Designing successful stakeholder participatory processes for environmental planning: A case study of subwatershed planning in Hamilton, Ontario.

by

Mark Andrew van der Woerd

A thesis

presented to the University of Waterloo

in fulfillment of the

thesis requirement for the degree of

Master of Environmental Studies

in

Geography

Waterloo, Ontario, Canada, 2009

Author's declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

Stakeholder participation has become a valuable tool for agencies in the field of environmental planning. The potential benefits, for both agencies and individuals, of involving stakeholders in the planning process have been widely recognized and well documented. However, the success of participatory initiatives depends on the extent to which local stakeholders are interested in, and capable of, becoming involved in the process. Thus, the outcomes for each process vary as planning issues are dependent on their local context. This study aimed to evaluate the characteristics of successful stakeholder participation in planning. Specifically, it strived to obtain an understanding of successful stakeholder participation through developing and integrating an evaluative framework based on the literature with the motivations and perceptions of agencies representatives and local stakeholders. In order to achieve these goals the evaluative framework was applied to a case study of the Tiffany Creek subwatershed in Hamilton, Ontario. The case study revealed that determining and incorporating the opinions of agencies and stakeholders toward a participatory process can shed light on the characteristics of successful stakeholder participation in a given region. The characteristics of successful stakeholder participation and the integration of agency and stakeholders viewpoints into the planning process are discussed and recommendations to improve participatory processes in environmental planning are provided.

Finally, to my wife Sonja, thank you for keeping me grounded. I truly could not have completed this thesis without your positive attitude, and unfailing encouragement. This is as much your accomplishment as it is mine. You have been alongside me for the entirety of this project and I want to thank you for patience, especially in the months leading up to my completion.

Table of Contents

List of tables

List of figures

Acronyms

A.C.T.	Ancaster, Chedoke, and Tiffany Creek Subwatershed Stewardship Action Plans
BARC	Bay Area Restoration Council
BTA	Bruce Trail Association
CA	Conservation Authority
CAA	Conservation Authorities Act
DAD	Decided, Announce, Defend
DCA	Dundas Valley Conservation Area
FSRT	Field and Stream Rescue Team
GRIDS	Growth Related Integrated Development Strategy
HCA	Hamilton Conservation Authority
HRCA	Hamilton Region Conservation Authority
HWRM	Hamilton Wentworth Regional Municipality
MOE	Ministry of the Environment
MOEE	Ministry of Environment and Energy
NIMBY	Not In My Backyard
RBG	Royal Botanical Gardens
REM	Resource and Environmental Management
SAC	Stakeholder Advisory Committee

Chapter 1: Introduction

1.1   Problem context

Watershed management is an integrative concept within the field of environmental

planning. Also commonly referred to as catchment management outside of North America,

watershed management is a holistic method of managing natural systems. The term watershed

originates from the German word for "water parting"; it is appropriately named, for a watershed

is delineated by natural hydrological boundaries that focus management on the whole gathering

ground of a water system (Reimold, 1998). Consequently, a watershed management framework

requires the integration of broad physiological and socioeconomic variables: surface water,

ground water, soils, landforms, vegetation, flora and fauna within the drainage basin, and

humanity's interactions with natural systems (Reimold, 1998). In this way, watershed planning

is an ecosystem-based management strategy that acknowledges the importance of the

hydrological cycle and recognizes it as the pathway integrating the physical, chemical, and

biological processes of an ecosystem (Ivey, et al., 2002; Ontario, 1997).

Stakeholder participation has developed as a management methodology (means)

commonly used to aid in decision-making and policy development to collect perspectives found

outside their specific discipline (e.g., resources management, land use planning, environmental

planning). This tool has resulted in part because of an ideological shift from an older perception

of natural systems as predictive, linear systems and to new one which addresses the complexity

and uncertainty of the environment (Leach, et al., 2002). Interest in stakeholder participation

grew as some began to view stakeholder participation as a "democratic", "bottom-up", or "grass-

roots" methodology which could be used in decision-making and planning in an effort to better

understand the complex interrelationships and competing interests within ecosystems; this has led to the emergence of more relevant and successful plans and policies (Broderick, 2005; Hunsberger, et al., 2005; Marshall & Jones, 2005; Primmer & Kyllönen, 2006). Specifically, examples of stakeholder participations incorporation into environmental planning are well documented in research globally through the Australian Landcare programs (Bryon & Allen, 2002; Buchy & Race, 2001; Gooch, 2004; Norton, 2007), the European Union's Water Framework Directive (Jöborn, et al., 2005; Jonsoon, 2005), the United States' emphasis on watershed councils and partnerships (Duram & Brown, 1999; Kootnz, 2005; Leach, 2006; Margerum & Whitall, 2004), and through examples in developing nations such as China (Yuan, et al., 2003), Vietnam (Phuong, 2007), and Tanzania (Dungumaro & Madulu, 2003).

Stakeholder participation has also been incorporated into policy development and planning in watershed management by the Ontario conservation authorities (CA). In Ontario, the need for conservation, restoration, development and management of resources other than oil, gas, coal and minerals during the early twentieth century resulted in the formation of the Conservation Authorities Act (CAA) in 1946 (Ontario, 1990a, 20-21; Shrubsole, 1996). Since that time, thirty-eight CAs across Ontario have formed, predominately in the Southwestern and Central regions. These organizations, based on local initiation and municipal funding, are the only agencies in Ontario with administrative borders based on surface water drainage boundaries (Marshall, 1997). Thus, they represent an ecosystem based approach to environmental planning.

The goal for establishing CAs in Ontario was that they would be mechanisms for social and economic change, and would act as "a vehicle to accomplish more than water and land management" (Mitchell & Shrubsole, 1992, 18). The broad mandate of CA's was seen as a means of capturing relevant ecosystem and socioeconomic considerations that could then be

2

synthesized into land-use planning and resource management (Shrubsole & Mitchell, 1997). The

Ontario Provincial Ministry of Environment and Energy's (MOEE) 1993 publication

Subwatershed Planning (Ontario, 1993b) advocated this approach to water management,

highlighting its widespread adoption because: (1) water continuously moves through watersheds

and influences various communities, life cycles, and physical process; (2) an action or change in

one location of a watershed has potential implications to many other natural features processes

through various linkages (surface and groundwater flow); and (3) water movement does not

follow political boundaries and may require transboundary collaboration (Ontario, 1993c).

However, taking into consideration both the local environmental and social contexts in a

watershed is a complex undertaking and therefore requires an integrated, interdisciplinary

approach, including stakeholder participation, to effectively manage natural resources. This

collaborative approach is particularly needed given the complex institutional arrangements of

water management in Ontario and subsequently the need for multi-departmental approvals for

CA projects (Durley, 2007; Ivey, et al., 2002; Mitchell & Shrubshole, 1992). Thus, since their

formation, CAs have collaborated and partnered with various governmental ministries and non-

governmental organizations on projects in which interests and decision-making power have

cross-institutional boundaries. However, nearing the end of the twentieth century, agencies

began to note the importance of stakeholders in resource management and planning, particularly

in making watershed plans "everyone's plans" (Durley, 2007; Ontario, 1993b; Wallace, et al.,

1997). At this time, pressure was put on CAs to use stakeholder participation as a means of

gathering opinions and influencing the decision-making process (Wallace, et al., 1997).

Despite recognition of the need to involve stakeholders in watershed management by the

CAs and the efforts made to engage them, questions relating to the relative success of such

3

initiatives continue to surface (Durley, 2007; Wallace, et al, 1997). Particularly, questions have

surfaced challenging whether in fact stakeholders want to be included in the management and

planning of watersheds. This issue is not unique to water management in Ontario. Recently,

scholars and practitioners in other parts of the world have also begun to express concerns

surrounding the effectiveness and characteristics of commonly used participatory initiatives by

governments, resource managing agencies, and businesses (Day, 1997; Irvin & Stransbury, 2004;

Koontz & Johnson, 2004; Lawrence, 2006; Lowndes, et al., 2001; Yang & Callahan, 2007). In

actuality, since Sherri Arnstein's seminal work, "A ladder of citizen participation" (Arnstein,

1969), scholars have discussed varying approaches to stakeholder participation, frequently

disagreeing on tactics, power dynamics, and process orientation (Black & Fisher, 2001; Day,

1997; Hansen & Mäenpää, 2008; House, 1999; Jonsson, 2005; Lowry, et al., 1997; Marshall &

Jones, 2005; Norton, 2007; Steelman & Ascher, 1997; Warner, 2006). Specifically, some have

noted the abundance of control that managers have over the process; managers control which

citizens participate and how, as well as the manner in which values and concerns are shared and

how the results are ultimately reflected in the outcomes (Buchy & Race, 2001; Golobič &

Marušič, 2007; Gooch, 2004; Hunsberger, et al., 2005; Newman, et al., 2004). Thus, some

believe that "[public managers] aren't just accountable for the results, but that they are the ones

who determine how the results will be realized" (Yang & Callahan, 2007, 256).

    Consequently, whether self-perceived or not, agencies have some control over the

success or failure of their participatory initiatives. Despite the magnitude of impact which

managers have on the process, environmental planning literature lacks a systematic

understanding of the effects of agency motivations and perceptions toward the development and

implementation of stakeholder participation. Specifically, there is little recognition of how

agency perceptions affect the participatory processes and whether or not the agency should fuse its motivations for stakeholder participation with those of citizens in order to establish participation that is mutualistic and desirable.

Thus, given the lack of consensus amongst academics and practitioners as to which methods of participation are more successful, this study takes a new approach to understanding how best to include stakeholders in resource management and planning. Rather than examine the methodologies of stakeholder participation, this thesis evaluates the characteristics of successful stakeholder participation in environmental planning. In order to achieve this, an evaluative framework was developed that is based on the principles and characteristics of successful participation found within planning and resource management literature. This framework was applied to a case study in order to determine citizen and agency perceptions and opinions toward participatory processes and evaluate the characteristics of current planning initiatives within the subwatershed.

The Tiffany Creek subwatershed in Hamilton, Ontario (Figure 1.1) provides an excellent context to evaluate the characteristics of successful stakeholder participation because it is a region where stakeholders have been integrated into the planning and management process. In 2008, a stakeholder advisory committee was formed to produce comprehensive stewardship action plans for the Ancaster, Chedoke, and Tiffany Creek (A.C.T.) subwatersheds of the Spencer Creek. The goal of these studies was to provide "a clear direction and a coordinated effort among all stakeholders to implement stewardship activities in order to improve ecological functions in the regions and be a guide for sustainable development in the regions" (Hamilton Conservation Authority (HCA), 2008a, 1). Improving ecological functions in the A.C.T. subwatersheds is particularly important because of the fifteen subwatersheds within the Spencer

5

watershed these are the most urbanized subwatersheds in the Spencer Creek watershed and have

been targeted for increased development and urban intensification by the City of Hamilton

(HCA, 2008a). Thus, developing watershed plans that address the impacts of development and

help to improve existing ecological conditions and stewardship practices in the region is

important to ensure that the ecological integrity of the area is maintained and improved in years

to come. Subsequently, in their effort to formulate plans which are comprehensive and

contextually relevant, the HCA has used stakeholder participation to build its decision-making

capacity to address the numerous challenges facing sustainable watershed management (HCA,

2008a). Moreover, given the conservation authority's intentions to continue to have stakeholders

participate in development of the remaining Spencer Creek watershed action plans,

understanding the characteristics of successful stakeholder participation in subwatershed

planning and management is important to their success.

Figure 1: Map of the Tiffany Creek subwatershed in Hamilton, Ontario
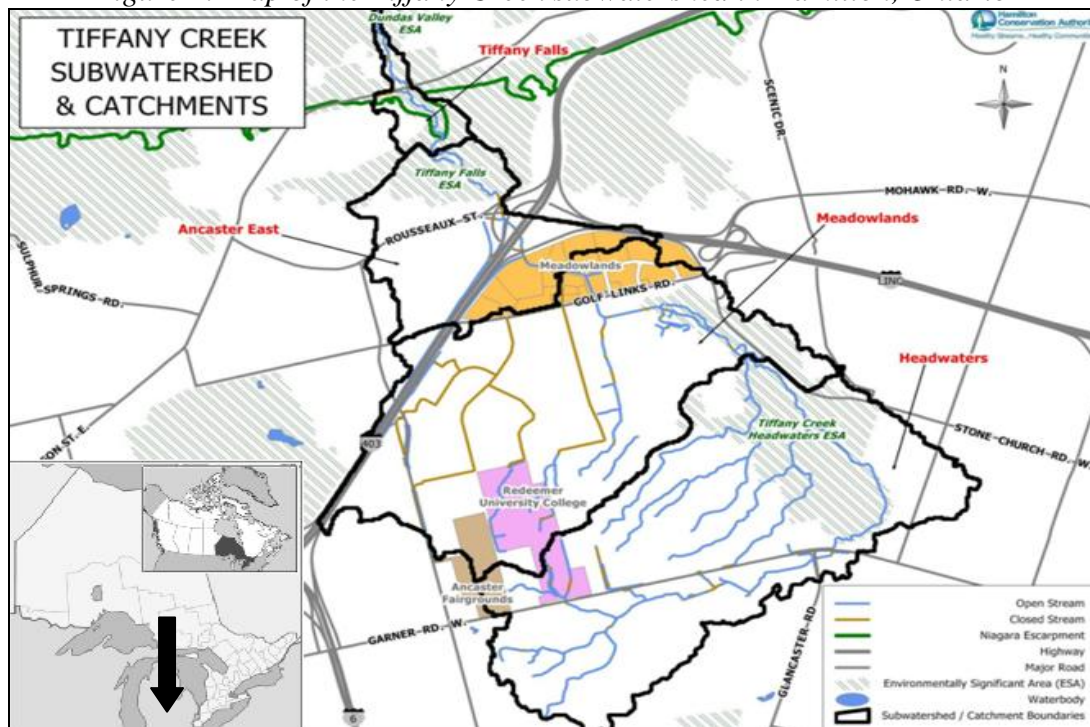
(Adapted from HCA, 2008a)

1.2   Purpose and Objectives

The purpose of this thesis is to evaluate and determine the characteristics of successful stakeholder participation in environmental planning. Within this broad purpose the objectives of this study are:

1. To review resource management and planning literature with the goal of developing an understanding of the characteristics and dynamics of successful stakeholder participatory initiatives currently undertaken in environmental planning.

2. To conglomerate the results and lessons learned from successful participatory endeavours in order to develop an evaluative framework which outlines the common characteristics of successful stakeholder participation.

3. To apply the framework in the Tiffany Creek subwatershed, Hamilton, Ontario to evaluate:

   a. The goals and objectives of the general public and the staff at the HCA relating to stakeholder participation;

   b. the willingness of citizens and the HCA staff to engage in stakeholder participation initiatives;

   c. to determine whether or not levels and characteristics of stakeholder participation being used in subwatershed management and planning meet the goals and objectives of the conservation authority and stakeholders for participating;

4. To make recommendations for improving the level and characteristics of stakeholder participation in watershed management and planning.

1.3   Thesis Outline

This thesis is presented in six chapters. Chapter Two explores the concept of stakeholder participation, discussing the characteristics and outcomes of such endeavors while also

emphasizing citizen motivations for engaging in resource management. Additionally, the conclusion of Chapter Two presents the evaluative framework used in this study to obtain an understanding of agency and stakeholder opinions on the dynamics of successful participation initiatives in environmental planning. Chapter Three outlines the research approach and methodology used to develop the framework of successful stakeholder participation, and to evaluate stakeholder participation in the Tiffany Creek subwatershed. Chapter Four describes the case study site; in particular it discusses the ecological characteristics, the socioeconomic conditions, the history of the region, the institutional relationships, and the management of Tiffany Creek subwatershed. Chapter Five synthesizes the results of interviews conducted in order to determine the desired level and characteristics for stakeholder participation in the Tiffany Creek subwatershed, based on the evaluative framework discussed in Chapter Two. Chapter Six discusses the key findings of the research, considers the current level and aspirations for participation in region, and makes concrete recommendations for improvement in the subwatershed. Finally, Chapter Six identifies the conclusions, contributions, and limitations of this thesis, as well as future research opportunities.

Chapter 2: Literature Review

2.1   What is participation?

Simply stated, stakeholder participation is a collaborative process whereby the interests

and insights of multiple stakeholders are addressed in the development, management, and

implementation of plans and policy (Koontz, 2005). Frequently, this process results in the

collaboration of diverse groups in the public and private sectors by convening periodically or

indefinitely over a number of days, months, or years in an effort to influence, or possibly achieve

consensus on, public policy and its implementation (Leach, 2006). Additionally, stakeholder

participation can be an exercise of achieving "quid pro quo" agreements amongst private and

governmental parties to resolve contentious management issues (Leach, 2006). This broad

definition of stakeholder participation reflects the fact that participation is expansive and is as

much of an abstract concept as it is a practical tool.

For the purpose of this thesis, it is important to define who should participate in

environmental planning. In this thesis, the term "stakeholder" will be used to indicate those who

should be given opportunities to participate in planning. In their 1997 study, Mitchell, Agle, and

Wood (1997) cite a classic definition that a stakeholder is "any group or individual who can

affect or is affected by the achievement of the organization's objectives" (856). This definition is

desirable because the term "stakeholder" can refer to non-human entities (e.g. organizations,

governments, ecosystems, etc.) while the terms like "public" or "citizen" mainly refer to political

constituents in a given region.   Thus, describing those involved as "stakeholders" is appropriate

for this thesis as it is comprehensive and attempts to include individuals from a wide audience.

Espousing to this definition, this thesis inherently advocates the need for participation to be

inclusive and representative. The use of this term is to include all those who should be involved

in the environmental planning process is not unique to this study but has been incorporated in other studies which have examined participatory processes for planning (Broderick, 2005; de Löe, et al., 1999; Koontz, 2005; Koontz & Johnson, 2004, Mitchell, et al., 1997).

Also, it is important to establish the terminology used to describe the methodologies of participation. Individuals frequently disagree about the definitions used to describe participatory initiatives, particularly the connotations which emerge when identifying the process as involving, engaging, consultative, collaborative, etc. (Black & Fisher, 2001; Day, 1997; Hansen & Mäenpää, 2008; House, 1999; Jonsson, 2005; Lowry, et al., 1997; Marshall & Jones, 2005; Steelman & Ascher, 1997). Thus, classifying the various typologies for stakeholder participation is important in order to ascertain the characteristics and associated outcomes of a methodological endeavor. For this thesis, the term "participation" will be used broadly to describe the various approaches used to incorporate stakeholders into resource management and planning.

2.1.1 Principles of participation

Although broad in scope, subscribing to a participatory approach often involves acceptance of the following four principles:

(1) Capacity building: through utilizing stakeholders, agencies actively seek experience, knowledge, and understanding of various individuals and groups in order to respond effectively to a collective problem and improve decision-making (Broderick, 2005; Beirerle & Konisky, 2001; Durley & de Löe, 2005).

(2) Power sharing: participation is a pluralistic exercise of power sharing whereby stakeholder interests are valued and heard. Power sharing does not inevitably mean that equal power is given, however it is a process of democratizing resource management (Day, 1997; Mitchell, 2002; Primmer & Kyllönen, 2006).

(3) Intrinsic valuation of stakeholders: whether perceived or not, by incorporating

stakeholders into management practices agencies are acknowledging various interests and

differing viewpoints (Day, 1997; McCool & Guthrie, 2001).

(4) Autonomy: where stakeholders are given a chance to voice their concerns and ideas

and are listened to, they often take pride in a policy or program, which can result in a

perception of self-reliance and ownership (Black & Fisher, 2001; Day, 1997).

2.1.2 *History of participation*

Participation in resource management and environmental planning arose in response to

early twentieth century management practices wherein policy-makers and managers solely relied

on the knowledge of professionals and academics to solve resource issues. Consequently,

decisions were made by a small number of managers using a top-down supposedly objective

approach based on scientific research (Leach & Pelkey, 2001; Marshall & Jones, 2005). As

such, managers maintained legitimacy by being reservoirs of knowledge.

Beginning in the mid-twentieth century, increasing evidence arose to support the belief

that natural systems interact within a complex web of positive and negative feedback loops.

Scholars began to call for the adoption of holistic strategies that integrated various disciplines

and agencies in order to address the uncertainty and complexity found within the environment

(Day, 1997; Garin, et al., 2002; Lane, 2005; Leach & Pelkey, 2001). This shift, which viewed

natural systems as dynamic and open, recognized the importance of incorporating various factors

—multivariate habitat influences, varied life histories, biotic interactions, geomorphic change,

and so on —into management frameworks (Kay, et al., 1999; Ritcher, et al., 1997).

Subsequently, emphasis began to be placed on the importance of integration and ecosystem-

based management (Kay, et al., 1999; Lane, 2005; Wallace, et al., 2003). Although this shift

11

called for the integration of various disciplines, it did not explicitly advocate for the incorporation of stakeholders into management strategies.

However, in the late twentieth-century emphasis began to be placed on the need for adopting more egalitarian and proactive alternatives to technocratic, agency-dominated management approaches (Leach & Pelkey, 2001; Tuler & Webler, 1999). Specifically, two conferences played an influential role spurring the adoption of more democratic processes in resource planning, the 1983 World Commission on the Environment and Development and the 1992 United Nations Rio Earth Summit. The documents that resulted from these conferences, *Our Common Future* and *Agenda 21* respectively, advocate for incorporation of stakeholders in management and planning so that the knowledge, views, and concerns of stakeholders could be addressed and potentially incorporated into the process (Buckingham & Theobald, 2003; Hansen & Mäenpää, 2008; Læssøe, 2007; Poncelot, 2001; Shrubsole, 1996; Warner, 2006). Specifically, Agenda 21 "refers to the need for all levels of government to develop capacities to serve all people's needs" (Shrubsole, 1996, 332). As a result, the inclusion of stakeholders into the process has become increasingly valued and interest has been placed on using stakeholder participation as a pivotal tool in capacity building for sustainability planning (Buckingham & Theobal, 2003).

The role of the stakeholder in resource management has gradually shifted from traditionally passive to requiring active participation in decision-making (Summerville & Adkins, 2007). In fact, planners in the last decade have experimented with several different group processes designed to encourage stakeholder incorporation in problem solving. This focus on stakeholder participation has occurred in an attempt to gain an understanding of multiple interests among varying groups, increase legitimacy of plans and projects, and create consensus

12

on contentious community issues (Lowry, et al., 1997). As a result, many management methodologies presently used in resource management and environmental planning—integrated planning approaches, ecosystem models, environmental assessments, watershed planning, sustainability—stress the need for stakeholder participation (Buckingham & Theobald, 2003; Eccleston, 2001; Gibson, et al., 2005; Lane, 2005; Leach, et al., 2002; Marshall & Jones, 2005; Parkinson & Mark, 2005; Poncelet, 2001).

The primary purpose for including stakeholders in environmental planning today is to improve planning practices, which will lead to increased capacity to address the complex management challenges facing practitioners (Hansen & Mäenpää, 2008; Marshall & Jones, 2005; Primmer & Kyllönen, 2006). Specifically, some have noted that participation can have a number of positive spin-off effects: the development of well informed stakeholders, increased understanding of stakeholder values and goals, greater accountability, legitimizing management strategies, more efficient implementation, and reduced levels of conflict (House, 1999; Hunsberger, et al., 2005; Jöborn, et al., 2005; Koontz, 2005; Leskinen, 2004; Margerum & Whitall, 2003). In addition, some have noted the practicality of involving stakeholders, stating that they have considerable knowledge of their environment that can help inform planning leading to better decision-making by agencies (Broderick, 2005; Hunsberger, et al., 2005). Even so, others claim it is important to include stakeholders because they are made up of those who live and work within the natural systems and as a result have a tremendous ability to impact environmental health (Broderick, 2005; House, 1999).

2.2   Methods of stakeholder participation

Although participation in environmental planning is widely accepted as an important tool, its implementation and dynamics differ significantly between agencies. Sherri Arnstein, in her

1969 article *A Ladder of Stakeholder Participation*, was one of the first to recognize this, stressing the fact that power dynamics in participatory initiatives are not unilateral but widely varied. Her early taxonomy of participation assessed the level of stakeholder power, placing various participatory approaches on a ladder. In doing so she noted that, "there is a critical difference between going through the empty ritual of participation and having the real power needed to affect the outcome of the process" (Arnstein, 1969, 217). Since then, many authors have adopted similar outlooks toward the planning process and have argued that in order for participation to be effective stakeholders should be involved at "higher" or more "meaningful" levels. Specifically, a number of authors stress the importance of having stakeholders participate in the many stages of plan and policy development by including them in proposal development, the decision-making process, program implementation, and evaluation (Black & Fisher, 2001; Buchy & Race, 2001; Day, 1997; House, 1999; Koontz, 2005; Lane, 2005; Marshall & Jones, 2005; Steelman & Ascher, 1997). Thus, many scholars recognize that there are fundamental differences to participatory methodologies. While some processes include stakeholders to obtain input through a "review and comment" processes (symbolic participation), others provide opportunities for stakeholders to become meaningful contributors to the process through decision-making, partnering, and so on (substantial participation).

2.2.1   *Structured institutional mechanisms*

Throughout the literature there appear to be two overarching forms of participation that presently take place in environmental planning. These methods are structured participatory mechanisms and stakeholder influence mechanisms. Structured participation is a specific, formally defined process where decisions and objectives may be influenced by stakeholder input but only at the discretion of an agency (House, 1999; McDaniels, et al., 1999). Within this class

14

of participation, there are two sub-groups: standard representation and symbolic participation.

Standard representation is a process whereby elected or appointed officials make decisions and

form management strategies on behalf of their constituents, presumably representing some of

their views, preferences, and interests (Steelman & Ascher, 1997). This is the traditional

approach used in environmental planning, and many who continue to advocate this structure say

that more "democractic" approaches, such as those advocated by Arnstein (1969), over-

emphasize anecdotal knowledge and experience of stakeholders (Day, 1997; Marshall & Jones,

2005). Additionally, they believe that such methods will not provide impartial, scientific

comparison and understanding of a problem (Day, 1997). Commonly, the extent of stakeholder

participation in standard representation takes the form of decide-announce-defend (DAD), which

often results in conflict, is a poor educational tool, and an inadequate persuasion method (Irvin &

Stransbury, 2004; Mitchell, 2005).

Symbolic participation is another form of structured participation. In this process,

stakeholders have the opportunity to contribute to the process, but the final outcome is

determined by the agency (House, 1999; Steelman & Ascher, 1997). This methodology is

commonly used by organizations that are required to obtain stakeholder feedback because it is a

cheap and relatively quick means for obtaining input (Black & Fisher, 2001; McDaniels, et al.,

1999; Pratchett, 1999). This process is predominately used in an informative manner taking the

shape of consultation rather than meaningful participation. Characteristically, symbolic

participation includes stakeholders late in the process in the form of DAD (Irvin & Stransbury;

Marshall & Jones, 2005). Most methods are forms of one-way communication, and can include

community surveys, stakeholder comment periods, open houses, stakeholder meetings,

stakeholder panels, focus groups, stakeholder forums, personal letters, and presentations

15

(Lawrence & Daniels, 1996; Lynn & Busenberg, 1995; Marshall & Jones, 2005, Rowe and Frewer, 2000).

2.2.2 *Stakeholder influence mechanisms*

Stakeholder influence mechanisms involve group processes that rely on collaboration and interpersonal dialogue, sometimes resulting in consensus. Within this framework, stakeholder influence mechanisms take the form of either non-binding policy making or binding policy making. The only clear difference between non-binding policy making and symbolic participation is the presence of two-way communication. However, similarly to symbolic participation, in non-binding policy making, stakeholders or groups operate within structures overseen by agencies (Steelman & Ascher, 1997). In this method, forums are provided for discussion of issues which are identified by community action groups, stakeholders, or agencies. Dialogue is conducted in an effort to promote communal understanding and facilitate management strategies that will benefit all stakeholders (Johnson, et al., 1996). This method provides face-to-face contact with the planners, helping to build relationships and empower the community (Lane, 2005).   Some examples of non-binding policy making include standard representation of stakeholders (through nomination, designation, or voting), pubic advisory committees, task forces, steering committees, and partnerships (Black & Fisher, 2001; Collentine, et al., 2002; Johnson, et al., 1996; McDaniels, et al., 1999).

Finally, the most inclusive form of stakeholder participation is binding policy making (e.g., deliberative democracy). This mechanism relies on stakeholders to actively form public policy and management strategies (Black & Fisher, 2001; Steelman & Ascher, 1997). This method is best illustrated through referenda, negotiated rule making, consensus conferencing, and partnerships (Rowe & Frewer, 2000).   These processes require open discussion and

argumentation in an effort to reach a shared vision resulting in collaborative decision-making (Collentine, et al., 2002; Lane, 2005; Rowe & Frewer, 2000). Moreover, this approach advocates equality of representation and accommodation for all people in the planning process with the goal of increasing cognitive knowledge and awareness (Collentine, et al., 2002; Rowe & Frewer, 2000).

2.3 Stakeholder motivations for participation

It is important to note that instituting a participatory program does not result in immediate success. Often, participation is plagued by a lack of representation or involvement in the planning process. Subsequently, questions arise surrounding what motivates stakeholders to participate in environmental planning. Although some evidence has surfaced to suggest that those actively engaged in pro-environmental behaviour tend to have similar socioeconomic backgrounds, other studies have concluded that such findings are inconclusive and their correlation with environmental behaviour are weak (Hallin, 1995; Jones & Dunlap, 1992; Schultz & Zelezny, 1998; Stern, et al., 1993). Therefore, if pro-environmental behaviour is not necessarily associated with one's demographic background, from where does such an interest emerge? Much research has concluded that there are specific motivations for environmental action that are not universal, but a part of each individual's unique ideology (Hallin, 1995; Manzo & Weinstein, 1987; Schultz, et al., 2005). A common motivator for stakeholder participation in environmental planning is the belief in a self-directed destiny. In particular, some stakeholders become actively engaged in the planning process because they believe they can control their own fate. Manzo and Weinstein (1987) stress this thought: "the belief that one has control over his or her own fate, as well as the feeling that one has the ability to contribute ideas and formulate policy, seems to facilitate genuine participation" (678). In some cases, those who

17

are motivated to participate not only feel this strong need for self-directed change, but also perceive low political efficacy. This combination can motivate some to act individually because they feel that using the political system to instigate change is unresponsive and futile. Therefore, in order to gain greater power and influence, they must engage outside the conventional socio-political system by joining other organizations (Klanderman, 1983; Manzo and Weinstein, 1987).

Furthermore, research regarding "green" consumption has found that many stakeholders have egoistic motivations for pro-environmental behaviour (Stern, et al., 1993). For many, acting in a responsible manner provides intrinsic value by providing a generally satisfying feeling that they are doing something "beneficial" (Hallin, 1995; Hartmann & Ibanez, 2006). In some instances, stakeholders were not primarily interested in the objective of reducing their environmental impact but decided to participate because it provided a sense of value or pleasure, similar to a "warm glow of giving" (Hartmann & Ibanez, 2006).

Additionally, some academics have concluded that individuals become engaged because of a genuine valuation of the natural environment (Hartmann & Ibanez, 2006). In their 1993 study Stern, et al., write that some stakeholders are motivated by a general love for the earth (biospheric valuation), which can stem from philosophies and worldviews that stress the intrinsic value of ecological communities (e.g., deep ecology). Also frequently referred to as eco-centric ideologies, biosphere valuation does not stress the redistribution of resources, but a restructuring of society so that worth and justice is given to the environment (Stern, et al., 1995; Garvill & Nordlund, 2002). For those ascribing to this philosophy, participation is often motivated by ones efforts to mitigate society's impact on the environment because of the need to conserve and protect natural systems. In this manner, ecosystems are not protected and conserved for utilitarian purposes, but because their existences have worth in and of themselves.

18

Moreover, some studies have also shown that humanistic values are commonly attributed to those with high motivation for pro-environmental behaviour (Stern, et al., 1993). According to Hallin (1995), many individuals highlight altruistic motivations for environmental action, expressing a perceived moral obligation to prevent or lessen harmful consequences to others, as in this example:

"I feel guilty from wasting natural resources that we have. I think of some people that don't have, you know, in other countries. Where they show pictures of people lining up to get fresh water, and here we have so much, so we just let it run (Woman 73 years)" (563).

Likewise, many feel an inclination to act when they are made aware of their negative consequences on other human beings (Stern, et al., 1995). This altruistic behaviour not only applies to those physically existing on Earth at a specific time, but it also refers to the consideration of future generations. Particularly since the 1987 Brundtland Commission, many within the environmental movement have stressed the need for sustainable development; this form of development stresses that society should meet the needs of the present without compromising the capacity of future generations to meet their own needs (Gibson, et al., 2005; Larrère & Larrère, 2007). Although altruistic motivations are more anthropocentric than the others described above, it is an approach that is increasingly being advocated by politicians, social scientists, economists, and the general stakeholder, especially when combined with the terms sustainability or justice.

In addition, many religions provide motivation for pro-environmental behaviour through offering solutions to the philosophical gaps found in ecology, economics, and traditional science. Whether or not one agrees with the foundational principles of a religion, they can play an

important role in the development of pro-environmental behaviour. Religions have the ability to make statements of value because they are worldviews and perspectives that make declarations of the need for reverence and obedience (Rolston, 2006). Unlike scientific thought, which generalizes and confirms on the basis of data which is quantifiably verified, religion is subjective, immediate, and personal. Religion, regardless of fact or data, can ask one to live justly on the earth (Dwivedi, 1989); to delineate further, "scientific knowledge does not ask 'why' but 'how'; it seeks for the mechanism rather than for the meaning of things (Hayes and Marangudakis, 2001, 140). Unlike some of secular thought, which often stresses relativity and uncertainty of truth, some religious traditions uphold absolute truths which an individual is required to follow. This unyielding philosophical perspective requires individuals to continually assess and critique their cultural, social, and environmental surroundings to ensure that their lives are not subject to spiritual dissonance. Consequently, if religious believers have a requirement to act in a just manner toward the Earth, their choice to live sustainably is strongly influenced by their faith unique spiritual commitments.

Despite a rise in environmental thought, academics have discovered that frequently a dichotomy between environmental thought and behaviour exists. Many believe that such a trend illustrates that individuals express environmental concern, but do not generally participate when opportunities become available (Eagly & Kulesa, 1997; Garvill & Norlund, 2002; Hallin, 1995; Hartmann & Ibanez, 2006). Therefore, one should not be blind to the fact that there are some barriers to participation (economics, time, inconvenience, lack of efficacy, lack of awareness, etc). Hallin's 1995 study concluded that non-conservers in Foley, a small town in Minnesota, did not relate their everyday behaviour to environmental problems. In fact, it was noted that the non-conservers interviewed were critical of the throw-away society. In addition, even though

non-conservers realized that some of their behaviours were wasteful, they did not, like

conservers, feel guilty about it (Hallin, 1995). Cases like Foley, Minnesota, are particularly

troubling because such cognitive dissonance represents a lack of urgency and obligation to act

sustainably. Such findings may indicate that there are social motivations causing pro-

environmental behaviour amongst an active minority, but that such factors are not encouraging

the participation of the silent majority. This cognitive dissonance has significant implications for

the implementation of environmental policies and programs because the silent majority do not

need to be convinced that problems exist; rather, they must undergo behaviour transformations

that link their recognition of ecological degradation to a call to action.

Therefore, with increasing emphasis being placed on stewardship and stakeholder

participation in the planning process (Collentine, et al., 2002; Day, 1997; Lane, 2005; Mitchell,

2005), managers and practitioners need to recognize the challenges they face when attempting to

involve stakeholders. Since pro-environmental behaviour can stem from varying philosophies,

researchers and practitioners should not focus on discovering a single framework for

participation, but rather they should focus on integrative efforts of utilizing diverse knowledge

and belief systems under the common objective of caring for the natural world. In this manner,

participatory initiatives must be integrative, not of disciplines but of worldviews, providing

opportunities for all involved to experience personal success in the planning process. In doing

this, stakeholders will participate because the issues matter to them and affect them either

environmentally, socially, or economically (Lowndes, et al., 2001).

2.4 Benefits of stakeholder participation

There are many benefits of engaging the stakeholder in policy development and planning,

particularly for an organization. Generally, the literature highlights that the outcomes of

participation will lead to better management practices through a variety of means. One factor cited is that participation can increase communication, which can help foster relationship building, trust, and cooperation. Through detailed interaction between organizations and stakeholders, relationships can develop which promote a deeper understanding of the concerns and interests of various groups, fostering trust, and potentially disbanding anti-trust sentiment (particularly of governments) (Buchy & Race, 2001; Irving & Stransbury, 2004; Lynn & Busenburg, 1995; Poncelot, 2001). In addition, increased communication can help stakeholders gain a better understanding of regional or ecosystem-based protection as they undergo education about management challenges. Through this process, organizations are able to highlight suitable solutions to community problems increasing the understanding of the organization's role and generating ownership of such issues (Brody, 2003; Lynn & Busenberg, 1995; Marshall & Jones, 2005).

Additionally, through participation organizations have the opportunity to obtain sources of knowledge outside their in-house expertise. This can increase organizational capacity to address natural resource issues (Broderick, 2005; Howell, et al., 1987; Jonsson, 2005; Poncelot, 2001). By engaging stakeholders, agencies can provide opportunities for stakeholders to contribute knowledge and wisdom about their local environment which can inform planning (Beierle & Konisky, 2001; Duram & Brown, 1999; Ferreyra & Beard, 2007; Mitchell, 2005; Steelman & Ascher, 1997). In this manner, local knowledge can provide an opportunity for agencies to integrate innovative perspectives potentially increasing their capacity while also helping to foster trust and open communication (Day, 1997; Durley, 2007).

Furthermore, through the participation of stakeholders in the planning process, agencies are able to obtain a cross section of stakeholder views and concerns (Irvin & Stransbury, 2004;

Lynn & Busenberg, 1995; Pratchett, 1999). Stakeholder participation can give planners more

complete and accurate information, especially when making decisions on behalf of the public

(McCool & Guthrie, 2001). By engaging stakeholders, agencies can better predict unpopular

policies, which can lead to pre-emptive planning, potentially reducing conflict and building trust

(Irvin & Stransbury, 2004).

Finally, the inclusion of stakeholders in the planning process can help to avert costly

delays and litigation (Irvin & Stransbury, 2004; Leach & Pelkey, 2001; Marshall & Jones, 2005;

Warner, 2006). Through participation, reasons for a policy that at first appear unpopular can be

explained and socially acceptable and legitimate outcomes can be discussed (Jöborn, et al., 2005;

Jonsson, 2005; Lowry, et al., 1997). Thus, early participation can increase the efficiency of

dispute resolution and feedback integration, helping agencies to be proactive and attempt to

avoid having to address a large group of stakeholders if significant problems occur (Lynn &

Busenberg, 1995).

Although skakeholder participation is attractive to organizations, there are also a

number of benefits for stakeholders. Participation gives stakeholders access to decision-makers

and an opportunity to voice concerns and opinions (Duram & Brown, 1999; Gooch, 2004;

Poncelot, 2001). In participatory processes, stakeholders are given autonomy, or at least a sense

of it, which can often decrease resistance to new management policies and increase an

understanding of natural systems. Moreover, stakeholders can experience political,

psychological, and social empowerment (Steelman & Ascher, 1997); this is crucial, as some have

noted that empowerment can lead to a sense of ownership, which can help overcome personal

constraints on environmental stewardship such as a lack of understanding, knowledge, or skills

(Mitchell, 2005). Thus, participation can serve as a catalyst for environmental education,

23

developing stakeholders understanding of environmental issues (Gooch, 2004; Jonsson, 2005; Lynn & Busenberg, 1995). Educating stakeholders is important to environmental planning because having an informed general stakeholder can result in the formation of stakeholder-experts who understand and represent communities when technically difficult situations arise, helping ensure that solutions to planning problems are community-based (Irving & Stransbury, 2004). Finally, stakeholder participation can also be an avenue for social change whereby stakeholders and administrators can work for the good of stakeholders ensuring that agency actions are embedded in society and not imposed on it (Day, 1997; Duram & Brown, 1999; Gooch, 2004; Irving & Stransbury, 2004; Marshall, 1997).

2.5   Challenges for success

Despite the recognition that participation positively impacts both organizations and stakeholders, there are a number of challenges facing successful stakeholder participation. It is important to view the examples below as challenges rather than drawbacks, because innovative and diligent planning can frequently overcome them. One obstacle to successful participation relates to representation of stakeholder interests. Frequently, when organizations seek stakeholder participation in planning and management, few individuals take the opportunity to participate (Day, 1997). Some have noted that this limited participation has resulted because of a lack of awareness of how the issues affect stakeholders and thus has resulted in a lack of interest in the planning process (Duram & Brown, 1999; Leech & Pelkey, 2001; Steelman & Ascher, 1997). This lack of understanding can be particularly problematic when attempting to link scientific and technocratic knowledge with the knowledge of stakeholders. Some stakeholders may not understand the scale of the project, the technical jargon, or interconnections. If such technicalities are emphasized during project formation, then stakeholders may not understand

24

their role and thereby feel they cannot contribute meaningfully (Garin, et al., 2002; Hunsberger, et al., 2005; Margerum & Whitall, 2003). Moreover, a lack of understanding can also lead to a NIMBY (not-in-my-backyard) philosophy where stakeholder participation is non-existent until an issue directly and tangibly affects them or their property (Duram & Brown, 1999; Johnson, et al., 1996; Jonsson, 2005).

However, for stakeholders a lack of participation does not only stem from low awareness but can also arise from a perceived sense of social exclusion (Durley, 2007). Elitism is frequently cited as one form of social exclusion. This problem occurs if stakeholder input is perceived by agencies as experiential, emotional, or anecdotal rather than constructive to understanding a planning issue (Irvin & Stransbury, 2004; Lawrence & Daniels, 1996; Leach, et al., 2002; Lynn & Busenberg, 1995; McCool & Guthrie, 2001). Additionally, exclusion can be quite practical as well; it can occur if preselection or avoidance of stakeholders takes place (specifically if there are some stakeholders who are known to resist an action or policy) (Lynn & Busenberg, 1995). Moreover, exclusion can occur if program timing is poorly planned (e.g., during regular work schedules, dinner times, etc.) and only those who can afford or have time to participate can attend group meetings (Lynn & Busenberg, 1995; Leech, 2006).

Additionally, participation is habitually plagued with challenges surrounding time. Rarely do people have an abundance of time for activities outside of their daily routine. For many stakeholders, the time required to understand the issues at hand, travel, and attend lengthy meetings is too great a commitment (Duram & Brown, 1999; Durely, 2007; Jöborn, et al., 2005; Lowry, et al., 1997; Margerum & Whitall, 2003). However, time constraints are not only a limitation in the early stages of attracting stakeholders, but can also arise once participation is underway. Involving stakeholders can result in increased program length due to delays, which

25

can arise from conflict, inability to reach consensus, or bureaucratic issues. These issues can

cause frustration for stakeholders and discourage participation because individuals refuse to wait

for bureaucracy and are looking for quick solutions to apparent problems (Garin, 2002; Plumlee,

et al., 1985). In addition, extensive participation and lengthy processes can cause volunteer

burnout resulting in stakeholders dropping out of the participatory process; volunteer burnout

occurs when individuals become detached or cynical towards the planning process due to a

reduced sense of personal accomplishment (Broderick, 2005; Byron & Allen, 2002; Ferreyra &

Beard, 2007; Sharpe & Conrad, 2006). Delays in the participatory process are not only

aggravating for stakeholders but also agencies. Many agencies are looking to develop and

implement policies swiftly in order to rectify an issue facing their organization; delays often

increase project costs, pose challenges for implementation, and put strains on project timelines.

In addition, a significant challenge for incorporating stakeholders in environmental

planning is a lack of organizational training (Lawrence & Daniels, 1996; Steelman & Ascher,

1997). In some cases, local policy makers and planners who have little to no education in

managerial techniques for stakeholder participation are left to design, interpret, and

operationalize a participatory framework (Steelman & Ascher, 1997). This lack of training on

how to engage stakeholders can cause obstacles for the process because often stakeholders and

bureaucrats have differing views of what a participatory process should look like (Steelman &

Ascher, 1997). Therefore, a misunderstanding of the appropriate processes for stakeholder

participation can lead to misrepresentation, a lack of participation, and conflict. Often, the

defaults for busy managers are consultative methods that are quick and relatively cost effective.

However, as highlighted above, such methods are more symbolic than influential because

organizations frequently use such times to hold stakeholder forums to educate stakeholders on

decisions that have already been made (Irvin & Stransbury, 2004; Lawrence & Daniels, 1996; Plumlee, et al., 1976).

Finally, a significant barrier to meaningful participation is funding (Duram & Brown, 1999; Sharpe & Conrad, 2006). The increased time, training, and costs for hosting events and engaging stakeholders in a meaningful manner is a significant barrier, especially for many governmental organizations where funding is frequently reduced (Margerum & Whitall, 2003). Some question the value of participation and whether it is an effective use of organizational resources, due to the lack of funding amongst many resource managing agencies.

2.6   Evaluative framework

The literature recognizes the importance of integrating land and water resources, society, and institutional arrangements into planning practices (Cai, et al., 2002; Chaves & Alipaz, 2006; Duram & Brown, 1999; Durley, 2007; Lankford & Beale, 2007; Litke, 2003; Marshall & Jones, 2005; Valentin & Spangenberg, 2000). In fact, Mitchell (2005) asserts that expert knowledge alone cannot face management challenges today; environmental managers must inexplicitly deal with (1) rapid change to human and natural systems, (2) high levels of complexity, (3) significant levels of uncertainty, (4) and frequent conflict. Thus, many advocate that participation can act as a valuable tool for planners aiding them to formulate adaptive and sustainable management practices.

However, as illustrated, participation is a diverse concept with many different faces, benefits, and challenges. Since its widespread adoption into environmental planning, academics and practitioners have placed continued emphasis on determining suitable levels and characteristics for stakeholder participation (Arnstein, 1969; Black & Fisher, 2001; Day, 1997; Hansen & Mäenpää, 2008; House, 1999; Jonsson, 2005; Lowry, et al., 1997; Marshall & Jones,

27

2005; Steelman & Ascher, 1997). In their efforts, many writers have promoted the use of hierarchy frameworks to assess appropriate levels of participation; this process classifies the various participatory methodologies by placing them on a continuum that spans from no or little participation to direct ownership of the process (Arnstein, 1969; Buchy & Race, 2001; Hansen & Mäenpää, 2008; Koontz, 2005; Lindahl & Söderqvist, 2004; Rowe and Frewer, 2000).

However, this type of discussion is largely ineffective for both practitioners and stakeholders for a number of reasons. First, classifying the typologies of participation in this manner can convey a feeling that a higher degree of participation (e.g., consensus) is ideal, which can potentially lead to the overemphasis of certain methods of participation. Second, these models frequently presume that all communities want (or have the capacity) to participate at the high levels (Buchy & Race, 2001; Warner, 2006). This assumption can be particularly frustrating for agencies that may put valuable resources (time, funding, etc.) into organizing "comprehensive" participatory programs when in reality the community itself may be uninterested in becoming substantially involved in the planning process. Finally, the use of these frameworks is largely inconsistent with findings that assert that there is no "appropriate" degree of local participation (Koontz, 2005; Marshall & Jones, 2005; Norton, 2007; Pratchett, 1999; Rowe and Frewer, 2000; Webler & Tuler, 2001). In fact, many argue that participation is contextually relevant with no single determining factor that leads to success. Consequently, committing to a hierarchy of participation can be limiting as the need for participation can greatly vary; it can serve as a means to an end or simply an end in and of itself (Buchy & Race, 2001). Therefore, practitioners should not focus on the particular methodologies for participation but rather concentrate on the decisive factors for successful stakeholder participation. Thus, by synthesizing the results of an evaluative framework with opinions and

motivations of agencies and stakeholders for the process, agencies can gain substantial insight

into what would be the characteristics of successful participation in a given region.

In this study, an evaluative framework used to understand the characteristics of

successful stakeholder participation will be created. The evaluative framework is based on the

most frequently cited outcomes and suggestions from studies in the literature; it coalesces the

essential characteristics which have made stakeholder participation successful in various parts of

the globe. A list of all the characteristics for successful participation can be found in Appendix

1. It is important to note that this framework does not produce quantifiable results, rather it is an

attempt to synthesize the results found in planning, resource management, and other relevant

sources of literature in order to establish best practices for stakeholder participation in planning.

The methodologies for applying this framework to the Tiffany Creek subwatershed can be found

in the next chapter. The remainder of this chapter summarizes the basis of this framework.

From the literature seven principles (Table 2.1) have been identified as important for

achieving successful participation in REM: (1) well-defined goals, (2) early participation, (3)

representation, (4) empowerment, (5) strong leadership, (6) open and honest communication, and

(7) contextual understanding.   All of these factors have been incorporated into the framework

and for each of these factors a set of indicators was developed in order to evaluate their presence

in the planning process. These principles have all emerged out of the literature and were selected

because they were common factors cited as contributing to the success of a participatory

initiative.

First, the importance of well-defined goals and expectations for participants in the

planning process is highlighted in many parts of the literature. In reaching this goal, stakeholders

need to be informed of what is expected of them (i.e., outcomes, outputs), what difficulties and

frustrations may arise (i.e., technical information), and what the mechanisms are for producing

tangible results (Iacofano, 1990; Lowry, et al., 1997; Rowe & Frewer, 2000; Sabatier, et al.,

2005). Establishing well-defined goals and expectations is essential to the success of a process

because if they are not collaboratively defined, members will assume their own expectations are

those of the group and may become resentful when they are not fulfilled (Lynn & Busenberg,

1995). Therefore, organizations must make stakeholders aware of the level of participation used

(i.e., direct or indirect participation) and the potential impacts of their participation. By

displaying and discussing the mechanisms and goals for participation, the underlying reasons for

the process can be evaluated and the extent to which a decision or program is well supported by

all involved will be explicit (Rowe & Frewer, 2000). The participatory process can greatly

benefit from ensuring that a clear understanding is reached; specifically, some note that it will

reduce conflict, instil greater accountability, and increase trust (Bryon & Allen, 2002; Rowe &

Frewer, 2000). Moreover, Mitchell (2005) writes that establishing a shared vision is a way of

looking hopefully into the future and can lead to greater excitement and commitment to

environmental sustainability.

Secondly, early participation is an integral component of stakeholder participation. This

requires stakeholders to be able to provide input long before full-fledged project plans are

complete. By having stakeholders participate early in the process, they are given the opportunity

to signal their concerns when the issues are being defined. Early participation is important

because problems can then be defined as group so that value judgements can be made

collectively (Leach, 2006). Thus, early participation can help all parties involved better

comprehend the various dynamics of the issues at hand, help participants establish a clear

understanding of their role in the process, and potentially result in the adoption of community-

based solutions. In addition, by focussing on early participation, agencies become process

oriented.   Process orientation results because early participation does not result in any direct

outputs (i.e., completed plan or project, satisfaction of participants, direct solutions) but rather

can instigate the development of valuable outcomes (i.e., learning, relationship building,

ownership, etc.) (McCool & Guthrie, 2001; Ferreyra & Beard, 2007). Thus, by including

stakeholders from the outset, projects can achieve greater legitimacy, well defined goals, and

representation while stakeholders gain a sense of autonomy and pride through participating in

such processes.

Third, in order for participatory initiatives to be successful it is important for adequate

representation to occur in the process (Lawrence, 2006; Leach, 2006). Achieving representation

occurs in two stages: (1) obtaining an accurate cross section of stakeholders impacted by the

planning process who need to be involved; and (2) stakeholders who participate should have

equal opportunity to provide and have their view and opinions acknowledged. In this manner,

participation should be an inclusive exercise with no exclusivity or formal restrictions placed on

the stakeholder's ability to be involved in the process. By including all relevant stakeholders, an

accurate cross section of stakeholder views and concerns can be obtained (Gooch, 2004; Irvin &

Stransbury, 2004; Lynn & Busenberg, 1995; Pratchett, 1999). Acquiring an accurate cross

section is important to resource planning because it provides agencies with more complete and

accurate information about community interests, especially when addressing complex

management issues (Day, 1997; Lynn & Busenberg, 1995; McCool & Guthrie, 2001).   By

ensuring that adequate representation occurs, agencies can reduce the need for stakeholder

inquiries, curb potential objections and legitimize proposals, and can see more efficient program

implementation results (Golobič & Marušič, 2007; Jöborn, et al., 2005; Plumlee, 1985; Warner,

2006). Thus, in order for participation to be successful, participation should be an inclusive process so that the knowledge and experience of all relevant stakeholders can be integrated into the plans and policies of a community.

In addition, stakeholder participation is a pluralistic endeavour whereby the interests and opinions of stakeholders are incorporated into policies and programs. Specifically, a participatory process should be equitable and empowering for all participants. In fact, stakeholder participation rises out of an approach to planning that attempts to address inequality (in the manner relating to the bargaining power of groups and their access to political structures) (Arnstein, 1969; Lane, 2005). Thus, in participatory processes, stakeholders must have the ability to influence the process (Lawrence & Deagan, 2001; Leach 2006; Rowe & Frewer, 2000;). However, this does not necessarily mean that all individuals involved in the process are given the same levels of power or control (Mitchell, 2002). Rather, it is importance to value and listen to all people involved in the participatory process, regardless of the degree of authority that they hold (Broderick, 2005; Gooch, 2004; Mitchell, 2002). Specifically, in her 2004 study, Gooch concluded that empowerment could occur through a variety of means – through positive experiences, personal relationships among group members, receiving funding and adequate resources on community projects, hearing a diversity of opinions, and learning to "play" the negotiation game to be able to influence decision making – all of which contributed to a sense of empowerment in the planning process. By empowering stakeholders, agencies can create a sense of ownership and pride amongst stakeholders which can breed a virtuous cycle of collective learning and collaboration on planning issues within a community (Black & Fisher, 2001; Collentine, et al., 2002, Day, 1997; Lynn & Busenberg, 1995).

Furthermore, strong leadership is an important factor which contributes to the success of stakeholder participation. Since environmental planning initiatives can often address sensitive issues for stakeholders, leaders will inevitably deal with conflict and disagreement during a participatory process. Consequently, those organizing and hosting participatory events must be trained in the area of stakeholder participation, conflict resolution, and negotiation so that best practices can be used to ensure that the process is conducted in a civil, respectful, and efficient manner (Black & Fisher, 2001; Ferreyra & Beard, 2007; Leach, 2006; Steelman & Asher, 1997). In addition, leaders should be individuals who are trusted in the community and whose personal biases are exposed to ensure impartiality and foster trust amongst all those involved in the process (Leach, 2006; Rowe & Frewer, 2000). Moreover, a leader must be a person with a "can do" attitude, strong interpersonal skills, and be someone who values the stakeholder participation, understanding both its benefits and expected outcomes (Pratchett, 1999). This is important as it can build trust which is essential to the success of stakeholder participation and encourages communication amongst agencies and stakeholders (Beierle & Konisky, 2001; Black & Fisher, 2001; Koontz, 2005; Phuong, 2007).

As well, open and honest communication is an integral component of successful stakeholder participation. In fact, some scholars emphasize that communication, rather than consensus, is ultimately the goal of participation (Ferreyra & Beard, 2007; Hansen & Mäenpää, 2008; Lowry, et al., 1997). Open communication results when agencies and stakeholders are transparent with their intentions for the process, opinions toward the issues, and when they freely share all relevant information for the process (Hansen, & Mäenpää, 2008; Leach, 2006; Lowry, et al., 1997, Rowe & Frewer, 2000). In doing so, trust can be fostered between stakeholders and agencies because participants will have equal ability to understand the context of the planning

issue and how the outcomes will be determined (Johnson, et al., 1996; Leech 2006; Rowe & Frewer, 2000). This reduces feelings of resentment and exclusion when decisions are made, and can create social cohesion which can lead to increased participation and cooperation (Byron & Allen, 2002; Gooch, 2004). Particularly, opening the lines of communication between agencies and stakeholders can lead to transformative discourse and understanding of the values and concerns of participants which can build lasting relationships amongst community members (including agencies) (Lowry, et al., 1997; Lynn & Busenberg, 1995). This can result in more informed and relevant decision-making which can reduce conflict and avoid costly litigation. Poncelet in his 2001 study summarizes the importance of open communication stressing the fact that,

> "In addition to the impact that this may have for improved decision-making, increased participation also means that the so-called stakeholders are having the opportunity to actually meet and dialogue with one another. Though seemingly trivial, this is an unmistakable step forward toward overcoming the lack of face to face communication between the different sectors of society which has plagued meaningful levels of concerted action in the past. We should not downplay the possibilities for change engendered by the act of bringing people together who had formerly been kept, or kept themselves, apart" (17).

Lastly, contextual relevancy is a vital component to a successful participatory initiative. As highlighted in previous chapters, practitioners and scholars often disagree on what constitutes a good process for stakeholder participation (Pratchett, 1999; Webler & Tuler, 2001). In fact, no real consensus has been reached on the extent to which stakeholders should participate in planning (Koontz, 2005; Marshall & Jones, 2005). Rather, contextual relevancy has been

stressed and some have advocated that stakeholder participation should be tailored to the specific context of a region (McCool & Guthrie, 2001; Norton, 2007). Thus, for stakeholder participation to be successful, agencies need to seek and affirm the knowledge and opinions of the various groups and individuals who are affected by a proposed plan or policy (Broderick, 2005; Dungumaro & Madulu, 2003; McDaniels, et al., 1999). It is important to incorporate knowledge found outside the discipline of environmental planning because including it is a way to ensure that a contextual understanding is established. This is vital because

> "Local knowledge of resources is individually unique, socially constructed and often differ from 'expert' knowledge. While local knowledge is often holistic, it is also, by definition, is spatially specific, and therefore must be specifically included in local studies within regional NRM processes" (Broderick, 2005, 288).

Consequently, valuing and affirming the knowledge of participants involved in stakeholder participation has the potential to improve an agencies understanding of environmental processes. Incorporating stakeholder knowledge can serve as a way of getting new, inventive, and innovative solutions to resource management and planning concerns. However, if local understanding is not valued and incorporated in the process, the outcomes of stakeholder participation will not represent complete or holistic approaches to socioeconomic or environmental issues in a region and thus may not be adequate solutions which contribute to long-term sustainability in a region (Durley, 2007).

In Chapter Two a review of the literature was conducted to obtain an understanding of the varying processes and dynamics of stakeholder participation in environmental planning. Additionally, an evaluative framework was developed to achieve an understanding of the characteristics of successful stakeholder participation. A summary of the framework can be

found in Table 2.1. Chapter Three continues with a discussion of the methodologies used in this thesis, outlining the research approach and sources of data used to evaluate the characteristics of successful stakeholder participation in subwatershed planning processes within the Hamilton region.

Table 2.1: Evaluative criteria for successful participation in environmental planning and management

Principles for successful stakeholder participation	Corresponding evaluative criteria	Supporting Literature
Well-defined goals	-Method of participation made known to stakeholders and is understood -Responsibilities and role of stakeholders in the process are clearly outlined -Value-based goals (i.e. relationship building, communication, etc.) are included in the participatory process -Project timeline for participation created and communicated to stakeholders -Expected outcomes for the process are communicated to stakeholders	Black & Fisher, 2001; Buchy & Race, 2001; Conrad & Daoust, 2008; Gooch, 2004; Iacofano, 1990; Leach, 2006; Lowry, et al., 1997; Lynn & Busenberg, 1995; McDaniels, et al., 1999; Mitchell, 2005; Rowe and Frewer, 2001; Sabatier, et al., 2005.
Early participation	-Stakeholder engagement occurs in plan/program development before significant decisions are made -Participation occurs before the completion of a draft report	Duram & Brown, 1999; Hansen & Mäenpää, 2008; Ferreyra & Beard, 2007; Hunsberger, et al., 2005; Lawrence & Deagan, 2001; Leach, 2006; Marshall & Jones, 2005; McCool & Guthrie, 2001; Mitchell, 2005; Rowe and Frewer, 2000.
Representation	-Recruitment methods for participation are broad in scope reaching various audiences -Representatives from varying backgrounds are included and maintained throughout process -There are no formal restrictions for participation -Participation exists equally throughout process	Broderick, 2005; Buchy & Race, 2001; Gooch, 2004; Irvin & Stransbury, 2004; Lawrence & Daniels, 1996; Leach, 2006; Lowry et al., 1997; Plumlee, et al., 1985;
Empowerment	-Stakeholder input is logged and documented for stakeholders to observe -Participation impacts the outputs of a program -Stakeholders are included in implementation and monitoring of a program	Arnstein, 1969; Broderick, 2005; Collentine, et al., 2002; Day, 1997; Gooch, 2004; Hansen & Mäenpää, 2008; Lane,

	-When decision making needs to occur alternatives suggested and presented to stakeholders even if they are not included in the decision-making process	2005; Lawrence, 2006; Leach, 2006; Lynn & Busenberg, 1995; McDaniels, et al., 1999; Mitchell, 2002; Rowe & Frewer, 2000; Warner, 2006
Strong leadership	-An impartial facilitator is present on contentious issues or if not possible, biases are communicated to stakeholders at the onset of participation -Leaders have credibility in community -Coordinator has participatory training in some capacity	Black, 2001; Ferreyra & Beard, 2007; Johnson, et al., 1996; Koontz, 2005; Leach, 2001; Phuong, 2007; Pratchett, 1999;
Open and clear communication	-There is unimpaired sharing of available data and resources, including minutes and any retained information, with stakeholders -If possible joint fact finding occurs between stakeholders and agencies -There are opportunities for all to share comments and concerns about a planning issue	Byron & Allen, 2002; Ferreyra & Beard, 2007; Johnson, et al., 1996; Leach, 2006; Lowry, et al., 1997; Mitchell, 2002; Warner, 2006
Contextual relevancy	-Scope of a planning issue is identified and understood by participants -Opportunities for learning are present -Resources and information relating to the planning issue are made available to participants if needed -Historical background, socioeconomic, and ecological background research is conducted for each planning issue	Beirele & Konisky, 2001; Broderick, 2005; Day, 1997; Dungumaro & Madulu, 2003; Durley, 2007; Koontz, 2005; Marshall & Jones, 2005; McCool & Guthrie, 2001; McDaniels, et al., 1999; Norton, 2007; Pratchett, 1999; Webler & Tuler, 2001;

Chapter 3: Methodology

This chapter describes the methods used to evaluate the level and success of stakeholder participation in the Tiffany Creek and to determine the opinions of stakeholders and agencies toward participatory processes. The characteristics of the case study site are described in Chapter Four. The following sections describe the research approach, case study selection, research design, data sources, and the process of analysis.

3.1   Research approach

A case study approach was used to address the second and third objectives outlined in Chapter One of this study. This approach was chosen because: (1) it allows for the investigation of contemporary phenomena within their real-life contexts; (2) it promotes the use of multiple sources of evidence; and, (3) it is an intensive contextual study of a single issue, which can provide insight and understanding into an issue or topic (Gerring, 2004; Yin, 1984). For the purpose of this study an interpretive case study approach was used to understand the level and success, as well as the opinions of local actors toward, stakeholder participation in watershed management. This method was adopted because an interpretative approach attempts to understand the worldview of the people it studies (Thacher, 2006). Furthermore, an illustrative perspective was also integrated into this study. This is generally characterized by establishing a detailed contextual understanding of a case study (Gerring, 2004; Gerring, 2007). By focusing on the case study context, these methods allow for a synthesis of the context and characteristics of subwatershed planning with the opinions and values of stakeholders. In this manner, a case study approach allows for the results to be directly applied to the context of the region allowing for greater potential for implementation and consideration in management practices currently undertaken by the HCA.

3.2 Case study selection

An important result of recognizing water needs in all ecological communities has been a push to manage water resources at catchment levels. This focus on watershed management has forced a re-examination of conservation approaches,

> "which historically have been focused around the physical and structural template, and to recognize catchments as the primary functional units for future conservation and management. Recognizing the importance of the catchment unit represents an important fundamental shift in the scientific, political and legislative way in which we conceptualize and approach the conservation and management of river systems" (Wishart & Davies, 2003, 430).

Stepping outside of the scope of traditional planning practices and approaching water management at the catchment level ensures that the needs of ecosystems are met. Moreover, through cooperative arrangements at water basin levels, all water users (including those speaking on behalf of ecosystems) can collaborate, sharing information and often decision-making power, which will aid in addressing the complex nature of managing natural resources for the common good.

This broad and integrative perspective can greatly vary amongst individuals and institutions, and managing at the watershed level requires that one clearly define the scale at which one is operating. Although difficult, managing under this conceptual framework is not new in the province of Ontario. Since their inception conservation authorities (CA) have guided the development and management of river basins under the legislation of the Conservation Authorities Act. Notably, CAs were mandated to operate at the river basin scale because

historically water resource issues were interlinked, crossing traditional political jurisdictions (Mitchell & Shrubsole, 1992).

However, gradually the challenges facing sustainable watershed management grew increasingly complex. As a result, some began to see the need for decreasing the scope of management practices in planning in certain circumstances in order to attain a greater understanding of the issues at hand. Consequently, CAs developed subwatershed plans which act as substructures to the broader, more comprehensive watershed plans (Ontario, 1993b). The narrowed focus of subwatershed planning allowed CAs to address and deal with local level issues that contribute to overall watershed health. This shift was supported by the Ministry of Environment and Energy (MOEE), specifically in its 1993 document *Subwatershed Planning,* as it recognized the need for greater contextual understanding, and increased stakeholder involvement in the process. Today, in some circumstances subwatershed planning is believed to be an appropriate planning response to managing issues because by focusing on a smaller geographic area, more responsive understanding of problems can be attained (Shrubsole, 1996). An example of this can be seen in the development of Spencer Creek Subwatershed Action Plans.

Focusing at a local level can be beneficial for agencies when attempting to integrate stakeholders into planning. For stakeholders, the wider regional problems facing their area could be difficult to conceptualize and therefore increased time could be needed to understand the context of resource issues. In addition, some have highlighted that by focusing planning at the local level stakeholder education and participation will likely be greater as the issues relate to the protection of their own personal and communal interests (Day, 1997; Lowndes, et al., 2001). Similarly, by integrating stakeholders into planning at the subwatershed level stakeholders are

also given an opportunity to become engaged in planning at their community level, which may contribute to a sense of ownership and autonomy amongst stakeholders. Consequently, because the subwatershed level is a prominent planning unit for conservation authorities, understanding how best to undertake subwatershed planning practices, including stakeholder participation, is essential for development of holistic plans and policies.

The Tiffany Creek subwatershed is an excellent case study to examine the best practices for stakeholder participation in resource planning at the subwatershed level. The Tiffany Creek subwatershed is an appropriate case study for this research because: (1) the HCA has attempted to incorporate stakeholders into the development of subwatershed plans, and stakeholders have been identified as crucial partners for achieving success in subwatershed planning; (2) there is a diversity of land-use interests in subwatershed planning within the Tiffany Creek subwatershed; and, (3) there has been minimal stakeholder participation in subwatershed planning within the Tiffany Creek subwatershed.

In order to fulfill the research objectives it was necessary to chose a location in which subwatershed planning was actively underway and where efforts have been made to incorporate stakeholders into planning practices. Subwatershed planning in the Tiffany Creek subwatershed provides an excellent case study to examine the characteristics of successful stakeholder participation as recent efforts have been made to engage stakeholders in the planning process. In early 2009, the HCA was in the early stages of completing stewardship actions plans for the 15 subwatersheds in the Spencer Creek watershed. The purpose of these plans was to improve ecological functions in the region through restoration and stewardship initiatives (HCA, 2008a, i). At the time of writing, subwatershed stewardship action plans have been completed for the Chedoke Creek subwatershed, Ancaster Creek subwatershed, and Tiffany Creek subwatershed.

41

These plans were completed in March of 2008 with the help of a stakeholder advisory committee and were jointly produced under the project title *A.C.T. Ancaster, Chedoke, and Tiffany Creek Subwatershed Action Plans* (HCA, 2008a; HCA, 2008i).

Additionally, the Hamilton region is an area where diverse land-use interests are present. In the Tiffany Creek subwatershed natural biodiversity is found throughout the northern regions in areas like the Dundas Valley, the Niagara Escarpment, and protected wetlands. In the southern areas, land had been traditionally used for the purpose of agriculture. However, more recently biodiversity and rural landscapes have been threatened by increased urban intensification. As part of provincial and municipal growth strategies, the region is in various stages of development and pressure is being increasingly placed on protected lands and prime agricultural farmland within the region. Thus, a diverse set of challenges faces subwatershed stewardship and restoration, particularly representing and educating the broad stakeholders in the region. Consequently, the Tiffany Creek subwatershed fulfills the second requirement for an appropriate case study selection.

Lastly, the Tiffany Creek subwatershed was chosen as a case study because it is a region where efforts made to include stakeholders in planning have been met with little response. Recently, through the A.C.T. process, the HCA attempted to include stakeholders in subwatershed management through advertisements in local media, website announcements, and stakeholder open houses educating citizens of the stewardship initiative. Moreover, through these avenues, interested citizens were asked to sit on the advisory committee for the process. However, the efforts of the HCA met with little success. Only one private landowner from all three of the subwatersheds joined the action plan advisory committee (HCA, 2008a). Additionally, landowner attendance at the open houses was virtually non-existent (HCA, 2007d;

HCA, 2008b). Although it may seem counterintuitive to study a region where there has been a lack of participation in the planning process, the results of the Tiffany Creek Stewardship Action Plan raises important questions surrounding representation, depth of stakeholders understanding of local issues, and stakeholder buy-in into management strategies of A.C.T. In addition, questions arise at the organizational level as to whether the time and monetary resources put into marketing the program were worth the efforts. Thus, understanding the ideal characteristics of stakeholder participation (from both the citizen and agency perspective) is important for future planning practices at the subwatershed level. Understanding the motivations and perspectives of agencies and stakeholders provides important insight into how best to engage stakeholders in the planning process. Moreover, findings from the Tiffany Creek subwatershed may also provide lessons and insight into techniques which could be used for local participatory programs in other regions in the future.

3.3   Research design

In order to fulfill the first research objective it was necessary to establish an understanding of the importance and characteristics of successful stakeholder participation in environmental planning. To accomplish this, a review of the academic literature was conducted to understand the varying characteristics and outcomes of stakeholder participation in resource management. This review was not narrowly focused. Rather, it merged the results of studies found within the field of resource planning, business, community development, ecosystem-based management, stakeholder administration, and others. This integrative approach was taken so that a broad and holistic understanding of stakeholder participation could be established.

Likewise, an evaluative framework based on the literature was developed. A summary of the evaluative framework can be found in Table 2.1 and an in-depth discussion of each principle

can be found in Chapter Two. This framework comprises seven of the most commonly cited characteristics of successful participation. It served as the backbone of the thesis and its goal was twofold: (1) it served as a means to understand best practices for stakeholder participation as outlined in the literature; and, (2) it was the basis for developing a series of questions used to evaluate the opinions and perspectives of stakeholders and agencies in the Tiffany Creek subwatershed toward successful stakeholder participation.

From the evaluative framework a series of questions directed to HCA staff members and stakeholders were generated which were related specifically to subwatershed management in the Tiffany Creek subwatershed by the HCA (Appendix 2 and 3). Upon completion of the interviews, the answers to these questions were considered collectively for each criterion in order to assess the presence or absence of each variable. The responses generated were then analyzed by comparing statements and assumptions with the principles found in the evaluative framework. This resulted in the formation of characteristics for successful stakeholder participation in the Tiffany Creek subwatershed from both the agency and stakeholder perspective. These perceptions were then compared to understand if the characteristics of successful stakeholder participation, discussed in Chapter Two, existed in development of the Tiffany Creek subwatershed action plan process and if changes should be made for planning exercises in the future.

This type of research design is not unique and has been applied by others in their evaluation of participatory programs in resource management. Specifically, Buchy and Race (2001) and Norton (2007) have used a similar methodological approach where focused questions are used to evaluate principles of good participation practices. In both cases, the evaluation of stakeholder participation was presented in the form of a narrative using descriptions gathered

from the case study, data sources, and the literature to evaluate the characteristics for successful stakeholder participation. A similar approach will be also be used in this thesis to develop an understanding of the characteristics for successful stakeholder participation in the planning and management of the Tiffany Creek subwatershed.

As mentioned in Chapter Two, some studies have attempted to assess the appropriate characteristics of citizen involvement in environmental planning. Particularly, studies have traditionally focused on placing participatory programs on a continuum or have stressed the importance of contextual relevancy. Although much is known about methods for incorporating citizenry in resource management and planning as well as subsequent benefits and drawbacks of their involvement, little is written about why many agencies continue to have difficulties involving stakeholders in their processes (whether this is self-perceived failure or ignorance of current methods). This work focuses on the need for understanding and interpreting both agency and citizen motivations and perceptions for stakeholder participation. A contextual understanding of participation (goals, motivations, and perceptions) will thus be ascertained and synthesized with the perspectives of agencies and stakeholders in order to establish participatory initiatives which are pertinent and attractive for all parties involved.

3.4   Data sources

Three sources of data—document analysis, semi-structured interviews, and personal observation—were used in this thesis to understand the characteristics for successful participation in the Tiffany Creek subwatershed. This combination of methods was desirable as the various methods, when analyzed collectively, were able to highlight converging lines of inquiry leading to more convincing and accurate results (Yin, 1984).   Although each method individually was not sufficient, when combined these methods served to corroborate findings

45

from the data sources. This process of triangulation served as a way of checking information to verify results.

Document analysis

In order to understand the context of resource planning issues within the Tiffany Creek subwatershed relevant documents pertaining to planning and management practices within the region were collected and analyzed. Primarily, the documents gathered were used to understand management strategies and policies within Tiffany Creek subwatershed. However, such documents also provided an understanding of the overall socioeconomic, ecological, and governance structures within the region, which aided in understanding the overall context. Obtaining and examining the documents early in the study was essential in order to tailor questions to the context and also to corroborate findings brought forth by interview participants.

Most of the documents analyzed in this study were collected through local libraries and websites of relevant environmental agencies. Examples of some of the documents used are: the Conservation Authorities Act, the ACT! Ancaster, Chedoke, and Tiffany Creek subwatersheds, and the Tiffany Creek subwatershed plan. In order to establish an understanding of current management practices within the region 11 federal and provincial government documents, 14 municipal planning documents, 19 Hamilton Conservation Authority documents, 17 documents specifically related to the A.C.T. process, and 4 local media reports related to the Tiffany Creek subwatershed were used.

In addition, documents were obtained during interviews with key informants at the HCA. After conducting interviews with HCA staff, participants were asked if they could provide documents not readily available to the public. Examples of documents provided are: Planning & Regulation Policies and Guidelines (2006), Stakeholder Consultation Guide (1997), Stakeholder

Engagement (2007), and landowner contact letters and response sheets (1999). In total 18 documents were collected from the key informant interviewees at the HCA.   The documents gathered were used to understand the role of stakeholder participation in subwatershed planning within the Tiffany Creek subwatershed. More detailed information regarding the specific context of the subwatershed can be found in Chapter Four.

Semi-structured interviews

In order to determine the attitudes and motivations of the HCA and residents toward stakeholder participation in subwatershed planning, 20 semi-structured interviews were conducted. Interviews were performed with local residents from various regions in the Tiffany Creek subwatershed and key informants at the HCA. The interviews were used to identify the opinions surrounding the characteristics, goals, and frequency of successful stakeholder involvement in subwatershed planning and to highlight relevant information not found in the document analysis. Thus, for the purpose of this research, understanding if any dissimilarities existed amongst agencies and stakeholders was stressed over statistical representation. In this manner, input was obtained from randomly selected stakeholders and key informants at the HCA in order to evaluate if problem existed with current management practices undertaken by the conservation authority. The research was qualitative and although the researcher recognizes that "representativeness may be at times be a crucial requirement, at other times kneeling before the gods of randomness impedes rather than facilitates understanding" (Palys, 2003, 144). To clarify, although at times obtaining statistical representation is an integral component of research, at other times to obtaining an in-depth contextual understanding of the research question is preferred to understand varying dynamics of a problem. Thus, for the purpose of this thesis, utilizing a qualitative methodology was preferred because it facilitated a greater understanding of

the research question through establishing long, flexible dialogues about stakeholder participation.

All the interviews conducted followed a semi-structured format with evaluative questions geared to the characteristics of the participant (i.e., stakeholder or key informant). Moreover, the purpose of the research was made explicit to each participant in order to provide individuals with the rationale and goals for the interview process. This method was used to allow adaptation and follow-up questions to be asked based on the background of the interviewee. The questions asked were guided both by the research objectives and the evaluative framework. Initial questions were posed to interviewees on the current management practices and the role of stakeholders in planning at the current time (Appendix 2 and 3). These questions helped establish background information, perceptions of the HCA, and highlight the characteristics for successful stakeholder involvement. Following this, questions were asked relating to motivations for participation, opinions regarding best practices, and the perceived outcomes of the adoption of a participatory approach to planning.

An important criterion for stakeholder participation in this study was the location of the subwatershed in which they reside. In order to integrate the opinions of all residents in the Tiffany Creek subwatershed, an equal number of participants was randomly selected from each of the three land-use classifications in the region (semi-rural, suburban, and greenspace). Thus in order to represent each of the land-use classifications interviews were conducted with semi-rural residents, suburban residents with properties backing onto designated greenspace, and suburban residents away from urban greenspace. Initially, emphasis was placed on citizen location in order to determine if motivations and perceptions toward participation varied amongst residents from differing landscapes. However, one should note that upon obtaining the results

little variation existed between participants from the differing land-uses within the subwatershed. Consequently, no emphasis is placed on the location of residents in the proceeding sections of the thesis.

In each region, interviewees were selected through a disproportionate stratified random sampling technique (Palys, 2003). This was done by collecting and placing all the street names into a hat and having a third-party select a street where participants would first be sought for an interview. This procedure was conducted for each land-use in order to determine where to begin recruitment for participation in the study. One should note that in each of the three cases additional street names would have been randomly drawn if enough citizens could not have been recruited; however, in each case stakeholders were receptive to participation and no additional streets were needed. Additionally, it is important to recognize that a random method was the only option for designing this study because was no documentation provided which suggested that stakeholders from the Tiffany Creek subwatershed had previously participated in environmental planning. Thus, the lack of stakeholder participation did not provide opportunities for the researcher to contact individuals who had previous experience in the subwatershed planning process.

Upon arrival at each of the streets used in the study, the researcher started the recruitment process from the lowest even street address moving from house to house in a linear fashion until five participants agreed to participate in the study. If an individual verbally agreed to participate in the study, he or she was given a recruitment letter which outlined the research. At that time, interviewees were also informed that their participation was anonymous and were given the option of either contacting the researcher at a later date to set up an interview or doing so immediately. Upon verbal interest in the study, potential interviewees were given the option of

having interviews conducted in person at a public location or via telephone on a date of their

choice. The two options were provided to participants because the researcher recognized, after

several failed attempts to solicit participation, that individuals preferred interviews to be

conducted over the telephone because they were more time efficient, and they allowed the

individual to participate from the comfort of their home. Consequently, all interviews conducted

with stakeholders were done over the telephone and interviewees willingly gave their contact

information and appropriate dates for a interview at their doorstep. All interviews with

stakeholders were conducted during the months of January and March, 2009 over the telephone

and were audio-recorded (with permission) for accuracy. Interviews ranged in length from 18

minutes to 59 minutes for an average of 33 minutes. Finally, it is important to note that

interviewees were selected only on the basis that they were the primary owners or renters of a

residence in the Tiffany Creek subwatershed. No other characteristics (e.g., age, education, etc.)

were required for an individual to participate. However, anecdotally interviewees in this study

ranged in approximate age from mid-thirties to mid-sixties with a total of 8 men and 7 women

participating from the Tiffany Creek subwatershed.

In addition, interviews were conducted with key informants at the HCA. The participants

from the conservation authority were selected based on their previous experience organizing or

being involved in participatory processes at the HCA. Thus, participants came from various

departments in the organization—two from the engineering and planning division, two from

stewardship outreach, and one from watershed enforcement. In this manner sampling was non-

probabilistic because participants were chosen for expertise and specialized knowledge of both

participatory processes and organizational structure (Marshall & Rossman, 1995; Palys, 2003).

At the onset, interviews were first conducted with staff who directly participated in the A.C.T.

process. These names were obtained from the final copies of the A.C.T. action plans. Upon completion of an interview, each participant was asked for suggestions of other individuals who would be necessary to interview to understand stakeholder participation in subwatershed management by the HCA. In total five interviews were conducted with key informants at the HCA headquarters in Ancaster, Ontario during December, 2008 and January, 2009 on dates and at times of their choice. Interviews ranged in length from 61 minutes to 88 minutes for an average of 72 minutes.

The Office of Research Ethics at the University of Waterloo reviewed the proposed study for ethical matters, and cleared the research design and question protocols. In accordance with the regulations of the research ethics board, verbal or written consent to be an anonymous participant in the study and to have the interview audio-recorded was obtained from each individual. At their doorstep, each participant was presented with an information letter outlining the study. The letter gave the participants an overview of the study and informed them of their role in the research process. Also, it highlighted how their information would be used in the thesis. Moreover, it assured them of their rights as a participant and assured them of the fact that the study had received ethical clearance from the University of Waterloo's Office of Research Ethics. A copy of the information letter provided to participants and the follow up letter given as gratitude for participation has been included in Appendix 4 and 5.

Personal observations

In order to gain a visual understanding of watershed and land-use characteristics within the Tiffany Creek subwatershed, personal observations were recorded on trips made to the region for a previous study in 2006 and in March of 2009. Observations were made of the ecological and socioeconomic conditions of the watershed. Observations were made by walking from the

headwaters of the watershed until its convergence with the Ancaster Creek noting the land-use practices within the subwatershed, stream characteristics, and riparian communities in the subwatershed. Observations were taken using a digital camera and by taking detailed field notes. Although these observations did not bestow substantial insight into the research objectives they did contribute to a rich contextual understanding which was needed during both the interview and document analysis processes.

3.5   Data analysis and presentation of results

As articulated at the beginning of this chapter multiple sources of data were used in this research in order to obtain information that could be corroborated or augmented by other data sources leading to more accurate results (Yin, 1984). Thus, for the purpose of this study citizen and informant interviews were compared with each other, with relevant documents, and when needed with personal observations. The comparison of data sources was done in order to reveal patterns, relationships, and disparity that aided in establishing appropriate characteristics for successful stakeholder participation and the varying approaches of both citizens and managers to the process.

Reponses given from both the citizens and key informant interviews were audio-recorded (with permission) for greater accuracy and transcribed. Because the methods were qualitative (descriptive in nature), quotations and general conclusions from the interviews and documents were coded based on the principles found in the evaluative framework presented in Chapter Two. From the evaluative framework a number of questions and characteristics of each principle served as codes (indicators) to assess of the presence or absence of a principle in participant responses. This was done in order to highlight emerging themes from the respondents and

documents in order to determine if similar or dissimilar perspectives toward participatory
initiatives existed.

In order to present the results in an accessible manner, seven tables were created that
were based on each of the principles outlined in the evaluative framework. An example of the
tables is illustrated below; the remaining tables can be found in Appendix Six. Merging the
outcomes of the interviews and document analysis in individual chart form, side-by-side, allowed
for easy analysis and comparison of the results from the sources of data. One should note that
results within the chart were presented in qualitative form because the responses from both
citizens and key informants were descriptive.

Table 3.1: Results supporting establishing well-defined goals and objectives in a participatory process

Evaluative principle	Corresponding criteria	
Well-defined goals and objectives	• *Method of participation- is made known to participants* • *Presence of value based goals* • *Project timeline for participation is established and communicated* • *Responsibility and role of stakeholders involved outlined*	
Documentation	**HCA Response**	**Stakeholder Response**
• HCA, 2000a: Need for clear goals in the implementation of watershed plan. • Ontario, 2007: Part of having well-defined goals is being transparent with your intentions and goals for the participatory process • Marketing communications from the A.C.T. process illustrate that the HCA clearly articulated the role tha citizens would have in the process (HCA; 2007j; HCA; 2007l; HCA, 2008c; HCA, 2008e). • HCA also produced a stakeholder engagement guidelines document which outlines the role of stakeholders in the A.C.T. process (HCA, 2007k: HCA, 2007m).	• Respondents highlighted that if citizens didn't understand the process and how they would be involved they would be more reluctant to participate. • 3/5 participants highlighted the importance of clear process gaols for the success of involvement. • Communicating goals and objectives allows citizens to understanding how and why they are participating	• Establishing goals for the participatory process make a program attractive for residents. • Citizen responses highlighted that it is important to establish what organizations want from citizens in the early stages so they know early on how they will be participating and what impact they will have.
Documentation Quotations:		

53

Ontario, 2007: "The roles and responsibilities of all parties need to be clearly defined and shared with participants at the outset. Stakeholder need to be informed up front of the how, where, when, and what is to be expected of their contribution and participation. (17)

HCA Quotations:
HCA 2: "A lot of people don't understand the provincial planning process either, so if you don't understand what the process is you might be a little more reluctant to get involved in the meetings."
HCA 3: "You have to know what their goals are or what their objectives are you have to know what their wanting to accomplish and what your wanting to accomplish."
HCA 4: "Yeah, I think not knowing how there. . .but even then we sent out media releases and it was in the newspaper that we were seeking their input. . .but yah seeking input for what? So maybe yah, maybe more specific messaging at the outset would increase participation."
HCA 5: "People I think can only be involved as long as they understand what it is you're asking them to be involved in. I'm not likely, as a citizen, to go out to something if I don't understand how my input is going to make a difference . . . if it isn't clear what you're asking them to be involved in your of course going to get less interest."
Stakeholder Quotations:
S5: "You need to have everyone on board in terms of what are aiming for, what is the mission and visioning in terms of our goals. The more people realize it and know about it the more they are enticed to become a part of it because the better it will be."
S11: "If I were the conservation authority I would put some ads in the paper, the community papers, and have an open house. And during the open house they could present to the residents okay here is what we want to do and we are really interested in having your input on these certain policies and being a part of the decision making process."

The objectives for this research were to draw conclusions about the characteristics for successful stakeholder participation in environmental planning in the case studied and to provide recommendations on how to improve current and future planning practices. In this chapter the methodology used to achieve the objectives described above was discussed, outlining the criteria for selecting the Tiffany Creek subwatershed as the case study site and the sources of data used to examine the characteristics of successful stakeholder participation. Chapter Four continues with a discussion of the Tiffany Creek subwatershed, examining the historical, social, economic, and environmental characteristics of the region.

Chapter 4: Characteristics of the Tiffany Creek subwatershed

4.1   Location of subwatershed

The Tiffany Creek subwatershed is located in the town of Ancaster within the
amalgamated City of Hamilton. This subwatershed is located within the much larger Spencer
Creek Watershed, which covers an area of 568 square kilometres within the towns of Ancaster,
Dundas, Flamborough, and portions of Hamilton and Puslinch (Figure 1.1) (Hamilton Region
Conservation Authority (HRCA), 2000b). Tiffany Creek is approximately nine kilometres in
length and is a tributary of Ancaster Creek. Ancaster Creek flows into Spencer Creek,
proceeding through the Dundas Valley and eventually drains into Cootes Paradise, Hamilton
Harbour, and by extension, Lake Ontario (HRCA, 2000b). Encompassing only 3.1 percent of the
total surface area of the Spencer Creek watershed and draining a total of 909 hectares of land, the
Tiffany Creek subwatershed is a small piece of a greater ecological puzzle (HRCA, 2000b;
HRCA, 1997). Nonetheless, the Tiffany Creek subwatershed plays a pivotal role in the health
and restoration of the Spencer Creek watershed and the Hamilton Harbour as the subwatershed
has experienced significant suburban expansion with similar development poised to continue for
years to come.

The City of Hamilton (formerly the Hamilton-Wentworth regional municipality), is a
community that has experienced much population growth in the last fifty years because of its
location in the Windsor to Quebec corridor, and its close proximity to the metropolitan area of
Toronto. In 1991, the town of Ancaster contained 22,000 citizens and it is projected that in 2020
the area will be home to 43,000 residents (HRCA, 2000b). These statistics are corroborated by
both the City of Hamilton's official plan and the growth plan for the greater Golden Horseshoe

under the *Places to Grow Act,* which indicates that this region is slated for continued urban

intensification and development for years to come (Ontario, 2006).

The Tiffany Creek subwatershed is located within an area underlain primarily by

limestone. This area was formed by the skeletal remains of salt water creatures which, at one

time, lived in an ancient salt water sea covering the region (Woodhouse, 1973a). Like much of

Southern Ontario, the area's topography is attributed to the last glacial age when a large glacial

sheet scoured the earth and deposited finer particles of earth and sand in Ancaster. As a result,

the region is primarily composed of sandy, well drained, and potentially erodible soils (HRCA,

1997; Woodhouse, 1973). Moreover, a distinct physiological feature within the Tiffany Creek

subwatershed is the Niagara Escarpment. This limestone ridge has resulted from ancient

cataclysmic earth movements and extends from Niagara Falls to Tobermory, with visible

outcroppings within the region that are covered with extensive tracts of biotic life (HRCA,

2000b). In Hamilton, this natural feature is included within the large Dundas Conservation Area

(DCA). The DCA is important to the region of Hamilton as it is host to diverse ecological

communities and subsequent recreational, educational, and cultural activities.

4.2   History of the Region

Prior to 1700 A.D., the region of Hamilton-Wentworth was occupied by a variety of

native tribes who participated in hunting and gathering and eventually subsistence agriculture at

the end of the sixteenth-century. However, around the turn of the eighteenth century, the

Ancaster region (Dundas Valley) was travelled by French explorers and merchants who traded

with natives in the area (Morton, 1973). Shortly after, Europeans (primarily United Empire

Loyalists) began to settle in the region and in 1793 the area was officially surveyed; this spurred

further development. During this period, the town of Ancaster boomed due to abundant and

accessible hydropower which was used for grist and saw mills. Thus, in the early 1800s,

Ancaster was the core community in the region with no neighbouring towns within a forty

kilometre radius (Morton, 1973; Weller, 1990; Woodhouse, 1973).

Nearing the mid-1800s, the small community of Hamilton boomed economically and

socially due to the advent of steam power and the opening of the Burlington Ship Canal in 1832.

This canal was crucial to Hamilton's development as it gave ships direct access to Hamilton's

deep water port. During this time, Hamilton rapidly expanded in the export and middleman

market, leading to the development of warehouses along the Hamilton Harbour coast. Also, in

1851, Hamilton became a stop on the Great Western Railway, which increased the city's ability

to import and export goods to and from the region. Because of the new railway link and the

completion of the Burlington ship canal, Hamilton emerged as the core community within the

region while Ancaster developed into a periphery town; the dynamics within the town changed

forever (Morton, 1973; Weller, 1990; Woodhouse, 1973).

At the turn of the twentieth century and into the mid-1900s, Hamilton rapidly expanded

economically around the development of heavy industries, particularly steel. In fact, from 1890

to 1914, the city of Hamilton doubled in population and physical size due to high levels of

immigration from countries like Netherlands, Germany, Poland, and Italy. Widespread

immigration into Hamilton, which coincided with the expansion of the steel industry, caused

urban sprawl to the east of the city centre, which also prompted the development of a massive

stakeholder transit system (Hamilton-Wentworth Regional Municipality (HWRM), 1991b;

Morton, 1973; Weller, 1990; Woodhouse, 1973).

In the 1920s, Hamilton's landscape was revolutionized by the introduction of

automobiles to the region. The onset of personal transportation caused changes to how land was

used in the region by increasing individual accessibility to employment resulting in the southward suburban expansion of the city above the escarpment, which, due to lower land costs, resulted in increased lot and house sizes. During this period (1901 to 1931), the population of Hamilton-Wentworth was growing at a much faster rate than the population of Ontario and such growth continued after the Great Depression (Pennock & Orr, 1983).

Over the next number of decades, until the 1960s, Hamilton continued to grow based on the manufacturing sector, but not without consequences. Years of development and industrial production caused tremendous physical change of the landscape resulting from high suburban development above the escarpment and the degradation of the Hamilton Harbour below, which up to this point had been a sink for increasing levels of industrial pollution (including high levels of toxic contamination). In fact, in the 1930s, Hamilton Harbour witnessed the first closure of its beaches due to coliform pollution, which was being caused by high levels of pollution in tributary streams, including Tiffany Creek (HWRM, 1991b; Pennock, 1983; Weller, 1990).

Despite heavy pollution in the mid-twentieth century, environmental issues gained recognition within the Hamilton region with the formulation of the Remedial Action Plan during the 1970s and 1980s. This plan was instituted by the International Joint Commission with the help of local, provincial, and federal governments operating in Hamilton in an effort to stave off continued pollution of the Hamilton Harbour while attempting to restore it to a healthy state. Also, from the late 1980s to the present day, Hamilton has begun to change socially and economically; technological innovations and globalization have caused decreases in the manufacturing sector and a rapid increase in the service sector of the economy. This growth specifically impacted the Tiffany Creek subwatershed because industrial-business parks were built in Ancaster as a result of tertiary based growth. Moreover, during this period, all major

58

highways were completed in Hamilton, including the Lincoln Alexander Expressway which

caused significant alteration to Tiffany Creek itself and the subwatershed at large. Although this

period saw increased investment surrounding the remediation of the Hamilton Harbour through

government spending, many began to recognize the need for addressing new environmental

issues which had begun to surface in other regions of Hamilton (e.g., point-source pollution from

subwatersheds) (HCA, 2007c; HWRM, 1991; Pennock & Orr, 1983; Weller, 1990).

4.3   Land use

As mentioned previously, the Tiffany Creek drainage basin has experienced much

population growth recently. Presently, land use within the region can be broken down into three

types: suburban land use, agricultural land use, and protected regions.

Figure 4.1: Land use patterns in the Tiffany Creek subwatershed
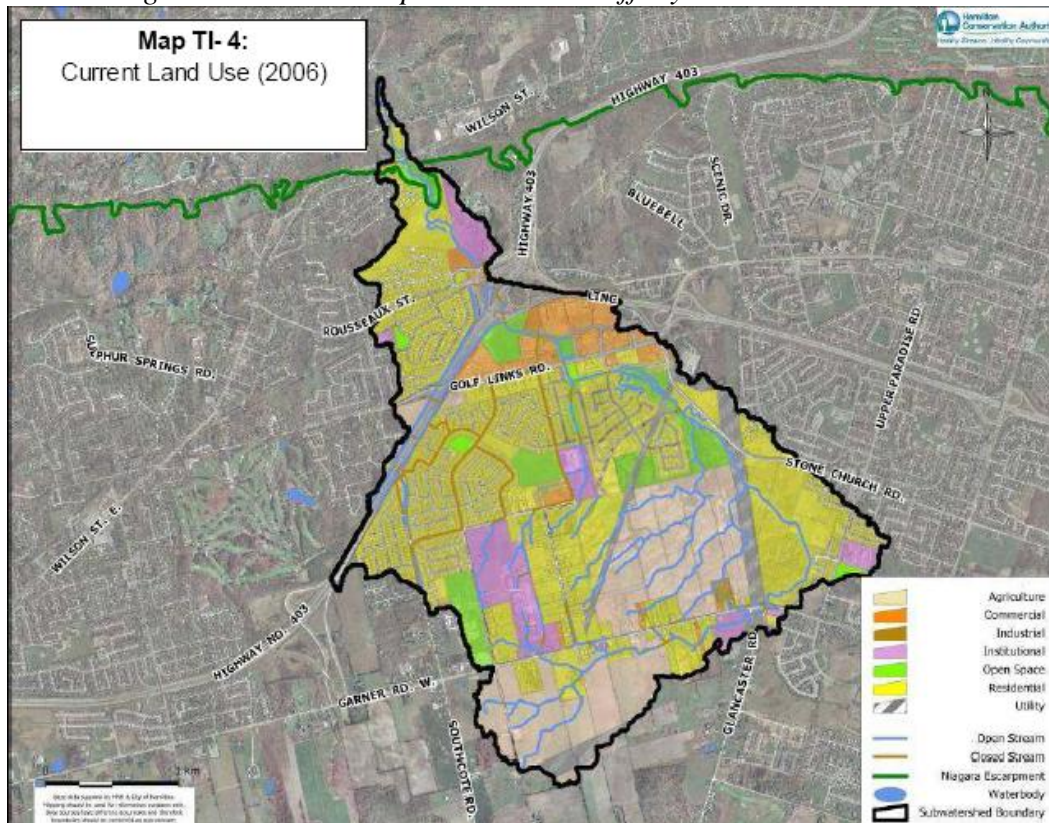
(HRCA, 2008a)

However, the Tiffany Creek basin is predominately used for suburban development and transportation systems, both of which have directly divided parts of the watershed (HRCA, 2000b). The regional focus on suburban development stems from after the Second World War when the area experienced high levels of growth coupled with transportation and commercial expansion in Ancaster (HWRM, 1987; HWRM, 1992). According to the City of Hamilton's official plan (2009), continued expansion of residential and commercial developments will be encouraged in the region in order to diversify the tax base of the region, create room for new residents, and increase local employment opportunities.

Although population growth does not necessarily require urban sprawl, the City of Hamilton's official plan for Ancaster focuses on suburban expansion in the Tiffany Creek basin. Ancaster contains 18 percent of the vacant residential land in Ancaster while the estimated residential unit potential for the area is only 15 percent, illustrating the municipality's plans for lower density development in the subwatershed (HCA, 2000b). Regrettably, this suburban growth is slated to cover prime agricultural land and to surround environmentally sensitive areas (Ancaster Creek Headwaters Complex, Tiffany Falls, and DCA). The intent is to not to prohibit development but to allow growth on a permit basis (HWRM, 1987). Specifically, an increase of 4,350 residential units in the Meadowlands Complex and an expansion of 8000 units in Ancaster are expected (Stantec Consulting Inc., 2001).

However, despite the increase in commercial and suburban development in Ancaster, the area has also been recognized for its natural importance through the designation of three environmentally significant areas (ESAs): Tiffany Falls, the Tiffany Creek Headwaters Wetland Complex (a Provincially Significant Wetland), and a small portion of the much larger Dundas Conservation Area (DCA) (HRCA, 2000b). These protected areas were recognized as

environmentally significant in 1995 by the City of Hamilton and also recognized in 1999 by the town of Ancaster. The environmentally significant areas are of great importance because they are home to 585 species of plants and animals—70 of which are rare and 33 of which have been identified as species at risk by Environment Canada (HRCA, 2000b; HCA, 2009b). Also, these protected areas have significant hydrological functions, slowing the stream velocity and absorbing nutrients which enter the stream from storm water run-off (van der Woerd, 2007). Moreover, the DCA is vital to the region because of its extensive recreational, educational, historical, and cultural relevance. In fact, in its planning phase, the area was thought to be especially important for the City of Hamilton because,

> "Hamilton has a great deal of heavy industry and needs more than many other cities . . . the type of psychological relief that a Conservation Area such as the one contemplated can provide for people who are daily engaged in job functions that are far removed from nature's environment" (Hamilton-Wentworth Planning Area Board, 1968, 22).

4.4   Environmental conditions and challenges

Currently, the Tiffany Creek subwatershed is suffering from the effects of increased urban development. Specifically, it is experiencing significant soil erosion, nutrient loading, and a loss in biodiversity. Soil erosion is a significant problem not only facing the Tiffany Creek catchment, but also the Ancaster Creek, Spencer Creek, and Cootes Paradise. As mentioned earlier, this basin has a high potential for erosion due to sandy soils surrounding the stream and a relatively high slope of 10-15 percent within the region (HRCA, 2000b). Unfortunately, increasing levels of impervious substances (asphalt and concrete) in the basin have augmented the amount and speed of surface flow causing high levels of run-off and subsequent soil deposition within the stream channel and subsidiary streams (HRCA, 2000b). However, the

61

problems with soil erosion are not new. In the 1990s, the Tiffany Creek subwatershed

contributed to a total of 47,000 kilograms of sediment being dumped into Cootes Paradise every

day (HRCA, 1990).

Additionally, high levels of surface water flow from suburban and commercial regions

have caused nutrient loading in the Tiffany Creek subwatershed. Particularly, nutrient loading

has been found to be high in winter melting periods due to road salt application and run-off from

transportation systems (van der Woerd, 2007).   However, this problem is only worsening as the

amount of impervious land is still increasing within the basin. In fact, between 1990 and 1999,

there was an overall eight percent increase in the total area of impervious land within the Tiffany

Creek subwatershed which consequently increased surface run-off while also preventing water

infiltration into the soil. Also, rapid suburban expansion is altering the stream morphology and

flow as the stream is being rerouted, channelized, and pushed under Ancaster transportation

routes. Moreover, this expansion has also disrupted regional wildlife and biodiversity through

the destruction of important habitats and has created new barriers between the green spaces in

the region (HRCA, 2000b).

4.5   Socioeconomic background

As mentioned in the preceding paragraphs, Hamilton has historically been settled by

immigrants. Throughout the twentieth century, the region was predominately settled by

Europeans who came to work in the steel industry (Pennock & Orr, 1983). In the late 1990s,

Hamilton continued to change with steady immigration from other regions of the world;

predominantly, increasing numbers of immigrants came from Asia (Carr, et al., 2005).

Additionally, the population within Hamilton is largely composed of those between the ages of

35-44 years of age due to the combination of the post-war "baby boom" and increased immigration into the region (Carr, et al., 2005).

Interestingly, despite being home to four post-secondary institutions, the level of education amongst Hamilton residents is lower than the overall levels of the Province of Ontario. Specifically, 14.3 percent of the population in Hamilton has a university bachelor's degree or higher while the overall provincial average was 19.2 percent (Carr, et al., 2005). In addition, a higher percentage of the population over twenty years of age have achieved less than Grade Nine (8.7 percent) and Grades Nine-Thirteen without high school graduation certification (16.9 percent) compared with the rest of the province (Carr, et al., 2005).

Traditionally, Hamilton's socio-demographic characteristics have been linked to the region's dependence on and continued expansion around the manufacturing sector. Particularly, the region is known for its specialization in heavy industry – steelmakers Stelco Inc. and Dofasco Inc. are historically the two largest private sector employers in the area – with 49,005 residents involved in this area generating $1.2 billion which was almost the equivalent of four percent of Ontario's gross domestic product (GDP) in 2001 (Hack & Yee, 2005). Although this statistic is dated, it illustrates the region's dependence on the industrial sector of the economy.

However, around the turn of the twenty-first century, Hamilton experienced high levels of growth in the retail and institutional sector which coincided with an overall decrease in manufacturing (Carr, et al., 2005). During this time, the city experienced significant growth in the health industry as Hamilton Health Sciences has grown to be the largest single employer in the region with over nine thousand employees (Hack & Yee, 2005). This growth in the service sector has brought much change into the region as city council and municipal planners are increasingly working to transform Hamilton's reputation from one focused on heavy industry to

a town with opportunities for those seeking employment in health care and for "baby-boomers" who are planning for their future needs. Despite a relatively strong economy in the region, it is important to note that Hamilton, when compared to the province of Ontario, does have a substantially higher proportion of its population in the city who live below the low-income mark set by the province (18.8 percent in Hamilton versus 13.6 percent in Ontario). This is true for all age demographics, but is particularly worse for those over the age of 75 in the region and for unattached individuals (younger individuals, teens, etc.) (Carr, et al., 2005).

4.6   Institutional context of water management in the region

Water management in the Hamilton region, as in most of the province, is a fragmented process with many agencies staking claim to their own piece of the management puzzle. This complex arrangement characterizes the diverse set of institutional challenges facing sustainable management of the Tiffany Creek subwatershed. In this section, agencies that operate within the jurisdictional boundaries of the Tiffany Creek subwatershed will be described. However, one should note that the HCA is the primary manager of the Tiffany Creek subwatershed and its role is described below in section 4.7.

The federal government has an interest in the general management of Tiffany Creek. Primarily, this occurs through the *Fisheries Act* (species and habitat protection), the *Canada Water Act* (special interest partnerships), the *Canadian Environmental Protection Act* (water and resource toxic pollution prevention), the *Great Lakes Water Quality Agreement* (Boundary Waters Treaty), the *Drinking Water Safety Act* (Human Health), and the International Joint Commission's Remedial Action Plan and (Ontario, 1998). However, traditionally the federal government's interest in the region has been limited for two reasons: (1) there are not significant fisheries in the subwatershed; and, (2) the government's perspective on water management is

generally at a macro level. However, through the continued remediation of the Hamilton

Harbour and recent recognition of the need to address pollution coming from its tributaries, the

federal government has recently become more interested with the state of subwatershed health in

the Hamilton region (HCA, 2007e). Specifically, as recent research has highlighted, the Tiffany

Creek subwatershed, by way of the Spencer Creek, is negatively impacting the health and water

quality of the Hamilton Harbour and the success of implementation of the Remedial Action Plan.

This has caused interest to be sparked in local subwatershed planning by the federal government.

Although the Province of Ontario did give the Conservation Authorities significant

responsibilities for the management of watersheds in the 1940s, the provincial ministries also

have jurisdiction within the subwatershed and have been a part of the overall planning process.

Through its various ministries and subsequent legislative acts, the Province has been an

important partner in the management of the watersheds in the Hamilton region. Provincial

ministries with interest in the region include the following: the Ministry of the Environment

(water quality and environmental health, source water protection planning); the Ministry of

Natural Resources (fisheries, forestry, public lands, parks); the Ministry of Municipal Affairs

(land use planning); and the Ontario Clean Water Agency (water supply). Although these

agencies may not all have programs and policies which necessarily operate in the region, they do

have a role in the creation and implementation of water policies and legislation that impact

Ontario's water resources (Hill, et al., 2007). Particularly of interest is the province's

tremendous input into the restoration of the Hamilton Harbour and more recently, the Province's

concern with the impact that subwatersheds have on its efforts to restore environmental health to

the harbour. In addition, the Province's concern in the region will continue to grow as

development continues to venture closer to provincially environmentally significant areas in the region.

At the local level, the City of Hamilton plays an important role in the management of the Tiffany Creek subwatershed. The Department of Planning and Economic Development operates under the Province's *Planning Act* to manage local zoning, by-law amendments, subdivision approvals, site plan controls, and building permits while at the same time operating under federal and provincial government frameworks (HWRM, 1991b). Although the City does have a wide variety of interests to account in its regional planning and development, it has made numerous commitments to address and attempt to rectify environmental degradation within region. In fact, in 1992, Hamilton adopted VISON 2020 which is a community visioning and sustainable development program that was launched as a model for community participation in environmental reporting and agenda setting (Wakefield, 2007). Moreover, the City's official plan states that, "pollution of air, water, and land in its many forms be prevented, mitigated, or otherwise controlled [and that] council will encourage and cooperate with all relevant agencies to reduce levels of pollution in Lake Ontario, Hamilton Harbour, Cootes Paradise, and watercourses within the City" (HWRM, 1994b, C-13). Therefore, through the official regional plan and through city programs such as Vision 2020, Growth Related Integrated Development Strategy (GRIDS), New Official Plan, Clean Air, Clean City Strategy, Downtown Renewal, to name a few, it is evident that the City of Hamilton has a strong interest in environmental protection and remediation.

Lastly, there are a number of interest-based non-governmental organizations who have vested interest in the management of the Tiffany Creek subwatershed. Although each group has its own niche in environmental management, these organizations do have a wide interest in the

66

general management of land and water within the Hamilton region and frequently collaborate to tackle issues and management challenges. The primary citizen-based action groups operating within the Tiffany Creek subwatershed are the Bay Area Restoration Council (BARC), Bruce Trail Association (BTA), Green Venture, Environment Hamilton, Royal Botanical Gardens (RBG), Field and Stream Rescue Team (FSRT), Hamiltonians for Progressive Development, and the Hamilton Naturalists Club (HCA, 2007c). Also, although not always organized cooperatively, local landowners have a variety of interests in the Tiffany Creek subwatershed. These relate to agriculture, economic development, recreation, education, and historical heritage.

4.7   Watershed management in the Hamilton region

Historical context of watershed management

A conference in Guelph, Ontario, in 1941 marked the beginning of a new era for water management in the province of Ontario. During the meeting, researchers and politicians advocated for an end to the depletion of natural resources and for a restoration of the lost productivity in regions of Ontario (Krause, et al., 2001). Although at the time no apparent solution to this problem was established, for years to come concerns continued to grow and many began to push for new legislation that would address concerns regarding the effect of environmental degradation on economic development in Ontario. Determining how the province would provide employment for the many armed forces coming back from WWII was also a concern (Ivey, et al., 2002). As a result, the *Conservation Authorities Act (CAA)* was established in 1946 and assumed responsibility for the "conservation, restoration, development and management of natural resources other than gas, oil, coal, and minerals" (Shrubsole, 1996, 321). Under the terms of the *CAA,* CAs were formed under a municipal and provincial partnership to

67

manage the quality and quantity of surface waters and natural resources (Ivey, et al., 2002). As a result, 38 CAs have formed in Ontario (Shrubsole, 1996).

At the time of their formation, and for years to come, CAs were viewed as one of the most advanced approaches to community action for conservation (Shrubsole, 1996). Based on six guiding principles, they were an early attempt at an integrative approach to water management. Of the six principles, two stand out in the context of the research: local initiative, and collaboration and cooperation.

CAs have historically placed significant emphasis on the incorporation of stakeholders into their organizational frameworks (Mitchell & Shrubsole, 1992). This emphasis on local participation is evident in the need for each CA to be a locally-initiated endeavour. Under the CAA, this meant that CAs were only formed when municipalities actively sought the development of these organizations in their watersheds. At the time, the Government of Ontario stressed that it would not force watershed-based agencies on municipalities, stating that they are a movement by and for the people (Mitchell & Shrubsole, 1992). In fact, the Ontario premier at the time, George Drew, stated that the closer government was to the people the better and more economical that government was (Mitchell & Shrubsole, 1992). It is because of their history of local initiation that terms such as "community based", "grass roots" and "bottom-up" have been applied to describe CAs (Mitchell & Shrubsole, 1992). This emphasis on local initiative can also be observed today through stakeholder participation in management practices, which continue to highlight the community-based orientation of the organization (Shrubsole, 1996).

Additionally, CAs have stemmed from principles of cooperation and coordination (Mitchell & Shrubsole, 1992). In fact, the CAA indicates that one goal of CAs is to collaborate with departments and agencies of government, municipal councils and local boards and other

68

organizations (Mitchell & Shrubsole, 1992; Shrubsole, 1996). CAs recognize the importance of stakeholder partnerships to their organization and thus attempt to apply such a belief to the management of Ontario's watershed today.

It is evident that the involvement of stakeholders is an integral component of current management practices undertaken by a Conservation Authority. However, currently many challenges face CAs, "including a complex institutional environmental, fluctuating senor government support, reduced funding, and concerns relating to communication and accountability" (Ivey, et al, 2002, 312). In particular, the provincial government only funds programs directly relating to their interests (e.g., flood control and environmentally significant regions) (Ivey, et al., 2002). However, such projects are only small segments of the overall responsibilities of CAs as they frequently are engaged in numerous activities related to watershed management, including watershed strategies, environmental education, habitat restoration, land acquisition, landowner stewardship assistance, and wetland management, to name a few.

The Hamilton Conservation Authority

Hurricane Hazel was a deadly storm in 1954 that dumped 285 millimetres of rain on the Greater Toronto Area (GTA) in a period of 12 hours (HCA, 2009b). This storm, the strongest ever recorded to strike so far inland, caused tremendous damage to private property and unfortunately took the lives of numerous individuals. Afterward, the Ontario CAs emerged from this tragedy with a primary mandate to partake in floodwater management. Beginning as the Spencer Creek Conservation Authority in 1958, the HCA was formed in the wake of Hurricane Hazel.

As time has progressed, the role of the HCA has grown tremendously from its initial function in flood water control and land management. Today, with responsibilities for protecting groundwater, educating landowners, acquiring land, managing stakeholder land trusts, monitoring environmental health and so on, the HCA has developed into the predominant environmental agency in the Hamilton region. Presently, the authority manages 4,400 hectares of stakeholder land and takes responsibility for 2,122 hectares of forested areas (HCA, 2009b). Over its 50 year history the CA has also planted 1.5 million trees and has two active outdoor environmental education centres that serve up to 12,000 students annually (HCA, 2009b). In its efforts to make Hamilton a sustainable community, the HCA has also been pivotal in helping the region surpass the goal set by the United Nations for sustainability, which suggests that 12 percent of a region should be made up of natural areas.

Tiffany Creek subwatershed management

In 2000, the HCA completed the subwatershed plan for the Tiffany Creek, one of the first subwatershed plans completed. This area was given priority because of the significant amount of existing and pending development occurring in the basin. In this study, the HCA stated that the increase in urban development posed was a major problem for the subwatershed. Particularly, the HCA concluded that residential development, encroachment into natural areas, channelization, and surface water run-off (urban and highway)—all a result of urban development—was threatening the overall environmental health of the subwatershed.

The outcome of the subwatershed plan was the formation of management strategies that attempted to mitigate threats to the catchment and restore environmental health where possible. The result was the recognition of five management strategies for the future: (1) protection of natural areas and wildlife habitats; (2) an increase and enhancement of natural corridors and open

70

spaces; (3) improvements to water quality and quantity in the region; (4) increased need for landowner stewardship and stakeholder awareness; and, (5) minimization of the impacts of proposed development in the basin. Of particular interest to this study is recognition of the increased need for stakeholder involvement and education. An outcome of the subwatershed plan was the recognition that the Meadowlands development complex be targeted for increased landowner contact in order to encourage stewardship and natural area conservation. Subsequently, upon completion of the plan, stakeholder participation in subwatershed management and planning primarily occurred through educative means through landowner contact newsletters, educational handouts to residents, letters of encouragement, workshops, and landowner site visits through the Hamilton-Halton Watershed stewardship program.

Although these programs are an essential component of watershed management practice, the role of the citizen for many years in the management and planning process within the Tiffany Creek subwatershed was to provide assistance in environmental remediation. Surprisingly, such a passive role in the planning of the Tiffany Creek subwatershed contradicts the goals and principles of the 1997 Spencer Creek Watershed Management plan, which advocated stakeholder awareness and understanding.   In fact, the plan directly states that,

> "In order to be effective [watershed plans] must have the support of local residents and politicians. Through stakeholder consultation, group and individuals will be invited to participate in the planning process and help implement the recommendations" (HRCA, 1997, 16).

However, such inconsistencies appear to have been resolved with development of the Ancaster, Chedoke, and Tiffany Creek subwatershed action plans in 2007. This initiative was a comprehensive approach to watershed planning and restoration that integrated stakeholders into

71

the planning process. This project focused on identifying current and future stresses that will be addressed over the next five years in the Ancaster, Chedoke, and Tiffany Creek subwatersheds (HCA, 2008a). The hope for these plans was that they would serve as a guide for local partnership in the implementation of stewardship actions within the basin that relate to educating local stakeholders, restoring the natural environment, and learning more about the local ecosystems (HCA, 2008a).

Unlike the subwatershed plan from 2000, the Tiffany Creek subwatershed stewardship action plan attempted to incorporate stakeholders into the planning process through the formation of a local stakeholder advisory committee. This committee met over the course of a year and provided direct support and input throughout the planning process. The formation of the advisory committee was an attempt to have the interests of all stakeholder represented in the planning process and membership in these committees was extended to all interested parties. Accordingly, the committee included agencies, organizations and businesses, and local residents (many of whom were described in section 4.6).

However, this plan, like its predecessor, identifies many threats to the subwatershed but fails to incorporate the input of local residents. This lack of stakeholder participation was disappointing for the HCA because despite extensive efforts (letters to the mayor, direct mailings to citizens, flyer distribution in the community, five media releases, website promotion, and two open houses) stakeholders largely were unresponsive to calls for participation in the process. Only 12 citizens attended the two open houses for A.C.T., and only one was a resident of the Tiffany Creek subwatershed. Moreover, only two citizens sat on the A.C.T. Stakeholder Advisory Committee, neither of whom were permanent residents of the Tiffany Creek subwatershed (HCA, 2007d; HCA, 2007o; HCA, 2008a; HCA, 2008b).

The HCA continues to focus on grassroots stewardship and local participation. Recent examples of their emphasis on local involvement are illuminated by the importance placed on stakeholder participation in both the continued development of the Spencer Creek subwatershed action plans and the newly completed fifty-year planning vision for the Dundas Valley (HCA, 2009a). These endeavours demonstrate that despite the minimal success of the Tiffany Creek subwatersheds and the ACT! process, the organization continues to be committed to environmental remediation through stakeholder participation in the planning and management process. Thus, understanding the most effective means for successfully including stakeholders in subwatershed planning is important for future management practices in the Spencer Creek watershed. An evaluation of the Tiffany Creek subwatershed may be able to highlight some reasons for the lack of participation in the development of the Tiffany Creek subwatershed action plan and may shed light on new approaches for engaging stakeholders in subwatershed management generally. Chapter Five provides the results of the evaluation of the perceptions and opinions of the HCA and stakeholders toward the characteristics of successful stakeholder participation in subwatershed planning for the Tiffany Creek.

Chapter 5: Results

As illustrated in Chapter Two, although methodologies for stakeholder participation often vary amongst agencies, it appears from the literature that there are a number of commonly cited characteristics for successful participation in environmental planning. This chapter presents the results of the document analysis and interviews conducted within the Tiffany Creek subwatershed. The findings from these data sources were compared to the evaluative framework established in Chapter Two and were used to understand the characteristics of successful stakeholder participation in the management and planning of Tiffany Creek subwatershed.

5.1   Well defined goals and objectives

As discussed in Chapter Two, the goals and objectives of stakeholder involvement in environmental planning and management can widely vary. For some agencies, stakeholder participation can provide meaningful comments on management plans and proposals while for others it is an opportunity for collaboration in order to improve decision-making. Regardless of the participatory method chosen for a process, it is crucial that the goals and objectives for the process are well-defined so that individuals can understand and accept their role in the process.

The importance of clear goals for effective stakeholder participation is not foreign to the Hamilton Conservation Authority (HCA) in its planning initiatives. In its 1997 Spencer Creek Watershed Plan, the HCA stressed the need for clear goals in the implementation of watershed plan strategies. This approach to watershed planning was supported at the time by the Ministry of the Environment and Energy's 1997 planning document *An Evaluation of Watershed Management in Ontario* (Ontario, 1997). This document supported the notion that strong local support for watershed plans could be achieved through an open planning process whereby the project purpose and participant roles are communicated early, throughout the process and in

74

plain language (Ontario, 1997). Emphasis on establishing well-defined goals in a participatory

process is also echoed today in a Provincial planning document obtained from the HCA on

stakeholder engagement for drinking water source protection in Ontario. Specifically, the report

outlines that,

> "Whatever the consultation tools and process used to engage stakeholders . . . the
>
> facilitators and leaders of these processes are responsible to the participants. Expectations
>
> of involvement and how the participants' contribution will be used need to be clearly
>
> articulated and met . . . if participants are being asked to provide input then leaders are
>
> accountable to the participants having promised that their input will receive due attention
>
> and consideration" (Ontario, 2007, 16).

Furthermore, the document sketches the importance of agencies being transparent with their

intentions and goals for the participatory process so that stakeholders can comprehend their role

in the planning process. The need for establishing well-defined goals and objectives in the

planning process is supported directly in the document where it states,

> "The roles and responsibilities of all parties need to be clearly defined and shared with
>
> participants at the outset. Stakeholder need to be informed up front of the how, where,
>
> when, and what is to be expected of their contribution and participation" (Ontario, 2007;
>
> 17).

In the Tiffany Creek subwatershed, emphasis on well-defined goals can be found in the

media communications for the A.C.T. process. In both the March 2007 and January 2008

newspaper advertisements and outreach flyers, stakeholders were informed that the HCA was

seeking stakeholder input at two open houses in the Hamilton Region (HCA, 2007j; HCA, 2007l;

HCA, 2008c; HCA, 2008e). Within each of these communications, the HCA stressed that

participation would take the form of asking stakeholders to join them at its open houses so that residents could voice their opinions and share their knowledge of the issues within their subwatershed (HCA, 2007g; HCA, 2007h; HCA, 2007j, HCA, 2007k; HCA, 2007l; HCA, 2007m). Thus, stakeholders were informed that the HCA was seeking additional local knowledge and understanding which would be taken into consideration when developing the stewardship action plans.

As well, the HCA asked stakeholders to consider joining its stakeholder advisory committee (SAC) for the Ancaster, Chedoke, and Tiffany Creek subwatershed action plans. Similar to the open houses, a call was made in local newspapers and posted on flyers in stakeholder locations for individuals to join the SAC (HCA, 2007k: HCA, 2007m). In these documents, stakeholders were asked to provide a resume and cover letter to HCA staff at the open houses or by email stating their interest in sitting on the SAC. Once submissions were made, or if requested before the application was submitted, stakeholders were given the *Stakeholder Advisory Committee Guidelines* document, which articulated the purpose, goals, and commitment required to be a member of the committee (HCA, 2007n). However, despite providing details on the characteristics for participation in the SAC, the HCA never outlined the purpose of forming a SAC or the anticipated outcomes of the process. It is evident from these actions that the HCA was interested in having stakeholders participate in development of the subwatershed action plans, but that increased efforts could have been made to ensure that residents understood their role in the process.

HCA interviewees emphasized the importance of establishing and communicating the goals of stakeholder involvement to all parties. In particular, HCA staff members emphasized value of ensuring that all stakeholders involved in the planning process should understand how

and why they were participating (Hamilton Conservation Authority 2 (HCA-2); HCA-3; HCA-5). Specifically, one staff member highlighted that,

> "People I think can only be involved as long as they understand what it is you're asking them to be involved in. I'm not likely, as a stakeholder, to go out to something if I don't understand how my input is going to make a difference . . . if it isn't clear what you're asking them to be involved in you're of course going to get less interest" (HCA-5).

This emphasis on communicating how stakeholder input would be used in the planning process was stressed by three of five respondents. Specifically, one staff member communicated the need for asking stakeholders what their objectives are for the participatory process stating, "You have to know what their [stakeholders] goals are or what their objectives are. You have to know what they're wanting to accomplish and what you're wanting to accomplish" (HCA-3). However, as highlighted at the end of previous quotation, respondents also spoke of the need for agencies to identify and communicate their goals for the process. One staff member reiterated this point while pondering the effectiveness of the outreach communications used in the A.C.T. process. Specifically, s/he noted,

> "We sent out media releases and it was in the newspapers that we were seeking their input . . . but yeah seeking input for what? So maybe yeah, more specific messaging at the outset would increase participation" (HCA-4).

> Similar to the staff members at the HCA, two stakeholders from the Tiffany Creek subwatershed also highlighted the importance of having well defined goals for the participatory process (Stakeholder-5); Stakeholder-11). The two residents stressed that if agencies were to clearly communicate the goals and objectives of a participatory process to stakeholders,

participation would be more attractive. This perspective was clearly articulated by a participant as s/he stated that,

> "You need to have everyone on board in terms of what they are aiming for, what is the
> mission and visioning in terms of their goals. The more people realize it and know about
> it the more they are enticed to become a part of it because the better it will be"
> (Stakeholder-5).

This perspective was supported by Stakeholder 11 who in his/her interview provided specific recommendations for how to effectively communicate the process goals and characteristics to stakeholders, stating,

> "If I were the conservation authority I would put some ads in the paper, the community
> papers, and have an open house. And during the open house they could present to the
> residents, okay, here is what we want to do and we are really interested in having your
> input on these certain policies and being a part of the decision making process"
> (Stakeholder-11).

Interestingly, the ideas of Stakeholder 11 are not new but are similar to the methods currently used in existing management practices by the HCA.

5.2 Early involvement

For agencies, choosing when to involve stakeholders in the planning process is a decision which has significant implications for the success of a participatory process (Brody, 2003; Marshall & Jones, 2005). As illustrated in Chapter Two, although sometimes agencies leave stakeholder participation until plans are drafted and stakeholders are used as a "check and balance" (as highlighted in Chapter Four), the literature advocates stakeholder participation early in the process.

Emphasis on early participation has been a recurring theme in the management of watersheds and subwatersheds within Ontario for some time. In both of the 1993 Ministry of the Environment and Energy (MOEE) reports, *Subwatershed Planning* and *Water Management on a Watershed Basis* (Ontario, 1993b; Ontario, 1993c)*,* the Government of Ontario advocates for the integration of stakeholders early in the planning process. These documents highlight that drawing stakeholders into the planning process early ensures that stakeholder concerns are received by agencies throughout all necessary stages in the process. Moreover, the documents state that if stakeholders are involved throughout the planning process, they can act as a "check and balance" to the planning professionals (Ontario, 1993b; Ontario 1993c; Ontario, 1997). Specifically, *Watershed Management on a Watershed Basis* (1993c) states that,

> "Early involvement of everyone in watershed planning can go a long way to minimizing conflicts, not just between land use and ecosystem needs, but also among agency mandates or responsibilities, or between long-term and short-term goals" (14-15).

Thus, the government emphasises the integration of stakeholders from the onset of project development because of the practical benefits which resulted (e.g., reduction of conflict). Today, the recognition of positive outcomes associated with the early adoption of stakeholder participation continues. In fact, in a recent document the Ministry of the Environment (MOE) expands on the positive attributes from the two 1993 documents, emphasizing that agencies should,

> "Get people involved early in the process. This helps to build a foundation of understanding of the issue, generate "buy-in" and contribute increased experiences and ideas to the process. Trying to get people to support a process . . . can be difficult if they are not engaged at the outset" (Ontario, 2007, 25).

Keeping in step with the recommendations of the Ontario provincial government, over the years the HCA has recognized the need for early involvement in their planning documents. In the *Spencer Creek Watershed Plan* (HRCA, 2000a) and the subsequent *Tiffany Creek Subwatershed Plan* (HRCA, 2000b) the HCA stresses the importance of early and proactive education of stakeholders in order to mitigate the impacts associated with residential development and make known to stakeholders how they could become involved in stewardship practices in the region. Additionally, in the A.C.T. process, early participation was a fundamental component of the project as stakeholders were asked to contribute input at two stages. First, stakeholders were asked to contribute input before the plan composition was underway. Second, they were asked to comment on the proposed draft plan once it was completed. In both cases, the HCA sought to obtain input from stakeholders before the final decisions within the planning process were made in an effort to ensure that the knowledge and understanding of stakeholders could be considered in the development of the plans. To generate interest in the process, the HCA provided stakeholders with a variety of methods and dates to participate (open houses, direct contact with HCA representatives, or by sitting on the A.C.T. stakeholder advisory committee). In order to encourage participation, the HCA also developed a diverse communications strategy which included newspaper advertisements, community flyers, letters to landowners, letters to town council, and website promotion – all of which described the project and asked residents to participate (HCA, 2007f; HCA, 2007g; HCA, 2007h; HCA, 2007j; HCA, 2007k; HCA, 2007l; HCA, 2007m; HCA, 2008b; HCA, 2008c; HCA, 2008e).

In the interview process, early participation was highlighted as a necessary factor in the success of stakeholder participation. All HCA staff members interviewed recognized that early stakeholder involvement in the planning process was important. Four of the five interviews

advocated for the immediate inclusion of stakeholders in the planning process (HCA-1; HCA-2; HCA-3, HCA-4). Additionally, the HCA's commitment to early participation in the planning process is evident in the A.C.T. process because the HCA asked residents to provide input before the majority of the actions were complete. According to HCA-1, participation was sought "early" in the process to ensure that the opinions and knowledge of stakeholders could be integrated into the plans.

Moreover, two staff participants highlighted the practical benefits for including stakeholders at the onset of program formation stating, "I wouldn't hesitate; you have to involve everybody right at the beginning . . . if you don't, you will get backlash from the stakeholder" (HCA-1). In addition, another interviewee stated that, "the more people are engaged and involved at the outset of the project and the development of it, the more engaged they'll be in the end" (HCA-4). Conversely, one interviewee mentioned that involving stakeholders too early in the process could have detrimental effects on the program. In particular, s/he felt that involving stakeholders at the onset (i.e., in proposal stage) is a waste of the stakeholder's time because they would struggle to understand the issues and be unable to provide meaningful input (HCA-5). Additionally, this staff member continued by stating that it was the responsibility of the HCA to gather research and create proposals because municipal taxes pay for the HCA to work on behalf of stakeholder (HCA-5). Nonetheless, despite differing opinions on the exact characteristics of early participation, HCA staff agreed that the involving stakeholders in planning early in the process ensures that the opinions and perspectives of stakeholders can be incorporated into a program or policy before any significant decisions are made (HCA-2; HCA-4).

Likewise, 11 of the 15 interviews with Tiffany Creek subwatershed residents stated that early participation was important for participation to be successful. However, rather than discuss

when a process could be defined as "early", comments from stakeholders primarily focussed on the results of including stakeholders in the planning process early. Particularly, one interviewee emphasized that by "being a part of the process start to finish, you will also get a sense of ownership" (Stakeholder-11). Also, residents mentioned that being incorporated early in the process allows residents to grow alongside a project, developing knowledge and understanding of the issues in their community creating a sense of pride amongst those who participate (Stakeholder-1; Stakeholder-4; Stakeholder-11). Finally, participants noted that if stakeholders were given a chance to be a part of the process early, then residents would be more likely to support a new policy or program.

In addition, residents also commented that early participation serves as a way to ensure that stakeholders get a chance to influence decision-making. One stakeholder summarizes this argument well stating that participation should, "definitely [occur] on the early side because sometimes, you know, once the projects are going, it is too late to turn it around and unscramble the egg" (Stakeholder-14). Moreover, another resident reiterates this point commenting that, "stakeholders should be there right from the beginning. This is what we would like to see and once the authorities have already started something and you really don't like it, then it is difficult to change it" (Stakeholder-6). Thus, by being incorporated at the onset of program development, the participants stressed that residents would be more likely to support a new policy or program. One resident highlights this sentiment well, stating,

> "When you are not a part of the process, then it is very difficult to support it. And of course flags go up because you don't know the whole story. So it is just about being involved in the process, listening, providing feedback, and knowing that the decision

being made by the conservation authority has residential backing" (Stakeholder 11, 2009).

5.3   Representation

As stated in Chapter Two, representation is one of the main goals of stakeholder participation in resource management and planning (Lawrence, 2006; Leach, 2006). Whether or not the method chosen to involve stakeholders in the process is collaborative or consultative, asking stakeholder to become involved in the process is a form of taking into consideration the interests of those in a community.   Thus, achieving adequate representation of stakeholders should become a goal of planning exercises which utilize.

In Ontario, emphasis has been placed on need for inclusive and representative stakeholder participation.   Particularly, the Ontario *Planning Act* requires that municipalities give stakeholders a chance to question and comment on official planning documents and their subsequent amendments (Ontario, 1990b). Specifically, in section (15) (d), when formulating an official plan, at least one stakeholder meeting must be held for giving stakeholders an opportunity to voice their comments on a proposed plan (Ontario, 1990b). Thus, theoretically all stakeholders are given a chance to partake in the planning process; however, participation often takes the shape of structured participatory processes which, if one was categorizing participation using hierarchy models like Arnstein's ladder previously discussed, would fall low on ladder of participation.

Additionally, during the 1990s the MOEE authored several documents which outlined best practices for watershed management in Ontario.   In these reports, special emphasis is placed obtaining adequate representation of the interests and opinions of stakeholders in the management of a watershed.   Specifically, the documents call for the broad inclusion of

stakeholders, providing opportunities to all those in a community (public or private) to be active participants in the planning process (Ontario, 1993b; Ontario, 1993c; Ontario, 1997). Furthermore, the MOEE stresses the importance of equitably recognizing the input of all individuals who participate. This need for adequate representation is reaffirmed in a later document produced in 1997 which emphasizes that "all participants should be assured of equitable participation and consideration of [their] ideas" (Ontario, 1997, 13).

At the local level in Hamilton, Ontario, representation of stakeholders in planning has been a goal for at least the last decade. In Vision 2020, a community based sustainability plan produced by the City of Hamilton, emphasis is placed on the fact that a "more sustainable community will result when stakeholders have the opportunity for meaningful participation in the decision-making process of local government on the issues that affect their community" (HWRM, 1997, 214). Thus, in developing the objectives and goals for Vision 2020, the City of Hamilton held a number of participatory events where stakeholders could provide input into the planning processes and community visioning exercises for the city. In fact, the involvement of stakeholders in the planning process is a direct goal for the actions and strategies for the project. Specifically, the City of Hamilton highlights under strategy 52 that a goal of the projects is to ensure that there is active stakeholder participation in local government decision making (HWRM, 1997).

Also, the HCA has emphasized the need for adequate representation of stakeholder opinions on and understanding of the formulation of watershed and subwatershed plans and policies within the Hamilton region. An early example of this is in the development of the *Spencer Creek Watershed Management Plan* where over 80 individuals sat on work groups which contributed to the development of the plan (Hamilton Region Conservation Authority

(HRCA, 1997) . In addition, open houses, group meetings, presentations, and letters were all used to obtain stakeholder representation in the watershed plan. While the HCA recognizes the importance of including stakeholder input into the planning process, their involvement is also critical in the implementation phase. This is highlighted in the *Spencer Creek Watershed Management Plan* where the HCA states,

> "Implementing the watershed plan through the planning process will required support from all levels of the municipality. Local politicians, municipal staff and local residents must be aware of the watershed process and ecosystem planning" (HRCA, 1997, 101).

The importance of stakeholder representation in planning and management is also evident in the development of the A.C.T. stewardship action plans. In the formulation of these plans, a broad and inclusive call for participation was made to stakeholders. In order to achieve representation, the HCA used newspaper advertisements, press releases, website stakeholderations, letters, direct contact, and stakeholder open houses to invite stakeholders become involved in the planning process. In this manner, the HCA invited all residents within the Tiffany Creek subwatershed to become involved in the process so that adequate representation of community interests and knowledge could occur. Moreover, the HCA ensured that stakeholders were given the opportunity to be present at all stages of planning (proposal development, plan formulation, and now in the implementation phase), so that together the conservation authority and stakeholders could work together to address and alleviate environmental stressors in the region.

However, despite the efforts made by the HCA to include stakeholders in the A.C.T. planning process the results of their endeavours suggest that the interests and opinions of stakeholders were not represented in the outcome of the plans as only one resident attended the

two open houses and no landowners sat on the SAC. Thus, minimal participation in the development of the plans leads one to question the level of stakeholder representation in the planning exercise. Consequently, the statement from the A.C.T. Stewardship Action Plans executive summary that "local stakeholders have jointly developed comprehensive stewardship actions plans for the Ancaster, Chedoke, and Tiffany (ACT) creek subwatersheds of Spencer Creek" seems generous considering only eight residents from all three subwatersheds attended the two open houses and only two residents sat on the SAC (HCA, 2008a, i). Rather, it appears in the acknowledgements of the A.C.T. Stewardship Action Plans that the main participants in the planning process were local agencies that had an interest in the development of the stewardship action plans (e.g., City of Hamilton) (HCA, 2008a). One should note that the preceding statement is not intended to criticize the efforts made by the conservation authority to include stakeholders in the process. In fact, its efforts should be commended as it voluntarily went above and beyond the required level for stakeholder participation in policy development. The statements rather highlight the fact that a problem exists if the intentions of the HCA were to have the interests and opinions of the Tiffany Creek subwatershed residents incorporated and represented in the stewardship action plans.

In the interview process with the HCA staff, participants confirmed that 13 recruitment methods were used in the A.C.T. process to encourage stakeholder participation in the planning and implementation of the stewardship action plans. Although largely unsuccessful in the Tiffany Creek subwatershed action plan, achieving stakeholder representation in planning and management at the watershed level was confirmed as a goal for four of the five persons interviewed (HCA-1; HCA-3; HCA-4; HCA-5). Specifically, when asked who should participate in watershed planning, participants suggested that stakeholder participation should be

86

an inclusive practice whereby all interested individuals can become involved, if they desire. This

belief was especially evident in one interview where a staff member emphasized that stakeholder

involvement should be made available to,

> "whoever is motivated to come out. If you have, you know, those people who may not
>
> be familiar with the environment, but say have a strong business interest, say, or a
>
> technical interest or specialty, I think that's important to have them too because that way
>
> you will have a well rounded group . . . Those perspectives will help you learn how to get
>
> your message out in ways that you haven't considered because they are coming to you
>
> with a different set of eyes and values because they are different. So I think it's
>
> important, if you can draw that well rounded group" (HCA-5).

This emphasis on having a well rounded group involved in the planning process was echoed in

another interview, where an interviewee stated,

> "I would always hope for an accurate cross-section of the land uses . . . different sectors.
>
> You want adequate representation, guess would be a better way of phrasing it, from
>
> different sectors, in anything that you do. And anyone, really, that's interested in
>
> learning as well as participating. If they are engaged and want to participate I don't think
>
> anyone should be excluded" (HCA-4).

Notably, during the interviews it appeared that the reasoning for attempting to achieve

representation in planning is more than just democratizing the process. Interviewees also

highlighted that achieving stakeholder representation fosters learning for both residents and the

HCA which increases stakeholder buy-in for management plans and policies and reduces conflict

during the implementation stages of program development (HCA-4).

While interviewing residents for this thesis it became clear that the residents of the Tiffany Creek subwatershed believed that all interested individuals should have the opportunity to become involved in watershed management and planning. In total, nine residents made specific reference to the fact that local planning by the HCA should be inclusive and involve stakeholders. Specifically, one individual advocated that participation "should be available to those who care. I think that is my best way of putting it. They don't have to be educated, they have to be people that care about it" (Stakeholder-6). In addition, this perspective was reiterated by Stakeholder 13 in his/her statement:

> "You would have to have a cross-section of everyone, right? You couldn't say you just want highly educated or formally educated individuals, you need people with passion and a love for various things is important too; I would say a cross-section of people with general walks in life" (2009).

As seen in the comments above, for residents, it is important that stakeholder involvement is not restrictive but available to all community members. However, interviewees failed to mention the importance of obtaining a statistically accurate cross section of community interests, but rather commented on how participatory processes should be structured. Some individuals noted that stakeholders can provide valuable knowledge to the planning process which cannot be obtained by HCA employees. Specifically, one participant spoke of wisdom and the importance of including experiential and contextual understanding of some residents in the development of watershed plans and projects commenting that,

> "if you can hear different perspectives on issues, that is a good thing, if you are just hearing all the same thing, like if it's all scientists or environmentalists or something,

88

they are just hearing one perspective and to make solid decisions you need to hear all perspectives" (Stakeholder-2).

5.4   Empowerment

By its nature, stakeholder participation is a way of democratizing the planning process in order to integrate the interests and opinions of the general populous into a project. However, as mentioned numerous times in this thesis, making the planning process more equitable and empowering people does not necessarily mean that stakeholders should be given equal power in the decision-making process (Mitchell, 2002). Regardless of the methodology used to involve stakeholders in resource planning, the act of including stakeholders in the process is a pluralistic exercise whereby agencies are actively seeking to utilize the knowledge and understanding of stakeholders in some capacity (Day, 1997; Lane, 2005; Primmer & Kyllönen, 2006). As highlighted in section 2.2, the characteristics and level of stakeholder involvement in planning varies between organizations and projects. Likewise, for individuals involved in the planning process, the level of empowerment will also vary in each circumstance, depending on the methodology used. Regardless, from the literature it is clear that an important component of successful participation is the fact that stakeholders have the ability to influence the process in some capacity (Broderick, 2005; Day, 1997; Gooch, 2004; Leach 2006; Rowe & Frewer, 2000; Lawrence & Deagan, 2001). The use of the term "influence" is important to note above, as empowerment can occur through varying avenues (e.g., positive experiences, personal relationships, being heard, influencing decision making) and primarily, it is easily obtained through valuing and listening to stakeholders involved in the participatory process (Broderick, 2005; Gooch, 2004; Mitchell, 2002).

Due to the complexity of managing ecosystems at the subwatershed level, including stakeholders in planning offers an opportunity for agencies to obtain knowledge outside of the discipline of environmental planning in order to increase agency capacity to address stressors on regional sustainability. As time progresses, stakeholders are becoming more knowledgeable and concerned about the environment (Hallin, 1995; Ontario, 1993c). With this new awareness comes the "need for the stakeholder to feel that they are part of the solutions to environmental problems, as well as that they have a say in preventing new ones" (Ontario, 1993c, 32). Thus, according to the province of Ontario, best practice for community based planning is for stakeholders to have a meaningful role (i.e., feel a sense of empowerment) in the process so that shared ownership of a policy or plan can occur (Ontario, 1993b; Ontario 1993c; Ontario, 2007). The government stresses that sharing responsibility and ownership amongst stakeholders and agencies will result in the development of "a kind of 'community plan' and stakeholders will become planners of their own local future" (Ontario, 1993b, 35). In this manner, "sharing ownership and responsibility for the outcomes of the . . . planning process helps to create the commitment needed for implementation at all stages" (Ontario, 2007, 17).   According to the Province, this collaboration with stakeholders is desirable for conservation authorities because as time progresses, stakeholders are becoming more knowledgeable and concerned about the environment and thus can contribute valuable information to the process (Ontario, 1993c).

The A.C.T. stewardship action plans were developed in response to the need for improving ecological health within urban environments in Hamilton, Ontario. The goal of these comprehensive plans was to create awareness by educating stakeholders about environmental issues, highlight areas of need, and guide sustainable development in the region (HCA, 2008i). To accomplish this, the HCA sought the help of local stakeholders, asking them to join the

stakeholder advisory committee so that stakeholders could collaborate with the HCA to develop

comprehensive stewardship actions plan (HCA, 2008a). In an effort to lure stakeholders into the

process, the HCA developed a diverse marketing strategy aimed at encouraging residents to

become involved in the process. Thus, the HCA developed a series of press releases, newspaper

advertisements, personal letters, and community flyers which asked residents to provide input

and comments on the plan in its various stages of development (HCA, 2007f; HCA, 2007g;

HCA, 2007h; HCA, 2007j; HCA, 2007k, HCA, 2007l; HCA, 2007m, HCA 2008b; HCA,

2008e).   In this manner, the HCA was consulting residents in order to solely obtain information

which could be used in the plan development. However, upon review of the outreach

communications, draft plan, and the final submission, it appears that the HCA was primarily

seeking anecdotal information from stakeholders rather than meaningful input. This is

particularly evident in outreach communications which ask residents to attend open houses and

join the SAC in order to provide comments on the development of the plans.

Although participatory processes that focus on consultation rather than engagement are

not inappropriate, it is clear through the interviews conducted in this study that it is import to

empower stakeholders when asking them to participate in the planning process. Specifically,

HCA interviewees stated that hearing and validating the ideas of stakeholders would lead

stakeholders to feel a sense of empowerment in the process, which would lead to increased levels

of participation (HCA-1; HCA-2; HCA-4; HCA-5). Specifically, one interviewee emphasized

this point by stating,

> "If they [stakeholders] are empowered in some way . . . it's all about relationships and
>
> fostering good relationships . . . then people are going to participate more. But if you're
>
> alienating them there is no way that they will participate in anything" (HCA-1).

Therefore, in order to foster empowerment and ensure that participation amongst stakeholders is encouraged, the majority of staff members interviewed for this thesis stressed the importance creating a sense of ownership amongst stakeholders in the planning process (HCA-1; HCA-2; HCA-4). Interviewees recognized that if stakeholders feel a sense of ownership or autonomy in the process then stakeholders would be more likely buy-in to the project and become active participants in the implementation phase (HCA-1; HCA-2; HCA-4). Particularly, one interviewee stated that if stakeholders are empowered in the process,

> "Then everyone owns a piece of it and everyone wants to see it happen and then you have people even helping you to implement it. If people are involved and they buy into it then it becomes their plan that they want to see implemented and it isn't just a government plan" (HCA-1).

This point was validated by another staff member, who felt that when stakeholders are empowered in the planning process they are more likely to become "leaders in the community or champions of the project in the community" helping to implement policies and programs which contribute to environmental sustainability in a region (HCA-4). Furthermore,

> "They [stakeholders] would take the plan back to their respective communities and bring the thing to life. To carry it forward . . . because you want those plans to stay alive, to be out there in the community and people to be bringing them to reality, to get them off the paper and get them out there" (HCA-4).

When asked what the ideal form of stakeholder involvement would look like, HCA staff members were divided on the ideal characteristics for community-based planning. For two staff members, it was important to have stakeholders involved in the decision-making process (HCA-1; HCA-4). In particular, one staff member underlined the fact that involving stakeholders in

decision making did not necessary mean that power would be given to them. S/he noted that, "the conservation authority still has a role to play in guiding the decision-making but giving them choice . . . giving them options is key" (HCA-4). Conversely, for two other interviewees, ideal participation took the form of consultation, where the HCA would receive well informed input from stakeholders while power would be retained by the organization (HCA-2; HCA-3). This form of involvement is deemed necessary, because, "there has to be a group that makes the final decision in the end and that lies mainly with politicians or people appointed by the municipality" (HCA-3). Thus, in the interviews, it was clear that the HCA interviewees were divided on the level of empowerment that should be given to stakeholders.

For Tiffany Creek subwatershed residents, gaining a sense of empowerment in the planning process was noted as an important criterion for successful stakeholder involvement. Specifically, 12 participants highlighted the need for having their opinions and input heard throughout the process. Of the 12 responses, two stand out which address this point:

> "It [consultation] would give you the feeling that you are going to be heard and that you are going to have some kind of . . . you know, your input and your participation will count for something, you know? It gives you purpose and meaning, it is not just someone rubber stamping anything they want to do, right?" (Stakeholder-13).

Moreover,

> "Even if it doesn't necessarily result in something that the residents wanted, at least the residents know that their voices were heard and they discussed the issue and they came back with reasonable explanations as to why it didn't go the way you wanted it. But at least we feel that our job is done. We did what we are supposed to do, raise those flags and see if there is any way that we could be accommodated. And, if not, we were

provided with a reasonable explanation and we moved forward— as opposed to your

opinion doesn't matter; we are going to do whatever we want" (Stakeholder-11).

When discussing power dynamics for stakeholder involvement in the planning process,

residents were primarily concerned with having the ability to provide meaningful input on

proposals and plans, rather than gaining significant decision-making power in the process.

Stakeholder-14 highlights this point, stating,

"I am not saying we have to drive the agenda, but I think we should be consulted more, or

at least be informed. I think there should be some input from the stakeholders. Just to

meet our needs. If they put questions to us, what we are looking for . . . we would be out

there more and we would know more."

As illustrated in section 5.4, some stakeholders spoke of the desire to have the HCA

maintain their role as the primary managers of watersheds. Particularly, stakeholders were blasé

about obtaining decision-making power in the planning process. In fact, five participants stated

that they wanted the HCA to assume their leadership responsibility and to make decisions on

their behalf, based on their expertise and experience. In this manner, participants were more

interested in becoming educated about the management issues in their region and having

opportunities to provide input into the process than they were in assuming the responsibility of

making decisions pertaining to watershed management (Stakeholder-3; Stakeholder-7;

Stakeholder-8; Stakeholder-11). For some participants, agency representatives have the distinct

role of applying their technical expertise and understanding to solve management and planning

problems on behalf of stakeholders (Stakeholder-7; Stakeholder-8). Stakeholder-7 emphasizes

this idea by stating,

"I think they [stakeholders] should be given the option of giving some input, but I don't

think that they should be managing it. Because realistically, it is the responsibility of the

conservation authority, and personally, as a governmentally funded agency, it is their

responsibility to educate us because we aren't the ones . . . we don't have the knowledge .

. . they have knowledge and they should give that to us and tell us what to do."

In this regard, many stakeholders preferred to keep decision-making power in the hands of

agencies that are trained and educated in the area of environmental planning and management

(Stakeholder-5; Stakeholder-8; Stakeholder-9; Stakeholder-11; Stakeholder-13).

5.5 Strong leadership

Strong leadership in the planning process is crucial to program success, particularly when

incorporating stakeholders into the process. According to the MOEE document *Subwatershed*

Planning, selecting a qualified leader is essential to the success of subwatershed planning

initiatives (Ontario, 1993b). The document outlines that leaders must have a basic understanding

of the contextual issues, multi-agency perspectives toward the process, and "effective leadership

and communication skills are needed for coordinating role of linking technical experts, planners,

stakeholders, and the stakeholder" (Ontario, 1993b). Moreover, agency representatives engaging

in stakeholder participation should also have the ability to anticipate and resolve conflict

amongst participants and "facilitate timely input from the stakeholder and non-governmental

organizations" (Ontario, 1993b).

This emphasis on selecting appropriate leadership was supported by the 1997 provincial

document *An Evaluation of Watershed Management in Ontario.* This document highlights that in

some case studies examined, stakeholder participation in watershed and subwatershed planning

became an uneven process where particularly vocal individuals could take control of the process

and have their views and concerns disproportionally represented (Ontario, 1997). The

overemphasis of a particular viewpoint during watershed planning was attributed to the lack of a

strong leader, who, when conflict arose, relied on technical or scientific members to resolve

conflicts (Ontario, 1997).   Consequently, leaders who are hosting and organizing stakeholder

participation should possess facilitation skills which can be used to address conflict when it

arises and ensure that all individuals are given an opportunity to present their opinions or

concerns in the process (Ontario, 2007). Moreover, leaders should also have a strong ability to

chair meetings and be individuals who are observant and able to see who is participating and

who is being left out of the process (Ontario, 2007).

Within the Tiffany Creek subwatershed no specific documentation could be found which

highlighted the need for strong leadership in the planning process. However, as an organization,

there is evidence that the HCA has and is taking active leadership educating stakeholders on

environmental issues within the community. Particularly, proactive landowner contact has

occurred in an effort to educate and empower stakeholders to actively participate in stewardship

initiatives on their private property. In 2006, approximately 120 educational packages relating to

local stewardship initiatives were delivered to residents of the Tiffany Creek subwatershed.

Moreover, over the past decade, the HCA has delivered flyers, mailed letters, phoned property

owners, and conducted site visits on numerous homes in the Spencer Creek watershed through

the HCA's Hamilton-Halton Watershed Stewardship Program.

In the interview process, HCA staff members reiterated some of the findings taken from

the document analysis found in the preceding paragraphs. Specifically, interviewees addressed

the need for those hosting participatory events to have conflict resolution and strong leadership

skills that can be used to facilitate the process (HCA-4). This is important for the success of stakeholder participation because,

"a lot of stakeholder meetings can go sideways because of people . . . [who] have a real issue that they can't get off of and they stick to. Like I say, it can sometimes be totally unrelated to the meeting that is being held and so I mean having a person chairing the meeting that knows how to handle that is really important, too" (HCA-2).

Thus, to ensure that conflict is minimized and that all participants have an adequate chance to voice their concerns and opinions during the process, those selected to lead participatory endeavours need to have strong leadership skills and facilitation experience.

HCA staff members interviewed also highlighted a lack of organizational training for employees about how to effectively include stakeholders in management and planning processes. When asked if there were any guidelines for participation or frameworks used to determine appropriate methodologies or characteristics for a participatory processes, staff members stated that planning stakeholder participation events is done in an ad hoc fashion. Specifically, they mentioned that managers are primarily responsible for determining the appropriate methodologies and characteristics of participatory events (HCA-1; HCA-2; HCA-5; HCA-4). Moreover, four participants in the study also stated that no formal training exists to describe how staff at the HCA can best engage stakeholders or effectively communicate information to stakeholders at outreach and participatory events (HCA-1; HCA-2; HCA-5; HCA-4).

Rather than speak about the need for direct leadership in the participatory process, stakeholders focused on the broad need for organizational leadership in the community. Specifically, some participants highlighted that the HCA should be an active and visible group in

the Hamilton region. This finding was predominately linked to a lack of understanding of what the goal of the HCA is in the region. Thus, for one stakeholder,

> "The conservation authority has an obligation to make themselves more aware of what is in the community. I wouldn't even know where to begin to look for them other than the yellow pages" (Stakeholder-1).

For another resident, concerns regarding the leadership of the HCA surrounded a perceived lack of action and planning to minimize the spread of suburban sprawl. Particularly, one stakeholder stated,

> "I just think it is kind of funny that I have in the past received letters from the authority about protecting our little bit of greenspace right here. Meanwhile you hear that a developer has bought all of the land around us and now we are a little island here now. So we are doing our little bit trying to protect our land that we are blessed with but meanwhile what is going to happen out there because you have just sold off this big hunk of land? Maybe that is unfair—I don't know, but that was just a little letter of encouragement to me. You know, is there something else going on, more of master plan going on?" (Stakeholder-2).

In addition, a participant mentioned that, in his/her opinion, leadership in the planning process is clearly articulating the goals and vision of the HCA to stakeholders. If an organization takes active lead in this regard, Stakeholder-5 asserted that participation will increase because people will better understand the process and understand how it impacts their personal well-being.

5.6 Open and clear communication

Open dialogue, amongst agencies and stakeholders is often cited as a primary goal for stakeholder participation in environmental planning (Ferreyra & Beard, 2007; Hansen &

Mäenpää, 2008; Lowry, et al., 1997). As outlined in Chapter Two, emphasis on communication between organizations and stakeholders often occurs because agencies recognize the offshoot benefits of lasting interaction with stakeholders.

At the provincial level, the need for increased communication between agencies and stakeholders has been recognized. Specifically, the Ontario government has acknowledged that, "multidisciplinary efforts carried out in subwatershed planning and the sharing of information throughout the process promote more effective planning for both land uses and the environment" (Ontario, 1993b, 11). Therefore, the establishment of two-way dialogue and information sharing is a method of ensuring the opinions and concerns of stakeholders are listened to (Ontario, 2007). This is important as, "participants in the process need to feel listened to – not patronized. The design of the process needs to ensure that the audience is not being spoken at, but rather engaged in a discussion and dialogue that is flowing in two directions" (Ontario, 2007, 21-22). By involving stakeholders in this manner, agencies ensure that the process is inclusive by,

> "creating an open, inclusive atmosphere at any stakeholder engagement event, where participants feel that they are welcome to speak, share, and contribute to the process. This is also linked to the principle of equity in that participants should be welcomed to the discussion regardless of their real or perceived level (or lack of) of power, influence or authority" (Ontario, 2007, 18-19).

In order to achieve open and honest communication with participants, agencies must communicate with stakeholders in an understandable and consistent manner. Specifically, conservation authorities should dialogue with stakeholders in a "clear manner, using familiar terms, regular updates, tapping into their channels of communication and being consistent across stakeholder groups" (Ontario, 2007, 21).

In the Tiffany Creek subwatershed, efforts were made by the HCA to initiate dialogue between itself and stakeholders in the region. Throughout the Spencer Creek subwatershed action planning process, the HCA actively sought input from local stakeholders. From the onset of the program, the conservation authority recognized and committed to working with stakeholders to develop a series of plans which would be the foundation of ecological restoration in the subwatershed for many years to come (HCA, 2007q; HCA, 2008i). As highlighted previously, during the A.C.T. process stakeholders were approached to provide input and comments during the development of the plans (HCA, 2007d; HCA, 2007f, HCA, 2007g, HCA, 2007h, HCA, 2008c). Even though there were those who were approved to participate in the stakeholder advisory committee, the primary form of participation in the process for stakeholders took the form of two open houses (HCA, 2007d; HCA, 2008b). According to the advertising materials used to elicit participation in the open houses, at the events stakeholders were given a chance to provide their opinions on the development of the Tiffany Creek subwatershed action plan. However, poor stakeholder attendance at the two opens houses speaks to the fact that the HCA was not able to establish dialogue with the stakeholders of the Tiffany Creek subwatershed (HCA, 2007d; HCA, 2008b).

Achieving open communication can be difficult for agencies as practitioners may struggle to clearly communicate their knowledge and understanding of complex systems in a manner that an average stakeholder can understand. Thus, establishing communication which is open and clear while at the same time addressing the characteristics, goals, and objectives for the planning process can prove to be difficult. Often, documents are out of touch with the knowledge and understanding of the general populous. An example of this can be seen in the A.C.T. communication materials which ask residents to become involved in the development of

subwatershed stewardship action plans. For most residents, the term "watershed" or "stewardship" is unfamiliar and is not commonly used in their vocabulary. Thus, a lack of participation could have existed because the general public's did not understand what was being asked of them or what the goals and objectives of the A.C.T. process were.

During the interviews, HCA staff members acknowledged the need for regularly conversing with the stakeholders of the local watersheds in Hamilton, Ontario. Particularly, one staff member highlighted that,

> "good stakeholder consultation is just having good audience attendance and really being able to accurately and constructively getting the information across to people. If you even have fairly small attendance but you can get your message across effectively and get your awareness out there and hopefully increase word of mouth even" (HCA-2).

Respondents also mentioned that clear messaging to stakeholders throughout the participatory process can raise awareness which can lead to increased participation (HCA-2; HCA-4). This point is highlighted by an interviewee who mentioned that "if it isn't clear what you're asking them to be involved in, you're of course going to get less interest" (HCA-4).   Also, in order to foster dialogue between organizations and agencies, an HCA participant stressed the importance of honesty when communicating with stakeholders. The HCA staff member mentioned that it is important for conservation authorities to be

> "real straightforward and not telling them [stakeholders] something and then going away saying 'we aren't going to do that'. You know be honest with people and try and have the reasons for why you want to do a thing, always being open to people calling and writing and that you respond and get back to them. Everything from the shortest email to big

studies that come out, that you respond to and put it out there. I think that's the way you go about it" (HCA-4).

Thus, HCA-4 recognized the importance of open and honest communication with stakeholders. In addition, s/he also recognizes that an important piece of the communication process is responding to the inquiries received from stakeholders, addressing them as needed no matter how substantial or "meaningless" the input received.

For stakeholders, effective communication was an important component of successful stakeholder participation. In fact, when asked to describe their ideal form of stakeholder participation in subwatershed management and planning, one interviewee responded by saying, "I would hope it would be an open dialogue. You know, give and take, and then sharing. You know, come together and see what is the best decision for the most amount of people" (Stakeholder-14).   Additionally, when asked to give the conservation authority advice on how to make stakeholder participation successful, another stakeholder responded by saying,

"Off the top of my head, only being clear in what you want them to know. Don't give me a bunch of jargon hidden in a pamphlet somewhere, you know what I mean? . . . I just think that establishing some sort of connection with the community, making it personal would sell your service more. And you would be a lot more accepted" (Stakeholder-3).

Thus, for some interviewees, continued and transparent communication between stakeholders and agencies was extremely important (Stakeholder-1; Stakeholder-2; Stakeholder-11; Stakeholder-12).

Stating that effective communication is important to the planning process can be vague and useless to the process as it leaves significant room for interpretation. Nonetheless, during the interview process with stakeholders, participants were quick to give practical advice

pertaining to effective communication in two regards; first, stakeholders commented on what the characteristics of effective communication look like and second, they gave advice for how to achieve that goal. First, one participant said that, "conservation organizations need to be very transparent about the challenges they are facing and the needs they have and that way maybe people who have a heart for that will come forward and I think that is how it works now" (Stakeholder-2). In this manner, stakeholders declared a need for the conservation authority to be transparent in the process so that stakeholders can be aware of all relevant information which would pertain to health and viability of their community. The emphasis on open communication in the subwatershed was reiterated by other participants in the interview process, as well (Stakeholder-1; Stakeholder-3; Stakeholder-11; Stakeholder-12; Stakeholder-14). Specifically, one resident argued,

> "From my experience of working with groups, being open is always the best option. Lay the cards on the table the way you see it. Don't try to cover up because that is when you lose trust. I think the conservation authority probably has to work the same way. Be honest, don't try to have a hidden agenda because somebody will figure that out sooner or later and then you lose the trust of stakeholders and it is very hard to win that back" (Stakeholder-1).

Second, interviewees provided practical advice for conservation authorities for how to create planning processes that have open communication amongst those involved in the process. For one interviewee, s/he believed that stakeholder participation should,

> "Start with some sort of communication package where the conservation authority has an open house and also provides maybe some mail outs or whatnot to say that we are trying out some new project. I don't know if they would commit to something like this right

away, they might just say we are looking for residents who are interested in, you know . . . whatever, protecting the environment and what not and just to see what kind of feedback they get" (Stakeholder-11).

By approaching stakeholders early in the process and by asking for participation in a non-committal and educative manner, the conservation authority provides opportunities for stakeholders to learn about the planning process and the HCA as an organization. Particularly, one participant declared the importance of using local media sources to communicate with stakeholders; particularly, s/he stated that,

"if there is things going on get it on the news get it on the radio get it in the little Ancaster paper. Let us know, being transparent, and being proactive. You know, what the challenges are, what's the vision?" (Stakeholder-2).

Thus, participants underlined a need for the HCA to communicate early and proactively in the process the organizational goals and challenges facing the conservation authority. In this way, "people will just get a different twist on what the conservation authority is about and they had no idea that the conservation authority was about A,B,C they thought they were about 1,2,3 and that might open up a whole new avenue of discussion" (Stakeholder-12).

5.7   Contextual relevancy

Due to the complex nature of planning issues facing agencies today, unilateral and dogmatic approaches to environmental issues do not contribute to long-term sustainability in a region. Thus, resource management and environmental planning literature stresses the importance of adaptive planning practices which consider the local context of a region when developing a holistic management framework or planning policy (Koontz, 2005; Marshall & Jones, 2005). Consequently, today practitioners and academics agree that agencies should

engage in stakeholder participation in order to collaborate with stakeholders so that decision-making capacity for addressing environmental issues can be increased (Beirele & Konisky, 2001; Broderick, 2005; Day, 1997). Moreover, agencies also have recognized that participatory initiatives need to be adapted to a specific region and planning context in order to ensure program success.

In Ontario, the provincial government has emphasised the importance of obtaining a rich contextual understanding when developing plans and policies pertaining to ecosystem management and planning. Specifically, the *Provincial Policy Statement* asserts the importance of using a coordinated, integrated, and comprehensive approach when dealing with planning matters (Ontario, 2005). Although the statement does not explicitly advocate for the incorporation of stakeholders into planning, it does highlight the importance taking a holistic approach which incorporates a variety of factors into the process, including:

- "Managing and/or promoting growth and development;

- Managing natural heritage, water, agricultural, mineral, and cultural heritage and archaeological resources;

- Infrastructure, stakeholder service facilities and waste management systems;

- Ecosystem, shoreline and watershed related issues;

- Natural and human-made hazards;

- Population, housing and employment projections, based on regional market areas" (Ontario, 2005, 7).

In the Province's watershed planning documents released in the mid-1990s, special emphasis was placed on the need for incorporating stakeholders into the planning process. Particularly, the document *Water Management on a Watershed Basis* advocates that interest-based groups and

105

stakeholders can "provide valuable insights and information to a planning team, often bringing new ideas and sound understanding of local conditions and aspirations" (Ontario, 1993b, 34). Moreover, in a later document released by the provincial government which evaluated the existing watershed management framework, using locally based information and expertise early in the process was seen as "the best method of saving money and time researching information and in developing community support and stewardship for the project" (Ontario, 1997, 14). Thus, provincial planning authorities have recognized the importance of stakeholders in the planning and management of subwatersheds in Ontario, specifically their ability to contribute valuable information to the process which helps to achieve a rich contextual understanding of planning issues.

In the Hamilton region, the HCA has recognized the important role which stakeholder can have in the planning process. Specifically, by examining the HCA's response to environmental issues impacting the Spencer Creek watershed, it is clear that the conservation authority is striving to create management approaches which are holistic. In the development of the *Spencer Creek Watershed Plan* (2000a), the HCA established eight work groups used to gain an in-depth contextual understanding of the planning issues. At the end of the process, the HCA recognized the key role which stakeholders played in the development of the plans. Specifically, in the conclusions of the *Spencer Creek Watershed Plan,* the HCA highlighted the need for continued collaboration with stakeholders in the future stating that "as political roles and responsibilities change, organizations like the Conservation Authority must adapt to meet the needs of watershed residents" (HCA, 2000a, 102).

The need for establishing an in-depth contextual understanding of a planning issue continues today. In the A.C.T. process, the HCA depended on stakeholder consultation to

provide anecdotal and experiential knowledge into the development of the stewardship action

plans in each subwatershed of the Spencer Creek watershed (HCA, 2007c; HCA, 2008a).   In this

manner, the HCA attempted to include the knowledge and understanding of local residents in the

process which would be used "to guide activities of local agencies to prevent and mitigate the

impacts of the stresses on the environment" (HCA, 2008, xxi).

In addition, through the A.C.T. process it was apparent that the HCA placed value on

providing a rich contextual understanding of planning issues for those participating in the

consultation process. The development of the A.C.T. stewardship action plans are a unique

undertaking by the HCA as such a coordinated and collaborative effort to obtain an contextual

understanding of a planning issue has not been undertaken before by the organization. This is

directly emphasized by a HCA employee who stated,

> "We have tried to do different things with the new subwatershed stewardship action plans
>
> because they are different. No one's ever really done anything like that . . . we did the
>
> notices not just with ads in the paper but put flyers up all over the neighborhoods, we
>
> invited some of the key people we knew who lived in the watershed, and we also tried to
>
> do something different by incorporating them into the steering committee . . . we just
>
> tried to find different ways to engage them . . . I mean we tried a lot of different things
>
> that normally with other projects that other organizations do, don't do. Just trying to get
>
> them involved and getting them sitting at the table with all the technical staff at the
>
> different agencies too" (HCA-1).

Additionally, as seen in the agenda for the stakeholder advisory committee meeting on June 26,

2007, the HCA provided each participant with a comprehensive background of the current

socioeconomic and ecological conditions within the Tiffany Creek subwatershed. Evidence of

this can be seen in the "Bigger Picture" section of the meeting agenda where the HCA and other local practitioners provided expertise on the Hamilton Harbour, Cootes Paradise, community perspectives toward stewardship, the conservation authority's perspective to watershed planning, the history of the HCA, and the stewardship site selection process (HCA, 2007b). The purpose of the HCA engaging in such an integrated approach, attempting to collaborate with stakeholders in the development of the plans, was to create awareness of environmental issues and develop stewardship actions to improve the health of the Tiffany Creek subwatershed (HCA, 2008a).

However, as mentioned, although the HCA strived to obtain a rich contextual understanding of the planning issues through the help of local stakeholders, the organization struggled to obtain substantial stakeholder participation in the process despite the development of a multimodal participatory process and an exhaustive outreach communications strategy. While a full explanation for the lack participation may never be obtained, it did appear during the interview process that stakeholders may struggle with the concepts of watershed management. Specifically some interviewees highlighted the need for participants to be educated on the context of local planning issues (Stakeholder-1; Stakeholder-7). Particularly, one stakeholder noted,

> "If I [knew] the impact that my changes to the stream would make downstream then I
> would be less likely to do so. I could dump some of my used engine oil into the stream
> because it would just go down and away right? But if I would know the whole impact
> that it would have on the whole watershed then I would be less likely to do so"
> (Stakeholder-1, 2009).

This conclusion was also supported by some employees interviewed at the HCA who emphasized the importance of bringing watershed issues down to a property scale which could

be easily understood by local residents (HCA-2, 2008).   Moreover, HCA participants also

highlighted that educating stakeholders on the context of watershed management issues is needed

so that stakeholders can understand how the issues impact them directly (HCA-2; HCA-4).

Education of stakeholders is needed because in their experience with stakeholders, HCA

employees have observed that stakeholders are extremely motivated to participate in planning

exercises when they understand how an issue impacts their personal well-being or private

property (HCA-1; HCA-2; HCA-4; HCA-5).

Additionally, during the interviews with those from the HCA, participants made it clear

that collaborating with stakeholders increases the agency's capacity to deal with the complex

management challenges (HCA-1; HCA-2; HCA-4). Consequently, interviewees outlined that

stakeholder participation should be an exercise which is dependent on local circumstance and

interest from stakeholders in the region. This idea was supported by HCA-5 who mentioned

that,

> "I don't think that you can slot . . . you know, this is the way it should be done because
> that isn't going to work for everything because there are so many initiatives that we are
> all involved with. So you have to use the framework that is more appropriate." (HCA-5,
> 2008).

In this manner, interviewees stressed the importance of designing participatory processes with

the individual project in mind so that the exercise can be effective and attractive for both the

conservation authority and local stakeholders (HCA-2; HCA-4).

Additionally, interview participants suggested that the HCA should adapt their

participatory initiatives to the goals and objects of stakeholders. For example, one interviewee

suggested that,

109

"you have to know your audience, know where they're coming from. You have to know

if there are any conflicts between either their interests and your project or their interests

and anybody else's interests that are participating" (HCA-4).

However, if the HCA is going to develop a sound understanding of their target audience, a long-

term commitment from the conservation authority is needed in order to fully grasp the issues and

interests of the stakeholders within the Hamilton (HCA-4, HCA-5). In his/her interview, HCA-5

explained,

"If you're here for the long-term then you remember what the issues may have been in

the past because there is a past so you will be sensitive to those things, too. You will

know what have the issues been in that community over the years and what are they now,

and what are they going to potentially be in the future" (2008).

Consequently, if an understanding of the local context is achieved, the HCA is better suited to

adapt management and planning strategies to the needs of stakeholders.

Furthermore, HCA participants also highlighted the value of developing a holistic

understanding of the issues impacting a region so that they can educate stakeholders on how

environmental issues are impacting them personally and how they can begin to rectify those

issues. Specifically, one interviewee emphasized that educating stakeholders on the impacts of

planning issues on their own property's well-being is extremely important to the success of the

participatory process, stating,

"The best way to get people involved in the process is to bring it down to their property

scale. Because a lot of people, especially if people don't have an environmental

background, they can't relate to these broad . . . I mean climate change is a good

example, they are aware it exists and whether they believe it is a problem or not is one

110

thing. But, if you can bring a lot of these issues to their property scale that is where the

understanding can really kick in because they can see it, they have dealt with it, they can

touch it, and they are looking at it every day . . . if you bring these issues down to a

property scale that is where people really uptake it and really get a grasp on it. I think

that's probably the best way to get the environment message out to people" (HCA-2).

Thus, for some HCA staff members, developing a thorough understanding of the local planning

issues and educating stakeholders on the context of those issues is valuable to stakeholder

participation as stakeholders can learn how issues directly impact them, potentially helping to

encourage participation in the planning and implementation process (HCA-2; HCA-4).

For stakeholders, contextual relevancy was an important factor in becoming active

participants in the planning. In fact, one interviewee highlighted the importance of participating

in processes which were current and relevant to the issues faced by the conservation authority

(Stakeholder-2; Stakeholder-7; Stakeholder-11). Specifically, one stakeholder stressed that,

"you can create committees, but it has to keep up with what is going on, as opposed to

you know, we are talking a lot and not making a lot of decisions and we are slowing

down the process. It has to keep up, and if not, it would defeat the purpose of us being

involved. I would want to be a part of something that would assist them and look at

certain things from a well rounded perspective as opposed to straight lined" (Stakeholder-

11).

Thus, for participants, it is important for stakeholders to be a part of a process which operates

under the guidance of the HCA. In this regard, stakeholders affirmed the need for adaptive

planning so that participatory initiatives can be tailored to the specific issues which the

community is facing (Stakeholder-1; Stakeholder-2; Stakeholder-7).

However, despite which method is chosen one participant stressed that by having stakeholders involved in the process, the HCA is ensuring that stakeholders can have a chance to provide feedback on planning matters. This is vital to process because, "it is always important to have an external option outside the mindset of the conservation authority maybe that would spark some new areas of research that they didn't really consider before" (Stakeholder-3).

This belief that residents can provide useful information and understanding to agencies was not isolated to the quotation above. Another resident advocated that stakeholders often have substantial understanding of the current issues facing their community and thus can provide valuable input to the planning process. Stakeholder-2 states that often agencies can focus on the incorporation of technical knowledge into plans and polices because,

> "people often take these things to be scientific, and I don't think that is the case. Wisdom is not scientific, it is prescientific, and some of the wisest people I know have never finished high school some of them never even went to high school. But some of them are wise from life experiences and from being attuned to their environment and nature and are making decisions—but they are not scientific people" (Stakeholder-2).

Therefore, residents emphasized that stakeholders can provide unique knowledge and expertise on environmental issues which contribute to establishment of a holistic contextual understating of planning issues in the Tiffany Creek subwatershed which can aid in the development of more sustainable management practices (Stakeholder-2, Stakeholder-3; Stakeholder-15).

Finally, in order to achieve stakeholder representation in planning exercises that would help to establishing a robust contextual understanding of an issue, the HCA needs to continue include the public into planning processes. This is needed because stakeholders emphasized in the

interview process that they are motivated (or would be motivated) to participate in watershed

management for t a number of reasons:

- To address future resource availability (Stakeholder-7; Stakeholder-11; Stakeholder-15).

- To protect the health of the environment and preserve natural heritage (Stakeholder-3; Stakeholder-4; Stakeholder-6; Stakeholder-7; Stakeholder-10; Stakeholder-11; Stakeholder-13).

- To preserve the environment for future generations (Stakeholder-5; Stakeholder-6; Stakeholder-12; Stakeholder-13; Stakeholder-14).

- To learn more about the environment (Stakeholder-14).

- To have a say in management and planning (Stakeholder-1; Stakeholder-14).

- To protect their personal real-estate (Stakeholder-9).

- To build community within neighbourhoods (Stakeholder-3).

- To obtain information in the process to educate youth (Stakeholder-5).

As seen above, stakeholder motivations for participating in planning are directly in line with

goals and objectives for the development of the A.C.T. Stewardship Action Plans. Specifically,

the HCA engaged in the development of the stewardship action plans in order to

> "create awareness by educating the stakeholder on the environmental issues within their
>
> local subwatershed, and to in turn, improve the ecological functions of the subwatershed
>
> through restoration initiatives. These plans provide a comprehensive strategy to support
>
> environmental watershed stewardship within the Spencer Creek subwatersheds by
>
> focusing on stewardship activities such as, education & awareness, habitat restoration and
>
> stress mitigation efforts. Additionally, these plans will help to guide sustainable
>
> development for the Spencer Creek watershed" (HCA, 2008, xvii).

Consequently, if the HCA and stakeholders have similar motivations for engaging in participatory processes and they both recognize the important role which stakeholders can play, efforts should continue to be made for the two groups to collaborate to address environmental issues impacting the basin. Also, as stated above, if recent attempts to collaborate have been largely unsuccessful, than increased education needs occur to ensure that stakeholders understand the participatory processes for planning.

Table 5.1: Summary of the results found in Chapter 5

Characteristic	HCA Conclusions	Stakeholder Conclusions
Well Defined Goals and Objectives	1) All members of the planning process must understand how and why they are participating 2) The HCA needs to understand what stakeholders are hoping to accomplish in the process	1) Clearly communicating the goals for participation will make the processes more attractive to stakeholders
Early Involvement	1) Stakeholders need to be incorporated immediately into the planning process 2) Early involvement has positive outcomes for agencies (e.g., less backlash) 3) Early involvement ensures that stakeholder input is incorporated into a process before decisions are made	1) Being involved early and throughout the process creates a sense of ownership 2) Early involvement allows stakeholders to grow alongside a project 3) Stakeholders will be more likely to support a policy or program if they are involved early
Representation	1) All interested stakeholders must have opportunities to participate 2) Achieving representation fosters mutual learning, increases buy-in, and reduces conflict	1) All interested stakeholders must be able to participate in the planning process 2) Obtaining a cross section of interests is important for success
Empowerment	1) HCA staff were divided on the level of empowerment needed for success 2) Empowering stakeholders is important for stakeholder participation to be successful	1) Obtaining a sense of empowerment is an import criterion of successful participation 2) Opinions and input from stakeholders need to be heard and validated 3) Some stakeholder wanted the HCA to retain decision making power
Strong Leadership	1) Leaders need conflict resolution and strong leadership skills 2) There is a lack of organizational training for how to properly conduct stakeholder participation	1) Stakeholders attributed strong leadership to the HCA being an active and visible organization in the community
Open and clear communication	1) The HCA must regularly converse with stakeholders 2) Clear and frequent messaging can increase awareness and lead to increased participation	1) Participation needs to be a process with two-way dialogue 2) Communication should be free of jargon 3) Communication should be transparent 4) Early and proactive communication can improve stakeholder participation
Contextual Relevancy	1) Participation methods need to be adapted to each local circumstance	1) Stakeholders want to participate in processes which are current and relevant to

	2) The HCA should adapt their participatory process to the goals and objectives of stakeholders 3) Stakeholders must be educated on the context of local planning issues	the issues facing the HCA 2) Residents can provide useful input which can help the HCA better understand the context of planning issues 3) Stakeholders have a variety of motivations to participate

Summary

In this chapter the results of the data analysis were presented in a narrative fashion.   A summary of the results which highlight the points addressed by both the HCA and Stakeholders can be found in Table 5.1. In the following chapter, these results are examined and the implications for the findings are discussed. Furthermore, recommendations are made to improve stakeholder participation in future watershed planning practices within the Tiffany Creek subwatershed by the HCA.

Chapter 6: Discussion and Conclusions

This research evaluated the motivations and perceptions of the HCA and general public toward to successful stakeholder participatory processes in the Tiffany Creek subwatershed in Hamilton, Ontario.   More specifically, the research attempted to: (a) determine whether or not stakeholders and the staff at the HCA have similar goals and opinions relating to successful stakeholder participation; (b) evaluate the willingness of stakeholders and the HCA staff to engage in stakeholder participation initiatives; and, (c) evaluate whether or not levels and characteristics of stakeholder participation used in subwatershed management and planning are appropriate and meet the objectives of the conservation authority and stakeholders.   This chapter outlines the lessons learned from the findings presented in Chapter Five and also offers practical recommendations to improve future participatory initiatives. The final section of this chapter outlines the research contributions of this thesis and also identifies important limitations and research opportunities.

6.1   Lessons for stakeholder participation

From the results a number of lessons can be learned from the participatory approach used in the development of the Tiffany Creek subwatershed action plan. To be most effective in the future, stakeholder participation in subwatershed management and planning requires the Hamilton Conservation Authority to integrate the evaluative framework presented in Chapter Two with the opinions of both their agency members and stakeholders on the planning problem in order to determine the appropriate levels and characteristics for participation. This section identifies the lessons learned from the case study of stakeholder participation in the management and planning of the Tiffany Creek subwatershed.

116

6.1.1 Agencies must integrate the characteristics and objectives of participatory initiatives into marketing communications.

When examining the role that project goals and characteristics play in the participatory process the HCA needs to establish clear, well-defined characteristics and objectives for a participatory process. All three data sources suggested that to do so would improve stakeholder participation making it more attractive and understandable for residents while also ensuring that agencies receive relevant and informed information that can be used in plan development. However, despite the fact the HCA and stakeholders agreed on the need for and characteristics of well defined goals and objectives, the A.C.T. process had low levels of stakeholder participation in the process.

Review of the A.C.T. documents showed that the HCA accurately portrayed how stakeholders would be involved at open houses during the planning process. In the materials used to elicit attendance at their two open houses, the HCA informed participants that their opinions and knowledge of environmental issues in the A.C.T. subwatersheds was being sought (HCA, 2007g; HCA, 2007h; HCA, 2007j, HCA, 2007k; HCA, 2007l; HCA, 2007m). The HCA made it clear its intentions for stakeholder participation at the open houses were to provide an opportunity for stakeholders to give input into the planning process.

However, the HCA was vague when communicating the characteristics and expected outcomes for the stakeholder advisory committee. As mentioned, in their community flyer and newspaper advertisements used to obtain participation, the HCA never outlined the purpose of forming a stakeholder advisory group or the anticipated outcomes of the process. In addition, it failed to communicate how participants would be expected to contribute and the level of knowledge they needed to be a valuable member (HCA, 2007k; HCA, 2007n). Although it may

seem excessive to include all the details listed above in the advertisements for the SAC, the

results from the interviews conducted with both the HCA staff members and local stakeholders

confirmed that doing so would have been beneficial. During the interview process both the HCA

and stakeholders recognized that if stakeholders fully understand the characteristics of a process

and how their participation would be used, they would be more willing to participate (HCA-2;

HCA-3; Stakeholder-5).

Therefore, in the development of future participatory initiatives, the HCA would benefit

from the clear articulation of the characteristics for and expected outcomes of stakeholder

participation in the watershed planning context. Thus, it is important for the HCA to closely and

honestly examine the purpose of a participatory initiative so that well defined goals and

characteristics of the process can be established early on and communicated fully to

stakeholders. By providing these details to stakeholders, agencies will minimize feelings of

confusion, animosity, and apathy toward participation in the planning process as open

communication of project goals and objectives will ensure that stakeholders understand their role

in the process. In this manner, stakeholders will better understand the commitment needed to

become a valuable member of the group and the influence they can expect to have on the

process. Consequently, the HCA must conscientiously work at incorporating the goals and

objectives for the participatory process into marketing materials in order to ensure that

stakeholders have the opportunity to fully understand the process and determine if their

involvement is warranted.

6.1.2   *Meaningful stakeholder participation should occur early in the process.*

By ensuring that participatory occurs early in the process, the agencies grant stakeholders

the opportunity to provide input and signal concerns before any substantial decisions are made.

Although each HCA employee interviewed for this thesis stressed that it was important for stakeholder participation to occur early in the process, surprisingly staff responses predominately focused on when "early" was rather on the outcomes or associated benefits of adopting such a strategy in the watershed planning context. Specifically, four staff members advocated for immediate stakeholder participation in subwatershed planning during the development of the project proposal (HCA-1; HCA-2; HCA-3; HCA-4). Conversely, another staff member stressed that stakeholder participation too early in the process would create questions amongst stakeholders as to whether the HCA is fulfilling its role as the primary managers of watersheds in the Hamilton region. Despite this disagreement, all HCA respondents did stress the importance of incorporating stakeholders in the early stages of the planning process.

In the development of the A.C.T. action plans, stakeholder participation was sought by means of two open houses and a stakeholder advisory committee both after the proposal writing stage but before any significant decisions were made. In this manner, the HCA attempted to give stakeholders the opportunity to express their concerns and opinions about the project early. However, as mentioned previously, upon review of the open house attendance sheets and the number of stakeholders who joined the SAC highlight it appears that there was little participation in the action planning process (HCA, 2007c; HCA, 2007d; HCA, 2008a; HCA, 2008b). Nonetheless, after examining the efforts made by the HCA to involve stakeholders early in the planning process and hearing the HCA's dedication to it during the interviews, it is apparent that a lack of participation in the development of the subwatershed action plans cannot be attributed to the timing of when participation occurred.

6.1.3   Representation should be a stated goal for a participatory process and targeting for achieving representation should occur at the onset of program development.

Both practitioners and stakeholders recognize the importance of seeking sufficient representation when including stakeholders in planning processes, highlighting that participation should be an inclusive exercise that provides ample opportunity for all participants to provide input. Specifically, HCA staff members and local stakeholders agreed that participation should attempt to achieve an accurate cross section of stakeholder views and opinions and be open to all those impacted by a management decision or policy. These conclusions were also supported by provincial and conservation authority planning literature for watershed management, which also emphasized the importance of achieving stakeholder representation in the planning process.

As address in Chapter Five a lack of participation existed in development of the stewardship action plan for the Tiffany Creek subwatershed. Therefore, if the purpose for a planning process is to develop plans or policies that are a collaboration between agencies and stakeholders, then representation should be stated priority and goal so that the interests and opinions of local stakeholders are taken into consideration. As mentioned previously, only one resident from the Tiffany Creek subwatershed attended the two open houses and no landowners sat on the SAC during the A.C.T. process. However, if the HCA never set targets for what constituted adequate representation in the A.C.T. participatory process, then the open houses and SAC were not ineffective because the opportunity was there for stakeholders participate in the process; whether or not they chose to participate was not necessarily the concern of the HCA.

In future, to ensure that representation is achieved the HCA should set tangible targets before the process begins as to what constitutes adequate representation. In this manner, goals could be either quantitative or qualitative depending on the individual circumstance. In the case of obtaining input for consideration into a plan or policy, it may be more beneficial to establish focus groups or advisory committees which offer less interaction with large groups of individuals

but can provide in-depth communication with residents. Conversely, in cases where organizations are attempting to understand if a policy or plan would be accepted in a community, open houses, presentations, or surveys may be more effect ways to achieve representation in the process. Either way, as commented above in section 6.1.1, before engaging stakeholders to participate in planning, agencies should establish well-defined goals and objectives for the process so that they can tailor the methods used to include stakeholders in planning in order to better achieve their goals. By establishing well-defined goals for the participatory process and obtaining desired levels of representation, agencies will increase the effectiveness and value of participatory endeavours in the process as they will clearly understanding what they are seeking from stakeholders before the process begins. Further, by communicating these goals with stakeholders, the conservation authority will better comprehend their role in the process (e.g., why stakeholder participation is being sought and how their input will be used) which, as stated in the stakeholder interviews, will increase participation (Stakeholder-5, Stakeholder-11).

6.1.4 *Stakeholders must feel a sense of empowerment when asked to participation in the development of a plan or policy.*

It is evident that best practices for watershed management in Ontario include having stakeholders contribute to the planning process in meaningful ways (Ontario, 1993b; Ontario, 1993c; Ontario, 2007). Additionally, in the Tiffany Creek subwatershed, it appeared that the HCA was seeking to collaborate with stakeholders on the development of the A.C.T. stewardship action plans. However, upon review of the outreach materials it was apparent that the HCA was asking stakeholders to participate in an informative manner. Although the participatory processes that focus on consultation rather than engagement are not inappropriate, it is obvious through the interviews conducted in this thesis that it is import to empower stakeholders when

121

asking them to participate in the planning process. Specifically, HCA interviewees stated that hearing and validating the ideas of stakeholders would lead stakeholders to feel a sense of empowerment in the process, which would lead to increased the levels of participation (HCA-1; HCA-2; HCA-4; HCA-5). This perspective was reiterated during interviews with local residents as participants emphasized that they must be given the chance to provide input in the planning process. However, for residents "giving input" meant more than just being able to state their opinion on a plan or proposal. Rather, interviewees asserted that when asked to provide input into watershed planning, their opinions should validated and taken into consideration in the decision-making process (Stakeholder-5; Stakeholder-8; Stakeholder-9; Stakeholder-11; Stakeholder-13).

If the HCA wanted to empower stakeholders in the development of the stewardship action plans in the Ancaster, Chedoke, and Tiffany Creek subwatersheds, then increased efforts should have been made to validate the input received by HCA. Although validation may have occurred in person by HCA staff members hosting the open houses and SAC, documenting and publishing the feedback received from stakeholders would have been beneficial to the process as stakeholders would be able to see that their input was heard. Whether or not their input is taken into consideration when developing a policy or plan, publishing feedback obtained from stakeholders would show that the conservation authority values their contributions. This can simply be done by placing these results on the HCA's website or attaching feedback received in the appendix of a plan. Although publishing the input received from stakeholders may not immediately impact the planning process, it is especially important for future planning endeavors. By documenting all input received, the conservation authority confirms that the planning process is transparent; it highlights that the HCA processes input received and that

122

feedback does not fall on deaf ears; and finally, it affirms that stakeholders are valuable

contributors to the planning process.

6.1.5 Leaders of participatory processes in subwatershed planning must be trained on how to effectively engage stakeholders and communicate the goals and objectives of the HCA.

It was clear in the document analysis and interview process that leaders of participatory

initiatives have a tremendous impact on the success of stakeholder participation. Provincial

planning documents highlight that a leader of a participatory process needs to have facilitation,

mediation, negotiation, and conflict resolution skills to ensure that a participatory process

operates in an effective manner (Ontario, 1993b; Ontario, 1997; Ontario, 2007). In addition,

during the interview process, HCA staff stressed that those leading participatory events need to

have conflict resolution skills and facilitation skills (HCA-2; HCA-4). However, staff members

highlighted that a lack of formal training exists to on best practices for engaging in stakeholder

participation.   Interviewees mentioned that instruction on how to effectively include

stakeholders in planning does not take place at the conservation authority; instead, staff members

with their managers were left to determine the appropriate methodologies and characteristics of

participatory events (HCA-1; HCA-2; HCA-5; HCA-4).

To ensure that stakeholder participation is best utilized in subwatershed management,

HCA staff members would benefit from formal training in the techniques for incorporating

stakeholders into the planning process.   This conclusion is supported by both the planning and

resource management literature and government documents outlining best practices for

watershed management in Ontario, which advocate for strong leaders in the participatory

process. However, because training often requires significant monetary and time commitments,

the HCA would benefit most from the development of a formal policy or protocol for selecting

123

and running participatory events. Establishing a formal policy for stakeholder participation is needed because all five HCA interviewees confirmed that no guidelines or framework for participation existed at the HCA. By developing a protocol which could be referred to by staff members seeking to use stakeholder participation, the HCA could ensure that appropriate participatory methods for each planning context are selected. Although instigating formal training at the HCA would be desirable, developing a protocol for stakeholder participation would be the most efficient use of staff and funding resources for the HCA as a team of employees who have training and experience with stakeholder participation could develop a framework to be used by the organization.

6.1.6 Open and clear communication requires that conservation authorities begin dialogue early and avoid the use of jargon when communicating with stakeholders.

The results found in Chapter Five highlight that open communication between agencies and stakeholders is important to the success of participatory initiatives. The data sources and documents used in this study agree that participation should be inclusive with clear, focused and transparent communication between all participants which includes the sharing of necessary information and documentation relevant to the process (HCA, 2007q; HCA, 2008i; Ontario, 1993b; Ontario, 2007; Stakeholder-1; Stakeholder-2; Stakeholder-3; Stakeholder-11).

Open and clear communication with stakeholders needs to occur to ensure the success of stakeholder participation. However, from the results in Chapter Five appears that low levels of participation in the development of the Tiffany Creek stewardship action plan may be attributed to lack of understanding amongst stakeholders as to what was being asked of them. This conclusion is supported by both HCA staff members and stakeholders who mentioned that residents understanding of the watershed perspective and of the HCA as an organization is low

(HCA-3; HCA-5; Stakeholder-3; Stakeholder-7; Stakeholder-9). Particularly, questions arose surrounding whether or not the average stakeholder understands what terms like "subwatershed plans" and "stewardship action plans" mean. Therefore, in the future if stakeholders are being approached to participate in planning, the HCA should begin communication early with stakeholders.

Moreover, initial dialogue should also be free of jargon and easy to understand so that all residents can have the opportunity to participate by understanding what is being asked of them. If more specialized understanding and technical input is required from residents in the process, the HCA should develop a series of communication steps where stakeholders can be gradually educated on more complex terminologies and concepts so that they can provide more focused input for the conservation authority. Although this will increase the length of the participatory process, communicating with stakeholders in a clear manner, free of jargon, does ensure that all potential participants have an opportunity to participate and that no exclusion occurs. However, it is important to note that if communication materials focus on broader and more understandable information, agencies must ensure that they maintain honesty in how and why stakeholder participation is being sought.

6.1.7 Educating stakeholders on environmental issues will encourage stakeholder participation in the planning process which will result in the development of thorough contextual understanding of watershed management issues.

Managing at the watershed level is a complex undertaking with high levels of uncertainty due to the need for integrating of numerous factors in the management process. Today, many practitioners and scholars recognize that management and planning processes are not universal but need to be adapted and catered to the unique circumstances of an area. From the results, it

was clear that coordinated and comprehensive planning approaches are needed to address the environmental issues facing the subwatersheds in the Hamilton region.

By examining both the stakeholder motivations for participation and the purpose for the A.C.T. process, it appears that the HCA and residents have similar goals for engaging in participation. However, there was a significant lack of participation from stakeholders in the A.C.T. process. This disconnect between the groups suggests that stakeholders do not fully understand the context of environmental issues in their community or the management practices of the HCA. Additionally, stakeholders may have not participated because collaborating to compose stewardship action plans may not be viewed as pressing or crucial concern to the community. Thus, it appears that HCA needs to ensure that it is proactively educating stakeholders on the management issues facing the conservation authority and applying those issues to the local context so that stakeholders can understand how the issues are affecting or will affect them directly. Moreover, it is important for the HCA to clearly communicate to stakeholders both the goals and objectives of a project, including the intentions for seeking participation, so that they have the opportunity to understand how a planning issue is impacting their community. As stated in section 6.1.6, proactive education will likely require frequent communication with stakeholders through various media forms, which will need to be clear, free of technical jargon, and easy to understand. By ensuring that stakeholders understand the context of watershed issues and some of the ecological processes within them, participation will increase as stakeholders will recognize the importance of addressing environmental issues impacting their community. This task is extremely difficult, and it must not be overlooked that the HCA and other agencies are actively engaged in community outreach and education; however, if stakeholder participation is going be best utilized and well attended, informed

126

stakeholders are needed to understand the complex issues facing Hamilton's watersheds today and in the future.

6.2   Conclusions and recommendations

The purpose of this research was to develop an evaluative framework from environmental planning literature and to apply it to the Tiffany Creek subwatershed in order to understand the characteristics of successful stakeholder participation. This thesis attempted to understand whether or not appropriate levels and characteristics of stakeholder participation have been used in subwatershed planning, and it strived to make recommendations on how to improve planning and management processes within the basin. In the first part of this chapter, a discussion of the results from the data sources was presented and recommendations for improving future HCA participatory processes were made.

The results of this study can be applied to the wider context of watershed and environmental planning.   From the literature, it is clear that presently governments and resource management agencies face significant challenges addressing the complexity and interconnectedness of environmental problems impacting the world's ecosystems. With rapidly changing circumstances around the globe and the continual onset of macro-level environment concerns, such as climate change, there is an increasing need to develop management frameworks that are adaptive and flexible both at the global and local level. The role of stakeholders in addressing these challenges is ever more important as agencies need to increase their capacity for decision-making, gain stakeholder buy-in into management plans and processes, and obtain assistance in the implementation of planning strategies.

This thesis does not attempt to be a litmus test for successful stakeholder participation in environmental management and planning. Rather, it attempts to integrate the lessons learned

from previous research and bureaucratic initiatives at the local level with the perceptions and opinions toward the participatory process of HCA staff members and Tiffany Creek subwatershed residents. This thesis advocates that the consideration of the motivations and opinions of stakeholders and agencies toward stakeholder participation can yield a greater understanding of what successful stakeholder involvement in a region would look like. As seen in the case of the HCA in the development of the A.C.T. Stewardship Action Plans, despite best efforts by an organization, which include innovative and new approaches to planning, the success of stakeholder participation depends on the interest and involvement of stakeholder in the process. Thus, if stakeholders do not understand what is being asked of them or the relevancy of a participatory endeavor to their personal circumstances, stakeholder participation in the planning process will likely be unsuccessful as it does not meet the needs or interests of stakeholders.

Therefore, to ensure that the HCA and other agencies are able to engage in effective participation, an examination of stakeholder's opinions and goals for participation should be established and compared with organizational goals and objectives for a process. In this manner, the characteristics for stakeholder participation in a planning process should not be dependent solely on previous research or personal experience. Rather, participatory processes need to be flexible and adaptive to ever changing needs and interest of the stakeholders in a specific region. By creating such processes, agencies will ensure that the greatest number of individuals participate in the planning process. It is important for practitioners and agencies to educate themselves on relevant participatory initiatives being used in resource management and integrate the results of those initiatives with the goals and objectives of both their organization and the general populous.

Agencies will benefit from using an evaluative framework like the one used in this research. By comparing the evaluative characteristics in the framework with the participatory methodology that is going to be used, organizations can gain some understanding as to the necessary characteristics for successful stakeholder participation. However, as in the case of this study, it is imperative that agencies examine the question of successful stakeholder participation methods through the lens of their specific planning issue. Subsequently, agencies should use the framework as a guide and compare it with the opinions and values of the managing agency and the intended stakeholders participating in the process. By applying the framework to their local context agencies will ensure that the method used to obtain stakeholder participation has a concrete theoretical background complimented by the goals and needs of those expecting to participate. It is important to note that practitioners need to stay current on the outcomes and continued research surrounding stakeholder participation as the principles for successful participation may change over time and the evaluative framework used in this study need adaption.

6.3   Limitations and research opportunities

It is important to recognize the limitations of the research found in this thesis in order that the key findings and recommendations are evaluated and understood within the current context of environmental planning and resource management literature. Several challenges presented themselves over the course of conducting this research. To some extent these challenges test the usefulness of the results discussed in this chapter. However, reflecting on these challenges also provides one the chance to highlight future research opportunities.

First, a significant challenge that emerged when conducting this research was the level of understanding amongst some of the residents relating to the watershed perspective and the

Hamilton Conservation Authority as an organization. During the study, some interview

questions needed to be adapted to accommodate the level of understanding that an interviewee

had. Specifically, some residents had a very little knowledge of the role of the conservation

authority in their region and what watershed planning entailed.   Thus, achieving specific

recommendations for improving stakeholder participation in subwatershed planning proved

difficult during some of the interviews.

Second, during the document analysis phase, there was a limited number of planning

documents and literature pertaining to stakeholder participation in watershed management by the

HCA. Despite receiving some information from the conservation authority, there was a lack of

documentation of previous stakeholder participation in planning practices undertaken by the

HCA in the Tiffany Creek subwatershed or in the broader Spencer Creek watershed.

Specifically, there was not a substantial amount of information available pertaining to the

proposal stages of plan development, particularly relating to the justification for a management

proposal and the selection process of a participatory initiative.

Third, this study examined the opinions and perceptions of local residents and agencies

toward the stakeholder participation process. This research could have benefited from the

inclusion of stakeholders from the private sector. Particularly, as outlined in Chapter Four, there

are a number of stakeholder-based groups and nongovernmental organizations operating within

the boundaries of the Tiffany Creek subwatershed. Incorporating them, as well as some other

local businesses, would have been beneficial for obtaining a more robust understanding of the

issue.

Lastly, a limitation to this research was the sample size used in this thesis.   The small

sample size for this research was chosen for a number of reasons. First, the study is qualitative

and focuses on obtaining in-depth results from longer communications with fewer individuals. Second, this research is exploratory and was an attempt to understand if a larger research problem existed within the field of environmental planning. Finally, the sample was chosen because of the time commitment required for one researcher to design the study, recruit participants, interview stakeholders, and analyze the data. Regardless, it would be beneficial to expand this study to include more participants from the subwatershed and to compare the results from the Tiffany Creek subwatershed with other case studies in order to validate and expand on the conclusions and recommendations found in this chapter.

Fortunately the challenges and limitations of this research point to opportunities for future research. First, it would be beneficial to return to the Tiffany Creek subwatershed and interview HCA staff at greater length about the process for selecting and conducting stakeholder participation in watershed planning. Specifically, it would be interesting to gain an understanding of how a specific method is chosen when stakeholder participation is needed, and what information is used, if any, to assess and justify the use of particular methods. Whether or not a process is documented, it would be intriguing to interview staff on the selection process and program development for stakeholder participation by the HCA.

Additionally, it would be useful to conduct further research in the Hamilton region as the HCA continues to develop stewardship actions plans for the remaining subwatersheds in the Spencer Creek watershed. While all the stewardship action plans ultimately have the same objective, they are incorporating different stakeholders into each process and thus will have differing successes incorporating stakeholders into the planning process. Accordingly, a comparison of these processes could be extremely useful for gaining insight into best practices for stakeholder participation in the development of stewardship plans.

Furthermore, this thesis primarily focuses on the positive outcomes which stakeholder participation provides conservation authorities in the development of subwatershed and watershed plans. However, it would be interesting to also examine the impact which participatory processes have on the stakeholders who participate. Specifically, understanding the benefits which arise for stakeholders could be useful in understanding how to "market" participation to stakeholders and create campaigns which are attractive for all who participate.

Also, in order to understand if the results of this study are applicable to the wider context, it would be beneficial to compare them to other case studies in environmental planning. Conducting these comparisons could highlight whether or not the research question in this study has broad applicability. Specifically, it would confirm if developing evaluative frameworks and integrating them with the opinions of stakeholders and agencies is useful in other regions. Confirming the relevancy of the results would provide agencies with a greater understanding of how to successfully incorporate stakeholders into planning processes. This is crucial as achieving successful stakeholder participation is the ultimate goal of this thesis.

Each of these limitations identified offer opportunities for further research and continued understanding of how stakeholders can best participate in the environmental planning process. Through becoming part of the management and planning processes, stakeholders can provide insight into the complexities and challenges facing the sustainable management of our ecosystem. The hope for this research is that the findings and recommendations will inspire greater interest in understanding the characteristics for successful participation in the development of environmental plans and policies. By achieving successful stakeholder participation in planning processes, agencies and stakeholders can effectively collaborate to address the complexity of environmental issues facing communities around the globe.

References

Arnstein, S. (1969). A ladder of citizen participation. *Journal of the American Institute of Planners, 35,* (4), 216-224.

Beierle, T., & Konisky, D. (2001). What are we gaining from stakeholder involvement? Observations from environmental planning in the Great Lakes. *Environment and Planning C: Government and Policy, 19*, 515-527.

Black, P. & Fisher, B. (2001). *Conservation of Water and Related Land Resources.* Lewis Publishers: London, England.

Broderick, K. (2005). Communities in catchments: Implications for natural resource management. *Geographical Research, 43,* (3), 286-296.

Brody, S. (2003). Measuring the effects of stakeholder participation on the quality of local plans based on the principles of collaborative ecosystem management. *Journal of Planning Education and Research, 22*, 407-419.

Buchy, M., & Race, D. (2001). The twists and turns of community participation in natural resource management in Australia: What is missing? *Journal of Environmental Planning and Management, 44,* (3), 293-308.

Buckingham, S., & Theobald, K. (2003). *Local Environmental Sustainability*. Woodhead Publishing, CRC Press: Cambridge, England.

Byron, I., & Allen, C. (2002). Maintaining volunteer commitment to local watershed initiatives. *Environmental Management, 30,* (1), 59-67.

Carr, D., Powell, B., Shubair, M., Trotz-Williams, L., & Wong, L. (2005). *Social and Health Issues.* City of Hamilton. Hamilton, Ontario: Stakeholder Health and Community Services Department.

Cai, X., McKinney, D., & Lasdon, L. (2002). A framework for sustainability analysis in water resources management and application to the Syr Darya Basin. *Water Resources Research, 38,* (6), 1-14.

Chaves, H., & Alipaz, S. (2006). An integrated indicator based on basin hydrology, environment, life, and policy: The watershed sustainability index. *Water Resource Management, 21*, 883-895.

Collentine, D., Forsman, A., Galaz, V., Bastviken, S. K., & Stahl-Delbanco, A. (2002). CATCH: Decision support for stakeholders in catchment areas. *Water Policy, 4*, 447-463.

Conrad, C., & Daoust, T. (2008). Community-based monitoring frameworks: Increasing the effectiveness of environmental stewardship. *Environmental Management*, *41,* (3), 358-366.

Day, D. (1997). Citizen participation in the planning process: An essentially contested concept?. *Journal of Planning Literature, 11,* (3), 421-434.

de Löe, R., Kreutzwiser, R., & Moraru, L. (2001). Adaption options for the near term: climate change and the Canadian water sector. *Global Environmental Change, 11, 231-245*.

Dungumaro, E. W., & Madulu, N. F. (2003). Stakeholder participation in integrated water resources management: The case of Tanzania. *Physics and Chemistry of the Earth, 28*, 1009-1014.

Duram, L., & Brown, K. (1999). Assessing stakeholder participation in U.S. watershed planning initiatives. *Society & Natural Resources, 12*, 455-467.

Durley, J. (2007). Linking integrated community sustainability planning and watershed planning in Ontario, Canada. *Environments, 35,* (1), 57-77.

Durley, J., & de Löe, R. (2005). Empowering communities to carry out drought contingency planning. *Water Policy, 7*, 551-567.

Dwivedi, O. P. (1989). *World Religions and the Environment.* Gitanjali Publishing House: New Delhi, India.

Eagly, A. H., & Kulesa, P. (1997). Attitudes, attitude structure, and resistance to change: Implications for persuasion on environmental issues. In M. Bazerman, D. Messick, A. Tenbrunsel & K. Wade-Benzoni (Eds.), *Environment, Ethics, and Behaviour*. (122-153). The New Lexington Press: San Francisco, United States of America.

Eccleston, C. (2001). *Effective Environmental Assessments: How to Manage and Prepare NEPA EAs.* Lewis Publishers: London, England.

Ferreyra, C., & Beard, P. (2007). Participatory evaluation of collaborative and integrated water management: Insights from the field. *Journal of Environmental Planning and Management, 50,* (2), 271-296.

Garin, P., Rinaudo, J., & Ruhlmann, J. (2002). Linking expert evaluations with stakeholder consultation to design water policy at the watershed level. *Water Sciences and Technology, 46,* (6), 263-271.

Garvill, J., & Nordlund, A. (2002). Value structures behind proenvironmental behaviour. *Environment and Behavior, 34,* (6), 740-756.

Gerring, J. (2004). What is a case study good for?. *American Political Science Review, 98,* (2), 341-354.

Gerring, J. (2007). *Case Study Research: Principles and Practices*. Cambridge University Press: New York, United States of America.

Gibson, R. G., Hassan, S., Holtz, S., Tansey, J., & Whitelaw, G. (2005). *Sustainability*

Assessment: Criteria, Processes and Applications. Earthscan: London, England.

Golobič, M. & Marušič, I. (2007). Developing an integrated approach for stakeholder

   participation: A case of land-use planning in Slovenia. *Environment and Planning B:*

   Planning and Design, 34, 993-1010.

Gooch, M. (2004). Volunteering in catchment management groups: Empowering the volunteer.

   Australian Geographer, 35, (2): 193-208.

Hack, J. & Yee, C. (2005). *Development of policy papers for phase two of the transportation*

   master plan for the City of Hamilton: Economic development policy paper. City of

   Hamilton: Hamilton, Ontario.

Hallin, P. (1995). Environmental concern and environmental behaviour in Foley, a small town in

   Minnesota. *Environment and Behavior, 27,* (4), 558-578.

Hamilton Conservation Authority (2006a). *Hamilton Harbour Watershed Stewardship*

   Program: Tiffany Creek property owner letter. Ancaster, Ontario.

Hamilton Conservation Authority (2006b). *Planning & Regulation Policies and Guidelines.*

   Ancaster, Ontario.

Hamilton Conservation Authority (2007a). *A.C.T.! Plans background.* Ancaster, Ontario.

Hamilton Conservation Authority (2007b). *A.C.T.! Stakeholder advisory committee:*

   agenda. Ancaster, Ontario.

Hamilton Conservation Authority (2007c). *A.C.T.! Stewardship action plans* [Draft]. Ancaster,

   Ontario.

Hamilton Conservation Authority (2007d). *A.C.T.! Stewardship action plans – open house sign-*

   in sheet. Ancaster, Ontario.

Hamilton Conservation Authority (2007e). *Appendices: A.C.T.! Stewardship action plan.*

Ancaster, Ontario.

Hamilton Conservation Authority (2007f). *Direct mailing (councillors) March 07 open house.* Ancaster, Ontario.

Hamilton Conservation Authority (2007g). *Direct mailing (HHWSP Stewards) March 07 open House.* Ancaster, Ontario.

Hamilton Conservation Authority (2007h). *Direct mailing (Partners) March 07 SAC call for interest.* Ancaster, Ontario.

Hamilton Conservation Authority (2007j). *Newspaper advertisements March 2007 Open House.* Ancaster, Ontario.

Hamilton Conservation Authority (2007k). *Newspaper advertisements March Stakeholder Advisory Committee Call for Interest.* Ancaster, Ontario.

Hamilton Conservation Authority (2007l). *Notice of stakeholder open house: Ancaster, Chedoke, and Tiffany Creeks subwatershed action plans.* Ancaster, Ontario.

Hamilton Conservation Authority (2007m). *Stakeholder notice: Advisors sought in Ancaster, Chedoke, and Tiffany Creek subwatershed stewardship action plans.* Ancaster, Ontario.

Hamilton Conservation Authority (2007n). *Stakeholder Advisory Committee Guidelines.* Ancaster, Ontario.

Hamilton Conservation Authority (2007o). *Stakeholder advisory committee interest list*. Ancaster, Ontario.

Hamilton Conservation Authority (2007p). *Tiffany Creek subwatershed stewardship action plan [Draft]*. Ancaster, Ontario.

Hamilton Conservation Authority (2008a). *A.C.T.! Stewardship action plans.* Ancaster, Ontario.

Hamilton Conservation Authority (2008b). *A.C.T.! Stewardship action plans – open house sign-in sheet.* Ancaster, Ontario.

Hamilton Conservation Authority (2008c). *Draft A.C.T.! Stewardship Action Plans* [Presentation]. Ancaster, Ontario.

Hamilton Conservation Authority (2008d). *Newspaper advertisements January 2008 Open House.* Ancaster, Ontario.

Hamilton Conservation Authority (2008e). *Notice of stakeholder open house: Comments sought on local environmental action plans.* Ancaster, Ontario: January, 2008.

Hamilton Conservation Authority (2008f). *Potential lead agency statistics.* Ancaster, Ontario.

Hamilton Conservation Authority (2008g). *Press release.* Ancaster, Ontario: January 18.

Hamilton Conservation Authority (2008h). *Quick reference of relevant stresses/opportunities.* Ancaster, Ontario.

Hamilton Conservation Authority (2008i). *Tiffany Creek subwatershed: Stewardship action plan.* Ancaster, Ontario.

Hamilton Conservation Authority (2009a). *Dundas Valley 50-Year Vision & Strategy 2008-2058: Finaly Draft for Review – Febuary 2009.* Ancaster, Ontario.

Hamilton Conservation Authority (2009b). *Stakeholder consultation for the Ancaster, Chedoke, and Tiffany Creek subwatersheds action plans.* Ancaster, Ontario.

Hamilton Region Conservation Authority (1990). *A Working Paper for Future Discussion.* Ancaster, Ontario.

Hamilton Region Conservation Authority (1997). *Spencer Creek Watershed Management Plan.* Ancaster, Ontario.

Hamilton Region Conservation Authority (1999a). *Hamilton Harbour Watershed Stewardship*

Program: Tiffany Creek property owner letter. Ancaster, Ontario.

Hamilton Region Conservation Authority (1999b). *Hamilton Harbour Watershed Stewardship Program: Appendix II summary of landowners in the Tiffany Creek subwatershed.* Ancaster, Ontario.

Hamilton Region Conservation Authority (2000a). *Spencer Creek Watershed Plan.* Ancaster, Ontario: Watershed Planning & Engineering Division.

Hamilton Region Conservation Authority (2000b). *Tiffany Creek Subwatershed Plan.* Ancaster, Ontario: Watershed Planning & Engineering Division.

Hamilton Region Conservation Authority (2005). *Planning & Regulation Policies and Guidelines.* Ancaster, Ontario: Board of Directors.

Hamilton-Wentworth Planning Area Board (1968). *A Study of the Ancaster-Dundas Valley System For Conservation* Purposes: *Part II Appraisal and Recommendations.* Hamilton, Ontario.

Hamilton-Wentworth Regional Municipality (1971). *City of Hamilton: General Background Information*. Hamilton, Ontario: Planning and Development Department.

Hamilton-Wentworth Regional Municipality (1987). *Town of Ancaster Official Plan*. Hamilton, Ontario: Planning and Development Department.

Hamilton-Wentworth Regional Municipality (1990). *State of the Environment*. Hamilton, Ontario: Planning and Development Department.

Hamilton-Wentworth Regional Municipality (1991a). *Government in Hamilton-Wentworth*. Hamilton, Ontario: Planning and Development Department.

Hamilton-Wentworth Regional Municipality (1991b). *Transportation, Physical Services and Land Use*. Hamilton, Ontario: Planning and Development Department.

Hamilton-Wentworth Regional Municipality (1992). *Employment Trends, 1982 to 1990.*

Hamilton, Ontario: Planning and Development Department.

Hamilton-Wentworth Regional Municipality (1994a). *City of Hamilton Official Plan*. Hamilton,

Ontario: Planning and Development Department.

Hamilton-Wentworth Regional Municipality (1994b). *Greenspace and Natural Areas*.

Hamilton, Ontario: Planning and Development Department.

Hamilton-Wentworth Regional Municipality (1997). *Vision 2020 Implementation Review*.

Hamilton, Ontario.

Hansen, H., & Mäenpää, M. (2008). An overview of the challenges for stakeholder participation

in river basin management and planning. *Management of Environmental Quality: An

International Journal, 19,* (1), 67-84.

Hartmann, P., & Ibanez, V. (2006). Green value added. *Marketing Intelligence & Planning,

24,* (7), 673-680.

Hayes, B. & Marangudakis, M. (2001). Religion and attitudes toward nature in Britain. *British

Journal of Sociology, 52,* (1), 139-155.

Hill, C., Furlong, K., Bakker, K., Cohen, A. (2007). A survey of water governance legislation

and policies in the provinces and territories. In Bakker, K. (Eds.), *Eau Canada* (pp. 369-

392). UBC Press: Vancouver, British Columbia.

House, M. (1999). Citizen participation in water management. *Water Science Technology, 40,*

(10), 125-130.

Howell, R., Olsen, M. & Olsen, D. (1987). *Designing a citizen Involvement Program: A

Guidebook for Involving Citizens in the Resolution of Environmental Issues.* Western

Rural Development Center: Corvallis, Oregon, United States of America.

140

Hunsberger, C., Gibson, R., & Wismer, S. (2005). Citizen involvement in sustainability-centred environmental assessment follow-up. *Environmental Impact Assessment Review, 25*, 609-627.

Iacofano, D. (1990). *Stakeholder Involvement as an Organizational Development Process: A Proactive Theory for Environmental Planning Program Management.* Garland: New York, United States of America.

Irvin, R., & Stransbury, J. (2004). Citizen participation in decision making: Is it worth the effort? *Stakeholder Administration Review, 64,* (1), 55-65.

Ivey, J., de Löe, R., & Kreutzwiser, R. (2002). Groundwater management by watershed agencies: An evaluation of the capacity of Ontario's conservation authorities. *Journal of Environmental Management, 64*, 311-331.

Jöborn, A., Danielsson, I., Arheimer, B., Jonsson, A., Larsson, M., Lundqvist, L., Löwgren, M., & Tonderski, K. (2005). Integrated water management for eutrophication control: Stakeholder participation, pricing policy, and catchment modeling. *Royal Swedish Academy of Sciences, 34,* (7), 482-488.

Johnson, A., Shrubsole, D., & Merrin, M. (1996). Integrated catchment management in Australia. *Land Use Policy, 13,* (4), 303-316.

Jonsson, A. (2005). Stakeholder participation in water resources management: Stakeholder voices on degree, scale, potential, and methods in future water management. *Ambio, 34*, 495-500.

Kay, J., Regier, H., Boyle, M., & Francis, G. (1999). An ecosystem approach for sustainability: Addressing the challenge of complexity. *Futures,* 31, 721-742.

Koontz, T. (2005). We finished the land, so now what? Impacts of collaborative stakeholder

  participation on land use policy. *The Policy Studies Journal, 33,* (3), 459-481.

Koontz, T., & Johnson, E. (2004). One size does not fit all: Matching breadth of stakeholder

  participation to watershed group accomplishments. *Policy Sciences, 37*, 185-204.

Krause, P., Smith, A., Veale, B., & Murray, M. (2001). Achievements of the Grand River

  Conservation Authority, Ontario, Canada. *Water Science and Technology*, *43,* (9), 45-55.

Læssøe, J. (2007). Participation and sustainable development: The post-ecologist transformation

  of citizen involvement in Denmark. *Environmental Politics, 16,* (2), 231-250.

Lane, M. (2005). Stakeholder participation in planning: An intellectual history. *Australian*

  Geographer, 36, (3), 283-299.

Lankford, B., & Beale, T. (2007). Equilibrium and non-equilibrium theories of sustainable water

  resources management: Dynamic river basin and irrigation behaviour in Tanzania. *Global*

  Environmental Change, 17, (168-180).

Lawrence, A. (2006). 'No personal motive?' Volunteers, biodiversity, and the false

  dichotomies of participation. *Ethics, Place and Environment, 9,* (3), 279-298.

Lawrence, R. & Daniels, S. (1996). *Stakeholder Involvement in Natural Resource Decision*

  Making: Goals, Methodology, and Evaluation. Forest Research Laboratory, Oregon State

  University: Corvallis, Oregon, United States of America.

Lawrence, R., & Deagen, D. (2001). Choosing stakeholder participation methods for natural

  resources: A context-specific guide. *Society & Natural Resources, 14*, 857-872.

Leach, W. (2006). Collaborative stakeholder management and democracy: Evidence from

  western watershed partnerships. *Stakeholder Administration Review, Special Issue,*

  December, 100-110.

Leach, W., & Pelkey, N. (2001). Making watershed partnerships work: A review of the

     empirical literature. *Journal of Water Resources Planning and Management,* 127, (6)

     378-385.

Leach, W., Pelkey, N., & Sabatier, P. (2002). Stakeholder partnerships as collaborative

     policymaking: Evaluation criteria applied to watershed management in California and

     Washington. *Journal of Policy Analysis and Management, 21,* (4), 645-670.

Leskinen, L. (2004). Purposes and challenges of stakeholder participation in regional and local

     forestry in Finland. *Forest Policy and Economics, 6*, 605-618.

Lindahl, T., & Söderqvist, T. (2004). Building a catchment-based environmental programme: A

     stakeholder analysis of wetland creation in Scania, Sweden. *Regional Environmental*

     Change, 4, 132-144.

Litke, S. (2003). Sustainability indicators for the Fraser Basin—A tool for change. Paper

     presented at the Fraser Basin Council, Olympia, Washington, United States of America.

Lowndes, V., Pratchett, L., & Stoker, G. (2001). Trends in stakeholder participation: Part 2 –

     citizens' perspectives. *Stakeholder Administration, 79,* (2), 445-455.

Lowry, K., Alder, P., & Milner, N. (1997). Participating the stakeholder: Group process, politics,

     and planning. *Journal of Planning Education and Research, 16*, 177-187.

Lynn, F. & Busenberg, G. (1995) Citizen advisory committees and environmental policy: What

     we know, what's left to discover. *Risk Analysis,* (15)**,** 147-162.

Manzo, L., & Weinstein, N. (1987). Behavioral commitment to environmental protection:

     A study of active and nonactive members of the Sierra Club. *Environment and*

     Behavior, 19, (6), 673-694.

Margerum, R., & Whitall, D. (2004). The challenges and implications of collaborative

   management on a river basin scale. *Journal of Environmental Planning and*

   Management, 47, (3), 409-429.

Marshall, B., & Jones, R. (2005). Citizen participation in natural resource management: Does

   representativeness matter? *Sociological Spectrum, 25,* (6), 715-737.

Marshall, C. & Rossman. G. (1995). *Designing Qualitative Research. 2nd Ed.* Sage

   Publications: London, England.

Marshall, J. (1997). *Designing a Stakeholder-based Implementation Evaluation for*

   Subwatershed Planning. Department of Planning: Master's of Arts thesis. University of

   Waterloo, Waterloo, Ontario.

McCool, S., & Guthrie, K. (2001). Mapping the dimensions of successful stakeholder

   participation   in messy natural resources management situations. *Society and Natural*

   Resources, 14, 309-323.

McDaniels, T., Robin, G., & Fields, D. (1999). Democratizing risk management: Successful

   stakeholder involvement in local water management decisions. *Risk Analysis, 19,* (3),

   497-510.

Mitchell, B. (2002). *Resource and Environmental Management*. (2nd Ed.) Pearson Education

   Limited: Essex, England.

Mitchell, B. (2005). Participatory partnerships: Engaging and empowering to enhance

   environmental management and quality of life? *Social Indicators Research, 71,* 123-144.

Mitchell, B., & Shrubsole, D. (1992). *Ontario Conservation Authorities: Myth and Reality*.

   Department of Geography at the University of Waterloo: Waterloo, Ontario.

Mitchell, R., Agle, B., & Wood, D. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review, 22,* (4), 853-886.

Morton, J. (1973). The Indian Era. In *Ancaster's Heritage*. The Ancaster Township Historical Society: Ancaster, Ontario.

Newman, J., Barnes, M., Sullivan, H., & Knops, A. (2004). Stakeholder participation and collaborative governance. *Journal of Social Policy, 32,* (2), 203-223.

Norton, S. (2007). *An Assessment of Local Involvement and Influence in the Development of a Water Sharing Plan, NSW, Australia*. Department of Geography: Master's of Arts thesis. University of Guelph: Guelph, Ontario.

Ontario, Province of (1990a). *Conservation Authorities Act.* Toronto, Ontario: Government of Ontario.

Ontario, Province of (1990b). *Planning Act*. Toronto, Ontario: Government of Ontario.

Ontario, Province of (1993a). *Environmental Bill of Rights*. Toronto, Ontario: Government of Ontario.

Ontario, Province of (1993b). *Subwatershed Planning*. Toronto, Ontario: Ministry of Environment and Energy.

Ontario, Province of (1993c). *Water Management on a Watershed Basis: Implementing an Ecosystem Approach.* Toronto, Ontario: Ministry of Environment and Energy.

Ontario, Province of (1997). *An Evaluation of Watershed Management in Ontario*. Toronto, Ontario: Watershed Planning Implementation Project Management Committee.

Ontario, Province of (1998). *Remedial Action Plan for Hamilton Harbour: Goal, Problems, and Options.* Toronto, Ontario: Government of Ontario.

Ontario, Province of (2005). *Provincial Policy Statement.* Toronto, Ontario: Ministry of

    Municipal Affairs and Housing.

Ontario, Province of (2006). *Places to grow: Growth Plan for the Greater Golden Horseshoe.*

    Toronto, Ontario: Ministry of Stakeholder Infrastructure Renewal.

Ontario, Province of (2007). *Stakeholder engagement: Reference material for Drinking Water*

    Source Protection. Toronto, Ontario: Ministry of the Environment.

Ontario, Province of (2008). *Conservation Authorities Amendment Act.* Toronto, Ontario:

    Government of Ontario.

Palys, T. (2003). *Research Designs: Quantitative and Qualitative Perspectives* (3rd ed.). Nelson

    Publishing: Scarborough, Ontario.

Parkinson, J., & Mark, O. (2005). *Urban Stormwater Management in Developing Countries*.

    IWA Publishers: London, England.

Pennock, M. & Orr, J. (1983). *Social Trends in Hamilton-Wentworth: Past, Present, and Future*.

    Hamilton, Ontario: The Social Planning and Research Council of Hamilton and District.

Phuong, P. (2007). Community involvement in urban watershed management. *The Journal of*

    Environment & Development, 16, (3), 307-327.

Plumlee, J., Starling, J., & Kramer, K. (1985). Citizen participation in water quality

    planning: A case study of perceived failure. *Administration & Society, 16,* (4), 455-473.

Pollution Probe (2004). *The Source Water Protection Primer.* Toronto: ON.

Poncelet, E. (2001). A kiss here and a kiss there: Conflict and collaboration in environmental

    partnerships. *Environmental Management, 27*, (1), 13-25.

Pratchett, L. (1999). New fashions in stakeholder participation: Towards greater democracy?

    Parliamentary Affairs: A Journal of Representative Politics, 52, (4), 616-633.

Primmer, E., & Kyllönen, S. (2006). Goals for stakeholder participation implied by sustainable development, and the preparatory process of the Finnish National Forest Programme. *Forest Policy and Economics, 8*, 838-853.

Reimold, R. (Ed.). (1998). *Watershed Management*. McGraw-Hill Publishing: Toronto, Ontario.

Rolston III, H. (2006). Caring for nature: What science and economics can't teach us but religion can. *Environmental Values, 15,* (3), 307-313.

Rowe, G., & Frewer, L. (2000). Stakeholder participation methods: A framework for evaluation. *Science, Technology, & Human Values, 25,* (1), 3-29.

Sabatier, P., Focht, W., Lubell, M., Trachtenberg, Z., Vedlitz, A., & Matlock, M. (Ed.). (2005). *Swimming Upstream.* The MIT Press: London, England.

Schultz, W., Gouveia, V., Cameron, L., Tankha, G., Schmuck, P., & Franek, M. (2005). Values and their relationship to environmental concern and conservation behaviour. *Journal of Cross-Cultural Psychology, 36,* (4), 457-475.

Schultz, W. & Zelezny, L. (1998). Values and proenvironmental behaviour: A five-county survey. *Journal of Cross-Cultural Psychology, 29,* (4), 540-558.

Sharpe, A., & Conrad, C. (2006). Community based ecological monitoring in Nova Scotia: Challenges and opportunities. *Environmental Monitoring and Assessment, 113*, 395-409.

Shrubsole, D. (1996). Ontario conservation authorities: Principles, practice and challenges 50 years later. *Applied Geography, 16,* (4), 319-335.

Shrubsole, D., & Mitchell, B. (Eds.). (1997). *Practising Sustainable Water Management: Canadian and International Experiences*. Canadian Water Resources Association: Cambridge, Ontario.

Stantec Consulting Inc. (2001). *Ancaster Comprehensive Transportation Study.* City of

Hamilton: Hamilton, Ontario.

Steelman, T., & Ascher, W. (1997). Stakeholder involvement methods in natural resource policy making: Advantages, disadvantages and trade-offs. *Policy Sciences, 30*, 71-90.

Stern, P., Dietz, T., & Kalof, L. (1993). Value orientations, gender, and environmental concern. *Environment and Behavior, 25,* (3), 322-348.

Summerville, J., & Adkins, B. (2007). Enrolling the citizen in sustainability: Membership categorization, morality and civic participation. *Human Studies, 30*, 429-446.

Thacher, D. (2006). The normative case study. *American Journal of Sociology, 111,* (6), 1631-1676.

Tuler, S., & Webler, T. (1999). Voices from the forest: What participants expect of a stakeholder participation process. *Society & Natural Resources, 12*, 437-453.

Valentin, A., & Spangenberg, J. H. (2000). A guide to community sustainability indicators. *Environmental Impact Assessment Review, 20*, 381-392.

van der Woerd, M. (2007). *Water Quality and the Impacts of Landuse on the Tiffany Creek Subwatershed.* Department of Environmental Studies: Bachelor's of Science Thesis. Redeemer University College: Ancaster, Ontario.

Wakefield, S. (2007). Great expectations: Waterfront redevelopment and the Hamilton Harbour Waterfront Trail. *Cities, 24,* (4), 298-310.

Wallace, J., Acreman, M., & Sullivan, C. (2003). The sharing of water between society and ecosystems: From conflict to catchment-based co-management. *Philosophical Transactions: Biological Science, 358,* (1440), 2011-2026.

Wallace, M., Woo, L., & Boudreau, S. (1997). Involving the stakeholder: Learning from

watershed planning in Ontario. In Shrubsole, D. & Mitchell, B. (Eds.), *Practising Sustainable Water Management: Canadian and International Experiences* (pp. 115-132). Canadian Water Resources Association: Cambridge, Ontario.

Warner, J. (2006). More sustainable participation? Multi-stakeholder platforms for integrated catchment management. *Water Resources Development, 22,* (1), 15-35.

Webler, T., & Tuler, S. (2001). Stakeholder participation in watershed management planning: Views on process from people in the field. *Human Ecology Review, 8,* (2), 29-39.

Weller, P. (1990). *Stakeholder Participation in Great Lakes Management: A Case Study of Remedial Action Planning in Hamilton Harbour, Ontario*. Department of Geography: Master's of Arts thesis. University of Waterloo: Waterloo, Ontario.

Wishart, M. & Davies, B. (2003). Beyond catchment considerations in the conservation of lotic biodiversity. *Aquatic Conservation: Marine and Freshwater Ecosystems, 13,* 429-437.

Woodhouse, R. (1973). The history of Ancaster Township. In *Ancaster's Heritage*. The Ancaster Township Historical Society: Ancaster, Ontario.

Yang, K., & Callahan, K. (2007). Citizen involvement efforts and bureaucratic responsiveness: Participatory values, stakeholder pressures, and administrative practicality. *Stakeholder Administration Review,* March/April, 249-264.

Yin, R. K. (1984). C*ase Study Research: Design and Methods*. Sage Stakeholderations: Thousand Oaks Hills, California.

Yuan, W., James, P., Hodgsonc, K., Hutchinsonb, S., & Shia, C. (2003). Development of sustainability indicators by communities in China: A case study of Chongming County, Shanghai. *Journal of Environmental Management, 68*, 253-261.

Personal Communications

Hamilton Conservation Authority (HCA)-1 (2008). Hamilton Conservation Authority staff member. Personal Communication. Ancaster, Ontario. December 5, 2008.

HCA-2 (2008). Hamilton Conservation Authority staff member. Personal Communication. Ancaster, Ontario. December 5, 2008.

HCA-3 (2008). Hamilton Conservation Authority staff member. Personal Communication. Ancaster, Ontario. December 12, 2008.

HCA-4 (2009). Hamilton Conservation Authority staff member. Personal Communication. Ancaster, Ontario. January 16, 2009.

HCA-5 (2008). Hamilton Conservation Authority staff member. Personal Communication. Ancaster, Ontario. December 22, 2008.

Stakeholder-1 (2009). Semi-rural resident of the Tiffany Creek subwatershed. Personal Communication. Ancaster, Ontario. January, 28, 2009.

Stakeholder-2 (2009). Semi-rural resident of the Tiffany Creek subwatershed. Personal Communication. Ancaster, Ontario. February, 3, 2009.

Stakeholder-3 (2009). Semi-rural resident of the Tiffany Creek subwatershed. Personal Communication. Ancaster, Ontario. January 26, 2009.

Stakeholder-4 (2009). Semi-rural resident of the Tiffany Creek subwatershed. Personal Communication. Ancaster, Ontario. January, 29, 2009.

Stakeholder-5 (2009). Semi-rural resident of the Tiffany Creek subwatershed. Personal Communication. Ancaster, Ontario. January, 31, 2009.

Stakeholder-6 (2008). Suburban resident of the Tiffany Creek subwatershed with property

backing onto greenspace. Personal Communication. Ancaster, Ontario. February 26, 2009.

Stakeholder-7 (2008). Suburban resident of the Tiffany Creek subwatershed with property backing onto greenspace. Personal Communication. Ancaster, Ontario. March 2, 2009.

Stakeholder-8 (2008). Suburban resident of the Tiffany Creek subwatershed with property backing onto greenspace. Personal Communication. Ancaster, Ontario. March, 2, 2009.

Stakeholder-9 (2008). Suburban resident of the Tiffany Creek subwatershed with property backing onto greenspace. Personal Communication. Ancaster, Ontario. March 2, 2009.

Stakeholder-10 (2008). Suburban resident of the Tiffany Creek subwatershed with property backing onto greenspace. Personal Communication. Ancaster, Ontario. March 8, 2009.

Stakeholder-11 (2008). Suburban resident of the Meadowlands development complex within the Tiffany Creek subwatershed. Personal Communication. Ancaster, Ontario. February 9, 2009.

Stakeholder-12 (2008). Suburban resident of the Meadowlands development complex within the Tiffany Creek subwatershed. Personal Communication. Ancaster, Ontario. February 11, 2009.

Stakeholder-13 (2008). Suburban resident of the Meadowlands development complex within the Tiffany Creek subwatershed. Personal Communication. Ancaster, Ontario. February 26, 2009.

Stakeholder-14 (2008). Suburban resident of the Meadowlands development complex within the Tiffany Creek subwatershed. Personal Communication. Ancaster, Ontario. March 8, 2009.

Stakeholder-15 (2008). Suburban resident of the Meadowlands development complex within the

Tiffany Creek subwatershed. Personal Communication. Ancaster, Ontario. February 9,

2009.

Appendices

Appendix 1: The characteristics of successful stakeholder participation found in the literature.

Characteristic of Successful Stakeholder Participation	Number of times found in the literature:	Supporting authors:
Empowerment	18	Broderick, 2005; Brody, 2003; Collentine, et al., 2002; Day, 1997; Dungumaro & Madulu, 2003; Gooch, 2004; Hansen & Mäenpää, 2008; Lane, 2005; Lawrence, 2006; Leach, 2006; Lynn & Busenberg, 1995; Marshall & Jones, 2005; McDaniels, et al., 1999; Mitchell, 2002; Newman, et al., 2004; Rowe & Frewer, 2000; Steelman & Ascher, 1997; Warner, 2006
Contextual Relevancy	14	Beirele & Jonisky, 2001; Broderick, 2005; Day, 1997; Dungumaro & Madulu, 2003; Durley, 2007; House, 1999; Hunsberger, et al., 2005; Koontz, 2005; Marshall & Jones, 2005; McCool & Guthrie, 2001; McDaniels, et al., 1999; Norton, 2007; Pratchett, 1999; Webler & Tuler, 2001
Well-defined goals	13	Black & Fisher, 2001; Buchy & Race, 2001; Conrad & Daoust, 2008; Gooch, 2004; Iacofano, 1990; Leach, 2006; Lowry, et al., 1997; Lynn & Busenberg, 1995; McCool & Guthrie, 2001; McDaniels, et al., 1999; Mitchell, 2005; Rowe and Frewer, 2001; Sabatier, et al., 2005.
Representation	13	Collentine, et al., 2002; Broderick, 2005; Buchy & Race, 2001; Durely, 2007; Ferreyra & Beard, 2007; Gooch, 2004; Irvin & Stransbury, 2004; Johnson, et al., 1996; Lawrence & Daniels, 1996; Leach, 2006; Lowry et al., 1997; McDaniels, et al., 1999; Plumlee, et al., 1985
Early participation	10	Duram & Brown, 1999; Duram & Brown, 1999; Durley, 2007; Hansen & Mäenpää, 2008; Ferreyra & Beard, 2007; Hunsberger, et al., 2005; Lawrence & Deagan, 2001; Leach, 2006; Marshall & Jones, 2005; McCool & Guthrie, 2001; Mitchell, 2005; Rowe and Frewer, 2000
Open and clear communication	10	Collentine, et al., 2002; Buchy & Race, 2001; Byron & Allen, 2002; Ferreyra & Beard, 2007; Johnson, et al., 1996; Leach, 2006; Leskinen, 2004; Lowry, et al., 1997; Mitchell, 2002; Warner, 2006
Strong leadership	7	Black, 2001; Ferreyra & Beard, 2007; Johnson, et al., 1996; Koontz, 2005; Leach, 2001; Phuong, 2007; Pratchett, 1999;
Educative	3	Collentine, et al., 2002; Lynn & Busenberg, 1995; Jonsson, 2005
Power sharing exercise	2	Lane, 2005; Warner, 2006
Relationship oriented	2	Jöborn, et al., 2005; McCool & Guthrie, 2001
Consensus decision making	1	Black & Fisher, 2001
Adaptive	1	Mitchell, 2005
Shared responsibility	1	House, 1999
Accommodating to all interests	1	Lane, 2005

Department of Geography
University of Waterloo
200 University Avenue West
Waterloo, Ontario, Canada
N2L 3G1

Mark van der Woerd
Master's Candidate
Department of Geography
m3vander@envmail.uwaterloo.ca
(905) 745-9773

Interview with the Hamilton Conservation Authority Staff:

Evaluation of current practices
1. To the best of your knowledge, does the Hamilton Conservation Authority (HCA) have participatory frameworks/guidelines for how to incorporate stakeholders in their programs? If so, please name and describe them.
2. Is stakeholder participation required during any management steps at the HCA?
3. How have you seen citizens utilized/incorporated by the HCA? Can you give specific examples in the Tiffany Creek Subwatershed?
4. What techniques are currently used to motivate citizens to participate in watershed management and planning at the HCA? (i.e. marketing strategies)
5. Currently, how much input do citizens have in formulating management strategies at the HCA? In the day-to-day operations?
6. Are employees trained to include citizens in management and planning? Subsequently are they trained how to properly interact/engage with them when included.

Perceptions of the need for citizen involvement
1. If possible, rank the motivations of citizens to participate in HCA events on a scale from 1 to 4 (1 being no motivation, 4 being extremely motivated)? Please give an explanation for your ranking?
2. In your opinion, what are some citizen motivations for participating in HCA events?
3. Who should participate in planning and management?
4. What are some advantages of incorporating stakeholders in watershed management?
5. What are some disadvantages of incorporating stakeholders in watershed management?
6. In your opinion, what is the most effective method to incorporate stakeholders in environmental management?
   a. Partnership/Citizen power (referenda)
   b. Stakeholder consultation (power retained by organization, advice of citizens)
   c. Standard Representation (citizen delegates work with the CA on behalf of the majority group or organization works with what they feel is the best interest of community)
   d. Citizen based advisory groups (citizen delegates develop plans with CA)
7. In your opinion, does the Hamilton Conservation Authority need the help of citizens to effectively manage the region's watersheds?
8. Are there important/unique factors that one must consider when incorporating stakeholders in environmental and resource management? (I.e. time of participation, location, etc.)
9. In your opinion, what is the most effective method to incorporate stakeholders in watershed management? Additionally, please name all methods/techniques which you know or have heard about.

10. If possible, describe in your own words what successful stakeholder participation in watershed management would look like.
11. What are some barriers/obstacles to successful stakeholder participation?
12. Should citizens work with directly with Conservation Authorities (or other organizations) or form their own interest-based groups (such as land stewards, citizens against urban development) and work alongside the CA in that capacity?
13. In your opinion, would giving citizens more power in environmental management lead to increased community involvement in such processes?
14. When is the best time to include citizens in the management and planning process (i.e. early in the process, once the project is underway, or near the end of the project)

Appendix 3:   Questions for the interviews with stakeholders from the Tiffany Creek subwatershed

Department of Geography
University of Waterloo
200 University Avenue West
Waterloo, Ontario, Canada
N2L 3G1   he Tiffany Creek subwatersl

Mark van der Woerd
Master's Candidate
Department of Geography
m3vander@envmail.uwaterloo.ca
(905) 745-9773

Evaluation of current practices

1. Have you ever heard of or been approached to participate in environmental planning or management (e.g. by-law amendment, community clean up, advisory board) If so, by whom and when?
2. What is the role of the Conservation Authority in your region?
3. To the best of your knowledge, is the Hamilton Conservation Authority (HCA) attempting to incorporate stakeholders in their programs? If you can give a specific example please name and describe the program.
4. Currently, how much input do feel like citizens have in formulating management strategies at the HCA? In the day-to-day operations?
5. In your opinion, does the HCA do an adequate job including stakeholders in its operations?
6. Do you think that citizens should be included managing natural resources? If so, in what way?
7. In your opinion, are organizations adequately trained to include citizens in management and planning?

Perceptions of the need for citizen involvement

8. If possible, list and explain what would motivate you to participate in environmental management.
9. If possible, rank the level of motivation you would have to participate in environmental management on a scale from 1 to 4 (1 being no motivation, 4 being extremely motivated)? Please give an explanation for your ranking?
10. In your opinion, what are some citizen motivations for participating in HCA events (i.e. community cleanups, educational evening meetings, advisory groups)?
11. In your opinion, who should participate in environmental management?
12. What role do citizens play in environmental management? Should they be part of the management and planning, if yes, why?
13. When is the best time to include citizens in the management and planning process (i.e. early in the process before decisions are made, once the project is underway, or near the end of the project)
14. In your opinion, what is the most effective method to incorporate stakeholders in environmental management?
    a. Partnership/Citizen power (referenda)
    b. Stakeholder consultation (power retained by organization, advice of citizens)
    c. Standard Representation (citizen delegates work with the CA on behalf of the majority group or organization works with what they feel is the best interest of community)
    d. Citizen based advisory groups (citizen delegates develop plans with CA)
15. In your opinion, would giving citizens more power in environmental management lead to increased community involvement in such processes?

16. If possible, describe in your own words what successful stakeholder participation in environmental management would look like.
17. What are some barriers/obstacles to successful stakeholder participation?
18. What are some advantages/benefits of incorporating stakeholders in watershed management?
19. What are some disadvantages/drawbacks of incorporating stakeholders in watershed management?
20. In your opinion, does the Hamilton Conservation Authority need the help of citizens to effectively manage the region's watersheds?
21. In your opinion, does the Hamilton Conservation Authority want the help of citizens to manage the environment?
22. Should citizens work with directly with Conservation Authorities (or other organizations) or form their own interest-based groups (such as land stewards, citizens against urban development) and work alongside the CA in that capacity?
23. Are there important/unique factors that one must consider when incorporating stakeholders in environmental and resource management? If so, please name them.

Appendix 4: Information letter for interested stakeholder participants

Department of Geography
University of Waterloo
200 University Avenue West
Waterloo, Ontario, Canada
N2L 3G1

Mark van der Woerd
Master's Candidate
Department of Geography
m3vander@envmail.uwaterloo.ca
(905) 745-9773

Dear Citizen:

This letter is an invitation to participate in an **independent research study**. As a full-time master's student in the Department of Geography at the University of Waterloo, I am currently conducting research under the supervision of Dr. Paul Kay on citizen involvement in resource and environmental management focusing on watershed management approaches by the Hamilton Conservation Authority. A note of assurance, we are not affiliated with any governmental organization or private institution but are participating in social research to show the academic community and environmental managers the need for including citizens in resource and environmental management in a meaningful way.

Study Overview
Stakeholder participation is an important component of natural resource management. In fact, as of late many management methodologies incorporate citizens in their management processes. The purpose of this study is to examine stakeholder participation in order to better understand what motivates citizens to engage in resource management. Specifically, this study will examine the Hamilton Conservation Authority's management of the Tiffany Creek subwatershed in Hamilton, Ontario, as a case study for citizen involvement in environmental management. In order to determine the level of participation within the Ancaster region, we will be conducting interviews with citizens within the watershed area and the Hamilton Conservation Authority management.

Your Involvement
The interview includes questions about the current management practices of the Hamilton Conservation Authority and your own opinions on the necessary vision, goals, and challenges for including the general stakeholder in environmental management.
If you agree to participate, note that all interviews will be conducted in person or over the telephone and I will contact you after receiving consent to participate. I will arrange a time with you to collect your answers and provide you with an opportunity to add additional comments and clarification. Finally, I will follow up with you after we have conducted the interview, to review any questions or concerns you may have.

I will be scheduling in-person interviews commencing January 22, 2009. The interview would last about one hour and would be arranged at a time convenient to your schedule. Additionally, the consent form can be returned to the researchers when the interview is conducted in person (if one chooses to participate) or it will be collected if a phone interview is preferred Participation in interview is entirely voluntary and there are no known or anticipated risks to participation in this study. You may decline to answer any of the questions you do not wish to answer. Further, you may decide to withdraw from this study at any time, without any negative consequences, simply by letting me know your decision. All information you provide will be

considered confidential unless otherwise agreed to, and the data collected will be kept in a secure location.

Your name will not appear in any thesis or publication resulting from this, as citizens will only be identified by region and number. After the data have been analyzed, you will receive a copy of the executive summary. If you would be interested in greater detail, an electronic copy (e.g., PDF) of the entire thesis can be made available to you.

Contact Information
If you have any questions regarding this study, or would like additional information about participation, please contact me at 905-745-9773 or by email m3vander@envmail.uwaterloo.ca . You can also contact my supervisor Dr. Paul Kay by email at pkay@envmail.uwaterloo.ca.
I assure you that this study has been reviewed and received ethics clearance through the Office of Research Ethics at the University of Waterloo. However, the final decision to participate is yours. If you have any comments or concerns resulting from you participation in this study, please contact Dr. Susan Sykes of this office at 1-519-888-4567 ext. 36005 or ssykes@uwaterloo.ca.

Thank you in advance for your interest and assistance with this research.

Yours very truly,

Mark van der Woerd
Master's Candidate

Appendix 5: Information letter for interested HCA participants

Department of Geography	Mark van der Woerd
University of Waterloo	Master's Candidate
200 University Avenue West	Department of Geography
Waterloo, Ontario, Canada	m3vander@envmail.uwaterloo.ca
N2L 3G1	(905) 745-9773

Dear [Insert Name],

This letter is an invitation to participate in a research study. As a full-time master's student in the Department of Geography at the University of Waterloo, I am currently conducting research under the supervision of Dr. Paul Kay on citizen involvement in environmental planning focusing on watershed management approaches by the Hamilton Conservation Authority.

Study Overview

Public participation is an important component of environmental planning. In fact, as of late many management methodologies—integrated planning, ecosystem models, environmental assessments, and sustainable development—incorporate citizens in their management processes. The purpose of this study is to examine public involvement in REM in order to better comprehend what motivates citizens to engage in ressurource management. Specifically, this study will examine the Hamilton Conservation Authority's management of the Tiffany Creek subwatershed in Hamilton, Ontario, as a case study for citizen involvement in environmental planning. By focusing on the Tiffany Creek subwatershed, this study attempts to highlight specific barriers and opportunities related to citizen involvement at the local level so that they can be compared to those in environmental planning literature and then applied within the greater socioecological community.

Semi-structured interviews will be performed with key figures at the HCA who have organized or been a part of participatory initiatives in order to ascertain the following: current practices and goals for utilizing citizen participation, perceptions of challenges and opportunities related to participation, and how participation has/is sought and secured. Upon completion, the results of the semi-structured interviews will be compared in order to determine the relationship between the target groups. Lastly, in order to measure and compare the level of participation across communities, sustainability indicators for citizen participation will be formulated.

Your Involvement

The interview includes questions about the organizational structure of the Hamilton Conservation Authority, the vision for including the general stakeholder in the watershed planning process, and goals and objectives for participation. You may wish to consult other staff in your organization regarding the questions, but I would ask that any opinions expressed be your own.
If you agree to participate, note that all interviews will be conducted in person or over the telephone. Also, I will contact you after receiving consent to participate and will arrange a time with you to collect your answers and provide you with an opportunity to add additional comments and clarification. Finally, I will follow up with you after we have conducted the interview, to review any questions or concerns you may have.

I will be scheduling in-person interviews commencing December 1, 2008. The interview would last about one hour and would be arranged at a time convenient to your schedule. With your permission the interview will be audio record. Additionally, the consent form can be returned to the researchers when the interview is conducted (if one chooses to participate) or will be picked up by the researcher before the telephone interview.

Participation in the interviews is entirely voluntary and there are no known or anticipated risks to participation in this study. You may decline to answer any of the questions you do not wish to answer. Further, you may decide to withdraw from this study at any time, without any negative consequences, simply by letting me know your decision. All information you provide will be considered confidential unless otherwise agreed to, and the data collected will be kept in a secure location and confidentially disposed of in one years time.

Your name will not appear in any thesis or publication resulting from this study unless you provide express consent to be identified and have reviewed the thesis text and approved the use of the quotes. After the data have been analyzed, you will receive a copy of the executive summary. If you would be interested in greater detail, an electronic copy (e.g., PDF) of the entire thesis can be made available to you.

Contact Information
If you have any questions regarding this study, or would like additional information about participation, please contact me at 905-745-9773 or by email m3vander@envmail.uwaterloo.ca .
You can also contact my supervisor Dr. Paul Kay by email at pkay@envmail.uwaterloo.ca.
I assure you that this study has been reviewed and received ethics clearance through the Office of Research Ethics at the University of Waterloo. However, the final decision to participate is yours. If you have any comments or concerns resulting from you participation in this study, please contact Dr. Susan Sykes of this office at 1-519-888-4567 ext. 36005 or ssykes@uwaterloo.ca.

Thank you in advance for your interest and assistance with this research.

Yours very truly,

Mark van der Woerd
Master's Candidate

Appendix 6: Results from the literature review, document analysis, and semi-structured interviews

Table A: Results evaluating the need for establishing well-defined goals and objectives in successful stakeholder participation within the Tiffany Creek Subwatershed

Evaluative principle	Corresponding criteria	
Well-defined goals and objectives	• *Method of participation is made known to participation* • *Presence of value based goals* • *Project timeline for participation is established and communicated* • *Responsibility and role of stakeholders involved outlined*	
Documentation	**HCA Response**	**Stakeholder Response**
• HCA, 2000a: Need for clear goals in the implementation of watershed plan. • Ontario, 2007: Part of having well-defined goals is being transparent with your intentions and goals for the participatory process • Marketing communications from the A.C.T. process illustrate that the HCA clearly articulated the role tha citizens would have in the process (HCA; 2007j; HCA; 2007l; HCA, 2008c; HCA, 2008e). • HCA also produced a stakeholder engagement guidelines document which outlines the role of stakeholders in the A.C.T. process (HCA, 2007k: HCA, 2007m).	• Respondents highlighted that if citizens didn't understand the process and how they would be involved they would be more reluctant to participate. • 3/5 participants highlighted the importance of clear process gaols for the success of involvement. • Communicating goals and objectives allows citizens to understanding how and why they are participating	• Establishing goals for the participatory process make a program attractive for residents. • Citizen responses highlighted that it is important to establish what organizations want from citizens in the early stages so they know early on how they will be participating and what impact they will have.

Documentation quotations:

Ontario, 2007: "The roles and responsibilities of all parties need to be clearly defined and shared with participants at

the outset. Stakeholder need to be informed up front of the how, where, when, and what is to be expected of their contribution and participation. (17)

HCA quotations:

HCA 2: "A lot of people don't understand the provincial planning process either, so if you don't understand what the process is you might be a little more reluctant to get involved in the meetings."

HCA 3: "You have to know what their goals are or what their objectives are you have to know what their wanting to accomplish and what your wanting to accomplish."

HCA 4: "Yeah, I think not knowing how there. . .but even then we sent out media releases and it was in the newspaper that we were seeking their input. . .but yah seeking input for what? So maybe yah, maybe more specific messaging at the outset would increase participation."

HCA 5: "People I think can only be involved as long as they understand what it is you're asking them to be involved

in. I'm not likely, as a citizen, to go out to something if I don't understand how my input is going to make a difference . . . if it isn't clear what you're asking them to be involved in your of course going to get less

interest."

*Table B: Results evaluating the need for early participation in successful stakeholder
participation within the Tiffany Creek Subwatershed*

Evaluative principle	*Corresponding criteria*	
Early participation	• *Citizen engagement occurs in the early stages of a process* • *Citizens are able to give input which can alter or be incorporated into the process*	
Documentation	**HCA response**	**Stakeholder response**

• Drawing people into the process early can raise their concerns for a project and create accountability for an agency (Ontario, 1993b).
 • Early involvement can reduce conflict among agencies and the public (Ontario, 1993c).
 • Stakeholders should be involved early in the development of subwatershed plans (Ontario, 1993b).
 • It is important to target new land owners and to educate the public early on conservation practices and their impacts on local ecosystems (HCA, 2000a; HCA, 2000b).
 • Early involvement can increase public buy-in into planning polices and encourage participation (Ontario, 2007)
 • The public was involved early in the A.C.T! process and it was sustained until its completion (see citations below[i])
	• All interviewees stressed that the importance of early public involvement.
	 • Participants had varying opinions when early was:
	    ○ 3 advocated for immediate involvement (i.e. proposal stage),
	    ○ 2 preferred involvement early but after proposal completion.
	 • Early involvement increases buy-in and reduces conflict.
	 • Early involvement will allow for the HCA to develop program objectives around comments and input from stakeholders helping to avoid stakeholder backlash against management policies
	 • By getting the public involved in the process early you can tailor the process according to their input because input is obtained before significant and lasting decisions are made.
		• 11/15 stakeholders stated early involvement is important for successful participation
		 • Early involvement should take the form of education
		 • It provides opportunities for stakeholders to comment on management proposals before decisions are made
		 • Stakeholders stressed the outcomes of involving them early in the process (e.g. creates a sense of ownership, reduces conflict leads to a sense of empowerment).
		 • One stakeholder stated that participation should occur after the experts have made their decisions and established the necessary information; however, they did state that participation should not occur at the end of a project.

Document quotations: Ontario, 1993c: Early involvement of everyone in watershed planning can go a long way to minimizing conflicts, not just between land use and ecosystem needs, but also among agency mandates or responsibilities, or between long-term and short-term goals" (14-15).		

Ontario, 2007: "Get people involved early in the process. This helps to build a foundation of understanding of the issue, generate "buy-in" and contribute increased experiences and ideas to the process. Trying to get people to support a process . . . can be difficult if they are not engaged at the outset. Participation, as discussed in previous section of this document, does not mean decision-making. It can be as simple as information sharing through newsletters and speaking at meetings etc., and as complex as a working group or advisory committee" (25).

Citations[1]: HCA, 2007f; HCA, 2007g; HCA, 2007h; HCA, 2007j; HCA, 2007k; HCA, 2007l; HCA, 2007m; HCA, 2008b; HCA, 2008c; HCA, 2008e

HCA Quotations:

HCA 1: "I wouldn't hesitate; you have to involve everybody right at the beginning. . . if you don't you will get backlash from the public."

HCA 2: "You get them involved early, get their opinions early, and then you develop your objectives and recommendations based on in part what you want to do but also the feedback that you have already developed."

HCA 3: "We haven't decided on anything, but now I am of the opinion that you should get out there and tell them we are doing a master plan for this area. That's all I have got to tell you right now. We are doing a plan for this area, so that they are aware that this is something that is coming down the road."

HCA 4: "The more people are engaged and involved at the outset of the project and the development of it the more engaged they'll be in the end."

HCA 4: "So far this model seems to be working where we include them in the development of the plan, that's when it really. . .when their input is needed most."

HCA 5: "I mean you do your best to get people interested at the level you're asking if you were to ask for even more involved earlier on, might people say, 'Isn't that your job? What are you being paid to do?' So, you got to be realistic to what your job is and what you are suppose to be doing and when is it the right time to ask. You know put the ask out there, we've developed things to this point, now please comment."

Stakeholder Quotes:

S1: "When you have that recommendations and it affects them, then they are interested, but by then it may be too late or very inconvenient and troublesome to try and revise things once you get their input at that late stage."

S1: " I think if you get them early on then they grow together in the project. If you get them at the end then a lot of decisions have been made already, a lot of information has been processed, reports have been written, recommendations already made so at that point it is a little late to give your input."

S4: "I would like to see it at the beginning because then you see some hard work come to fruition and when the thing is done everybody has a sense of pride in it, even in the decision process."

S6: "I think that citizens should be there right from the beginning. This is what we would like to see and once the authorities have already started something and you really don't like it then it is difficult to change it."

S7: " Well from a project management level if you don't get all the input in on the first step then halfway through your project you are going to find out that you have missed a piece of the pie."

S8: "Early in the process . . . I suppose once it has a lot of momentum it is kind of hard to stop something that has a lot of momentum."

S11: "Being a part of the process start to finish you will also get a sense of ownership and that I think is key."

S11: "When you are not a part of the process then it is very difficult to support it. And of course flags go up because you don't know the whole story. So it is just about being involved in the process, listening, providing feedback and know that the decision being made at the conservation authority that you have residential backing."

S14: "On definitely on the early side because sometimes you know once the projects are going it is too late to turn it around and unscramble the egg right."

Table C: Results evaluating the need for there to be adequate representation in successful stakeholder participation within the Tiffany Creek Subwatershed

Evaluative principle	Corresponding criteria
Representation	• *Recruitment methods are broad in scope and have the ability to reach all potential participants* • *Participation is inclusive and varying stakeholders are involved in the process* • *No formal restrictions are placed on participation*

Documentation	HCA response	Stakeholder response

• Municipalities are required to have stakeholder representation in planning processes (Ontario, 1990b).
• All stakeholders should be active participants in the planning process (Ontario, 1993b, Ontario, 1993c; Ontario, 1997).
• Community sustainability planning must achieve representation of stakeholders by including them in the decision-making process (HWRM, 1997).
• Achieving public representation is a goal of the HCA and was implemented in the development of the Spencer Creek Watershed Plan (HRCA, 1997)
• Stakeholder representation was sought in the development of the A.C.T.! stewardship action plans but was largely unsuccessful (HCA, 2007; HCA, 2007d; HCA, 2007o; HCA, 2008a; HCA 2008b).
	• 13 recruitment methods have been used by HCA to get stakeholders involved in A.C.T.!
	• 4/5 staff confirmed that everyone should be involved
	• Representation is important to the planning process because it:
	   o Encourages wide stakeholder buy-in into the plans or policies
	   o It obtains an accurate cross section of input from residents
	   o Stakeholders are impacted by the polices and should have a say into how the region in which they live is run.
	• Having stakeholders participate at a deeper level (i.e. stakeholder advisory committee) is an important way to have public input into planning policies and practices.
		• It shouldn't matter if stakeholders are experts or not. Wisdom does not come from training but can come from experience in a local area.
		• Getting the public involved in the process is a way of getting input from those outside the field of REM or watershed management. It provides a new lens for looking at management issues.
		• 1/15 stakeholders had been approached to participate by the HCA
		• 1/15 had heard of others (family, neighbours, etc.) who have participated or been approached to participate by the HCA
		• It is important to be inclusive and have all individuals participate in the process

Document Quotes:

Ontario, 1997: "All participants should be assured of equitable participation and consideration of [their] ideas" (13).

HWRM, 1997: "More sustainable community will result when stakeholders have the opportunity for meaningful participation in the decision-making process of local government on the issues that affect their community" (Hamilton-Wentworth Regional Municipality (214).

HRCA, 1997: "Implementing the watershed plan through the planning process will required support from all levels of the municipality. Local politicians, municipal staff and local residents must be aware of the watershed process and ecosystem planning" (101).

HCA Quotes:

HCA 1: "At our authority we have thirteen members of the watershed management advisory. Three of those members are members of our board and ten of them are stakeholders. And we have an application process for them to go through and we try to get a diverse range of interests. Some are biologists and some are just stakeholders who are very interested in the natural environment and want to feel a sense of wanting to contribute to the community."

HCA 3: "There's no ideal, they just know how they want their neighbourhood to be. I think it's anyone who has an interest."

HCA 4: "I would always hope for an accurate cross section of the land use. . .different sectors. . .you want

adequate representation, I guess would be an better way of phrasing it, from different sectors in anything that you do. And anyone really that's interested in learning as well as participating if their engaged and want to participate I don't think anyone should be excluded."

HCA 4: "We want adequate representation from all the different sectors because we want their buy-in when it comes to implementation. "

HCA 4: "Everyone's input is valid and useful and they'll always learn something they didn't know and we'll learn something from them."

HCA 5: " Whoever is motivated to come out; But, if you have you know those people who may not be familiar with the environment, but say have a strong business interest say or a technical interest or specialty, I think that's important to have to because that way you will have a well rounded group . . . those perspectives will help you learn how to get your message out in ways that you haven't considered because they are coming to you with a different set of eyes and values because their different. So I think it's important, if you can draw that well rounded group."

Stakeholder Quotes:

S1: "I suppose it depends on the nature of the range at which the conservation authority is planning at. I think if it's the Tiffany Creek then it is obviously best to get representation from that area. If you are looking at a broader watershed then you obviously want to get broad representation as well. I mean we already have our city council in place so we have representation through council. They may not necessarily be the best people to sit on such a body because that is a very political thing and we don't want to make this political."

S2: "I think if you can hear different perspectives on issues that is a good thing. If you are just hearing all the same thing, like if it's all scientists or environmentalists or something, they are just hearing one perspective and to make solid decisions you need to hear all perspectives. People often . . . take these things to be scientific, and I don't think that is the case. Wisdom is not scientific, it is prescientific, and some of the wisest people I know have never finished high school some of them never even went to high school. But some of them are wise from life experiences and from being attuned to their environment and nature and are making decision but they are not scientific people."

S2: Well I think everybody should play a role especially if you are living in that area. I mean . . . and I think there is a self-interest element to that but we should all take a hand or role in our own environment that it remains healthy and it is looked after and managed well.

S3: "Yeah I think everybody. Everybody and that is the neat thing about community and when they come together you have so many different kinds of experts on something and how unique that would be if they commit their expertise to creating a better environment, natural environment."

S6: "It should be available to those who care. I think that is my best way of putting it. They don't have to be educated they have to be people that care about it."

S10: "I think they have to incorporate all demographics of the city. With regards up the mountain, down the mountain, inner city, and the suburbs get a cross section of the city that way."

S11: "I think that you need a little bit of all people. Bring some average Joes into a place where we are providing feedback and somebody can say that is a great idea."

S13: "Well I guess you would have to have a cross section of everyone right? You couldn't say you just want highly educated or formally educated individuals, you need people with passion and a love for various things is important too. I would say a cross section of people with general walks in life."

S14: "Make sure the invitation or message gets out to as many people as possible. Whether that would be through phone surveys, mailings, or newspapers, or at least the most amount of people are informed."

Table D: Results evaluating the need to empower stakeholders in successful stakeholder participation within the Tiffany Creek Subwatershed

Evaluative principle	*Corresponding criteria*

166

Empowerment	• *Public input documented and logged* • *Does participation impacted outputs* • *Stakeholders included in implementation and monitoring*	
Documentation	**HCA response**	**Stakeholder response**
• The public is becoming more knowledgeable and concerned about the environment (Ontario, 1993c). • It is best practice in Ontario to have stakeholders involved in the planning process in a meaningful way (Ontario, 1993b, Ontario 1993c, Ontario, 2007). • The sharing of responsibility and ownership will result in a sense that a plan is a "community plan" (Ontario, 1993b). • The goal of the A.C.T.process was to create awareness by educating the public of environmental issues (HCA, 2008i). • The HCA sought to get stakeholders involved in a meaningful way through participation on the stakeholder advisory committee (HCA, 2008a). • The marketing strategy for the A.C.T. process highlighted that stakeholders were being asked to provide input and comments on plans (References below).	• 4/5 participants claimed that empowering the public, in some capacity, would make stakeholder participation more successful • An important part of participation is hearing their ideas and validating them. • Empowering stakeholders is crucial to participation; however, that does not necessarily mean giving stakeholders power • Empowering residents is important because the plans are theirs, and they need to be the champions of the plans and implement them in the community. • Highlighting public input is important when the policies or plans are created so that stakeholders know their information has been used.	• 12/15 Stakeholders stated that being heard in the process is the ultimate goal for participation • 3 stakeholders highlighted the importance for stakeholders to hear that their suggestions and efforts are met with response and implemented • 3 residents stated that by being given the opportunity to comment on HCA proposals and policies stakeholders would be able to ensure that the HCA is working on their behalf. • 9/15 stated the giving stakeholders more decision-making power will increase participation • 5 Stakeholders preferred a top-down management style

Document Quotations:

Ontario, 1993b: Since the subwatershed can be considered a "manageable" area for broad-based local participation in the planning process, the subwatershed plan can become a kind of "community plan," and the public become planners of their own local future (35).

Ontario, 1993c: Moreover, the public in general has become much more knowledgeable and concerned about the environment, especially over the last five years or so, and with this awareness is a need for the public to feel that they are part of the solutions to environmental problems, as well as that they have a say in preventing new ones. (32)

Ontario, 2007: "Sharing ownership and responsibility for the outcomes of the source water protection planning process helps to create the commitment needed for the implementation at all stages" (17).

The marketing strategy for the A.C.T.! process highlighted that stakeholders were being asked to provide input and comments on plans (HCA, 2007f; HCA, 2007g; HCA, 2007h; HCA, 2007j; HCA, 2007k, HCA, 2007l; HCA, 2007m, HCA 2008b; HCA, 2008e).

HCA Quotations:

HCA 1: "If you get good community involvement in plan implementation then everyone owns a piece of it and

everyone wants to see it happen and then you have people even helping you to implement it. If people are involved and they buy into it then it becomes their plan that they want to see implemented and it isn't just a government plan."

HCA 1: "If they are empowered in some way . . . it's all about relationships and fostering good relationship . . . then people are going to participate more. But, if you're alienated them there is no way that they will participate in anything."

HCA 1: "If they have an interest or knowledge its good but you really have to get them into the decision making.

HCA 2: "Get that buy in and go to the public early, then you are much better off and it just makes sense. Because then they feel like they are actively a part of it rather than just being told what you are doing."

HCA 3: "There has to be a group that makes the final decision in the end and that, that lies manly with politicians or people appointed by the municipality."

HCA 4: "You would hope they would take the plan back to their respective communities and bring the thing to life. To carry it forward. And that's why the implementation teams have been created after the development of the action plans. Because you want those plans to stay alive, to be out there in the community, and people to be bringing them to reality, to get them off the paper and get them out there."

HCA 4: "I guess it's providing them the opportunity to share their ideas but not always taking their ideas and running with it. You know if the group as a whole doesn't agree with it."

HCA 4: "They're beneficial to the implementation of the plans because those are the people that are going to be leaders of the community or champions of the project in the community."

HCA 5: "Ideal participation is that they are out there and learning how their participation can effect watershed planning and they start to learn that people will listen to them. And they really learn that people will listen when you go as a group."

Stakeholder Quotations:

S5: "I don't necessarily like leaving all the power in the hands of the experts. I think that stakeholders can advise, they can voice their opinions, you know they should be on the committees that maybe make some of the big decisions. They can have a say in it. I think people need to have a say in it."

S7: "I think they should be given the option of giving some input, but I don't think that they should be managing it. Because realistically it is the responsibility of the conservation authority and personally as a governmentally funded agency, it is their responsibility to educate us because we aren't the ones . . . we don't have the knowledge, they have knowledge and they should give that to us and tell us what to do."

S7: "Stakeholders should be the ones that should be led in to how to self manage it later on. But like I said you have to have authoritative figure, like the conservation authority in order to manage that for us to understand how to maintain it because realistically none of us are ecobiologists, or ecospecialists by any means."

S8: "To a limited extent yes. We have officials who have been elected to look after things and we can give a little bit of input from the community but they are our elected representatives and they have a broader view of things than many other people would. So I think they should have access sort of at an input level, but decision making no."

S9: "I think that the professionals have to make the ultimate decision but they should be getting our input and it should be weighted . . . with enough weight . . . it has to be carefully looked at. But in the end you can't have people that are not educated about the environment or whatever just making . . . you know having too much weight in the vote because there is a lot involved in these studies. I mean I think you have to have public input into what they think is going to happen but in the end they have to decide what is best for the land and they do it right."

S10: "I think whatever future planning they have, whatever the master plan for the future should be, they could look to the public for suggestions whether or not to go ahead with it or not."

S11: "I think ultimately the decisions will have to be made by the appropriate personal but in terms of just being involved in the discussions and just providing some feedback and knowing that we were involved in really important discussions with the people who will make the final decisions. Because then at least we are being heard. At the very least we are being heard."

S11: "Even if it doesn't necessarily result in something that the residents wanted, at least the residents know that their voices were heard and they discussed the issue and they came back with reasonable explanations as to why it didn't go the way you wanted it. But at least we feel that our job is done. We did what we

are supposed to do. Raise those flags and see if there is any way that we could be accommodated and if not we were provided with an reasonable explanation and we moved forward as opposed to your opinion doesn't matter we are going to do whatever you we want."

S13: "I don't know if you can make it all voting right but I think the second [consultation] you mentioned would be a good one where you get discussion meetings and debating and consideration and then the organization takes what is being heard from the stakeholders and hopefully that carries some kind of merit and weight in the decision making. They should still be concerned with what stakeholders have to say or present, but ultimately I think the organization has to definitely have the say."

S13: "It [consultation] would give you the feeling that you are going to be heard and that you are going to have some kind of . . . you know your input and your participate will count for something you know. It gives you purpose and meaning, it is not just someone rubber stamping anything they want to do right."

S14: "I am not saying we have to drive the agenda but I think we should be consulted more or at least be informed. I think there should be some input from the stakeholders. Just to meet our needs. If they put questions to us, what we were looking for and how we are . . . we would be out there more and we would know more."

Table E: Results evaluating the characteristics of strong leadership in successful stakeholder participation within the Tiffany Creek Subwatershed

Evaluative principle	*Corresponding criteria*	
Strong Leadership	• *Impartial facilitator present on contentious issues or if not, biases are exposed* • *Leaders have credibility in community* • *Coordinator has participatory training*	
Documentation	**HCA response**	**Stakeholder response**
• Selecting trusted leaders to carry out watershed plans and participation is necessary in order gain public support (Ontario, 1997). • The HCA has instituted several educational campaigns and stewardship opportunities for local residents (HCA, 1999a; HCA, 1999 b: HCA; 2006a; HCA, 2007e). • Selecting an excellent program coordinator is essential to success of the participatory process (Ontario, 1993b). • Leaders should support collaborative processes so that they can be facilitators of change (Ontario, 1997). • Good facilitators need to be able to elicit participation from stakeholders ensuring that all have opportunities to speak (Ontario, 1997).	• Four staff confirmed that training does not exists for staff employees on how to engage the public or for public speaking • Participation is done in an ad hoc fashion where managers are consulted on appropriate processes and techniques. • Two staff members highlighted that people hosting public events need to have conflict resolution skills and be strong leaders • Three participants mentioned the importance of interpersonal, conflict resolution, and leadership skills for those hosting public engagement events.	• Two stakeholders spoke of the need for the HCA to be an active and visible group in the Hamilton region. • One interviewee highlighted the importance of educating the public and getting involved in community events in order to make their management practices well known. • By taking an active leadership role in the community the HCA will become a more approachable organization which will result in higher levels of participation and increased trust between the agency and stakeholders.

Document Quotations:
Ontario, 1993b: "Effective leadership and communication skills are needed for coordinating role of linking technical experts, planners, stakeholders, and the public." (20)
Ontario, 1997: "The selection of the project leader was the single most important decision to successfully carry out a watershed management study. Effective leaders encourage consensus building and issue resolution by leading participants through each phase of the project, ensuring that each stakeholder interest and concern was understood, and if possible, addressed." (12-13)
Ontario, 2007: "Therefore, leaders and decision-makers have to have a way of acknowledging the contributions of the participants and demonstrating that it is being used." (16)
Ontario, 2007: "Leadership and can best be undertaken in a collaborative manner. Collaboration refers to partnership and involving multiple stakeholders who are collectively responding to an issue or situation. Leadership refers to the guidance of change, rather than reaction to it. Leaders create meaning for other individuals and set examples for others." (16)

HCA Quotations:
HCA 1: "And what he did was ask the group questions and they would answer and then he would argue with them and tell him his thoughts and feelings as opposed to doing his job on the group which was to hear theirs and not share his opinion. That's what you do when you facilitate. So that kind of didn't work out well that session so it's important to understanding your role and what you're supposed to do."
HCA 1: "I don't know if in the past they had some kind of communication, not even consultation training. Staff don't usually get it. They get it through their university training and in their experiences. But, no there is no formal training."
HCA 2: "There hasn't been at any of the Conservation Authorities that I have worked for in the past. There isn't a formal training process in place for say for public speaking or engaging with the public."
HCA 2: "I have seen a lot of public meetings go sideways because of people that have a real issue they can't get off of and they stick to and like I say it can sometimes be totally unrelated to the meeting that is being held and so I mean having a person chairing the meeting that knows how to handle that is really important too but I mean focusing that feedback to help avoid that."
HCA 4: "If you have different interests groups around the table sometimes their issues conflict so you need someone with conflict resolution skills who can facilitate the process."

Stakeholder quotations:
S1: "Well I think that the conservation authority has an obligation to make themselves more aware what is in the community. I wouldn't even know where to begin to look for them other than the yellow pages."
S1: "They might be willing to participate more if they know that there is a person here that they can talk to. You can invite them to meetings and they are more likely to come if they know you and know what you are doing."
S2: "I just think it is kind of funny that I have in the past received letters from the Authority about protecting our little bit of Greenspace right here. Meanwhile you hear that a developer has bought all of the land around us and we are a little island here now. So we are doing our little bit trying to protect our land that we are blessed with but meanwhile what is going to happen out there because you have just sold off this big hunk of land. Maybe that is unfair I don't know, but that was just a little letter of encouragement to me. You know is there something else going on, more of master plan going on?"
S3: "Yeah I think everybody. Everybody and that is the neat thing about community and when they come together you have so many different kinds of experts on something and how unique would that be if they commit their expertise to creating a better environment, natural environment. So I don't think you can pinpoint responsibility even on an organization, I think if you look at a Conservation Authority I don't think it is up to them. I think they are ones to keep us informed but I think ultimately it is still our baby to take care of I guess."
S5: "Absolutely . . . because it is kind of like you know you can have a leader but if people aren't following you are not much of a leader. You need to have everyone on board in terms of what are aiming for, what is the mission and visioning in terms of our goals. The more people realize it and know about it the more they are enticed to become a part of it because the better it will be."
S7: "Again I don't know if management should be given to the stakeholders. Management should be given to the conservation authority that should be taking responsibility for it and helping . . . they should be managing it and telling us how to manage it. People which have the education to understand the

170

ecosystem and the significant area should be the ones making the decisions and saying this is where we need to be and not where we should be five years from now."

S7: "People which have the education to understand the ecosystem and the significant area should be the ones making the decisions and saying this is where we need to be and not where we should be five years from now."

S11: "I think everyone will go out in left field and we can hang out in left field for months and then find out at the end of the day that we are not allowed to do it. I think that we need to have that happy balance. Where we can brainstorm and throw out a lot of ideas, but we need somebody there who can put some reality into some of the things that we would suggest."

Table F: Results evaluating the characteristics of open and honest communication in successful stakeholder participation within the Tiffany Creek Subwatershed

Evaluative principle	*Corresponding criteria*	
Open and honest communication	• *Unimpaired sharing of available data and resources including minutes and any retained information* • *Joint fact finding* • *Opportunity for all to share comments and concerns*	
Documentation	**HCA response**	**Stakeholder response**
• Sharing information in the planning process will promote more effective planning (Ontario, 1993b). • It is important for two-way dialogue to occur to ensure opinions and concerns are listened to (Ontario, 2007). • Communication should occur throughout the process (Ontario, 2007). • Participation should be inclusive and give each stakeholder the opportunity to provide input into the process. • Communicating agency objectives and goals to stakeholders will increase understanding best practices for management (HCA, 2007q; HCA, 2008i).	• Two staff members highlighted that communication with stakeholders needs to be clear in order for the process to be successful. • One staff member highlighted the importance providing information whenever possible • Staff mentioned that communication with the public can be difficult because citizens don't often understand the issues • If the HCA is not clear on how they are asking stakeholders to become involved in the process they will be less likely to participate.	• Making information accessible to the public is crucial for the success of participation • Open communication fosters trust and respect • Both sides of an argument should be presented in the planning process so that the public can be made aware of all the potential outcomes and options regarding a plan or policy. • Communication should transparent. • Dialogue should continue throughout the participatory process. • The use of jargon should be avoided so that stakeholders can understand the details of a project fully. • Open houses and public events educated the public of the HCA's role and function.

Document Quotations:

Ontario, 1993b: Finally, the multidisciplinary efforts carried out in subwatershed planning and the sharing of information throughout the process promote more effective planning for both land uses and the environment (11).

Ontario, 2007: The participants in the process need to feel listened to – not patronized. The design of the process needs to ensure that the audience is not being spoken at, but rather engaged in a discussion and dialogue that is flowing in two directions (21-22).

171

Ontario, 2007: Communicating with stakeholders in a clear manner, using familiar terms, regular updates, tapping into their channels of communication and being consistent across stakeholder groups and through time in regards to how concerns are dealt with will help to build a more informed and confident public(21).

Ontario, 2007: "This [inclusiveness] refers to creating an open, inclusive atmosphere at any stakeholder engagement event, where participants feel that they are welcome to speak, share, and contribute to the process. This is also linked to the above principle of equity in that participants should be welcomed to the discussion regardless of their real or perceived level (or lack of) of power, influence or authority." 18-19

HCA, 2007q; HCA, 2008i: "Initiate a community greening project with watershed partners to deliver messaging to targeted audiences. Utilize workshops, information sessions, literature, webpages & direct landowner contact to create awareness regarding urban BMPs and the ecological significance of natural features" (TI-13)

HCA Quotations:

HCA 2: "But yah policy development is tough because unless you are A familiar with the issues that the policies are based on but it is also technical jargon that a lot of people don't understand."

HCA 2: "Good public consultation is just having good audience attendance and really being able to accurately and constructively getting the information across to people. If you even have fairly small attendance but you can get your message across effectively and get your awareness out there and hopefully increase word of mouth even."

HCA 4: "Honesty is the biggest thing, being real straightforward and not telling them something and then go away saying we aren't going to do that. You know, be honest with people and try and have the reasons for why you want to do thing; always being open to people calling and writing in that you respond and get back to them. Everything from the shortest email to big studies that come out that you respond to and put it out there. I think that's the way you go about it."

HCA 4: "If it isn't clear what you're asking them to be involved in your of course going to get less interest."

HCA 4: "Not having clear messaging does deter people or is a barrier to having people participate."

Stakeholder Quotations

S1: "They need to be well organized, information clearly presented, pro's and con's presented not just simply the one position . . . like if I think of the development here (airport development) they are just pushing the development without pushing the cons. I think if you recognize both the positives and the negatives then people also realize that yeah they have been thinking about it."

S1: "From my experience of working with groups, being open is always the best option. Lay the cards on the table the way you see it. Don't try to cover up because that is when you lose trust. I think the conservation authority probably has to work the same way. Be honest, don't try to have a hidden agenda because somebody will figure that out sooner or later and then you lose the trust of the public and it is very hard to win that back."

S2: "The Conservation organizations need to be very transparent about the challenges they are facing and the needs they have and that way maybe people who have a heart for that will come forward and I think that is how it works now."

S2: "Probably impossible but I just think that getting, using the media as is, if there is things going on get it on the news get it on the radio get it in the little Ancaster paper. Let us know, being transparent, and being proactive. You know what the challenges are, what's the vision."

S3: "Off the top of my head only being clear being clear in what you want them to know. Don't give me a bunch of jargon hidden in a pamphlet somewhere, you know what I mean? . . . I just think that establishing some sort of connection with the community, making it personal would sell your service more. And you would be a lot more accepted."

S11: "I guess it is government, it is not private in the sense of private ownership in my mind but it is private because we don't know a lot what is going on. So it is the government but I find it doesn't get the word out.

S11: "I think it has to start with some sort of communication package where the conservation authority has an open house and also provides maybe some mail outs or whatnot to say that we are trying out some new project, I don't know if they would commit to something like this right away, they might just say we are looking for residents who are interested in, you know . . . whatever, protecting the environment and

what not and just to see what kind of feedback they get."

S12: "Once again thinking after the open house people will just get a different twist on what the conservation authority is about and they had no idea that the conservation authority was about a,b,c, they thought they were about 1,2,3 and that might open up a whole new avenue of discussion.

S12: In response to the question: What would ideal participation look like to you? Answer: "I guess if I noticed that they were seriously taking the general public's concerns. They were really listening to the concerns and acting on that. And if I guess it would . . . they made everything more accessible to the general public."

S14: "I would hope it would be an open dialogue. You know give and take and then sharing. You know, come together and see what is the best decision for the most amount of people."

Table G: Results evaluating the characteristics of contextual relevancy in successful stakeholder participation within the Tiffany Creek Subwatershed

Evaluative principle	*Corresponding criteria*	
Contextual relevancy	• *Scope of issue(s) identified* • *Opportunities for learning present* • *Resources/information available for participants* • *Historical background to problem discussed*	
Documentation	**HCA Response**	**Stakeholder Response**
• A Coordinated, integrated, and comprehensive approach should be used (Ontario, 2005). • Stakeholders can contribute valuable input to the process which are often new and based on a sound local understanding if conditions and aspirations (Ontario, 1993b; Ontario, 1993c) • Obtaining and incorporating local knowledge can save time and resources (Ontario, 1997). • HCA depends on the understanding of conservation groups to help develop watershed plans and policies (HCA, 2000a). • As political roles and responsibilities change, the HCA needs to adapt their management strategies to meet the needs of residents (HCA, 2000a) • Stakeholder consultation was used in the A.C.T. process in order to guide the activities of local agencies (HCA, 2008a). • Stakeholder advisory	• Participants highlighted the need for collaboration in order to have the capacity to address management issues which arise from the public. • Two participants highlighted that a rich contextual understanding of a problem is needed for participation to be successful. • Three staff members stated that participatory methods are not universal, but vary depending on the context of an issue. • A real challenge to participation is getting stakeholders to understand the context of resource problems. • Participatory methods are not universal, but vary depending on the context of an issue. • Two employees spoke of the need to bring resource issues down to the local level. They cited, that stakeholders are more likely to be engaged if an issue impacts them or their property directly.	• It is important for the group to have a well-rounded understanding of an issue before making a decision. • Participation should be relevant, current, and based on new issues impacting their community • Although understanding the context is difficult, a part of participation is learning. Thus, even if the watershed context is difficult to understand trying and failing is important because stakeholders, over time, will develop an understanding of the issues. • Stakeholders highlighted that there may be more than one appropriate method to include the public. They stress that the whichever method is chosen should be tailored to the project because each project and scenario is unique. • Participation provides agencies with the means to gather information and understanding found outside of the discipline of watershed and environmental management

committee members were given presentations on watershed context during the A.C.T. process. (HCA, 2007b).		

Document Quotations:

Ontario, 2005: A coordinated, integrated and comprehensive approach should be used when dealing with planning matters within municipalities, or which cross lower, single and/or upper-tier municipal boundaries, including
- Managing and/or promoting growth and development;
- Managing natural heritage, water, agricultural, mineral, and cultural heritage and archaeological resources;
- Infrastructure, public service facilities and waste management systems;
- Ecosystem, shoreline and watershed related issues;
- Natural and human-made hazards;
- Population, housing and employment projections, based on regional market areas. (7)

Ontario, 1993b: Interest groups and the public at large can provide valuable insights and information to any planning team, often bringing new ideas and a sound understanding of local conditions and aspirations. (20)

Ontario, 1997: Using locally based . . . information and expertise early in the process was the best method of saving money and time researching information and in developing community support and stewardship for the project (14)

HCA, 2000a: "The Hamilton-Wentworth Natural Areas Inventory could not have been completed without the leadership of the Hamilton Naturalists Club" (102).

HCA, 2000a: "As political roles and responsibilities change, organizations like the Conservation Authority must adapt to meet the needs of watershed residents." (102).

HCA Quotations:

HCA 1: "Well the citizens who are going to be affected by the decisions of the authority that come out of the plans should be participating, but it's as I said before the struggle is getting them to understand that a plan might take two years to build."

HCA 1: "I mean it [participation] has to be designed around the kind of project it is."

HCA 2: "The best way to get people involved in the process is to bring it down to their property scale. Because a lot of people, especially if people don't have an environmental background, they can't relate to these broad . . . I mean climate change is a good example, they are aware it exists and whether they believe it is a problem or not is one thing, but if you can bring a lot of these issues to their property scale that is where the understanding can really kick in because they can see it, they have dealt with it, they can touch it, and they are looking at it every day . . . if you bring these issues down to a property scale that is where people really uptake it and really get a grasp on it. I think that's probably the best way to get the environment message out to people."

HCA 4: "You have to know your audience, know where they're coming from. You have to know if there are any conflicts between either their interests and your project or their interests and anybody else's interests that are participating."

HCA 5: "I don't think that you can slot you know this is the way it should be done because that isn't going to work for everything because there are so many initiatives that we are all involved with. So you have to use the framework that is more appropriate. They [participatory methods] are all used."

HCA 5:" I just think you need to be sensitive to the community and that might take, that's that long-term commitment. If you're here for the long-term then you remember what the issues may have been in the past because there is a past. So, to be sensitive to those things too. You know, what have the issues been in that community over the years and what are they now, and what are they going to potentially be in the future."

Stakeholder Quotations:

S1: "But if I know the impact that my changes to the stream would make downstream then I would be less likely to do so. I could dump some of my used engine oil into the stream because it would just go down and

174

away right? But if I would know the whole impact that it would have on the whole watershed then I would be less likely to do so."

S2: "But the challenges in different areas would be different so they would have to adapt those principles to the local environment, the local."

S2: "I don't think it makes any difference on what is better or not. It depends on what they are volunteering for. In some cases it would be better to work with them [consultation] and in other cases you know it's better to go through a interest based group and come to some consensus or something."

S3: "It is always important to have an external option outside the mindset of the conservation authority maybe that would spark some new areas of research that they didn't really consider before."

S5: "You can't just go down and say okay turn off all the smoke stacks around the bay because you have to go into the background and history and know what are those industries are producing and how it trickles down into what we are consuming as well."

S7: "Because you can't tell them to manage this because wait a second we don't have the knowledge or understanding to manage it so teach us how to and then teach us how to maintain it."

S11: "You can create committees but it has to keep up with what is going on as opposed to you know we are talking a lot and not making a lot of decisions and we are slowing down the process. It has to keep up, and if not it would defeat the purpose of us being involved. I would want to be a part of something that would assist them and look at certain things from a well rounded perspective as opposed to straight lined, this is my view and like I said no one else matters."