebec side of the Ottawa River generally put-on the river at the Sullivan Island control dam, which is below the first rapid. Few companies operating on the Quebec side of the river put-on above the first rapid. The length of the rafting run varies depending on the company and the water level. Many companies travel between seven and ten kilometers downstream from their put-on. Some companies run both channels on each trip, increasing the distance they travel downriver in a single day.

The nature of these physical characteristics of the Ottawa River has fostered a concentration of commercial rafting operations around this relatively small section of river. In terms of this specific section of river, one interview respondent highlighted the section's major attributes:

> We are in a very fortunate river corridor, we have warm water, that helps for security, we have big water, that helps for security, we have short rapids, that helps for security, we have a consistent gauge, that helps for security, we have years of experience on doing pretty much the same thing at those different water levels. (Owner)

The commercially run section of the river is dam controlled, which allows for consistent water for the entire spring, summer, and part of the fall season. In addition, the water that feeds this section comes from the tops of dams and is heated to near Caribbean ocean temperatures, which is a significant difference to the water temperatures of Western Canada's cold, glacier fed rivers.

Industry Identity

The Ottawa River rafting industry is considered one of Canada's oldest commercial river rafting industries (Guide Manager). Many of the companies have been operating on the Rocher Fendu stretch of river for over 17 years, with the oldest having been in operation for around 30 years (one Interview Respondent). Like all industries, the commercial river rafting industry has undergone many changes since its inception. Three respondents believe that in the industry's initial years, there was a significantly different rafting experience for both the clients and companies. One example indicative of the industry at that time was that intoxication and the party atmosphere were synonymous with Ottawa River rafting. According to one respondent, "we often sort of had a blind eye to that" (Owner). Today alcohol consumption still occurs but is better managed and in many cases it is prohibited prior to rafting. Three respondents noted that the practice of rafting has changed in the last twenty years. The practice has gone from a disorganized industry sending down the river a huge volume of people, to a highly organized and consistent program that is tailored to smaller groups and families. In the initial years of the industry, companies experienced upwards of 900 to 1000 people per weekend (Guide Manager). A big contraction in the number of participants occurred in the late 1990s and early 2000s (one Interview Respondent). At that time, raft guides were loosely employed during the rafting season. Guides would be hired as needed, and there was relatively little stability in terms of job security. Today, working as a commercial raft guide can be a very elite and professional career (Owner). While each company in the Ottawa Valley offers rafting, they do so in their own particular way.

Each of the rafting companies within the Ottawa Valley has its own unique program characteristics. Each rafting company sells a different product and thus has a different image (All Respondents). However, taken as a whole, these companies create a product and image of rafting on the Ottawa River. The individual companies in this study each have their own style or philosophy for the way they view rafting and conduct their business. At one end of the spectrum are those companies operating "conservative" or "less aggressive" operations. An example of this less aggressive or conservative philosophy is:

> I believe very strongly in not scaring customers, because a scared customer is not a returned customer, so that's why we are a little more, I can't say safer, we are a little less aggressive on the river. Like we don't do certain things like Buseater [the name of a rapid] and stuff like that, because people that go unintentionally or unprepared in big rapids generally don't come back rafting. (Owner)

At the other end of this spectrum are those companies operating "aggressive" or "rock and roll" programs. These companies are not necessarily more dangerous; they have different goals and therefore have different programs on the water, compared to the less aggressive companies. Some companies also fall in the middle of this spectrum, both in terms of level of aggression and style of rafting. These characteristics dictate each company's identity.

Company Identities

Of the six main companies operating commercial river rafting on the Rocher Fendu stretch of the Ottawa River, five took part in the study. One company did not respond to the appeal for participation through the letter of invitation and subsequent

emails from the researcher. In conversation with key informants within the industry, it was "no surprise" that this company chose not to participate. For this study it is important to recognize that the companies that participated all had diverse identities. Each of the companies that took part in this study is influenced by six emergent factors that described identity. These six factors emerged from the data and were found to be: (a) owner involvement and rafting philosophy; (b) program details; (c) onsite opportunities; (d) staff; (e) equipment; and (f) history (All Respondents).

Owner involvement and the owner's philosophy of rafting were found to influence company identity. In some cases, owners were actively involved in the operation of their companies. Some owners were on the river guiding rafts, while others worked behind the scenes in the office or in the maintenance of their facilities. In some instances, owners had not been actively involved in the day-to-day operations of their companies for many years.

Owner philosophy shaped company identity as it influenced policy documents and the genre of rafting by which a company operated. For example, some owners identified that a family and less aggressive style of rafting was their main focus for their business. Their philosophical views of rafting as a family activity with a family environment influenced their rafting program design. Family rafts took less aggressive lines down rapids and were shorter in duration, whereas owners that identified with the "big party market" or the "smash and bash, work them hard market" often had program designs that reflected this more aggressive style of rafting. Owners with the highest levels of participation and involvement in their companies often had program designs for levels of guide qualifications and guide standards. These will be discussed in detail later in this

chapter. These owners were extremely aware of current issues and involved themselves in the day-to-day affairs of their companies and cared about the quality of their guests' experiences.

The second factor affecting companies' identities that emerged from the data is the specifics of their rafting programs. Rafting takes on a variety of different formats. On the Ontario side of the Ottawa River, all companies have big boat rafting trips. Big boat trips are characterized by the size of the rafts, which measure approximately 22 feet in length and accommodate 12 or more clients and one or two guides. Two of the three companies paddle-guide these big boats while the third company uses oars. In addition, companies run what is called sport rafting or paddle rafting (rafts around 14 feet in length with seven or fewer participants plus one paddle-guide). These smaller rafts are generally considered to be more "sporty" or aggressive than the big, 22-foot rafts. Companies on the Ontario side of the river offer family rafting in a variety of sized craft guided by either oar or paddle. The companies on the Quebec side of the river that participated in this study exclusively offer paddle-rafting trips. Some companies from both the Ontario and Quebec sides of the river offer a smaller self-guided two-person sport yak (inflatable kayak) program in an addition to their regular rafting trips.

One of the major program elements that affected a company's identity was their transitional infrastructure. The term "transitional infrastructure" emerged from the data as a description for activities occurring pre, during, and post a rafting experience. Examples of transitional infrastructure are transportation to and from the river, lunch spot style, and additional activities. The majority of companies on the Ontario side of the river had similar pre-trip methods of transporting their guests. Guests were transported via school

bus for approximately ten minutes to the put-on location just above the first rapid. On the Quebec side of the river, companies had longer pre-trip transportation times, in some cases taking over an hour to arrive to the put-on. All companies serve their clients food. The majority of companies stop part way through the day to sever a lunch, dinner or snack at a designated location. One company served their main meal at the end of the rafting run, while returning to base camp on a pontoon boat. On the Ontario side of the river, the three main companies each had a different method of returning their guests to the company's base. The various methods were: traveling to base on a bus after the last major rapid; paddling back to base (located not far from the last major rapid); or paddling through the last rapid on the river and boarding pontoon boats to be transported via water to the company's base. These transitional infrastructures put limits on the flexibility and delivery of a company's rafting program. These transitional infrastructures are usually heavily influenced by time limits and physical characteristic restrictions (i.e., location and distance). In addition to transitional infrastructure the number of trips offered each day influenced companies' program design.

The number of trips companies offer in one day is influenced by the logistical considerations of offering multiple trips in one day. Companies on the Quebec side of the river offered only one trip per day, with some companies running both channels during their only excursion. On the Ontario side, companies only ran one channel but offered up to six separate trips a day, departing and returning to base at different times during the day. In addition to the on-water logistics, activities offered at the rafting provider's resort add to the company's identity.

Onsite opportunities offered by specific companies also reflected their individual identity. Some companies offered more of a camping environment, while other offered resort-style accommodations and facilities. The quality of food services was another element that shaped a company's identity (reported by one respondent). In addition, some companies were set up to offer bar services which directly influenced clientele and staff alcohol consumption. Some companies offered additional outdoor adventure activities, such as rock climbing, tour kayaking, mountain biking, and horseback riding in an attempt to keep their clients for more than the standard one or two days of rafting. By offering additional experiences, companies are able to attract a larger range of clients to their program sites. As these additional experiences become increasingly central, rafting companies shift their focus beyond rafting. This shift of focus transforms the identity of the rafting company to resemble a resort or theme park for their service provision (according to the opinions of some respondents).

Staff played a direct role in shaping a company's identity. Staff is the primary way in which these companies come in contact with their customers, and this is especially pronounced while rafting. The guide-to-client relationship emerged as the most influential relationship that clients use to base the success or failure of their rafting experience. Guides have two main roles that emerged and are represented by the following quote: "there are two sides to guiding: there's getting the raft down safely, and there is also your relationship with your customers, two massive elements" (Guide Manager). Hiring and mentoring "good" or "high quality" guides is an influential part of a company's identity and success. Guides are in constant control of the client experience. Much of the success in rafting is how successful the guide is in manufacturing a positive

experience (Holyfield, 1999). Other staff considerations that impact the client experience are those of the non-guide related positions, such as office and maintenance staff. Larger companies have bigger disconnects between frontline staff and management/owners, whereas the smaller companies have less room for this gap (two respondents). In smaller companies guide managers and owners interact directly with customers, whereas in larger companies the owners and guide managers have limited exposure to clients.

The quality of equipment used by a company is a good indicator of how a company invests in itself, its guides, cares for its clients, and values the client's experience. Low quality equipment that is either not built for the demands of rafting on the Ottawa River or that is old and deteriorated is prone to experience failure and problems while on the water. All companies have instances of equipment trouble while on the water, but those that are more apt to deal with the problems or that encounter problems less frequently offer a better client experience (Holyfield, 1999). Respondents believed that clients and peers have negative views of companies with higher rates of equipment failure or use old and neglected equipment. Amongst all respondents, equipment standards are believed to be very high in comparison to other river industries. However, some companies use old equipment that is prone to failure.

On the Ottawa River, a company's history defines its unique identity. Some companies are rooted in family traditions, offering a certain style and quality of rafting. Other companies have histories rooted in low prices or affordable rafting. Other companies offer high quality professional international guides as the basis for their operations. Some companies are newer than others and have little historical identity apart from the owner's previous involvement in other rafting operations.

Respondent Information

Interviews for this study took place during and after the 2008 commercial rafting season on the Ottawa River. Six respondents took part in the study, including three guide managers and three owners from five different companies. The study initially sought to interview one owner and one guide manager from each of the six main companies operating commercial river rafting on the Ottawa River. Two conditions were found to limit the number of respondents who participated in this study. First, some companies did not have guide managers. In this case, the owners were the acting guide managers. Second, certain owners chose not to participate.

Respondents described their active role with their respective company using the role title or titles of: manager; river manager; general manager; president; director; visionary; owner; lead instructor; river captain; and/or river operations manager. Within these positions, managers had between one and eight years of experience in their role, and owners had between four and twenty-two years in their role. Respondents reported that their responsibilities included activities such as: river operations; marketing; driving support boats; cleaning; driving to and from put-ins and take-outs; making repairs; managing staff; and guiding trips.

In addition to the importance of respondents' roles and responsibilities, their experiences both in the Ottawa River whitewater adventure industry and the general outdoor adventure industry add to the depth of these findings. All respondents actively paddle whitewater rivers either for pleasure or as guides, or both. Respondents had at the least ten years of experience in whitewater adventure recreation, with some respondents

citing over thirty-four years of experience. All respondents have guided or continue to guide commercially on the Ottawa River. Five respondents cited additional experience centered on teaching and instructing core competencies of whitewater training and safety. These core competencies include whitewater rescue training, whitewater kayak and canoe training, and wilderness medical training. Various affiliations with both national and international certification agencies such as Rescue 3 International, Rescue Canada, and ORCKA were cited. Other experience cited included youth and experiential education work, environmental teaching, expedition guiding, international adventure experience, college instruction, and motivational speaking.

Findings in Consideration of the Three Main Research Questions

This research is guided by three research questions and the purpose of the study. The abridged versions of the questions are:

1. What are the factors affecting regulations, qualification, and policies (i.e., standards) in the Ottawa Valley Whitewater Rafting Industry and how are they influential?
2. What are the differences between companies' risk mitigation practices; and
3. How will the proposed *Special-purpose Vessels Regulations* influence and change risk mitigation practices?

The findings of this study are separated into three main sections to address each of these three research questions. These three sections are: standards; risk management; and *Special-purpose Vessels Regulations*.

Dimensions of Regulations, Qualifications, and Policies

One of the primary questions of this study is, what are the regulations, qualifications, and policies (i.e., standards) within the Ottawa Valley whitewater adventure industry, and in particular, what are the standards that influence commercial river rafting? Respondents were asked to identify whether they thought standards existed within the industry, what those standards are, and what factors influenced those standards.

What are Standards?

In relation to the Ottawa whitewater rafting industry, standards are factors, guidelines, restrictions, methods, and practices that companies can acknowledge and adhere to for the operation of their business (Price, Arnould, & Tierney, 1995). These standards primarily affect and influence the on-river or rafting related segments of a company's operation. The findings show that the standards take on many forms and that they are interpreted very differently by each organization on the Ottawa River. The origin of these standards is often cloudy and the continued enforcement of standards was often found to be lacking. However, some standards are followed universally and regarded by the respondents as a framework for the effective operation of commercial river rafting on the Ottawa River. Owners, managers, guides, and clients have varying levels of awareness of and interaction with these standards and standards were found to have mixed implications for each group. On the Ottawa River, broad standards proposed by the Canadian Rivers Council (CRC) have governed on-river operations in the past. However, respondents indicated these standards were non-comprehensive, outdated, and not currently enforced (the CRC is discussed later in this chapter). One respondent stated,

"when Transport Canada started talking about coming in the CRC disbanded, so as of the past few years there hasn't been a regulating body" (Guide Manager). Respondents indicated that in place of firm guidelines, standards are found to emanate from a variety of sources.

Types of standards

It was found that standards come from two different sources. The first are those standards that are mutually accepted by the industry: *industry standards*. These standards are followed and/or acknowledged as industry norms and practices. A participant provided an example of industry standards as:

> John Smith wants to start a rafting company, he knows he's going to have rafts that do not leak and has more than one air compartment and have life jackets for all his customers that floats 26 pounds head up and has to give out helmets and has to have a first aid kit because that is industry norm. (Owner)

Respondents classified these types of standards as being based on "everybody on the Ottawa's opinion." The above quotation summarizes the industry's commonly accepted minimum standards. While this industry standard is what "everybody" supposedly does on the Ottawa River, it does not adequately represent the actual standards. To adequately portray the actual standards used on the Ottawa River, each company's standards were explored. These types of standards are best titled: *internal standards*. The difference between industry and internal standards is that companies have the ability to create and implement internal standards at will, whereas, industry standards are based on norms, and in many cases a minimum generalization of industry practices.

Influences on Standards

Participants indicated that industry and internal standards were interrelated and influenced each other heavily. They reported internal standards that were significantly different from other company's internal standards. Additionally, they indicated there were differences in how those standards related to and influenced the industry standards.

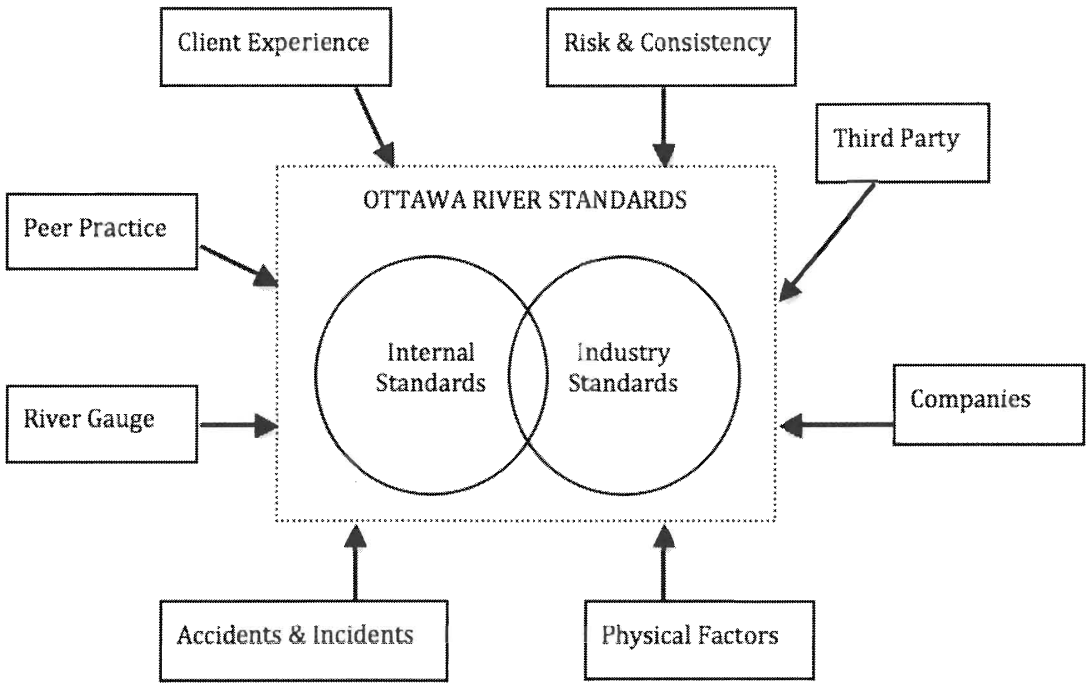

Figure 4. Influences on standards in the Ottawa Valley whitewater rafting industry.

Figure 4 indicates the factors that emerged from the data that influenced standards. These factors emerged from interview data and company policy documentation. These influencing factors include: physical factors; third party influence; peer practice; accidents and incidents; the client experience; companies; risk and consistency; and the river gauge. Within each of these factors, sub-factors illustrate their influence on standards. Each of these factors is described in detail in the following sections.

Physical factors. These factors are the material and environmental considerations for whitewater rafting. These factors, if not considered, often have negative or unpleasant consequences. These factors include: The river (water, rocks, rapids, water depth, river length, ledges, undercuts, and hydraulics or holes); and seasonal factors (water temperature and weather). These factors are permanent because they generally emanate from the natural environment. Companies find themselves creating and adjusting their program, equipment, and staff to complement these factors (two respondents).

The Ottawa River is renowned for big rapids that are deep and that end in pools (large bodies of calmer water). This physical feature is known locally as a pool drop rapid formation. Rapids in the Western part of Canada are considered to be more continuous and not end with pools, making the consequences of an uncontrolled or upset raft more significant to the clients and guides. Operations on the Ottawa are all based on a day trip model because of the length of the river. Traveling from the first rapid to the last can take between two and six hours. Other physical factors such as ledges, undercuts and hydraulics dictate how rapids are run. Companies run very specific lines (routes) through rapids on the Ottawa River, and the physical features of the river in part influence these lines. Respondents commented that many guides feel they were riding rails down the river, because the company lines are very similar and rarely change. The Ottawa River is conducive for this style of short runs of big rapids because of its physical nature. Examples of significant physical factors identified by respondents are the Buseater hydraulic, Garvin's Chute (in particular the Elevator Shaft rapid), and Coliseum. The Buseater, sometimes called the Greyhound Buseater, is a river-wide ledge that forms a hydraulic. The Buseater lies at the bottom of a rapid called the Lorne or Black Chute. A

raft can maneuver around the Buseater by navigating to the river left or right of the hydraulic. At high water levels a window or tongue appears in the center of the Buseater hydraulic. At these water levels some companies run a line through the tongue. Debate between companies exists in terms of the necessity for motorized rescue, allowable cutoff level (what water level is too high or too low), and the type of boat allowed to run this particular line.

Another example is a rapid named Garvin's Chute, which requires very specific rafting methods because of the possibility and severity of the consequences of improperly running it. For some companies, their most specific guidelines are for running this rapid. An example of these specific guidelines would be one company's run down the ST Chute at Garvin's. This company requires meticulous downstream safety, double guided rafts, and shoreline markers that are used to guide a run down the rapid. Even with the use of these safeguards, clients and guides fall out, the rafts go into the hydraulics sideways and there is the possibility for injury. Likewise, on the other side of Garvin's Chute is a rapid named Elevator Shaft. This rapid is a near vertical waterfall or slide ranging in height from approximately ten to fifteen feet depending on the water level. A few companies in smaller paddle rafts will only run this rapid due to its physical dimensions (it is narrow).

An additional example of how physical features influence standards is the effect of the dam-controlled water on the Ottawa River (five respondents). These dams play a significant role in controlling the amount of water that is released throughout the year. A stick gauge was installed downstream of the Sullivan dam. This gauge was installed on a diagonal and measures the water level in feet. The gauge does not report actual water depth but offers points of reference. In addition, the dams are top releasing, which

influences the water temperature at regular summer water levels (one respondent). Water released from the surface is warmer due to the influence of solar heating during the daytime. In the summer the near tropical water temperatures cause thermal protection to become unnecessary for guides and clients. However, during the spring season thermal protection is generally encouraged by both internal and external sources.

Access to the river has proven to be a significant factor influencing standards. The Quebec side of the river has the characteristics of a backcountry environment while the Ontario side has road access to every rapid (one respondent). These factors are significant because they influence evacuation policies and procedures depending on the location at which the incident occurs.

Third Party influence. The main third party influences identified were from government agencies, insurance providers, the Canadian Rivers Council, and the association of Adventure Écotourisme Québec. The influences of these parties affect rafting through their regulation of various aspects of on and off river operations.

During the summer that data were collected for this research, the Canadian Government began implementing the *Special-purpose Vessels Regulations* (SVR) within the industry (Canada-Gazette, 2007). These regulations are not currently enforced and will not be for up to two years. Site visits to significant (large) operations are proposed for the summer 2009 season. The SVR and their affects on companies will be presented in detail in a later section. Other than these new regulations, the government influence on rafting was limited, and companies have enjoyed relative freedom from government involvement compared to Canada's western whitewater industry, which was administered and regulated by the *River Rafting Standards* (three respondents). Finally, the *Safe*

Boating Guidelines were identified as having some minor influence on equipment standards (i.e., buoyant heaving line, life jacket).

Respondents indicated that one of the most omnipresent entities working behind the scenes is insurance companies and their insurance brokers. Four of the five companies were insured through the same broker, with one company being insured through an affiliated association on the Quebec side of the river. One respondent noted that:

> There are one or two companies running on the Quebec side, running under the radar, running with no insurance and no part of any association. It's not just probably Quebec, it's probably also Ontario and obviously some out West too. (Owner)

Insurance was seen to affect standards with the insurers' recommendations and policies for good practices. These included: levels of first aid training; selection of guides; use of motorized support boats at certain water levels and at certain rapids; waivers; guide training requirements; and number of practice runs needed before a guide becomes the primary guide on a raft. In addition, some respondents described the role of the insurance companies as being the "watch dogs" for the industry as a whole. In some cases, the insurance company will visit the various whitewater rafting companies and audit their programs to ensure that there is a limited chance that a liability claim could be made. Respondents saw the possibility of a liability claim as the major reason for the active involvement in standards by the insurance companies.

An interesting situation came to light by asking respondents to comment on the difference in requirements for the use of motorized rescue boats. Motorized rescue boats are used at a few locations on the Ottawa River. These boats are used to assist guests who

are in the water and are considered to be in danger. Respondents indicated that one major insurance provider required the presence of a motorized rescue boat at certain locations and at certain water levels on the river. One place in particular is between a rapid named Coliseum and another named Dog's Leg. These motorized rescue boats are in place to pick up customers in need of help. Each company insured by this broker is required to have a boat in this location if their trip is running the rapid between certain high water levels. Companies in the Ottawa River Valley (with only a few exceptions) will work together to rescue any clients that are in the water. This makes rescues there much more effective, as there are numerous rescue boats present. This situation works well for those companies that require a motorized rescue boat. However, respondents indicated that conflict between providers occur when companies who are not required to have motorized rescue by their insurance provider are running this rapid without a motorized rescue boat. One respondent said, "our insurance does not obligate us to have a motorboat [at Coliseum]" (Owner).

The Canadian Rivers Council (CRC), was initially started as the Eastern Canadian River Outfitters Association and at the time of this research was defunct, continued to influence standards on the Ottawa River. The name was changed to its current format (CRC) as an intention for creating a national standard. The CRC was an organization that set out guidelines for: safety equipment (equipment provided to clients and first aid kits); operating procedures; safety information (pre-trip and on water briefings); on river operations (trip management, staff skills and knowledge, and client care; trip design (assessment of a company's ability to design safe rafting trips); and on-water emergency procedures. The presence and influence of the CRC guidelines are everywhere within the

Ottawa Valley industry. Many companies continue to adhere to and advertise the standards set and influenced by the CRC. The CRC was created and run by key participants in the Ottawa Valley industry. These participants were the owners of the rafting operations and some long-time guides. However, with Transport Canada set to regulate the industry through the SVR, the CRC was "put to rest" (Guide Manager) as an active organization. Many companies still follow some of the guidelines set by the CRC while others have begun to adopt other guidelines. Historically, the CRC guidelines were accepted as the minimum standards in the Ottawa Valley Rafting Industry (all respondents).

The CRC's main goal was to develop standards, which would occur through regular meetings. However, with the CRC defunct, respondents reported that a "lack of communication between companies" has occurred. All respondents reported wanting to recreate this opportunity for formal meetings at least once every year. It was also reported that formal meetings between guide managers could possibly be more beneficial than just meetings with owners.

The Adventure Écotourisme Québec (AEQ) Association is a broad-spectrum organization that accredits adventure and ecotourism companies in Quebec. It offers a multi-step accreditation program that involves an application, review, risk management plan, and site visit to become an outfitter member. This is only open to those companies operating on the Quebec side of the Ottawa River. This is a paid professional organization that deals with tourism related outfitters. As a result, their standards for rafting are limited. This organization also provides insurance coverage through an associated insurance provider. Some respondents said that the AEQ was, "a good

association on the Quebec side … it's an outdoor association that governs the Quebec side, with Tourism Quebec, they have a very high standard that exceeds the standards of Transport Canada" (Owner). One notable standard set by the AEQ is the requirement for insurance in order to become a member. This association is reported to conduct yearly site visits and reviews of their accredited outfitters. The AEQ has no influence on companies who are non-members of the organization, and it is not a requirement to be part of the organization to offer whitewater rafting adventures on the Quebec side of the Ottawa River (one respondent).

Accidents and incidents. Whitewater rafting can be dangerous to participants and guides for various reasons (Whisman, 2003). The Ottawa Valley whitewater adventure industry is not exempt from this condition. It became apparent from the respondents that details of accidents and incidents were not something that was widely discussed among individual companies. In addition, accidents and incidents were seldom documented, particularly for public access. In many cases, guides who were not active witnesses to an accident or incident were not informed of the situation. Respondents were reluctant to share their perspective when questioned about accidents and incidents.

One owner reported that, in 1983, a client death occurred at a rapid named Garvin's Chute. The inquest that followed resulted in major impacts on the industry. A primary outcome of this inquest was the recommendation that helmets be used while on the river. Prior to the incident helmets were not required for rafting on the Ottawa River. It was found that the use of a helmet could possibly have prevented to death of the client. After the inquest, all companies began using helmets only at Garvin's Chute. This later progressed to helmets being worn while on the river and around the water's edge.

Through informal conversations with guides it was found that many accidents and incidents become legend or lore on the Ottawa River. One respondent told the story of a J-Rig (a motor propelled raft capable of carrying 20 or more people) that went into the Whiteface Monster (a very large hydraulic) and flipped causing clients to be scattered all over the river in various states of trauma. Some respondents would say this type of incident rarely occurs given contemporary industry standards. This hydraulic is one of the most dangerous places on the Ottawa River.

Other notable incidents reported by respondents include spinal cord injuries occurring at various rapids, near drownings, broken bones, and clients being run over by motor boats. One respondent said "...we have had motorboats hit our customers..." and "...our motorboats hit other customers..." (Guide Manager). These various incident types play a role in creating or changing standards when they occur.

A final aspect of the importance of recognizing accidents and incidents as influencing standards are the way accidents are interpreted and reacted to by different parties. At the time of this research an incident occurred where a guide from one company swam into a river hole (hydraulic) known as Lunch Box and no one from her company was there to rescue her. Another company's "video boater" was eventually able to rescue the guide. This is one version of the story by a respondent who witnessed the incident:

> XYZ rafting company's raft ran through right side Bus Eater, it was very high, must have been around 15 [on the river gauge], ACME rafting was just below leaving lunch spot, customers all made it to the eddy, raft made it to the eddy on the right. One guide didn't swim at all, swam down into a hole [hydraulic] bottom

> right of, you know there's the point below Buseater there, okay there's a hole there that we call Lunch Box. It's a nice pour over hole and she swam straight into the center of that hole and was re-circulated in it for some time. No attempt to swim or to ball up, tuck or anything. Our video boater paddled by, picked her up and pulled her to the side. And she was not in good condition. She would not have been rescued if we had not come and fished her out. (Guide Manager)

This is a version of the same incident from a respondent within the company that the guide who was affected worked for, "this year when we had one of our guides go into the hole at the Lorne, and went for a five-minute recirculation" (Guide Manager). Subsequently, the company who "fished" the guide out has changed their video boater standards. They now require all their video boaters to carry a throw bag with sufficient rope length and to actively participate in a rescue if needed. The interpretation of an incident is thus important to recognize because of the influence it can have on changing standards. Finally, one respondent's view on change was, "change is something that can either be embraced or something that people are often afraid of" (Owner). This quote is pertinent because it illustrates the different ways an incident can be interpreted and reflected on. Some companies were found to view incidents as negative situations that need to be hidden and forgotten, while other companies use them as opportunities for reflection and adjustment to their standards.

Peer practice. Peer support and peer practice affect standards in very obscure ways. It was found that as procedures and practices evolve those that remain and are used are often the ones agreed upon or accepted by the majority of companies. These practices, whether they are policies, levels or training, equipment, or briefings, etc., often come

from an individual company or group of individuals. Four examples that illustrate this concept of peer practice as a driving influence on standards are: the creation of a new standard for lifejackets; water cutoff levels; community watch; and the use of motorized rescue boats.

In the early years of rafting on the Ottawa River, two respondents mentioned that life jackets used for clients resembled the keyhole style flotation design with butterfly knots as a cinching device. According to some respondents, these lifejackets were sufficient, but as time passed their shortcomings became apparent. As a result, a group of industry professionals got together to design a new lifejacket to replace the previous version. This new lifejacket design has become the standard for all rafting operations on the Ottawa River. If a new operator opened a rafting operation, they would have to conform to this lifejacket standard. If they did not, and an incident occurred, one of the first questions two respondents stated they would ask was, why were they not conforming to the industry practiced standard?

Water level cutoffs play an important role on the Ottawa River. Cutoffs are references to the river gauge that indicate the allowable levels for running specific rapids and can further dictate specific lines down many rapids (all respondents). Minimum and maximum cutoffs were created by all of the owners of the companies based on what they had experienced with past trips. These cutoffs were later incorporated as guidelines by the CRC. The following quote explains some of the importance that these cutoffs had for the industry.

> It used to be before 1997, I think it was. It was company discretion, whenever the cutoffs were, and so companies, I could be wrong on the date. Between 1996 -

> 1997, they formally put it on paper, what the cutoffs were going to be, for all the rapids, mainly because of risk, but also because of consistency. If our company's cutoff is 10 and someone else is running it at 13, it hurts the whole industry when 100 of our people coming down with us who could be repeat customers with us or might be with another company the next year, they see another company running down well above cutoff, then you have to explain to all those 100 people why you are not running it and they are running it, and then the only way to do that is to trash or bad mouth other companies and their safety standards, so it was just to make it a little better for everybody and so that all the owners, that was all the owners that were involved in that, could have a discussion on what should be happening out there. (Owner)

There are certain cutoffs that are standard for all companies on the Ottawa River. One example would be the standard that no company is allowed to commercially raft the main line at Coliseum above 10.5 on the gauge. There are several standard cutoffs that are followed. However, many of the smaller rapids have recommended cutoffs that companies determine for themselves.

The idea of community watch was found to influence and be present by all companies operating on the river. Respondents noted that they were frequently in communication with other companies regarding on-water issues and concerns (four respondents). These issues and concerns would primarily come from trip leader and guide manager encounters and interactions with other operations. An example of the extremes of this community watch concept is illustrated by the following quote:

> I don't think as a group we are not that active in pointing fingers at companies that don't do things right, it does happen every once in awhile, there are companies that, in recent past new companies have started doing a one boat trip down the river and there is no safety kayaker, so we just talk to them or, if we don't talk to them we just call insurance and say hey you are insuring a company that is not complying with general agreed rafting practices. (Owner)

While finger pointing does not occur frequently, it has been used in several situations to eliminate negative repercussions for the industry.

For many companies, their insurance provider requires the use of motorized rescue boats in certain situations. Peer practice is the main reason for the creation of this standard. The idea of having motorized rescue at Coliseum began with one company, and was seen as an effective solution for rescuing guests before they swam over a large ledge at the bottom of the rapid. This ledge can and continues to injure clients and guides who swim over it. More companies adopted the use of motorboats to the point where insurance stepped in to mandate their use. The present situation with the use of motorboats is an excellent illustration peer practice influencing and shaping standards. The following respondent's comment illustrates this capacity:

> The industry has kind of moved towards having motorboats there for rescue…that has now become the industry standard. Has now pushed us to keep up, in that same category. So we do use a motorboat there however, there are many days where we wish they [other motor boats] let people run, let the boat flip, if it is what's going to happen, and let people swim to security, as opposed to people swimming towards this moving platform which has some risk as far as the rescue

goes. (Owner)

The use of motorboats as a standard for rescue has shown to be an issue of great debate with many different viewpoints. To summarize, the industry relies heavily on motorboat rescue and a set of procedures that accompany the safe use and preparation of clients for the use of these rescue boats. Those companies that utilize motorboats at Coliseum for rescue have strict safety briefings telling clients about the rescue boats and what the clients should do if they do go into the water (two respondents). The generally agreed upon procedure for a rafting run of the rapid is for one raft at a time to enter the rapid as soon as their motorboat gives them a go ahead signal from downstream. The clients are instructed to swim hard to the river right shore, if they fall out or the raft flips, so as to avoid the Ledge and Center Slot rapid, which lie directly downstream. If the boat flips or if clients or guides fall out, the motorboat(s) leave the eddy and enters into the rapid in a downstream position to pick up those guests who are in trouble or who are not swimming to the river right shore. In addition, guides are instructed not to use their throw bag at any time on this rapid because of the safety considerations of a rope getting stuck in the propellers and impellers of the rescue boats. This whole process and procedure is highly stressful and the drivers of the motorboats need to be highly trained and practiced, as there are extremely significant consequences if mistakes occur. The drivers of these motorboats have no problem telling other inexperienced or unqualified drivers to either get off the river as well as how to operate an effective rescue (Field Note).

The client experience. Without satisfied clients, rafting operations would not exist. Those companies still in operation must therefore conduct their business in a manner conducive to positive client experiences. The client experience occurs on and off

the water. This study looked at the client experience on water. Each company catered to a somewhat different customer experience (all respondents). Some customers value aggressive rafting programs, with higher levels of perceived danger, while others value "soft" or less aggressive rafting programs. In the case of the Ottawa Valley whitewater adventure industry, how a company accurately marketed its style of rafting was thought to affect a client's experience. When asked about how companies prepare their customers, respondents indicated there were several ways in which this happens. First, advertisements need to accurately portray the experience they sell. Some respondents indicated this is sometimes not the case. Whitewater rafting does have many different formats, and in some cases there is a difference between what is advertised on a company's website and what the reality on the river is.

Another method mentioned by the respondents used to enhance both the customer experience and safety was to give accurate and useful briefings. On the Ottawa these briefings occur in two formats. The first is a briefing given by the trip leader outlining the safe use of equipment, the associated risks, what to expect, and the various policies that clients need to know. The second type of briefing occurs on the water before each rapid. On-water briefings generally include an overview of the rapid, where to swim, and where safety is located. The amount of information given in an on-water briefing was reported by respondents to vary between companies and in some cases is directly related to the professionalism of the guide. One respondent's view of an on-water briefing is:

> You can't say swim right but not too far right, they can only cope with one instruction, customers can only cope with one instruction, you can give them a nice briefing before a rapid but I give them a re-briefing just before, with the one

instruction of which way to go. (Guide Manager)

Other factors respondents stated as influential to the customer experience were professionalism and personality of the guide, fluidity of the trip, perception of bad equipment, and the feeling of adventure. The feeling of adventure is best viewed in terms of standards. All respondents thought that stringent industry standards limit the customer experience. One respondent said, "standards kill customer satisfaction" (Guide Manager). This respondent was referring to setting a standard on the basis of the lowest acceptable risk a client needs to experience for enjoyment of the experience. This was not actively occurring within the industry but is feared by all respondents if regulations become stricter.

Risk and consistency. Rafting has its associated risks. Two respondents indicated these risks are based on many factors. One respondent explained acceptable risk as the point at which a company, guide, and client are willing to place themselves between perceived and actual risk. Clients often do not have a say in this decision, because the company, and the guide to a lesser extent, make the decision long before their arrival. This decision is based on many factors, some of which including experience, equipment tolerances, human physical tolerances, liability, and quality of the guide.

Three respondents indicated that consistency was a concept that directly controlled the factors that dictate the levels of allowable risk. They said that this consistency is present in two forms, program consistency and guide consistency. A company sets its standards for both its guides and its programs in relation to the level of risk it is willing to accept and endure. When programs are not administered and maintained at this set level, their exposure to risk increases. On the Ottawa River there

are many instances where the consistency of a company's program is blatantly lacking, while other companies are able to maintain very consistent programs. One respondent's view on program consistency is, "we run a very disciplined operation … we have very specific things that we do at very specific water levels and in specific ways that we do them" (Owner). It was also found that some companies had very inconsistent guide staff while others maintained high levels of consistency amongst their guides. Guide consistency represents a guide's ability to reproduce the required skills, maneuvers, and interactions with clients every time they are on the water. According to all respondents, guides should maintain the same level of consistency between their first and last day of work. This is however, not always an accurate representation of actual practices and there is no sufficient and accurate method of ensuring and monitoring this owner/ operator statement.

It was found through respondents and document analysis that companies that maintain both guide and program consistency did so through the use of daily debriefs, trip leaders, records, and consistent training. Some companies with the highest levels of consistency had debriefs or meetings throughout their trip day. In addition, consistent training and practice were cited by all respondents as methods used to increase consistency.

Companies. The companies comprising the Ottawa Valley whitewater adventure rafting industry have an important function in affecting standards. Owners and guide managers play the biggest role in this driving force for the creation and maintenance of standards. In many cases, the owner's and guide manager's visions and philosophies have lead both the industry's and their own company's standards in a particular direction. One

respondent stated that owner involvement with the day-to-day operations directly affect their connection with staff, equipment needs, and program. On the Ottawa River, guide managers played an important role as the "eyes and ears" for the owners, with guide managers having the ability to manage and adjust their programs when needed. Respondents indicated that the guide manager's ability to affect change was dictated by the level of owner involvement. Owners and guide managers are at the forefront of the companies' influence on standards. Choices relating to staff and equipment were found to be under the control of owners and guide managers. For example, owners and guide managers who required only the minimum first aid qualifications for their guides did not work towards positively raising the standards within the industry. Companies that required higher levels of first aid training wanted minimum first aid standards to be increased. Guide qualification standards were found to vary amongst all the companies on the river. A level of first aid training, whitewater rescue training, and the guide's age were the only semi-consistent qualifications found through respondent information and document analysis. Within these qualifications the necessary level for guides was highly disputed amongst all respondents.

The equipment used by companies was found to reflect the program design and rafting philosophy of the various companies rafting operations. There are many elements of boat design that are conducive to the various approaches to rafting. For example, a paddle guided 22-foot raft with large tubes was seen by the respondents as less maneuverable than an oar guided 22-foot raft with smaller tubes. Similarly, 14-foot paddle guided sport rafts can run tighter aggressive lines than their 22-foot cousins. Each company has different equipment standards that they deem necessary.

River gauge. All respondents reported that every run of the river was influenced by the amount of water in the river as indicated by the river gauge. The gauge is a consistent tool that is used by operators to reference rapid conditions at the various water levels. Respondents reported that on the Ottawa River, there is little room for a guide to make decisions on how to run a rapid. Each rapid has very specific lines that are dictated by the physical features of the river and the water level according to the river gauge. The gauge fluctuates from -6 to + 23 in diagonal feet. This corresponds to approximately 13 to 15 vertical feet of difference on the gauge. The river gauge's numbers do not represent actual water depth of the river.

All respondents indicated that, in the past, their companies met with the CRC to set restrictions or accepted the set restrictions on how rapids are run (or if they are run at all) based on different water levels. A baseline set of gauge cutoff levels from the CRC is used as guidelines by which companies can operate. One respondent said, "the numbers are set, even though we do fiddle with it, according to what our boats can do" (Guide Manager). Even though there are agreed upon industry standards, companies do adjust the standards for their own purposes. Standard cutoffs were found to be more consistent between companies when the magnitude of the rapid increased. The big rapids on the river, (i.e., Coliseum, Bus Eater, and Garvin's) all have agreed on cutoff levels. One respondent's view reflects the importance of the gauge and its influence on industry and internal standards. The respondent said:

> So the gauge went in and a bunch of decisions were made about okay, the industry is going to bond together and say and put some basic guidelines in, say at this level nobody should do this, and at this level nobody should do that, and then

> from there at some of the less crucial levels individual outfitters like ourselves have then been able to work out, also in equating to our policy, well only do this at this level and then we will only do that at another level. (Owner)

The above influences on standards play an integral role in the creation, adoption, and utility of risk management practices in the Ottawa Valley. The following sections present the findings in consideration of risk management.

Ability to Mitigate Risk

All respondents believed that the Ottawa Valley whitewater adventure industry has shown that its overall ability to mitigate risk is very high. Differences in risk mitigation practices between companies were found to exist. Two respondents saw the differences as negligent on the companies' behalf. Respondents suggested multiple possible solutions for mitigating risk better as an industry. These include better communication, cross company collaboration, owner active involvement, better guide training, and inter-company incident protocols. Risk management and better risk mitigation represent the emergent themes found in both the interviews and company documents. They are discussed in the following section.

Risk Management

Within the Ottawa Valley whitewater rafting industry, respondents reported that there were rare cases of "bad" dangerous, or non-professional rafting operations, particularly in comparison with what they have personally witnessed with other industries (both nationally and internationally). According to respondents, the Ottawa rafting industry has "high standards of quality, the best in all of Canada" (Owner). This is in comparison to rafting in Western Canada, and rafting on the Rouge River in Quebec.

Two primary reasons emerged from the interviews which explained these high standards: (a) the watchful eye of key companies and high volume of rafts on the river; and (b) the maturity of the industry in consideration of the influence of the Canadian Rivers Council (CRC). Respondents with both Canadian and international rafting experience considered the Ottawa River industry to be a leader in the proper practice of commercial whitewater rafting.

All of the respondents identified their interest in keeping the Ottawa River rafting brand or product strong, and wanted to work towards making it stronger. The physical attributes of the river - the warm, deep water, and big pool-drop rapids - are part of the Ottawa River rafting brand. In addition to these physical attributes, the companies themselves have a vested interest in identifying and mitigating the risks of whitewater rafting together as an industry. Respondents identified with the reality that anything negative that occurs with one company affects the whole Ottawa River rafting industry. One respondent stated that:

> If somebody leaves company X and they feel they were ripped off, or they feel they got a horrible trip, or they feel they had an unsafe trip, it's not just company X that is losing them coming back, but all that person's friends that they go and talk to about rafting on the Ottawa. We lose that entire social network of that person as repeat customers and then they go to the Rouge, or they go to Appalachia or they go to Upper New York State. (Guide Manager)

All respondent thought that a helpful community environment exists amongst the companies operating commercial river rafting on the Ottawa River. One respondent described his view of the competition and community relationship amongst the

companies as, "... it's the highest level of competition on the phone, for most companies on the river we all help each other out" (Owner). In addition one respondent said:

> We could probably learn more from each other, that we could probably assist each other more, we could probably share some ideas that might go a little bit viral, and the better trip that we run and the better trip our competitors run the better our industry and the healthier our industry is going to be. (Owner)

This remark exemplifies the competition and community aspect of the Ottawa River rafting companies. In addition, there is significant positive interaction of river managers and owners between the companies that help in creating this idea of community (Field Note).

Two respondents said the Canadian Rivers Council has had and continues to have significant influence on the risk mitigation practices of the Ottawa Valley whitewater rafting industry. Being an industry driven self-regulating entity, the CRC was able to actively reflect and address the concerns of all the companies. Respondents believed that with the CRC gone, no industry regulating force is left to enforce standards.

When asked about their biggest concern for risk mitigation, four respondents agreed that non-river issues were their largest fear. They indicated that such things as insurance claims (which were most often related to non-river related incidents), falling down steps, and the lack of hand railings were in more need of attention.

Respondents expressed concerns for areas that lack effective risk management, such as the use of motorized rescue, and guide your own rafting programs. As observed by the researcher, it appears that high levels of program consistency were absent in some

companies' practices on the river. For example, motorboats do hit some clients during rescues.

Guide your own rafting is a program operated by several companies on the Ottawa River. This program allows inexperienced clients to maneuver a raft down the river without a guide. Guides accompany the trip in kayaks showing the clients where to go. Not all companies agreed that the practice of guide your own rafting is a safe form of whitewater rafting for the Ottawa River. According to one respondent,

> I think running, for me Little Trickle [rapid on the Middle Channel] is almost a class four, you need to make a certain move, the consequences can be pretty bad, a pin or a foot entrapment there is high, I think that is totally stupid to do guide your own on Little Trickle. (Owner)

Two respondents believed that guide your own rafting is possible, if done correctly. The question is, how can it be done correctly? The current state of some guide your own operations is described by the following quote:

> There is no way in hell they can with four or five kayakers out there for 12 rafts, they can really, really manage everybody. I see the guide your owns push everybody down, and they bounce off of everything ... we are really waiting for something to happen here, you cannot get into a big rapid like Rock and Roll with four or five rafts at the same time, and they flip everywhere. (Owner)

In addition, one respondent saw guide your own rafting as a statement by some companies regarding the necessity of having a highly qualified guide:

> I think it is a real farce for us guides who are working so hard to have the highest level of certifications and we are right there doing a high adventure trip right

> besides them, and our guests look at us and say why don't they have a guide. (Owner)

Guide your own rafting is a new program on the Ottawa River. There are many details that are continually being worked out by those companies that offer the service. However, without an active regulating agency to address the concerns of industry companies not content with the current risk management practices of some guide your own rafting operations, it is believed by respondents that these programs will persist. Finally, guide your own rafting is seen to be above the new Transport Canada regulations because there is no guide in the boat. One respondent's view on this situation is:

> But they get away with it because in guide your own there is no guide in the raft, and this is Transport Canada telling me this, even though it is guided in a kayak there is no guide in the raft so it's like a recreational thing and no longer a commercial thing. So that's the answer that I got from Transport Canada the other day. Whether it is the right answer or not, I do not know. (Owner)

The following section describes how better risk management can occur within the Ottawa Valley whitewater rafting industry.

Better Risk Mitigation

Several recommendations on how to better mitigate risk on the Ottawa River were made by respondents. The primary finding was better communication among owners, guide managers, and trip leaders. Three respondents suggested that one or two formal meetings between owners every summer would lead to better communication. Meetings between guide managers were also seen as important for better risk mitigation. However, two respondents thought that guide managers had the best communication of the three

parties, especially during the summer of 2008. According to respondents, water levels were much higher in 2008 than previous seasons. At high water levels, guide managers have the opportunity to interact while operating the motorboats at Coliseum. On a typical high water day, guide managers find themselves at Coliseum for several hours allowing for informal intercompany meetings. Trip leaders from the various companies did not have the opportunity to meet during the season. Respondents suggested that trip leaders could be integral tools for risk management. A trip leader is often a senior guide, with high levels of experience and training. One respondent thought that a separate opportunity for trip leader communication and meetings could be beneficial.

In addition to better communication, respondents believed that understanding other companies' program characteristics to be key knowledge for better industry risk mitigation. One respondent said, "... some companies do things differently and understanding what it is they do, would also help" (Guide Manager). There were visible differences between the various companies and their programs. It is apparent that, while on the river, guides act as the main interpreter for clients who notice these differences. Without the knowledge and understanding of the reasons for the companies' various differences, guides revert to mocking a company's program. Many companies attempt to correct this problem by fostering a high level of professionalism amongst their guides. Two respondents believed that more cooperation between companies was seen as a positive outcome of this understanding.

Amongst respondents, the level to which owners vocalized their concerns and involvement was seen as a tool for better risk mitigation. Many owners had active involvement with their company's while others had little to no on-water involvement.

Higher levels of owner involvement and vocalization of risk management issues were identified by respondents as more beneficial than outside regulation and influence. Many of the owners believe that the Ottawa Valley industry can regulate itself more successfully, and to a higher level, if owner involvement and vocalization were better. For example:

> Last year, I went on a bit of a rant again about the 10, 10.5, and 11 Coliseum thing, and just don't get any response, I could start that again to try and, because the cutoff for Coli is 10.5 and I really don't feel comfortable with it until we are below 10 and so that's a specific thing. (Owner)

Four respondents noted that better risk mitigation could be fostered with better guide training and mentoring. Those guides, who were more proactive in their guiding style, were seen as better tools for risk management. Guides are directly in contact with customers, the water, and their rafts. Guides play the most active role in practical risk management. Higher levels of requirements, training, and experience were seen by respondents to have positive effects on risk management. Respondents mentioned cross training, and cross experience as possible tools for better risk mitigation. It was suggested that group scenarios where guides from various companies work together to practice skills were seen as leading towards better risk mitigation.

Within a company's risk management plan, formal guidelines dictate the appropriate procedures for dealing with an internal incident (Guide Manual). Limited to no guidelines exist for incidents affecting multiple companies. One respondent suggested that formal risk management protocols should be set up to address this issue. It was

recommended that a "phone tree" of communication be established to adequately deal with situations that involve several companies.

The traditional ways in which risks are managed are potentially in the process of being altered by government involvement through the *Special-purpose Vessels Regulations*. The findings of these regulations are presented in the following sections.

Special-purpose Vessels Regulations

At the time interviews were conducted, the finalized version of the *Special-purpose Vessels Regulations* was being introduced to the industry. The regulations were enacted in April 2008. Respondents believed that Transport Canada inspectors would audit key rafting companies in the summer of 2009 and enforce the regulations the following year. Three of the five operations were already making provisions to meet the regulations, while two were waiting for Transport Canada to give them their audit and then planned to respond accordingly. All respondents had heard of these regulations, with only one respondent saying he was "somewhat familiar with them." Respondents in general said they had first heard of the regulations between one and eight years ago. Those respondents more actively involved (owners and guide managers) had heard of the regulations at an earlier date than respondents who were either new guide managers or did not participate as actively with their companies. Differences existed in terms of where respondents heard of the regulations. Some heard when Transport Canada came to visit their site, while others heard through word of mouth or the Internet.

To illustrate the affects of these new regulations, respondent were asked about their role in the formation of these regulations. Further, the overall perceived affect of the proposed regulations was investigated to give a broad picture of the influence these

regulations could possibly have on the industry. Finally, respondents were asked their views and opinions on five specific provisions outlined in the new regulations. These provisions were: enforcement; white water rescue course; safe swimmer belt; first aid kit contents; and record keeping.

Involvement and Consultation

The involvement and input during the formation and review process of these new regulations differed highly amongst respondents. Three respondents (mostly owners) had high levels of involvement while three had little to no involvement through recommendations and edits of the proposed regulations. One owner in particular had very high levels of involvement during the review and editing phase of these regulations. One respondent noted his and the industry's involvement as, "I have been pretty instrumental, we all have, there has been a few people who have been more involved than me, because they are free lance or retired and not full time" (Owner). It is important to note that according to respondents there are other individuals who were not involved with this study who purportedly had significant influence on the formation of these new regulations. It was found that involvement was most commonly found to occur through the process of sending "paper back and forth with suggestions" between certain respondents and government agents.

Three respondents indicated that Transport Canada held various opportunities for industry members to join in public consultations during the formation of these regulations. One respondent noted that associations affiliated with their companies (i.e., AEQ) took part in this process. Four respondents from this study, on an individual level,

did not take part in formal consultations held by Transport Canada. One respondent claimed to have taken part in two consultations with Transport Canada.

Overall Effect on Whitewater Rafting Operations

In general, all respondents reported that the new regulations were not adversely affecting commercial whitewater rafting in the Ottawa Valley. One respondent commented that, "No one on the Ottawa is going to really be affected by the actual operating standards of this proposal, which isn't going to push the industry to improve" (Guide Manager). Respondents said the regulations were not viewed as improving the current standards within the Ottawa Valley rafting industry. Respondents reported two main reasons why these regulations were not set to a higher level. First, they perceived that the government wanted to create regulations that would govern commercial rafting in all of Canada. This approach therefore needed to be holistic and cover a wide variety of industries operating on a variety of rivers, and in a variety of styles. One respondent believed that the government had to set the regulations to the "lowest common denominator" across the country as the minimum standard. It was believed that the government did this to ensure that it would be feasible for companies that did not already conform to these regulations to adjust their businesses and programs to meet the new regulations. One respondent saw the role of owners as an overall negative influence on the new regulations as:

> Unfortunately Transport Canada is the subject matter expert and that's where it is falling down. They have talked to a bunch of subject matter experts and unfortunately brought in owners to do it, and trust me, there are lots of really good

> owners and there are lots of really bad owners, but owners are only interested in keeping it to the lowest common denominator. (Guide Manager)

The second reason that the standards within the regulations are constrained at a lower level is due to the organizational structure of Transport Canada. One respondent noted:

> Transport Canada is trying to make this fit into their boat Captain scenario where people are paying for a service, a service aboard a vessel, where the vessel needs to be staffed by a crew or a captain. They are trying to fit us into this old boy ship routine, and because people are paying to be on these boats they are considered commercial vessels. (Owner)

Two respondents saw the regulations as an attempt by Transport Canada to fit commercial rafting into their Marine Regulations format. Respondents suggested that a more appropriate format would be the former CRC regulations or a set of regulations similar to British Columbia's *River Rafting Regulations*.

Three respondents saw some benefit in having Transport Canada regulate the rafting industry. The main benefit mentioned was the legitimacy of being a recognized and regulated industry by the Government of Canada. One respondent saw that the future of rafting would become:

> More of a recognized thing to do and it's like when you step into a gondola at a ski resort and if it is inspected and maintained by a transportation or government agency, okay that thing is probably safe to jump into. (Guide Manager)

However, respondents were also concerned that the low level of minimum standards would not have the same influence on companies to improve because of their legitimacy

and static nature. Two respondents thought that some companies would no longer feel the pressure to keep up with each other, which is one of the reasons the Ottawa Valley industry has such high standards. Two respondents feared that companies could use the Transport Canada regulations as an excuse for not working towards a higher level of standards. In some cases respondents thought this was a highly negative effect of the new regulations.

Additionally, all respondents noted their displeasure at having to do more "busywork" because of the need to register all the rafts. Some companies have over 120 rafts that would need to be registered with the Government. In addition to registering each raft, a Transport Canada serial number needs to be affixed in two locations on each raft. Respondents saw no direct relation between having a Transport Canada serial number and making the Ottawa Valley rafting industry safer.

Mandatory Swiftwater Rescue Training

The new regulations state that overnight excursions in class III or above waters must include a person who holds a swift-water rescue certificate with theoretical and practical training in the skills and knowledge necessary for swift-water rescues. This provision of the regulations does not have a direct impact on Ottawa Valley companies, as they do not actively offer overnight excursion on the Ottawa River. One respondent noted the significance of formal swift-water rescue training as, "The SRT [Swiftwater Rescue Technician] gives you an armory of activities which you can, an armory of ideas which you can attack the same scenario with" (Guide Manager). Five respondents saw the proposed standard of swiftwater training required as very low and non-beneficial to the industry. Respondents stated companies require some level of swift-water training,

whether it is in-house or third party. Five respondents noted that third party training was a "better way to go" than in-house training. Respondents indicated that the main reason for their preference for third party training was the standardization of curriculum and the transference of liability to these third parties. In addition, most respondents saw the *Special-purpose Vessels Regulations* as setting the industry back 20 to 25 years to the days when it was not required. Most respondents believed that at least a three-day, third party course was minimum for all active guides working on the Ottawa River. Some respondents noted that higher levels of training should be encouraged.

Quick Release Harness

Respondents were asked their opinion about the regulation that every guide on an excursion be provided with a properly sized personal flotation device with a quick release harness. A quick release harness, or safe swimmer belt, is a tool that can be used by a trained professional that attaches a rope to a rescuer and gives them the ability to self-release from the system. Responses to this question were divided into two categories. Respondents associated with companies requiring formal third party swift-water training for all their guides thought that quick release harnesses should be mandatory equipment for all guides. One respondent remarked:

> That point to me is a complete no brainer because from the level of swiftwater rescue training which we operate in and expect of our guides and instruct, we just would never consider working in any field of whitewater without a strong swimmer belt on our lifejacket, it's just part of the uniform. (Owner)

This point is an important consideration because of the regulation's lack of a mandatory swift-water training course. One respondent said, "... if you use one incorrectly you can

kill yourself, or you can get seriously hurt" (Guide Manager). All respondents thought that making them mandatory and then not making the sufficient training mandatory would do more damage than not requiring them at all. One respondent noted that, "for them to make it mandatory that they wear one, and not be mandatory that they be trained in it, that puts them at risk" (Guide Manager). The predominant method of training for a quick release harness system is done during a swift-water rescue course, which the new regulations do not require for guides on the Ottawa River.

One respondent thought about the quick release harness system was that it was more dangerous in general. "My personal opinion is that they are more dangerous than they are worth... the danger with a quick release belt is that people are more likely to use them if it is there, and get themselves in danger" (Guide Manager). One respondent associated with a company that did not require mandatory third party swift-water rescue training predominantly expressed this view. In addition, these respondents saw the use of swift-water rescue harnesses as not being necessary on the Ottawa River. One respondent had this to say about quick release harnesses on the Ottawa River:

> The only time I could have seen a strong swimmer belt coming in handy is this year when we had one of our guides go into the hole at the Lorne, and went for a five-minute recirculation. I cannot set a strong swimmer belt at every hole on the river, because we will never get down the river, so its one of those things, that I think is not a bad idea, because it's a tool whatever, is it going to make anything safer, no! (Guide Manager)

Record keeping

Meticulous record keeping by companies is required under the new regulations. Respondents indicated that this record keeping was a non-issue, considering the present levels of record keeping already occurring on the Ottawa River. All respondents thought that this provision would only create more "busywork" and office related work for their organizations. The one issue they identified with the record keeping regulation was that no format for records was outlined. Respondents were particularly concerned that there was no mention of whether the records should be kept electronically, in loose-leaf format, or in a bound book. They questioned the validity of records kept electronically and in loose-leaf format as they were interpreted to be less reliable than records kept in a bound book. They indicated this uneasiness because records not kept in a bound book or filing system could be rewritten and modified more easily than those records kept in a bound book of filing system.

Enforcement

The regulations are to be enforced by the Small Vessel Inspection Program, conducted by Transport Canada Marine safety inspectors who can designate local enforcement officers (police and conservation officers) to respond to compliance and safety issues. All respondents saw the proposed methods of enforcement as being potentially ineffective. Large companies and companies registered with the government are thought to be the main focus of enforcement of these regulations and are the ones more likely to be audited and spot-checked because of their higher levels of customer participation. Respondents believed that these companies tend to have consistent programs that operate in already highly regulated ways. Respondents worried that smaller

companies operating out of view of Transport Canada and the public eye are the ones to be concerned about, but which will be less affected by the enforcement of the regulations.

All respondents expressed concern that the knowledge and expertise of the individuals (Transport Canada inspectors and policing forces) enforcing these regulations would be insufficient. All respondents were concerned that enforcement officers would easily interpret situations in the wrong manner and not have enough subject expertise to accurately enforce any of the regulations for the betterment of the companies or the industry. All respondents indicated that the enforcement of these regulations would occur most effectively through self-regulation and enforcement among companies. This is similar to the way the industry on the Ottawa River is already operating.

First Aid Kit Contents

Respondents were asked to give their opinion on the contents list of required items for a first aid kit under the new Transport Canada regulations. Every respondent thought these minimum requirements were, "woefully inadequate" (Guide Manager), or very basic. One respondent believed that the minimum requirement was sufficient supplies for one guide to have in their pocket, however, not enough supplies for an entire rafting operation. Respondents indicated that these minimum requirements would not have any bearing on the minimum supplies required in some potential situations. All respondents believed that first aid kit contents should reflect the ability of the people using them. Respondents also believed that these low levels of requirements reflect low levels of first aid training. One respondent, when asked about the minimum requirements said:

> We carry a very comprehensive medical kit. We are one of the few … whitewater outfitters that has started promoting and carrying a defibrillator on our trip and other advanced medical tools, because we take all sorts of people, whatever their health issue just happens to be and we just have to deal with those. We may have to deal with those in a remote setting, for example we get people who are older male, overweight, smokers, etc, that have a high health risk for coronary disease, or cardio vascular disease, so with that we then take them on an activity which raises their exertion level and their activity level, well that then makes us seem like we are setting ourselves up as a target for someone to go into cardiac arrest. The fact that Transport Canada says you need to have this many Band-Aids and this many triangular Band-Aids all of those requirements are well and truly exceeded in a combination of (a) the medical equipment that we bring with us and, (b) the medical training that we demand of our staff. So again would I like to see that higher, well sure, it can be as high as it would like to be. I don't imagine that it would ever get to the point where it would exceed the things that we do and still be considered feasible. Right again the content that they are requesting we have that in each boat or each guides pocket, let alone for each trip. (Owner)

The biggest concern expressed was that these minimum requirements will actually lower the current standard used on the Ottawa River for first aid kit requirement and training.

The most prominent emergent themes will be discussed and related back to the literature in the following chapter. The relevant themes are organized under the three main research questions: influences on standards, risk management, and the *Special-*

purpose Vessels Regulations. Within each of the three main research questions, there are themes that are both specific to area and that cross into the other categories.

CHAPTER 5 – DISCUSSION AND RECOMMENDATIONS

The following discussion is framed in relevant risk management literature and the study's findings. The purpose of this case study is to explore current standards and risk management practices of the whitewater adventure rafting industry in the Ottawa Valley and the impact of the proposed *Special-purpose Vessels Regulations* on the risk mitigation practices of whitewater adventure rafting industry companies. This chapter is organized in relation to the three main research questions. This follows both the sequence of the literature review and the results sections of this research. Final recommendations for research and practice are made and are accompanied by final remarks.

The concepts of risk and risk management are central to the purpose of this study. Client attraction to risk is a central requirement in the commercial whitewater rafting experience (O'Hare et al., 2002), and needs to be managed from a variety of externally and internally administered sources (Morgan & Fluker, 2002). Within this research, the origin and influence of these sources are viewed through the standards found to influence owners/ operators and their choices for the adoption of internal and external risk management practices. Their ability to manage this risk was examined by identifying their successes and determining possibilities for improvement within overall industry. Finally, this research is timely as it includes an investigation of how new government regulations have affected one river specific industry. This study's results are divided into three distinct areas, based on the research questions. Those areas are broadly considered: standards; risk management; and the *Special-purpose Vessels Regulations*.

Adventure recreation and commercial adventure recreation, often considered commercial adventure tourism, differ in two primary areas. These two areas are the

motivations for participation (Pomfret, 2006) and the concept of whether the participant is identified as a recreationist or a client. Adventure recreationists can be seen as having motivations based on internalized rewards. Commercial adventure tourism participants, especially those participating in short-term whitewater rafting trips, have bought a service or a manufactured experience (Holyfield, 1999). These packaged commercial adventure experiences are governed by multiple sources that work towards creating suitable standards. These standards are discussed in the following section.

Standards

This study explored the multiple origins of standards that govern the practices and procedures of commercial whitewater adventure rafting operations in the Ottawa Valley. It was found that there was no common, mutually agreed upon and practiced standards within the industry. The most accurate representation of standards in the Ottawa Valley is the Canadian Rivers Council (CRC) regulations. However, the CRC is no longer operational and the regulations are not actively enforced or modified by the regulating agency. In addition, many respondents mentioned that their organizations use the CRC regulations as a framework for creating their own internal regulations within their respective companies. This general finding makes it difficult to create a list of minimum standards that encompasses all the practices within the Ottawa Valley industry. For this reason, the study explored the multiple influences of standards affecting the practice of commercial river rafting.

The commercial adventure tourism environment, as described by Morgan and Fluker (2002), is a complex system of external and internal influences. They indicate that operators do not govern all aspect of the commercial adventure tourism environment.

Rather, there is a zone of operator concern and a zone of operator influence. Morgan and Fluker's model (see Figure 3) can be used as a basis for identifying the multiple paths of influence affecting the standards of a commercial adventure environment. Their model is centered on the influences affecting the client experience, whereas this study focuses on identifying and exploring the influences on standards affecting owners' and operators' risk management practices in the commercial rafting environment.

The literature identifies five main areas for the assessment of standards in the provision of outdoor adventure including: certification; accreditation; licensing; instructional/ guide awards; and government issued regulations. Four of these five areas focus on the guide as the main source for upholding standards. Within adventure recreation, research on standards is heavily focused on the quality and level of training of a guide/ instructor/ leader (Attarian, 2001; Cockrell & LaFollette, 1985; Ewert, 1985, 1987; Gass, 1999; Senosk, 1977). The role of the commercial whitewater rafting guide on the Ottawa River is much different than the role of a multi-day wilderness adventure recreation guide or leader. Ottawa River rafting guides work in a very specific industry where they are taught to manufacture a desired experience (Holyfield, 1999). In all cases these experiences are heavily controlled by company procedures and standards. These include trip time schedules, briefings, and routes (to name a few). In addition, a trip leader further manages each trip by controlling all on-water conditions. These management tools leave little room for guides to stray from their prescribed daily routines, which is the expectation of the companies. There is no doubt that guides who are highly certified and accredited will be better equipped to deal with rescue and emergency situations, and those companies requiring higher levels of guide certification

and training have higher guide standards. This being the case, guide quality appears to not be the most appropriate way to evaluate and describe the standards within the Ottawa Valley commercial whitewater rafting industry.

In the course of the research three distinct themes emerged regarding standards in the Ottawa Valley rafting industry: internal; industry; and actual standards (see Figure 4). The actual standards that a company utilizes are a combination of both the organization's internal standards and current industry standards. Internal standards can be directly related to a company's philosophy and program characteristics, and tend to be detailed and adaptive. These standards have the ability to over-power and subdue industry standards because of the control an organization has on the design and implementation of their internal standards. Industry standards affect all companies in very similar ways, mainly due to their origin (i.e., third-party and government) and design (broad and encompassing). Influences on both internal and industry standards affecting Ottawa Valley rafting were found to originate as the following emergent themes: client experience; risk and consistency; third party; companies; physical factors; accidents and incidents; river gauge; and peer practice. In many cases these influences can transcend both internal and industry standards making clear connections and delineations difficult. Siderelis and Moore (2006) recognized that whitewater rivers are some of the most challenging and complex recreational settings to manage and identify some regulation sources similar to this study's findings, such as third party associations.

This study's findings further identify a multitude of influences that create each company's actual standards. The findings show that standards are not only affected by regulating agencies and associations, but that they originate from both direct and indirect

routes. Typically, the direct routes of influence (insurance brokers, laws, and health and safety codes) are those most easily identified because they are active and sanction-provoking. At the opposite end of this spectrum are the indirect route influences that affect standards. Indirect influences (peer practice, the client experience, and consistency) are harder to identify and monitor from an outsider perspective. They are harder to identify due to the isolated manner in which each company internally responds to the influence. In most cases, companies are able to respond (by the decisions they make) as they see fit to indirect influences without the need for outside approval.

The influences towards standards presented in this study are specific to the Ottawa Valley industry. However, many influences are transferable to other industries, especially within Canada. This view of standards and how they are influenced offers great insight into the complexity of regulating river based adventure recreation activities. Regulating agencies, outfitters, and the public need to critically consider the multiple influences that their actions will have on the management of river settings for all parties involved. The following section discusses how standards and risk management in the Ottawa Valley relate to prominent literature on the subject.

Risk Management

Litigation cases against adventure recreation companies have increased the necessity for transparent and effective risk management schemes. Rafting companies in the Ottawa Valley recognize this movement, and have acted in response to increased litigation based on the views of company owners and managers. Risk management theory encapsulates the framework for this research in conjunction with the exploration of existing standards and new third party regulations in the Ottawa Valley rafting industry.

Two theoretical models describing the factors of risk mitigation and the use of risk management tools were explored to describe the industry's ability to mitigate risk. In addition, supplementary studies on risk management focusing on whitewater rafting, commercial adventure, and guide proficiency contextualize this study.

The overall theme found in this research is that the Ottawa Valley rafting industry has highly effective risk management standards, based on the views of industry owners and guide managers. The two main reasons for these high standards are due to the watchful eye of other companies and the high volume of rafting, the maturity of the industry in consideration of the influence of the CRC. Because of these two reasons, the Ottawa Valley rafting industry has been able to balance the levels of perceived and actual risk that it offers its clients during a program. Cater (2006) identifies that one of the main reasons risk management exists is that participants hand over a significant part of the responsibility for risk to the adventure providers. Rafting clients have little say in the risk and the situations they encounter on the river during commercial rafting trips.

Company consistency in program delivery was found to be essential to the idea of necessary risk and the client risk experience (Cater, 2006). Companies set up their programs under the guidance of their risk management tools such as trip leaders, briefings, waivers, and consistency. By incorporating these risk management tools into their practice, companies can ensure they are adequately managing the necessary risk needed for success in their programs.

Many whitewater rafting operations seek to increase the perceived risk while reducing and/ or eliminating the actual or real risk. A company's proficiency in this process offers clients the necessary risk experience they seek through adventure

recreation. Csikszentimihalyi (1975) offers the theory of flow to describe the feelings of "fusion and fluidity" (p. 318) felt by individuals who experience "complete involvement" (Cater, 2006, p. 36) in an activity. To optimize the client experience, adventure companies need to balance the necessary skills and inherent challenge of each situation in which they place their clients.

Due to the all-encompassing nature of risk management (Cloutier, 2000), adventure companies seek to negotiate risk through all aspects of their program delivery. Brown's (1999) Adventure Risk Exposure Model (see Figure 1) can be used as a framework to describe the multiple elements used in the negotiation of risk, and allows for inductive comparison with the Ottawa Valley whitewater rafting industry's practices. In terms of risk management, this research focused on what Brown calls the risk responses of participant preparedness and the adventure environment. These two categories of risk responses highlight companies' methods for negotiating risk in the adventure setting. Within the industry, companies do not negotiate risk in the same manner or to the same standard. Some companies exhibit lower levels of risk exposure than others, and respond to their perception and understanding of risk differently.

Participant preparedness in the Ottawa Valley rafting industry initially occurs in the forms of marketing and waiver/ release of liability forms. These tools allow companies to communicate the risk to participants in various manners. There are differences in how companies market their risk, through outlets such as websites, flyers, and printed marketing which is suited to attracting participants rather than communicating risk. Clients encounter the realities of risk when they arrive at the rafting company, being faced with their waiver and release of liability forms. At this instance the

company has an insurance dictated requirement to inform its clients of the risks associated with the activity, and to ensure that clients have read, and understand the waiver. Waivers and release of liability forms are the primary method by which companies provide the detailed communication of risks (Holyfield, 1999). The critical issue with waivers and release of liability forms is that they do not ensure comprehension of the material; the forms only offer the information for those who take the time to read them. All companies ensure that they are covered legally by asking clients if they have read and understand the waiver. However, respondents noted that clients generally did not spend adequate time in this process therefore compromising the comprehension of risk.

High-functioning commercial rafting trips are designed to be sequenced and consistent in their program delivery and quality (Holyfield, 1999). On the Ottawa River some companies do exhibit higher levels of consistency and program delivery than others. Participant experiences are supposed to be meticulously planned to be consistent with internal and industry standards. Those companies who offer the most consistent programs thereby ensure they have the most rigorous risk management practice. However, this does not mean that consistent companies are the safest; they are simply best able to adhere to their set risk management protocols for program delivery. Internal practices and standards can be seen as a point for differentiating among companies with highly consistent program delivery and those with lower levels of program consistency.

In addition to consistent program delivery, Brown (1999) recognized certified guides as another tool companies use as a risk response. Reference to guide certifications, accreditation, and experience is often cited in the literature as a focus for ensuring safety

and consistency in a leader (Attarian, 2001; Cockrell & LaFollette, 1985; Ewert, 1985, 1987; Gass, 1999; Senosk, 1977). Guide certifications and qualifications on the Ottawa River were found to be company specific and based on several variables. Most notable were company philosophy and owner involvement, rather than only industry "best practices." Guide training varied widely between companies. In general, those companies with higher standards for guide training and guide requirements were better suited to higher levels of program consistency and client safety. Those guides with more practical experience and training were better able to anticipate, prevent, and mitigate risk while on the water. Based on the findings of this study, those companies with less experienced guides and lower guide standards were perceived as a greater liability to the industry and their guests than companies with higher levels by interviewees.

Not within the focus of this research were Brown's (1999) risk responses of participant characteristics. This exclusion is a result of the makeup of the commercial rafting clients' characteristics. Rafting clients are not limited to their participation on any characteristics other than weight (generally 90 lbs for high adventure rafting, 45 lbs for family rafting), and sobriety (must be sober). One concern within participant characteristics that would have added depth to this research, would be to examine how medical considerations are elicited from clients by rafting providers, and to what degree they are considered in the risk management of their program delivery. Within the Ottawa Valley industry, medical screening can take on many forms. For example, four of the five companies' medical screening procedures include a quick oral question about the medical history of the participants at the river put-on by the guides. In no case will a participant be denied a trip based on their medical needs. Therefore, these medical history inquiries

are only for the benefit of the guides, who have a duty to take the clients down river regardless of the considerations. This quick oral inquiry does not adequately disseminate the possible medical issues of participants to the guides and the trip leader with enough notice for the rafting provider to adequately address the possible implications to their service. Further research into the participant characteristics of commercial adventure recreation would be a beneficial addition to the risk management literature.

The Adventure REACT Model (Brown, 1999) identifies three judgment paths as the critical points in the risk management process (see Figure 2). The three options Brown describes are to opt in, opt in conditionally, and to opt out. Applying this model to the owners and managers within the Ottawa Valley rafting industry helps to explain why there are both differences in risk management protocols and in the perceived quality of company specific risk management practices. Ultimately, the final judgments (*risk recognition* and the *evaluation of risk*) towards opting in or opting out of risk management practices are left to the owners and managers with the consideration of industry standards and external policy requirements (i.e., insurance and government). The Ottawa Valley industry's high level of ability to manage risk makes it difficult to use this model to illustrate the three main processes at work, in a generalized manner. However, singling out one recently developed very particular example of motorized rescue and the use of motorboats, offers insight into the processes of Brown's model. Motorboat rescue was initially implemented because operators *evaluated* the risk of running one particular rapid (i.e., Coliseum) as high, and *adjusted* their program by negotiating this risk with motorized rescue. Each company evaluates this risk to different degrees and reacts with their *judgment* to opt in, conditionally opt in, or opt out. As seen on the Ottawa River,

those companies that have opted in focus their programs towards fully incorporating motorized rescue as an active part of their overall risk management. By fully opting in companies enter into what Brown calls the *risk monitoring loop*. The companies who conditionally opt in are continuously *adjusting* their motorized rescue efforts, with an overall lack of risk management consistency for motorboat use. Finally, those companies that opt out do not acknowledge the need or are satisfied to *track* the risk for incorporating motorized rescue into their risk management until it is proven to them to be necessary.

Special Purpose Vessels Regulations

The timely enactment of the *Special-purpose Vessels Regulations* and their affect on the whitewater adventure industry offer a unique opportunity for this study to research the impacts of external regulations. The literature on the subject of Canadian rafting regulations was limited, however, previous government regulation schemes (BC Rafting Regulation and Maritime Rule 80) were discussed in the literature review in addition to rafting regulation schemes from select countries (New Zealand and the United Kingdom). In light of the lack of research on external commercial rafting regulations, this study's research design was tailored to capture one case (Ottawa Valley Industry) and offer insights into the perceived effects that new national regulations will have. The perceived effects offered in the results section cannot be considered indicative of national trends for other commercial river rafting industries. However, the findings of this study can be used as a benchmark for one progressive commercial river rafting industry. The Ottawa Valley industry was found to be progressive because, as a whole, it works towards continuous action and reform, through self-directed undertakings. As a whole, the Ottawa Valley

commercial whitewater rafting industry is high functioning and has been able to self-regulate to a higher standard than the enacted *Special-purpose Vessels Regulations* will require.

The most prominent finding from respondents was the view that these new regulations will not significantly influence the Ottawa Valley rafting industry. However, respondents with experience outside the Ottawa Valley industry felt that the regulations will cause other commercial rafting operations in the rest of Canada to raise their standards and practices. Accidents in British Columbia and Alberta were the main reason the *River Rafting Standards* and subsequent *Special-purpose Vessels Regulations* were created by the Canadian Government.

With that in consideration, the Ottawa Valley is not without its problems. However, the Ottawa Valley's problems tend to be a less significant focus for government regulators' attention, as the problems are not related to core safety fundamentals of the rafting discipline. Core fundamentals can be considered the simple operational standards (briefings, good equipment, guide training, etc.) rafting providers use for the safety of their clients and staff. The new regulations were found to be lacking in influence for the Ottawa Valley rafting industry, because Transport Canada is not the subject matter expert, and the structure of Transport Canada's regulating and enforcing procedures does not adequately address adventure recreations' and adventure tourisms' regulation needs. Companies and organizations operating commercial whitewater rafting should not be regulated via the same policies, procedures, and systems that Transport Canada uses to regulate commercial passenger vessels and cargo-container ships. There are significant concerns as to whether Transport Canada and its rafting regulations will be

fluid enough to adapt to the always-changing adventure recreation and tourism market's needs, for both outfitters and participants. Because Transport Canada is not the subject matter expert, they will not be able to adequately respond to changes and trends within the industry.

It is important to look critically at why a national government agency (Transport Canada) invested significant monetary resources and time into re-writing regulations that are less stringent than what previously existed. The non-operational *River Rafting Standards* were more rigorous than the new *Special-purpose Vessels Regulations*. Democratic governments, in a utopian view, are set up to work for the people and should represent the people's needs. It is difficult to see how these regulations are working for the betterment of the participants of commercial rafting trips when they are not raising the minimum safety standards, but are instead creating minimum standards that even companies with the lowest safety standards, are able to match.

Respondents with experience in dealing with other types of Transport Canada regulations have expressed concern as to the appropriateness of a government agency regulating commercial recreation. Some believe that regulations will only become stricter by possibly falling into the Transport Canada operational framework, where guides are considered Captains and must obtain their Transport Canada Captain's qualifications in order to guide. It is believed by those within the industry that this could lead away from the quality control that some operators have instilled within their companies and in addition could become a great hindrance to companies employing large numbers of guides for seasonal work. The Ottawa Valley industry has significant autonomy, in terms of the influence on it, from regulating authorities. However, the new government

regulations are another step on the path for the Ottawa Valley to become a regulation saturated adventure recreation industry such as those seen in New Zealand (Chisholm & Shaw, 2004).

Government intervention into commercial pursuits would superficially be met with initial opposition. However, within the Ottawa Valley industry, mixed attitudes surround these new regulations, the most predominant being that these regulations will not change anything for rafting businesses and operations. However, some respondents believe that the government intervention will offer validity to the activity of commercial river rafting as a recognized and government regulated pursuit. The acknowledgement of rafting as more than a hedonistic and fringe pursuit will legitimize its practices and future business recognition.

Some concern exists within the industry towards those companies that are seen as being of lower quality standards than others. In many cases there is some validity to these concerns. The *Special-purpose Vessels Regulations* will not be an effective tool to confront those companies that feel their lower standards are adequate. However, specifics within the regulations will offer some changes to inadequate rafting practices. For example, mandatory Swiftwater Rescue Technician and strong swimmer belts on all guides, detailed record keeping requirements, equipment standards, and first aid kit requirements will all push companies towards better practices.

Based on the studies findings and the relevant literature the following recommendations for research and for practice have been designed for both the Ottawa Valley whitewater adventure industry and future researchers.

Recommendations for Research

The following recommendations for future research can be made based upon this study:

1. Communication of risk.

Research on the communication of risk is an essential component to understanding the full extent of the risk management discipline. Further studies need to focus on the effectiveness of methods used in attracting and communicating risk to clients in adventure recreation. The whitewater rafting industry is well suited as a case study for this research to occur. The steady number of clients participating in daylong rafting trips and the opportunities that pre and post trip briefings and scheduled meeting times allow for the natural adaptation of research tools and researchers into the whitewater rafting schedule. For rafting in particular, research that evaluates the portrayal of risk through media (posters, flyers, websites, commercials), onsite experience descriptions (trip briefing, waiver forms) and actual experiences would offer insight into the communication of risk.

2. Client visualization of risk.

Recreation participants have been previously studied for their attraction and motivations towards risk in adventure activities. Research has focused on the psychological and emotional ways participants negotiate the risk in activities. However, few studies have focused on the differences between participants of multi or extended programs and short-term commercial high adventure programs (day rafting). Extending this further, research needs to be dedicated to studying the visualization of risk by short-term commercial clients who have little previous experience and knowledge of the risk in the adventure program to which they are committing themselves. Research into the

visualization of risk will offer a more complete understanding of how to better adapt short-term commercial adventure experiences in terms of risk and risk management practices. This will further develop strategies for program development and implications, which may illuminate some of the areas for needs in terms of regulation and governance.

3. Study other river industries, and the value of studying one river industry.

This study focused on a regional rafting industry (Ottawa Valley), which in most cases involved companies with practices on a specific river (Ottawa River). The community of companies within the Ottawa Valley has etched out a unique rafting industry. By focusing on this one industry, this qualitative case study was able to highlight industry and river specific concerns and considerations, such as motorized rescue, the CRC, and guide your own rafting. However, because of the new *Special-purpose Vessels Regulations* and the national influence they will have, looking beyond one river industry will be essential to monitoring the impact of these regulations on the vitality and safety of Canadian commercial whitewater rafting.

4. Are commercial adventure programs adjusting their program specifics to match market and client demands?

As the needs and allure of adventure recreation change, research on commercial adventure recreation must consider if and how adventure providers are correspondingly adjusting their programs. As was seen in this research, the history of practice for a company can be an influential deterrent to program changes and adapting new program elements. Program changes are often viewed negatively because of the highly mechanized consistency of commercial adventure recreation.

5. National research in whitewater adventure.

Focusing research on studies that seek to encompass national trends with whitewater adventure recreation would be beneficial for researchers wanting to follow various patterns within the overall industry. Beneficial trends to follow would be participation rates, demographics, locations and distances traveled for participation, incidents and injury rates, guide experience, and guide pay scales. Considering that national government policy has begun regulating commercial river rafting, limited Canadian national research has occurred on the topic. For example, it is difficult to accurately determine the extent to which these new national regulations are going to impact the Canadian commercial whitewater rafting industry without sufficient prior research outlining its previous state.

Recommendations for Practice

The following recommendations for practice amongst Ottawa Valley white water rafting operations can be made based on the findings of this study:

1. Formalize rescue boat training and policies.

With the continued requirement for motorized rescue by insurance providers, more formalized standards and sanctioned practices need to be developed. It was found that the current motorized rescue situation was adequately mitigating the needs requested by insurance providers. However, to simply require "motorized rescue" does not effectively set out guidelines for inter-company motorized rescue interactions and driver training. With the complex and risky situations that accompany motorized rescue, guidelines need to be formally developed to legally protect drivers and companies that help each other out. As it currently stands, companies are not protecting themselves adequately by simple stating motorized rescue as a possible danger in their release of

liability, waiver of claims, assumption of risks and indemnity agreement forms. Formalized motorized rescue protocols need to be developed by the industry, and if not by the industry, then by the insurance providers to protect the drivers and companies. Some of the biggest concerns surround the legal responsibilities and implication of a company that is assisting another with their rescue. In particular, what are the consequences when one company's rescue boat injures another company's client in a rescue attempt? Currently the systems in place for driver training were found to be ad hoc apprenticeships and mentoring schemes, which do an adequate job of informally training their drivers. One particular instance was recorded where a driver had no training and experience with motorized rescue at Coliseum.

2. Industry wide, incident management plan.

A comprehensive industry incident management plan was seen to be beneficial by participants of this research. The occurrence of incidents and accidents is not uncommon in whitewater rafting. The company in command of their trip deals with the majority of their incidences that do occur. However, some incidents transcend company boundaries, and bring other players into the situation. It is not uncommon for another company to be the first on scene, or to be in a better position to help those in need. Guidelines do not exist that govern these interactions. Areas where standards and procedures could be beneficial between companies would be chain of command protocols, emergency contact sequences, how to close a rapid or section of river, calling on the resources of multiple companies (i.e., guides and trained rescue personnel), and approved statements to the media. In addition, practicing some of these possible protocols and standards would greatly help the industry as a whole if an incident were to transcend company boundaries.

3. Industry governed representative organization.

Re-open the CRC! The Transport Canada *Special-purpose Vessels Regulations* were seen as a replacement to the CRC's standards and policies. However, because of the low requirements of the Transport Canada regulations, much of the hard work and progress that the CRC made has been lost. There is currently no organization that represents the industry and acknowledges the standards that have been created thus far by the companies of the Ottawa Valley. The individual managing the CRC needs to be at arms length from the rafting companies. The board of directors should be composed of the owners and operators of rafting companies and there should be at least one formal meeting each year. When the industry works together it is stronger in every aspect. Therefore, creating a means to govern itself can only benefit the industry over time, especially in relation to representing itself against government and third party regulating bodies.

4. Establish higher minimum standards for guide qualifications and experience.

One of the most controversial issues amongst interview participants was the topic of necessary guide qualifications and experience. This issue is not easily solved or agreed upon because of the variety of programs run by companies on the Ottawa River. Some companies sell "professional guides" while others sell "affordable rafting" with many lying in between. The very nature of the structure of their organizations directs and limits their view on the necessary qualifications needed for their guides. In confronting this issue the term "minimum standards" does not push companies to exceed beyond low qualification and experience standards. One possibility in dealing with this issue would be to have an outside organization or government agency create a guide training level

certificate or award that gives recognition to the guides and companies that maintain high qualification and experience standards. This acknowledgement could be used as a tool for marketing and recognition of companies striving for the highest standards.

5. Create a system to monitor industry wide incidents, injuries and accidents.

Incidents and accidents can blemish the company name and affect business in a negative way. However, reflection on incidents and accidents can offer significant value to risk management plans and company or industry protocols. A database or system to manage injuries, accidents, incidents, etc., could offer the companies, the industry and researchers a tool for examining trends and mitigating risk longitudinally. One possible option would be for an industry-sponsored organization to administer incident report forms to companies at the beginning of the season and then collect a copy of them at the end. Inputting the data into an accessible and anonymous system would allow that information to be used in a shared capacity.

Concluding Summary

The mitigation of risk in adventure recreation settings is the foundation for this research. This study created the case for looking at not only the tools for risk management, but, also at the influences on the owners and operators, for creating and managing risk within their commercial adventure programs. Standards are a starting block to analyzing the capacity to which companies embody their specific and formalized risk management practices. In addition, new government regulations offer insight into one avenue of third party influence and the future of regulating the commercial rafting industry in the Ottawa Valley.

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Appendix A: Association for Experiential Education Accreditation Process

Phase I – Initial Application

Step 1: Organization contacts the AEE Staff Accreditation Administrator.

Step 2: AEE provides materials: Cover Letter, Fact Sheet, Preliminary Application, and Organization Profile Form.

Step 3: Organization completes Preliminary Application and Organization Profile, pays preliminary application fee, and receives current *Manual of Accreditation Standards for Adventure Programs, Self-Assessment Workbook* on disk, and *Policy and Procedures Manual*.

Step 4: Organization attends Accreditation Workshop (registration included in the fee paid in step 3; this fee does not include food and lodging for the workshop).

Phase II – Self-Assessment

Step 5: Organization undertakes self-assessment process.

Step 6: Organization submits self-assessment report with formal application fee within 18 months of processing the Preliminary Application (Step 3).

Step 7: Liaison Accreditation Council members and AEE Staff Accreditation Administrator review report, in general, for completeness.

Phase III – Evaluation

Step 8: Accreditation Council with Organization forms on-site review team, and establishes time schedule.

Step 9: Team conducts on-site review and reports findings in Accreditation Council.

Step 10. Accreditation Council liaisons review the findings of the onsite review team.

Step 11: Accreditation Council sends the report to the Organization for response.

Step 12: Organization submits a response to Council.

Phase IV – Formal Accreditation and Continuation of Accreditation

Step 13: Accreditation Council (entire) reviews the Organization's response.

Step 14: Accreditation Council formally acts (see types of action).

Step 15: Organization evaluates the process.

Step 16: Organization submits annual status report and pays annual fee.

Step 17: Organization applies to Accreditation Council for renewal of accreditation.

(van der Smissen & Liddle, 1997) as seen in (Gass, 1999).

Appendix B: Special-purpose Vessels Regulation – Proposed Regulatory Text

PROPOSED REGULATORY TEXT

Notice is hereby given that the Governor in Council proposes, pursuant to paragraph 35(1)(*e*) (see footnote a), section 100 and subsection 120(1) of the *Canada Shipping Act, 2001* (see footnote b), to make the annexed *Special-purpose Vessels Regulations.*

Interested persons may make representations to the Minister of Transport, Infrastructure and Communities with respect to the proposed Regulations within 60 days after the date of publication of this notice. All representations must be in writing and cite the *Canada Gazette*, Part I, and the date of publication of this notice, and be sent to Kevin Monahan, Project Manager, Regulatory Services and Quality Assurance, Marine Safety Directorate, Department of Transport, Place de Ville, Tower C, 330 Sparks Street, Ottawa, Ontario K1A 0N5 (tel.: 613-998-8207; fax: 613-991-5670; e-mail: monahak@tc.gc.ca).

Ottawa, July 30, 2007

MARY O'NEILL - *Assistant Clerk of the Privy Council*

SPECIAL-PURPOSE VESSELS REGULATIONS

INTERPRETATION

1. The following definitions apply in these Regulations.

"class 3 or above waters" means waters that have rapids with moderate and irregular waves or that have rapids that are stronger, have more obstructions or are otherwise more difficult to navigate than rapids with moderate and irregular waves. (*eaux de classe 3 ou plus*)

"guide", in respect of a vessel, means its master. (*guide*)

"helmet" means a helmet that has a fastening system and that is designed to protect from injury the head of a person who wears it from the mid-line of the forehead to the back of the crown of the head. (*casque protecteur*)

"personal flotation device" means a life-saving apparatus that meets the standards for type I personal flotation devices set out in CAN/CGSB-65.11-M88, *Personal Flotation Devices*, published by the Canadian General Standards Board, as amended from time to time. (*vêtement de flottaison individuel*)

"small-vessel lifejacket" means a lifejacket that meets the standards set out in CAN/CGSB-65.7-M88, *Lifejackets, Inherently Buoyant Type*, published by the Canadian General Standards Board, as amended from time to time. (*gilet de sauvetage pour petit bâtiment*)

"white-water vest" means a life-saving apparatus that meets the standards set out in *Supplement SC — Type V White Water PFD's* of ANSI/UL 1123-1999, *Standard for Marine Buoyant Devices*, published by the Underwriters' Laboratories, as amended from time to time. (*gilet pour eaux vives*)

APPLICATION

2. (1) These Regulations apply in respect of Canadian vessels that are inflatable and carry persons on an excursion in Canadian waters for remuneration.

(2) These Regulations do not apply in respect of motorized rigid-hull inflatable vessels.

RESPONSIBILITIES

3. (1) Every person in charge of an enterprise that engages in an excursion shall ensure that the requirements set out in sections 4 to 17 are met in respect of the excursion.

(2) A vessel's guide shall ensure that the requirements set out in sections 12 to 17 are met in respect of the vessel.

VESSELS AND EQUIPMENT

VESSELS

4. (1) Every vessel shall be of sound construction and in good condition so as to be able to withstand the weather and water conditions that may reasonably be expected on the excursion.

(2) Every vessel shall have a line that is becketed to the gunwale around the outside of the vessel or safety straps that are suitable to use as handgrips.

5. Every vessel shall be able to maintain buoyancy if any one of its buoyancy chambers deflates.

6. Every vessel shall have sufficient seating so that every person on board can be seated.

EQUIPMENT

7. (1) Every person on an excursion, other than a guide, shall be provided with a properly sized small-vessel lifejacket or white-water vest.

(2) Before January 1, 2012, a person on an excursion in waters that are not class 3 or above waters may be provided with a properly sized personal flotation device instead of the equipment required by subsection (1).

(3) Every guide on an excursion shall be provided with a properly sized small-vessel lifejacket or white-water vest or an inherently buoyant and properly sized personal flotation device that has a quick release harness.

(4) Every person on an excursion in class 3 or above waters, other than a person on an excursion on a motorized vessel that is over 6 m in length, shall be provided with a properly sized helmet.

(5) Every person on an excursion in class 3 or above waters where the water temperature is less than 15°C shall, unless the excursion is on a motorized vessel that is over 6 m in length, be provided with properly sized gear designed to provide thermal protection to the body core when a person is immersed in water.

8. (1) A first aid kit that contains the following shall be carried in a watertight container by one vessel out of every five or fewer vessels travelling together:

(*a*) 20 adhesive bandages;

(*b*) two sterile pads;

(*c*) one 10-cm × 4.5-m gauze bandage;

(*d*) one 7.5-cm × 4.5-m roller bandage;

(*e*) one triangular bandage, with a minimum base length of 100 cm, and two pins;

(*f*) one 1.25-cm × 4.5-m roll of adhesive first-aid tape;

(*g*) one pair of safety scissors;

(*h*) 60 mL of antiseptic wound solution and 10 disposable applicators, or 10 antiseptic swabs;

(*i*) a first aid manual;

(*j*) two pairs of latex examination gloves; and

(*k*) one resuscitation face shield.

(2) Every vessel shall carry a throw bag that has at least 15 m of buoyant line.

9. Every vessel shall carry, travel with another vessel that carries or be at all times within 5 km of a cache that contains

(*a*) a repair kit for inflatable vessels;

(*b*) an air pump;

(*c*) an engine repair kit and a spare motor if the vessel is propelled by a motor; and

(*d*) a spare oar with an oarlock or clip if the vessel is propelled by oars.

OPERATIONAL REQUIREMENTS

10. (1) A vessel's guide shall

(*a*) be at least 18 years of age;

(*b*) hold a standard first aid certificate as defined in section 16.1 of the *Canada Occupational Health and Safety Regulations*;

(*c*) if the excursion is in class 3 or above waters, have completed five excursions in class 3 or above waters on an inflatable vessel, other than a motorized rigid-hull inflatable vessel; and

(*d*) if the excursion is in class 3 or above waters, have completed one excursion on any type of vessel in those waters.

(2) Before an excursion is started, the guide shall ensure that he or she is aware of

(*a*) the current and expected conditions and the hazards of the waters in which the excursion will take place; and

(*b*) the contents of the rescue plan required by section 17.

11. Every overnight excursion in class 3 or above waters shall include the participation of a person who holds a swift-water rescue certificate that is evidence of their successful completion of theoretical and practical training in the skills and knowledge necessary for swift-water rescues, including training in

(*a*) selecting and using swift-water rescue equipment;

(*b*) executing swift-water rescues;

(*c*) ensuring the safety of rescue personnel; and

(*d*) identifying and managing medical emergencies and carrying out evacuations.

12. Before an excursion is started, every person on the excursion, other than the guides, shall receive a safety briefing that includes

(*a*) information about the excursion and a warning about the nature of the hazards of the waters in which it will take place;

(*b*) a description of the general safety precautions to take and the routine procedures to follow in the waters;

(*c*) details of the requirement under section 13 to wear equipment, as well as directions regarding its use;

(*d*) a description of the procedures to follow in the event of emergencies during the excursion, including casualties, persons overboard and the swamping and capsizing of vessels.

13. (1) Every person who is provided with a small-vessel lifejacket, white-water vest or personal flotation device under section 7 shall wear it when on board a vessel.

(2) Every person who is provided with a helmet under subsection 7(4) shall wear it when on board a vessel in class 3 or above waters.

(3) Every person who is provided with gear under subsection 7(5) shall wear it when on board a vessel in class 3 or above waters where the water temperature is less than 15°C.

14. Any equipment or material that is on board a vessel and that is not being used shall be properly stowed and secured in place when the vessel is moving.

15. No person may be allowed on board a vessel if there are reasonable grounds to believe that their faculties are impaired by alcohol or a drug to an extent that they might present a hazard to the vessel or to persons on board it.

16. Except in an emergency, a vessel shall not be operated

(*a*) in class 3 or above waters unless it is accompanied by another vessel, whether inflatable or not; or

(*b*) in class 3 or above waters during the period beginning one-half hour after sunset and ending one-half hour before sunrise.

17. On every excursion, a rescue plan in respect of the excursion that contains the procedures to be followed in the event of an emergency, including the following procedures, shall be carried on a vessel:

(*a*) a description of the means of communication to be used in an emergency;

(*b*) emergency telephone numbers, such as the telephone numbers of local law enforcement and search and rescue groups;

(*c*) a description of pull-out or extraction sites from which, in an emergency, persons can be transported by air or land; and

(*d*) the procedures to be followed in a medical emergency.

RECORDS

18. Every person in charge of an enterprise that engages in an excursion shall keep, for three years after the excursion, records that include

(*a*) in respect of each guide on the excursion, the name of the guide, the date of the excursion, the number of passengers on the excursion and the class of waters and a geographical description of the waters in which the excursion took place;

(*b*) information in respect of the certificates required by paragraph 10(1)(*b*) and section 11, including the name of the holder of the certificate, its date of issuance and, if applicable, the name of the institution that issued it and the endorsed propulsion method;

(*c*) the contents of the safety briefing required by section 12; and

(*d*) a copy of the rescue plan required by section 17.

CONSEQUENTIAL AMENDMENTS TO THE SMALL VESSEL REGULATIONS

19. (1) The portion of subsection 3(1) of the *Small Vessel Regulations* (see footnote 1) **before**

paragraph (*a*) is replaced by the following:

3. (1) Subject to subsections (2) and (3), these Regulations, except for Part I, apply in respect of the following small vessels:

(2) Section 3 of the Regulations is amended by adding the following after subsection (2):

(3) These Regulations, except for Part I, do not apply in respect of vessels in respect of which the *Special-purpose Vessels Regulations* apply.

COMING INTO FORCE

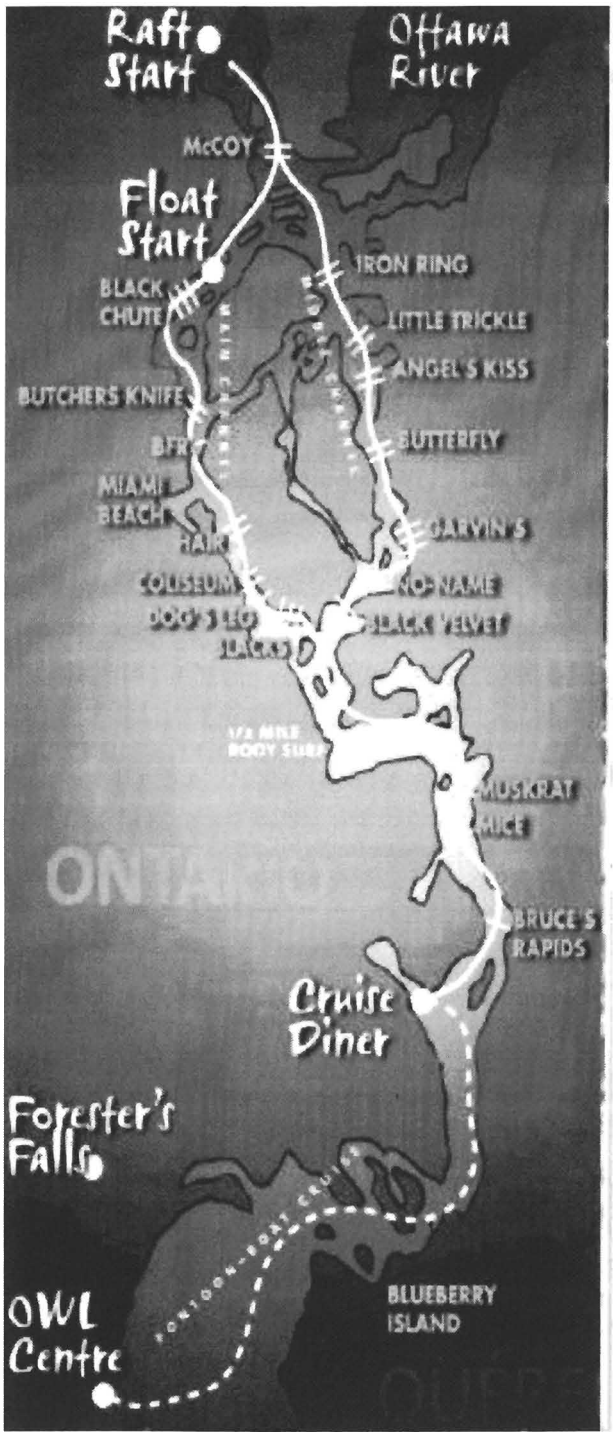
20. These Regulations come into force on the day on which they are registered. [32-1-o]

Footnote a S.C. 2005, c. 29, s. 16(1)

Footnote b S.C. 2001, c. 26

Footnote 1 C.R.C., c. 1487

Appendix C: Map of Ottawa River Commercial Rafting Run



Appendix D: Letter of Invitation

June 20, 2008

Title of Study: A Case Study of the Ottawa Valley Whitewater Adventure Industry: Perceptions of Standards, Qualifications, and Policy

Principal Student Investigator: Ryan Howard, Graduate Student, Department of Recreation & Leisure, Brock University

Faculty Supervisor: Dr. Tim O'Connell, Associate Professor, Department of Recreation & Leisure, Brock University

I, Ryan Howard, Graduate Student, from the Department of Recreation and Leisure, Brock University, invite you to participate in a research project entitled, A Case Study of the Ottawa Valley Whitewater Adventure Industry: Perceptions of Standards, Qualifications, and Policy.

The purpose of this research project is to explore current standards, qualifications, and policies of the whitewater adventure industry in the Ottawa Valley and the impact of the proposed *Special-purpose Vessel Regulations* on the risk mitigation practices of whitewater adventure industry companies.

The expected duration of participation is a one hour interview (approx.) occurring between the months of July and September, 2008. The interviews will take place at a location convenient to you. Additionally, company policy documentation (e.g., River Policies, Risk Management Plans) is being sought for this research. If you choose to participate in the study, transcripts of interviews will be forwarded to you for verification post-interview.

This research will shed light onto the continued process of risk management of whitewater adventure recreation and improve transparency of risk mitigation by whitewater adventure companies. This research is timely and pertinent due to the Canadian Federal governments proposed *Special-purpose Vessel Regulations*. These regulations are set to standardize whitewater rafting in Canada and will have implications to the operation of whitewater adventure recreation.

No companies or organizations are sponsoring this research study. Data for the study will be obtained from a variety of whitewater adventure recreation companies in the Ottawa Valley area.

If you have any pertinent questions about your rights as a research participant, please contact the Brock University Research Ethics Officer (905-688-5550 ext 3035, reb@brocku.ca)

If you have any questions, please feel free to contact me via email.

Thank you.

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Associate Professor
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tim.oconnell@brocku.ca

This study has been reviewed and received ethics clearance through Brock University's Research Ethics Board (file # 07-326]

Appendix E: Interview Protocol (Interview Guide)

Preliminary Information

- What is your experience with whitewater adventure recreation?
- What is your role and experience with this company and whitewater adventure recreation in the Ottawa Valley?
- Tell me about (your company/the company) that you work for?
- Has your company had any injuries or fatalities? Could you tell me about those incidents?
- Did those incidents cause you to re-evaluate the way in which you mitigated risks on the river? Explain why?

Standards

- What are the standards used to mitigate risk in whitewater adventure recreation in the Ottawa Valley?
- Do all the companies work together to mitigate risk? If they do then how?

Current regulations, qualifications, and Policies

- Are there any regulations that the company adheres to that are initiated from government sources? If so, what are they?
- How do these regulations impact the way you operate this business? Are there restrictions or benefits that you can talk about?
- What qualifications do you make your guides hold and why?
- What is your river policy? Who created it and how long ago was it modified?
- Do you feel that your company is mitigating risk as best as possible? Explain?

What are the differences between and among Ottawa Valley whitewater adventure industry companies' risk mitigation practices?

- Do you see any differences in the way risk is mitigated between the various companies operating whitewater adventure recreation in the Ottawa Valley?
- What would you like to see other companies do to mitigate risk better?
- Do you feel that as an industry you and the other companies could mitigate risk without outside regulations? How?

How will the proposed *Special-purpose Vessel Regulations* influence and change risk mitigation practices in whitewater adventure recreation companies in the Ottawa Valley?

- Have you heard of the Special-purpose Vessel Regulations? If you have where and how did you hear about it?
- What do you know about it?
- Have you been in correspondence with the government agencies creating the new regulation? If so, what has your role been?
- How do you think these regulations will impact your business? Why?

Other

- Do you have anything else you would like to add?

Appendix F: Introduction/ Consent Form

Date: May 24, 2008
Study Title: A Case Study of the Ottawa Valley Whitewater Adventure Industry: Perceptions of Standards, Qualifications, and Policy

Principle Student Investigator
Ryan Howard, MA Candidate,
Department of Recreation and Leisure
Brock University
(XXX) XXX-XXX;
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Faculty Supervisor
Dr. Tim O'Connell
Department of Recreation and Leisure
Brock University
(905) XXX-XXXX Ext. XXXX;
tim.oconnell@brocku.ca

INVITATION

You are invited to participate in a study that involves research. The purpose of this study is to explore current standards, qualifications, and policies of the whitewater adventure industry in the Ottawa Valley and the impact of the proposed *Special-purpose Vessels Regulations* on the risk mitigation practices of whitewater adventure industry companies.

WHAT'S INVOLVED

As a participant, you will be asked to take part in a face-to-face semi structured interview, occurring at a convenient location. The interview will be guided by research question in an approved interview guide. Participation will take approximately one hour of your time. In addition, company river policy documentation or risk management plans are being sought for this study. These documents will be analyzed to corroborate the interview study data.

POTENTIAL BENEFITS AND RISKS

Possible benefits of participation will be the inquiry into the continued process of risk management of whitewater adventure recreation and improve transparency of risk mitigation by whitewater adventure companies. This research is timely and pertinent due to the Canadian Federal governments proposed *Special-purpose Vessels Regulations*. These regulations are set to standardize whitewater rafting in Canada and will have implications to the operation of whitewater adventure recreation. There are no known or anticipated risks associated with participation in this study.

CONFIDENTIALITY

All information you provide is considered confidential; your name and job title will not be included or, in any other way, associated with the data collected in the study. You will not be identified individually in any way in written reports of this research.

Data collected during this study will be stored in the office of the Faculty Supervisor. Upon completion of the study, the data files will securely stored for seven years. Access to this data will be restricted to the Principal Student Investigator and the Faculty Supervisor.

VOLUNTARY PARTICIPATION

Participation in this study is voluntary. If you wish, you may decline to answer any questions or participate in any component of the study. Further, you may decide to withdraw from this study at any time and may do so without any penalty or loss of benefits to which you are entitled.

PUBLICATION OF RESULTS

Results of this study may be published in professional journals and presented at conferences. Feedback about this study will be available from Dr. Tim O'Connell, Department of Recreation and Leisure Studies, Brock University. He can be contacted at (905) 688-5550 Ext. XXXX; tim.oconnell@brocku.ca. Feedback will be available upon completion of this study and a copy of the study's draft will made available to participants in the study (Early 2009).

CONTACT INFORMATION AND ETHICS CLEARANCE

If you have any questions about this study or require further information, please contact the Principal Investigator or the Faculty Supervisor (where applicable) using the contact information provided above. This study has been reviewed and received ethics clearance through the Research Ethics Board at Brock University File # 07-326. If you have any comments or concerns about your rights as a research participant, please contact the Research Ethics Office at (905) 688-5550 Ext. 3035, reb@brocku.ca.

Thank you for your assistance in this project. Please keep a copy of this form for your records.

CONSENT FORM

I agree to participate in this study described above. I have made this decision based on the information I have read in the Information-Consent Letter. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I understand that I may withdraw this consent at any time.

Name: _____ Signature: _____

Date: _____

Appendix G: Letter of Gratitude

May 24, 2008

Dear Owners and Managers,

Thank you for your participation in the research project, "A Case Study of the Ottawa Valley Whitewater Adventure Industry: Perceptions of Standards, Qualifications, and Policy." As you are aware, this research project is being conducted by Ryan Howard, in the Faculty of Applied Health Sciences at Brock University.

Your participation has been essential to understanding the current standards, qualifications, and policies currently used to mitigate risk in the whitewater adventure recreation industry.

Feedback about the use of the data collected will be available early 2009 from Dr. Tim O'Connell in the Faculty of Applied Health Sciences, Department of Recreation and Leisure Studies, at Brock University. A written explanation will be provided for you upon request (contact Dr. O'Connell and leave your name and address). If you have any concerns or questions about this research project, please do not hesitate to email me at ryan.howard@brocku.ca or contact Dr. O'Connell via email: tim.oconnell@brocku.ca, or phone: (905) 688-5550. Ext. 5014. Thank you again for your participation!

Sincerely,

Ryan Howard