


## Unit Well 31 Facility Design





## Project Background

- The 2006 Madison Water Utility Master Plan identified a fire flow capacity deficiency and a lack of supply redundancy in the southern part of Pressure Zone 4.
- New Well 31 was recommended within zone 4.
- Two test wells were drilled
  - Tradewinds Property
  - Dairy Drive
- Both yielded similar capacity's and quality and 4901 Tradewinds Parkway was purchased



## Project Location




**Legend**

- Proposed Unit Well 31
- Existing Reservoirs
- Existing Unit Wells
- Pressure Zone 4

Scale: 1:25000



## Project Site



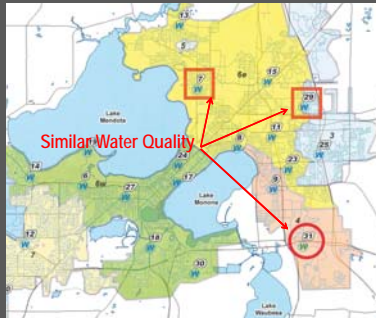
TRADEWINDS PKWY

JADON DR




## Water Quality

- Well 29
  - FE 0.37 mg/l
  - MN 84.2 ug/l
- Well 7
  - FE 0.39 mg/l
  - MN 27 ug/l
- Well 31
  - FE 0.24 mg/l
  - MN 11 ug/l



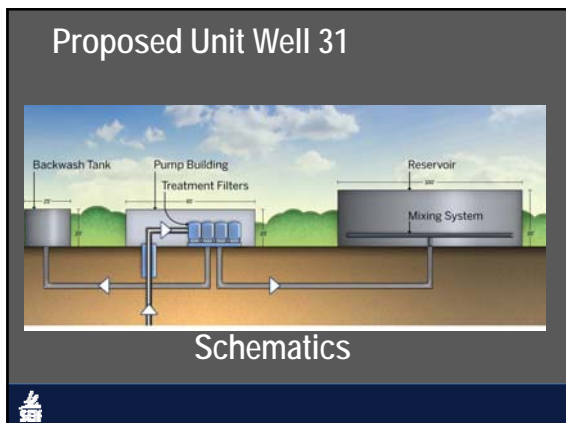
Similar Water Quality



## Public Information Meetings

- Options
  - 1.5 MG Reservoir
    - Attached & Detached
  - 2,200gpm well pump and motor
  - 16- 4-foot vertical pressure filters
  - Backwash tanks
  - Firm capacity of 3,500gpm
- PIM #1 September 3<sup>rd</sup>
- PIM #2 November 17<sup>th</sup>



- ### Option 1A Recommended
- Lowest overall capital costs
  - Low facility maintenance
  - Life cycle cost analysis
    - Concrete wire round tank
  - Total unit well building square footage of 4,052
  - Storage building 3,900 square foot
  - Two rectangular concrete backwash tanks above grade; Totals 100,000 gallons
  - One detached 1.5 MG wire-wound cylindrical concrete potable water storage tank
  - Total estimated project costs \$5.5 Million
    - MWU currently has budget \$5.7 Million.

### Next Steps

Description	Mile Stone
• Proceed with Final Design of Approved Conceptual Design 1A	December 2014
• 30% Design Update and UDC Application	February 2015
• 90% Design, Plans and Specs	April 2015
• Bid Period	June 2015

