Wastewater Facilities Upgrade

Facilities Plan Public Hearing
June 10, 2026

Village of Spring Green, WI

Town & Country Engineering, Inc.

Introduction

- Why is an upgrade needed?
- What needs to be done?
- How much will it cost?
- How will this affect me?

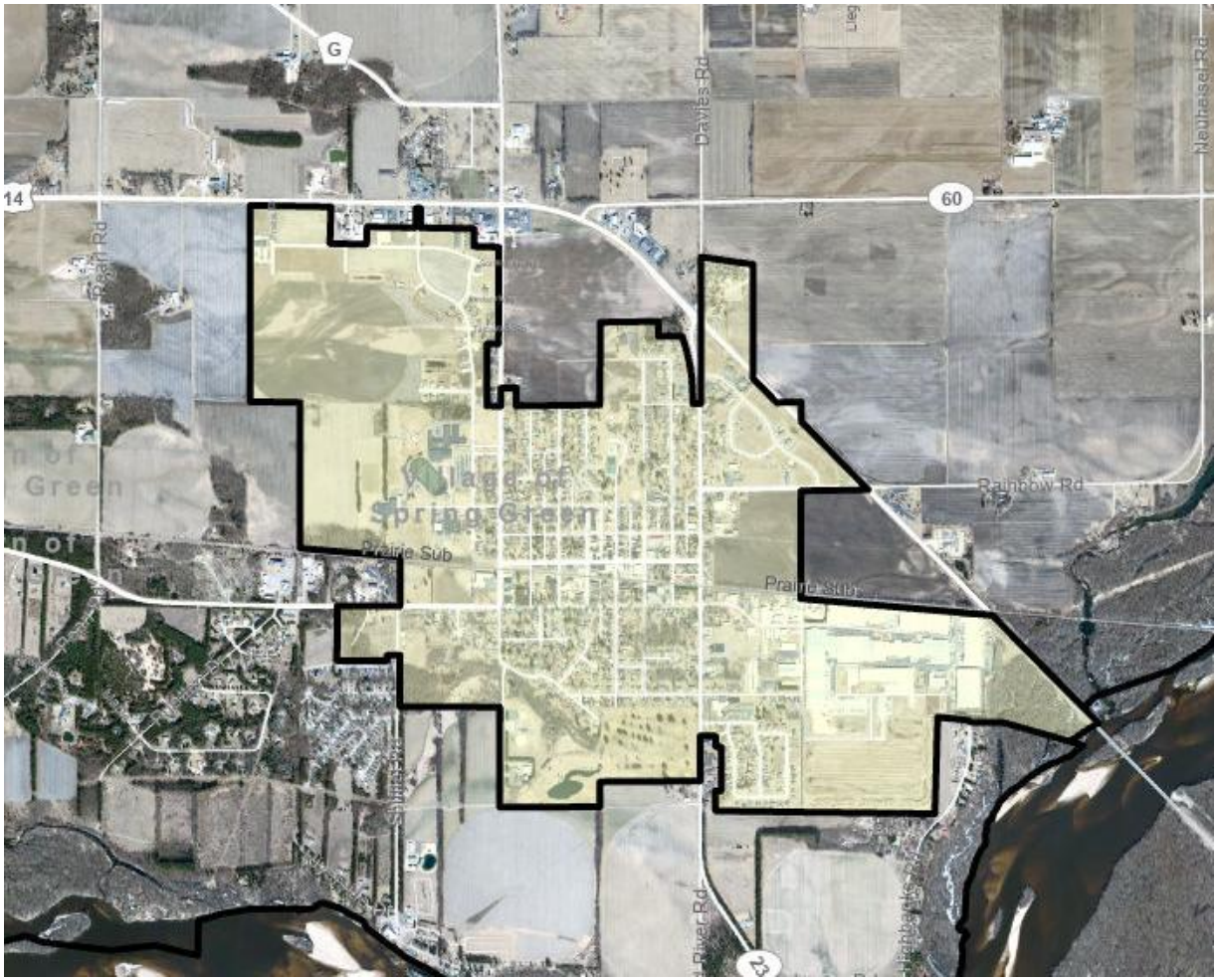
Steps for Plant Upgrade

- Step 1 – Facilities Planning
  - Evaluate WWTF options for the future
  - This public hearing closes out this phase
- Step 2 – Design
  - Preparation of plans and specifications
  - Typically requires 9 - 12 months
- Step 3 – Construction
  - Typically requires 12 - 24 months

What is Facilities Planning?

- Evaluates existing infrastructure
  - Collection system and lift stations
  - Wastewater treatment facility
- Develops future design conditions
- Evaluates viable alternatives
- Environmental and socio-economic issues
- Alternative selection, cost analysis and rate impact on user rates
- Public hearing
- Implementation schedule

Sewer Service Area



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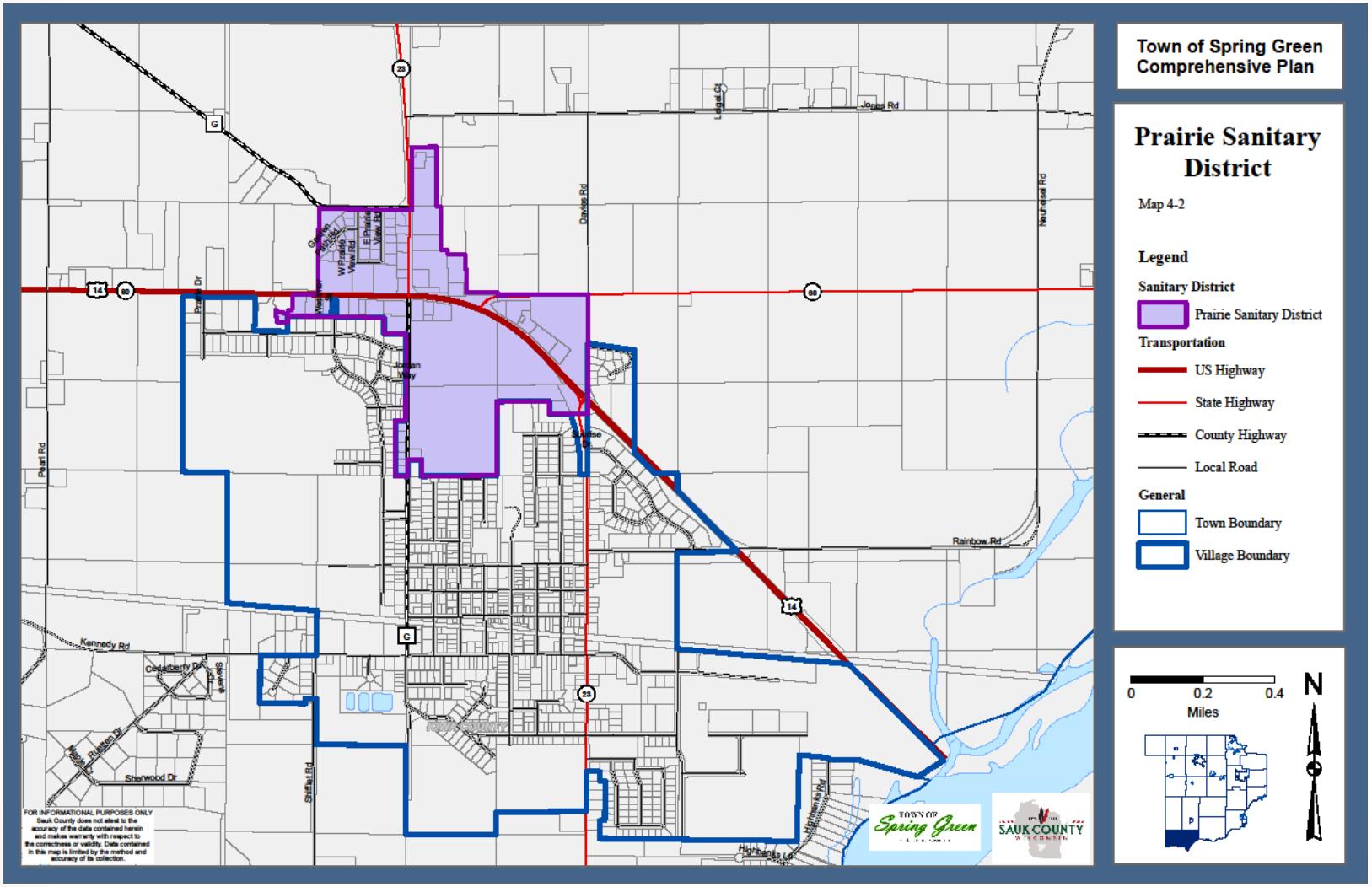
Sewer Service Area



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Overview of Current WWTF

- Wastewater Treatment Facility
  - Originally constructed in 1979
  - Upgraded with the last expansion in 1996
  - Structures are 30 – 45 years old, equipment is mostly 20+ years old

WWTF Site

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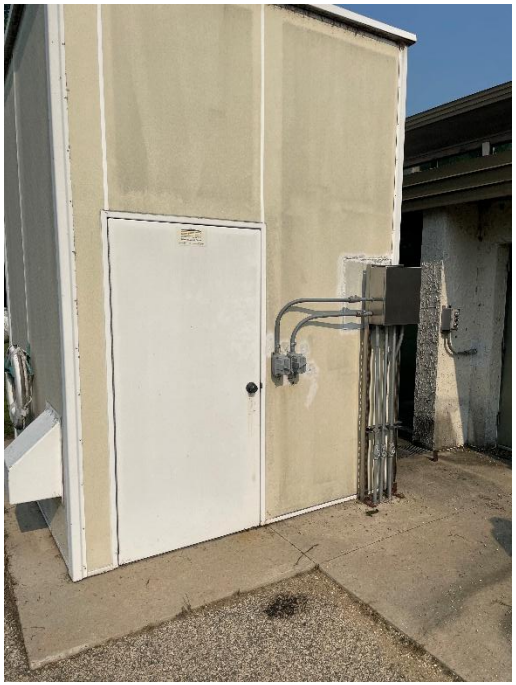
Why is an upgrade needed?

- Replace old and outdated equipment at the end of its useful life
- Upgrade infrastructure in need of repairs
- Update HVAC and electrical systems to meet current code requirements
- Update plumbing to meet facility needs
- Maintain compliance with the existing and future permit limits

Ex. Screening Building



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Ex. Control Building

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Ex. Oxidation Ditch / Final Clarifier

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Ex. Blower Building

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Ex. Chemical / Sludge Building

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Ex. Storage Barn

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Development of Future Design Conditions

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Future Flow / Loading Projections

- Residential –1,556 residents in 2025
  - (DOA projects no residential growth)
- Commercial – 20 acres added
- Industrial – 25 acres added
- Public – 0% increase
- Cardinal – 20,000 gpd
- Hauled waste – none
- Prairie Springs S.D. – 0% increase
- Spring Green Golf S.D. #2 - none

Design Loading Summary

Contributor	Quantity	Rate	Design Flow MGD
1. Village Base - Annual Average			
Residential	1,566 capita	59 gpcd	0.092
Commercial	97 customers	266 gpcd	0.026
Public	27 customers	363 gpcd	0.010
General Industrial	20 customers	3,500 gpcd	0.070
2. Future Village Increases- Annual Average			
Residential	0 capita	59 gpcd	0.000
Commercial	20 acres	1,000 gpad	0.020
Public	0% per year	363 gpad	0.000
General Industrial	25 acres	1,500 gpad	0.038
3. Additional Contributors			
Septage Hauling			0.000
Prairie Spring S.D.			0.000
S.G. Golf Course San. Dist. #2			0.000
4. Future Major Industry Requests			
Cardinal CG			0.010
Cardinal IG			0.010
Cardinal TG			0.000
5. Clear Water Infiltration/Inflow			
Future Maximum Month	0 capita x 0 gpcd		0.000
Future Reduction	No reductions assumed		0.000
Annual Average			0.058
Annual Average Flow (MGD)			**0.333**

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Design Loading Summary

	BOD (lbs/day)	TSS (lbs/day)
1. Base Loading		
Annual Average	240	208
2. Future Increases		
Residential	0	0
Commercial	42	42
Public	0	0
General Industrial	78	78
3. Additional Contributions		
Septage Hauling	0	0
Sanitary Districts	0	0
4. Future Industry Requests	42	42
Annual Average Loading (lbs/day)	401	370
Design Sustained Loading (lbs/day)	**472**	**475**
Current Rated Capacity	**520**	**520**

Projected Effluent Limits

- Outfall location will remain the same
- Limits for BOD, TSS, and ammonia expected to remain the same
- Phosphorus limits – also expected to remain the same as discharge is direct to the Wisconsin River

Development and Evaluation of Alternatives

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Base Scope - Equipment Upgrades

The base scope of this project will include:

- Replace process equipment coming to the end of its effective life
- Address the issues of deteriorating structures, HVAC effectiveness, and outdated controls system
- Ensure continued compliance with the existing and future effluent limits

Evaluation of Needs / Alternatives

The project focuses on the need to upgrade and replace equipment, but additional needs include:

- New Headworks Building
- New Final Clarifier
- Replace (New) Blower Building
- New Aerobic Digester

Alternatives were evaluated based on capital costs and operation and maintenance costs.

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Summary of Costs

	Phase 1 (Process)	Phase 2 (Sludge)
Capital Costs	$8,550,300	$1,315,300
Average Additional Annual O&M Costs	$10,000	$0
Annual Replacement Costs	$52,300	$5,200

Recommendations

- Construct both the Phase 1 and Phase 2 upgrades as a single project
  - Phase 2 adds about $1.3M in added costs now, but will be more in the future.
  - Phase 2 has limited impact to the annual O&M and Replacement Costs for the overall project

Project Phasing

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Project Phasing

- Village is looking to construct both phases of the improvements as a single project

Renovate Existing Facilities	Phase 1	Phase 2
Site Work	$716,400	
New Headworks Building	$1,006,100	
Control Building	$985,300	
Oxidation Ditch	$534,600	
Final Clarifier	$285,700	
New Final Clarifier	$584,400	
New Blower Building	$486,800	
Disinfection Tank	$84,000	
Chemical Storage/ Sludge Pump Building		$235,200
Aerobic Digester		$84,500
New Aerobic Digester		$386,400
Sludge Storage Tank		$14,200
Project Electrical	$1,170,900	$180,100
Contractor Costs	$878,200	$135,100
Contingency	$673,300	$103,600
Design and Management Costs	$875,300	$134,700
Resident Observation Costs	$269,300	$41,500
Total Capital Costs	**$8,550,300**	**$1,315,300**

Possible Funding Sources

- Total Project Cost for Phases 1 & 2: $9.9 million
- Low-interest loan funding from the Wisconsin Clean Water Fund (CWF) program
- Other potential sources
  - Focus on Energy Incentives

Average Sewer User Rate Impacts

- Current sewer rates average $71 per quarter for a residential user
- For Phase 1 & 2, residential user rates would increase to about $140 per quarter
  - Actual rates will depend on the methodology of the user charge system, the amount of grant money, and the funding package

Environmental Impacts

- All construction impacts are temporary
- No threatened or endangered species identified within the project area
- Upgrades will take place on the existing plant already owned by the Village
- Minor impacts during construction (traffic, noise, erosion) will be mitigated with temporary controls

Implementation Schedule

Activity	Date
Submit Draft of Facilities Plan	March 2026
Public Hearing on Plan	June 2026
Approval of Facilities Plan	September 2026
Submit Plans and Specifications (Phase 1 & 2)	September 2026
Submit CWF Loan Application (Phase 1 & 2)	September 2026
Apply for Construction Permits	October 2026
Approval of Plans and Specifications	December 2026
Advertise for Bids	January 2027
Open Bids	February 2027
Award Bids	March 2027
Start Construction	April 2027
Submit User Charge Rates/Ordinances	July 2027
Complete Construction	December 2028

COMMENTS

QUESTIONS

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