

## **Mountain Lakes District Water Committee Report for October, 2013**

This report covers the meetings of 10/3/13 and 10/17/13

### ***Mountain Lakes District Water Committee Meeting of 10/3/13***

Status: Draft as of 10/16/13 – Reviewed as of 10/17/13 – Approved as of 10/17/13

This was the October, 2013 Water Committee Meeting. It was held from 7:30 AM to 8:30AM on 10/3/13

Attendees: Ed Rajsteter – Chair, Don Drew – Water Department, Bob Long – Commissioner, Peter Olander, Robert Roudebush, and Ken King. Tony tried to call in but no one answered the phone.

We approved the Water Committee September, 2013 report.

### **Water System Status**

Don reported that the current usage is about 20,000 gallons per week day and about 25,000 on week ends.

We discussed several items that Don wanted our approval to buy. The first was slide jack hammer for about \$350 and a full power hammer for \$1000. We decided to buy the slide jack hammer and put the power hammer into the next budget cycle. The budget process for next year starts on October 21<sup>st</sup> We voted and approved \$400 for a slide jack hammer.

The next item was a tool rack for the district truck for \$450. We voted and approved \$500 for the rack.

Don talked about some surplus pipe that Mike Clark wanted to purchase from us. We agreed to offer it to Mike at \$100/piece.

### **Lower Dam Outlet Replacement**

Ed reported that we have not received any response to the funding information we sent to the UNC people. We need to obtain \$174,000 for this project. The current rate for bonding through the state is 4% but local banks are lower. We will continue to look at different funding options.

While the cost of doing a total concrete solution for the lower dam was very high we do want to price out a box culvert solution for the upper lake outlet project. This will have to be done within the next 5 years or so.

### **Surface Water Systems**

We expect to receive the information from D&K on our surface water project by the 15<sup>th</sup> so our next meeting will be on the 17<sup>th</sup>

We talked about the need to get back to Woodsville Waater & Light (WWL). Even if we do not use them as a major source we will always need them as a standby source.

### ***Mountain Lakes District Special Water Committee Meeting of 10/17/13***

Status: Draft as of 11/7/13 – Reviewed as of – Approved as of

Attendees: Ed Rajsteter – Chair, Don Drew – Water Department, Bob Long – Commissioner, Peter

Olander, Robert Roudebush, Tony Salvucci, and Ken King. Nick Sceggell (D&K) via phone.

We approved the minutes of our 10/3/13 meeting.

The purpose of this meeting was to review the Feasibility Level Assessment of Water System Improvements Summary Report from DuBois&King. This was a long report and was received late the previous day so most of us had not had a chance to study it.

The main discussion was how Alternative 1: Increase Current Infiltration Source Capacity had become Alternative 1a: River Bank Filtration. This was a discussion with Nick Sceggell from D&K.

We had been talking to D&K about two options for local water sources. One was to continue to use our infiltration well as a source. We knew that it would require several modifications because of its low current flow rate. We also knew that we would have to add some filtration as infiltration wells are now considered to be surface water systems by the state. The second option was to take water directly from the lake and install a new filtration system to process it.

After a meeting with the state, D&K had stayed and reviewed the history of our infiltration well. After looking at all of the past problems with the infiltration well and the fact that it was never designed to provide an easy way to backwash or regenerate the filter media they decided to go with a different alternative.

The new alternative was a river bank filtration system. The idea is to locate the well in a place that it can draw both ground water and surface water. The amount of filtration needed is based on the mix of the two types of water.

We looked at the cost estimates for the two alternatives. A surface water system is estimated to cost about two million for the initial design and installation and about \$50,000 in annual costs. There is also the cost of operating it. Such a system requires a full-time person at Level 3. This is a much greater cost than our current half-time person at Level 1.

The river bank filtration system could be one million but only if a location can be found that has a significant amount of ground water. Based upon our previous work in trying to locate ground water sources in the vicinity of our pumping station we would expect that the river bank filtration system would be the same cost as the full surface water system.

We wanted more time to study the full report The plan is to have the next meeting with people from D&K as well as Claud Cormier who has a better understanding of the hydrology in the area of our pumping station. This meeting is now set for November 18<sup>th</sup>.

There was a brief discussion with Bob Long on the topic of individuals having swimming pools on their property. They are not prohibited by any of our current zoning issues. The Water Committ requested that people with large pools be required to have a water meter installed and they will be billed based on actual usage.

Related Emails:

On Thursday, November 7, 2013 2:46 PM, "[ccormier@teamhydrosource.com](mailto:ccormier@teamhydrosource.com)" <[ccormier@teamhydrosource.com](mailto:ccormier@teamhydrosource.com)> wrote:

Gentlemen,

I would be pleased to attend the 11/18 meeting. However, so everyone is aware, it is my understanding after speaking with NHDES officials that they will simply not approve a Riverbank Filtration Source (RBF) for the Mountain Lakes District.

To clarify, an RBF source, while working much like a well, is typically positioned and constructed with the explicit objective of capturing water from an adjacent surface water body. In Mountain Lakes' case, one goal of an RBF source would be to maximize its yield by taking advantage of the hydrogeological setting (i.e., higher soil permeability) and greater ability to capture water given its close proximity to a surface water body since hydrogeological conditions farther away are not amenable to development of a source with a sufficient yield. A second goal is/would be to minimize the treatment requirements of the water produced to make it potable. Still, an RBF source, given its close proximity to a surface water body and its construction specifications (which is likely to be shallow given the hydrogeological conditions in the area of the District) could be expected to provide only a limited level of pretreatment to the water it produced. Therefore, the water would naturally contain at least some surface water indicators, and thus require at least some measure of surface water filtration/treatment. Note that if the RBF source effectively removed all surface water indicators it would simply be classified as a groundwater source – and it is highly unlikely that such an environment exists in the immediate vicinity of Mountain Lakes where this would be possible.

The bottom line is that NHDES considers an RBF supply a surface water source, and a surface water source is not permissible for any system with a service population less than 1,000, such as Mountain Lakes. As I understand it, improvement of the District's current infiltration gallery is also not permissible to NHDES as it does not meet current water supply regulations – it would now essentially be considered a surface water source.

Hence, it would appear Mountain Lakes currently has two options that would satisfy NHDES requirements. One is to continue to purchase the water they need from Woodsville. The other is to pursue development of a suitable groundwater source.

I realize the significant effort and expense the District has undertaken in the past to locate a suitable groundwater source without success. Prior efforts have shown that the immediate area near the District is not conducive for developing productive well sources, and while other more promising locations for well source development appear to be present in the surrounding area, connection of a source farther from the system would necessitate a significant cost to extend pipe and powerline. This would be in addition to costs associated with source exploration/siting, land purchase, source development and NHDES permitting. Hence, this may not be an attractive option.

We would certainly be pleased to provide our services for either RBF or groundwater source development. However, it appears that these options are either, at worst simply not permissible in the case of an RBF source, or at best economically impractical for a groundwater source.

Again, I would be happy to attend, but given this, I don't know that I could contribute anything of value to the conversation at the upcoming meeting, and I do not want to waste anyone's time if that is the case.

Sincerely,

Claude Cormier  
President  
HydroSource Associates, Inc.