

Mountain Lakes District Water System Conservation Plan

Approved and Accepted by Mountain Lakes Commissioners Feb. 11, 2011

Mission Statement

Mountain Lakes District is a public agency that is dedicated and committed to serving present and future residents in a service-oriented manner by:

- Providing safe, reliable, high quality drinking water while meeting and or exceeding all regulatory requirements in a cost-effective and environmentally responsive manner.
- Pursuing alternative resources with the most sustainable, efficient and cost-effective approaches.

This plan in part is to satisfy the description of need as set forth in the New Hampshire Department of Environmental Services Drinking Water Groundwater Bureau Administrative Rules. Its intent is to demonstrate the efficient use of and need for existing and future water supply for the community of Mountain Lakes District. It also demonstrates the awareness of the Mountain Lakes District to use its natural resources wisely for now and into the future.

Benefits

The objective of the Mountain Lakes District Conservation Plan is to achieve efficient use of the water supply resources. The goal is to accomplish conservation through practices and measures that reduce per capita water consumption within the distribution system and water use by the customer base. Meeting this objective will allow extended use of available water supplies and providing information for any proposed extension of infrastructure into the future as needed.

It should be emphasized to the district residents that conservation means using water wisely. Any well-designed conservation plan should not deprive the community a basic fundamental service that users rely on. Rather, it should provide a roadmap for more efficient water use while lowering energy requirements and demands of the water service area. This approach could produce the following benefits:

- Lower water bills for the customer base.
- Control of future water rates
- Identify potential resources and improve source protection through the Source Protection (SPW) Committee to minimize potential impacts on MLD natural resources
- Energy conservation

Our Values

- Exercise responsible financial management
- Provide responsive customer service and open communication
- Promote ethical behavior in the conduct of District business
- Ensure fair and open processes involving the public
- Provide a healthy work environment
- Promote environmental responsibility and sustainability
- Ensure for the future

Our Values Promote

- Integrity
- Honesty
- Professionalism
- Responsibility
- Reliability
- Tenacity
- Prudence
- Discipline
- Collaboration
- Safety
- Community

Elements of Conservation Planning

Crucial elements of the development of a water conservation plan include indoor and outdoor conservation practices, landscaping practices and possible plumbing retrofit installations. Areas to consider include:

- Define a water meter program (one month after adoption)
- A plan for public education and information (two months after adoption)
- Water Audit and Periodic Leak Detection requirements (monthly)
- Rate Structure Analysis (annual)

Water System Description

Currently, The Mountain Lakes District maintains 3 wells throughout the system (2 of the wells are active and 1 inactive). Bedrock Well #3 (BRW3) is inactive, and Bedrock Well #4 (BRW4) and Infiltration Well #001 supply most of the daily demand. We also have a water connection to Woodsville Water and Light for use when our demand of the customer base exceeds our well output. Currently the system supplies water for approximately 320 residential users

The following is a percentage breakdown of source contribution for the last 4 years:

| | | | |
|------|-------------|-------------------------|------------|
| 2007 | BRW#4 = 15% | INFILTRATION WELL = 37% | WW&L = 48% |
| 2008 | " = 17% | " = 54% | " = 29% |
| 2009 | " = 17% | " = 30% | " = 30% |
| 2010 | " = 15% | " = 57% | " = 28% |

Storage and Supply

Water Storage is provided by a two-cell, poured-in-place concrete tank with a capacity of 250,000 gallons. Currently, one cell is used at a time and manually alternated periodically. The purpose for this operational procedure is to avoid "dumping" the entire tank in the event of a significant water main break. The existing storage reservoir provides sufficient non-fire flow storage capacity since the available 250,000 gallons exceeds the average daily demand by over 5 times.

The majority of the transmission/distribution system was constructed with 2-inch to 12-inch diameter piping. The system is constructed with cast iron piping, ductile iron and PVC product, however during recent replacement of existing piping, ductile iron and PVC piping has been used.

With the help of Granite State Rural Water Association, the District has undertaken an aggressive ongoing leak detection program by testing of both the transmission lines and service connections.

Metering

Mountain Lakes District recognizes the importance of proper metering programs that support accurate usage record keeping and fair and equitable rate structure. The District has in place meters to measure accurately produced water from its groundwater sources and Woodsville Water & Light supply. At present, there are no consumption metering devices throughout the distribution or customer connections. Currently, a planned meter replacement program will ensure accurate data acquisition and fair and equitable revenue collection for the foreseeable future. This will enable the District to effectively maintain water audit programs and use this information for long range planning and projections.

Rate Reviews

Currently, \$450 has been established for the past few years as the annual fee for water by its Mountain Lakes residential customer base, (a different rate formula for non-residents (Bath) is also used). An annual rate review was started in 2008 to analyze the rate structure and have information for the Commissioners to adjust if needed. The rate reviews show that current revenues provide for operation and maintenance and reserve options for capital. It is the position of the District to continue an annual review so that it can continue to establish a fair and equitable rate based on the need and financial status of the District.

Public Education and Information

Mountain Lakes District currently promotes conservation to its residents by informing them about methods to conserve water and demonstrate ways to become contributors to the plan. This information is distributed to new and existing residents in a number of ways, through mailings and suggestions that are posted on the Districts web-site and bulletin board. We plan on conducting two meetings per year for Public Education and Information.

Water System Monitoring

Individual metering is not currently required on any single-family residential dwellings attached to the Districts water system. During periodic water audits, District personnel watch for spikes in above average water usage and report them to the Commissioners. Staff also observe lower than normal water usage to ensure that it is not a pattern caused by any malfunctioning meter.

The District also conducts an internal audit to confirm that the water system is free from excessive leakage. This is accomplished by comparing production log data with AWWA and other industry standards of the amount of usage on a quarterly basis. The plan is in process and will be modified as needed.

Energy Efficiency Programs

Mountain Lakes District will partner and work with professional energy providers and engineers with high efficiency performance equipment when reviewing new upgrades and system expansion projects that would benefit in reduction of energy demands, and efficient use of equipment and overall operation and maintenance of the Districts utility assets.

Plan Implementation

District Water Department personnel will act as administrator of the Water Conservation Plan. The Administrator will oversee the execution and implementation of all elements of the Plan. The individual will oversee record keeping for program verification.

The District Commissioners will ratify the Water Conservation Plan through the adoption of an Ordinance at the February 14th, 2011 monthly meeting so that the Plan is a legal document of the District.