

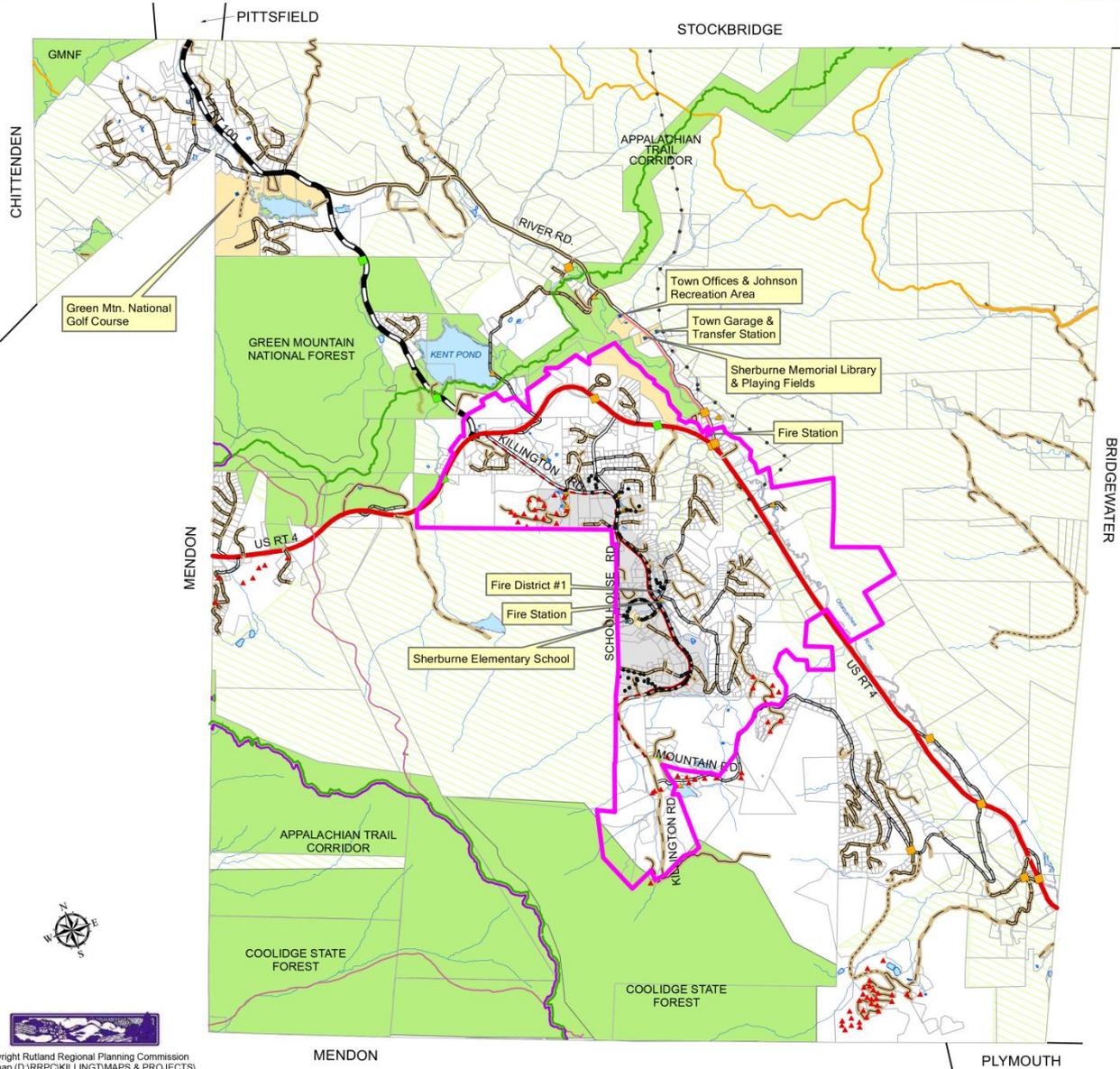
Town of Killington Water System Feasibility Study

Phase I Needs Assessment
Public Information Meeting
November 15, 2011

Presented by
Joe Duncan, PE
Rachel Marvin, EI

Project Purpose

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



— BOUNDARY FOR MOUNTAIN ACCESS ROAD WATER STUDY AREA



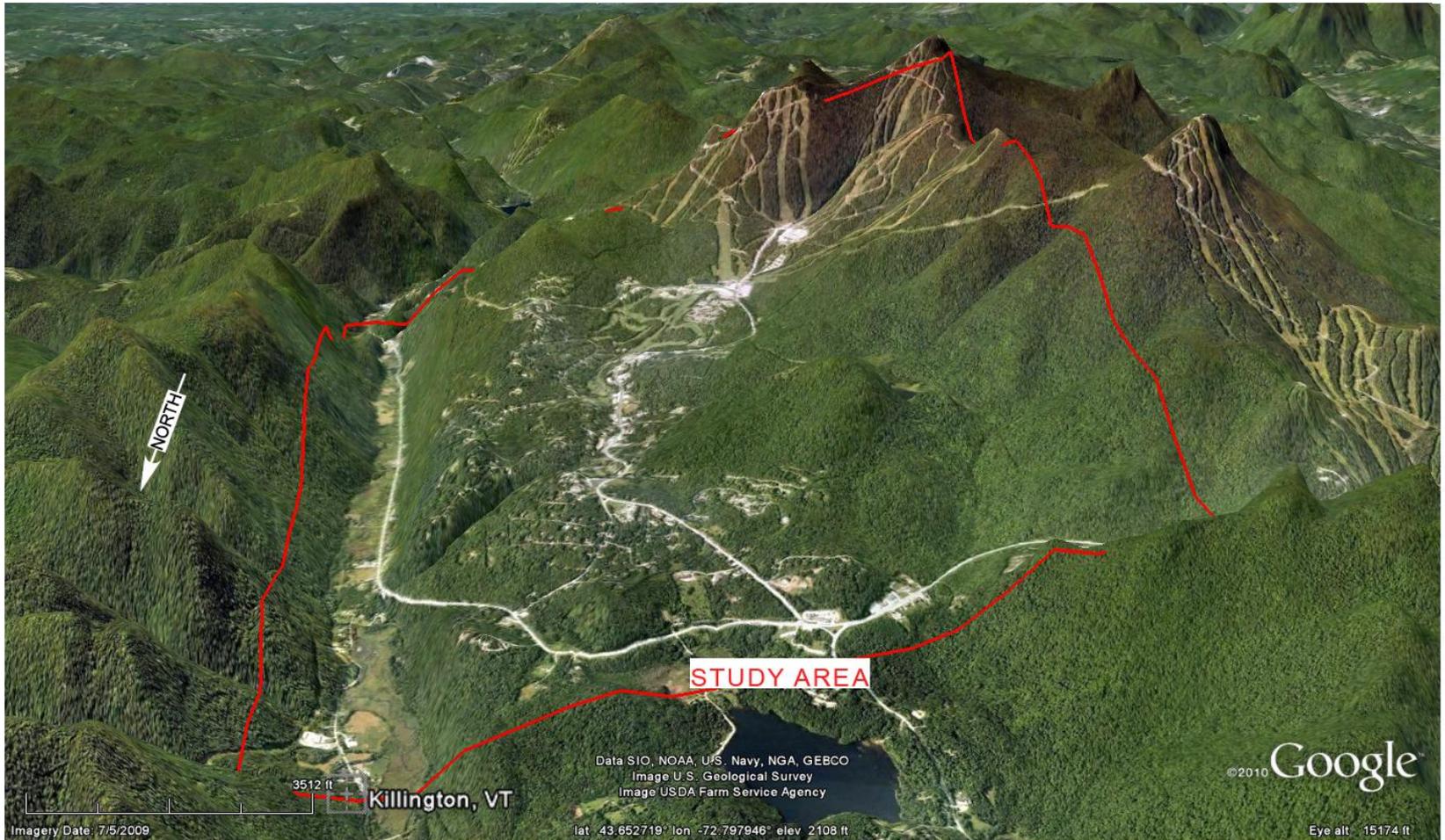


FIGURE 2
Google Earth™ Image Showing Approximate Study Area Boundaries,
Town of Killington Water System Feasibility Study, Killington, Vermont

Phase I – Needs Assessment

- Define level of interest, need, and general costs
- Needs Survey Questionnaire
- Range of costs and rates to be developed to assess affordability
- Phase I Public Input Meeting to get sense for willingness to proceed

Questionnaire

- Purpose is to determine the level of interest and need for municipal water system
- Survey conducted by A+E
- Survey mailed by A+E to property owner's mailing address listed in the Town's land records

TOWN OF KILLINGTON, VERMONT
 WATER SYSTEM NEEDS ASSESSMENT
 PROPERTY OWNER SURVEY RESULTS

As of November 15, 2011

Total Number of Surveys Mailed Out	1,621
Total Number of Surveys Returned	510
Response Rate	31%

1. When was your well installed?

Before 1970	56	11%
1970-1989	246	48%
1990-1995	11	2%
1996-2001	33	6%
2002-Present	24	5%
Don't know / No comment	140	27%

2. Please indicate any upgrades or repairs that have been performed on your water system within the last 10 years?

N/A - Written Comments

3. Do you know where your water supply is located?

On my property	354	69%
On property other than mine	41	8%
Don't know / No comment	115	23%

4. Which type of water system do you have?

Individual Drilled Well	223	44%
Individual Dug Well	4	0.8%
Individual Spring or Infiltration Gallery	2	0.4%
Community (shared) Drilled Well	134	26%
Community (shared) Dug Well	5	1%
Don't know / No comment	142	28%

5. Have you ever run out of water?

Yearly	12	2%
Every few years	22	4%
Never	404	79%
No comment	72	14%

6. Which best describes the quality of your water?

Always good quality	314	62%
Generally good quality but declines seasonally	49	10%
Poor quality seasonally	12	2%
Always poor quality	62	12%
No comment	73	14%

7. Do you have contamination issues with your source?

Radium	23	5%
Bacteriological	14	3%
Petroleum	7	1%
Sulfur Odor	27	5%
Other	49	10%
No Comment	390	76%

8. How concerned are you about fire protection?

Very concerned	121	24%
Somewhat concerned	148	29%
Not concerned	168	33%
No comment	73	14%

9. How much would you be willing to pay per month for municipal water?

\$0	98	19%
\$15-\$30	166	33%
\$30-\$50	42	8%
<\$50	13	3%
No Comment	191	37%

10. Comment on your interest/willingness for a municipal water project?

Interested	132	26%
Not interested	168	33%
No Comment	210	41%

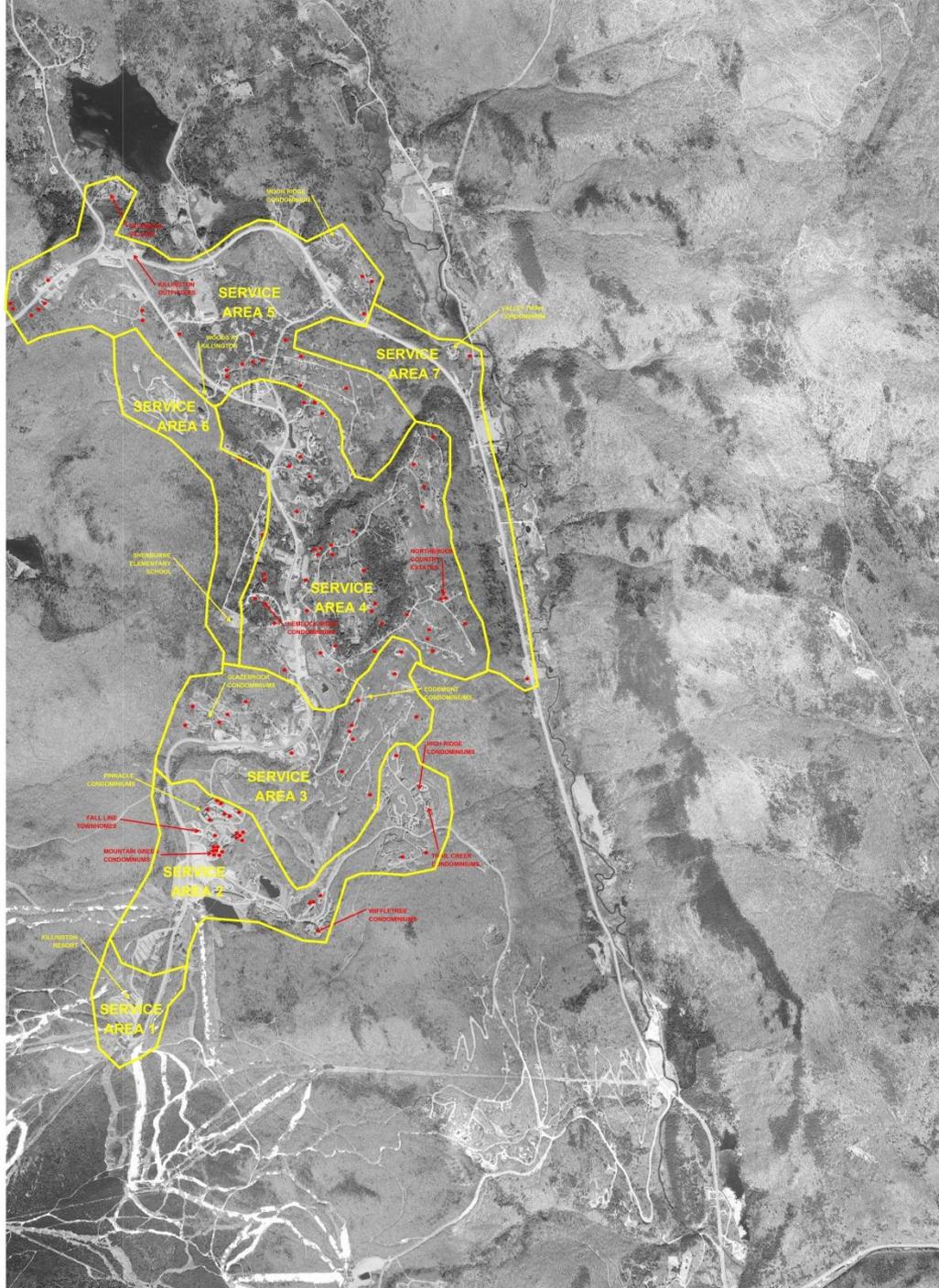


General Observations

- Only 34 (6%) of the respondents have ever run out of water
- The majority of respondents (62%) view their water as good quality
- 120 (24%) of the respondents indicated contamination issues with their source
- The idea of fire protection is evenly split

General Observations (cont.)

- Overall 33% are not interested and 26% are, while 41% did not indicate either way
- 120 primary residents submitted surveys, 27% are interested, 38% are not, and 35% did not comment
- Written comments focused on concerns about cost and affordability
- Locations of interested properties are sporadic and not densely populated



Range of Costs

- Focused initially on cost of main distribution lines in 7 service areas as starting point
- Developed construction costs for the mains only, which range from \$500,000 to \$2,700,00
- Low level of interest relative to watermain construction costs

**Table No. 1
Watermain Construction Cost Summary**

Service Area	Total No. of Properties	No. of Interested Properties	Percent Interested	Watermain Construction Cost	Notes
1	5	5	100%	\$500,000	Killington Resort
2	77	26	34%	\$2,000,000	Includes 6 complexes, 5 of which have quality issues
3	125	15	12%	\$1,700,000	
4	358	50	14%	\$2,700,000	
5	247	32	13%	\$1,800,000	
6	24	2	8%	\$600,000	
7	70	2	3%	\$1,500,000	

Range of Costs (cont.)

- Construction costs for water source can range from \$500,000 to \$1,500,000 depending on capacity and location
- Construction costs for water storage can range from \$750,000 to \$2,000,000 depending on size and location
- Overall construction costs can range from \$5M for Service Areas 1 and 2 to \$15M for all Service Areas
- Total project cost is typically 1.3 times construction cost so total project cost range is \$7M to \$20M
- Typical DWSRF rate is 3% for 20 years (\$66.45/\$1000), which results in annual payment range of \$500,000 to \$1,300,000

Conclusions

- Hydrogeologic evaluation and some of the surveys indicate a definite need in study area
- 7 of 15 PCWS do not fully meet drinking water quality standards
- Surveys indicate minimal interest and support
- Potential capital investment versus number and location of interested properties makes it difficult to justify project for entire service area
- Possible to consider Service Areas 1 and 2 due to density and 5 PCWS with water quality issues

Phase II – Technical Assessment

- Phase II will occur only if there is willingness to proceed at end of Phase I
- Development of alternatives and recommended plan for a municipal system based on Phase I Needs Assessment
- Review of municipal water entity options

Next Steps

- Board determines if there is a willingness to proceed
 - No, then project does not continue into Phase II
 - Yes, then Phase II – Technical Assessment will be conducted

Questions?

