

Outcomes from Stakeholder Interviews for the Squam Lakes Watershed Plan

Introduction

One of New Hampshire's first watershed plans was completed in 1991 for the Squam Lake Watershed by the New Hampshire Office of State Planning. This plan was a model for New Hampshire at the time. The Squam Lakes Association (SLA) is now developing a new *Squam Lakes Watershed Plan* which will meet new Environmental Protection Agency requirements for watershed plans.



As part of this project, sixteen Squam Watershed stakeholders were interviewed in the spring of 2016. The interviews were conducted by Plymouth State University (PSU) graduate students enrolled in an Environmental Planning course. The project objectives were to:

- Determine stakeholders' knowledge about watershed issues and engage them in the planning process.
- Apply qualitative analysis techniques to determine key issues and themes which will be incorporated into the new *Squam Lakes Watershed Plan*.
- Engage students in a applied research project where they would learn, practice, and use qualitative research techniques.



Methods

The Squam Lakes Watershed Plan interview process and analysis involved multiple steps and components in order to successfully identify stakeholder's opinions and issues.

- **Research Design Approval:** The project design was first submitted for approval from PSU's Institutional Review Board (IRB). Students in the course completed required IRB training.
- **Stakeholders:** The SLA assisted with identifying stakeholders defined a person (or group) responsible for either making or implementing a management action or affected by the action (EPA, 2008).
 - Each stakeholder was included to serve as a representative for the community and ranged from paid environmental professionals to volunteers who have a passion for Squam Lakes. Some of the stakeholders lived in the watershed either full- or part-time.
- **Interview Questions:** Interview questions were developed with the aim to provide information on stakeholder concerns and ideas regarding the Squam Watershed and to learn about stakeholder connections with the watershed.
- **Interviews:** Phone interviews were conducted with sixteen stakeholders. Interviews were recorded and transcribed by the interviewer.

Qualitative data analysis begins with specific observations and builds toward general patterns using an inductive process. It seeks to understand the multiple interrelationships in the data without making prior assumptions. Guided by analytical principles, the details in the data lead to discovery of patterns, themes, and interrelationships. Interpreting qualitative data leads to making the obvious obvious; the obvious dubious; and the hidden obvious. (Patton, 2002)

Data Analysis

Coding and Themes: The graduate students each read and analyzed a sample of interview transcriptions to develop "codes" which are themes, topics, concepts, and ideas that emerged in the data.

- Codes identified stakeholder's concerns, suggestions, and major points that were brought up during the interview.
- To ensure inter-coder reliability, the graduate students reviewed these interviews, discussed the coding, and developed a set of unified codes.

Once codes were refined, all interview transcriptions were coded. Codes were then compiled into themes.

Results

Eight themes were identified from the sixteen interviews conducted. Themes are categories of data that were seen throughout the interviews. Each theme points to an important component that should be addressed in the Squam Watershed Plan.

Water Quality:

- *Water quality is a primary concern.*
- *Tributaries and upland areas contribute to water quality.*
- *Management should focus on watershed as whole.*
- *It is necessary to broadly define water quality.*

Use of the Watershed:

- *Frequency & intensity of use are issues.*
- *There are concerns about the amount of use, who is able to use the resource(s), and impacts on wildlife and water quality.*
- *Multiple use is important.*



Access:

- *Access to resources, both land and water, for recreation and enjoyment is an issue.*
- *Access should be encouraged in a sustainable manner.*

Development:

- *Development of land is important for residential & business uses.*
- *Development relates to water quality.*
- *Natural, wild, and forested character should be maintained and conserved.*
- *Economic development is also important for the watershed.*

Community:

- *All towns in the watershed need to be involved.*
- *Dialog between communities is a necessity.*
- *Lots of people of all ages should be engaged.*

Watershed Planning:

- *The plan needs to be completed in a timely manner.*
- *The plan needs to be implemented and used.*
- *The plan needs to be regularly updated.*
- *Accomplishable goals must be realistic.*

Education:

- *Increasing people's knowledge about the watershed through formal and informal means is important.*
- *A goal is to help people use resource in sustainable way.*
- *Good education will reduce need for regulation.*

Data:

- *More information is needed including carrying capacity for boats, sustainable level of fishing tournaments, employment in the watershed, and the use of trails and boat launches.*

Conclusions

The primary project goal was to determine issues in the Squam Watershed that should be included in a new watershed plan. The themes from the interviews are related and watershed management strategies designed to address one issue will likely address others.

- Water quality is an overarching concern across themes. Stakeholders understand that the Squam Watershed Plan can have a major role in ensuring the protection of water quality if it is executed and implemented.
- Development of the region and its impacts on water quality needs to be balanced with people being able to live and prosper in the region. Better economic data and community input will help clarify the balance between a strong economy and resource protection.
- Sustainable use of the Squam Watershed is a theme that stakeholders would like the plan to address. Specifically, management strategies for multiple recreational uses (boating, swimming, fishing tournaments) need to be established.
- Squam Lake should not become over-regulated to the point where it is impossible to enjoy the public resource. All people have a right to access and use the lake. The new Squam Watershed Plan will need to address this.
- Community is important in the success of the Squam Watershed Plan. The five primary towns in the watershed need to be engaged and know that they all have a role to play. The Squam Watershed Plan is everyone's plan.

Stakeholders and community members have a great deal of ecological knowledge about the Squam Watershed. This project helped to bring this forward this knowledge and engage people in the planning process.

This project enabled PSU students to learn about qualitative research and apply their skills to a real world project.

"The students' work from the planning class has helped the SLA in many ways. We were able to create a draft vision statement for the Squam Watershed Plan based on the values and ideas generated from the class project. It helped demonstrate to NH Department of Environmental Services the work done to date on the Squam Watershed Plan update as we applied for a grant to complete the process. We have applied their work in our recent strategic plan update. Understanding the values and opinions of key stakeholders helps us shape our communication in the future and the direction in which we take our conservation work."
Squam Lakes Association

References:

- Patton, M.Q. (2002) *Qualitative research and evaluation methods*. 3rd ed. Thousand Oaks: Sage Publications.
- US Environmental Protection Agency (2008) *Handbook for Developing Watershed Plans to Restore and Protect our Waters*.
- Photos: Squam Lakes Association