

# Lannon – Lisbon Joint Water Study Explores Options for Long-Term Resiliency

**Public Hearing**  
**Town of Lisbon**  
*December 18, 2019*

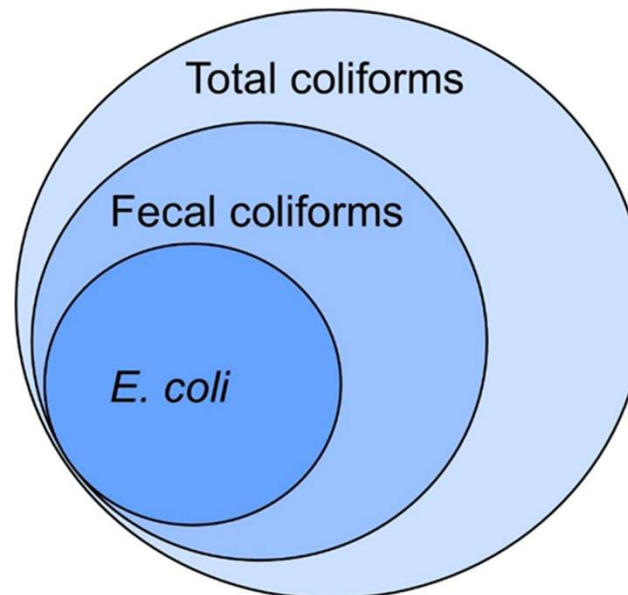


# Outline

- Lannon's Need for Rapid Water Expansion
- Lannon's Need for Redundant Supply
- Lannon's Historic Water System Planning
- Great Lakes Compact Implications
- Lannon Must Explore Second Source Alternatives

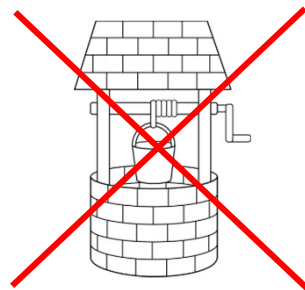
# Lannon's Need for Rapid Water Expansion

- Lannon Declared a Public Health Emergency in October, 2018
  - ~55% of all Tested Private Wells are Coliform or E. Coli Positive
  - Since Fall 2018, 65 Wells Tested, 36 Positive Coliform, 13 Positive E. Coli
  - Lannon Elementary School Repeatedly Tested Positive for E. Coli
  - Municipal Water was Extended to Lannon Elementary in 2019
- Municipal Water Expansion is Proposed by End of 2020

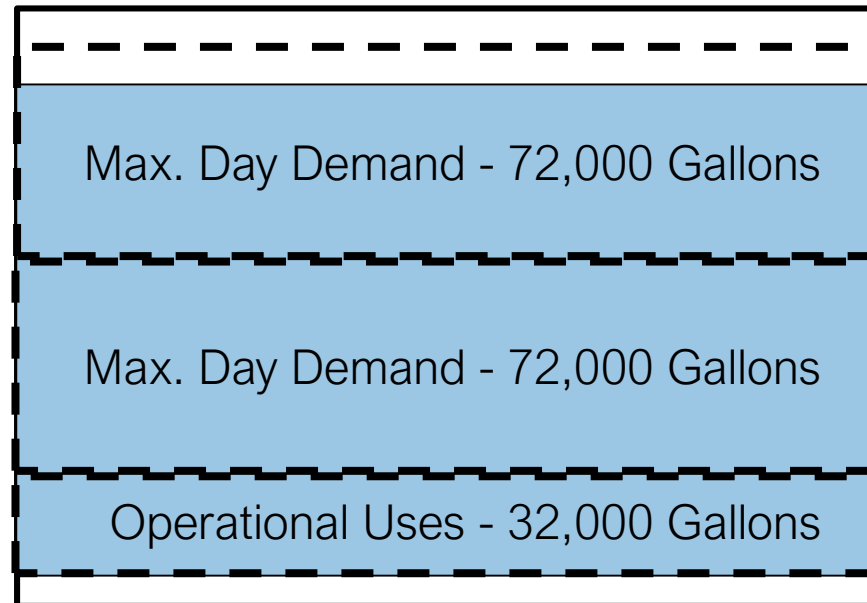


# Lannon's Need for Redundant Supply

- Lannon has One 250 gpm Well, and a 160,000 gal Reservoir
- WDNR Code Requires Redundant Supply (NR 811.26(1))
- Lannon's System Will Drain in Two Day's Based on 2019 Demands and If the Well Is Out of Service
  - 2019 = Firm well **supply deficit** of 50 gpm
  - 2024 = Firm well **supply deficit** of 188 gpm



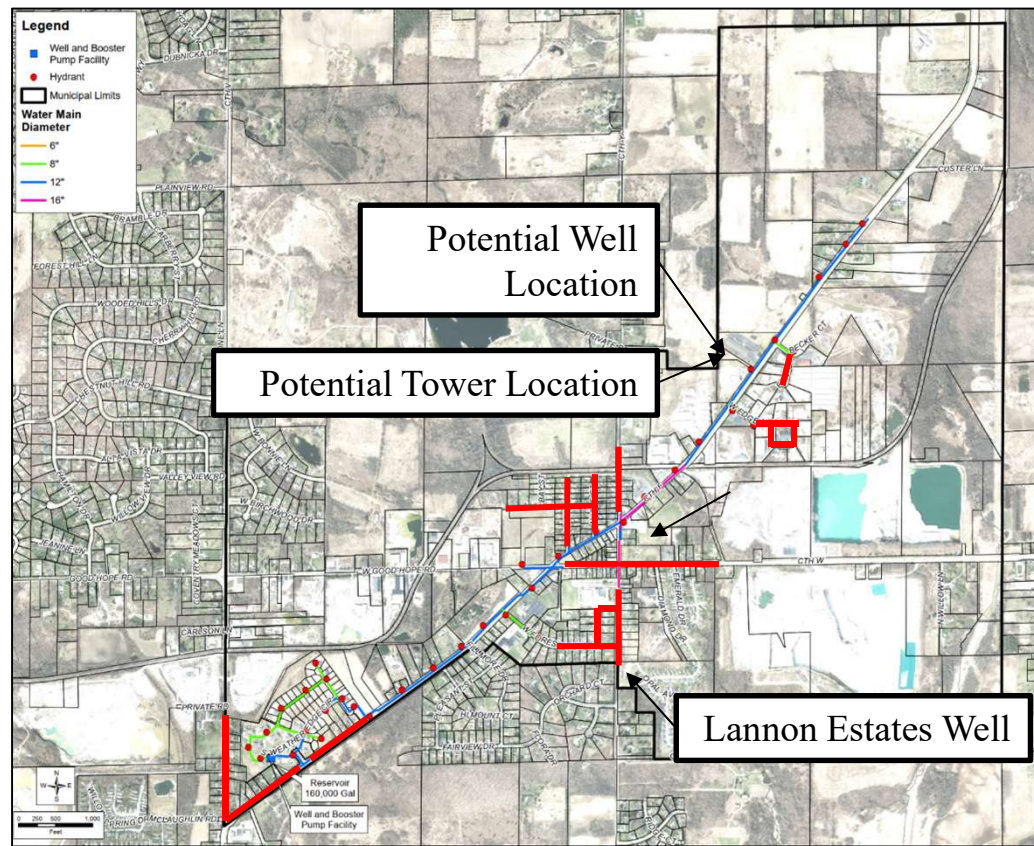
250 gpm Well  
(Firm Supply)



160,000 Gallon Reservoir

# Lannon's Need for Redundant Supply

- Service Connections will Increase from 142 to 317 by End of 2020
- Most Connections are for Residents Earning Below the State MHI



# Alternatives and Utility Ownership Considered

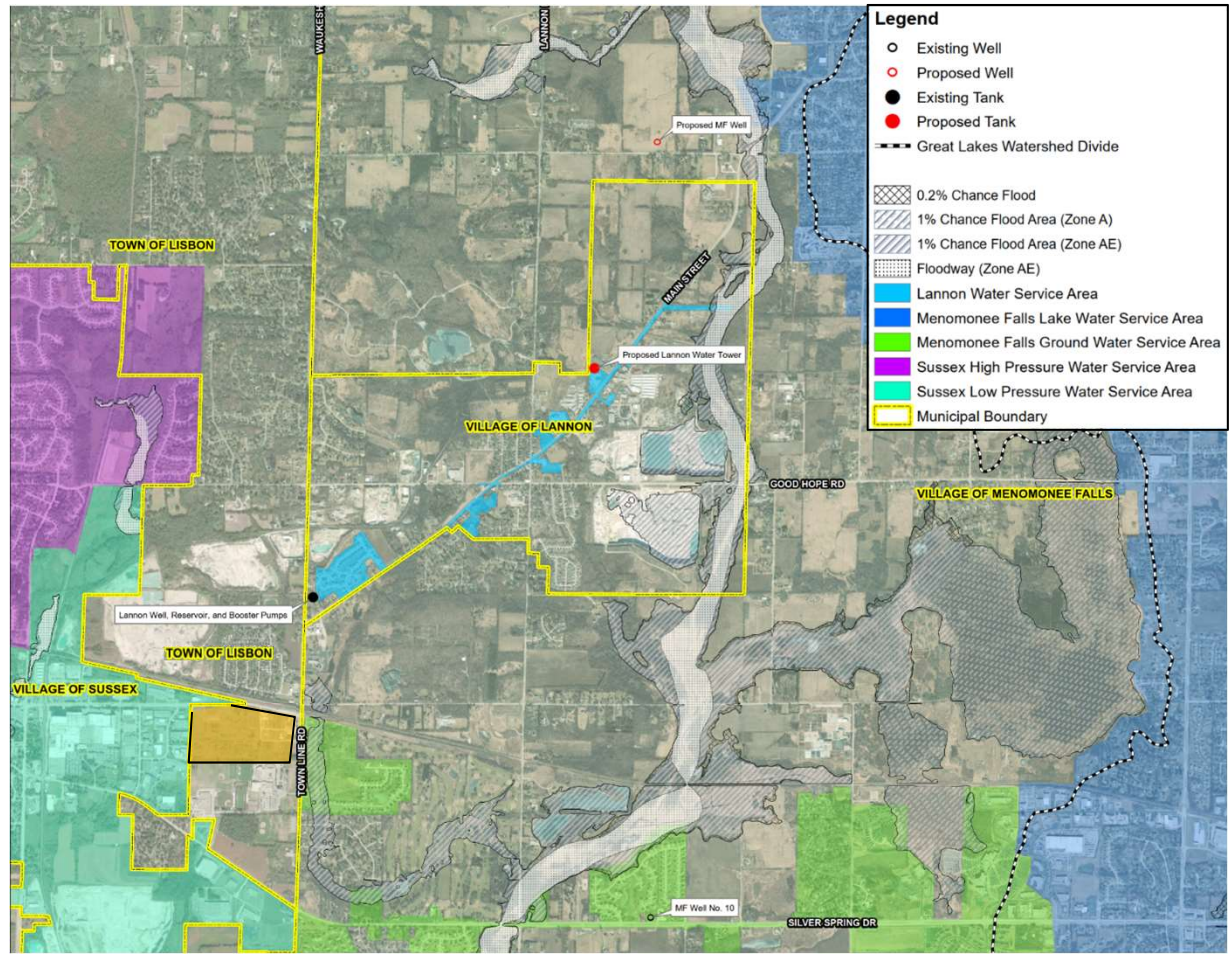
- **Alternative A** – Emergency Interconnection with Village of MF
  - Different hydraulic gradient, Great Lakes Compact
- **Alternative B** – Joint Menomonee Falls/Lannon Combined System
  - Disconnection required from Lake Water System
- **Alternative C** – Interconnection with Village of Sussex
  - Farther Away
- **Alternative D** – Combined System with Town of Lisbon
  - Use future well to be constructed by Lisbon
- **Alternative E** – Build out Own System
  - Expensive (\$2.5M for Deep Well with Radium Treatment)


Sussex  
HGL = 1,080 feet

Lannon  
Village Hills

Lannon  
HGL = 1,065 feet

Menomonee Falls  
HGL = 1,030 feet

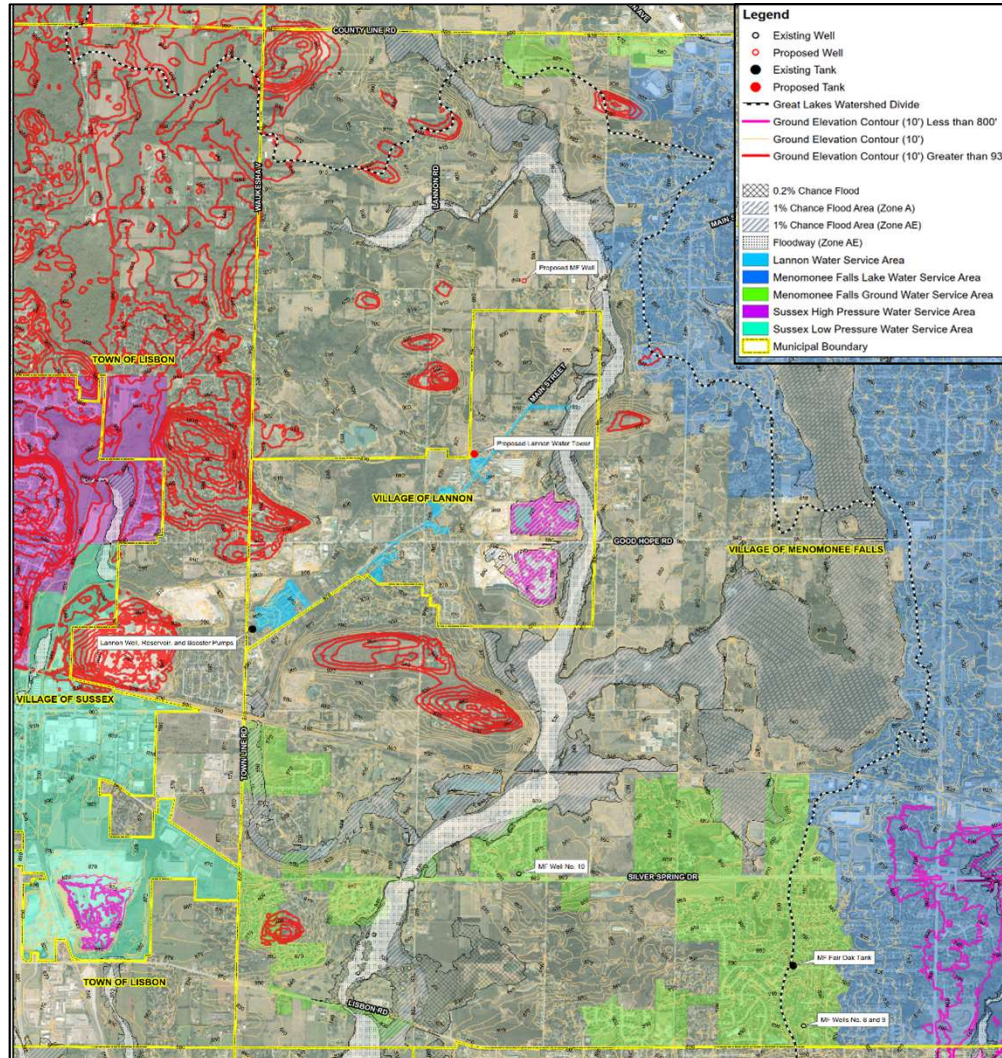



  
 Sussex
   
 HGL = 1,080 feet

Lannon
   
 Village Hills

Lannon
   
 HGL = 1,065 feet

Menomonee Falls
   
 HGL = 1,030 feet



# Great Lakes Compact Further Complicates Interconnections with Menomonee Falls

- Great Lakes Compact Implications
  - 2 of Menomonee Falls' Groundwater Wells are Inside of the Basin, Operating Under a Grandfathered Diversion
  - Lannon is a Community in a Straddling County, Requiring Approval of All Great Lakes Governors. (Sec. 4.9 of Great Lakes Compact)
  - Physically Connected Emergency Interconnects are Prohibited. (Sec. 4.9 of Great Lakes Compact)
- Similar Emergency Interconnect Was Not Approved by WDNR
  - Sussex & Menomonee Falls
  - WDNR Not Approved Based on Great Lakes Compact

# Lannon Water Expansion Must Continue to Plan for Interconnections with Neighboring Communities

- Lannon's Water System Must Expand to Address Public Health Issues
- Lannon Must Have Redundant Supply as Dictated by WDNR Code 811.26(1)
- Further Investigation of a Lannon-Lisbon Interconnect is Prudent for Lannon
- Potential Benefits Include Redundant Supply to Each System

# Lannon Will Explore Viable Options While Appropriate Agencies Would Need to Approve Formal Projects

- Next Step is to Study Options
- DNR Approves Technical Plans
  - Approval Requirements Governed by NR 108
  - Water Mains 30 days; Others 90 days
- PSC Approves Interconnects by Construction Authorization
  - Wis. Admin. Code 184
  - Interconnects – 6 months
  - Integrated Utility – 12-18 months