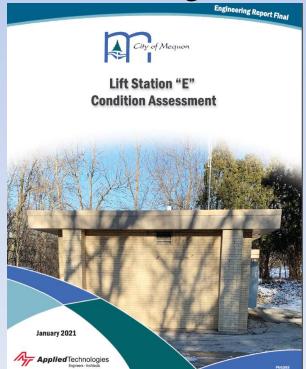
Lift Station Improvement Project Ranch Road Lift Station "E"



Meeting 1pm December 15, 2021 City Hall

- Condition Assessment Completed
- Site Evaluation and Site Selection In Progress
- Preliminary and Final Design Pending Site Selection
- Construction





• Condition Assessment – Completed

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CHAPTER 7 – LIFT STATION EVALUATION

Projected Flows
Alternative 1 – Upgrade Existing LS E7-3
Alternative 2 – New LS E at West Ranch Road
Alternative 3 – New LS E at Wildwood Drive
Alternative 4 – New LS at Fire House to Offload LS E7-12
Cost – Effectiveness Anaylsis and Alternative Selection
Non - Monetary Cost Evaluation7-25
Alternative Selection



PROPOSED PROJECT: SYSTEM IMPROVEMENT BACKGROUND

• Lift Station E Service Area (5 sq. mi.)

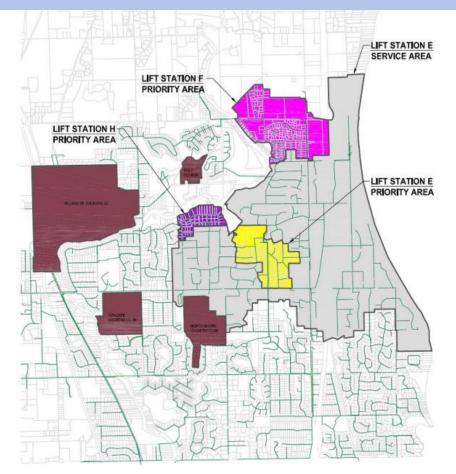
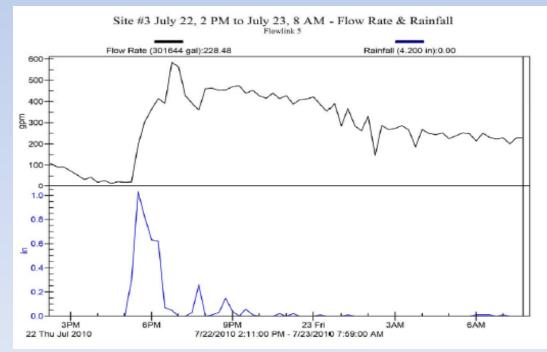




Figure 1. Recommended Areas for PPI/I Program

PROPOSED IMPROVEMENTS: REDUCE WET WEATHER FLOWS

- Clear Water Compliance Inspections
- Rehabilitation of Sewer System
- Lift Station Improvements





PROPOSED PROJECT: LIFT STATION CHALLENGES

City of Mequon-GIS

Floodplain and Easement Width Ο



CO

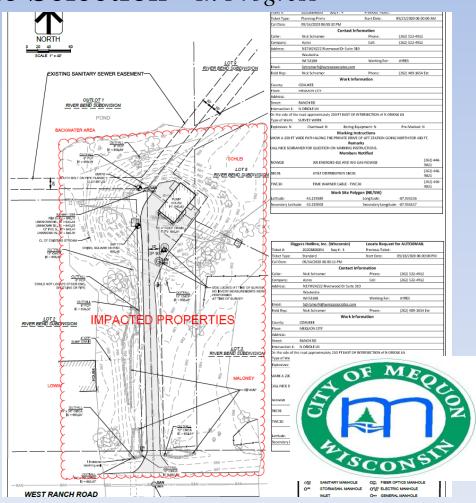


• Site Evaluation and Site Selection – In Progress

Raise aboveFloodplain

• Encroachment of Fill

• Existing Utilities



Address Capacity
 Reduce Sewer
 Overflows
 Comply with MMSD
 & WDNR
 Preserve quality of life

14" B&B WALL CASTING C/L ELEV. 67.0 10" C L VENT PIPE C/L ELEV. 66.25 - 10" C.I. VENT C/L ELEV. 55 FI FI 54 (0 36" INFLUENT SEWER 12" GATE V ELEV. 61.25 PLMP #2 STEEL STAIR GRATING 10"X12" ECC SCRE TREADS TER EL. 53.70 EI 53.85 1.1.1.1. 10" C. L. VENT PIPE- C/L ELEV. 55.50 -B&B WALL CASTING -14" C.I. PUMP DISCH. HEADER - C/L ELEV 67.0

o Reduce non-compliance (N.R. 110 & 210)



• Site Evaluation and Site Selection – In Progress





• Site History (1941 Aerial)



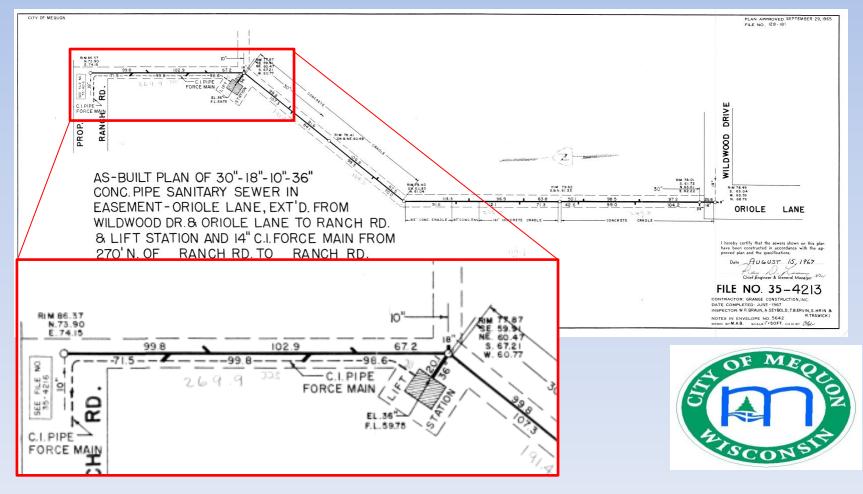
• Site History (1950 Aerial)



• Site History (1963 Aerial)



• Site History (1967)

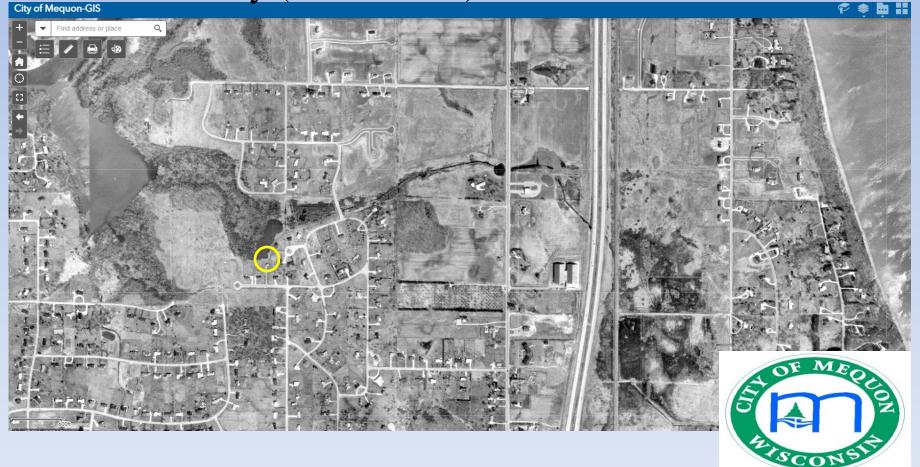


• Site History (1970 Aerial)

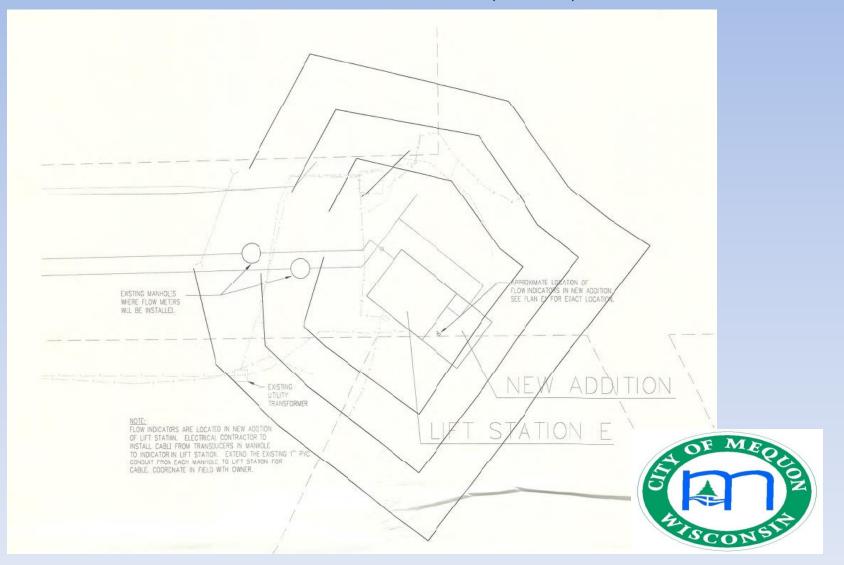


SCO

Site History (1980 Aerial)



DESIGN OF BUILDING ADDITION LIFT STATION IMPROVEMENT (1999)

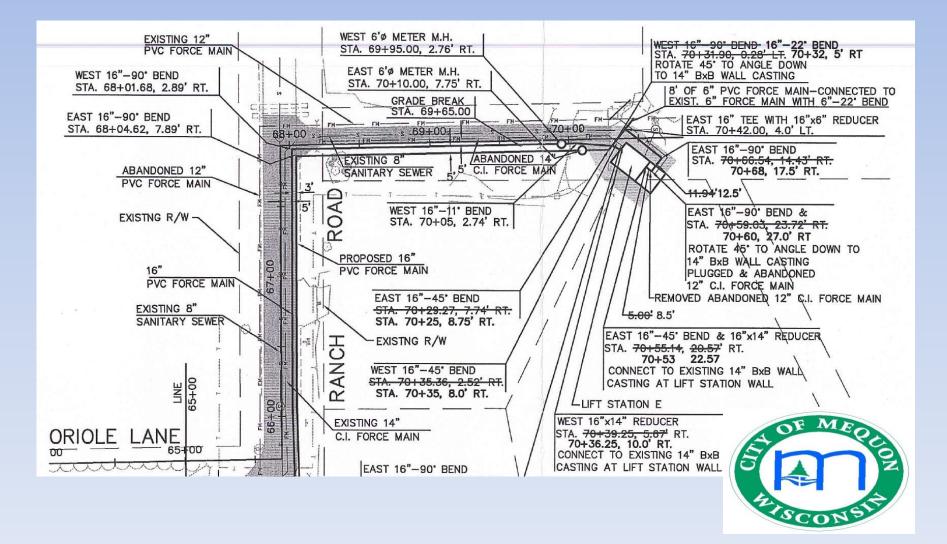


O Site History (2000 Aerial)

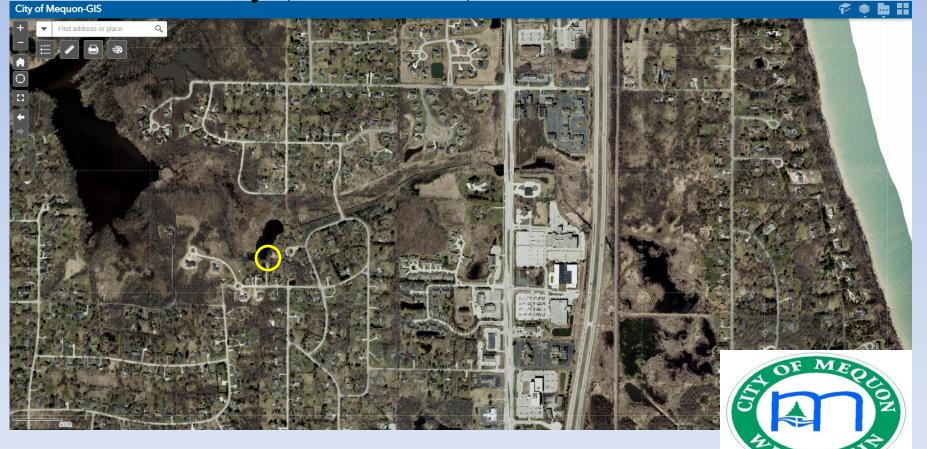


SCO

LIFT STATION IMPROVEMENT: TWIN 16-INCH DIA. FORCEMAINS (2001)



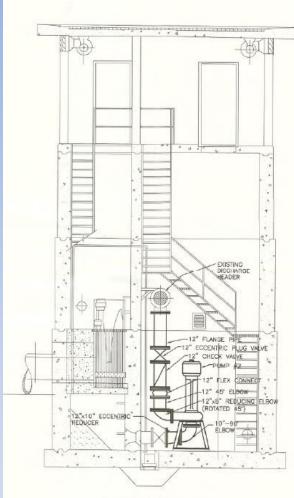
• Site History (2020 Aerial)



SCO

CHRONLOGY OF SITE

- o 1965 LS E Constructed
- o 1976 Back-Up Power
- 1997 Pump Improvements
- o 1999 Station Upgrade
- o 2000 New Control Panel
- o 2001 Force Main Replacements
- o 2002-2003 Odor Control
- 2007 New Transformer and Meter
- 2008-2009 Pump Improvements



PROPOSED SECTION 1-



CHRONOLOGY CONTINUED

- o 2010-2011 Valve Replacements and Pump Work
- o 2012 Transfer Switch Upgrade
- o 2013 Pump Replacement, Mechanical Improvements
- o 2014-2015- Safety Improvements
- o 2016-2017 Stairwell Repairs and Odor Control Work
- o 2018-2019 Pump, Valve, Lighting, Electrical Work
- 2020 Safety and Operational Improvements (ETS)
- 2020 Condition Assessment
- 2021 Site Evaluation
- 2022 Budget Approval to Replace Station

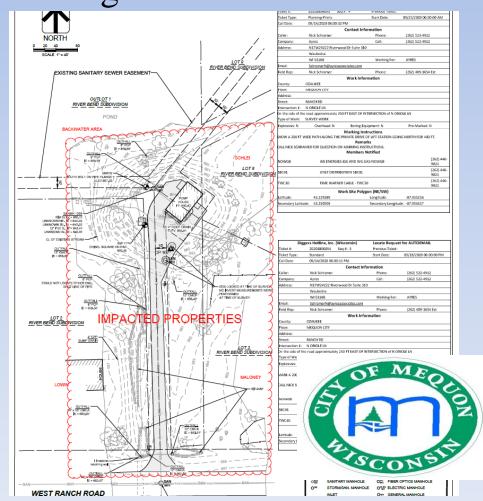


2021 SCHEDULE

- December 2021 Outreach Meetings
- January 2022 Additional Outreach Meetings (tentative, if needed)
- Winter 2022 Appraisal for Easement Acquisition (tentative)
- February 2022 Hire Consultant for Design (if authorized)
- Spring 2022 Preliminary Design (if authorized)
- Summer 2022 Final Design (if authorized)
- Fall 2022 Bid Opening and Contractor Selection
- Winter 2022 Construction / Site Restorations
- Spring 2023 Contract Completion / Start-up
- Summer 2023 Decommissioning



- Access Required before Design
- Raise aboveFloodplain
- Encroachment of Fill
- Agreements for
 Easement or
 Site Acquisition
- Relocate Existing
 Utilities



PROPOSED PROJECT: AREA OF CONCENTRATION

• Ranch Road and River Bend Court





PROPOSED PROJECT: SUMMARY & FOLLOW UP ACTION

- Volunteer for Appraisal
- Willingness to discuss Easement or Land Acquisition
- Estimate for Completion tbd



QUESTIONS

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Example –Lift Station

