

# Madison Water Utility Pressure Zone 4 Well Siting Study

Water Utility Board Meeting  
Wednesday, April 27, 2011 at 4:30 p.m.  
Water Utility Conference Room



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# Summary of Progress to Date

- An engineering study in 2004 identified a water supply deficiency Pressure Zone 4 based on criteria for volume of water available for fire fighting and lack of redundancy in supply. There is only one well in Pressure Zone 4.
- After an initial public meeting in December 2008 a Citizen Advisory Panel (CAP) was formed.
- The CAP met with Water Utility Staff in early 2009 and agreed that it was necessary to establish a project to increase the amount of water available in Pressure Zone 4.
- The Water Utility Board voted to establish the Pressure Zone 4 Water Supply Augmentation project in March 2009.
- The CAP met with Water Utility staff in throughout the remainder of 2009 to evaluate alternatives for increasing the water supply in Pressure Zone 4.

# Summary of Progress to Date

- Based on staff recommendations and public input, the Water Utility Board voted in December 2009 to proceed with a study to find a suitable location for a new water supply well in Pressure Zone 4.
- The Water Utility solicited competitive proposals and selected a consultant to assist in the well siting study in July 2010.
- Water Utility staff and the consultant worked with the CAP to develop site-selection criteria and reviewed potential well sites within Pressure Zone 4.
- Five areas within Pressure Zone 4 identified as potentially suitable well sites were presented in a Public Meeting in early November 2010.
- Following more detailed analysis and additional CAP input, three areas with one or more individual properties were identified as suitable sites, subject to purchase negotiations and due diligence procedures.

# Summary of Potential Well Sites

	<b>Site</b>	<b>Status</b>	<b>Comment</b>
1	Progress Road	Ruled out	Available property is too small.
2	Walton Commons	Ruled out	Land was purchased partly with federal funds and is dedicated to development as part of the Bioag Gateway.
3	Siggelkow Road	Ruled out	The site appears to be too close to a suspected inactive fault zone that may reduce the ability of the aquifer to provide sufficient quantities of water to the proposed well.
4	North Dairy Center	In consideration as an alternate to Dairy Center or Tradewinds	At least one potentially suitable property in this area is available.
5	Dairy Center	In consideration	Several suitable properties in this area are available.
6	Tradewinds	In consideration	Several suitable properties in this area are available.



# Legend for Contamination Maps

## Legend for Contamination Maps:

Contours on contamination maps labeled “10 YR”, “50 YR”, and “100 YR” show the estimated areas of the bedrock aquifer (“zones of contribution”) that contribute groundwater to a well at the “example well location” over period of 10, 50 and 100 years at an average pumping rate for Madison water supply wells. These zones of contribution were estimated using the Dane County Regional Aquifer Flow Model developed cooperatively by the Wisconsin Geological and Natural History Survey and the United States Geological Survey.

## Legend

### Tanks

-  Approved Gasoline or Fuel Oil Storage Tank
  -  600 ft setback
-  Residential Fuel Oil Tank
  -  200 ft setback
-  Bulk Fuel Storage Facilities
  -  1200 ft setback

### Closed Remediation Sites with Contamination Remaining

-  Groundwater
-  Groundwater and Soil
-  Soil
-  Contamination came from another property
  -  1200 ft setback

### Landfills and Quarries

-  Landfills or Quarries
  -  1200 ft setback

### Contaminated and Cleaned Up Sites

-  ERP closed activity
-  ERP closed (larger area) activity
-  ERP open activity
-  ERP open (larger area) activity
-  LUST closed activity
-  LUST open activity

-  Zone 4
-  Parcels
-  City Owned Parcels
-  Water main
-  Sanitary sewer main
-  Municipal Well

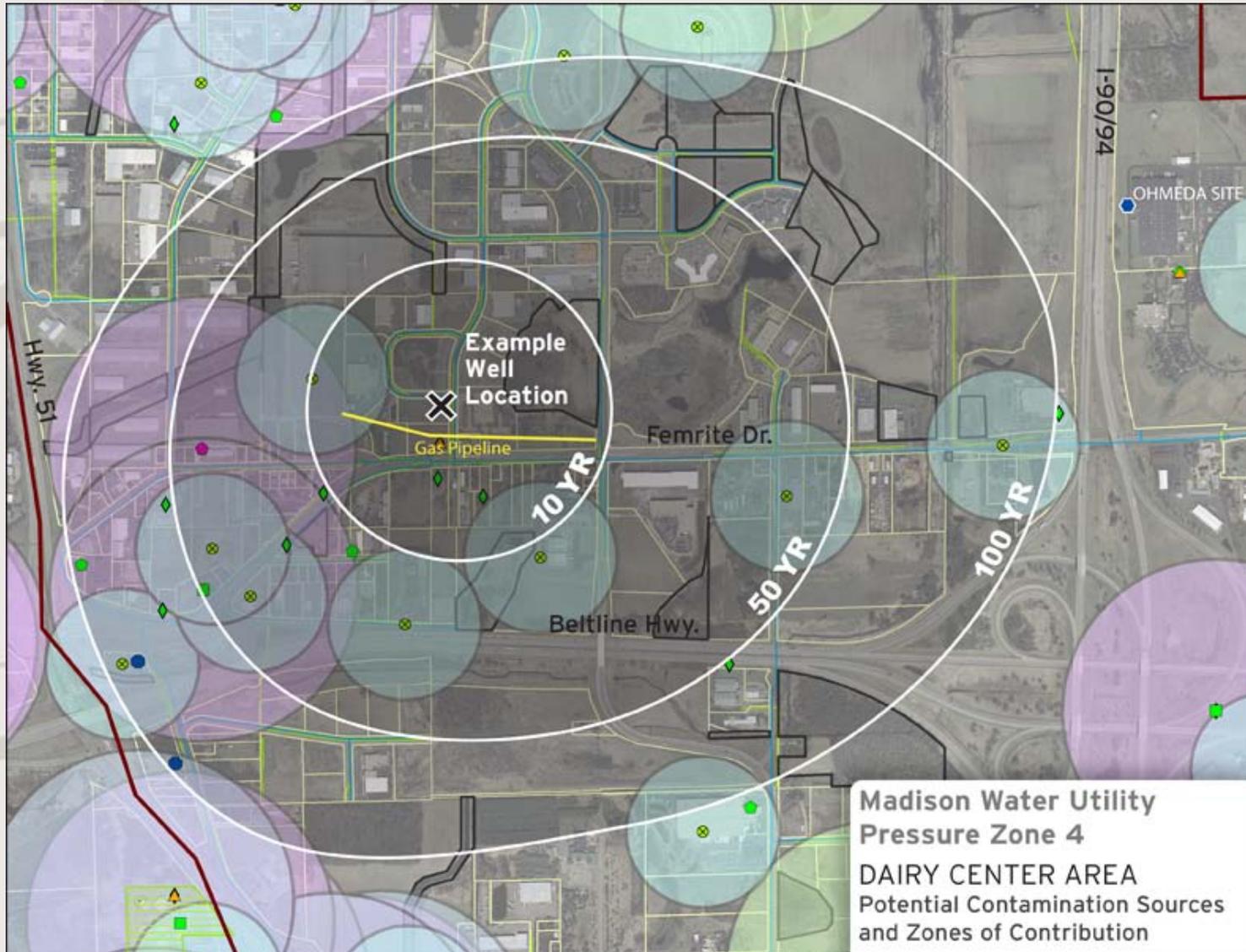
### Notes:

Closed Remediation Sites with Contamination Remaining and Contaminated and Cleaned Up Sites are from the Wisconsin Department of Natural Resources (WDNR), Bureau for Remediation and Redevelopment Tracking System (BRRTS)  
 ERP = Environmental Repair Program (contaminated sites other than LUST)  
 LUST = Leaking Underground Storage Tank

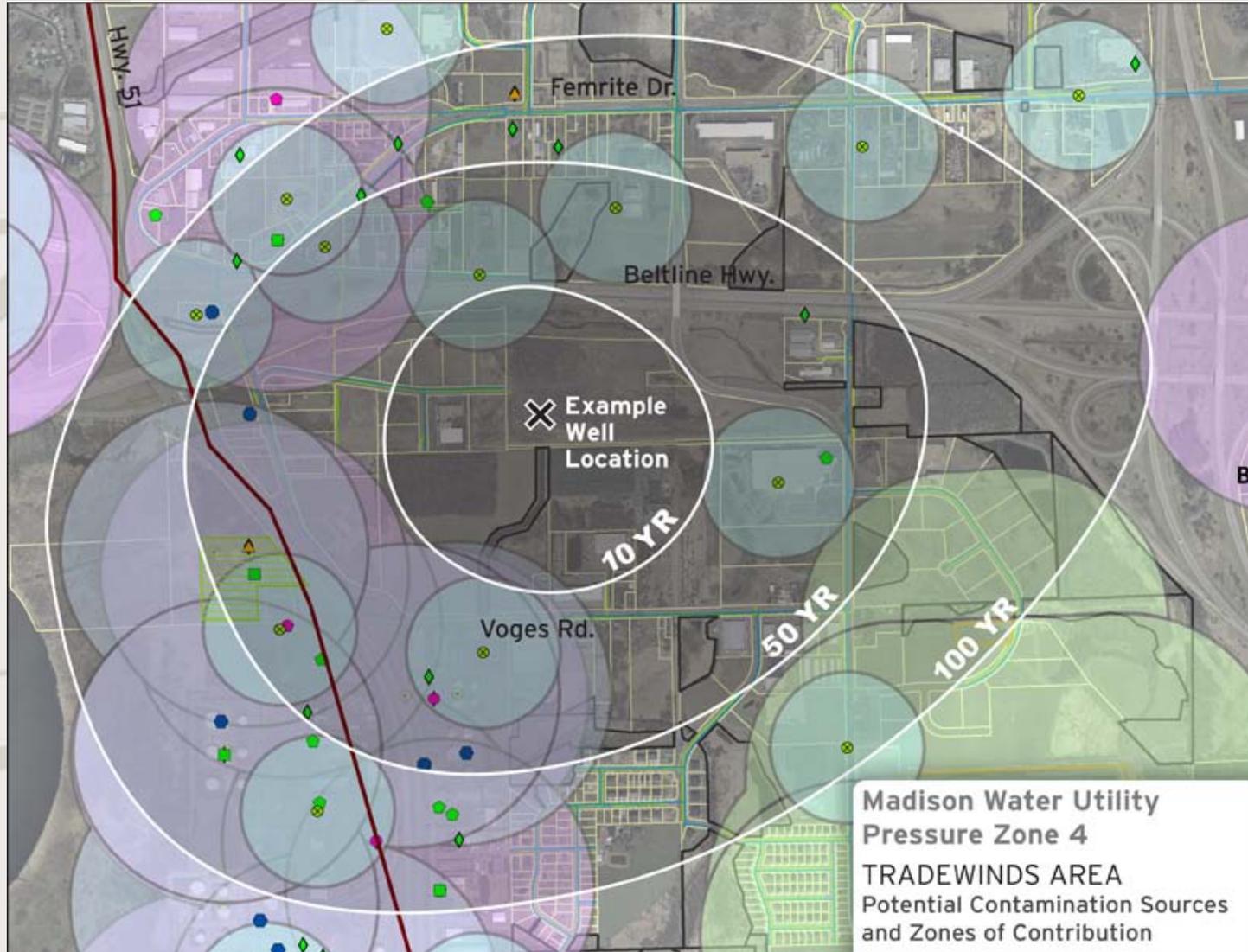
### Data Sources:

Closed Remediation Sites with Contamination Remaining and Contaminated and Cleaned Up Sites downloaded from WDNR RR Sites Map on September 1, 2010.

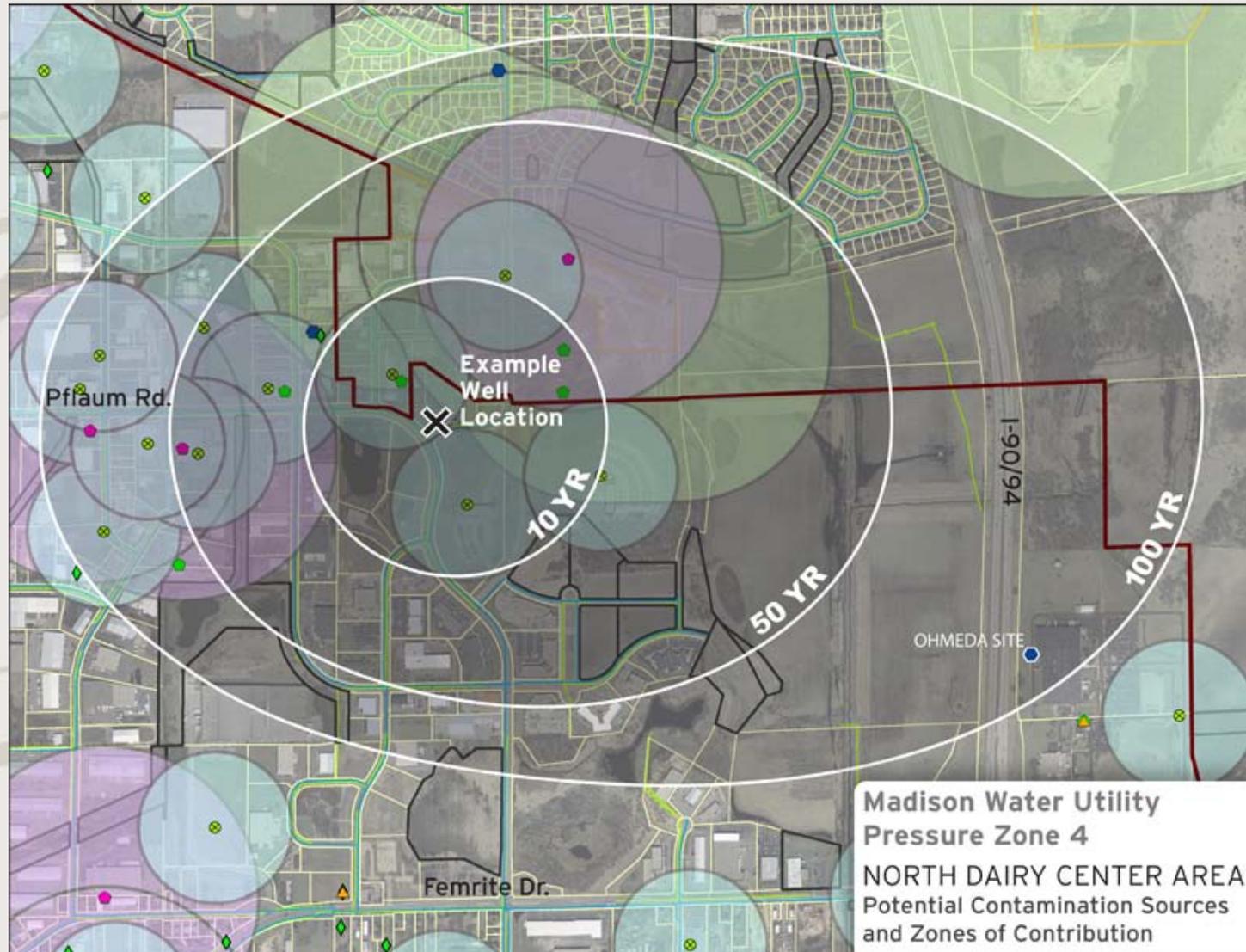
# Dairy Center



# Tradewinds Area



# North Dairy Center



# Recommendation to MWU Board

Authorize Water Utility staff to pursue negotiations with property owners in both the Tradewinds and south Dairy Center areas to obtain land at the most reasonable cost. If neither of these areas is feasible, then the north Dairy Center area should be considered.

Thank You.

Questions?



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