

BOARD OF SELECTMEN WORKSHOP
Minutes of 04-18-11
4:15 p.m.

Selectmen:

Colette Worsman, Chairman
Peter F. Brothers, Vice Chairman
Miller C. Lovett
Nathan J. Torr
Herbert R. Vadney

Town Manager:

Phillip L. Warren

Recording Clerk:

Karin Landry

Call to Order: Chair Worsman called the meeting to order 4:15 p.m. She introduced the Board, Town Manager, and the Recording Clerk and made announcements pertaining to emergency exits and cell phones.

W 11-07 Water System Committee Update

Water System Committee Chair Dave Thorpe presented the Committee's Eighth Report to the Board of Selectman. The Report describes the Water System Committee's activities to estimate future water demand, compare those demands to the water system capacity, and predict the timing required to provide sufficient system capability for the future. The four most probable variations of long range plans will be narrowed to one or two that fit the Town's perceived needs adequately. The selected variations will then be expanded to include an analysis of the distribution system capability and future requirements, the fiscal issues regarding future demand and capacity, and recommended water use policies. The distribution system will be evaluated by Water & Sewer Superintendent Dan Leonard.

Community Development Director John Edgar generated a modified build-out analysis of selected parcels in the water Service Area and the area in close proximity to it. In doing so, he divided the Town into six major geographical areas, examined 121 properties, and broke growth into three timeframes: 0-5 years, 6-10 years, and 11-20 years. He used his judgment as to what he felt might develop and when. The properties were divided into three levels of service: within the current Service Area with no extensions, in the current Service Area requiring an extension, and outside the Service Area. The Water Committee applied the typical usage for 17 different types of properties to the modified build-out analysis to predict the gallons per day to satisfy future needs. In a 20-year period of time, if no restrictions are put on requests for water, there will be an increased demand of approximately 220 gallons per day, for a 7-8% increase. Steps were taken to ensure that the numbers used to predict future demand are realistic and conservative, but not too conservative. Although the data used to predict future demand is based on a short window of time when accurate numbers are available ('09-'10), the Committee is confident that they have done a good job.

The Committee identified four properties not in the Service Area that should be considered for a special reserve against capacity due to public health requirements or economic development opportunities: Interlakes schools, the Robinson property south of the roundabout, Skyview Circle and Grouse Point, and the East Bluff Highlands and Village areas.

The capacity of the treatment plant was adjusted from 1 million to 800,000 gallons per day to allow for varying conditions. The average quarter daily demand with peaking factor and losses was determined in

the Service Area, the Service Area with extension, outside the Service area, and the Service Area with extension including a reserve. The projections assume 100% of predicted development. If every request for water outside the Service Area is granted, it is predicted that the sustainable capacity line will be crossed in 2025. The Committee recommends that a comprehensive plan be developed for the properties within the Service Area, including a reserve for the four properties previously identified. The plan represents a practical approach to the growth of the water system and the demand that will be placed on it. It is predicted that such a plan would cross the sustainable capacity line in 2028.

Although future projections are based on a 5% non-metered water loss, the loss rate has been elevated since December, and is currently in the 20-25% range. A professional leak detection company has been hired to do a full assessment of the system, and the Committee is confident that the source or sources of the leak will be identified and brought under control. The Town Manager explained that there is an industry standard for implementing a leak detection process when there are spikes in non-metered water loss. Steps would have been taken earlier to detect the source of the loss, but it is difficult to do so with snow on the ground.

Selectman Torr would like it to be clear to the ratepayers that the loss of water became known because the amount of water billed does not coincide with the amount of finished water processed, and the increased production at the plant is due to losses, not billed consumption.

Resident Jim Hughes was pleased that the water department alerted him that he might have a leak in his system when his usage recently increased. As a result, he was able to promptly address the situation. The Town Manager explained that home owners are notified by the water department when they identify a potential leak. As part of the capital improvements process, additional monitoring equipment will eventually be put in place.

Selectman Lovett inquired how the projections will be monitored as time moves forward. Mr. Thorpe explained that the analysis will be reviewed annually to verify that the rates, peaking factor, and loss factor are still on the forecasted trend.

Mr. Thorpe explained that the present water system has at least three likely single-points of failure: the source (Lake Waukegan), the treatment plant, and the storage tower with its single transmission line to the distribution system. The Committee believes the long range plan needs to include provisions for mitigating these areas of high risk by adding an additional storage tower somewhere in the Barnard Ridge Rd. area, and by considering a ground water source. The Committee will meet with groundwater consultants Emery and Garrett tomorrow to choose the locations where test wells will be drilled. It will be fortunate to secure a redundancy well that will deliver 3,000-5,000 gallons per day, which will be called upon to mitigate failure in the water system. The Committee recommends that whatever consumption demand level is chosen, a redundancy portion be included in the plan for a groundwater source, another storage tower, and the distribution system required to connect to it. In addition, as part of the ongoing CIP plan, the Committee recommends that an investment be made in variable frequency drives to monitor the output of the pumps at the treatment plant.

Selectman Brothers thanked the Committee and staff for the Eighth Report to the Board. He favors the plan for the In Service Area with Extension or the In Service Area with Extension plus Reserve as obtainable over the long term, and yet not overly restrictive to grow to some degree to meet future demands. He would like to reinforce that the infrastructure has been serving the community well over a lot of years, and that while a lot has been done to improve it, there is an obligation to continue funding and replacing some of the capital items that are there. In addition, educating the public on conservation is very important.

Mr. Thorpe explained that the long range plan will be for the entire enterprise, and will address items concerning maintenance, expansion, and non-expansion items. The Committee is approaching the point where it has completed its initial charge and will develop a plan for a sustaining effort that maintains control. There will be a land acquisition issue associated with the addition of another tower. The Town will have to purchase approximately 1/4 acre of land in order to meet the requirement for a 400' radius around the well. The Town Manager explained that there are no permit requirements for any of the plans presented to date.

Selectman Lovett identified two issues, redundancy and capacity. There is a 3-4 year difference in when demand will rise above sustainable plant capacity between the in Service Area with extension plus reserve and outside the Service Area. He would not want to solve the redundancy issues and make the mistake of not having the capacity to deliver additional water in the future. There will be infrastructure costs in connecting the additional tower to the system. The big issue that will be faced in the next five years is funding. Mr. Thorpe explained that the Committee will offer funding alternatives for the Board's consideration. The \$250,000 in reserves that will accumulate through 2013 will be used for short-term capital improvements.

Selectman Worsman favors developing a plan for the in Service Area with extension or the in Service Area with extension plus reserve. She is concerned with the stress that will be put on the plant as a result of the recent 25% water loss. Mr. Thorpe explained that today's leak detection process is very sophisticated, and he is confident that the source will be identified. The data presented is based on a 10% loss, and every 5% change in that loss moves the crossing of the sustainable capacity line forward or backward one year.

Water & Sewer Superintendent Dan Leonard asked for the public's assistance in reporting accumulated water that is not normally there so a field test can be done to determine if it is groundwater or treated water. The department has investigated approximately 50 properties in the last four months, and appreciates any help they can get from the public.

Selectman Vadney likes the two plans identified by his fellow Board members, but does not think it is wise to totally ignore outside the Service Area, and wonders if there are more than four properties that should be included in the reserve. Mr. Thorpe will confer with Mr. Edgar on whether there are additional properties that should be included in the reserve.

Selectman Torr likes to be a little more proactive, and agrees with Selectman Vadney that the Committee should develop a plan slight higher than the Service Area with Extension or the Service Area with Extension plus reserve. Mr. Thorpe suggested adding an additional 10% for future reserves.

There was a general consensus among the Board that the Committee should focus their efforts on developing a comprehensive plan for the in Service Area with extension and the in Service Area with extension plus reserve. In closing, Chair Worsman thanked the Water Committee, Dan Leonard, and staff for a job well done.

Selectman Torr motioned to adjourn the Workshop at 5:25 p.m. Seconded by Selectman Brothers. 5-0. All in favor. Motion passed unanimously.

Respectfully submitted,

Phillip L. Warren, Town Manager

Colette Worsman, Chairman

Peter F. Brothers, Vice Chairman

Miller C. Lovett

Nathan J. Torr

Herbert R. Vadney