Proposed Substitute Text for "Public Water Service" Section (Page 57)
Larry Nelson, City Engineer – Interim General Manager, Madison Water Utility
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Public Water Service

Water Distribution System. The design of the water supply system to serve the Pumpkin Hollow Neighborhood should be anchored on the concept of sustainability. Sustainability would occur if the projected water use of the neighborhood should come from the neighborhood.

The Madison Water Utility will extend public water service to the Madison portion of the Pumpkin Hollow planning area as new development occurs. The planning area will be served by extension of existing water mains within Pressure Zone 123, which includes the developing lands east of Interstate Highway 39-90-94. There currently is a 12-inch main serving the Parkway Village subdivision, just southeast of the planning area, which will be extended west along Hoepker Road; and a water main will be located at the intersection of Eastpark Boulevard and Portage Road which will be extended north along Portage Road. Eventually, this system will be looped to connect the two legs and provide increased service reliability. As development occurs, additional water distribution mains will be extended into the neighborhood within street right-of-way. The mains along the local streets will be 8 inches in diameter.

Reservoirs and Wells. Pressure Zone 123 is pressurized by the Cross Hill water tower located near Nelson Road and USH 151. This tower has the ability to provide appropriate water pressure to elevations between about 900 feet to 1,040 feet U.S.G.S., which should be sufficient to serve future development in the planning area. No additional water towers are planned within the Pumpkin Hollow planning area.

Development in the Pumpkin Hollow planning area, and on the northeast side of the City of Madison generally, will increase the demand for water and eventually may require new municipal wells to ensure a reliable supply. The Madison Water Utility has already acquired a well site in the Center for Industry and Commerce west of Interstate Highway 39-90-94 (Unit Well 35), and the Water Utility Master Plan identifies other potential future well sites within and near the Pumpkin Hollow planning area. Unit Well 38 is proposed to be located on the ridge within the Pumpkin Hollow Neighborhood and Unit Well 39 is located east of American Parkway.

The Madison Water Utility's Hydraulic Model indicates a need for one or more of these wells by 2025. In addition, existing wells, which are presently being operated, are being monitored for contaminants, including VOCs. These wells include Unit Well 15, which serves the northeast side of the City.

There are potential negative effects of municipal well pumping near Token Creek on the creek and on other springs and seepages that provide critical base flow to Cherokee Marsh and the Madison lakes. The limited available data suggest that the groundwater supplying the Token Creek springs may primarily be coming from north of the creek.

The presence and characteristics of the Eau Claire Shale acquitard beneath the area shall be assessed. If the Eau Claire Shale is present in the area, any new well will need to be cased through the acquitard to minimize the movement of groundwater between the upper and lower aquifer.

Regardless, to permit the development of municipal wells at any location, there will be requirements to minimize the impact on existing surface water resources and the movement of pollutant plumes. Existing codes for well development are being reviewed by the Department of Natural Resources to address these situations.

The Madison Water Utility has just concluded its most recently commissioned pump tests of UW 29, which serves the east side of the City. That test recommended an average annual pumping rate of 50% of the maximum capacity of the well in order minimize the movement of groundwater between the upper and lower aquifer and the movement of pollutants. Similar tests shall be conducted on new neighborhood wells to assess aquifer characteristics with the results being used to develop proper pumping strategies for area aquifers.