

TOWN OF KILLINGTON
WATER SYSTEM PRELIMINARY ENGINEERING STUDY

BACKGROUND

Current Water Sources

- There are over 600 drilled wells in the Killington Basin section of Town.
- At present, water quantity demands appear to be adequately met by available groundwater resources.
- Based upon testing of regulated water systems in the area there are existing water quality issues including groundwater contamination from man-made sources (i.e. petroleum contamination) and naturally-occurring elements (i.e. radium, arsenic, iron and manganese).
- Since there are no State-mandated testing requirements for private wells, the extent of potential water quality problems with the 500+ private wells in the study area is unknown.

Potential Future Water Needs

- Continued growth in the Killington Basin area may eventually lead to competition for sustainable quantities of groundwater, and may also continue to threaten water quality.
- Sustainable usage and protection of groundwater resources in the area could perhaps be better accomplished through an actively managed municipal source of supply.
- A municipal water source and system could better ensure that residents and visitors to the area are provided with a reliable and regularly-tested source of drinking water.
- A municipal system could also include hydrants for fire protection.
- For the proposed Killington Ski Resort development, the SP Land Company is planning to bring water from wells on Route 4 to the resort that could potentially also supply water to a municipal system along the Mountain Road as part of a Town municipal system.

PROJECT PURPOSE

- The Town has concerns about quantity and quality of available water sources in the area
- The Town wishes to assess the viability of developing a municipal water system to serve the Killington Mountain Basin section of the Town
- This potential municipal water system could be done:
 - In conjunction with planned development at the Killington Ski Resort
 - Through the development of another new water source
 - Utilization of excess capacity from existing private water sources

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PROJECT APPROACH

Phased Approach

- Phase I – Needs Assessment
- Phase II – Feasibility Study

Phase I

- Phase I will provide an understanding of the costs of a municipal water system so the Town can make an informed and thoughtful decision whether to move beyond Phase I to develop a more defined project.
- A needs survey questionnaire will be prepared and distributed to existing properties within the study area to determine the level of interest in connecting to a municipal water system. From the survey, an estimate of the number of potential connected users can be developed.
- A range of costs and water rates will be prepared based upon level of interest identified in the needs survey questionnaire. By developing the range of costs and water rates, the affordability of the project can be assessed.
- A Phase I - Public Input Meeting will be conducted to present the findings of the Needs Survey and preliminary user cost estimates. The purpose of the meeting is to present the affordability assessment and get a sense of public sentiment for a willingness to proceed further with the study.
- If the Town decides that a municipal water system is not affordable, then the study will not move past Phase I. With this approach time and money are not spent studying aspects of a municipal water system that aren't necessary, if early on it is determined that there is no reasonably affordable option supported by the majority of property owners.

Phase II

- The study will proceed into Phase II only if there is a willingness to proceed at the end of Phase I.
- The intent of Phase II is to develop alternatives that provide a cost-effective long-term municipal water solution that minimizes local user costs (O&M and debt service) by maximizing funding from outside sources and minimizing construction costs by coordinating with existing and/or proposed developments (i.e. the "Village").
- Potential approaches for establishing a municipal water entity to own and operate the proposed water system will also be evaluated.

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PROJECT SCHEDULE, COSTS, AND FUNDING

Project Schedule

- The first step of the project is the preliminary engineering study. Phase I of the study began in June 2011 and should be completed in September 2011. If the Town chooses to proceed past Phase I it is anticipated that Phase II will be completed in March 2011.
- If there is a willingness to proceed with the project at the end of Phase II of the study, there are still several steps that would follow before the possibility of starting construction.
- The project steps and durations for typical municipal water projects is as follows (year represents potential time frame for the steps for this project):
 - Preliminary Engineering 1 to 2 years (2011 to 2012)
 - Funding Determination ½ year (2012)
 - Bond Vote ½ year (2013)
 - Final Design 1 to 2 Years (2013 to 2014)
 - Construction 1 to 2 years (2014 to 2016)

Project Cost

- At this point the only costs for this project are the engineering fees to perform the study.
 - Phase I – Needs Assessment \$7,200
 - Phase II – Technical Assessment \$12,300
 - Total Study Costs \$19,500
- The Town is not obligated to move into Phase II if there is not a willingness to proceed past Phase I. With this approach time and money are not spent studying aspects of a municipal water system that aren't necessary, if early on it is determined that there is no reasonably affordable option supported by the majority of property owners.

Project Funding

- The project is only in the study phase and the only authorized expenditures to date are for the preliminary engineering study, which is a maximum of \$19,500.
- The study is being funded through a Planning Loan from the State of Vermont Water Supply Division. This loan has an interest rate of 0% for a term of 5 years.
- If the project does not move past the study, then the Town will pay the loan back at 0% for 5 years (maximum annual payment of \$3,900 per year).
- If the project moves forward, then the costs of the study are rolled into whatever future funding the Town secures for the next steps.

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INTERIM WATER SOURCE REPORT

- As part of Phase I of the study, the hydrogeologic consultant, Hoffer Consulting Inc., has prepared an interim water source report. This report summarizes existing groundwater resources in the Killington Basin area and identifies options for developing sources to serve a municipal system.
- [Click here to view the Groundwater Water Availability Assessment Preliminary Findings, June 2011](#)

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NEEDS SURVEY QUESTIONNAIRE

- A needs survey questionnaire will be prepared and distributed to existing properties within the Killington Mountain Basin section of Town to determine the level of interest in connecting to a municipal water system.
- This survey is for the Town to better understand the current water needs of the Killington Mountain Basin area.
- Our engineering consultant, Aldrich + Elliott, PC (A+E) of Essex Junction, will be conducting the survey.
- Specific information by address will be confidential and will not be shared with the Town or State.
- The information will not be used to pursue any type of enforcement action relating to non-complying or failed systems.
- All information gathered will be used for study purposes only. The information will be compiled by A+E and summarized by area; not by specific address.
- The survey will be mailed out by A+E to the property owner's to the mailing address listed in the Town's land records.
- It is anticipated that the survey will be mailed out in mid-July.
- A public information meeting will be scheduled approximately one week after the mailings to discuss the survey and answer questions.

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WHERE TO GET MY WATER TESTED?

- There are no requirements for the testing of private residential wells. However, to ensure that drinking water is safe, the Vermont Department of Health recommends the following testing schedule:
 - Total coliform bacterial test: every year
 - Inorganic chemical test: every five years
 - Gross alpha radiation screening test: every five years.
- Information on testing your water supply can be found at the Vermont Department of Health website http://healthvermont.gov/enviro/ph_lab/water_test.aspx#specificsupply
- A list of Laboratories Certified for Drinking Water Analysis can also be found at the Vermont Department of Health website http://healthvermont.gov/enviro/ph_lab/documents/certified_labs.pdf