Public Meeting Notes
Pressure Zone 4 Water Supply Well Siting
November 11, 2010, 6:00 to 7:15 p.m., LaFollette High School, Room C17

Present:
Madison Water Utility (MWU): Dennis Cawley and Alan Larson
Citizen Advisory Panel (CAP) Members: Mark McCulloch, Lynn Williamson, Karl Patzer, Don Paulson, and Doug Klitzkie
BT Squared (MWU Consultant): Eric Oelkers and Angela Wilcox-Hull
Bower Group (MWU Consultant): Jim Bower
Madison City Council Member for District 16: Judy Compton
Water Utility Board Member: Dan Melton
Members of the general public

Notes:
Mr. Cawley, whom is the MWU project manager for the well siting project, opened the meeting and introduced the MWU and consultants. He explained that due to development expanding eastward, there are concerns about sufficient quantity and pressure of water for fire protection in the areas furthest away from the existing Municipal Well #9 serving Pressure Zone 4. MWU went to the Water Utility Board in 2008 to kick off the process of finding a solution. A Citizen's Advisory Panel (CAP) was developed in the process and is working closely with MWU. Several alternative solutions to drilling a new well were discussed and modeled with computer programs, but it was determined that with the potential for more development to occur in the future, a new well would be the best long-term solution. The Water Utility Board agreed to proceed and budgeted for a new well to be sited, tested, and installed to ensure sufficient quantity and safe drinking water is provided to the community.

Mr. Oelkers, the hydrogeologic consultant, explained what criteria there are for siting a new municipal supply well. He handed out a "Well Siting Criteria" summary sheet and a map identifying well siting factors and potential well siting areas circled in red. Mr. Oelkers summarized the criteria regulated by the Wisconsin Department of Natural Resources (WDNR) and the MWU. He also emphasized that the well must be compatible with surrounding land use in the community.

A summary of what was considered when mapping potential well siting areas circled in red:

- The well site must be certain distances away from registered gasoline or fuel oil storage tanks, residential fuel oil tanks, bulk fuel storage facilities, landfills, quarries, closed remediation sites with either soil or groundwater contamination remaining, and contaminated and cleaned up sites regulated by WDNR or the Wisconsin Department of Commerce.
- Most of the potential contamination released from the tanks and sites are in shallow groundwater and have likely not been introduced to the deeper bedrock aquifer that the new well will be pumping water from.
- There is an open contaminated site located on the map with a blue dot that has an ongoing investigation, and because it has not yet been closed with WDNR, it does not have a required setback distance on the map. The site is GE Health, which had a release of chlorinated solvents to the deeper bedrock aquifer. There is the potential for some of this contamination to impact a supply well if it is installed too close to the site.
- Blooming Grove had a municipal well that is now abandoned on the far east side of Pressure Zone 4, near Ho-Chunk Casino. The well was not productive enough to supply residences due to a geologic fault zone in the bedrock that reduced the amount of pumpable water available to the well. It is unknown how extensive the fault zone is, and the geologic feature may impact a new supply well if installed near it.
- The McFarland #3 Well could not help supply Pressure Zone 4, as that well is being used near its capacity.
- The new well site should not be too close to existing supply wells, as a new well can impact the capacity and draw down the water elevation of existing wells.
- Other factors like flood plains, stormwater features on existing land, and water main locations are also considered when finding an ideal well site.

A summary of the proposed well site and well construction:

- Ideally, the well site will be on a vacant property, approximately one acre in size.
- There are no plans to have an aboveground pressure tank (water tower) on the well site.
- A test well will be installed to ensure adequate water quantity and quality.
- Preferably, the well will produce quality drinking water at least initially, but the well site should be planned in a way that can be easily adapted in the event the water must be treated.
- The final well will be installed with a pipe that is approximately 400 feet deep to seal the well from any potential shallow groundwater contamination. The well will be open to the deeper bedrock aquifer from approximately 400 to 800 feet.

Mr. Oelkers requested input from those present who may know of any other potential sources of contamination or other reasons not to site a well in the potential well siting areas circled in red.

A general summary of responses to concerns and questions posed by those present at the meeting:

- Material dredged from Mud Lake may have been deposited on land located within the central potential well siting area circled in red on the map. It is unknown how the dredged soil may impact the quality of a well. Mr. Oelkers said it was something to consider and research further if a piece of land from this area was selected for the well site.
- Pressure Zone 4 will likely be expanding eastward in the future and this is something to consider when siting the new well.
- There were concerns that the new supply well could impact private agricultural wells located outside of Pressure Zone 4. Mr. Oelkers explained that most private wells, including agricultural wells, pump water from shallower aquifers than the new supply well will. He said there is the potential for a new well to impact capacity, but it is unlikely. WDNR does not regulate water elevation draw down impacts in private wells, only in municipal wells.
- Mr. Oelkers explained that groundwater modeling to determine potential groundwater quality and quantity will be used to narrow down the search for a potential well site. Groundwater modeling can be used to calculate travel times of contaminated groundwater, and the GE Health site will be considered when modeling is performed.
- A new well would increase the available fire flow to better serve southeastern areas that are distant from the existing well.
- The contamination from GE Health reached bedrock aquifers quickly because geologically in the area of the site, there is not a lot of soil between the ground surface and the bedrock. Contaminants in soil have more time to biodegrade than they do in rock.
- Agricultural practices may impact the quality of water if the well was sited near rural areas, but Mr. Cawley reminded that a test well would be installed to test the water quality before a well is put in use. Mr. Bower explained that the MWU is trying to find a balance of water quality and quantity to best serve the communities within Pressure Zone 4.
- The City of Madison has already budgeted for the new well.

Mr. Cawley invited those interested in being more involved to join the CAP, as there are currently eight members and they are always welcome to have new members. Mr. Bower introduced the current CAP members.

Alder Judy Compton made a statement indicating she was appreciative of the MWU and the community's concern for water quality and said that water from Municipal Well #9 was some of the best water available to Madison citizens.

Mr. Bower requests that if there are any additional questions or concerns to e-mail or call Mr. Cawley. The handout and map available at the meeting will be posted on the MWU website soon. Another public meeting will be scheduled in approximately 6-8 weeks when a site will be selected for a test well. It is proposed that the test well will be installed in the spring.