

Water System Expansion – Program Update March 9, 2020 Village Board Presentation

Village of Lannon, Wisconsin
Updated April 3, 2020

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Strand Associates, Inc.®

Water System Expansion Program Update – Table of Contents

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Public Service Commission (PSC) of Wisconsin Financial Outreach Letter

- PSC routinely reviews finances of all WI water utilities
- Financial Outreach Letter sent to each utility that is underperforming
- PSC recommended a Simplified Rate Case
- Letter received on January 9, 2020
- Village responded on February 24, 2020

Insufficient Water Utility Revenue

PSC Concern

- 2017 rate increase was intended to balance annual spending
- Rates have been insufficient for spending since 2017
- Deficit approximately \$83,000 annual water revenue

Village Response

- *E. coli* issues in Fall 2018 prompted additional spending
- Result of that spending was a December 2019 USDA Rural Development (USDA-RD) loan application

Plan for Revenue Growth

PSC Concern

- Plan needed for revenue growth
- Need additional approx. \$83,000 in annual revenue

Village Response

- USDA-RD project will increase customer base from approx. 150 to 350
- TID development (signed agreements) will add approx. 80 customers during same timeframe (2020-2021)
- Revenue (approx.) by calendar year 2022
 - Impact Fees: \$900,000
 - Annual Water Use: \$210,000 (increase of approx. \$120,000)
- Anticipated revenue from Rock Pointe Village (if approved)
 - Impact Fees: Approx. \$1,000,000
 - Annual Water Use: Approx. \$50,000

High Amount of Non-Revenue Water

PSC Concern

- Annual water loss is approximately 40%
- Need to pursue controls to improve

Village Response

- Water loss is estimated at 6-8 gallons per minute (gpm)
- Equivalent to 2 leaks
- Village spent \$50,000 to repair 1 leak in 2015/2016
- Leak investigation is a USDA-RD Contingency Fund Project (if additional funds are available)
- Village will pursue leaks following Water System Expansion

Schedule to Improve Utility Finances

PSC Concern

- Identify timeframe and action for improving finances

Village Response

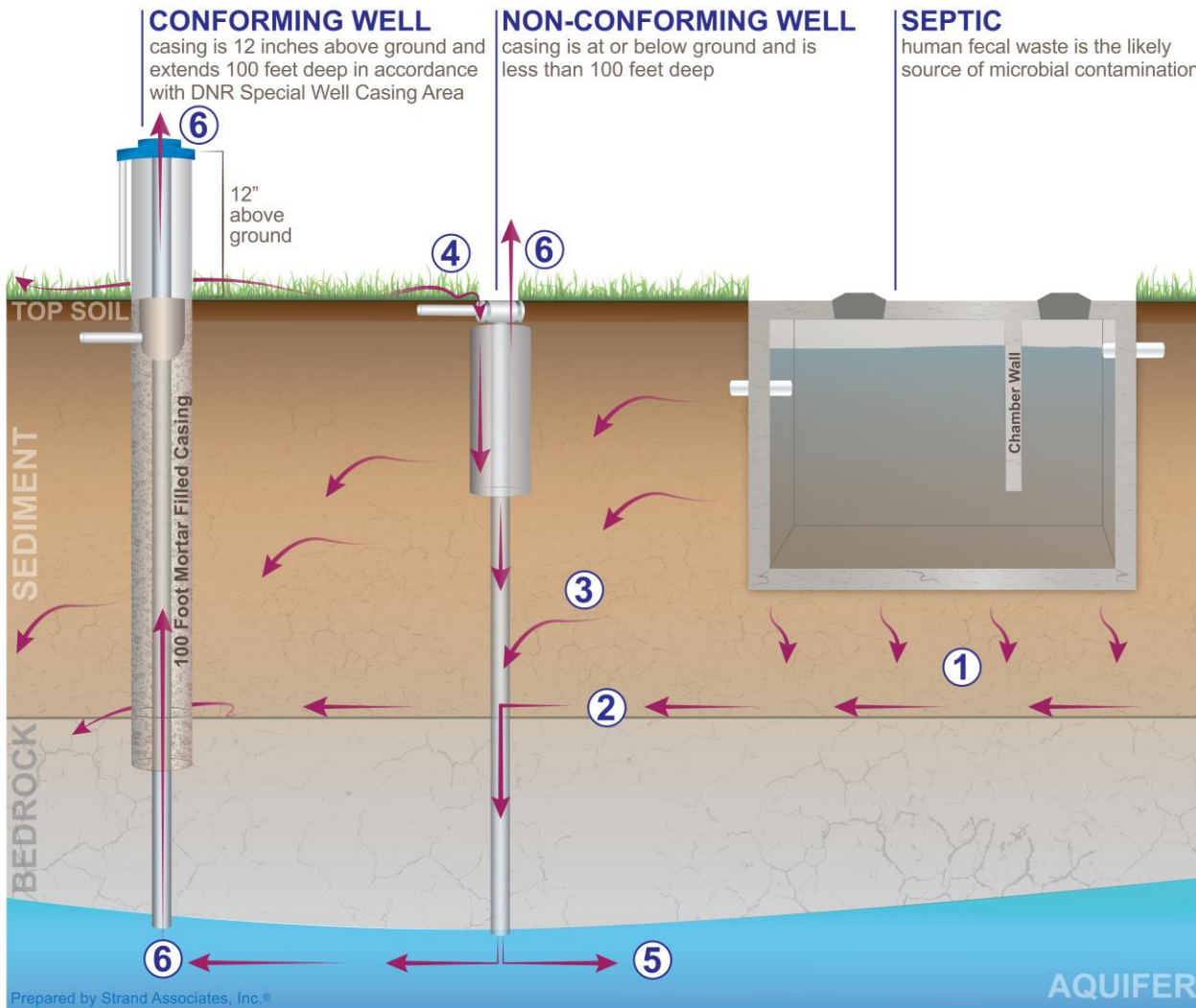
December 2019	USDA-RD Application Submitted
March 2020	USDA-RD Determination Anticipated
March 2020 to May 2020	Evaluate Anticipated Revenue
March 2020 to December 2020	Add Approximately 80 Customers from New Development
August 2020 to June 2021	Expand Municipal Water Service to 200 New Customers and One Large User
June 2021	Evaluate Revenue and the Potential Need for a Rate Increase
June 2021 to June 2025	Add Approximately 350 to 400 Customers from New Development

Conclusion to PSC – Fourfold Solution to Improve Water Utility Finances

- Implement USDA-RD water expansion project
- Add customers through new development
- Assess need for rate increase pending planned growth
- Address leaks when revenue is available

Water System Expansion Update

- Water Quality History
- Project Overview (Area, Numbers, Schedule)
- USDA-Rural Development Application Status
- Scope of Work to Property Owners
- Available Funding
- Forthcoming Policy Decisions



Microbial & E.Coli Transport to Private Wells

- ① Septic tank contaminant discharge soaks into ground.
- ② Shallow bedrock causes contaminants to move horizontally.
- ③ Contaminants encounter non-conforming well holes in the bedrock and quickly migrate to the bottom of the well hole and the aquifer.
- ④ Surface contaminants wash into non-conforming well caps.
- ⑤ Contaminants migrate horizontally through the groundwater, exposing neighboring wells.
- ⑥ Contaminants are drawn up into conforming and non-conforming wells.

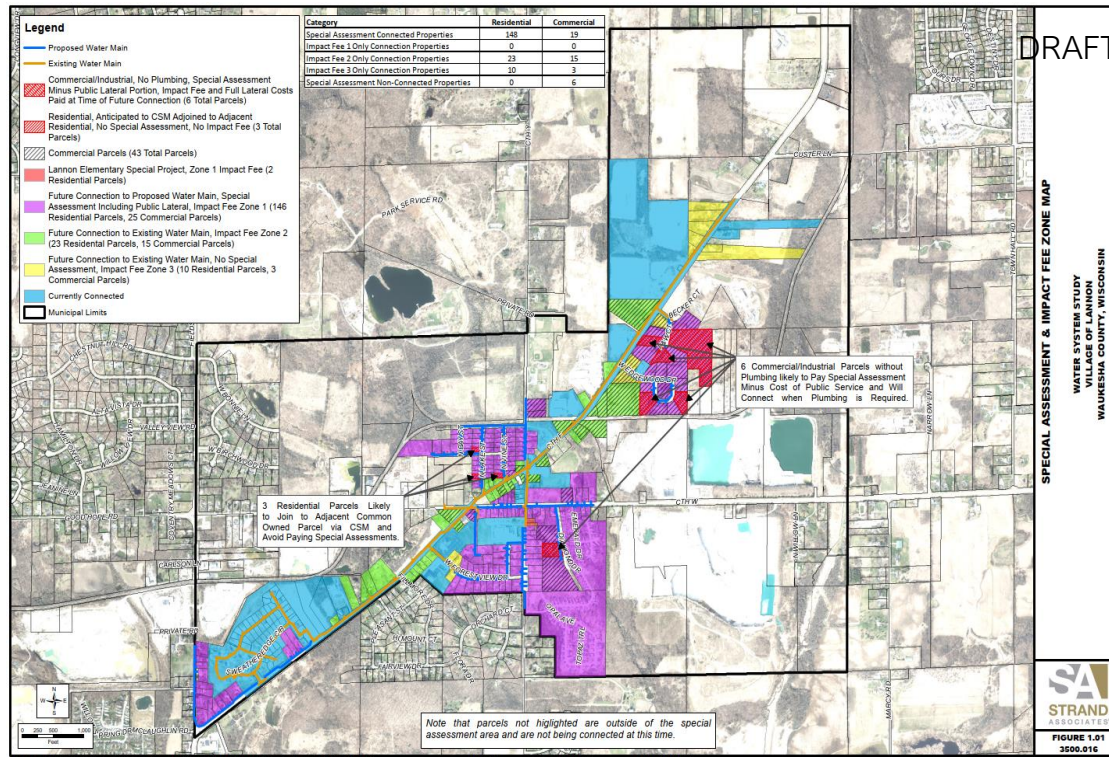
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History of Poor Water Quality from Private Wells Dates to Before 1958

- Shallow bedrock contributes to spread of contaminants
- DNR implemented Lannon Special Well Casing Area in Dec. 1958
 - 100 feet of casing
- 1990s Villagewide conversion from septic to sanitary sewer
- 2018 *E. coli* (fecal bacteria) issue re-emerges
 - 60% coliform positive; 22% *E. coli* positive
 - Neighboring septic systems may be the likely source
 - Village is conducting additional testing to understand the source
- 2019 Lannon elementary (17-ft casing) converts to municipal water

Project Overview Map

- USDA-RD applied for 3 miles of water main and a well
- USDA-RD water main services 172 properties representing approx. 700 of 1,200 Residents



Blue: Existing water customers

Purple: USDA-RD water expansion properties

Green & Yellow: Properties with access to existing mains that have not connected

Anticipated Type and Number of Properties Included

- USDA-RD Project new users – 166 immediate new users
- New connections to existing mains – 51 (33 residential)
- Total customer connections by project completion – 358
 - Represents approximately 80% of Lannon’s Population

User Type	Existing Main and Existing Connection	New Main and New Connection	New Main and No Connection	Existing Trunk Main and New Connection	Existing Sector Main and New Connection	Total Users
	1	2	3	4	5	
Residential	131	146	0	23	10	310
Commercial/Industrial	7	19	6	15	3	44
Public	3	0	0	0	0	3
Residential–Lannon Estates	0	1	0	0	0	1
Total	141	166	6	38	13	358

Table 6.07-1 Proposed Water System Users

Schedule Update

- USDA-RD Letter of Determination – Anticipated April 2020
- USDA-RD “Dockets” & Policy Decisions – March-May 2020
- Construction – Summer 2020 to Summer 2021

Lannon Water System Expansion		1Q 2020			2Q 2020			3Q 2020			4Q 2020			1Q 2021			2Q 2021			
Task		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
A.	Design and Regulatory Approval	[Orange bar]																		
	1. Design Water Main	[Blue bar]																		
	2. Submit Pre-Application (PER and ER)	[Red star]																		
	3. USDA RD - State and National Review		[Blue bar]																	
	4. Receive Application Decision and Complete Application			[Red star]	[Blue bar]															
	5. WDNR Agency Review			[Blue bar]																
	6. USDA RD Agency Review					[Blue bar]														
	7. Advertisement							[Blue bar]												
	8. Bid								[Red star]											
	9. Contract Execution									[Blue bar]										
B.	Construction									[Orange bar]										
	1. Construction Mobilization									[Blue bar]										
	2. Construction - Water Main and Public-Services										[Blue bar]									
	3. Private-Service and Plumbing Installation										[Blue bar]									
	4. Private Well Abandonment										[Blue bar]									
	5. Final Completion																			[Red star]
	6. Loan Closing																			

Water System Expansion Project Elements and Budget

- Total Program Cost Opinion: \$10.9M
- USDA-RD will only fund public costs: \$8.9M
 - Water mains and well acquisition
 - Water service laterals within the public right of way
 - Road restoration in disturbed areas
 - Village roads – resurface full road pavement width (all lanes)
 - County roads – resurface full lane pavement width (all lanes in some areas, single lane in other areas)
- USDA-RD will NOT fund private property costs: \$2M
 - Private service lateral
 - Private plumbing
 - Private well abandonment
 - Water impact fee

Example Scope and Approximate Cost of Private Property Work without Assistance

Special Assessment (public):	\$ 43,000
New Service Installation (private):	\$ 6,500
Plumbing Conversion (private):	\$ 2,000
Well Abandonment (private):	\$ 2,000
Impact Fee (private):	<u>\$ 1,500</u>
Example Total without Assistance:	\$ 55,000

Notes:

- This amount is for a single family residence without an existing service lateral.
- Approximately 63% of properties surveyed have an existing service lateral.
- Plumbing conversion costs will be much higher if property owner keeps their private well.
- All numbers subject to change.

Additional Funding Sought by Village on Behalf of Property Owners

- Priority to minimize property owner “out-of-pocket, up-front” costs
- Waukesha County Community Development Block Grant (CDBG)
 - Private water service laterals
 - Plumbing conversion
- Wisconsin Department of Natural Resources (WDNR) Well Abandonment Grants
 - Well abandonment
- Quarry Contributions
 - Private property work
 - Special Assessment relief

Example Scope and Approximate Cost of Private Property Work with Assistance

Special Assessment:	\$ 15,000	(USDA-RD & Quarry)
New Service Installation:	\$ 0	(CDBG)
Plumbing Conversion:	\$ 0	(CDBG)
Well Abandonment:	\$ 0	(DNR or Quarry)
Impact Fee:	<u>\$ 0</u>	<u>(Quarry)</u>

**Example Approx. Total
with Assistance**

\$ 15,000

Notes:

- Grant priority has been placed on minimizing up-front costs.
- Special Assessments have payment options from 0-15 years.
- This amount is for a single family residence.
- Plumbing conversion costs likely not covered if property owner keeps their private well.
- DNR well abandonment grants are subject to income verification.
- All numbers subject to change.

Forthcoming Policy Decisions

- Blight Determination
- Well Purchase Agreement
- Quarry Agreements
- Interim Financing
- Impact Fee Revision
- Special Assessment
- Water Connection Ordinance (USDA requirement)
- Private Well Monitoring Program

Note: Many of these items will have a public hearing requirement

Waukesha County Community Development Block Grant and Blight Determination

- Village has applied for \$850,000 in Waukesha CDBG Funds
- Waukesha CDBG Executive Committee recommended award, but formal award is not final
- Scope is to aid in:
 - Private water service lateral installation
 - Private plumbing conversion
- Waukesha County recommended Village make a Blight Determination
 - Likely no individual income verification requirement
 - Waukesha County hires and pays the contractor directly
 - Follow USDA-HUD Guidelines for blight elimination

HUD Blight Determination Guidelines

- The designated area must meet the definition of a blighted area under state or local law; AND
- At least 25 percent of the properties throughout the area exhibit one or more of the following:
 - **Physical deterioration of buildings/improvements**
 - Abandonment of properties
 - Chronic high occupancy turnover rates or chronic high vacancy rates in commercial or industrial buildings
 - Significant declines in property values or abnormally low property values relative to other areas in the community
 - **Known or suspected environmental contamination**

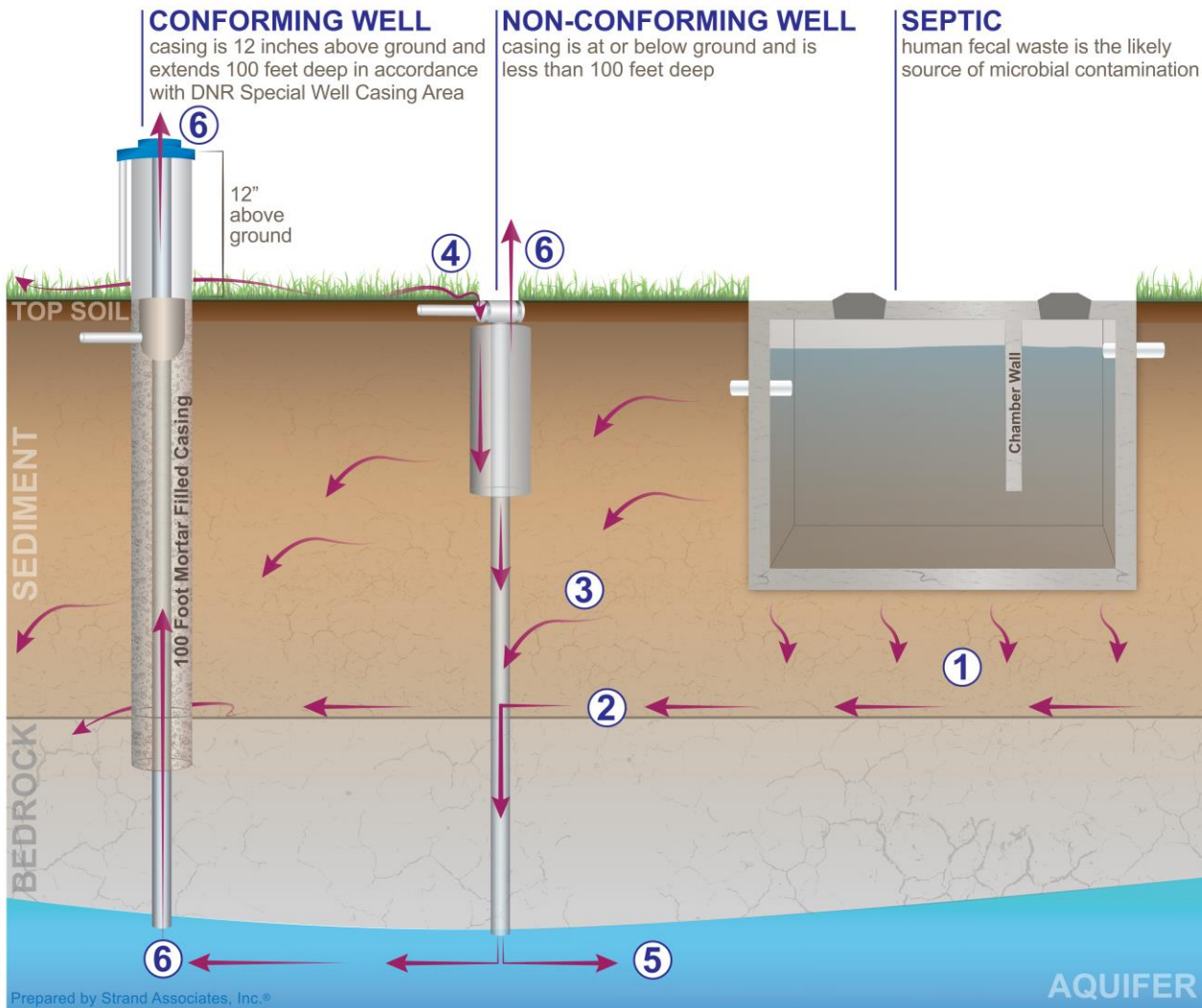
Wis. Stats. 66.1333 Blight Definition

- **Blighted Area:** Exhibits a predominance of buildings, which by reason of sanitation and the existence of conditions that are conducive to ill health, and are detrimental to the public health and welfare of the community.
- **Blighted Property:** Exhibits the predominance of unsanitary or unsafe conditions, deterioration of site or other improvements (non-conforming private wells), and that the factors listed substantially impair or arrest the sound growth of the village and constitutes an economic or social liability and is a menace to the public health and welfare in the present condition of use (of the private wells).

Non-Conforming Private Well “Findings of Fact” from DNR Consent Letter to Hamilton School District in Response to Bacteria in the Lannon Elementary Well

“Findings of Fact”

9. *From September 26, 2018 to October 31, 2018, water samples from private domestic wells in the vicinity of the School were tested by Waukesha County Department of Health. Of the 56 samples collected, 33 were total coliform positive and 12 were E. coli positive.*
10. *The School is in a known area with shallow bedrock that is susceptible to surficial contamination.*
11. *The School is within the Special Well Casing Area “Village of Lannon - Area 59b” which requires new potable well construction to have at least 100 feet of cement grouted casing due to the potential for bacterial contamination.*
12. *WUWN ES799 (the School’s well) has 17 feet of cement grouted casing with no description of annular seal material from 17 feet to 87 feet where the 6-inch steel well casing is set in limestone. WUWN ES799 does not conform to the Special Well Casing Area requirements.*
13. *WUWN ES799 is located in the School’s basement and may pose a sanitary hazard to safe drinking water. The department has not allowed well terminations in basements since April 10, 1953.”*



Microbial & E.Coli Transport to Private Wells

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- ⑥ Contaminants are drawn up into conforming and non-conforming wells.



Additional Private Well Considerations

- DNR considers the presence of *E. coli* to be in violation of water quality standards
- High bedrock contributes to contaminant spread
- Likely significantly more than 25% of private wells do not conform to Special Casing Area
- Likely more than 25% of wells tested are *E. coli* positive
- Waukesha County has reviewed a DRAFT Determination Letter and concurs with this justification

Recommendation for Wis. Stats. Blight Determination

Based on these factors, the Village Board should make a determination for a blighted area in accordance with Wis. Stats. 66.1333. Specifically, this area has a preponderance of buildings, which by reason of sanitation, and the existence of conditions that are conducive to ill health, and are detrimental to the public health and welfare of the community.

The Village Board should recognize that the area of blight shall include any property that has a private well and any property not yet developed. Exceptions would be for properties currently zoned quarry, park, or conservation (based on the likelihood of these properties not being developed), or properties zoned agricultural that do not have habitable buildings. This determination should be made by reason of the preponderance of unsanitary or unsafe conditions, deterioration of site or other improvements (specifically, non-conforming private wells), and that the factors listed to substantially impair or arrest the sound growth of the village and constitutes an economic or social liability and is a menace to the public health and welfare in the present condition of use of the private wells.

Water System Expansion Program Update – Next Steps

- Await USDA-RD Determination Letter (April 2020)
 - Generate scope of work to complete docket
 - Identify necessary public meetings and public hearings
- Take Action on Policy Decisions (March-May 2020)
- USDA-RD Project Construction (summer 2020-summer 2021)
- For additional information, contact the Village Engineer

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