

Water System Expansion – Background November 5, 2020 Public Hearing Presentation

Village of Lannon, Wisconsin

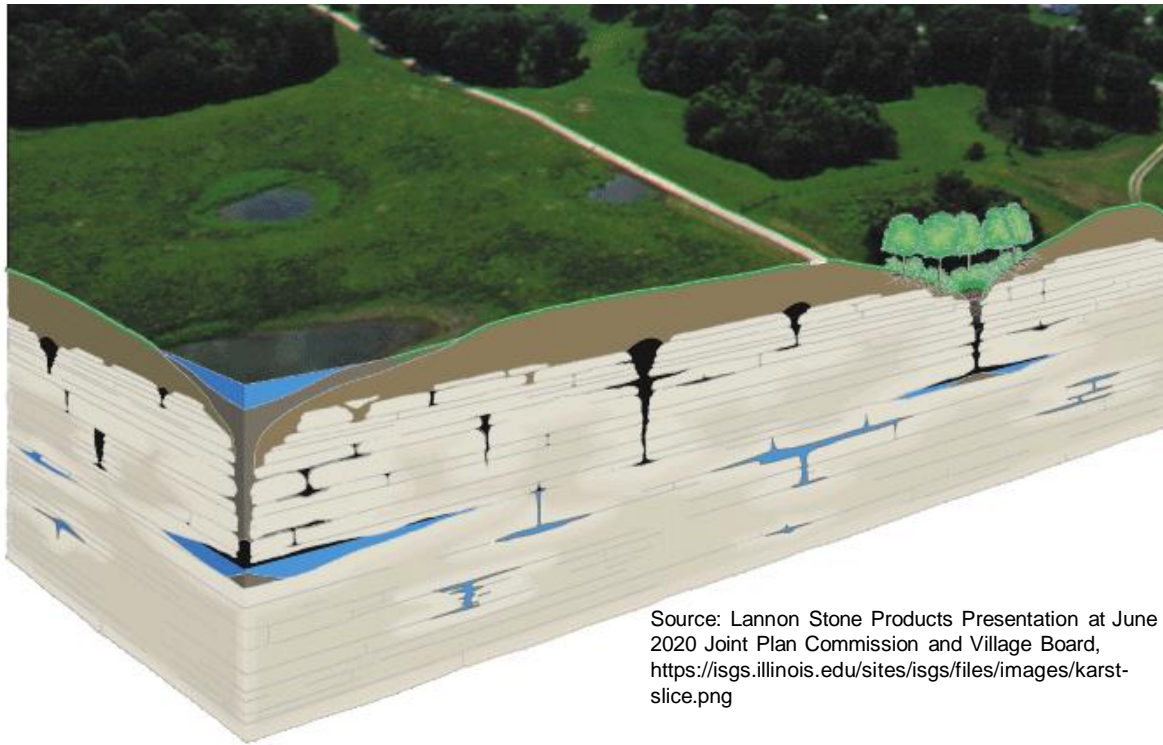
Prepared by Ben W. Wood, P.E., Strand Associates, Inc.®

Water System Expansion – Background Table of Contents

- Background
 - History of Water Quality in Lannon
 - Project Scope
 - Funding
 - Ordinance Revisions
 - Property Owner Letters
 - Water Rates
 - Schedule
- Special Assessment Report and Public Comment
- Impact Fee Report and Public Comment

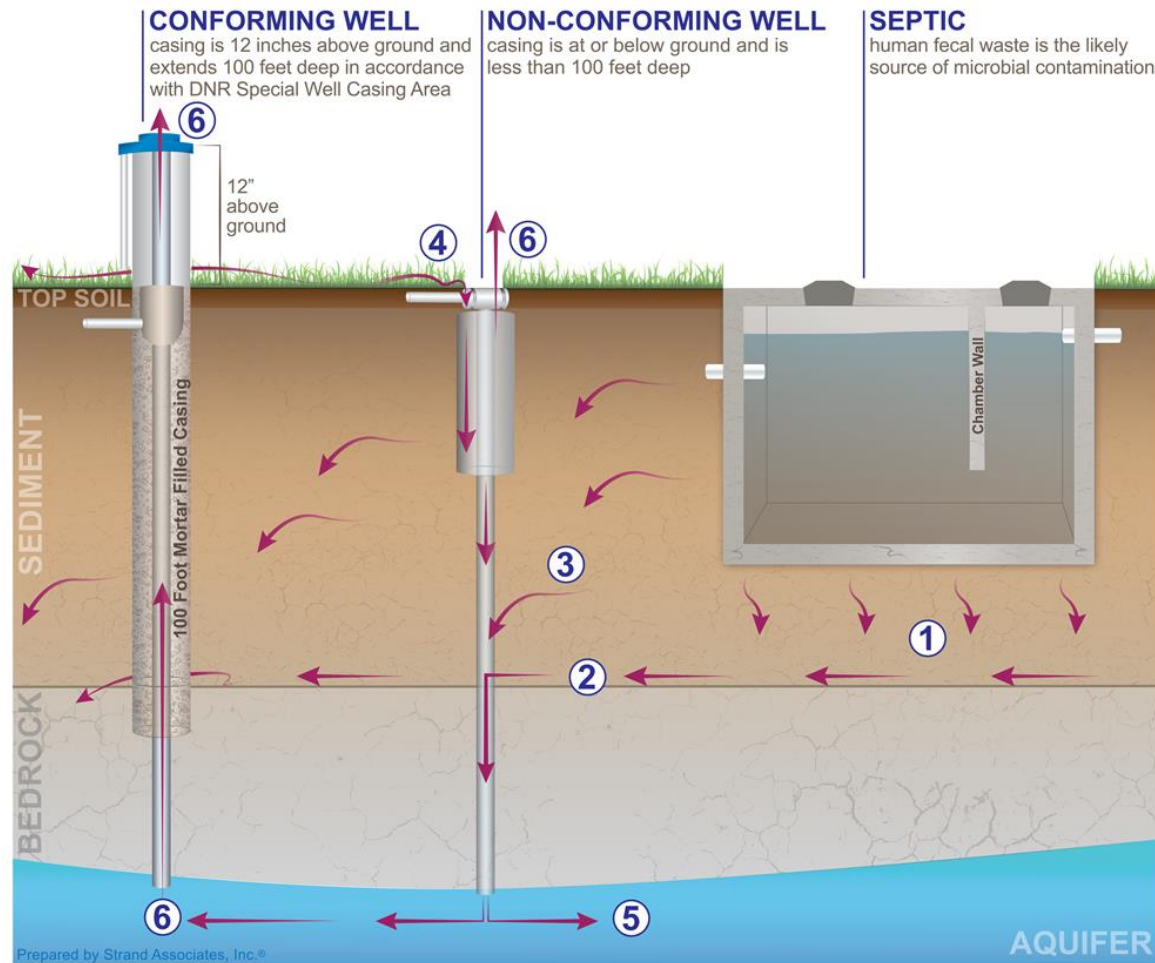
Local Geology Has Historically Been a Water Quality Challenge for the Village of Lannon

- The aquifer exists within fractures in the limestone bedrock
- Contaminants can migrate quickly through the fractures
- Wells with poor casing can be an entry point for bacteria



Source: Lannon Stone Products Presentation at June 25, 2020 Joint Plan Commission and Village Board, <https://isgs.illinois.edu/sites/isgs/files/images/karst-slice.png>

Geology and Failing Septic Systems are a Significant Source of Bacteria



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.

SA STRAND
ASSOCIATES®

The Quarries Have Changed, However the Water Quality Challenges Remain the Same

1963: Active DNR Investigation



2015: Water Quality Issues Persist



History of Water Quality Events in Lannon

- 1955: Village of Lannon issues survey inquiring about municipal water
- 1959: WDNR institutes a “Special Lannon Well Casing Area” requirement to mitigate bacteria issues in the ground water
- 1962-1965: WDNR conducts “Investigation of the Safety of Private Water Supplies Lannon, Wisconsin”
- 1965: WDNR concludes that the preferred action is to develop a public water supply to protect public health
- 1986: WDNR publishes “A Report on a Groundwater Investigation in Southeastern Lisbon Township and the Village of Lannon” and recommends municipal water and sewer for both communities
- 1997: Municipal sewer is installed throughout Lannon to mitigate bacteria sources in the groundwater

History of Water Quality Events in Lannon – Cont'd

- 1997: Engineering Study again recommends a municipal water solution and indicates water quality will worsen when quarries stop pumping
- 1997: Some municipal water pipes are installed to save costs while the trench is open for sewer installation
- 2006-2008: Whispering Ridge Condominiums installs and transfers a municipal well to the Village. A partial municipal water system becomes active as the Village of Lannon Municipal Water Utility.
- 2008: Due to the controversy at the time, mandatory connections were not required
- 2012-2018: Village Engineer fields approximately 1 call per year from a distressed homeowner whose well quality failed repeatedly, stalling home closing

History of Water Quality Events in Lannon – Cont'd

- 2018: Lannon Elementary and several surrounding private wells test positive for E.coli bacteria
- 2018: The Village Board makes an emergency declaration and directs the following:
 - Extend municipal water service to Lannon Elementary
 - Direct staff to study and find the most affordable extension of municipal water to remaining residents
- 2019: Municipal water is successfully extended to Lannon Elementary
- 2019-2020: Intensive study and loan and grant applications are made.
- 2020: Grant and loan monies are obligated
- 2020, 4th Quarter: Private property work scheduled to begin
- 2020-2021: Public water main and second source installation

Non-Conforming Private Well “Findings of Fact” from WDNR 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.*

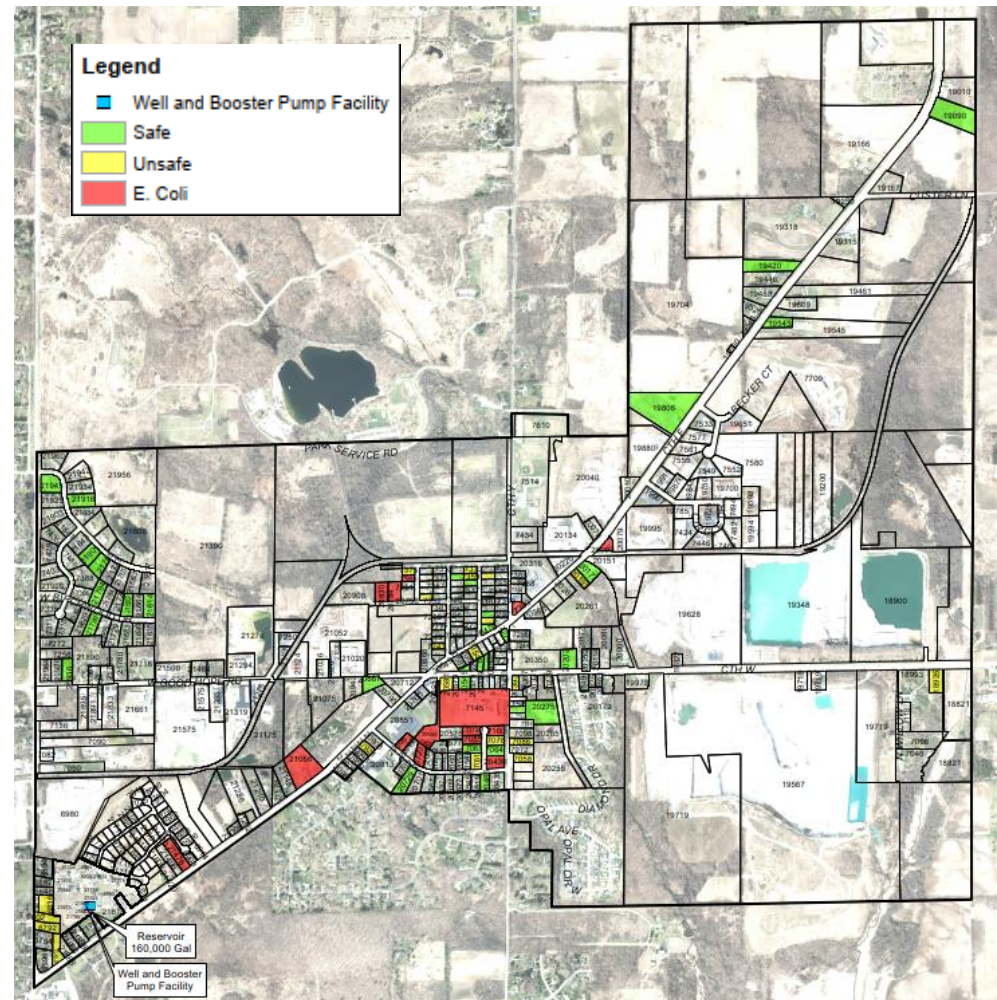
11. *The School is within the Special Well Casing Area “Village of Lannon - Area 59b” which requires new potable well construction to have at least 100 feet of cement grouted casing due to the potential for bacterial contamination.*

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.*

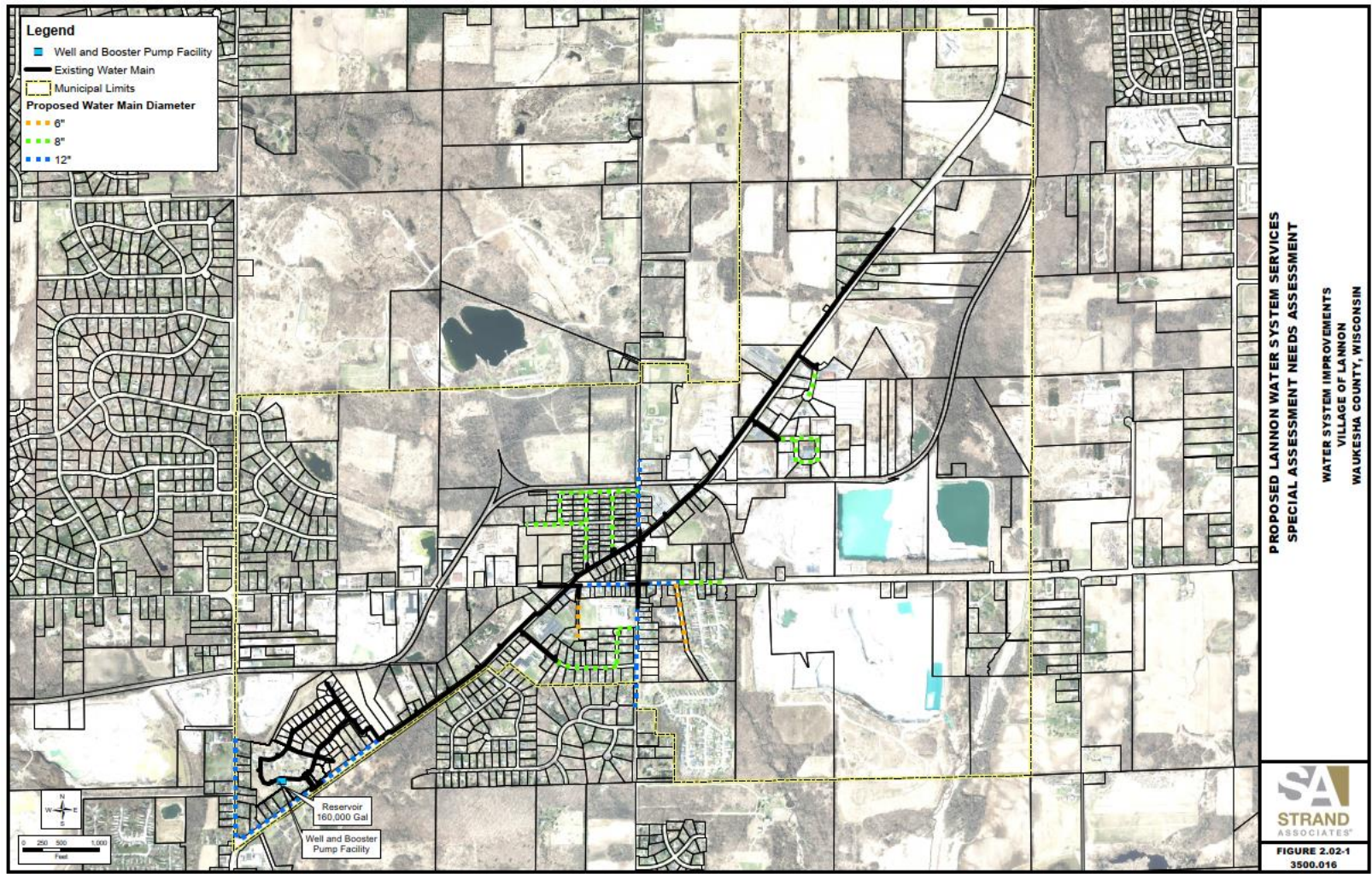
13. *WUWN ES799 is located in the School’s basement and may pose a sanitary hazard to safe drinking water. The department has not allowed well terminations in basements since April 10, 1953.”*

Project Scope Based on Public Health and Community Welfare

- Safe, reliable municipal water already available to new construction (\$400,000+ homes)
- Long-term future source supply and water storage facilities to be paid for by new developments in TIF Districts
- Safe, reliable municipal water to be expanded to existing neighborhoods impacted by bacteria



Water Main Extended to 80% of Village Residents



Project Scope Includes Road Restoration

- Last major local road work in conjunction with 1997 sewer
- Past leaders indicated streets would not be redone until water mains were installed
- End result will be similar to Lannon Road near Lannon Elementary School



Project Scope Also Based on Lannon's Loan Capacity and Grant Eligibility

- USDA Rural Development is primary funder and underwriter
- Public infrastructure is the maximum the Village can afford
 - 16,300 FT of new water main
 - Road restoration/reconstruction
 - Second source acquisition and upgrade (Lannon Estates)
- \$8,916,000 cost with \$3,493,000 grant (39%)
 - Grant eligibility based on 2010 Census
 - Lannon was slightly below MHI in 2010
 - This may be the last time Lannon will qualify for USDA grant

Summary of Obligated Funds from All Sources

- Total program budget: \$10.9M of public and private costs
- Total grant funds **obligated**: \$7.9M toward this project
- USDA Rural Development Loan and Grant
 - \$3,493,000 grant toward public water mains and road restoration/reconstruction
- Community Development Block Grant (CDBG)
 - \$847,868 obligated for private residential work
- The Quarry Fund
 - Waukesha County Community Foundation
 - \$4,560,000 obligated
 - Private property assistance (residential and commercial)
 - Public costs not USDA eligible
 - ~\$900,000 budgeted contingency for future connections

Ordinance and Policy Decisions Necessitated by Funding Sources and Agencies

- The Quarry Fund Quarry Conditional Use and Planned Unit Development Agreements modified:
 - 220 properties no longer need to be in Well Guarantee
 - Depth restriction removed for Lannon Stone Products' and Halquist Stone's large quarries
 - Well Guarantee remains in place for remaining properties
- USDA
 - Mandatory Water Connections (Ordinance 74-157)
 - Must connect within 6 Months
 - Must abandon well (except industrial production)
- CDBG Blight Determination: “this area has a preponderance of buildings, which by reason of sanitation and the existence of conditions that are conducive to ill health, that are detrimental to the public health and welfare of the community.”


Well Abandonments Required by Village Ordinance 74-158

- Village considered private well operation permits
 - Compliance with current construction codes required to be verified by licensed professional at owner's expense
 - Test and pass water quality 2 times a year
 - \$500 permit fee to cover village expenses
- Village decided to require well abandonments (Ord. 74-158)
 - Non-compliant wells are problematic for public health
 - Private wells likely do not comply with DNR codes
 - Code Revisions: 1953, 1958, 1975, 1991, 1994, 2014, 2020
 - Additional expense to separate plumbing
 - Municipal water is \$5.80 per 1,000 gallons (Less than 1 penny per gallon)

Overview of Property Owner Letters

- Village Board has “true cost to property owner” perspective
- Distinct letters sent according to the following
 - New mains
 - Existing mains
 - Residential
 - Commercial

Village of Lannon | 20399 W. Main Street | Lannon, WI 53046



October 23, 2020

«Owner_Name»
«Residential_Address»
«CityStateZip»

Re: Private Property Summary Related to the Village of Lannon (Village)
Municipal Water Expansion Project
Residential Property, Proposed New Water Main (Bin 3)

Dear Property Owner,

The Village plans to expand its municipal water system in response to the high rate of bacteriological contamination, including *E. coli*, in private well sources. The Village has received a grant on behalf of property owners from the Waukesha County Community Development Block Grant Program (CDBG) and from the Waukesha County Community Foundation's Village of Lannon Quarry Fund (Quarry Fund) that will assist with the private property connection costs. This letter describes how this project and the available funds will affect your property.

Our records show that your property, tax key «TAXKEY»«TAXKEY», is a residential property located adjacent to proposed new water main pipes. These water mains are being installed with the assistance of the United States Department of Agriculture–Rural Development (USDA RD) loan and grant. The unsubsidized portions of the public water main will be special assessed to this property. Once the water mains are installed, you must connect to the municipal water within six months (Village Ordinance 74-157). After connecting to the municipal water system, the well must be abandoned within 20 days (Village Ordinance 74-158). You may not keep your well. If you are not the owner of this property, please contact the Village Engineer, Ben Wood, Strand Associates, Inc., at 414-271-0771 or ben.wood@strand.com.

| Line Item | Cost | Property Owner Balance | Partner Entity |
|---------------------------|-----------------|------------------------|-----------------|
| Special Assessment: | \$ 43,000 | \$ 15,000 | (USDA & Quarry) |
| Water Impact Fee: | \$ 1,300 | \$ 0 | (Quarry) |
| New Service Installation: | \$ 6,700 | \$ 0 | (CDBG) |
| Plumbing Conversion: | \$ 3,350 | \$ 0 | (CDBG) |
| Well Abandonment: | \$ 1,840 | \$ 0-620 | (DNR & Quarry) |
| Approximate Total: | \$ 60,490 | \$ 15,000 - \$15,920 | |
| | (Before Grants) | (After Grants) | |

Notes: Special Assessment amount is reduced to approximately \$25,560 by USDA, and to approximately \$15,000 by the Quarry Fund.

What's Next?

1. Complete the enclosed contract and return to Village Hall.
2. Mid-City Corporation (Contractor) will contact you to schedule private property work.
3. Complete the Well Abandonment Grant application and submit to the Wisconsin Department of Natural Resources (DNR).
4. Make arrangements to pay your Special Assessment.
5. Contact the United States Department of Agriculture's (USDA) Wisconsin office if you need further financial assistance.



Letter Explains Anticipated Final Cost to Property Owner – New Mains

- New mains: Special assessment payable over 20 years
- Grant funds shown are already applied
- Grant funds shown are not income limited (except DNR \$920)

| <u>Line Item</u> | <u>Cost</u> | <u>Property Owner Balance</u> | <u>Partner Entity</u> |
|---------------------------|------------------|-------------------------------|-----------------------|
| Special Assessment: | \$ 43,000 | \$ 15,000 | (USDA & Quarry) |
| Water Impact Fee: | \$ 1,300 | \$ 0 | (Quarry) |
| New Service Installation: | \$ 6,700 | \$ 0 | (CDBG) |
| Plumbing Conversion: | \$ 3,350 | \$ 0 | (CDBG) |
| Well Abandonment: | \$ 1,840 | \$ 0-920 | (DNR & Quarry) |
| Approximate Total: | \$ 60,490 | \$ 15,000 - \$15,920 | |
| | (Before Grants) | (After Grants) | |

Notes: Special Assessment amount is reduced to approximately \$25,560 by USDA, and to approximately \$15,000 by the Quarry Fund.

Letter Explains Anticipated Final Cost to Property Owner – Existing Mains

- Existing mains: Impact fee due in full at time of connection
- Grant funds shown are already applied
- Grant funds shown are not income limited (except DNR \$920)

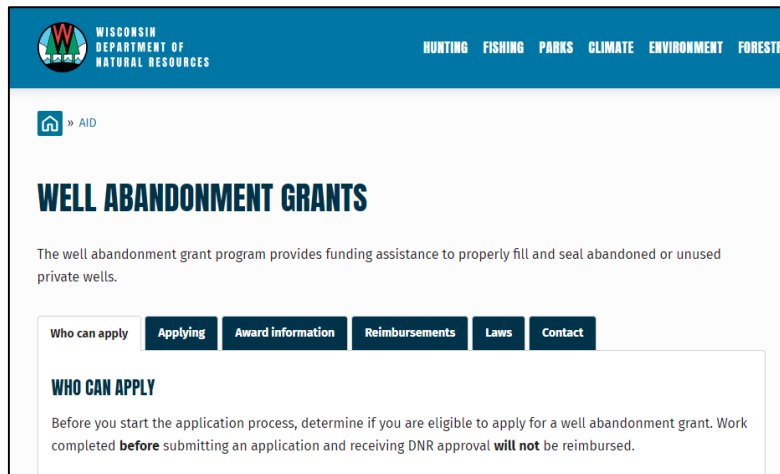
| <u>Line Item</u> | <u>Cost</u> | <u>Property Owner Balance</u> | <u>Partner Entity</u> |
|---------------------------|------------------|-------------------------------|-----------------------|
| Water Impact Fee: | \$ 7,700 | \$ 7,700 | |
| New Service Installation: | \$ 6,700 | \$ 0 | (CDBG) |
| Plumbing Conversion: | \$ 3,350 | \$ 0 | (CDBG) |
| Well Abandonment: | \$ 1,840 | \$ 0-920 | (DNR & Quarry) |
| Approximate Total: | \$ 19,590 | \$ 7,700 - \$8,620 | |
| | (Before Grants) | (After Grants) | |

Private Property Work Agreements

- Agreement is between the Property Owner, Mid-City Corp. (Contractor), and the Village
- Grant funds will pay the contractor directly
- Therefore, to receive the benefit of the grants, sign and return the contract
- If you do not sign the contract or use your own contractor, you will be responsible for private property costs at your own expense with no grant reimbursement
- Residential Properties (CDBG and Quarry Funded)
 - Return contract by Monday, November 9, 2020
- Commercial Properties (Quarry Fund Only)
 - Return contract by Friday, January 8, 2021
 - OR submit justification letter to use your own contractor

Private Property Well Abandonments

- Village has contracted rate of \$1,840 each
- Quarry Fund will pay 50% (\$920)
- Property owner must fund remaining 50% (\$920)
 - Property owner may be eligible for DNR Well Abandonment Grant
 - Income eligibility is <\$65,000W
 - Village will have detailed cost estimate available by December 1, 2020
 - Must apply before work is begun



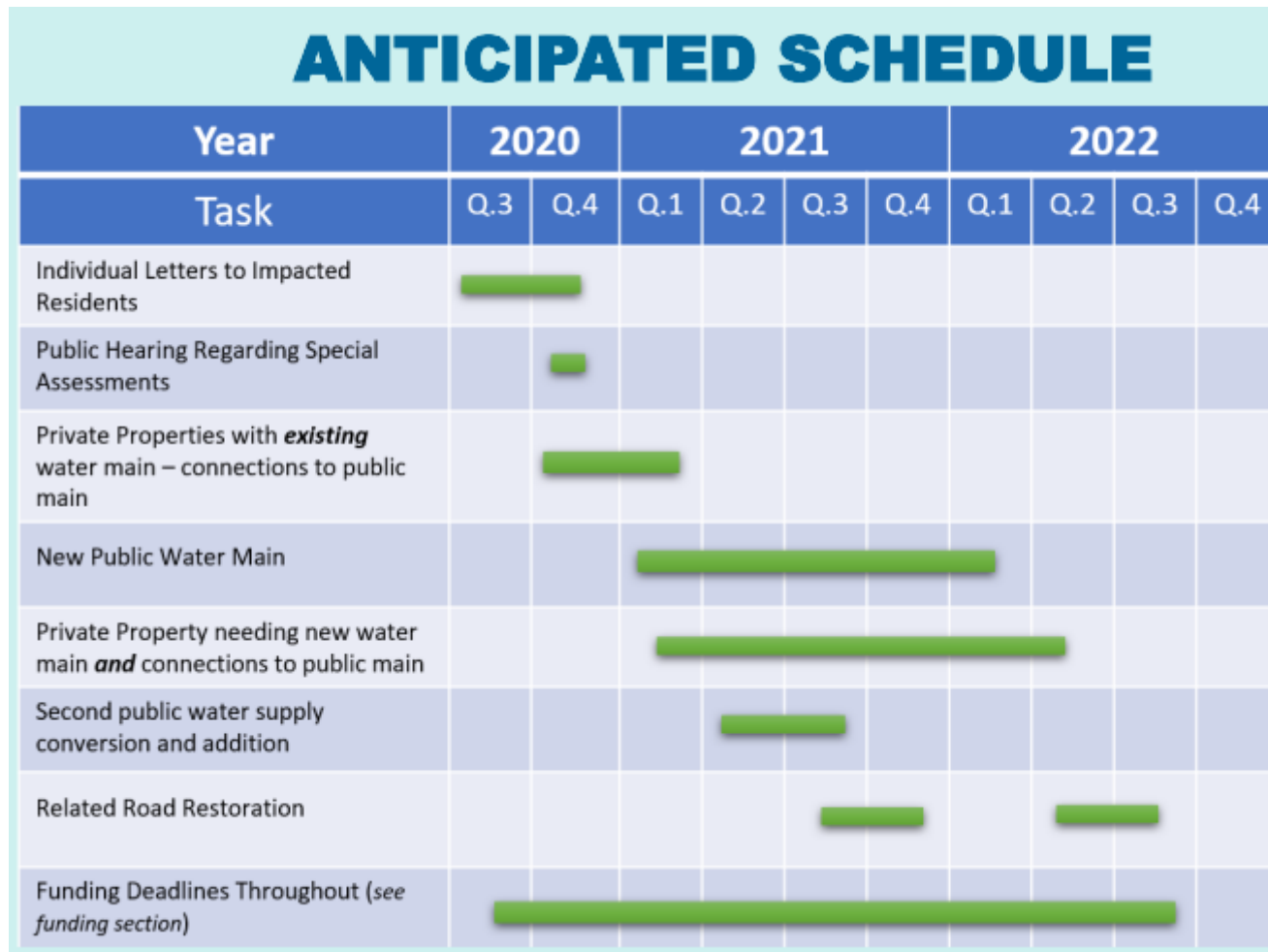
Further Financial Assistance May Be Available Based on Your Individual Situation

- USDA Safe Homes Loan Program
 - Extremely low income and seniors
 - Low interest deferred loan and grants
- Special Assessments
 - 20-year option results in \$940/Year added to your tax bill
- Impact Fee
 - Contact a bank to explore finance options
 - Personal loan
 - Home improvement loan
 - Refinance

Anticipated Water Rates

- Municipal water is \$5.80 per 1,000 gallons (Less than 1 penny per gallon)
- Typical customer: \$150 per quarter (\$600 per year)
- Lannon Estates:
 - The Village will sell bulk water to Lannon Estates
 - Lannon Estates then bills residents
 - Village will charge approximately \$80 per unit per quarter on average
- Sewer and water bills will be based on metered use

Project Schedule



Water System Expansion – Special Assessment November 5, 2020 Public Hearing Presentation

Village of Lannon, Wisconsin

*Prepared by Ben W. Wood, P.E.
Strand Associates, Inc.®*

Water System Expansion – Special Assessment Table of Contents

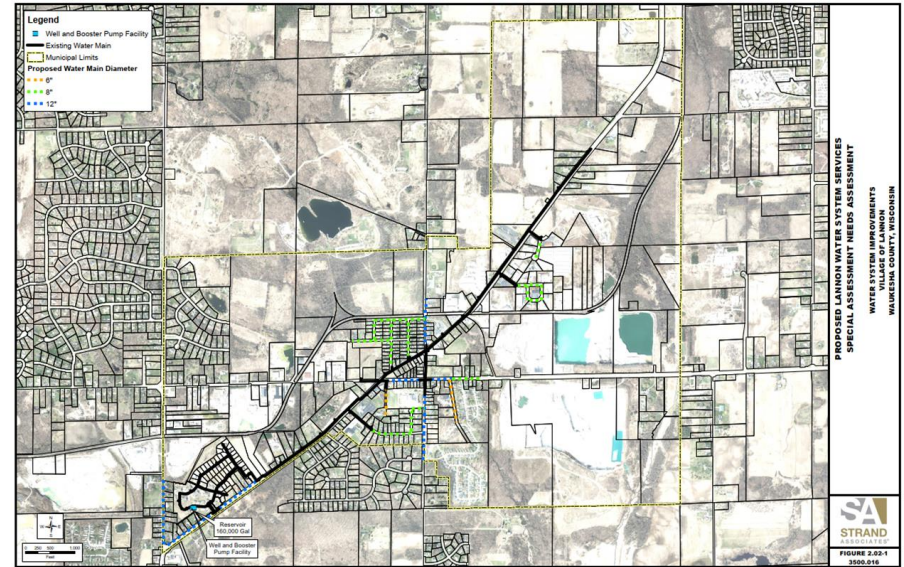
- Authority to Impose
- Description of Improvements
- Calculation of Special Assessment
 - Method of Fair Allocation
 - Equivalent Cost
- Recommended Special Assessment Schedule
- Process of Implementation

Authority to Impose Special Assessment

- Wisconsin Statutes §66.0701 and §66.0703 govern special assessments
- §66.0701(2) allows enactment by police powers for “the health, safety, and welfare of the public.” See also §62.11(5).
- §66.0703 requires that the assessment be
 - Based on a reasonable basis
 - Benefits must be distinct to the properties being assessed

Description of Improvements

- \$8,323,000 being special assessed for water mains
- Well is an impact fee

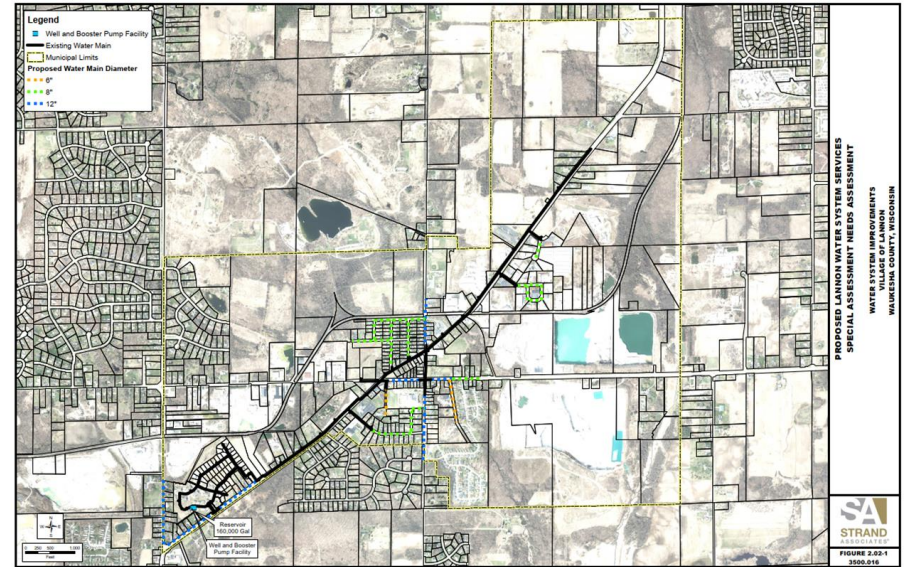


| Water Main Diameter (inches) | Existing Length (feet) | Proposed Length (feet) | Total Length (feet) | Percentage of Total |
|------------------------------|------------------------|------------------------|---------------------|---------------------|
| 6 | 90 | 1,471 | 1,561 | 4.5% |
| 8 | 5,102 | 7,967 | 13,069 | 37.6% |
| 12 | 11,829 | 6,860 | 18,689 | 53.8% |
| 16 | 1,419 | 0 | 1,419 | 4.1% |
| Total | 18,440 | 16,298 | 34,738 | 100.0% |

Table 2.02-2 Proposed Distribution System Water Main Inventory

Description of Improvements

- \$8,323,000 being special assessed for water mains
- Well is an impact fee

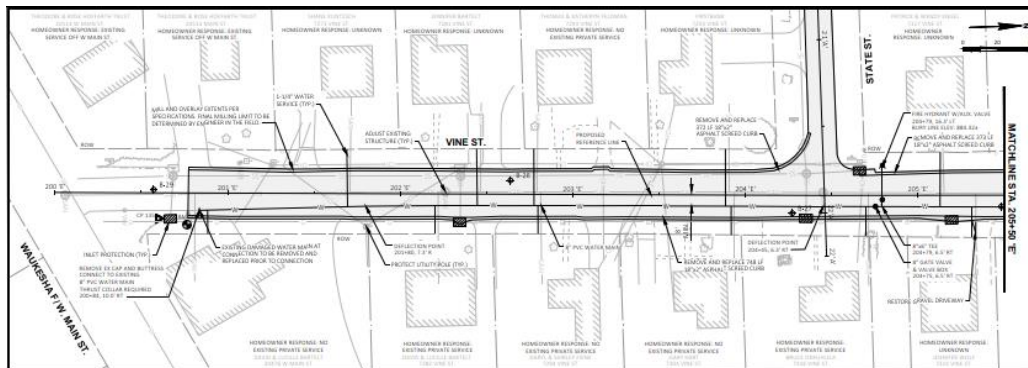


| Water Main Diameter (inches) | Existing Length (feet) | Proposed Length (feet) | Total Length (feet) | Percentage of Total |
|------------------------------|------------------------|------------------------|---------------------|---------------------|
| 6 | 90 | 1,471 | 1,561 | 4.5% |
| 8 | 5,102 | 7,967 | 13,069 | 37.6% |
| 12 | 11,829 | 6,860 | 18,689 | 53.8% |
| 16 | 1,419 | 0 | 1,419 | 4.1% |
| Total | 18,440 | 16,298 | 34,738 | 100.0% |

Table 2.02-2 Proposed Distribution System Water Main Inventory

Description of Improvements - Continued

- \$8,323,000 water main cost includes
 - Water main
 - Hydrants
 - Public service lateral
 - Road restoration/reconstruction
 - Roads last restored in 1997



Calculation – Method of Cost Allocation

- Common Methods
 - Linear feet of frontage (roads)
 - Equivalent services (land use ratios)
 - Equivalent meters (plumbing capacity)
- Equivalent meter method chosen
 - 5/8" and 3/4" meters are 1 equivalent (consistent with PSC guidelines)
 - All but Lannon Estates is 1 equivalent
 - Lannon Estates is 3" (20 equivalents)

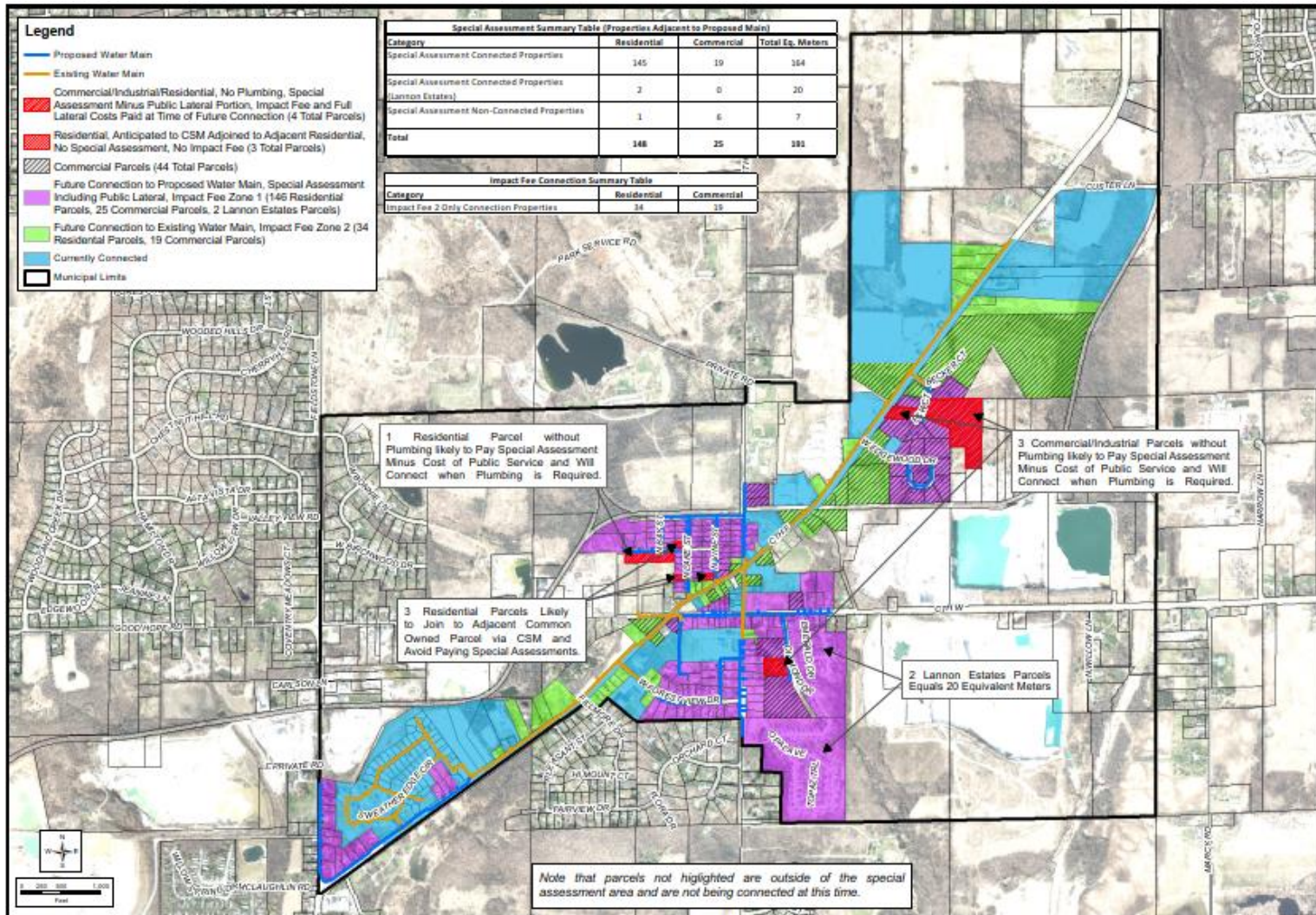
| Meter Size (inches) | Meter Capacity (gpm) | Equivalent Meter Connections |
|---------------------|----------------------|------------------------------|
| 5/8* | 25 | 1* |
| 3/4* | 35 | 1* |
| 1 | 70 | 3 |
| 1 1/2 | 200 | 8 |
| 2 | 310 | 12 |
| 3 | 500 ^t | 20 |
| 4 | 1,250 | 50 |
| 6 | 2,500 | 100 |

*5/8-inch and 3/4-inch meters are treated as the same size according to the PSCW

^tThis value is the average capacity of a Compound and Turbo Series Badger Meter.

Table 3.02-1 Equivalent Meter Connections

Calculation – Meter Count



Calculation – Assessment per Equivalent Meter

Line Item

Cost

| | |
|--------------------------------------|-----------------------|
| Full Water Main Cost: | \$ 8,323,000 |
| USDA Grant & Applicant Contribution: | <u>\$ (3,493,000)</u> |
| Balance to be Assessed: | \$ 4,830,000 |

Equivalent Meter Count: 189

Assessment per Equivalent Meter: \$ 25,560

Assessments to Non-Standard Situations

- Lannon estates 3" meter: \$511,110
- Vacant lots: assessed as 1 equivalent
- Double lots: must legally join or be assessed individually
- Buildings with no plumbing: will be special assessed as 1 equivalent minus cost of public lateral (\$21,680)

Special Assessment Schedule – No Quarry Fund Reductions

| Year | 5-Year Payment Schedule | 10-Year Payment Schedule | 15-Year Payment Schedule | 20-Year Payment Schedule |
|------------------------|-------------------------|--------------------------|--------------------------|--------------------------|
| Annual Payment | \$5,461.23 | \$2,882.35 | \$2,026.26 | \$1,600.85 |
| Total Full Term | \$27,306.14 | \$28,823.52 | \$30,393.93 | \$32,017.06 |

Note: The amount of a one-time, upfront payment during the first year is approximately \$25,560.

Table 4.02-1 Recommended 5/8-Inch and 3/4-Inch Meter Special Assessment Schedule

| Year | 5-Year Payment Schedule | 10-Year Payment Schedule | 15-Year Payment Schedule | 20-Year Payment Schedule |
|------------------------|-------------------------|--------------------------|--------------------------|--------------------------|
| Annual Payment | \$4,633.46 | \$2,445.47 | \$1,719.14 | \$1,358.21 |
| Total Full Term | \$23,167.30 | \$24,454.69 | \$25,787.07 | \$27,164.18 |

Note: The amount of a one-time, upfront payment during the first year is approximately \$21,680.

Table 4.02-2 Recommended 5/8-Inch and 3/4-Inch Meter Special Assessment Schedule (Commercial or Industrial Property Without Plumbing)

Special Assessment Schedule – With Quarry Fund

| Year | 5-Year Payment Schedule | 10-Year Payment Schedule | 15-Year Payment Schedule | 20-Year Payment Schedule |
|---|-------------------------|--------------------------|--------------------------|--------------------------|
| Special Assessment Amount | \$25,555.56 | \$25,555.56 | \$25,555.56 | \$25,555.56 |
| Quarry Fund Reduction Payment (Applied in Year 1) | \$10,555.56 | \$10,555.56 | \$10,555.56 | \$10,555.56 |
| Balance to Property Owner | \$15,000.00 | \$15,000.00 | \$15,000.00 | \$15,000.00 |
| Annual Payment by Property Owner (Due Each Year of Term) | \$3,205.50 | \$1,691.82 | \$1,189.33 | \$939.63 |
| Total Cost of Amortized Balance | \$16,027.52 | \$16,918.15 | \$17,839.92 | \$18,792.62 |
| Total Full Term, Including Quarry Fund Payment | \$26,583.07 | \$27,473.71 | \$28,395.47 | \$29,348.18 |

Table 4.03-1 Recommended 5/8-Inch and 3/4-Inch Meter Special Assessment Schedule–Quarry Fund Payment Plan

Special Assessment Schedule – With Quarry Fund

| Year | 5-Year Payment Schedule | 10-Year Payment Schedule | 15-Year Payment Schedule | 20-Year Payment Schedule |
|---|-------------------------|--------------------------|--------------------------|--------------------------|
| Special Assessment Amount | \$21,682.06 | \$21,682.06 | \$21,682.06 | \$21,682.06 |
| Quarry Fund Reduction Payment (Applied in Year 1) | \$6,682.06 | \$6,682.06 | \$6,682.06 | \$6,682.06 |
| Balance to Property Owner | \$15,000.00 | \$15,000.00 | \$15,000.00 | \$15,000.00 |
| Annual Payment by Property Owner (Due Each Year of Term) | \$3,205.50 | \$1,691.82 | \$1,189.33 | \$939.63 |
| Total Cost of Amortized Balance | \$16,027.52 | \$16,918.15 | \$17,839.92 | \$18,792.62 |
| Total Full Term, Including Quarry Fund Payment | \$22,709.57 | \$23,600.21 | \$24,521.97 | \$25,474.68 |

Table 4.03-2 Recommended 5/8-Inch and 3/4-Inch Meter Special Assessment Schedule (Commercial or Industrial Property Without Plumbing)–Quarry Fund Payment Plan

Process of Implementation

- Preliminary resolution (done)
- Report filed with clerk (done)
- Public notice and hearing (taking place tonight)
- Adoption and final resolution
- Final resolution to be published and mailed to interested persons
- Amendment based on actual cost
 - If assessments are materially higher – repeat entire process
 - If assessments are lower – no hearings, etc., required
- First assessment anticipated on November 2021 tax bill

Public Comment

Water System Expansion – Impact Fee

November 5, 2020 Public Hearing Presentation

Village of Lannon, Wisconsin

*Prepared by Ben W. Wood, P.E.
Strand Associates, Inc.®*

Water System Expansion – Impact Fee Table of Contents

- Authority to Impose
- Required Facilities
- Equivalent Connection Methodology
- Projected Service Area
- Projected Equivalent Connections
- Zone 1 – Calculation of Fees
- Zone 2 – Calculation of Fees
- Recommended Ordinance Revisions

Authority to Impose Impact Fee

- Wisconsin Statute §66.0617 governs impact fees
 - This is an amendment to existing impact fees
 - Zones are allowable
 - Cannot be used to address existing deficiencies
 - Paid at time of connection
- §66.0617(9) addresses refunds
 - Refunds are required if funds are not used
 - Lannon's impact fees collected have all been used
 - This amendment is a recalculation of past growth projections with updated capital costs

Primary Goals of this Amendment

- Update capital costs based on updated water system study and plans
- Re-allocate appropriate infrastructure costs to TIF Districts (new development)
- Determine fee that charges properties adjacent to existing mains equitably

Required Facilities

| Facility Name | Description | Anticipated Year Required | Former Funding Mechanism | Proposed Funding Mechanism | Does This Address Existing Deficiencies? |
|--|--|---------------------------|--------------------------|--|--|
| Second Source of Supply | Lannon Estates Well Acquisition and Upgrades | 2021 | Impact Fee Zone 1 | Impact Fee Zone 1 and In-Kind Contribution | No |
| Water Tower | Elevated Storage | 2023 | Impact Fee Zone 1 | TID and Impact Fee Zone 1 | No |
| Water Main Extensions to Existing Structures | USDA-RD Water System Expansion Project | 2021 | None | Special Assessments | No |
| Water Main Extensions to New Developments | As Needed | As Needed | Developer Contribution | Developer Contribution or TID | No |
| Transmission Main (2008 Bid Alternates) | 12-inch Main Oversizing (3,200 LF) from 2008 Water Main Bid Alternates | 2008 | None | Impact Fee Zone 1 | No |
| Lannon Road Transmission Main | 12- and 16-inch Main Oversizing (820 LF) | 2019 | None | Impact Fee Zone 1 | No |
| Water Transmission Main to Existing Structures | Lannon Village Hills, and Town Line Road | 2030 | None | Impact Fee Zone 1 | No |
| Third Source of Supply | Deep Well or Interconnect to Neighbor | 2025 to 2030 | None | TID and Impact Fee Zone 1 | No |

USDA-RD=United States Department of Agriculture-Rural Development

Table 2 Required Water Facilities

Equivalent Connection Methodology

- Former methodology based on projected land use and calculation of residential equivalent connection use (cumbersome to implement)
- Proposed residential methodology

| Residential User Type | REC |
|--|--|
| Single-Family Home | 1.00 |
| Duplex | 2.00 |
| Condominium (two bedrooms or more) | 1.00 per unit |
| Multiple family (two bedrooms or more) | 1.00 per unit |
| Multiple family (one bedroom or less) | 0.75 per unit |
| Boarding Houses | Meter size as shown in 63-6(2), minimum 2.00 total structure, all uses |

Table 3 Residential Equivalent Connection Calculation Proposed to Replace Table in Village Ordinance 63-5(2)

Equivalent Connection Methodology – Continued

- Non-residential based on meter size

| Meter Size (inches) | Meter Capacity (gpm) | Equivalent RECs |
|------------------------|----------------------------|--------------------|
| 5/8* | 25 | 1* |
| 3/4* | 35 | 1* |
| 1 | 70 | 3 |
| 1 1/2 | 200 | 8 |
| 2 | 310 | 12 |
| 3 | 500 ^t | 20 |
| 4 | 1,250 | 50 |
| 6 | 2,500 | 100 |

*5/8- and 3/4-inch meters are treated as the same size according to the PSCW.

^tThis value is the average capacity of a Compound and Turbo Series Badger Meter.

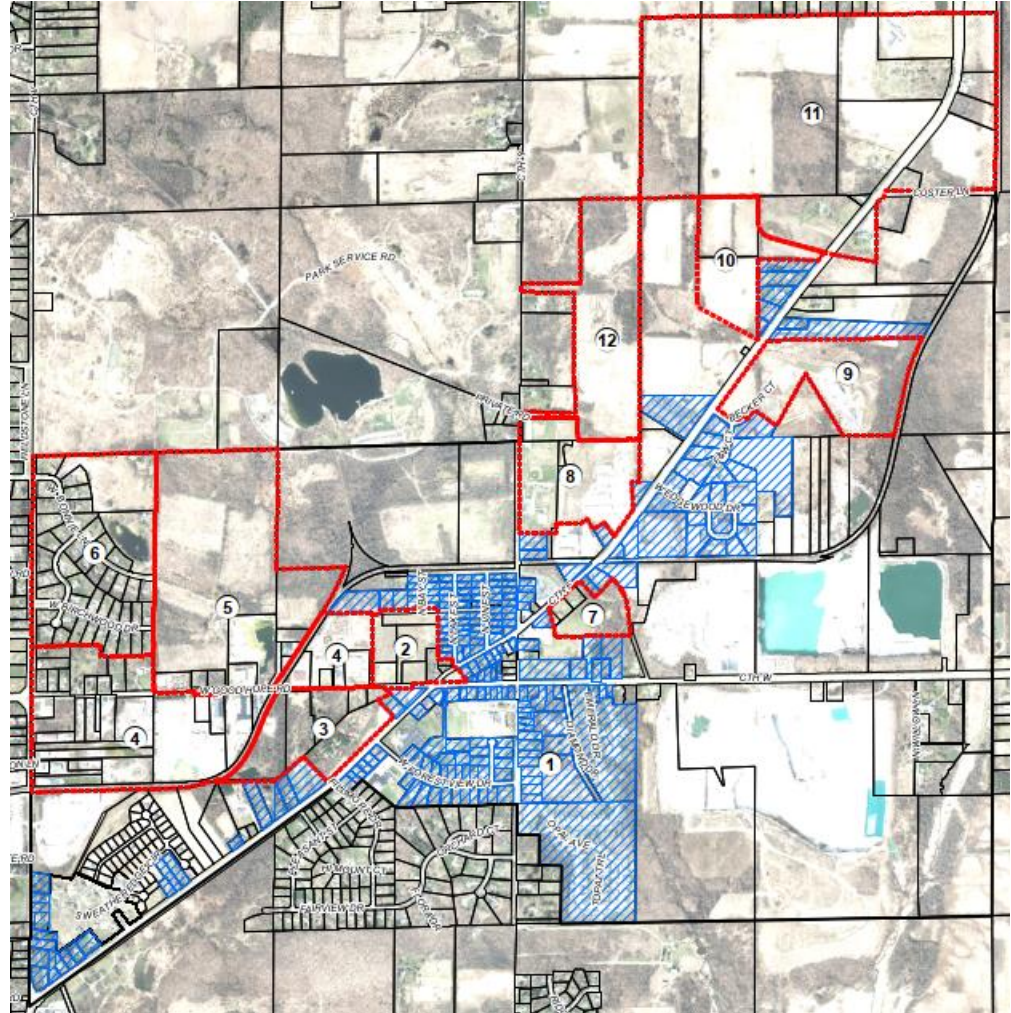
**Table 4 Nonresidential Equivalent
REC Calculation**

- 



Projected Equivalent Connections

- Projected likely growth over next 20 years
- Counted existing structures that will connect now through 2021



Projected Equivalent Connections – Continued

- Zone 1: 759
- Zone 2: 109
- Reasonable projections are fiscally responsible, so the Village is paid back over the term of the financing
- Past projections from 2008 was based on ultimate build-out (50 years) to pay for 20-year debt

Zone 1 Calculation of Fees – Remaining Infrastructure Costs

| Year | Capital Description | Capital Expenditure or Obligation | Impact Fees Collected per Year | Interest on Prior Year's Debt | Year End Balance |
|------|---|-----------------------------------|--------------------------------|-------------------------------|------------------|
| 2008 | Water Main Oversizing; Source & Tower Legal, Engineering, Acquisition | \$372,499 | (\$13,895) | \$0 | \$358,604 |
| 2009 | Source & Tower Legal, Engineering, Acquisition | \$96,280 | (\$9,644) | \$14,344 | \$459,584 |
| 2010 | NA | \$0 | (\$14,313) | \$18,383 | \$463,655 |
| 2011 | NA | \$0 | (\$30,890) | \$18,546 | \$451,311 |
| 2012 | NA | \$0 | (\$2,752) | \$18,052 | \$466,611 |
| 2013 | NA | \$0 | \$0 | \$18,664 | \$485,276 |
| 2014 | NA | \$0 | (\$146,461) | \$19,411 | \$358,226 |
| 2015 | NA | \$0 | \$0 | \$14,329 | \$372,555 |
| 2016 | NA | \$0 | (\$3,282) | \$14,902 | \$384,175 |
| 2017 | NA | \$0 | (\$34,290) | \$15,367 | \$365,252 |
| 2018 | NA | \$0 | (\$27,083) | \$10,958 | \$349,127 |
| 2019 | Water Main Oversizing | \$82,201 | (\$145,922) | \$10,474 | \$295,880 |
| 2020 | Well Acquisition and Upgrade; Future Oversizing, Source, and Storage | \$1,500,001 | (\$827,014) | \$8,876 | \$977,744 |

Note: These costs account for the 4.0 percent interest rate on the water utility loan from 2008 to 2017 and the December 2017 refinanced interest rate of 3.0 percent for 2018 and beyond as indicated by Baker Tilly.

Zone 1 Calculation of Fees – Fee per REC

- \$977,744 of capital costs (2020)
- 759 projected RECs (2020)
- \$1,288 per REC (2020)
 - Due at time of connection
 - Increases 3% per year

Zone 2 Calculation of Fees – Remaining Infrastructure Costs

| Year | Capital Description | Capital Expenditure or Obligation | Impact Fees Collected per Year | Interest on Prior Year's Debt | Year End Balance |
|------|-------------------------------------|-----------------------------------|--------------------------------|-------------------------------|------------------|
| 2008 | Local 8-inch Equivalent Water Mains | \$1,192,618 | (\$10,646) | \$0 | \$1,181,972 |
| 2009 | NA | \$0 | (\$5,564) | \$47,279 | \$1,223,687 |
| 2010 | NA | \$0 | \$0 | \$48,947 | \$1,272,634 |
| 2011 | NA | \$0 | (\$6,076) | \$50,905 | \$1,317,464 |
| 2012 | NA | \$0 | (\$6,348) | \$52,699 | \$1,363,814 |
| 2013 | NA | \$0 | \$0 | \$54,553 | \$1,418,367 |
| 2014 | NA | \$0 | (\$339,289) | \$56,735 | \$1,135,813 |
| 2015 | NA | \$0 | \$0 | \$45,433 | \$1,181,245 |
| 2016 | NA | \$0 | (\$7,570) | \$47,250 | \$1,220,925 |
| 2017 | NA | \$0 | \$0 | \$48,837 | \$1,269,762 |
| 2018 | NA | \$0 | (\$9,094) | \$38,093 | \$1,298,761 |
| 2019 | Local 8-IN Equivalent Water Mains | \$13,970 | (\$87,968) | \$38,963 | \$1,263,725 |
| 2020 | NA | \$0 | (\$627,994) | \$37,912 | \$673,643 |

Note: These costs account for the 4.0 percent interest rate on the water utility loan from 2008 to 2017 and the December 2017 refinanced interest rate of 3.0 percent for 2018 and beyond as indicated by Baker Tilly.

Table 10 Impact Fee Zone 2–Capital Cost Balance

Zone 2 Calculation of Fees – 2020 Fee per REC

- \$673,643 of capital costs
- 109 projected RECs
- \$6,180 per REC local water main portion
- \$1,288 per REC common infrastructure portion
- **\$7,468 per REC Total Zone 2**
 - Due at time of connection
 - Increases 3% per year (\$7,692 in 2021)

Recommended Village Ordinance Revisions

- 63-4(1): Replace the map
- 63-5(1): Replace the impact fee schedule

| Year | Zone 1 Impact Fee (Per REC) | Impact Fee Zone 2 (Per REC) |
|------|-----------------------------|-----------------------------|
| 2020 | \$1,288 | \$7,468 |
| 2021 | \$1,327 | \$7,692 |
| 2022 | \$1,367 | \$7,923 |
| 2023 | \$1,408 | \$8,161 |
| 2024 | \$1,450 | \$8,406 |
| 2025 | \$1,493 | \$8,658 |
| 2026 | \$1,538 | \$8,918 |
| 2027 | \$1,584 | \$9,185 |
| 2028 | \$1,632 | \$9,461 |
| 2029 | \$1,681 | \$9,745 |
| 2030 | \$1,731 | \$10,037 |
| 2031 | \$1,783 | \$10,338 |
| 2032 | \$1,837 | \$10,648 |
| 2033 | \$1,892 | \$10,968 |
| 2034 | \$1,949 | \$11,297 |
| 2035 | \$2,007 | \$11,636 |
| 2036 | \$2,067 | \$11,985 |
| 2037 | \$2,129 | \$12,344 |
| 2038 | \$2,193 | \$12,714 |
| 2039 | \$2,259 | \$13,096 |
| 2040 | \$2,327 | \$13,489 |

Note: Annual increase represents the interest rate of the Village's loan as refinanced in December 2017.

Table 14 Recommended Impact Fee Schedule for Inclusion in Section 63-5 of the Village Code of Ordinances

Ordinance Revisions – Continued

- 63-5(2): Replace table for determining residential RECs with the following

| Residential User Type | REC |
|--|---|
| Single-Family Home | 1.00 |
| Duplex | 2.00 |
| Condominium (two bedrooms or more) | 1.00 per unit |
| Multiple family (two bedrooms or more) | 1.00 per unit |
| Multiple family (one bedroom or less) | 0.75 per unit |
| Boarding Houses | Meter Size as shown in 63-6(2), minimum 2.00 total structure, all uses |

Table 3 Residential Equivalent Connection Calculation Proposed to Replace Table in Village Ordinance 63-5(2)

Ordinance Revisions – Continued

- 63-6(2): Replace paragraph (a) and the table with the following

(a) For all nonresidential users of the water system, anticipated water consumption shall be determined from the following table based on the water meter size installed as confirmed by the building inspector.

| Meter Size (inches) | Meter Capacity (gpm) | Equivalent RECs |
|------------------------|----------------------------|--------------------|
| 5/8* | 25 | 1* |
| 3/4* | 35 | 1* |
| 1 | 70 | 3 |
| 1-1/2 | 200 | 8 |
| 2 | 310 | 12 |
| 3 | 500 [†] | 20 |
| 4 | 1,250 | 50 |
| 6 | 2,500 | 100 |

*5/8-inch and 3/4-inch meters are treated as the same size according to the PSCW
[†]This value is the average capacity of a Compound and Turbo Series Badger Meter

Table 4 Nonresidential Equivalent REC Calculation

Ordinance Revisions – Continued

- 63-6(2): Replace paragraph (b) with the following

(b) If the village board determines that the information in the table does not accurately reflect the user's anticipated water consumption, the village board may estimate water consumption, in which case the RECs will be determined by dividing the estimated water consumption by the water consumption for 1 REC. The minimum REC for any property shall not be less than 1.00 REC. If the village board estimates the water consumption apart from the table below, then upon completion of the REC computations, the village shall calculate and impose an interim impact fee under the schedule set out in section 63-5. Since the impact fee determined under subsection (2)(b) of this section is based upon the anticipated impact of the estimated intended usage, the village may recalculate the impact fee based upon the average annual usage by a nonresidential account. The village may review the actual usage during the first 36 months after each nonresidential account at such development has been established with the water utility.

Public Comment