

**2020**  
**REBUILD ILLINOIS PUBLIC**  
**INFRASTRUCTURE**  
**APPLICATION FORMS**

Applicant  
**Village of Tolono**

## Public Infrastructure Application Submission Checklist

All applications will be screened for completeness. Applicants must complete and submit this checklist with the application. **All pages of the application must be sequentially numbered.** Use the right-hand column, labeled "Page Number" to indicate the page for each item.

- Original grant application (*indicate the "original" on the cover*)
- Two complete copies of the grant application

### PROJECT INFORMATION

### PAGE NUMBER

<input checked="" type="checkbox"/>	Completed Submission Checklist (This Page)	2
<input checked="" type="checkbox"/>	Letter of Transmittal from Chief Elected Official	3
<input checked="" type="checkbox"/>	State of Illinois-DCEO Uniform Grant Application	5
<input checked="" type="checkbox"/>	Project Information	9
<input checked="" type="checkbox"/>	GATA Capital Budget	12
<input checked="" type="checkbox"/>	Engineer's Cost Estimate	43
<input checked="" type="checkbox"/>	Project Location Map	97
<input checked="" type="checkbox"/>	FEMA Issued Floodplain Map	101
<input checked="" type="checkbox"/>	Project Summary	103
<input checked="" type="checkbox"/>	Minority Benefit/Affirmative Housing Statement	106
<input checked="" type="checkbox"/>	Job Creation Documentation	109
<input checked="" type="checkbox"/>	Project Readiness Summary	110

### DOCUMENTATION, CERTIFICATIONS, RESOLUTIONS

<input checked="" type="checkbox"/>	Signed Letters of Support	113
<input type="checkbox"/> NA	Council Commitment of Funds (if applicable)	NA
<input type="checkbox"/> NA	Resident Participation/Public Hearings (if applicable)	
	7-day notice	NA
	Newspaper clipping & Publisher's certification	NA
	Certified minutes	NA
	Attendance sheet(s)	NA
<input checked="" type="checkbox"/>	Local Government Certifications	125
<input checked="" type="checkbox"/>	Mandatory Disclosures	126
<input checked="" type="checkbox"/>	Conflict of Interest Disclosure	127
<input checked="" type="checkbox"/>	Intergovernmental Cooperation Agreement, if applicable	129

### ATTACHMENTS

<input checked="" type="checkbox"/>	Current Infrastructure Condition Documentation	130
<input checked="" type="checkbox"/>	Firm documentation of commitment from leveraging source(s)	131
<input checked="" type="checkbox"/>	Copy of Construction Permit(s)	140
<input checked="" type="checkbox"/>	Proof of Land Ownership (if applicable)	142
<input type="checkbox"/> NA	Control of Right of Way/Easements (if applicable)	NA
<input checked="" type="checkbox"/>	Copy of water purchase or wastewater treatment agreement (if applicable)	151
<input type="checkbox"/> NA	Copy of Option to Purchase (if applicable)	NA
<input checked="" type="checkbox"/>	Copy of Fair Housing Resolution	167
<input checked="" type="checkbox"/>	W-9	169
<input checked="" type="checkbox"/>	SAM Registration (CAGE #)	176
<input checked="" type="checkbox"/>	IRS Certification Letter	178
<input checked="" type="checkbox"/>	Copy of Local Government Audit	181
<input checked="" type="checkbox"/>	Supplementary Materials - Engineering Information	226



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Tolono, IL 61880

Phone: (217)485-5212

Fax: (217) 485-5117

Email: Info@TolonoIL.US

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June 24, 2020

Director's Office  
Illinois Department of Commerce and Economic Opportunity  
500 East Monroe  
Springfield, IL 62701

Dear Director:

The Village of Tolono is submitting an application for a public infrastructure grant under the Rebuild Illinois program. The grant request is in the amount of \$5,000,000 to be used to fund the Tolono Wastewater Treatment Plant. Additional funds in the amount of \$4,253,000 to be used for the completion of the project will come from Illinois Environmental Protection Agency Loan.

I certify that this application meets the eligibility thresholds as outlined in the Notice of Funding Opportunity and Rebuild Illinois Guidebook.

Very truly yours,

A handwritten signature in black ink, appearing to read "Robert Murphy". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Robert Murphy  
Village President  
Village of Tolono

***Insert Uniform Grant Application here.***

The Uniform Grant Application can be found in the Library on:

<https://www2.illinois.gov/dceo/CommunityServices/CommunityInfrastructure/Pages/default.aspx>



# Illinois Department of Commerce & Economic Opportunity

## Uniform Application for State Grant Assistance

### Agency Completed Section

1. Type of Submission  Pre-Application  
 Application  
 Changed / Corrected Application

2. Type of Application  New  
 Continuation (i.e. multiple year grant)  
 Revision (modification to initial application)

3. Date/Time Received By State (Completed by State Agency upon Receipt of Application)

4. Name of Awarding State Agency

5. Catalog of State Financial Assistance (CSFA) Number

6. CSFA Title

Catalog of Federal Domestic Assistance (CFDA)  Not Applicable (No federal funding)

7. CFDA Number

8. CFDA Title

9. CFDA Number

10. CFDA Title

Additional CFDA Number, if required

Additional CFDA Title, if required

### Funding Opportunity Information

11. Funding Opportunity Number

12. Funding Opportunity Title

Competition Identification  Not Applicable

13. Competition Identification Number

14. Competition Identification Title

**Applicant Completed Section**

**Applicant Information**

15. Legal Name (Name used for DUNS registration and grantee pre-qualification)

16. Common Name (DBA)

17. Employer/Taxpayer identification number (EIN, TIN)

18. Organizational DUNS Number

19. SAM Cage Code

20. Business Address (Address 1)   
(Address 2)   
(City), (State), (zip - 4)

**Applicant's Organizational Unit**

21. Department Name

22. Division Name

Applicant's Name and Contact Information for Person to be Contacted for **Program** Matters involving this Application.

23. First Name

24. Last Name

25. Suffix

26. Title

27. Organizational Affiliation

28. Telephone Number

29. Fax Number

30. E-mail Address

Applicant's Name and Contact Information for Person to be Contacted for **Business/Administrative Office** Matters involving the Application.

31. First Name

32. Last Name

33. Suffix

34. Title

35. Organizational Affiliation

36. Telephone Number

37. Fax Number

38. E-mail Address

**Areas Affected**

39. Areas Affected by the Project (cities, counties, state-wide, add attachments e.g. maps)

40. Legislative and Congressional District of Applicant

41. Legislative and Congressional Districts or Program Project

**Applicant's Project**

42. Description Title of Applicant's Project

43. Proposed Project Term

Start Date

End Date

44. Estimated Funding (Include all that apply)

<input checked="" type="checkbox"/> Amount Requested from the State	<input type="text" value="\$5,000,000.00"/>
<input type="checkbox"/> Applicant Contribution (e.g., in kind, matching)	<input type="text"/>
<input type="checkbox"/> Local Contribution	<input type="text"/>
<input checked="" type="checkbox"/> Other Source of Contribution	<input type="text" value="\$4,253,000.00"/>
<input type="checkbox"/> Program Income	<input type="text"/>
<b>Total Amount</b>	<input type="text" value="\$9,253,000.00"/>

Applicant Certification:

By signing this application, I certify (1) to the statements contained in the list of certifications\* and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances\* and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil or administrative penalties. (U.S. Code, Title 18, Section 1001)

(\* The list of certification and assurances, or an internet site where you may obtain this list is contained in the Notice of Funding Opportunity. If a NOFO was not required for the award, the state agency will specify required assurances and certifications as an addendum to the application.

I Agree

**Authorized Representative**

45. First Name

46. Last Name

47. Suffix

48. Title

49. Telephone Number

50. Fax Number

51. E-mail Address

52. Signature of Authorized Representative



53. Date Signed

6-24-2020

# APPLICANT PROJECT INFORMATION

## REBUILD ILLINOIS PUBLIC INFRASTRUCTURE

Type of project? Public Infrastructure Development Component of Commercial Development Project

If this project is "on behalf of" another entity, what is the entity:

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### I. PROJECT LOCATION ADDRESS:

Street Address East of 500 block of South Bourne Street  
(required)

City Tolono State IL Zip Code 61880-9038

The project location will be utilized to verify inclusion in an opportunity zone and/or DCEO underserved area.

### II. PROJECT BENEFIT INFORMATION

Provide the total number of persons served based upon the Census: 3,086

CENSUS TRACT NUMBER(s) – Use additional sheet, if necessary.

109					
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Is this project located in an Enterprise Zone?  Yes  No

Is this project located in an Empowerment Area?  Yes  No

Is this project located in a Tax Increment Financing District?  Yes  No

What is the current unemployment rate of the County? 10.9% (from IDES Non-Seasonally Adjusted, available at: [https://www2.illinois.gov/ides/lmi/Pages/Local\\_Area\\_Unemployment\\_Statistics.aspx](https://www2.illinois.gov/ides/lmi/Pages/Local_Area_Unemployment_Statistics.aspx))

### III. APPLICATION WRITER

CONTACT PERSON: Sukanya Sharma TITLE: Economic Development Planner

ADDRESS AND PHONE NUMBER:

Firm Name Champaign County Regional Planning Commission

Street Address 1776 E. Washington Street P.O. Box \_\_\_\_\_  
(required) (Only if no street address)

City Urbana State IL Zip Code 61802-4516  
(include + 4)

E-Mail ssharma@ccrpc.org  
(required)

BUSINESS PHONE: (217) 819-4105 FAX PHONE: (217) 328-2426  
FEDERAL EMPLOYER IDENTIFICATION NUMBER: 37-6006910  
(required)

**IV. PROJECT ENGINEER, if selected**

CONTACT PERSON: Tim A. Cowan TITLE: Professional Engineer

ADDRESS AND PHONE NUMBER:

Firm Name Donohue and Associates, Inc.

Street Address 1605 South State Street, Suite 1-C P.O. Box \_\_\_\_\_  
(required) (Only if no street address)

City Champaign State IL Zip Code 61820-7264  
(include + 4)

E-Mail tcowan@donohue-associates.com  
(required)

BUSINESS PHONE: (217) 903-5088 FAX PHONE: ( \_\_\_\_\_ )

FEDERAL EMPLOYER IDENTIFICATION NUMBER: 39-1873700  
(required)

## ***Insert GATA Capital Budget here.***

The GATA Capital Budget can be found in the Library on:

<https://www2.illinois.gov/dceo/CommunityServices/CommunityInfrastructure/Pages/default.aspx>



# State of Illinois -- Uniform Budget Template -- General Instructions

This form is used to apply to individual State of Illinois discretionary grant programs. Applicants should submit budgets based upon the total estimated costs for the project including all funding sources. Pay attention to applicable program specific instructions, if attached. The applicant organization should refer to 2 CFR 200, “Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards” cited within these instructions.

**You must consult with your Business Office prior to submitting this form for any award restrictions, limitations or requirements when filling out the narrative and Uniform Budget Template.**

## Section A – Budget Summary

### STATE OF ILLINOIS FUNDS

All applicants must complete Section A and provide a break-down by the applicable budget categories shown in lines 1-17. **Please read all instructions before completing form.**

### STATE OF ILLINOIS GRANT FUNDS

Provide a total requested State of Illinois Grant amount for each year in the Revenue portion of Section A. The amount entered in Line (a) will equal the total amount budgeted on Line 18 of Section A.

### BUDGET SUMMARY – STATE OF ILLINOIS FUNDS

All applicants must complete Section A and provide a break-down by the applicable budget categories shown in lines 1-17.

Line 18: Show the total budget request for each fiscal year for which funding is requested.

*Please use detail worksheet and narrative section for further descriptions and explanations of budgetary line items*

**Section A (continued) Indirect Cost Information:** *(This information should be completed by the applicant’s Business Office)*. If the applicant is requesting reimbursement for indirect costs on line 17, the applicant’s Business Office must select one of the options listed on the Indirect Cost Information page under Section-A Indirect Cost Information (1-4).

Option (1): The applicant has a Negotiated Indirect Cost Rate Agreement (NICRA) that was approved by the Federal government. A copy of this agreement must be provided to the State of Illinois’ Indirect Cost Unit for review and documentation. This NICRA will be accepted by all State of Illinois Agencies up to any statutory, rule-based or programmatic restrictions or limitations. *If this option is selected by the applicant, basic information is required for completion of this section. See bottom of “Section-A Indirect Cost Information”*

**NOTE: The applicant may not have a Federally Negotiated Indirect Cost Rate Agreement. Therefore, in order for the applicant to be reimbursed for Indirect Costs from the State of Illinois, the applicant must either:**

- A) Negotiate an Indirect Cost Rate with the State of Illinois’ Indirect Cost Unit with guidance from our State Cognizant Agency on an annual basis.**
- B) Elect to use the de minimis rate of 10% modified total direct cost (MTDC) which may be used indefinitely on State of Illinois Awards.**
- C) Use a Restricted Rate designated by programmatic statutory policy. (See Notice of Funding Opportunity for Restricted Rate Programs)**

Option (2a): The applicant currently has a Negotiated Indirect Cost Rate Agreement with the State of Illinois that will be accepted by all State of Illinois Agencies up to any statutory, rule-based or programmatic restrictions or limitations. The applicant is required to submit a new Indirect Cost Rate Proposal to the Indirect Cost Unit within six (6) months after the close of each fiscal year (2 CFR 200 Appendix IV (C)(2)(c)). **Note:** *If this option is selected by the applicant, basic information is required for completion of this section. See bottom of “Section-A Indirect Cost Information”*

Option (2b): The applicant currently does not have a Negotiated Indirect Cost Rate Agreement with the State of Illinois. The applicant must submit its initial Indirect Cost Rate Proposal (ICRP) immediately after the applicant is advised that the State award will be made and, in no event, later than three (3) months after the effective date of the State award (2 CFR 200 Appendix IV (C)(2)(b)). The initial ICRP will be sent to the State of Illinois' Indirect Cost Unit. **Note:** *The applicant should check with the State of Illinois awarding Agency for information regarding reimbursement of indirect costs while its proposal is being negotiated*

Option (3): The applicant elects to charge the de minimis rate of 10% modified total direct cost (MTDC) which may be used indefinitely on State of Illinois awards (2 CFR 200.414 (c)(4)(f) & (200.68)). **Note:** *The applicant must be eligible, see 2 CFR 200.414 (f), and submit documentation on the calculation of MTDC within your Budget Narrative under Indirect Costs. Note the applicant may only use the 10 percent de minimis rate if the applicant does not have an Approved Indirect Cost Rate Agreement. The applicant may not use the de minimis rate if it is a Local government, or if your grant is funded under a training rate or restricted rate program .*

Option (4): If you are applying for a grant under a Restricted Rate Program, indicate whether you are using a restricted indirect cost rate that is included on your approved Indirect Cost Rate Agreement, or whether you are using a restricted indirect cost rate that complies with statutory or programmatic policies. **Note:** *See Notice of State Award for Restricted Rate Programs*

## **Section B - Budget Summary**

### **NON-STATE OF ILLINOIS FUNDS**

NON-STATE OF ILLINOIS FUNDS: If the applicant is required to provide or volunteers to provide cost-sharing or matching funds or other non-State of Illinois resources to the project, the applicant must provide a revenue breakdown of all Non-State of Illinois funds in lines (b)-(d). the total of "Non-State Funds" should equal the amount budgeted on Line 18 of Section B. If a match percentage is required, the amount should be entered in this section.

#### **BUDGET SUMMARY – NON STATE OF ILLINOIS FUNDS**

If the applicant is required to provide or volunteers to provide cost-sharing or matching funds or other non-State of Illinois resources to the project, these costs should be shown for each applicable budget category on lines 1-17 of Section B.

Lines 1-17: For each project year, for which matching funds or other contributions are provided, show the total contribution for each applicable budget category.

Line 18: Show the total matching or other contribution for each fiscal year.

***Please see detail worksheet and narrative section for further descriptions and explanations of budgetary line items***

# Section C - Budget Worksheet & Narrative

[Attach separate sheet(s)]

Pay attention to applicable program specific instructions, if attached.

All applicants are required to submit a budget narrative along with Section A and Section B. The budget narrative is sometimes referred to as the budget justification. The narrative serves two purposes: it explains how the costs were estimated and it justifies the need for the cost. The narrative may include tables for clarification purposes. The State of Illinois recommends using the State of Illinois Uniform Budget Template worksheet and narrative guide provided.

1. Provide an itemized budget breakdown, and justification by project year, for each budget category listed in Sections A and B.
2. For non-State of Illinois funds or resources listed in Section B that are used to meet a cost-sharing or matching requirement or provided as a voluntary cost-sharing or matching commitment, you must include:
  - a. The specific costs or contributions by budget category;
  - b. The source of the costs or contributions; and
  - c. In the case of third-party in-kind contributions, a description of how the value was determined for the donated or contributed goods or services.

[Please review cost sharing and matching regulations found in 2 CFR 200.306.]

3. If applicable to this program, provide the rate and base on which fringe benefits are calculated.
4. If the applicant is requesting reimbursement for indirect costs on line 17, this information should be completed by the applicant's Business Office. Specify the estimated amount of the base to which the indirect cost rate is applied and the total indirect expense. Depending on the grant program to which the applicant is applying and/or the applicant's approved Indirect Cost Rate Agreement, some direct cost budget categories in the applicant's grant application budget may not be included in the base and multiplied by your indirect cost rate. Please indicate which costs are included and which costs are excluded from the base to which the indirect cost rate is applied.
5. Provide other explanations or comments you deem necessary.

Keep in mind the following—

Although the degree of specificity of any budget will vary depending on the nature of the project and State of Illinois agency requirements, a complete, well-thought-out budget serves to reinforce your credibility and increase the likelihood of your proposal being funded.

- A well-prepared budget should be reasonable and demonstrate that the funds being asked for will be used wisely.
- The budget should be as concrete and specific as possible in its estimates. Make every effort to be realistic, to estimate costs accurately.
- The budget format should be as clear as possible. It should begin with a budget narrative, which you should write after the entire budget has been prepared.
- Each section of the budget should be in outline form, listing line items under major headings and subheadings.
- Each of the major components should be subtotaled with a grand total at the end.

Your budget should justify all expenses and be consistent with the program narrative:

- Salaries should be comparable to those within the applicant organization.
- If new staff is being hired, additional space and equipment are considered, as necessary.
- If the budget lists an equipment purchase, it is the type allowed by the agency.
- If additional space is rented, the increase in insurance is supported.
- If an indirect cost rate applies to the proposal, the division between direct and indirect costs is not in conflict, and the aggregate budget totals refer directly to the approved formula. Indirect costs are costs that are not readily assignable to a particular project, but are necessary to the operation of the organization and the performance of the project (like the cost of operating and maintaining facilities, depreciation, and administrative salaries).

§200.308 Revision of budget and program plans

(c) The Federal/State awarding agency may, at its option, restrict the transfer of funds among direct cost categories or programs, functions and activities for Federal/State awards in which the Federal/State share of the project exceeds the Simplified Acquisition Threshold and the cumulative amount of such transfers exceeds or is expected to exceed 10 percent or \$1,000 per detail line item, whichever is greater of the total budget as last approved by the Federal/State awarding agency. The Federal/State awarding agency cannot permit a transfer that would cause any Federal/State appropriation to be used for purposes other than those consistent with the appropriation.

<b>STATE OF ILLINOIS</b>	<b>UNIFORM GRANT BUDGET TEMPLATE</b>			<b>Commerce &amp; Economic Opportunity</b>	
<b>Organization Name:</b>	Village of Tolono	<b>DUNS#</b>	93874980	<b>NOFO #</b>	2373-1362
<b>CSFA Number:</b>	420-75-2373	<b>CSFA Description:</b>	REBUILD ILLINOIS COMPETITIVE PUBLIC	<b>Fiscal Year:</b>	2021
<b>SECTION A -- STATE OF ILLINOIS FUNDS</b>				<b>Grant #</b>	92-1
<b>Revenues</b>				<b>TOTAL REVENUE</b>	
(a). State of Illinois Grant Amount Requested				\$	5,000,000.00
<b>BUDGET SUMMARY STATE OF ILLINOIS FUNDS</b>					
<b>Budget Expenditure Categories</b>		<b>OMB Uniform Guidance Federal Awards Reference 2 CFR 200</b>		<b>TOTAL EXPENDITURES</b>	
1. Design/Engineering				\$	153,000.00
2. Building/Land Purchase				\$	166,000.00
3. Equipment/Materials/Labor				\$	24,000.00
4. Equipment				\$	-
5. Wiring/Electrical				\$	-
6. Mechanical System				\$	677,000.00
7. Paving/Concrete/Masonry				\$	-
8. Plumbing				\$	10,000.00
9. Construction Management/Oversight				\$	-
10. Construction				\$	-
11. Other Construction Expenses				\$	11,000.00
12. Excavation/Site Prep/Dem				\$	-
13. Site Work				\$	3,071,000.00
14. Demolition & Removal				\$	155,000.00
15. Contingency				\$	733,000.00
16. Total Direct Costs (lines 1-15)				\$	5,000,000.00
<b>17. Total Costs State Grant Funds (16 &amp; 17)</b>				\$	5,000,000.00

Organization Name:

Village of Tolono

NOFO #

2373-1362

**SECTION - A (continued) Indirect Cost Rate Information**

If your organization is requesting reimbursement for indirect costs on line 17 of the Budget Summary, please select one of the following options.

1)  Our Organization receives direct Federal funding and currently has a Negotiated Indirect Cost Rate Agreement (NICRA) with our Federal Cognizant Agency. A copy of this agreement will be provided to the State of Illinois' Indirect Cost Unit for review and documentation before reimbursement is allowed. This NICRA will be accepted by all State of Illinois Agencies up to any statutory, rule-based or programmatic restrictions or limitations.

*NOTE: (If this option is selected, please provide basic Negotiated Indirect Cost Rate Agreement information in area designated below)*

Your Organization may not have a Federally Negotiated Indirect Cost Rate Agreement. Therefore, in order for your Organization to be reimbursed for Indirect Costs from the State of Illinois, your Organization must either:

- A. Negotiate an Indirect Cost Rate with the State of Illinois' Indirect Cost Unit with guidance from your State Cognizant Agency on an annual basis.
- B. Elect to use the de minimis rate of 10% modified total direct cost (MTDC) which may be used indefinitely on State of Illinois Awards.
- C. Use a Restricted Rate designated by programmatic or statutory policy. (See Notice of Funding Opportunity for Restricted Rate Programs)

2a)  Our Organization currently has a Negotiated Indirect Cost Rate Agreement with the State of Illinois that will be accepted by all State of Illinois Agencies up to any statutory, rule-based or programmatic restrictions or limitations. Our Organization is required to submit a new Indirect Cost Rate Proposal to the Indirect Cost Unit within six (6) months after the close of each fiscal year (2 CFR 200 Appendix IV (C)(2)(c)).

*NOTE: (If this option is selected, please provide basic Indirect Cost Rate information in area designated below)*

2b)  Our Organization currently does not have a Negotiated Indirect Cost Rate Agreement with the State of Illinois. Our Organization will submit our initial Indirect Cost Rate Proposal (ICRP) immediately after our Organization is advised that the State award will be made and, in no event, later than three (3) months after the effective date of the State award (2 CFR 200 Appendix IV (C)(2)(b)). The initial ICRP will be sent to the State of Illinois' Indirect Cost Unit.

*NOTE: (Check with your State of Illinois Agency for information regarding reimbursement of indirect costs while your proposal is being negotiated)*

3)  Our Organization has never received a Negotiated Indirect Cost Rate Agreement from either the Federal government or the State of Illinois and elects to charge the de minimis rate of 10% modified total direct cost (MTDC) which may be used indefinitely on State of Illinois awards (2 CFR 200.414 (c)(4)(f) & (200.68)).

*NOTE: (Your Organization must be eligible, see 2 CFR 200.414 (f), and submit documentation on the calculation of MTDC within your Budget Narrative under Indirect Costs)*

4)  For Restricted Rate Programs (check one) -- Our Organization is using a restricted indirect cost rate that:

\_\_\_\_\_ Is included as a "Special Indirect Cost Rate" in our NICRA (2 CFR 200Appendix IV (5) Or;

\_\_\_\_\_ Complies with other statutory policies (please specify):

The Restricted Indirect Cost Rate is \_\_\_\_\_ %

5)  No reimbursement of Indirect Cost is being requested. (Please consult your program office regarding possible match requirements)

Basic Negotiated Indirect Cost Rate Agreement information if Option (1) or (2a) is selected

Period Covered by the NICRA: From: \_\_\_\_\_ To: \_\_\_\_\_ (mm/dd/yyyy)

Approving Federal/State agency (please specify): \_\_\_\_\_

The Indirect Cost Rate is: \_\_\_\_\_ 0 % The Distribution Base is: \_\_\_\_\_

<b>STATE OF ILLINOIS</b>	<b>UNIFORM GRANT BUDGET TEMPLATE</b>	<b>Commerce &amp; Economic Opportunity</b>
<b>Organization Name: Village of Tolono</b>	<b>NOFO # 2373-1362</b>	<b>Fiscal Year 2021</b>
<b>S E C T I O N B -- NON STATE OF ILLINOIS FUNDS</b>		<b>Grant Number: 92-1</b>
<b>Revenues</b>		<b>TOTAL REVENUE</b>
	Private	Public
<b><u>NON-STATE Funds Total</u></b>	\$ -	\$ -
<b>BUDGET SUMMARY NON-STATE OF ILLINOIS FUNDS</b>		
<b>Budget Expenditure Categories</b>	<b>TOTAL Private EXPENDITURES</b>	<b>TOTAL Public EXPENDITURES</b>
1. Design/Engineering	\$ 1,042,000.00	\$ -
2. Building/Land Purchase	\$ -	\$ -
3. Equipment/Materials/Labor	\$ -	\$ -
4. Equipment	\$ 2,633,000.00	\$ -
5. Wiring/Electrical	\$ 578,000.00	\$ -
6. Mechanical System	\$ -	\$ -
7. Paving/Concrete/Masonry	\$ -	\$ -
8. Plumbing	\$ -	\$ -
9. Construction Management/Oversight	\$ -	\$ -
10. Construction	\$ -	\$ -
11. Other Construction Expenses	\$ -	\$ -
12. Excavation/Site Prep/Dem	\$ -	\$ -
13. Site Work	\$ -	\$ -
14. Demolition & Removal	\$ -	\$ -
15. Contingency	\$ -	\$ -
16. Total Direct Costs (lines 1-15)	\$ 4,253,000.00	\$ -
17. Total Costs NON -State Grant Funds (16 &17)		\$ 4,253,000.00

<b>CERTIFICATION</b>	<b>STATE OF ILLINOIS UNIFORM GRANT BUDGET TEMPLATE</b>	<b>AGENCY: Commerce &amp; Economic Opportunity</b>
<b>Organization Name: Village of Tolono</b>	<b>CSFA Description: REBUILD ILLINOIS COMPETITIVE PUBLIC INFRASTRUCTURE PROGRAM</b>	<b>NOFO # 2373-1362</b>
<b>CSFA #: 420-75-2373</b>	<b>DUNS # 93874980</b>	<b>Fiscal Year(s): 2021</b>

(2 CFR 200.415)

"By signing this report, I certify to the best of my knowledge and belief that the report is true, complete, and accurate and that any false, fictitious, or fraudulent information or the omission of any material fact, could result in the immediate termination of my grant award(s).

Village of Tolono  
 \_\_\_\_\_  
 Institution/Organization

  
 \_\_\_\_\_  
 Signature

Robert Murphy  
 \_\_\_\_\_  
 Name of Official

Village President  
 \_\_\_\_\_  
 Title  
 Chief Financial Officer (or equivalent)

6/24/2020  
 \_\_\_\_\_  
 Date of Execution

Village of Tolono  
 \_\_\_\_\_  
 Institution/Organization

  
 \_\_\_\_\_  
 Signature

Brandy Dalton  
 \_\_\_\_\_  
 Name of Official

Village Clerk/Treasurer  
 \_\_\_\_\_  
 Title  
 Executive Director (or equivalent)

6/24/2020  
 \_\_\_\_\_  
 Date of Execution

**Note: The State awarding agency may change required signers based on the grantee's organizational structure. The required signers must have the authority to enter into contractual agreements on behalf of the organization.**

## Section C - Budget Worksheet & Narrative

Village of Tolono

**1). Design/Engineering** -- Costs associated with planning, design, and construction observation or related services for the proposed project including environmental services, testing, surveys, etc. Costs associated with creation of the project's architectural drawings, engineering studies and/or fees, etc., including costs of plans & specs and/or printing costs if specifically identified as such within the project description. Copies of contracts will be required.

Purpose	Description of Work	Item Cost
<i>Miscellaneous Investigative Services for Design</i>	<i>(Soil borings, asbestos/lead paint surveys)</i>	\$ 23,000.00
<i>Engineering Design Services</i>	<i>Design and permitting services</i>	\$ 130,000.00
	<b>State Total</b>	<b>\$ 153,000.00</b>
 <i>Engineering Design Services</i>	 <i>Design and permitting services</i>	 \$ 436,000.00
<i>Engineering Bidding &amp; Construction Engineering Services</i>	<i>Bidding and Construction related services</i>	\$ 606,000.00
	<b>Private Non-State Total</b>	<b>\$ 1,042,000.00</b>
		\$ -
	<b>Public Non-State Total</b>	<b>\$ -</b>
	<b>Total</b>	<b>\$ 1,195,000.00</b>

**Narrative (State):**

The Village is requesting grant funds to help pay for these miscellaneous design costs and a portion of the Engineering Design costs to maximize grant fund request.

**Narrative (Private Non-State) i.e. "Match" or "Other Funding"**

The Village has submitted a project plan which includes the WWTP Improvements to secure a long-term low-interest loan through the IEPA Water Pollution Control Loan Program.

**Narrative (Public Non-State) i.e. "Match" or "Other Funding"**

## Section C - Budget Worksheet & Narrative

Village of Tolono

**2). Building/Land Purchase** -- Costs to purchase, either in whole or in part a building, structural shell, condominium, land, and/or easement including, but not limited to: the net purchase price itself, closing costs charged to the buyer on the closing document, legal fees, etc. Additionally, costs associated with Right-of-Way, appraisals, property/boundary surveys, legal fees, etc.

Purpose	Description of Work	Item Cost
<i>Lab + Control Building</i>	<i>Convert old chemical building into lab &amp; control building</i>	\$ <b>48,000.00</b>
<i>Chemical + Blower Building</i>	<i>Convert old filter building to chemical &amp; blower building</i>	\$ <b>105,000.00</b>
<i>Old Primary Clarifiers</i>	<i>Construct wood roof over tanks</i>	\$ <b>13,000.00</b>
	<b>State Total</b>	<b>\$ 166,000.00</b>
		\$ -
		\$ -
	<b>Private Non-State Total</b>	<b>\$ -</b>
		\$ -
		\$ -
	<b>Public Non-State Total</b>	<b>\$ -</b>
	<b>Total</b>	<b>\$ 166,000.00</b>

**Narrative (State):**

The Village is requesting grant funds to help pay for these improvements.

**Narrative (Private Non-State) i.e. "Match" or "Other Funding"**

**Narrative (Public Non-State) i.e. "Match" or "Other Funding"**

## Section C - Budget Worksheet & Narrative

Village of Tolono

**3). Equipment/Materials/Labor** (2 CFR 200.474)-- Purchase of materials and/or purchase/lease of equipment, to use or install for the project, such as: steel, drywall, lumber, wiring, doors, windows, roofing, rock, etc. including labor/installation costs, as identified - within the project description

Item	Quantity	Cost Rate	Item Cost
			\$ -
<i>Lab + Control Building (casework and furniture)</i>	<i>1</i>	\$ 24,000.00	\$ 24,000.00
		<b>State Total</b>	<b>\$ 24,000.00</b>
			\$ -
		<b>Private Non-State Total</b>	<b>\$ -</b>
			\$ -
			\$ -
		<b>Public Non-State Total</b>	<b>\$ -</b>
		<b>Total</b>	<b>\$ 24,000.00</b>

**Narrative (State):**

The Village is requesting grant funds to help pay for these improvements.

**Narrative (Private Non-State) i.e. "Match" or "Other Funding"**

**Narrative (Public Non-State) i.e. "Match" or "Other Funding"**

## Section C - Budget Worksheet & Narrative

Village of Tolono

4). **Equipment** (2 CFR 200.439) -- All costs associated with equipment that is not associated with any other contracts related to the grant.

Item	Quantity	Cost	Equipment Cost
			\$ -
			\$ -
		<b>State Total</b>	<b>\$ -</b>
<i>Fine Screen Equipment</i>	<i>1</i>	\$ 246,000.00	\$ 246,000.00
<i>Raw Influent Pump Station Equipment</i>	<i>1</i>	\$ 130,000.00	\$ 130,000.00
<i>Excess Flow Pump Station Equipment</i>	<i>1</i>	\$ 120,000.00	\$ 120,000.00
<i>Oxidation Ditch Equipment</i>	<i>1</i>	\$ 542,000.00	\$ 542,000.00
<i>Secondary Clarifiers Equipment</i>	<i>1</i>	\$ 669,000.00	\$ 669,000.00
<i>Return Activated Sludge (RAS) Pump Station Equipment</i>	<i>1</i>	\$ 99,000.00	\$ 99,000.00
<i>Cascade Aerator Equipment</i>	<i>1</i>	\$ 13,000.00	\$ 13,000.00
<i>Aerobic Digesters Equipment</i>	<i>1</i>	\$ 91,000.00	\$ 91,000.00
<i>Sludge Transfer Pump Station Equipment</i>	<i>1</i>	\$ 50,000.00	\$ 50,000.00
<i>Chemical + Blower Building Equipment</i>	<i>1</i>	\$ 193,000.00	\$ 193,000.00
<i>Site Electrical &amp; SCADA Equipment</i>	<i>1</i>	\$ 480,000.00	\$ 480,000.00
		<b>Private Non-State Total</b>	<b>\$ 2,633,000.00</b>
			\$ -
			\$ -
		<b>Public Non-State Total</b>	<b>\$ -</b>
		<b>Total Equipment</b>	<b>\$ 2,633,000.00</b>

**Narrative (State):**

**Narrative (Private Non-State) i.e. "Match" or "Other Funding"**  
 The Village has submitted a project plan which includes the WWTP Improvements to secure a long-term low-interest loan through the IEPA Water Pollution Control Loan Program.

**Narrative (Public Non-State) i.e. "Match" or "Other Funding"**

## Section C - Budget Worksheet & Narrative

Village of Tolono

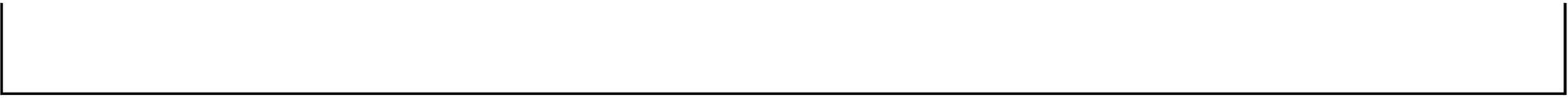
**5). Wiring/Electrical** (2 CFR 200.94) -- Purchase of materials necessary for completion of the project scope such as electrical wiring, conduit, outlets, switches, etc. including associated labor/installation costs, as identified within the project description.

Item	Quantity/ Duration	Cost per Item	Item Cost
			\$ -
			\$ -
			\$ -
		<b>State Total</b>	<b>\$ -</b>
<i>Fine Screen wiring and electrical installation</i>	<i>1</i>	\$ 22,000.00	\$ 22,000.00
<i>Raw Influent Pump Station wiring and electrical installation</i>	<i>1</i>	\$ 18,000.00	\$ 18,000.00
<i>Excess Flow Pump Station wiring and electrical installation</i>	<i>1</i>	\$ 62,000.00	\$ 62,000.00
<i>Secondary Clarifiers wiring and electrical installation</i>	<i>1</i>	\$ 72,000.00	\$ 72,000.00
<i>Return Activated Sludge (RAS) Pump Station wiring and electrical installation</i>	<i>1</i>	\$ 67,000.00	\$ 67,000.00
<i>Waste Activated Sludge (WAS) Flow Meter Vault wiring and electrical installation</i>	<i>1</i>	\$ 2,000.00	\$ 2,000.00
<i>Sludge Transfer Pump Station wiring and electrical installation</i>	<i>1</i>	\$ 35,000.00	\$ 35,000.00
<i>Chemical + Blower Building wiring and electrical installation</i>	<i>1</i>	\$ 72,000.00	\$ 72,000.00
<i>Site Electrical &amp; SCADA wiring and electrical installation</i>	<i>1</i>	\$ 228,000.00	\$ 228,000.00
		<b>Private Non-State Total</b>	<b>\$ 578,000.00</b>
			\$ -
			\$ -
		<b>Public Non-State Total</b>	<b>\$ -</b>
		<b>Total</b>	<b>\$ 578,000.00</b>

**Narrative (State):**

**Narrative (Private Non-State) i.e. "Match" or "Other Funding"**  
 The Village has submitted a project plan which includes the WWTP Improvements to secure a long-term low-interest loan through the IEPA Water Pollution Control Loan Program.

**Narrative (Public Non-State) i.e. "Match" or "Other Funding"**



## Section C - Budget Worksheet & Narrative

Village of Tolono

**6). Mechanical System** -- Purchase of materials necessary for completion of the project scope such as HVAC, elevators, fire alarm, sprinkler, or ventilation system, etc. including associated labor/installation costs, as identified within the project description.

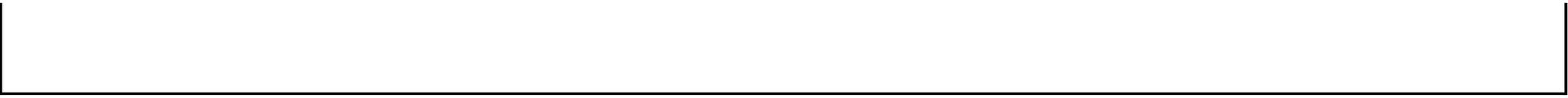
Item	Quantity/ Duration	Cost per Item	Item Cost
<i>Raw Influent Pump Station Mechanical Piping, Valve, and Appurtenances</i>	1	\$ 92,000.00	\$ 92,000.00
<i>Excess Flow Pump Station Mechanical Piping, Valves, and Appurtenances</i>	1	\$ 92,000.00	\$ 92,000.00
<i>Oxidation Ditch Mechanical Piping, Valves, and Appurtenances</i>	1	\$ 46,000.00	\$ 46,000.00
<i>Secondary Clarifiers Mechanical Piping, Valves, and Appurtenances</i>	1	\$ 149,000.00	\$ 149,000.00
<i>Return Activated Sludge (RAS) Pump Station Mechanical Piping, Valves, &amp; Appurtenances</i>	1	\$ 78,000.00	\$ 78,000.00
<i>Waste Activated Sludge (WAS) Flow Meter Vault Mechanical Piping, Valves, &amp; Appurtenances</i>	1	\$ 19,000.00	\$ 19,000.00
<i>Aerobic Digesters</i>	1	\$ 84,000.00	\$ 84,000.00
<i>Sludge Transfer Pump Station Mechanical Piping, Valves, and Appurtenances</i>	1	\$ 45,000.00	\$ 45,000.00
<i>Chemical + Blower Building Mechanical Piping, Valves, and Appurtenances</i>	1	\$ 72,000.00	\$ 72,000.00
		\$	-
		<b>State Total</b>	<b>\$ 677,000.00</b>
		\$	-
		\$	-
		<b>Private Non-State Total</b>	<b>\$ -</b>
		\$	-
		\$	-
		<b>Public Non-State Total</b>	<b>\$ -</b>
		<b>Total</b>	<b>\$ 677,000.00</b>

**Narrative (State):**

The Village is requesting grant funds to help pay for these improvements.

**Narrative (Private Non-State) i.e. "Match" or "Other Funding"**

**Narrative (Public Non-State) i.e. "Match" or "Other Funding"**





7). **Paving/Concrete/Masonry** (2 CFR 200.459) -- Purchase of materials necessary for completion of the project scope such as bituminous pavement, concrete, rock, bricks, blocks, mortar, tuckpointing, etc. including associated labor/installation costs, as identified within the project description.

---

*Public Non-State Total* \$ -

*Total* \$ -

**Narrative (State):**

These costs will cover the proposed entrances from Elm St. and IL Route 9 to the new roadway, Heritage Way, along with the new roadway itself, curb/gutters, an entrance to an existing development adjacent to the new roadway, all pavement markings, signage, and necessary traffic control and protection.

**Narrative (Private Non-State)** *i.e. "Match" or "Other Funding"*

**Narrative (Public Non-State)** *i.e. "Match" or "Other Funding"*

## Section C - Budget Worksheet & Narrative

Village of Tolono

8). **Plumbing**-- Purchase of materials necessary for completion of the project scope such as internal or external pipes for water, gas, and/or sewage; fixtures; etc. including associated labor/installation costs, as identified within the project description.

Item	Quantity	Cost per Item	Item Cost
<i>Lab + Control Building Plumbing fixtures &amp; features</i>	<i>1</i>	\$ <i>10,000.00</i>	\$ <i>10,000.00</i>
			\$ <i>-</i>
		<b><i>State Total</i></b>	<b><i>\$ 10,000.00</i></b>
			\$ <i>-</i>
			\$ <i>-</i>
		<b><i>Private Non-State Total</i></b>	<b><i>\$ -</i></b>
			\$ <i>-</i>
			\$ <i>-</i>
		<b><i>Public Non-State Total</i></b>	<b><i>\$ -</i></b>
			\$ <i>-</i>
		<b><i>Total</i></b>	<b><i>\$ 10,000.00</i></b>

**Narrative (State):**

The Village is requesting grant funds to help pay for these improvements.

**Narrative (Private Non-State) i.e. "Match" or "Other Funding"**

**Narrative (Public Non-State) i.e. "Match" or "Other Funding"**

## Section C - Budget Worksheet & Narrative

Village of Tolono

9). **Construction Management/Oversight** -- Costs associated with managing the construction activities and/or overseeing all aspects of the construction project, either by contractor personnel or grantee personnel, but limited to verifiable time working on this project.

Purpose	Description of Work	Item Cost
---------	---------------------	-----------

		<i>State Total</i>	\$	-
			\$	-
			\$	-
		<i>Private Non-State Total</i>	\$	-
		<i>Public Non-State Total</i>	\$	-
		<i>Total</i>	\$	-

**Narrative (State):**

**Narrative (Private Non-State) i.e. "Match" or "Other Funding"**

**Narrative (Public Non-State) i.e. "Match" or "Other Funding"**

## Section C - Budget Worksheet & Narrative

Village of Tolono

**10). Construction** -- *All costs associated with physical construction and construction related services provided by the contractor(s) of the facility.*

Purpose	Description of Work	Item Cost
---------	---------------------	-----------

		\$	-
<i>State Total</i>		\$	-
		\$	-
		\$	-
<i>Private Non-State Total</i>		\$	-
		\$	-
		\$	-
<i>Public Non-State Total</i>		\$	-
<i>Total</i>		\$	-

**Narrative (State):**

**Narrative (Private Non-State) i.e. "Match" or "Other Funding"**

**Narrative (Public Non-State) i.e. "Match" or "Other Funding"**

## Section C - Budget Worksheet & Narrative

Village of Tolono

**11). Other Construction Expenses** -- Costs that cannot be easily broken out to or covered by individual/specific budgetary line items such as landscaping, hauling, equipment, rental, insurance, environmental fees, loan payments, etc. as identified within the project description.

Purpose	Description of Work	Item Cost
<i>Erosion Control &amp; Stormwater Pollution Prevention Plan</i>	<i>Installation/inspeciton/maintenance of erosion control measures per SWPPP</i>	<b>\$ 11,000.00</b>
	<b>State Total</b>	<b>\$ 11,000.00</b>
		\$ -
		\$ -
	<b>Private Non-State Total</b>	<b>\$ -</b>
		\$ -
		\$ -
	<b>Public Non-State Total</b>	<b>\$ -</b>
	<b>Total</b>	<b>\$ 11,000.00</b>

**Narrative (State):**

The Village is requesting grant funds to help pay for these improvements.

**Narrative (Private Non-State) i.e. "Match" or "Other Funding"**

**Narrative (Public Non-State) i.e. "Match" or "Other Funding"**

## Section C - Budget Worksheet & Narrative

Village of Tolono

12). **Excavation/Site Prep/Demo** -- Costs associated with demolition of existing structures on the project site and/or preparation of the project site including excavation, etc. ahead of actual new construction/renovation activities.

Purpose	Description of Work	Item Cost
---------	---------------------	-----------

		<i>State Total</i>	\$	-
			\$	-
			\$	-
		<i>Private Non-State Total</i>	\$	-
			\$	-
		<i>Public Non-State Total</i>	\$	-
		<i>Total</i>	\$	-

**Narrative (State):**

**Narrative (Private Non-State) i.e. "Match" or "Other Funding"**

**Narrative (Public Non-State) i.e. "Match" or "Other Funding"**

## Section C - Budget Worksheet & Narrative

Village of Tolono

**13). Site Work** - All costs associated with work outside of the 5-foot building line, including grading, excavation, filtration systems, parking lots, sidewalks, utilities, etc.

Purpose	Description of Work	Item Cost
<i>Fine Screen Structure</i>	<i>Earthwork, concrete, metal, and bollards for fine screen structure.</i>	\$ 50,000.00
<i>Raw Influent Pump Station</i>	<i>Earthwork, concrete, metal, site piping, bollars, and force main</i>	\$ 240,000.00
<i>Excess Flow Pump Station</i>	<i>Earthwork, concrete, metal, site piping, bollars, and force main</i>	\$ 279,000.00
<i>Oxidation Ditch</i>	<i>Earthwork, concrete, metal, site ductwork and piping</i>	\$ 1,154,000.00
<i>Secondary Clarifiers</i>	<i>Earthwork, concrete, and metal</i>	\$ 561,000.00
<i>Return Activated Sludge (RAS) Pump Station</i>	<i>Earthwork, concrete, bollards, and force main</i>	\$ 103,000.00
<i>Waste Activated Sludge (WAS) Flow Meter Vault</i>	<i>Earthwork, concrete, and metal</i>	\$ 11,000.00
<i>Chlorine Contact Tanks</i>	<i>Earthwork, concrete, metal, tanks, and site piping</i>	\$ 106,000.00
<i>Cascade Aerator</i>	<i>Earthwork, concrete, and metal</i>	\$ 59,000.00
<i>Aerobic Digesters</i>	<i>Earthwork, concrete, and metal</i>	\$ 62,000.00
<i>Sludge Transfer Pump Station</i>	<i>Earthwork, concrete, bollards, and force main</i>	\$ 55,000.00
<i>Lab + Control Building</i>	<i>Concrete and metals</i>	\$ 20,000.00
<i>Chemical + Blower Building</i>	<i>Concrete</i>	\$ 74,000.00
<i>Old Control Building Demolition</i>	<i>Fill and concrete cap</i>	\$ 35,000.00
<i>Site Civil Work</i>	<i>Water lines, other site piping, aggregate parking areas, sidewalk, seeding, and fencing</i>	\$ 262,000.00
	<b>State Total</b>	<b>\$ 3,071,000.00</b>
		\$ -
		\$ -
	<b>Private Non-State Total</b>	<b>\$ -</b>
		\$ -
		\$ -
	<b>Public Non-State Total</b>	<b>\$ -</b>
	<b>Total</b>	<b>\$ 3,071,000.00</b>

**Narrative (State):**

The Village is requesting grant funds to help pay for these improvements.

**Narrative (Private Non-State) i.e. "Match" or "Other Funding"**

**Narrative (Public Non-State)** *i.e. "Match" or "Other Funding"*

## Section C - Budget Worksheet & Narrative

Village of Tolono

**14). Demolition and Removal** --All costs associated with removal of any structures required to accommodate new construction and approved as part of the grant.

Purpose	Description of Work	Item Cost
<i>Aerobic Digesters Demolition</i>	<i>Removal of clarifier equipment, air diffusers, pipes, steel handrail, and grating</i>	\$ <b>43,000.00</b>
<i>Lab + Control Building Demolition</i>	<i>Removal of existing tanks, equipment, pole barn, and pressure wash concrete</i>	\$ <b>16,000.00</b>
<i>Chemical + Blower Building Demolition</i>	<i>Removal of filters, process piping, and existing pole barn</i>	\$ <b>24,000.00</b>
<i>Old Control Building Demolition</i>	<i>Removal of existing building above grd, piping, equipment, &amp; asbestos abatement</i>	\$ <b>55,000.00</b>
<i>Old Primary Clarifiers Demolition</i>	<i>Removal of biofilter, handrails, sludge and pressure wash tank</i>	\$ <b>10,000.00</b>
<i>Site Civil Demolition</i>	<i>Removal of old chain-link fence, old sand bed, paving, &amp; media</i>	\$ <b>7,000.00</b>
	<b>State Total</b>	<b>\$ 155,000.00</b>
		\$ -
		\$ -
	<b>Private Non-State Total</b>	<b>\$ -</b>
		\$ -
		\$ -
	<b>Public Non-State Total</b>	<b>\$ -</b>
	<b>Total</b>	<b>\$ 155,000.00</b>

**Narrative (State):**

The Village is requesting grant funds to help pay for these improvements.

**Narrative (Private Non-State) i.e. "Match" or "Other Funding"**

**Narrative (Public Non-State) i.e. "Match" or "Other Funding"**

## Section C - Budget Worksheet & Narrative

Village of Tolono

**15). Contingency** - Coverage of potential cost overruns in any of the utilized grant budget line items.

Purpose	Description of Work	Item Cost
<i>Construction Contingency (aprx. 10%)</i>		\$ 733,000.00
		\$ -
	<b>State Total</b>	<b>\$ 733,000.00</b>
		.
		\$ -
	<b>Private Non-State Total</b>	<b>\$ -</b>
		\$ -
		\$ -
	<b>Public Non-State Total</b>	<b>\$ -</b>
	<b>Total</b>	<b>\$ 733,000.00</b>

**Narrative (State):**

The Village is requesting grant funds to help pay for these improvements.

**Narrative (Private Non-State) i.e. "Match" or "Other Funding"**

**Narrative (Public Non-State) i.e. "Match" or "Other Funding"**

## Section C - Budget Worksheet & Narrative

Village of Tolono

**Budget Narrative Summary**--When you have completed the budget worksheet, transfer the totals for each category to the spaces below to the uniform template provided (SECTION A & B). Verify the total costs and the total project costs. Indicate the amount of State requested funds and the amount of non-State funds that will support the project.

<i>Budget Category</i>	<i>State</i>	<i>Private Match</i>	<i>Public Match</i>	<i>Total</i>
<i>1. Design/Engineering</i>	\$ 153,000.00	\$ 1,042,000.00	\$ -	\$ 1,195,000.00
<i>2. Building/Land Purchase</i>	\$ 166,000.00	\$ -	\$ -	\$ 166,000.00
<i>3. Equipment/Materials/Labor</i>	\$ 24,000.00	\$ -	\$ -	\$ 24,000.00
<i>4. Equipment</i>	\$ -	\$ 2,633,000.00	\$ -	\$ 2,633,000.00
<i>5. Wiring/Electrical</i>	\$ -	\$ 578,000.00	\$ -	\$ 578,000.00
<i>6. Mechanical System</i>	\$ 677,000.00	\$ -	\$ -	\$ 677,000.00
<i>7. Paving/Concrete/Masonry</i>	\$ -	\$ -	\$ -	\$ -
<i>8. Plumbing</i>	\$ 10,000.00	\$ -	\$ -	\$ 10,000.00
<i>9. Construction Management/Oversight</i>	\$ -	\$ -	\$ -	\$ -
<i>10. Construction</i>	\$ -	\$ -	\$ -	\$ -
<i>11. Other Construction Expenses</i>	\$ 11,000.00	\$ -	\$ -	\$ 11,000.00
<i>12. Excavation/Site Prep/Dem</i>	\$ -	\$ -	\$ -	\$ -
<i>13. Site Work</i>	\$ 3,071,000.00	\$ -	\$ -	\$ 3,071,000.00
<i>14. Demolition &amp; Removal</i>	\$ 155,000.00	\$ -	\$ -	\$ 155,000.00
<i>15. Contingency</i>	\$ 733,000.00	\$ -	\$ -	\$ 733,000.00
<i>State Request</i>	\$ 5,000,000.00			
<i>Private Match</i>		\$ 4,253,000.00		
<i>Public Match</i>			\$ -	
<b>TOTAL PROJECT COSTS</b>				<b>\$ 9,253,000.00</b>

***Insert Engineer's Cost Estimate here.***

- Must be on company letterhead, include the date and the engineer's name
- Be less than one year old
- Must match the costs contained in the GATA Capital Budget.

**The Department reserves the right to deem the Engineer's Cost Estimate as "not included" for the following reasons:**

- Engineer's cost estimate not contained in application
- Engineer's cost estimate not on company letterhead with engineer's name and date
- Engineer's cost estimate does not include a detailed breakdown of costs; and/or
- Engineer's cost estimate contains grossly inflated costs.

Village of Tolono, Illinois  
 Wastewater System Project Plan  
 Project "A" - WWTF Upgrade with Oxidation Ditch Treatment  
 PROJECT COST OPINION  
 18-Jun-20

Structure	Name	Legal + Admin	Design	Bid + Const. Engr.	Const	Other **	Contingency	TOTAL
110	FINE SCREEN STRUCTURE	\$0	\$24,000	\$26,000	\$317,000	\$3,000	\$32,000	\$402,000
120	RAW INFLUENT PUMP STATION	\$0	\$37,000	\$40,000	\$480,000	\$3,000	\$48,000	\$608,000
130	EXCESS FLOW PUMP STATION	\$0	\$43,000	\$46,000	\$553,000	\$0	\$55,000	\$697,000
210	OXIDATION DITCH	\$0	\$134,000	\$144,000	\$1,742,000	\$8,000	\$174,000	\$2,202,000
231-232	SECONDARY CLARIFIERS	\$0	\$112,000	\$120,000	\$1,452,000	\$4,000	\$145,000	\$1,833,000
240+241	RETURN ACTIVATED SLUDGE (RAS) PUMP STATION	\$0	\$27,000	\$29,000	\$347,000	\$2,000	\$35,000	\$440,000
251	WASTE ACTIVATED SLUDGE (WAS) FLOW METER VAULT	\$0	\$2,000	\$3,000	\$32,000	\$0	\$3,000	\$40,000
271+272	CHLORINE CONTACT TANKS	\$0	\$8,000	\$9,000	\$106,000	\$0	\$11,000	\$134,000
280	CASCADE AERATOR	\$0	\$6,000	\$6,000	\$72,000	\$0	\$7,000	\$91,000
701+702	AEROBIC DIGESTERS	\$0	\$22,000	\$23,000	\$280,000	\$0	\$28,000	\$353,000
710	SLUDGE TRANSFER PUMP STATION	\$0	\$14,000	\$15,000	\$185,000	\$0	\$19,000	\$233,000
801	CONVERT OLD CHEMICAL BLDG. TO LAB & CONTROL BUILDING	\$0	\$9,000	\$10,000	\$118,000	\$0	\$12,000	\$149,000
802	CONVERT FILTER BLDG. TO CHEM & BLOWER BUILDING	\$0	\$42,000	\$45,000	\$540,000	\$0	\$54,000	\$681,000
803	DEMOLISH OLD CONTROL BUILDING	\$0	\$7,000	\$7,000	\$90,000	\$3,000	\$9,000	\$116,000
881	REMOVALS AT OLD PRIMARY CLARIFIERS	\$0	\$2,000	\$2,000	\$23,000	\$0	\$2,000	\$29,000
900	SITE ELECTRICAL & SCADA UPGRADES	\$0	\$55,000	\$58,000	\$708,000	\$0	\$71,000	\$892,000
980	SITE CIVIL UPGRADES	\$0	\$22,000	\$23,000	\$280,000	\$0	\$28,000	\$353,000
TOTALS =		\$0	\$566,000	\$606,000	\$7,325,000	\$23,000	\$733,000	\$9,253,000

\*\* Other Costs include soil borings & asbestos/lead paint surveys.

**Engineer Name** - Tim Cowan, P.E.

**Date** - June 24, 2020

Village of Tolono, Illinois  
Wastewater System Project Plan

Project "A" - WWTF Upgrade with Oxidation Ditch Treatment

PROJECT COST OPINION  
Revised: June 18, 2020

ID No.	Facility Name and Identification No.	Initial Capital Cost		Present Worth of Annual OM&R		TOTAL PRESENT WORTH
110	FINE SCREEN STRUCTURE	\$402,000	+	\$186,000	=	\$588,000
120	RAW INFLUENT PUMP STATION	\$608,000	+	\$731,800	=	\$1,339,800
130	EXCESS FLOW PUMP STATION	\$697,000		\$442,200	=	\$1,139,200
210	OXIDATION DITCH	\$2,202,000	+	\$971,600	=	\$3,173,600
231+232	SECONDARY CLARIFIERS	\$1,833,000	+	\$144,100	=	\$1,977,100
240+241	RETURN ACTIVATED SLUDGE (RAS) PUMP STATION	\$440,000	+	\$386,000	=	\$826,000
251	WASTE ACTIVATED SLUDGE (WAS) FLOW METER VAULT	\$40,000	+	\$67,300	=	\$107,300
271/272	CHLORINE CONTACT TANKS	\$134,000	+	\$94,000	=	\$228,000
280	CASCADE AERATOR	\$91,000	+	\$107,100	=	\$198,100
701+702	AEROBIC DIGESTERS	\$353,000	+	\$295,000	=	\$648,000
710	SLUDGE TRANSFER PUMP STATION	\$233,000	+	\$107,100	=	\$340,100
801	CONVERT OLD CHEMICAL BLDG. TO LAB & CONTROL BUILDING	\$149,000	+	\$12,000	=	\$161,000
802	CONVERT FILTER BLDG. TO CHEM & BLOWER BUILDING	\$681,000	+	\$1,358,800	=	\$2,039,800
803	DEMOLISH OLD CONTROL BUILDING	\$116,000	+	\$0	=	\$116,000
881	REMOVALS AT OLD PRIMARY CLARIFIERS	\$29,000	+	\$1,007,000	=	\$1,036,000
900	SITE ELECTRICAL & SCADA UPGRADES	\$892,000	+	\$174,000	=	\$1,066,000
999	SITE CIVIL UPGRADES	\$353,000	+	\$0	=	\$353,000
TOTAL PROJECT COST =		\$9,253,000	+	\$6,084,000		\$15,337,000

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020  
FINE SCREEN STRUCTURE  
PROJECT COST OPINION

Description

This component is a 1.71 MGD fine screen for the dry weather flows that pass onto the new Raw Influent Pump Station. Fine screen will be mounted in an 7-ft. diameter manhole shall have a PLC panel and Cold Weather Package.

ITEM	Units	Quantity	Installed Cost (\$)	Initial Cost (\$)
Architectural/Structural				
Earthwork		See next page for Detailed Cost Breakdown		\$5,900
Concrete		See next page for Detailed Cost Breakdown		\$25,000
Metals		See next page for Detailed Cost Breakdown		\$4,500
Buildings		See next page for Detailed Cost Breakdown		\$0
Demolition		See next page for Detailed Cost Breakdown		\$0
Fine Screen w/ cold weather pkg. & control panel	Each	1	\$204,700	\$204,700
Electrical	Lump Sum	1	\$18,000	\$18,000
Bollards	Each	4	\$1,500	\$6,000
Subtotal, rounded to the nearest \$1,000				\$264,000
Contractor Bonds, Insurance, Mobilization, Overhead & Profit			20%	\$53,000
Construction Cost before contingency				\$317,000
Contingency			10%	\$32,000
Total Construction Cost				\$349,000
Design Engineering			7.0%	\$24,000
Bidding and Construction Engineering			7.5%	\$26,000
Other Costs - Geotechnical				\$3,000
Total Cost =				\$402,000

Village of Tolono, Illinois

Wastewater System Project Plan

ARCHITECTURAL/STRUCTURAL WORKSHEET

ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	1	2,000	2,000
Earthwork: Excavation	cu yds.	80	30.00	2,400
Earthwork: Underdrain System	sq. yds.	0	100	0
Earthwork: Pile Foundation	ft.	0	100	0
Earthwork: Rock Excavation	cu yds.	0	75	0
Earthwork: Earth backfill	cu yds.	100	15	1,500
Earthwork: Sheeting	SF	0	20	0
<b>Earthwork</b>				<b>5,900</b>
Concrete: 7' dia precast Fine Screen Structure	VLF	25	1,000	25,000
Concrete:	VLF		1,500	0
Concrete:	VLF		2,000	0
Concrete:	Lump Sum		5,000	0
Concrete:	cu yds.		100	0
Concrete:	VLF		1,200	0
Concrete:	CY		500	0
Concrete:	Each	0	4,000	0
<b>Concrete</b>				<b>25,000</b>
Metals: Alum. Hatch, 60" x 48" w/ fall protection	each	1	4,500	4,500
Metals:	each		3,000	0
Metals:	risers		0	0
Metals:	Lump Sum		1,000	0
Metals:	Each		600	0
<b>Metals</b>				<b>4,500</b>
Building:	each	0	58,000	0
Building:	sq. ft.	0	100	0
Building:	sq. ft.	0	100	0
Building:	sq. ft.	0	100	0
Building:	sq. ft.	0	100	0
Building:	sq. ft.	0	100	0
<b>Buildings</b>				<b>0</b>
Demolition:	cu ft.	0	100	0
Demolition:	cu ft.	0	100	0
Demolition:	lump sum	0	100	0
Demolition:	lump sum	0	100	0
<b>Demolition</b>				<b>0</b>

Village of Tolono, Illinois

Wastewater System Project Plan

ANNUAL O&M COST ESTIMATE

General Description

Number of Motors Operating	1	
Brake Horsepower of Each Operating Pump	5	
Total Bhp	5	
Motor Efficiency	92%	
Adjustable Frequency Drive Efficiency	90%	
Wire Horsepower	6	
Wire Kilowatts	5	
Operating Hours Per Day	2	Assume in-service pump runs only 10% of the time
Operating Days Per Week	7	
Operating Weeks Per Year	52	
Operating Hours Per Year	874	
Maintenance Hours Per Year	100	

ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	3,935	0.10	394
Maintenance	hours	100	80	8,000
Total Annual Cost				\$8,394

Present Worth Analysis

Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94
Number of Years	30	
Present Worth Factor	21.212	

Present Worth of Total Annual Cost (Item "A") = \$178,000

B. Replacement Costs

ITEM	Replacement Year	Units	total Replacement Cost in Replacement Yr.	Present Worth of Replacement Cost
Replace motor on fine screen	15	Lump Sum	\$8,000	\$ 5,600
Replace bagger unit	10	Lump Sum	\$3,000	\$ 2,400

Present Worth of Replacement Costs (Item "B") = 8,000

Present Worth of Total OM&R Costs (Items "A" + "B") = \$186,000

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020

RAW INFLUENT PUMP STATION  
PROJECT COST OPINION

Description

This component is a two-pump submersible station fitted with two 1,187 gpm, 40 Hp pumps. Control panel will be located in 304 SS NEMA 4X enclosure near the station. Included is a Raw Influent mag meter and vault.

ITEM	Units	Quantity	Installed Cost (\$)	Initial Cost (\$)
<b>Architectural/Structural</b>				
Earthwork	See next page for Detailed Cost Breakdown			\$18,900
Concrete	See next page for Detailed Cost Breakdown			\$72,700
Metals	See next page for Detailed Cost Breakdown			\$12,300
Buildings	See next page for Detailed Cost Breakdown			\$0
Demolition	See next page for Detailed Cost Breakdown			\$0
Submers. pumps, 1.71 MGD each, 40 Hp w/ controls	Each	2	\$39,150	\$78,300
Porta-Con fitting, 6" in valve vault	Each	1	\$1,500	\$1,500
Porta-Con fitting, 6" in wetwell	Each	1	\$1,500	\$1,500
10" D.I. swing check valve, pneumatic assisted	Each	2	\$4,500	\$9,000
10" D.I. plug valve, handwheel actuated	Each	2	\$4,000	\$8,000
10" D.I. flanged piping wetwell/vault/meter MH	Lump Sum	1	\$28,000	\$28,000
Sump pumps and piping	Lump Sum	1	\$9,000	\$9,000
Painting piping, etc.	Lump Sum	1	\$10,000	\$10,000
Electrical work & site lighting	Lump Sum	1	\$15,000	\$15,000
Magnetic flow meter, reduce to 8-inch	Inch-diameter	8	\$1,200	\$9,600
VFDs, 40 Hp	Each	2	\$15,000	\$30,000
Site piping	Lump Sum	1	\$58,000	\$58,000
Bollards	Each	4	\$1,500	\$6,000
10-inch RWW force main to Oxidation Ditch	L.F.	200	\$160	\$32,000
Subtotal, rounded to the nearest \$1,000				\$400,000
Contractor Bonds, Insurance, Mobilization, Overhead & Profit			20%	\$80,000
Construction Cost before contingency				\$480,000
Contingency			10%	\$48,000
Total Construction Cost				\$528,000
Design Engineering			7.0%	\$37,000
Bidding and Construction Engineering			7.5%	\$40,000
Other Costs - Geotechnical				\$3,000
			Total Cost =	<b>\$608,000</b>

Village of Tolono, Illinois

**Wastewater System Project Plan**
**ARCHITECTURAL/STRUCTURAL WORKSHEET**

ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	2	5,000	10,000
Earthwork: Excavation, (hard shale)	cu yds.	230	30	6,900
Earthwork: Underdrain System	sq. yds.	0	100	0
Earthwork: Pile Foundation	ft.	0	100	0
Earthwork: Rock Excavation	cu yds.	0	75	0
Earthwork: Earth backfill	cu yds.	200	10	2,000
Earthwork: Sheeting	SF	0	20	0
<b>Earthwork</b>				<b>18,900</b>
Concrete: 4' dia precast Mag Meter Vault	VLF	7	1,500	10,500
Concrete: 7' dia precast PS wetwell	VLF	28	1,500	42,000
Concrete: 8' dia precast valve vault, EF PS	VLF	7	2,000	14,000
Concrete:	Lump Sum	1	5,000	5,000
Concrete:	cu yds.	0	100	0
Concrete:	VLF		1,200	0
Concrete: Fillet in wetwell	CY	2	600	1,200
Concrete:	Each		4,000	0
<b>Concrete</b>				<b>72,700</b>
Metals: Alum. Hatch, 60" x 48" w/ fall protection	each	1	4,500	4,500
Metals: Alum. Hatch, 48" x 36" w/ fall protection	each	2	3,000	6,000
Metals:	risers	0	0	0
Metals: Flow Baffle in wetwell	Lump Sum	1	1,000	1,000
Metals: Pump hoist socket	Each	1	800	800
<b>Metals</b>				<b>12,300</b>
Building:	each	0	58,000	0
Building:	sq. ft.	0	100	0
Building:	sq. ft.	0	100	0
Building:	sq. ft.	0	100	0
Building:	sq. ft.	0	100	0
Building:	sq. ft.	0	100	0
<b>Buildings</b>				<b>0</b>
Demolition:	cu ft.	0	100	0
Demolition:	cu ft.	0	100	0
Demolition:	lump sum	0	100	0
Demolition:	lump sum	0	100	0
<b>Demolition</b>				<b>0</b>

Village of Tolono, Illinois

Wastewater System Project Plan

ANNUAL O&M COST ESTIMATE

General Description

Number of Pumps Operating	1	
Brake Horsepower of Each Operating Pump	40	
Total Bhp	40	
Motor Efficiency	92%	
Adjustable Frequency Drive Efficiency	90%	
Wire Horsepower	48	
Wire Kilowatts	36	
Operating Hours Per Day	12	Assume in-service pump runs only 50% of the time
Operating Days Per Week	7	
Operating Weeks Per Year	52	
Operating Hours Per Year	4,368	
Maintenance Hours Per Year	208	(assume 2 crew hours per week on average, including repairs)

ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	157,417	0.10	15,742
Maintenance	hours	208	80	16,640
Total Annual Cost				\$32,382

Present Worth Analysis

Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94
Number of Years	30	
Present Worth Factor	21.212	

Present Worth of Total Annual Cost (Item "A") = \$686,900

B. Replacement Costs

ITEM	Replacement Year	Units	total Replacement Cost in Replacement Yr.	Present Worth of Replacement Cost
Replace 2 pumps' impellers/rebuild pumps	15	Lump Sum	\$20,000	\$ 14,000
Upgrade SCADA & control components	15	Lump Sum	\$10,000	\$ 7,000
Replace 2 pumps' check valves	15	Lump Sum	\$6,000	\$ 4,200
Replace one VFD	10	Lump Sum	\$25,000	\$ 19,700

Present Worth of Replacement Costs (Item "B") = 44,900

Present Worth of Total OM&R Costs (Items "A" + "B") = \$731,800

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020

EXCESS FLOW PUMP STATION  
PROJECT COST OPINION

Description

This component is a two-pump submersible station fitted with two 900 gpm, 50 Hp pumps.  
Control panel will be located in 304 SS NEMA 4X enclosure near the station. Included is an Excess Flow mag meter and vault.

ITEM	Units	Quantity	Installed Cost (\$)	Initial Cost (\$)
<b>Architectural/Structural</b>				
Earthwork	See next page for Detailed Cost Breakdown			\$31,600
Concrete	See next page for Detailed Cost Breakdown			\$85,100
Metals	See next page for Detailed Cost Breakdown			\$11,500
Buildings	See next page for Detailed Cost Breakdown			\$0
Demolition	See next page for Detailed Cost Breakdown			\$0
Submersible sewage pumps, 900 gpm, 50 Hp	Each	2	\$31,200	\$62,400
Controls and control panel	Lump Sum	1	\$34,000	\$34,000
Porta-Con fitting, 6" in valve vault	Each	1	\$1,500	\$1,500
Porta-Con fitting, 6" in wetwell	Each	1	\$1,500	\$1,500
10" D.I. swing check valve, pneumatic assisted	Each	2	\$4,500	\$9,000
10" D.I. plug valve, handwheel actuated	Each	2	\$4,000	\$8,000
10" D.I. flanged piping wetwell/vault/meter MH	Lump Sum	1	\$28,000	\$28,000
Sump pumps and piping	Lump Sum	1	\$9,000	\$9,000
Painting piping, etc.	Lump Sum	1	\$10,000	\$10,000
Electrical work	Lump Sum	1	\$18,000	\$18,000
Magnetic flow meter, reduce to 8-inch	Inch-diameter	8	\$1,200	\$9,600
VFDs, 50 Hp	Each	2	\$19,000	\$38,000
Site piping	Lump Sum	1	\$58,000	\$58,000
Bollards	Each	4	\$1,500	\$6,000
10-inch RWW force main to Lagoon Influent pipe	L.F.	250	\$160	\$40,000
Subtotal, rounded to the nearest \$1,000				\$461,000
Contractor Bonds, Insurance, Mobilization, Overhead & Profit			20%	\$92,000
Construction Cost before contingency				\$553,000
Contingency			10%	\$55,000
<b>Total Construction Cost</b>				<b>\$608,000</b>
Design Engineering			7.0%	\$43,000
Bidding and Construction Engineering			7.5%	\$46,000
Other Costs - Geotechnical				\$0
			<b>Total Cost =</b>	<b>\$697,000</b>

Village of Tolono, Illinois

## Wastewater System Project Plan

## ARCHITECTURAL/STRUCTURAL WORKSHEET

ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	1	5,000	5,000
Earthwork: Excavation, (hard shale)	cu yds.	500	30.00	15,000
Earthwork: Underdrain System	sq. yds.	0	100	0
Earthwork: Pile Foundation	ft.	0	100	0
Earthwork: Rock Excavation	cu yds.	0	75	0
Earthwork: Earth backfill	cu yds.	400	9	3,600
Earthwork: Sheeting	SF	400	20	8,000
<b>Earthwork</b>				<b>31,600</b>
Concrete: 7' dia precast Fine Screen Structure	VLF	16	1,500	24,000
Concrete: 7' dia precast EF PS wetwell	VLF	21	1,500	31,500
Concrete: 8' dia precast valve vault, EF PS	VLF	7	2,000	14,000
Concrete: Slab under Genset	Lump Sum	1	5,000	5,000
Concrete: Structural Slabs	cu yds.	0	100	0
Concrete: 6' dia precast meter vault	VLF	8	1,200	9,600
Concrete: Fillet in wetwell	CY	2	500	1,000
Concrete:	Each	0	4,000	0
<b>Concrete</b>				<b>85,100</b>
Metals: Alum. Hatch, 60" x 48" w/ fall protection	each	1	4,500	4,500
Metals: Alum. Hatch, 48" x 36" w/ fall protection	each	2	3,000	6,000
Metals:	risers	0	0	0
Metals: Flow Baffle in wetwell	Lump Sum	1	1,000	1,000
Metals: Pump hoist socket	Each	0	600	0
<b>Metals</b>				<b>11,500</b>
Building: Easi-Set Precast Bldg. (20'x12') - controls/elec	each	0	58,000	0
Building:	sq. ft.	0	100	0
Building:	sq. ft.	0	100	0
Building:	sq. ft.	0	100	0
Building:	sq. ft.	0	100	0
Building:	sq. ft.	0	100	0
<b>Buildings</b>				<b>0</b>
Demolition:	cu ft.	0	100	0
Demolition:	cu ft.	0	100	0
Demolition:	lump sum	0	100	0
Demolition:	lump sum	0	100	0
<b>Demolition</b>				<b>0</b>

Village of Tolono, Illinois

Wastewater System Project Plan

ANNUAL O&M COST ESTIMATE

General Description

Number of Pumps Operating	1	
Brake Horsepower of Each Operating Pump	50	Note: Motors are 75 Hp, but run on VFDs. Assume 50 Hp effective
Total Bhp	50	
Motor Efficiency	92%	
Adjustable Frequency Drive Efficiency	90%	
Wire Horsepower	60	
Wire Kilowatts	45	
Operating Hours Per Day	1.20	Assume one pump runs only 5% of the time over the entire year
Operating Days Per Week	7	
Operating Weeks Per Year	52	
Operating Hours Per Year	437	
Maintenance Hours Per Year	208	(assume 2 crew hours per week on average, including repairs)

ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	19,677	0.10	1,968
Maintenance	hours	208	80	16,640
Total Annual Cost				\$18,608

Present Worth Analysis

Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94
Number of Years	30	
Present Worth Factor	21.212	

Present Worth of Total Annual Cost (Item "A") = \$394,700

B. Replacement Costs

ITEM	Replacement Year	Units	total Replacement Cost in Replacement Yr.	Present Worth of Replacement Cost
Replace 2 pumps' impellers/rebuild pumps	15	Lump Sum	\$18,000	\$ 12,600
Upgrade SCADA/control components	15	Lump Sum	\$10,000	\$ 7,000
Replace 2 pumps' check valves	15	Lump Sum	\$6,000	\$ 4,200
Replace one VFD	10	Lump Sum	\$30,000	\$ 23,700

Present Worth of Replacement Costs (Item "B") = 47,500

Present Worth of Total OM&R Costs (Items "A" + "B") = \$442,200

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020

OXIDATION DITCH

COST OPINION

Description

Construct one cast-in-place Oxidation Ditch that is 115 ft. long x 70 ft. wide. This cost opinion utilized process equipment costs provided by Evoqua for their Orbal system.

ITEM	Units	Quantity	Installed Unit Cost	Initial Cost
<b>A. Architectural/Structural</b>				
Earthwork		See page 2 for Detailed Cost Breakdown		\$90,200
Concrete		See page 2 for Detailed Cost Breakdown		\$710,500
Metals		See page 2 for Detailed Cost Breakdown		\$117,000
Buildings		See page 2 for Detailed Cost Breakdown		\$0
Demolition		See page 2 for Detailed Cost Breakdown		\$0
<b>ID B. Process Equipment/Piping/Electrical/Controls</b>				
1A Orbal rotors and other process equipment (Evoqua)	Lump Sum	1	283,000	\$283,000
1B SmartBNR Lite Control System (Evoqua)	Lump Sum	1	55,000	\$55,000
1C VFDs for the 40 Hp rotors + 3 Hp Recycle Pump (Evoqua)	Lump Sum	1	30,000	\$30,000
1D Weatherhoods for the rotors (Evoqua)	Lump Sum	1	41,000	\$41,000
1E Anaerobic Recycle Pump, 3 Hp (Evoqua)	Lump Sum	1	25,000	\$25,000
1F Anaerobic Mixer, 2 Hp (Evoqua)	Lump Sum	1	18,000	\$18,000
2 Electrical ductbank routed to Ditch	LF	250	\$80	\$20,000
3 Process piping for recycle pump	Lump Sum	1	20,000	\$20,000
4 MLSS process piping under ditch slab	Lump Sum	1	18,000	\$18,000
5 18" MLSS piping to Sec. Clarifiers	LF	120	\$200	\$24,000
Subtotal, rounded to the nearest \$1,000				\$1,452,000
Contractor Bonds, Insurance, Mobilization, Overhead & Profit			20%	\$290,000
Construction Cost before contingency				\$1,742,000
Contingency			10%	\$174,000
<b>Total Construction Cost</b>				<b>\$1,916,000</b>
Design Engineering			7.0%	\$134,000
Bidding and Construction Engineering			7.5%	\$144,000
Other Costs - Geotechnical				\$8,000
			<b>Total Cost =</b>	<b>\$2,202,000</b>

Village of Tolono, Illinois Wastewater System Project Plan				
OXIDATION DITCH				
ARCHITECTURAL/STRUCTURAL WORKSHEET				
ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	1	10,000	10,000
Earthwork: Excavation	cu yds.	3,100	15	46,500
Earthwork: Gravel base under slab	cu yds.	300	40	12,000
Earthwork: Backfill	cu yds.	1,085	20	21,700
<hr/>				
Earthwork				90,200
<hr/>				
Concrete: Base Slab, incl. anaerobic tank	cu yds.	401	500	200,500
Concrete: Perimeter Walls	cu yds.	405	1,000	405,000
Concrete: Suspended walkways	cu yds.	80	1,000	80,000
Concrete: Flowable fill	cu yds.	100	250	25,000
Concrete:	cu yds.		850	0
<hr/>				
Concrete				710,500
<hr/>				
Metals: Aluminum Grating	sq. ft.	300	50	15,000
Metals: Aluminum Handrail	ft.	450	80	36,000
Metals: Aluminum Stairway	risers	60	800	48,000
Metals: Baffles and Weirs	SF	60	200	12,000
Metals: Stop plates	SF	40	150	6,000
<hr/>				
Metals				117,000
<hr/>				
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
<hr/>				
Buildings				0
<hr/>				
Demolition:	lump sum		30,000	0
Demolition:	lump sum		15,000	0
Demolition:	cu ft.		0	
Demolition:	lump sum		0	
<hr/>				
Demolition				0



Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020  
SECONDARY CLARIFIERS

COST OPINION

Description

Construct two new 43' diameter cast-in-place concrete Secondary Clarifiers. Included in the cost are density current baffles, Tow-Bro type collector mechanisms. Included in this system are two scum pumps that will discharge scum to the WAS force main, which routes scum to the digesters.

ITEM	Units	Quantity	Installed Unit Cost	Initial Cost
<b>A. Architectural/Structural</b>				
Earthwork		See page 2 for Detailed Cost Breakdown		\$40,000
Concrete		See page 2 for Detailed Cost Breakdown		\$355,000
Metals		See page 2 for Detailed Cost Breakdown		\$72,600
Buildings		See page 2 for Detailed Cost Breakdown		\$0
Demolition		See page 2 for Detailed Cost Breakdown		\$0
<b>B. Process Equipment/Piping/Electrical/Controls</b>				
ID				
1A Clarifier Mechanisms, 43' diameter each	Each	2	\$161,700	\$323,400
1B Stamford baffles	Each	2	\$25,000	\$50,000
2 Scum pumps	lump sum	2	\$20,000	\$40,000
3 Scum pumps' valves and piping, incl. site piping	lump sum	1	\$65,000	\$65,000
4 Slide gates for flow split	Each	2	\$9,000	\$18,000
5 Electrical power routed to units	lump sum	2	\$20,000	\$40,000
6 Instrumentation & control	lump sum	1	\$20,000	\$20,000
7 Painting of mechanisms	Each	2	\$40,000	\$80,000
8 FRP launders and baffles	LF	270	\$170	\$45,900
9 Process piping to and from splitter box	lump sum	2	\$30,000	\$60,000
Subtotal, rounded to the nearest \$1,000				\$1,210,000
Contractor Bonds, Insurance, Mobilization, Overhead & Profit			20%	\$242,000
Construction Cost before contingency				\$1,452,000
Contingency			10%	\$145,000
Total Construction Cost				\$1,597,000
Design Engineering			7.0%	\$112,000
Bidding and Construction Engineering			7.5%	\$120,000
Other Costs - Geotechnical				\$4,000
			Total Cost =	<b>\$1,833,000</b>

Village of Tolono, Illinois Wastewater System Project Plan				
SECONDARY CLARIFIERS				
ARCHITECTURAL/STRUCTURAL WORKSHEET				
ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	2	5,000	10,000
Earthwork: Excavation	cu yds.	700	30	21,000
Earthwork: Gravel base under slab	cu yds.	50	40	2,000
Earthwork: Backfill	cu yds.	350	20	7,000
<hr/>				<hr/>
Earthwork				40,000
Concrete: Base Slab	cu yds.	110	500	55,000
Concrete:	cu yds.	0	750	0
Concrete: Perimeter Walls	cu yds.	220	1,000	220,000
Concrete: Splitter Box	Lump Sum	1	80,000	80,000
Concrete: Structural Slabs/Walkways	cu yds.	0	850	0
<hr/>				<hr/>
Concrete				355,000
Metals: Aluminum Grating	sq. ft.	376	50	18,800
Metals: Aluminum Handrail	ft.	360	80	28,800
Metals: Aluminum Stairway	risers	20	800	16,000
Metals: Baffles and Weirs (FRP weirs are on page 1)	SF		200	0
Metals: Stop plates	SF	60	150	9,000
<hr/>				<hr/>
Metals				72,600
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
<hr/>				<hr/>
Buildings				0
Demolition:	lump sum		30,000	0
Demolition:	lump sum		15,000	0
Demolition:	cu ft.		0	
Demolition:	lump sum		0	
<hr/>				<hr/>
Demolition				0

Village of Tolono, Illinois  
Wastewater System Project Plan

SECONDARY CLARIFIERS

ANNUAL OM&R COST ESTIMATE

A. O&M Costs

Number of units operating	2	drive units
Brake Horsepower of Each Operating Motor	0.75	
Total Bhp	1.50	
Motor Efficiency	92%	
Wire Horsepower	2	
Wire Kilowatts	1	
Operating Hours Per Day	24	
Operating Days Per Week	7	
Operating Weeks Per Year	52	
Operating Hours Per Year	8,736	
Maintenance Hours Per Year	72	six hours per month avg.

O&M ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	10,626	0.086	918
Maintenance	hours	72	35	2,520
Total Annual O&M Cost =				\$ 3,438

Present Worth Parameters Used

Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94
Number of Years	30	
Present Worth Factor	21.212	

Present Worth of Total Annual O&M Cost above (Item "A") = \$ 73,000

B. Replacement Costs

ITEM	Replacement Year	Units	Replacement Cost in Replacement Yr.	Present Worth of Replacement Cost
Replace both drive units	15	L.S.	\$22,000	\$ 15,000
Repaint both mechanisms	15	L.S.	\$80,000	\$ 56,100

Present Worth of Replacement Costs (Item "B") = 71,100

Equivalent Annual OM&R set-aside required for these replacement items = \$ 12,100

Present Worth of Total OM&R Costs (Items "A" + "B") = \$144,100

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020

**RETURN ACTIVATED SLUDGE (RAS) PUMP STATION**  
**PROJECT COST OPINION**

Description

New 530 gpm submersible pump station that conveys return activated sludge from the Secondary Clarifiers back to the Oxidation Ditch.

ITEM	Units	Quantity	Installed Unit Cost	Initial Cost
<b>A. Architectural/Structural</b>				
Earthwork:		See page 2 for Detailed Cost Breakdown		\$5,900
Concrete		See page 2 for Detailed Cost Breakdown		\$32,800
Metals:		See page 2 for Detailed Cost Breakdown		\$10,600
Building:		See page 2 for Detailed Cost Breakdown		\$0
Demolition:		See page 2 for Detailed Cost Breakdown		\$0
<b>B. Process Equipment/Piping/Electrical/Controls</b>				
Submersible 530 gpm pumps	Each	2	\$23,000	\$46,000
Controls and control panel	Lump Sum	1	\$20,000	\$20,000
6" D.I. swing check valve, pneumatic assisted	Each	2	\$3,000	\$6,000
6" D.I. plug valve, handwheel actuated	Each	2	\$2,800	\$5,600
6" D.I. flanged piping wetwell/vault/meter MH	Lump Sum	1	\$30,000	\$30,000
Sump pumps and piping	Lump Sum	1	\$9,000	\$9,000
Painting piping, etc.	Lump Sum	1	\$8,000	\$8,000
Electrical work	Lump Sum	1	\$56,000	\$56,000
Magnetic flow meter, 4-inch	Inch-diameter	4	\$1,200	\$4,800
VFDs	Each	2	\$8,000	\$16,000
Pipe supports	Lump Sum	1	\$2,000	\$2,000
Bollards	Each	4	\$1,500	\$6,000
6-inch RAS force main to Oxidation Ditch	L.F.	300	\$100	\$30,000
Subtotal, rounded to the nearest \$1,000				\$289,000
Contractor Bonds, Insurance, Mobilization, Overhead & Profit			20%	\$58,000
Construction Cost before contingency				\$347,000
Contingency			10%	\$35,000
Total Construction Cost				\$382,000
Design Engineering			7.0%	\$27,000
Bidding and Construction Engineering			7.5%	\$29,000
Other Costs - Geotechnical				\$2,000
Total Cost =				\$440,000

Village of Tolono, Illinois

Wastewater System Project Plan  
RETURN ACTIVATED SLUDGE (RAS) PUMP STATION

ARCHITECTURAL/STRUCTURAL WORKSHEET

ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	1	500	500
Earthwork: Excavation	cu yds.	120	30	3,600
Earthwork: Sheeting around excavation	SF	0	17	0
Earthwork: Sand backfill around PS+VV	cu yds.	30	30	900
Earthwork: Crushed stone paving	SY	30	30	900
Earthwork:	acre		3,000	0
<hr/>				
Earthwork				5,900
<hr/>				
Concrete: Footings	cu yds.	0	350	0
Concrete: Wetwell	each	1	22,000	22,000
Concrete: Valve Vault	each	1	9,000	9,000
Concrete: Top for Wetwell	cu yds.	1	1,000	1,000
Concrete: Fillet	cu yds.	1	800	800
<hr/>				
Concrete				32,800
<hr/>				
Metals: Alum. Hatch, 48" x 48" w/ fall protection	each	1	4,000	4,000
Metals: Alum. Hatch, 36" x 36" w/ fall protection	each	2	2,800	5,600
Metals: Aluminum Stairway	risers	0	175	0
Metals: SS baffle over influent pipe	Each	1	1,000	1,000
Metals:	lump sum		1,100	0
<hr/>				
Metals				10,600
<hr/>				
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
<hr/>				
Buildings				0
<hr/>				
Demolition:	lump sum	0	800	0
Demolition:	CY	0	90	0
Demolition:	lump sum	0	1,000	0
Demolition:	lump sum		3,000	0
<hr/>				
Demolition				0

Village of Tolono, Illinois

Wastewater System Project Plan  
RETURN ACTIVATED SLUDGE (RAS) PUMP STATION

ANNUAL OM+R COST ESTIMATE

A. O&M Costs

Number of Pumps Operating	1
Brake Horsepower of Each Operating Pump	15
Total Bhp	15
Motor Efficiency	92%
Adjustable Frequency Drive Efficiency	90%
Wire Horsepower	18
Wire Kilowatts	14
Operating Hours Per Day	24
Operating Days Per Week	7
Operating Weeks Per Year	52
Operating Hours Per Year	8,736
Maintenance Hours Per Year	100

ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	118,063	0.08	9,445
Maintenance	hours	100	75	7,500
Total Annual Cost				\$16,945

Present Worth Analysis

Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94
Number of Years	30	
Present Worth Factor	21.212	

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Present Worth of Total Annual Cost (Item "A") = \$359,400

B. Replacement Costs

ITEM	Replacement Year	Units	Total Replacement Cost in Replacement Year	Present Worth of Replacement Cost
Replace pumps	15	Lump Sum	\$38,000	\$ 26,600

Present Worth of Replacement Costs (Item "B") = 26,600

Present Worth of Total OM&R Costs (Items "A" + "B") = \$386,000

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020

WASTE ACTIVATED SLUDGE (WAS) FLOW METER VAULT  
PROJECT COST OPINION

Description

New 4 ft. diameter WAS meter vault

ITEM	Units	Quantity	Installed Unit Cost	Initial Cost
<b>A. Architectural/Structural</b>				
Earthwork		See page 2 for Detailed Cost Breakdown		\$1,700
Concrete		See page 2 for Detailed Cost Breakdown		\$5,000
Metals		See page 2 for Detailed Cost Breakdown		\$2,800
Building:		See page 2 for Detailed Cost Breakdown		\$0
Demolition:		See page 2 for Detailed Cost Breakdown		\$0
<b>B. Process Equipment/Piping/Electrical/Controls</b>				
6" D.I. flanged piping wetwell/vault/meter MH	Lump Sum	1	\$10,000	\$10,000
Sump pumps and piping	Lump Sum	0	\$3,000	\$0
Painting piping, etc.	Lump Sum	1	\$1,000	\$1,000
Electrical work	Lump Sum	1	\$2,000	\$2,000
Magnetic flow meter, 4-inch	Inch-diameter	4	\$1,200	\$4,800
Subtotal, rounded to the nearest \$1,000				\$27,000
Contractor Bonds, Insurance, Mobilization, Overhead & Profit			20%	\$5,000
Construction Cost before contingency				\$32,000
Contingency			10%	\$3,000
Total Construction Cost				\$35,000
Design Engineering			7.0%	\$2,000
Bidding and Construction Engineering			7.5%	\$3,000
Other Costs - Geotechnical				\$0
			Total Cost =	\$40,000

Village of Tolono, Illinois

Wastewater System Project Plan  
WASTE ACTIVATED SLUDGE (WAS) FLOW METER VAULT

ARCHITECTURAL/STRUCTURAL WORKSHEET

ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	1	500	500
Earthwork: Excavation	cu yds.	30	30	900
Earthwork: Sheeting around excavation	SF	0	17	0
Earthwork: Sand backfill around PS+VV	cu yds.	10	25	250
Earthwork: Crushed stone paving	SY		30	0
Earthwork: seeding and restorations	acre		3,000	0
<hr/>				
Earthwork				1,650
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Concrete: Footings	cu yds.	0	350	0
Concrete:	each	0	18,000	0
Concrete: Meter Vault	each	1	5,000	5,000
Concrete:	cu yds.	0	900	0
Concrete: Fillet	cu yds.	0	600	0
<hr/>				
Concrete				5,000
<hr/>				
Metals: Aluminum Grating	sq. ft.	0	38	0
Metals: Aluminum Handrail	ft.	0	45	0
Metals: Aluminum Stairway	risers	0	175	0
Metals: SS baffle over influent pipe	Each		900	0
Metals: Alum. Hatch, 36" x 36" w/ fall protection	each	1	2,800	2,800
<hr/>				
Metals				2,800
<hr/>				
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
<hr/>				
Buildings				0
<hr/>				
Demolition:	lump sum	0	800	0
Demolition:	CY	0	90	0
Demolition:	lump sum	0	1,000	0
Demolition:	lump sum		3,000	0
<hr/>				
Demolition				0

Village of Tolono, Illinois

Wastewater System Project Plan  
WASTE ACTIVATED SLUDGE (WAS) FLOW METER VAULT

ANNUAL OM+R COST ESTIMATE

A. O&M Costs

Number of Pumps Operating	0	
Brake Horsepower of Each Operating Pump	10	
Total Bhp	0	
Motor Efficiency	92%	
Adjustable Frequency Drive Efficiency	90%	
Wire Horsepower	0	
Wire Kilowatts	0	
Operating Hours Per Day	24	
Operating Days Per Week	7	
Operating Weeks Per Year	10	<< after wet weather events only (20% of the time)
Operating Hours Per Year	1,747	
Maintenance Hours Per Year	40	

ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	0	0.08	0
Maintenance	hours	40	75	3,000
Total Annual Cost				\$3,000

Present Worth Analysis

Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94
Number of Years	30	
Present Worth Factor	21.212	

Present Worth of Total Annual Cost (Item "A") = \$63,600

B. Replacement Costs

ITEM	Replacement Year	Units	Total Replacement Cost in Replacement Year	Present Worth of Replacement Cost
Replace meter	20	Lump Sum	\$6,000	\$ 3,700

Present Worth of Replacement Costs (Item "B") = 3,700

Present Worth of Total OM&R Costs (Items "A" + "B") = \$67,300

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020  
CHLORINE CONTACT TANKS

COST OPINION

Description

Construct two new 10,000 gallon precast concrete chlorine contact tanks.

	ITEM	Units	Quantity	Installed Unit Cost	Initial Cost
A. Architectural/Structural					
	Earthwork		See page 2 for Detailed Cost Breakdown		\$7,400
	Concrete		See page 2 for Detailed Cost Breakdown		\$0
	Metals		See page 2 for Detailed Cost Breakdown		\$2,000
	Buildings		See page 2 for Detailed Cost Breakdown		\$0
	Demolition		See page 2 for Detailed Cost Breakdown		\$0
B. Process Equipment/Piping/Electrical/Controls					
ID					
1	10,000 gallon precast tanks	Each	2	\$27,000	\$54,000
2	Electrical power	None			
3	Instrumentation & control	None			
4	Process piping, 16" FE line from clarifiers to outfall	LF	150	\$165	\$24,750
	Subtotal, rounded to the nearest \$1,000				\$88,000
	Contractor Bonds, Insurance, Mobilization, Overhead & Profit			20%	\$18,000
	Construction Cost before contingency				\$106,000
	Contingency			10%	\$11,000
	Total Construction Cost				\$117,000
	Design Engineering			7.0%	\$8,000
	Bidding and Construction Engineering			7.5%	\$9,000
	Other Costs - Geotechnical				\$0
				Total Cost =	\$134,000

Village of Tolono, Illinois Wastewater System Project Plan				
CHLORINE CONTACT TANKS				
ARCHITECTURAL/STRUCTURAL WORKSHEET				
ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	2	500	1,000
Earthwork: Excavation	cu yds.	300	15	4,500
Earthwork: Gravel base under slab	cu yds.	10	40	400
Earthwork: Backfill	cu yds.	75	20	1,500
<hr/>				7,400
Earthwork				
Concrete: Base Slab	cu yds.	0	500	0
Concrete:	cu yds.	0	750	0
Concrete: Perimeter Walls	cu yds.	0	900	0
Concrete: Splitter Box	Lump Sum	0	15,000	0
Concrete: Structural Slabs/Walkways	cu yds.	0	850	0
<hr/>				0
Concrete				
Metals: Castings	Each	4	500	2,000
Metals: Aluminum Handrail	ft.	0	70	0
Metals: Aluminum Stairway	risers	0	800	0
Metals: Baffles and Weirs	SF	0	200	0
Metals: Stop plates	SF	0	150	0
<hr/>				2,000
Metals				
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
<hr/>				0
Buildings				
Demolition:	lump sum		30,000	0
Demolition:	lump sum		15,000	0
Demolition:	cu ft.		0	
Demolition:	lump sum		0	
<hr/>				0
Demolition				

Village of Tolono, Illinois  
Wastewater System Project Plan

CHLORINE CONTACT TANKS

ANNUAL OM&R COST ESTIMATE

A. O&M Costs

Number of units operating	0
Brake Horsepower of all Operating Motors	0
Total Bhp	0
Motor Efficiency	92%
Wire Horsepower	0
Wire Kilowatts	0
Operating Hours Per Day	24
Operating Days Per Week	7
Operating Weeks Per Year	52
Operating Hours Per Year	8,736
Maintenance Hours Per Year	20

O&M ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	0	0.086	0
Bleach	gallon	2,200	1.25	2,750
Sodium bisulfate	gallon	470	2.00	940
Maintenance	hours	20	35	700

Total Annual O&M Cost = \$ 4,390

Present Worth Parameters Used

Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94
Number of Years	30	
Present Worth Factor	21.212	

Present Worth of Total Annual O&M Cost above (Item "A") = \$ 93,000

B. Replacement Costs

ITEM	Replacement Year	Units	Replacement Cost in Replacement Yr.	Present Worth of Replacement Cost
Tank cleanout	10	lump sum	\$1,000	\$ 1,000
				\$ -

Present Worth of Replacement Costs (Item "B") = 1,000

Equivalent Annual OM&R set-aside required for these replacement items = \$ 200

Present Worth of Total OM&R Costs (Items "A" + "B") = \$94,000

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020

CASCADE AERATOR  
PROJECT COST OPINION

Description

New cascade aerator structure at plant outfall. Assume it will be 6 ft. wide by 15 ft. long.

ITEM	Units	Quantity	Installed Unit Cost	Initial Cost
<b>A. Architectural/Structural</b>				
Earthwork		See page 2 for Detailed Cost Breakdown		\$3,200
Concrete		See page 2 for Detailed Cost Breakdown		\$38,800
Metals:		See page 2 for Detailed Cost Breakdown		\$6,800
Building:		See page 2 for Detailed Cost Breakdown		\$0
Demolition:		See page 2 for Detailed Cost Breakdown		\$0
<b>B. Process Equipment/Piping/Electrical/Controls</b>				
Effluent Sampler	Lump Sum	1	\$11,000	\$11,000
Subtotal, rounded to the nearest \$1,000				\$60,000
Contractor Bonds, Insurance, Mobilization, Overhead & Profit			20%	\$12,000
Construction Cost before contingency				\$72,000
Contingency			10%	\$7,000
Total Construction Cost				\$79,000
Design Engineering			7.0%	\$6,000
Bidding and Construction Engineering			7.5%	\$6,000
Other Costs - Geotechnical				\$0
Total Cost =				\$91,000

Village of Tolono, Illinois

Wastewater System Project Plan  
CASCADE AERATOR

ARCHITECTURAL/STRUCTURAL WORKSHEET

ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	1	500	500
Earthwork: Excavation	cu yds.	70	30	2,100
Earthwork: Sheeting around excavation	SF	0	17	0
Earthwork: Sand backfill around PS+VV	cu yds.	20	30	600
Earthwork: Crushed stone paving	SY		30	0
Earthwork: seeding and restorations	acre		3,000	0
<hr/>				
Earthwork				3,200
<hr/>				
Concrete: base slab	cu yds.	10	400	4,000
Concrete: Walls	cu yds.	30	800	24,000
Concrete: Steps	each	9	1,200	10,800
Concrete:	cu yds.		900	0
Concrete:	cu yds.		600	0
<hr/>				
Concrete				38,800
<hr/>				
Metals: Aluminum Grating	sq. ft.	0	38	0
Metals: Aluminum Handrail	ft.	46	80	3,680
Metals: Aluminum Stairway	risers	0	175	0
Metals:	Each	1	900	900
Metals:	lump sum	2	1,100	2,200
<hr/>				
Metals				6,780
<hr/>				
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
<hr/>				
Buildings				0
<hr/>				
Demolition:	lump sum	0	800	0
Demolition:	CY	0	90	0
Demolition:	lump sum	0	1,000	0
Demolition:	lump sum		3,000	0
<hr/>				
Demolition				0

Village of Tolono, Illinois

Wastewater System Project Plan  
CASCADE AERATOR

ANNUAL OM+R COST ESTIMATE

A. O&M Costs

Number of Pumps Operating	1	
Brake Horsepower of Each Operating Pump	10	
Total Bhp	10	
Motor Efficiency	92%	
Adjustable Frequency Drive Efficiency	90%	
Wire Horsepower	12	
Wire Kilowatts	9	
Operating Hours Per Day	24	
Operating Days Per Week	7	
Operating Weeks Per Year	10	<< after wet weather events only (20% of the time)
Operating Hours Per Year	1,747	
Maintenance Hours Per Year	40	

ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	15,742	0.08	1,259
Maintenance	hours	40	75	3,000
Total Annual Cost				\$4,259

Present Worth Analysis

Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94
Number of Years	30	
Present Worth Factor	21.212	

Present Worth of Total Annual Cost (Item "A") = \$90,300

B. Replacement Costs

ITEM	Replacement Year	Units	Total Replacement Cost in Replacement Year	Present Worth of Replacement Cost
Replace pumps	15	Lump Sum	\$24,000	\$ 16,800

Present Worth of Replacement Costs (Item "B") = 16,800

Present Worth of Total OM&R Costs (Items "A" + "B") = \$107,100

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020  
AEROBIC DIGESTERS

COST OPINION

Description

Convert the existing common-wall treatment plant basins to two Aerobic Digesters. This conversion will include removal of all process equipment, repair of deteriorated concrete, removal of all old steel handrail, then providing new coarse bubble diffusers on both tanks. Also included will be new east-west walkway across the top of the tanks and new aluminum handrail around the tanks.

ITEM	Units	Quantity	Installed Unit Cost	Initial Cost	
<b>A. Architectural/Structural</b>					
Earthwork		See page 2 for Detailed Cost Breakdown		\$0	
Concrete		See page 2 for Detailed Cost Breakdown		\$19,500	
Metals		See page 2 for Detailed Cost Breakdown		\$32,000	
Buildings		See page 2 for Detailed Cost Breakdown		\$0	
Demolition		See page 2 for Detailed Cost Breakdown		\$36,000	
<b>B. Process Equipment/Piping/Electrical/Controls</b>					
ID					
1	Coarse bubble diffusion system	Each	2	\$37,500	\$75,000
2	Process piping	lump sum	1	\$60,000	\$60,000
3	4" SS decant pipe, telescoping valve or swivel pipe	Each	2	\$5,000	\$10,000
Subtotal, rounded to the nearest \$1,000					\$233,000
Contractor Bonds, Insurance, Mobilization, Overhead & Profit				20%	\$47,000
Construction Cost before contingency					\$280,000
Contingency				10%	\$28,000
Total Construction Cost					\$308,000
Design Engineering				7.0%	\$22,000
Bidding and Construction Engineering				7.5%	\$23,000
Other Costs - Geotechnical					\$0
Total Cost =					<b>\$353,000</b>

Village of Tolono, Illinois Wastewater System Project Plan				
AEROBIC DIGESTERS				
ARCHITECTURAL/STRUCTURAL WORKSHEET				
ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	0	1,000	0
Earthwork: Excavation	cu yds.	0	15	0
Earthwork: Gravel base under slab	cu yds.	0	40	0
Earthwork: Backfill	cu yds.	0	20	0
<hr/>				<hr/>
Earthwork				0
Concrete: Repair concrete	CF	200	40	8,000
Concrete: Pressure wash all walls	Lump Sum	1	3,000	3,000
Concrete:	cu yds.	0	900	0
Concrete:	Lump Sum	0	15,000	0
Concrete: Structural Walkway	cu yds.	10	850	8,500
<hr/>				<hr/>
Concrete				19,500
Metals: Castings	Each	0	300	0
Metals: Aluminum Handrail	ft.	300	80	24,000
Metals: Aluminum Stairway at each end	risers	10	800	8,000
Metals: Baffles and Weirs	SF	0	200	0
Metals: Stop plates	SF	0	150	0
<hr/>				<hr/>
Metals				32,000
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
<hr/>				<hr/>
Buildings				0
Demolition: Remove clarifier equipment	Each	2	9,000	18,000
Demolition: Remove old aeration tank/digester diffusers	crew-hour	32	250	8,000
Demolition: Remove all pipe, steel handrail & grating	crew-hour	40	250	10,000
Demolition:	lump sum		0	
<hr/>				<hr/>
Demolition				36,000

Village of Tolono, Illinois  
Wastewater System Project Plan

AEROBIC DIGESTERS

ANNUAL OM&R COST ESTIMATE

A. O&M Costs

Number of units operating	0
Brake Horsepower of all Operating Motors	0
Total Bhp	0
Motor Efficiency	92%
Wire Horsepower	0
Wire Kilowatts	0
Operating Hours Per Day	1
Operating Days Per Week	7
Operating Weeks Per Year	52
Operating Hours Per Year	182

Maintenance Hours Per Year 312

O&M ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	0	0.086	0
Labor	hours	312	35	10,920
Total Annual O&M Cost =				\$ 10,920

Present Worth Parameters Used

Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94
Number of Years	30	
Present Worth Factor	21.212	

Present Worth of Total Annual O&M Cost above (Item "A") = \$ 232,000

B. Replacement Costs

ITEM	Replacement Year	Units	Replacement Cost in Replacement Yr.	Present Worth of Replacement Cost
Replace diffusers	10	lump sum	\$80,000	\$ 63,000
				\$ -

Present Worth of Replacement Costs (Item "B") = 63,000

Equivalent Annual OM&R set-aside required for these replacement items = \$ 10,700

Present Worth of Total OM&R Costs (Items "A" + "B") = \$295,000

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020

**SLUDGE TRANSFER PUMP STATION**  
**PROJECT COST OPINION**

Description

New 200 gpm submersible pump station that transfers biosolids from the aerobic digesters to the Sludge Lagoon.  
Preliminary sizing of the force main out of the station is 4-inch.

ITEM	Units	Quantity	Installed Unit Cost	Initial Cost
<b>A. Architectural/Structural</b>				
Earthwork: seeding and restorations		See page 2 for Detailed Cost Breakdown		\$6,600
Concrete		See page 2 for Detailed Cost Breakdown		\$23,600
Metals: Hatches		See page 2 for Detailed Cost Breakdown		\$3,100
Building:		See page 2 for Detailed Cost Breakdown		\$0
Demolition:		See page 2 for Detailed Cost Breakdown		\$0
<b>B. Process Equipment/Piping/Electrical/Controls</b>				
Submersible sewage pumps, 200 gpm, 7.5 Hp	Each	2	\$13,000	\$26,000
Controls and control panel	Lump Sum	1	\$16,000	\$16,000
4" D.I. swing check valve, pneumatic assisted	Each	2	\$1,900	\$3,800
4" D.I. plug valve, handwheel actuated	Each	2	\$1,800	\$3,600
4" D.I. flanged piping wetwell/vault/meter MH	Lump Sum	1	\$20,000	\$20,000
Sump pumps and piping	Lump Sum	1	\$5,000	\$5,000
Painting piping, etc.	Lump Sum	1	\$4,000	\$4,000
Electrical work	Lump Sum	1	\$29,000	\$29,000
6" D.I. plug valve w/ valve box (station isolation)	Each	0	\$2,200	\$0
Pipe supports	Lump Sum	1	\$1,000	\$1,000
Bollards	Each	2	\$1,500	\$3,000
4" forcemain to lagoon	LF	100	\$95	\$9,500
Subtotal, rounded to the nearest \$1,000				\$154,000
Contractor Bonds, Insurance, Mobilization, Overhead & Profit			20%	\$31,000
Construction Cost before contingency				\$185,000
Contingency			10%	\$19,000
Total Construction Cost				\$204,000
Design Engineering			7.0%	\$14,000
Bidding and Construction Engineering			7.5%	\$15,000
Other Costs - Geotechnical				\$0
Total Cost =				\$233,000

Village of Tolono, Illinois

Wastewater System Project Plan  
SLUDGE TRANSFER PUMP STATION

ARCHITECTURAL/STRUCTURAL WORKSHEET

ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	1	500	500
Earthwork: Excavation	cu yds.	170	30	5,100
Earthwork: Sheeting around excavation	SF	0	17	0
Earthwork: Sand backfill around PS+VV	cu yds.	40	25	1,000
Earthwork: Crushed stone paving	SY		30	0
Earthwork: seeding and restorations	acre		3,000	0
<hr/>				
Earthwork				6,600
<hr/>				
Concrete: Footings	cu yds.	0	350	0
Concrete: Wetwell	each	1	18,000	18,000
Concrete: Valve Vault	each	1	5,000	5,000
Concrete:	cu yds.	0	900	0
Concrete: Fillet	cu yds.	1	600	600
<hr/>				
Concrete				23,600
<hr/>				
Metals: Aluminum Grating	sq. ft.	0	38	0
Metals: Aluminum Handrail	ft.	0	45	0
Metals: Aluminum Stairway	risers	0	175	0
Metals: SS baffle over influent pipe	Each	1	900	900
Metals: Hatches	lump sum	2	1,100	2,200
<hr/>				
Metals				3,100
<hr/>				
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
Building:	sq. ft.	0	0	
<hr/>				
Buildings				0
<hr/>				
Demolition:	lump sum	0	800	0
Demolition:	CY	0	90	0
Demolition:	lump sum	0	1,000	0
Demolition:	lump sum		3,000	0
<hr/>				
Demolition				0

Village of Tolono, Illinois

Wastewater System Project Plan  
SLUDGE TRANSFER PUMP STATION

ANNUAL OM+R COST ESTIMATE

A. O&M Costs

Number of Pumps Operating	1	
Brake Horsepower of Each Operating Pump	10	
Total Bhp	10	
Motor Efficiency	92%	
Adjustable Frequency Drive Efficiency	90%	
Wire Horsepower	12	
Wire Kilowatts	9	
Operating Hours Per Day	24	
Operating Days Per Week	7	
Operating Weeks Per Year	10	<< after wet weather events only (20% of the time)
Operating Hours Per Year	1,747	
Maintenance Hours Per Year	40	

ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	15,742	0.08	1,259
Maintenance	hours	40	75	3,000
Total Annual Cost				\$4,259

Present Worth Analysis

Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94
Number of Years	30	
Present Worth Factor	21.212	

Present Worth of Total Annual Cost (Item "A") = \$90,300

B. Replacement Costs

ITEM	Replacement Year	Units	Total Replacement Cost in Replacement Year	Present Worth of Replacement Cost
Replace pumps	15	Lump Sum	\$24,000	\$ 16,800

Present Worth of Replacement Costs (Item "B") = 16,800

Present Worth of Total OM&R Costs (Items "A" + "B") = \$107,100

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020

CONVERT OLD CHEMICAL BLDG. TO LAB & CONTROL BUILDING

COST OPINION

Description

Demolish the wood-framed pole barn on the existing Chemical Building, but keep the concrete substructure. Fill in the basement & provide a floor slab over it. Construct a new wood frame pre-engineered building on the slab. Create a new Electrical Room to house the motor control center, plus a new Lab/Office Area and Restroom. The building will be 24' x 24' which will provide 576 SF of space.

ITEM	Units	Quantity	Installed Unit Cost	Initial Cost
<b>A. Architectural/Structural</b>				
Earthwork		See page 2 for Detailed Cost Breakdown		\$0
Concrete		See page 2 for Detailed Cost Breakdown		\$15,500
Metals		See page 2 for Detailed Cost Breakdown		\$1,200
Buildings		See page 2 for Detailed Cost Breakdown		\$40,600
Demolition		See page 2 for Detailed Cost Breakdown		\$13,000
<b>B. Process Equipment/Piping/Electrical/Controls</b>				
ID				
1	Motor Control Center		See Section 900	
2	Lab Casework & Equipment & furniture	Lump Sum	1	\$20,000
3	Rest room fixtures, plumbing features	Lump Sum	1	\$8,000
Subtotal, rounded to the nearest \$1,000				\$98,000
Contractor Bonds, Insurance, Mobilization, Overhead & Profit				20% \$20,000
Construction Cost before contingency				\$118,000
Contingency				10% \$12,000
Total Construction Cost				\$130,000
Design Engineering				7.0% \$9,000
Bidding and Construction Engineering				7.5% \$10,000
Other Costs - Geotechnical				\$0
Total Cost =				<b>\$149,000</b>

Village of Tolono, Illinois Wastewater System Project Plan				
CONVERT OLD CHEMICAL BLDG. TO LAB & CONTROL BUILDING				
ARCHITECTURAL/STRUCTURAL WORKSHEET				
ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum		5,000	0
Earthwork: Excavation	cu yds.		30	0
Earthwork: Gravel base under slab	cu yds.		40	0
Earthwork: Backfill	cu yds.		20	0
<hr/>				0
Earthwork				
Concrete: Floor Slab	cu yds.	10	450	4,500
Concrete: Equipment pad under MCC	Each	1	1,000	1,000
Concrete: Flowable fill for basement	cu yds.	50	160	8,000
Concrete: Repair existing floor	Lump Sum	1	2,000	2,000
Concrete:	cu yds.		850	0
<hr/>				15,500
Concrete				
Metals:	sq. ft.	0	50	0
Metals: Aluminum Handrail	ft.	15	80	1,200
Metals:	risers	0	800	0
Metals:	SF	0	200	0
Metals:	SF	0	150	0
<hr/>				1,200
Metals				
Building: pole barn building with 10' height	sq. ft.	580	70	40,600
Building: fire suppression system - N/A	sq. ft.		3.50	0
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
<hr/>				40,600
Buildings				
Demolition: Remove existing tanks, equipment	Crew hours	32	250	8,000
Demolition: Remove existing pole barn	Crew hours	16	250	4,000
Demolition: Pressue wash exist. concrete	lump sum	1	1,000	1,000
Demolition:	lump sum		0	
<hr/>				13,000
Demolition				

Village of Tolono, Illinois  
Wastewater System Project Plan

CONVERT OLD CHEMICAL BLDG. TO LAB & CONTROL BUILDING

ANNUAL OM&R COST ESTIMATE

A. O&M Costs

Number of units operating	
Brake Horsepower of all Operating Motors	
Total Bhp	0
Motor Efficiency	92%
Wire Horsepower	0
Wire Kilowatts	0
Operating Hours Per Day	24
Operating Days Per Week	7
Operating Weeks Per Year	52
Operating Hours Per Year	8,736

Maintenance Hours Per Year

O&M ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	0	0.086	0
Maintenance	hours	0	35	0

Total Annual O&M Cost = \$ -

Present Worth Parameters Used

Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94
Number of Years	30	
Present Worth Factor	21.212	

Present Worth of Total Annual O&M Cost above (Item "A") = \$ -

B. Replacement Costs

ITEM	Replacement Year	Units	Replacement Cost in Replacement Yr.	Present Worth of Replacement Cost
Replace metal siding	20	lump sum	\$20,000	\$ 12,000

Present Worth of Replacement Costs (Item "B") = 12,000

Equivalent Annual OM&R set-aside required for these replacement items = \$ 2,000

Present Worth of Total OM&R Costs (Items "A" + "B") = \$12,000

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020

CONVERT FILTER BLDG. TO CHEM & BLOWER BUILDING

COST OPINION

Description

Demolish the wood-framed pole barn on the existing Filter Building, but keep the concrete substructure. Fill in the basement & provide a floor slab over it. Construct a new wood frame pre-engineered building on the slab. Create a new Bleach Room to house the bleach tanks and pump skids, plus a room for Sodium Bisulfite, a room for Digester Blowers, and maintenance areas. The building will be 36'-8" x 30', which will provide 1,100 SF of space.

ITEM	Units	Quantity	Installed Unit Cost	Initial Cost	
<b>A. Architectural/Structural</b>					
Earthwork		See page 2 for Detailed Cost Breakdown		\$0	
Concrete		See page 2 for Detailed Cost Breakdown		\$61,800	
Metals		See page 2 for Detailed Cost Breakdown		\$0	
Buildings		See page 2 for Detailed Cost Breakdown		\$87,500	
Demolition		See page 2 for Detailed Cost Breakdown		\$20,000	
<b>B. Process Equipment/Piping/Electrical/Controls</b>					
ID					
1	Bulk tanks for bleach, two 500 gallon tanks	each	2	\$5,000	\$10,000
2	Sodium bisulfite tanks, 250 gal	each	1	\$1,500	\$1,500
3	Digester blowers	each	2	\$40,000	\$80,000
4	Chem feed skids for bleach, and bisulfite	each	2	\$17,000	\$34,000
5	Electrical power routed to blowers & chem. feed pumps	lump sum	1	\$60,000	\$60,000
6	Instrumentation & control	lump sum	1	\$35,000	\$35,000
7	Process piping, digester blowers	lump sum	1	\$60,000	\$60,000
Subtotal, rounded to the nearest \$1,000					\$450,000
Contractor Bonds, Insurance, Mobilization, Overhead & Profit				20%	\$90,000
Construction Cost before contingency					\$540,000
Contingency				10%	\$54,000
Total Construction Cost					\$594,000
Design Engineering				7.0%	\$42,000
Bidding and Construction Engineering				7.5%	\$45,000
Other Costs - Geotechnical					\$0
Total Cost =					<b>\$681,000</b>

Village of Tolono, Illinois Wastewater System Project Plan				
CONVERT FILTER BLDG. TO CHEM & BLOWER BUILDING				
ARCHITECTURAL/STRUCTURAL WORKSHEET				
ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	0	5,000	0
Earthwork: Excavation	cu yds.	0	30	0
Earthwork: Gravel base under slab	cu yds.	0	40	0
Earthwork: Backfill	cu yds.	0	20	0
<hr/>				<hr/>
Earthwork				0
Concrete: New Floor Slab	cu yds.	30	500	15,000
Concrete: Equipment pads	Each	9	2,000	18,000
Concrete: Flowable fill for basement	cu yds.	180	160	28,800
Concrete:	Lump Sum	0	15,000	0
Concrete:	cu yds.	0	850	0
<hr/>				<hr/>
Concrete				61,800
Metals:	sq. ft.	0	50	0
Metals:	ft.	0	70	0
Metals:	risers	0	800	0
Metals:	SF	0	200	0
Metals:	SF	0	150	0
<hr/>				<hr/>
Metals				0
Building: pole barn with 10' height + interior block walls	sq. ft.	1,100	70	77,000
Building: fire suppression system for bleach room	sq. ft.	1,100	5.00	5,500
Building: Plumbing, floor drains, water lines	L.S	1	5,000	5,000
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
<hr/>				<hr/>
Buildings				87,500
Demolition: Remove filters + process piping + cap	Crew hours	56	250	14,000
Demolition: Remove existing pole barn	Crew hours	24	250	6,000
Demolition:	cu ft.		0	
Demolition:	lump sum		0	
<hr/>				<hr/>
Demolition				20,000

Village of Tolono, Illinois  
Wastewater System Project Plan

CONVERT FILTER BLDG. TO CHEM & BLOWER BUILDING

ANNUAL OM&R COST ESTIMATE

A. O&M Costs

Number of units operating	1	<< one set includes two 50 Hp blowers + 2 feed pumps
Brake Horsepower of all Operating Motors	105	
Total Bhp	105	
Motor Efficiency	92%	
Wire Horsepower	114	
Wire Kilowatts	85	
Operating Hours Per Day	24	
Operating Days Per Week	7	
Operating Weeks Per Year	52	
Operating Hours Per Year	8,736	
Maintenance Hours Per Year	300	

O&M ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	743,794	0.086	64,264
Bleach cost	gallon	4,015	1.75	7,026
Bi-sulfite cost	gallon	730	1.90	1,387
Maintenance	hours	300	35	10,500
Total Annual O&M Cost =				\$ 83,177

Present Worth Parameters Used

Interest Rate Per Year	2.70%
Number of Years	20
Present Worth Factor	15.299

Present Worth of Total Annual O&M Cost above (Item "A") = \$ 1,272,000

B. Replacement Costs

ITEM	Replacement Year	Units	Replacement Cost in Replacement Yr.	Present Worth of Replacement Cost
Replace both blowers	15	lump sum	\$90,000	\$ 60,000
Repaint all chem feed systems	15	lump sum	\$40,000	\$ 26,800

Present Worth of Replacement Costs (Item "B") = 86,800

Equivalent Annual OM&R set-aside required for these replacement items = \$ 14,800

Present Worth of Total OM&R Costs (Items "A" + "B") = **\$1,358,800**

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020  
DEMOLISH OLD CONTROL BUILDING

COST OPINION

Description

Demolish the old control building. Demolition includes removing the raw sewage pumps & blowers from the basement and filling the basement for flowable fill or sand. Demolition would include removal of the MCC and lab casework on the first floor. Removals shall include the north, east and west walls of the first floor. The south wall will remain since it forms the north wall of the existing plant that is being converted to aerobic digesters.

ITEM	Units	Quantity	Installed Unit Cost	Initial Cost
<b>A. Architectural/Structural</b>				
Earthwork		See page 2 for Detailed Cost Breakdown		\$0
Concrete		See page 2 for Detailed Cost Breakdown		\$28,800
Metals		See page 2 for Detailed Cost Breakdown		\$0
Buildings		See page 2 for Detailed Cost Breakdown		\$0
Demolition		See page 2 for Detailed Cost Breakdown		\$46,000

**B. Process Equipment/Piping/Electrical/Controls**

ID	None	each
1	None	each

Subtotal, rounded to the nearest \$1,000		\$75,000
Contractor Bonds, Insurance, Mobilization, Overhead & Profit	20%	\$15,000
Construction Cost before contingency		\$90,000
Contingency	10%	\$9,000
Total Construction Cost		\$99,000
Design Engineering	7.0%	\$7,000
Bidding and Construction Engineering	7.5%	\$7,000
Other Costs - Asbestos & Lead Paint Survey		\$3,000
<b>Total Cost =</b>		<b>\$116,000</b>

Village of Tolono, Illinois Wastewater System Project Plan				
DEMOLISH OLD CONTROL BUILDING				
ARCHITECTURAL/STRUCTURAL WORKSHEET				
ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	0	5,000	0
Earthwork: Excavation	cu yds.	0	30	0
Earthwork: Gravel base under slab	cu yds.	0	40	0
Earthwork: Backfill	cu yds.	0	20	0
<hr/>				<hr/>
Earthwork				0
Concrete: Floor Slab over basement entrance	cu yds.	0	500	0
Concrete: Flowable fill for basement	cu yds.	180	160	28,800
Concrete:	cu yds.		800	0
Concrete:	Lump Sum		15,000	0
Concrete:	cu yds.		850	0
<hr/>				<hr/>
Concrete				28,800
Metals:	sq. ft.	0	50	0
Metals:	ft.	0	70	0
Metals:	risers	0	800	0
Metals:	SF	0	200	0
Metals:	SF	0	150	0
<hr/>				<hr/>
Metals				0
Building:	sq. ft.		65	0
Building:	sq. ft.		3.50	0
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
<hr/>				<hr/>
Buildings				0
Demolition: Remove existing building above grade	lump sum	1	30,000	30,000
Demolition: Possible asbestos abatement	lump sum	1	5,000	5,000
Demolition: Core holes in basement floor for drainage	lump sum	1	3,000	3,000
Demolition: Remove pumps, blows + piping	Crew hours	32	250	8,000
<hr/>				<hr/>
Demolition				46,000

Village of Tolono, Illinois Wastewater System Project Plan				
DEMOLISH OLD CONTROL BUILDING				
ANNUAL OM&R COST ESTIMATE				
<u>A. O&amp;M Costs</u>				
Number of units operating	0	<< one set includes 2 blowers + 2 feed pumps		
Brake Horsepower of all Operating Motors	42			
Total Bhp	0			
Motor Efficiency	92%			
Wire Horsepower	0			
Wire Kilowatts	0			
Operating Hours Per Day	24			
Operating Days Per Week	7			
Operating Weeks Per Year	52			
Operating Hours Per Year	8,736			
Maintenance Hours Per Year	0			
<u>O&amp;M ITEM</u>	<u>Units</u>	<u>Annual Quantity</u>	<u>Unit Cost (\$)</u>	<u>Annual Cost (\$)</u>
Electricity	Kw-hrs.	0	0.086	0
Maintenance	hours	0	35	0
Total Annual O&M Cost =				\$ -
<u>Present Worth Parameters Used</u>				
Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94		
Number of Years	30			
Present Worth Factor	21.212			
Present Worth of Total Annual O&M Cost above (Item "A") =				\$ -
<u>B. Replacement Costs</u>				
<u>ITEM</u>	<u>Replacement Year</u>	<u>Units</u>	<u>Replacement Cost in Replacement Yr.</u>	<u>Present Worth of Replacement Cost</u>
Present Worth of Replacement Costs (Item "B") =				0
Equivalent Annual OM&R set-aside required for these replacement items =			\$ -	
Present Worth of Total OM&R Costs (Items "A" + "B") =				\$0

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020  
REMOVALS AT OLD PRIMARY CLARIFIERS

COST OPINION

Description

Remove the existing biofilter tank from atop the primary clarifiers. Also remove the deteriorated handrail and sludge from the tanks. For the sake of safety, provide a treated lumber cover with treated wood rafters over top the tanks, with HPDE membrane covering.

ITEM	Units	Quantity	Installed Unit Cost	Initial Cost
<b>A. Architectural/Structural</b>				
Earthwork		See page 2 for Detailed Cost Breakdown		\$0
Concrete		See page 2 for Detailed Cost Breakdown		\$0
Metals		See page 2 for Detailed Cost Breakdown		\$0
Buildings		See page 2 for Detailed Cost Breakdown		\$10,800
Demolition		See page 2 for Detailed Cost Breakdown		\$8,000
<b>B. Process Equipment/Piping/Electrical/Controls</b>				
		NONE		
Subtotal, rounded to the nearest \$1,000				\$19,000
Contractor Bonds, Insurance, Mobilization, Overhead & Profit			20%	\$4,000
Construction Cost before contingency				\$23,000
Contingency			10%	\$2,000
Total Construction Cost				\$25,000
Design Engineering			7.0%	\$2,000
Bidding and Construction Engineering			7.5%	\$2,000
Other Costs - Geotechnical				\$0
Total Cost =				\$29,000

Village of Tolono, Illinois Wastewater System Project Plan				
REMOVALS AT OLD PRIMARY CLARIFIERS				
ARCHITECTURAL/STRUCTURAL WORKSHEET				
ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	0	5,000	0
Earthwork: Excavation	cu yds.	0	30	0
Earthwork: Gravel base under slab	cu yds.	0	40	0
Earthwork: Backfill	cu yds.	0	20	0
<hr/>				<hr/>
Earthwork				0
Concrete: Base Slab	cu yds.	0	450	0
Concrete: Equipment pads	Each	0	1,500	0
Concrete: Perimeter Foundation Walls	cu yds.	0	800	0
Concrete:	Lump Sum	0	15,000	0
Concrete:	cu yds.	0	850	0
<hr/>				<hr/>
Concrete				0
Metals:	sq. ft.	0	50	0
Metals:	ft.	0	70	0
Metals:	risers	0	800	0
Metals:	SF	0	200	0
Metals:	SF	0	150	0
<hr/>				<hr/>
Metals				0
Building: Construct wood roof over tanks	sq. ft.	800	10	8,000
Building:	sq. ft.	800	3.50	2,800
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
<hr/>				<hr/>
Buildings				10,800
Demolition: Remove biofilter	Crew hours	8	250	2,000
Demolition: Remove handrails & pressure wash tankage	Crew hours	16	250	4,000
Demolition: Remove sludge	Crew hours	8	250	2,000
<hr/>				<hr/>
Demolition				8,000

Village of Tolono, Illinois  
Wastewater System Project Plan

REMOVALS AT OLD PRIMARY CLARIFIERS

ANNUAL OM&R COST ESTIMATE

A. O&M Costs

Number of units operating	1	<< one set includes 2 blowers + 2 feed pumps
Brake Horsepower of all Operating Motors	42	
Total Bhp	42	
Motor Efficiency	92%	
Wire Horsepower	46	
Wire Kilowatts	34	
Operating Hours Per Day	24	
Operating Days Per Week	7	
Operating Weeks Per Year	52	
Operating Hours Per Year	8,736	
Maintenance Hours Per Year	120	

O&M ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	297,518	0.086	25,706
<i>Bleach - See cost for Str. 750</i>				
Liquid Alum for phos. removal	pounds	66,400	0.200	13,280
<i>Sodium bisulfate - See cost for Str. 750</i>				
Maintenance	hours	120	35	4,200
Total Annual O&M Cost =				\$ 43,186

Present Worth Parameters Used

Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94
Number of Years	30	
Present Worth Factor	21.212	

Present Worth of Total Annual O&M Cost above (Item "A") = \$ 916,000

B. Replacement Costs

ITEM	Replacement Year	Units	Replacement Cost in Replacement Yr.	Present Worth of Replacement Cost
Replace both Algaewheel blowers	15	lump sum	\$90,000	\$ 63,000
Repaint all chem feed systems	15	lump sum	\$40,000	\$ 28,000

Present Worth of Replacement Costs (Item "B") = 91,000

Equivalent Annual OM&R set-aside required for these replacement items = \$ 15,500

Present Worth of Total OM&R Costs (Items "A" + "B") = \$1,007,000



Village of Tolono, Illinois Wastewater System Project Plan				
SITE ELECTRICAL & SCADA UPGRADES				
ARCHITECTURAL/STRUCTURAL WORKSHEET				
ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	0	1,000	0
Earthwork: Excavation	cu yds.	0	15	0
Earthwork: Gravel base under slab	cu yds.	0	40	0
Earthwork: Backfill	cu yds.	0	20	0
<hr/>				<hr/>
Earthwork				0
Concrete: Base Slab for Haag Tanks	cu yds.	0	500	0
Concrete: Sludge Loading Pad	Lump Sum	0	9,000	0
Concrete:	cu yds.	0	900	0
Concrete: Splitter Box	Lump Sum	0	15,000	0
Concrete: Structural Slabs/Walkways	cu yds.	0	850	0
<hr/>				<hr/>
Concrete				0
Metals: Castings	Each	0	300	0
Metals: Aluminum Handrail	ft.	0	70	0
Metals: Aluminum Stairway	risers	0	800	0
Metals: Baffles and Weirs	SF	0	200	0
Metals: Stop plates	SF	0	150	0
<hr/>				<hr/>
Metals				0
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
<hr/>				<hr/>
Buildings				0
Demolition:	lump sum		30,000	0
Demolition:	lump sum		15,000	0
Demolition:	cu ft.		0	
Demolition:	lump sum		0	
<hr/>				<hr/>
Demolition				0

Village of Tolono, Illinois  
Wastewater System Project Plan

SITE ELECTRICAL & SCADA UPGRADES

ANNUAL OM&R COST ESTIMATE

A. O&M Costs

Number of units operating	0
Brake Horsepower of all Operating Motors	25
Total Bhp	0
Motor Efficiency	92%
Wire Horsepower	0
Wire Kilowatts	0
Operating Hours Per Day	1
Operating Days Per Week	7
Operating Weeks Per Year	52
Operating Hours Per Year	182

Maintenance Hours Per Year 100 < mostly genset service contract

O&M ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	0	0.086	0
Maintenance (generator service contract)	hours	100	35	3,500
Total Annual O&M Cost =				\$ 3,500

Present Worth Parameters Used

Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94
Number of Years	30	
Present Worth Factor	21.212	

Present Worth of Total Annual O&M Cost above (Item "A") = \$ 74,000

B. Replacement Costs

ITEM	Replacement Year	Units	Replacement Cost in Replacement Yr.	Present Worth of Replacement Cost
SCADA upgrades	10	lump sum	\$50,000	\$ 39,000
SCADA upgrades	20	lump sum	\$80,000	\$ 50,000
Generator rehab	15	lump sum	\$15,000	\$ 11,000

Present Worth of Replacement Costs (Item "B") = 100,000

Equivalent Annual OM&R set-aside required for these replacement items = \$ 17,000

Present Worth of Total OM&R Costs (Items "A" + "B") = \$174,000

Village of Tolono, Illinois  
Wastewater System Project Plan

Revised: June 18, 2020  
SITE CIVIL UPGRADES

COST OPINION

Description

To minimize cost, new site roadways will be crushed stone and not concrete or asphalt. This item includes site erosion control measures and SWPPP provisions. Work will include relocating approximately 300 LF of park sidewalk, plus new chain link fence around the entire site, since the existing fence is > 50 years old. Also included is complete seeding and restorations of lawn areas of the site.

	ITEM	Units	Quantity	Installed Unit Cost	Initial Cost
<b>A. Architectural/Structural</b>					
	Earthwork		See page 2 for Detailed Cost Breakdown		\$0
	Concrete		See page 2 for Detailed Cost Breakdown		\$0
	Metals		See page 2 for Detailed Cost Breakdown		\$0
	Buildings		See page 2 for Detailed Cost Breakdown		\$0
	Demolition		See page 2 for Detailed Cost Breakdown		\$6,000
<b>B. Process Equipment/Piping/Electrical/Controls</b>					
ID					
1	New aggregate paving	SY	2,500	\$25	\$62,500
2	Erosion control via silt fence	LF	600	\$5.00	\$3,000
3	Seeding and restorations	acre	1	\$3,000	\$3,000
4	Asphalt paving	SY	0	\$60.00	\$0
5	3-inch Potable Water lines within the site	L.F.	200	\$50	\$10,000
6	2.5-inch post hydrants, for flushing	Each	1	\$3,000	\$3,000
7	Site processing piping not covered elsewhere	Lump Sum	1	\$50,000	\$50,000
7	SWPPP implementation and documentation	Lump Sum	1	\$6,000	\$6,000
8	Chain Link Fence	LF	1,820	\$40	\$72,800
9	Remove & relocate 8' wide PCC Sidewalk in Park	SY	270	\$60	\$16,200
	Subtotal, rounded to the nearest \$1,000				\$233,000
	Contractor Bonds, Insurance, Mobilization, Overhead & Profit			20%	\$47,000
	Construction Cost before contingency				\$280,000
	Contingency			10%	\$28,000
	<b>Total Construction Cost</b>				<b>\$308,000</b>
	Design Engineering			7.0%	\$22,000
	Bidding and Construction Engineering			7.5%	\$23,000
	Other Costs - Geotechnical				\$0
	<b>Total Cost =</b>				<b>\$353,000</b>

Village of Tolono, Illinois Wastewater System Project Plan				
SITE CIVIL UPGRADES				
ARCHITECTURAL/STRUCTURAL WORKSHEET				
ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum	0	1,000	0
Earthwork: Excavation	cu yds.	0	15	0
Earthwork: Gravel base under slab	cu yds.	0	40	0
Earthwork: Backfill	cu yds.	0	20	0
<hr/>				0
Earthwork				
Concrete:	cu yds.	0	500	0
Concrete:	Lump Sum	0	9,000	0
Concrete:	cu yds.	0	900	0
Concrete:	Lump Sum	0	15,000	0
Concrete:	cu yds.	0	850	0
<hr/>				0
Concrete				
Metals: Castings	Each	0	300	0
Metals: Aluminum Handrail	ft.	0	70	0
Metals: Aluminum Stairway	risers	0	800	0
Metals: Baffles and Weirs	SF	0	200	0
Metals: Stop plates	SF	0	150	0
<hr/>				0
Metals				
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
Building:	sq. ft.		0	
<hr/>				0
Buildings				
Demolition: Remove old chain link fence	Crew hours	8	250	2,000
Demolition: Remove old sand bed paving + media	Crew hours	16	250	4,000
Demolition:	cu ft.		0	
Demolition:	lump sum		0	
<hr/>				6,000
Demolition				

Village of Tolono, Illinois  
Wastewater System Project Plan

SITE CIVIL UPGRADES

ANNUAL OM&R COST ESTIMATE

A. O&M Costs

Number of units operating	0
Brake Horsepower of all Operating Motors	25
Total Bhp	0
Motor Efficiency	92%
Wire Horsepower	0
Wire Kilowatts	0
Operating Hours Per Day	1
Operating Days Per Week	7
Operating Weeks Per Year	52
Operating Hours Per Year	182

Maintenance Hours Per Year

O&M ITEM	Units	Annual Quantity	Unit Cost (\$)	Annual Cost (\$)
Electricity	Kw-hrs.	0	0.086	0
Maintenance	hours	0	35	0

Total Annual O&M Cost = \$ -

Present Worth Parameters Used

Interest Rate Per Year	2.40%	as per 2020 OMB Bulletin A-94
Number of Years	30	
Present Worth Factor	21.212	

Present Worth of Total Annual O&M Cost above (Item "A") = \$ -

B. Replacement Costs

ITEM	Replacement Year	Units	Replacement Cost in Replacement Yr.	Present Worth of Replacement Cost
				\$ -
				\$ -

Present Worth of Replacement Costs (Item "B") = 0

Equivalent Annual OM&R set-aside required for these replacement items = \$ -

Present Worth of Total OM&R Costs (Items "A" + "B") = \$0

## ***Insert Project Location Map here.***

**A project location map** must be included in the application. It is expected to be sufficiently detailed to show the following information: 1) specific boundaries of the project area; 2) all integral components of the system being improved or constructed, including water tower, well, pump stations, existing water/sewer mains, proposed water/sewer mains, etc.; 3) railroads, highways, interstates, towns/cities/villages (rural projects), county lines, and corporate limits. The project map must be suitable for reproduction and shall not exceed the page size of 11 x 17 inches. (Applicants may also submit blueprints or larger project maps as a supplement to their submission, if they deem necessary in order to show project details sufficiently.)

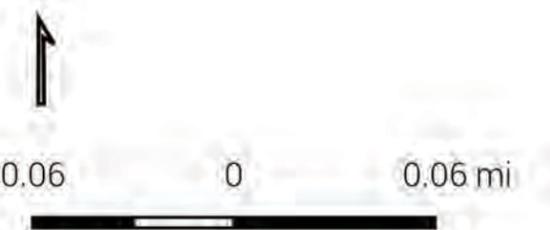
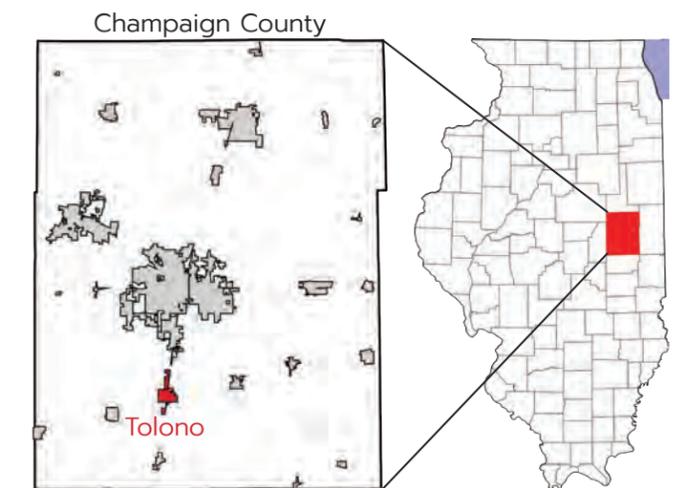


## Project Map: Tolono Wastewater Treatment Plant Improvements

*Refer to the engineering documents submitted with the application for additional project details.*

### Legend

- Tolono Wastewater Treatment Plant
- Village of Tolono





Location Map



***Insert FEMA issued Floodplain Map here.***

**A FEMA issued Floodplain map must** be included in the application. You can obtain this map by calling FEMA at 1(800) 358-9616 or by using the website <https://msc.fema.gov>. The project area must be clearly drawn on the map prior to submission.

# National Flood Hazard Layer FIRMette



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/9/2020 at 2:48:23 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

39°58'51.27"N  
88°15'44.51"W



**TOLONO  
WASTEWATER  
TREATMENT  
PLANT**

**AREA OF MINIMAL FLOOD HAZARD  
Zone X**

**17019 C0550D  
eff. 10/2/2013**

USGS The National Map: Orthoimagery. Data refreshed April, 2019.

0 250 500 1,000 1,500 2,000 Feet 1:6,000 39°58'23.70"N

88°15'47.06"W

## **Insert Project Summary here**

The Project Summary should consist of an approximately two-page narrative covering all key points of the proposed project to be funded, in part or in full, with RIPI grant funds. This summary must address the following:

1. **Relationship to Governor’s Five-Year Economic Plan** – Explain how this project relates to the principles, goals, challenges or key industries identified in the Governor’s Five-Year Economic Plan. The Plan can be found at: <https://www2.illinois.gov/dceo/Pages/EconPlan2019.aspx>
2. **Connections to other capital investments** – Does this project connect to other ongoing projects or planned investments in the region by the State of Illinois, federal or local governments?
3. **Impact Amplification** –Is this project’s impact amplified by proximity or connection to other assets, such as public transportation, highways, bodies of water, and industry clusters, among others?
4. **Minority Inclusion Plan** –Provide a Plan or at minimum, a narrative on how minority and women-owned businesses in the area will be included in the project.
5. **Business Infrastructure** – How does this project improve your community’s ability to retain or increase jobs? Provide details of how current infrastructure impacts businesses. Cite specifics and provide documentation and/or testimonials from affected businesses.
6. **Key Details:**
  - Describe the project – What is being proposed and why.
  - What is the present condition of the infrastructure for which grant funds are being requested? Is there a lack of infrastructure, or a threat to health and safety being addressed? How long has the problem existed? Address the severity and immediacy of the problem.
  - Describe the project area, including legal boundaries. Who is being affected and how? Provide a detailed explanation of how this specific project area was determined.
  - The project structure (i.e., will the residents be direct customers of the water district or is an agreement needed, what is source of water, who will treat wastewater, etc.).
  - Whether the project is necessary to comply with state or federal regulations.
  - Justification of the local government's need for assistance in relation to its overall financial capability, including discussion of outstanding indebtedness.

**Project Summary**

The Village of Tolono needs to upgrade its Wastewater Treatment Plant (WWTP). The plant was designed and built in the early 1970’s with improvements in the 1980’s and 2011. The 1984 update added a sludge storage lagoon, primary clarification and made other minor plant improvements. In 2011 a roughing filter was added to primary treatment to reduce the loading to the aeration basins. The majority of the process equipment is over thirty years old and has exceeded the original design life.

The Village of Tolono owns and operates the plant which treats wastewater generated by domestic and commercial customers. Currently it is operating above capacity. The Village is also considering taking waste from a nearby mobile home park, an elementary school, and some new residential developments. The Village has already undertaken studies<sup>1</sup> to identify necessary wastewater treatment facility improvements required to bring age depreciated facilities up to date.

**Present condition of Infrastructure and Immediacy of the Project**

Based on current recommended design standards, which assumes 1 person uses 100 gallons per day, the current plant is designed to serve a population of approximately 2,350 people but is actually serving a population of approximately 3,330 people.

Future design flow calculations are based on anticipated growth and expansion of the service area over the next 30 years. All equipment planned to be incorporated with the improvements is intended to have a design life of as much as 30 years with structural components potentially lasting much longer. Based on the same recommended design standards previously discussed and project expansion/growth of the community, the new plant would be designed to serve approximately 5,120 people.

Table below shows the current and proposed flows for the plant.

*Design, current and future flows:*

<b>Flows in millions of gallons per day (MGD)</b>	<b>Design Average Flow (DAF)</b>	<b>Design Maximum Flow (DMF)</b>
<b>Original Design Flows (permitted capacity)</b>	0.235	0.588
<b>Current Flows</b>	0.333	0.767
<b>Future Design Flows</b>	0.512	1.710

**Below are some of the concerns that are identified in the existing WWTP**

Processes that are past or quickly approaching the end of their useful life:

- Influent Pumps
- Stormwater Pump
- Blowers
- Clarifier Mechanisms
- Most valves and metering

Processes undersized for the future estimated flows and loadings:

- Primary Clarifiers
- Secondary Clarifiers
- Aeration Basins
- Aerobic Digestion

<sup>1</sup> Sanitary Sewer System Flow Study (2018 – 2019); WWTP Capital Improvement Planning (2019); Water and Wastewater System Rate Study (2019)

### Safety and Code Compliance concerns:

- Improved ventilation needed to declassify space (**NFPA 820**) – currently non-compliant

### Relationship to Governor’s Five-Year Economic Plan

The Governor’s Plan identifies the **Energy Sector** as a key industry sector that Illinois will strive to promote and expand. The wastewater treatment will be upgrading an old and less efficient management system which will promote cleaner energy. With the vast technological advances and efficiency improvements in the past 30 years all of the proposed mechanical and electrical equipment upgrades should result in less energy consumption and operating costs. The plant can potentially be an opportunity to increase awareness towards water conservation and wastewater management through potential educational programs. This can align well with **governor’s aspiration to expand career pathway programs that strengthen the pipeline for energy jobs** throughout Illinois. **Foundational principle: Downstate Revitalization (p 14)**

The Governor’s commitment to identify the needs of all Illinois residents, including downstate communities, gives the Village of Tolono immense hope that the Rebuild Illinois Program will support the improvements of the Wastewater treatment plant which can lead to expansion of the service area and ultimately help stimulate growth in the community.

### Connections to Other Capital Investments

Improving the Wastewater Treatment plant (WWTP) will benefit the community for many years to come by improving the village’s capacity to provide safe, high-quality wastewater services to local residents, institutions, and employers. The wastewater treatment plan improvements could greatly benefit the **Oaks Mobile Home Park** in Tolono as the improvements would allow the service area to be expanded to include the mobile home park. If the mobile home park can connect to municipal wastewater services in the future, the park could expand by as many as 100 additional mobile home units which would be an additional investment of \$2,000,000 and up to 48 new construction jobs in the community.

### Impact Amplification

As mentioned above, the **Oaks Mobile Home Community** will be able to potentially expand after the treatment plant upgrade and will be able to add 100 more affordable housing units to the village's housing stock. The upgrade will also allow for potentially expanding sewer lines to **Unity West Elementary School** and **Meadow Lane** – a small cluster of 17 residential properties within Village limits are currently operating private septic systems.

The upgrade will allow the plant to be in compliance of the **National Fire Protection Association (NFPA)**, section 820, which defines the protection standard in wastewater treatment facilities. Currently it has non-compliant items that need to be brought into **compliance**.

### Minority Inclusion Plan

The village as well as the engineer is committed to ensuring that minority and women-owned businesses will benefit from this project in accordance with the grant guidelines as well as for contract and bidding services. The construction contract for these improvements will require contractors to meet the minimum goal requirements established in the Business Enterprise for Minorities, Women, and Persons with Disabilities Act.

### Business Infrastructure

The proposed project will allow the creation of 111 construction jobs during the improvements of the WWTP.

**Project Boundaries** lie within the city limits. See location map on page 97.

### **Compliances Per State and Federal Regulations**

Construction permits that will need to be obtained include:

- IEPA Water Pollution Control Construction Permit for WWTP Improvements
- IEPA Notice of Intent for General Permit to Discharge Storm Water Associated with Construction Site Activities.
- Modified Illinois NPDES Discharge Permit

### **Local Government's Need for Assistance and Outstanding Indebtedness**

The Village of Tolono needs assistance for the infrastructure project in order to provide safe and reliable wastewater services for the community. While the Village is in good financial standing, additional funding is needed to support the project, especially as limited revenue sources are experiencing indications of delays and decreases as a result of the COVID-19 pandemic. As seen in the most recent financial audit, the City has comprehensive fiscal planning and budget compliance. Existing debt includes Tax Increment Financing General Obligation Bonds (alternative revenue source debt) with an outstanding principal balance of \$2,949,519 and a Tax Increment Financing General Obligation Note Payable with an outstanding principal balance of \$784,377. The bonds and note were issued to support redevelopment projects as well as construction of a new police station. Both have yearly principal and interest payments, and will mature in 2027.

## MINORITY BENEFIT/AFFIRMATIVE HOUSING STATEMENT

a. What is the percentage of the minority group(s) population residing in the community?

7.68 %

Identify the characteristics of the population of the project area by specific ethnic group. This information may be obtained from the most recent Census Data for the "applicant community." If submitting an "on behalf of" application for a project in an unincorporated area, use Census Data for the project's County.

Racial Group	Total Persons	# of Hispanic / Latino Ethnicity
White	2,849	
Black/African American	123	
Asian	32	
American Indian/Alaskan Native	0	
Native Hawaiian/Other Pacific Islander	0	
American Indian/Alaskan Native and White	0	
Asian and White	57	
Black/African American and White	25	
American Indian/Alaskan Native and Black/African	0	
Other Individuals Reporting more than One Race	82	
Some Other Race Alone	0	
Total	3086	*81
# of Female Headed Households	154	

*Above data is collected from 2018 ACS 5-Year Estimates Data Profiles, Table DP05 for Tolono Village. \*Only total number of Hispanic/Latino Ethnicity Statistics are available for the geography.*

With the exception of "Female Heads of Households", the above numbers should equal the total number of persons to benefit from the project ("targeted" area).

3,086

b. What is the goal for the percentage of funded contracts to be awarded to minority contractors?

20 %

c. If the percentage goal in *b* is substantially less than the percentage of minorities residing in the community, please explain. \_\_\_\_\_

d. The applicant agrees to affirmatively further fair housing by posting Fair Housing Posters and by making HUD Fair Housing Complaint Forms available to the public.

In addition, the unit of local government

Already has a Fair Housing Resolution on file. (Indicate Number and Date Passed)  
**Fair Housing Resolution 2020, Passed 23rd Day of June, 2020**

If funded, will pass a Fair Housing Resolution.

Signature of Chief Elected Official: \_\_\_\_\_

Date

6/24/2020

## IMPACT PER CAPITA DETERMINATION

Please provide the following information relative to the project for which funds are being requested:

- a) **Total Project Cost:** \$ 9,253,000  
(must match Total Project Costs indicated on the Uniform Capital Budget Template, Budget Narrative Summary)
- b) **Rebuild Illinois Grant Requested:** \$ 5,000,000  
(must match State Request indicated on the Uniform Capital Budget Template, Budget Narrative Summary)
- c) **Total # of Persons Served:** 3,086  
(must match Project Information page, I. Project Benefit Information)
- d) **Cost per Capita:** \$ 1620.22  
(Line b divided by Line c)

## **JOB CREATION DOCUMENTATION**

**Engineer providing cost estimate should assist with this information**

How many days of construction is anticipated? 364

Provide a list of all **personnel that will be necessary to complete construction**. Include the Job Title, the total number of people that will hold that job title, and the total number of hours that job title is anticipated to be utilized. Use additional pages as needed.

*Job Creation Documentation provided*

# TOLONO, IL - WWTP IMPROVEMENTS - REBUILD ILLINOIS JOB CREATION SUMMARY

## PUBLIC INFRASTRUCTURE CONSTRUCTION

### 1) Based on Governor's Rebuild Illinois Capital Plan

Total Anticipated Capital Investment	\$ 45,000,000,000.00
Total Anticipated Number of Jobs Created	540,000
Total Anticipated Number of Jobs Created per \$1 Million Capital Investment	12
<b>Total Anticipated Number of Jobs Created based on project cost of \$9.253 million</b>	<b>111</b>

### 2) Based on Staffing Estimates to Complete the Project

Construction Crew			
#	Description	Hours	Total Hours
1	Project Superintendent	1,920	1,920
Opinion of hours was developed based on the following assumptions:			
Buried Piping Crew			
1	Foreman	1,920	1,920
3	Operators	1,920	5,760
9	Laborers	1,920	17,280
6	Truck Drivers	1,920	11,520
12 months @ full-time (20 days/month & 8 hours/day)			
Treatment Process Crew			
1	Foreman	1,920	1,920
4	Operators	1,920	7,680
10	Laborers	1,920	19,200
4	Carpenters	1,920	7,680
4	Finishers	1,920	7,680
12 months @ full-time (20 days/month & 8 hours/day)			
Electrical Crew			
1	Foreman	1,920	1,920
2	Electricians	1,920	3,840
12 months @ full-time (20 days/month & 8 hours/day)			
Building Crew			
1	Foreman	480	480
4	Carpenters	480	1,920
4	Laborers	480	1,920
3 months @ full-time (20 days/month & 8 hours/day)			
Site and Roadwork Crew			
1	Foreman	1,920	1,920
3	Operators	1,920	5,760
5	Laborers	1,920	9,600
3	Finishers	1,920	5,760
3	Truck Drivers	1,920	5,760
12 months @ full-time (20 days/month & 8 hours/day)			
Engineering & Support Staff			
#	Description	Hours	Total Hours
1	Project Engineer	480	480
2	Resident Engineer	1,920	3,840
2	Surveyor	480	960
2	Materials Tester	480	960
Material Suppliers/Manufacturers/Delivery/Etc.			
#	Description	Hours	Total Hours
48	Supplier Employees	320	15,360
120	Manufacturer Employees	320	38,400
48	Delivery Employees	320	15,360
48	Other Employees	320	15,360
TOTAL PERSON-HOURS TO COMPLETE WORK			212,160
TOTAL NORMAL ANNUAL HOURS PER JOB			1,920
			(40 HOURS PER WEEK, 48 WEEKS PER YEAR) Removing 4 weeks for holidays/pto
<b>TOTAL NUMBER OF FULL-TIME JOBS CREATED</b>			<b>111</b>
<b>TOTAL # OF JOBS CREATED FROM PT CONSTRUCTION (AVERAGE OF THE 2 METHODS)</b>			<b>111</b>
(This equates to aprx. 12 jobs per \$1 million of construction)			

## ***Insert Project Readiness Summary here***

Each application must demonstrate that the proposed project is appropriate and achievable and that all actions have been completed to ensure timely implementation of the project. Specifically, the application must address all of the following, if applicable:

- Status of required permit(s) from the state and or federal agencies. If not applicable, address why;
- The community must have full control of the right-of-way either by having 100 percent of the necessary private property easements signed or a right-of-way docket. If not applicable, address why;
- Water/wastewater treatment agreement; If not applicable, address why.
- Identify the ownership of any property needed to complete the project (including option to purchase); and verify that the project will be shovel-ready;
- Additional funding commitment(s);
- Status of written permission from railroad(s), county highway commissioners, IDOT, etc. to proceed with any railroad and/or road borings that are proposed. If not applicable, address why;
- If a "phased project," indicate the status of all pertinent readiness issues. In addition, the application should include supporting documentation, as appropriate.

The Engineering firm (Donohue & Associates, Inc.) has recently completed and submitted a Wastewater System Capital Improvements Project Plan to seek funding assistance through the IEPA WPCLP to allow these improvements to be completed more affordably and in a timely fashion. In accordance with the 2021 Intended Use Plan, once the Village's project plan is approved, they would be eligible for 15% principal forgiveness and a low-interest loan that could be paid back over 30 years. The Village has already begun to incorporate rate adjustments exceeding the recommendations in the recently completed water and sewer rate study to prepare for the major capital improvement projects needed. We hope to receive final planning approval by the end of this year.

Remaining tasks to be completed include land surveying, engineering design, plan and specification development, permitting, bidding, loan closing, and construction. Currently, improvements are planned to be constructed within existing Village-owned property for the WWTP and an adjacent Village-owned property. Copies of current deeds of land ownership are included in the application.

**Construction permits that will need to be obtained** include:

- 1) IEPA Water Pollution Control Construction Permit for WWTP Improvements
- 2) IEPA Notice of Intent for General Permit to Discharge Storm Water Associated with Construction Site Activities
- 3) Modified Illinois NPDES Discharge Permit

### **Easements Status**

No easements will be required as the plant upgrade construction will be undertaken within the already existing WWTP.

### **Water/wastewater treatment agreement**

The WWTP discharges effluents to Hackett Branch under NPDES Permit No. IL0031453

### **Property Ownership**

The property is owned by the Village of Tolono and the ownership deeds are attached.

**Tentative Project Schedule**

An estimated project schedule from now to project completion with key tasks is included below:

<b>Date</b>	<b>Task</b>
06/30/20	IEPA Project Plan for Wastewater System Improvements submitted for review
06/30/20	Rebuild Illinois Public Infrastructure Grant Application Submittal
08/30/20	Notice of Grant Awards for Rebuild Illinois Public Infrastructure Grants
09/15/20	Execute contract for Engineering Services
11/01/20	Finalization of Grant Award for Rebuild Illinois Public Infrastructure Grants
11/01/20	Land surveying complete
01/01/21	IEPA Project Plan Approval
01/15/21	30% Design Review with the Village
03/15/21	60% Design Review with the Village
05/01/21	90% Design Review with the Village
05/15/21	All permits to be submitted for review on or before this date
08/15/21	All permits to be issued on or before this date
09/01/21	Advertisement for Bids
09/29/21	Bid Opening
10/08/21	IEPA Loan Closing
10/15/21	Bid Award / Notice of Award
11/01/21	Contract Execution / Notice to Proceed
01/01/22	Begin Construction
11/01/22	Substantial Completion
12/31/22	Final Completion

If the village is awarded the grant funds, we are confident that we have the right team assembled to complete this project.

Additional information to demonstrate that the proposed project is appropriate and achievable and that all actions have been completed to ensure timely implementation of the project is attached as the ‘Engineer’s Information’ at the end of the application as supplemental information. It includes –

- 1) Sanitary Sewer System Flow Study
  - Detailed flow study performed throughout collection system
- 2) WWTP Capital Improvements Plan
  - High level conceptual view of improvements needed at WWTP and costs
- 3) Water & Sewer Rate Study
  - Evaluation of Village’s current rates and revenue compared to capital improvement needs
- 4) Water & Sewer Special Meeting Powerpoint Presentation
  - Presentation highlighting the findings of the previous 3 studies mentioned above
- 5) IEPA Wastewater System Upgrade: Project Plan Report

***Insert Signed Letters of Support here.***

June 2, 2020

Director of Community Development  
Department of Commerce & Economic Opportunity  
500 East Monroe  
Springfield, IL 62701

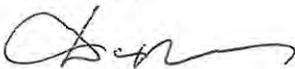
Dear Director of Community Development:

I would like to express my support for the Rebuild Illinois grant application submitted by the Village of Tolono for **Wastewater Treatment Plant Improvements**. This project will benefit the Tolono Community for many years to come by improving their capacity to provide safe, high-quality wastewater services to local residents, institutions, and employers.

As Senior Vice President of Stonetown Capital Group (owner/operator of The Oaks mobile home community in Tolono), I can attest that the improvements being supported by the grant could benefit the 126 families living in our community while providing us with the opportunity to expand by adding an additional 100 affordable housing sites to the Village. Currently, the affordable housing expansion is estimated to require an additional investment of \$2,000,000 to construct and could create up to 48 jobs during construction. Increasing the plant capacity with these improvements would create the possibility of a future extension of the sewer line to our community. Connecting to public sewer would not only make the expansion of the existing community much more feasible (in terms of development costs and efficient use of our land) but would also help reduce the day-to-day maintenance of the private wastewater systems that are currently in place at our community (including the replacing of lift station pumps, septic tank pumping and leech field maintenance). Vacating our existing system would reduce the amount of sewer backups that some families face during the year.

Support of these improvements would be a great addition to a community seeking to grow and thrive during these trying times. I am excited to hear more about the possibility of our company being a part of that growth for decades to come.

Sincerely,



Dax Nolen  
Senior Vice President  
Stonetown Capital Group

STATE CAPITOL  
HOUSE POST OFFICE  
SPRINGFIELD, ILLINOIS 62706



STATE OF ILLINOIS  
**100TH GENERAL ASSEMBLY**  
HOUSE OF REPRESENTATIVES

**BRAD HALBROOK**  
STATE REPRESENTATIVE  
102ND DISTRICT

June 2, 2020

Director of Community Development  
Department of Commerce & Economic Opportunity  
500 East Monroe  
Springfield, IL 62701

Dear Director of Community Development:

I would like to express support for the Rebuild Illinois grant application submitted by the Village of Tolono for **Tolono Sanitary Sewer Extension and Wastewater Treatment Plant Improvements**. This project will benefit the Tolono Community for many years to come by improving their capacity to provide safe, high-quality wastewater services to local residents, institutions, and employers.

The Village of Tolono is located in Champaign County and had an estimated population of 3,086 in 2018. The Village owns and operates the Wastewater Treatment Plant (WWTP) which treats wastewater generated by domestic and commercial customers. The majority of the sewer collection system and WWTP were built with the original system constructed in the early 1970's and they are currently operating above capacity. These conditions limit the Village's ability to support existing and proposed development opportunities, which spurred the Village to work with engineering consultants to identify the necessary improvements required to bring the age depreciated facilities up to date as well as extend services to un-serviced properties located in the Village's corporate limits. With the appropriate financial support, the Village is prepared to move forward with specific facility improvements and extensions thanks to a WWTP Facility Improvements Plan, a Sanitary Sewer Extension Plan, and a Water and Sewer Rate Study all completed in 2019 and ready to be implemented. With these improvements, the Village's wastewater infrastructure will be safe, reliable, and financially sustainable for many years to come.

The improvements outlined in the grant represent economic development potential by allowing Tolono to support proposed residential and commercial development opportunities that are currently on hold. The improvements outlined in the grant also represent substantial capital cost for a small municipality and would greatly benefit from a Rebuild Illinois grant to make the improvements affordable for the community and to start construction as soon as possible. I ask for your consideration of the Tolono's grant application on behalf of the current and future residents, institutions, and employers that would greatly benefit from this investment.

Sincerely,

A handwritten signature in cursive script that reads "Brad Halbrook".

Brad Halbrook  
State Representative  
102<sup>nd</sup> District



June 24, 2020

## **Tolono Sanitary Sewer Extension and Wastewater Treatment Plant Improvements**

Director of Community Development  
Department of Commerce & Economic Opportunity  
500 East Monroe  
Springfield, IL 62701

Dear Director of Community Development:

My name is Brian Neverman and I own Neverman Floor Artisans and also Neverman Development. These two established businesses are new to Tolono, IL in the past few months. As a lifelong resident of Tolono, IL, I have recently made the decision to transfer the base of my business to Tolono after many years in Champaign, IL. I am doing this in an effort to support the continued development and growth of my own community. During this transition, these two businesses have supplied the community with numerous job opportunities, increased sales tax revenues and we have also recently completely renovated an outdated commercial complex and transformed it into a thriving and also aesthetically appealing area in the Tolono Community. Our plans are to continue to do more of the same within the local area. One concern that I do have is whether or not my goals are achievable with the current facilities in place. As with anything, infrastructure and utility needs will grow as communities do. I look forward to being a business member and resident of Tolono for a long time. I also hope that my family will continue to play a vital role in the economic and social development of the area for many years to come. I believe that the **Tolono Sanitary Sewer Extension and Wastewater Treatment Plant Improvements** will help make these goals a much more achievable reality.

I would like to take a moment of your time to express support for the Rebuild Illinois grant application submitted by the **Village of Tolono** for **Tolono Sanitary Sewer Extension and Wastewater Treatment Plant Improvements**. This project will benefit the Tolono Residential community, as well as the business community for many years to come by improving their capacity to provide safe, high-quality wastewater services to local residents, institutions, and employers.

The Village of Tolono is located in Champaign County and had an estimated population of 3,086 in 2018. The Village owns and operates the Wastewater Treatment Plant (WWTP) which treats wastewater generated by domestic and commercial customers. The majority of the sewer collection system and WWTP were built with the original system constructed in the early 1970's and they are currently operating above capacity. These conditions limit the Village's ability to support existing and proposed development opportunities, which spurred the Village to work with engineering consultants to identify the necessary improvements required to bring the age depreciated facilities up to date as well as extend services to un-serviced properties located in the Village's corporate limits. With the appropriate financial support, the Village is prepared to move forward with specific facility improvements and extensions thanks to a WWTP Facility Improvements Plan, a Sanitary Sewer Extension Plan, and a Water and Sewer Rate Study all completed in 2019 and ready to be implemented. With these improvements, the Village's wastewater infrastructure will be safe, reliable, and financially sustainable for many years to come.



The improvements outlined in the grant represent economic development potential by allowing Tolono to support proposed residential and commercial development opportunities that are currently on hold. The improvements outlined in the grant also represent substantial capital cost for a small municipality and would greatly benefit from a Rebuild Illinois grant to make the improvements affordable for the community and to start construction as soon as possible. I ask for your consideration of the Tolono's grant application on behalf of the current and future residents, institutions, and employers that would greatly benefit from this investment.

Sincerely,

Brian Neverman - President & Owner

Neverman Floor Artisans / Neverman Development

A handwritten signature in blue ink, consisting of a large, stylized 'B' followed by a long, horizontal flourish.

**SPRINGFIELD OFFICE:**  
103-B STATE CAPITOL  
SPRINGFIELD, ILLINOIS 62706  
PHONE: 217/558-1006  
WWW.SENCHAPINROSE.COM



ILLINOIS STATE SENATE  
**CHAPIN ROSE**  
51ST SENATE DISTRICT

**DISTRICT OFFICES:**  
510 S. STALEY RD., SUITE D  
CHAMPAIGN, IL 61822  
PHONE: 217/607-1853

5130 HICKORY POINT FRONTAGE RD.  
SUITE 103  
DECATUR, IL 62526  
PHONE: 217/330-9356  
FAX: 217/330-9357

June 16, 2020

Ms. Wendy Bell  
Deputy Director of Community Development  
Department of Commerce & Economic Opportunity  
500 East Monroe  
Springfield, IL 62701

Dear Deputy Director Bell:

I am writing to express support for the Rebuild Illinois grant application submitted by the Village of Tolono for **Tolono Sanitary Sewer Extension and Wastewater Treatment Plant Improvements**. This project will benefit the Tolono Community for many years to come by improving their capacity to provide safe, high-quality wastewater services to local residents, institutions, and employers.

The Village of Tolono is located in Champaign County and had an estimated population of 3,086 in 2018. The Village owns and operates the Wastewater Treatment Plant (WWTP) which treats wastewater generated by domestic and commercial customers. Similar to many communities in my district, the majority of the Village's sewer collection system and WWTP were built decades ago and are currently operating above capacity. These conditions limit the Village's ability to support existing and proposed development opportunities, which spurred the Village to work with engineering consultants to proactively identify the necessary improvements required to bring their age-depreciated facilities up to date, as well as to extend services to un-serviced properties located in the Village's corporate limits. With the appropriate financial support, the Village is prepared to move forward with specific facility improvements and extensions thanks to a WWTP Facility Improvements Plan, a Sanitary Sewer Extension Plan, and a Water and Sewer Rate Study all completed in 2019, now ready for implementation. With these improvements, the Village's wastewater infrastructure will be safe, reliable, and financially sustainable for many years into the future.

The improvements outlined in the grant represent economic development potential by allowing Tolono to support proposed residential and commercial development opportunities that are currently on hold. The improvements outlined in the grant also represent substantial capital cost for a small municipality and would greatly benefit from a Rebuild Illinois grant to make the improvements affordable for the community and to start construction as soon as possible. For these reasons, I respectfully ask for your favorable consideration of the Village of Tolono's grant application, on behalf of many of my constituents who would greatly benefit from this investment. If I can answer any questions, please do not hesitate to contact me.

Best regards,

A handwritten signature in black ink that reads "Chapin Rose".

Chapin Rose  
State Senator - 51<sup>st</sup> District

**From:** Stefanie Pratt <[stefanie@stefaniepratthomes.com](mailto:stefanie@stefaniepratthomes.com)>

**Date:** June 22, 2020 at 2:32:53 PM CDT

**To:** Rob Murphy <[Rob.Murphy@tolonoil.us](mailto:Rob.Murphy@tolonoil.us)>

**Subject:** Letter of Support

To Whom It May Concern;

I am writing to support the upgrade of the sewer system in Tolono. There is a need for more housing in that area and that seems to be a big sticking point to allow new subdivision and expansions to move forward. I have a developer looking to develop another subdivision there in the near future. This would greatly help move things along.

There is a lack of homes in Tolono and many home buyers are looking in the outlying areas of Champaign-Urbana to move to for smaller town living and school districts.

Thank you in advance for this consideration

*Rock On & Stay Strong*

*Stefanie Pratt*

**Stefanie Pratt Team - Coldwell Banker Real Estate Group**

**"I Don't Buy Homes, I SELL THEM!"**

**Mobile: (217) 202-3336**

**Champaign County Association of Realtors Exec Team 2019-2023**

**View Homes and Learn More at: [StefaniePrattHomes.com](http://StefaniePrattHomes.com)**

**Click HERE to Register to WIN and Support Local Businesses**

**Relocation Certified: I Can Relocate You ANYWHERE in the World!**

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This e-mail and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom they are addressed; access to anyone else is unauthorized. If you are not the intended recipient or the person responsible for delivering the e-mail to the intended recipient, please delete and be advised that you have received this e-mail in error and that any use, dissemination, forwarding, printing, or copying of this e-mail is strictly prohibited.

**RESOLUTION COMMITTING LOCAL FUNDS**

*Not Applicable*

**PUBLIC HEARING NOTICE**

*Not Applicable*

***Insert Seven Day Notice of Hearing here.***

The Notice of Public Hearing **must** be published at least once in a newspaper of general circulation at least seven calendar days (excluding the date of publication *and* the date of the hearing) prior to the public hearing. All project information must be available for viewing on the first date of publication at a location within the community.

*Not Applicable*

***Insert Newspaper Clipping and Publisher's Certification here.***

*Not Applicable*

## ***Insert Certified Minutes here.***

The minutes of the public hearing must be certified by the chief elected official or other authorized local officials, such as county clerk, city clerk, etc.

*Not Applicable*

## ***Insert Attendance Sheets here.***

A copy of the public hearing attendance sheet must be included as part of the resident participation documentation. It is suggested that each person attending the public hearing provide his address and identify his role of participation (e.g., resident, elected or appointed official, municipal employee, contractor, grant administrator, business owner, etc.)

*Not Applicable*

**LOCAL GOVERNMENT CERTIFICATIONS**

On this 3rd of June, 2020, the Village President, Robert Murphy, of Village of Tolono hereby certifies to the Department of Commerce and Economic Opportunity in regard to an application and award of funds through the Rebuild Illinois Grant that:

1. It confirms that no aspect of the project for assistance has or shall commence prior to the award of funds to the community and the receipt of an environmental clearance from the Department.
2. It will comply with the Interagency Wetland Policy Act of 1989 including the development of a plan to minimize adverse impacts on wetlands or providing written evidence that the proposed project will not have an adverse impact on a wetland. It confirms that Project must also comply with Federal Wetlands Protection regulations at 24-CFR 58.5(b)(2) and Executive Order 11990, which may require preparation of an Eight-Step Wetlands Review.
3. It will comply with the Illinois Endangered Species Protection Act and the Illinois Natural Area Preservation Act by completing the consultation process with the Endangered Species Consultation Program of the Illinois Department of Natural Resources or providing written evidence that the proposed project is exempt.
4. It will identify and document all appropriate permits necessary to the proposed project, including, but not limited to building, construction, zoning, subdivision, IEPA and IDOT.
5. No legal actions are underway or being contemplated that would significantly impact the capacity of the Village of Tolono to effectively administer the program, and to fulfill the requirements of the program.
6. It will coordinate with the County Soil and Water Conservation District regarding standards for surface and sub-surface (tile) drainage restoration and erosion control in the fulfillment of any project utilizing Rebuild Illinois funds and involving construction.
7. It is understood that the obligation of the State will cease immediately without penalty of further payment being required if in any fiscal year the Illinois General Assembly or federal funding source fails to appropriate or otherwise make available sufficient funds for this agreement.
8. It acknowledges the applicability of Illinois prevailing wage rate requirements to construction projects; a wage rate determination must be obtained prior to commencement of any construction or equipment installation; and, it shall discuss these requirements with the contractor.
10. It will comply with OMB 2 CFR 200 and applicable areas of Illinois' Grant Accountability and Transparency Act (GATA).
11. The area, in whole or in part, in which project activities will take place, IS or **IS NOT** (circle one) located in a floodplain.

**A FEMA Floodplain map is included in the application (as required) and is located on Page \_\_\_\_\_**

If yes, does it participate in the National Flood Insurance Program?      Yes \_\_\_ No \_\_\_

If no, provide an explanation as to why it does not participate: \_\_\_\_\_

  
\_\_\_\_\_  
Signature of Chief Elected Official

6/3/2020  
\_\_\_\_\_  
Date

**MANDATORY DISCLOSURES**

Award applicants and recipients of awards from the State of Illinois (collectively referred to herein as “Grantee”) must disclose, in a timely manner and in writing to the State awarding agency, all violations of State or federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the award. See 30 ILCS 708/40; 44 Ill. Admin Code § 7000.40(b)(4); 2 CFR § 200.113. Failure to make the required disclosures may result in remedial action.

Please describe all violations of State or federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the awarding of a grant to your organization:

None

Grantee has a continuing duty to disclose to the Department of Commerce and Economic Opportunity (the “Department”) all violations of criminal law involving fraud, bribery or gratuity violations potentially affecting this grant award.

By signing this document, below, as the duly authorized representative of the Grantee, I hereby certify that:

- All of the statements in this Mandatory Disclosure form are true, complete and accurate to the best of my knowledge. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil or administrative penalties. (U.S. Code, Title 18, Section 1001).
- There is no action, suit or proceeding at law or in equity pending, nor to the best of Grantee’s knowledge, threatened, against or affecting the Grantee, before any court or before any governmental or administrative agency, which will have a material adverse effect on the performance required by the grant award.
- Grantee is not currently operating under or subject to any cease and desist order, or subject to any informal or formal regulatory action, and, to the best of the Grantee’s knowledge, it is not currently the subject of any investigation by any state or federal regulatory, law enforcement or legal authority.
- If Grantee becomes the subject of an action, suit or proceeding at law or in equity that would have a material adverse effect on the performance required by an award, or an investigation by any state or federal regulatory, law enforcement or legal authority, Grantee shall promptly notify the Department in writing.

Grantee Organization: Village of Tolono

By:   
Signature of Authorized Representative

Printed Name: Robert Murphy

Printed Title: Village President – Village of Tolono      Date: 6/3/2020

## CONFLICT OF INTEREST DISCLOSURE

Award applicants and recipients of awards from the State of Illinois (collectively referred to herein as “Grantee”) must disclose in writing to the awarding State agency any actual or potential conflict of interest that could affect the State award for which the Grantee has applied or has received. See 30 ILCS 708/35; 44 Ill. Admin Code § 7000.40(b)(3); 2 CFR § 200.112. A conflict of interest exists if an organization’s officers, directors, agents, employees and/or their spouses or immediate family members use their position(s) for a purpose that is, or gives the appearance of, being motivated by a desire for a personal gain, financial or nonfinancial, whether direct or indirect, for themselves or others, particularly those with whom they have a family business or other close associations. In addition, the following conflict of interest standards apply to governmental and non-governmental entities.

- a. **Governmental Entity.** If the Grantee is a governmental entity, no officer or employee of the Grantee, member of its governing body or any other public official of the locality in which the award objectives will be carried out shall participate in any decision relating to a State award which affects his/her personal interest or the interest of any corporation, partnership or association in which he/she is directly or indirectly interested, or which affects the personal interest of a spouse or immediate family member, or has any financial interest, direct or indirect, in the work to be performed under the State award.
- b. **Non-governmental Entity.** If the Grantee is a non-governmental entity, no officer or employee of the Grantee shall participate in any decision relating to a State award which affects his/her personal interest or the interest of any corporation, partnership or association in which he/she is directly or indirectly interested, or which affects the personal interest of a spouse or immediate family member, or has any financial interest, direct or indirect, in the work to be performed under the State award.

The Grantee shall also establish safeguards, evidenced by policies, rules and/or bylaws, to prohibit employees or officers of Grantee from engaging in actions, which create, or which appear to create a conflict of interest as described herein.

**The Grantee has a continuing duty to immediately notify the Department of Commerce and Economic Opportunity (the “Department”) in writing of any actual or potential conflict of interest, as well as any actions that create or which appear to create a conflict of interest.**

*Please describe all current potential conflict(s) of interest, as well as, any actions that create or which appear to create a conflict of interest related to the State award for which your organization has applied.*

None

If the Grantee provided information above regarding a current potential conflict of interest or any actions that create or appear to create a conflict of interest, the Grantee must immediately provide documentation to the applicable Department grant manager to support that the potential conflict of interest was appropriately handled by the Grantee’s organization. If at any later time, the Grantee becomes aware of any actual or potential conflict of interest, the Grantee must notify the Department’s grant manager immediately, and provide the same type of supporting documentation that describes how the conflict situation was or is being resolved.

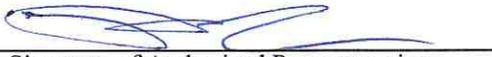
Supporting documentation should include, but is not limited to, the following: the organization’s bylaws; a list of board members; board meeting minutes; procedures to safeguard against the appearance of personal gain by the organization’s officers, directors, agents, and family members; procedures detailing the proper internal controls in place; timesheets documenting time spent on the award; and bid documents supporting the selection of the contractor involved in the conflict, if applicable.

By signing this document, below, as the duly authorized representative of Grantee, I hereby certify that:

- All of the statements in this Conflict of Interest Disclosure form are true, complete and accurate to the best of my knowledge. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil or administrative penalties. (U.S. Code, Title 18, Section 1001).
- If I become aware of any situation that conflicts with any of the representations herein, or that might indicate a potential conflict of interest or create the appearance of a conflict of interest, I or another representative from my organization will immediately notify the Department's grant manager for this award.
- I have read and I understand the requirements for the Conflict of Interest Disclosure set forth herein, and I acknowledge that my organization is bound by these requirements.

Grantee Organization: Village of Tolono

By:

  
Signature of Authorized Representative

Printed Name: Robert Murphy

Printed Title: Mayor – Village of Tolono

Date: 6/3/2020

## **INTERGOVERNMENTAL COOPERATION AGREEMENT**

Agreement not yet undertaken for "on-behlf of" application pertaining to grant administration

***Insert Current Infrastructure Condition Documentation here.***

The Tolono WWTP was designed and built in the early 1970's with improvements in the 1980's and minor improvements in 2011. The 1984 update added a sludge storage lagoon, primary clarification and made other minor plant improvements. In 2011 a roughing filter was added to primary treatment to reduce the loading to the aeration basins. The majority of the process equipment is over thirty years old and has exceeded the original design life. Past WWTP construction plans (including 1973 As-built 1984 Construction Plans, and 2011 Construction Plans) have been included for reference in Attachment below. The Village's existing sanitary sewer collection system map is included in the application for reference. Additionally, the WWTP was found to be operating above its capacity which will limit future expansion and development throughout the community.

The Village has recently received multiple inquiries to connect existing and proposed developments to the Village's sanitary sewer collection system and WWTP; most notably from The Oaks mobile home park and existing developments on the south side of the Village. The Oaks mobile home park and Meadow Lane were developed more than 30 years ago and the Unity West Elementary School is approaching 20 years since it was originally constructed. The vast majority of septic systems are, by in large, not maintained in accordance with recommended standards and it is likely all of the systems in this area are beginning to experience, or have been experiencing, more issues. The largest water user and thus, wastewater producer in this area, the Oaks mobile home park, has already expressed concerns with their existing systems age, condition, and functionality. They currently have 126 mobile home sites and have plans for expansion to serve up to another 100 mobile homes if they are able to connect to the Village's collection system and receive approval from the Illinois Department of Health. The Village has begun planning for a sanitary sewer extension to serve this area but their existing WWTP will require improvements to increase the plant capacity before this extension would be permitted by the IEPA.

The WWTP is located on South Bourne Street in Tolono, Illinois and discharges effluent to Hackett Branch under NPDES Permit No. IL0031453. The WWTP is rated for 0.235 MGD design average flow (DAF) and 0.588 MGD design maximum flow (DMF). Currently its operating 40% above the design capacity. **Studies conducted to document the existing conditions are attached as part of Engineering Information at the end of the application.**

## ***Insert Documentation of Commitment from Leverage/Match Sources here.***

The proposed WWTP Improvements include construction of a new treatment system, repurposing some of the infrastructure at the existing WWTP, to increase the plant's flow capacity to serve the community through the next 30-years and ensure long-term compliance with future NPDES discharge permit requirements.

*A project plan is being submitted to the **Illinois Environmental Protection Agency (IEPA)** by the end of this month to request financial assistance through the Water Pollution Control Loan Program (WPCLP) for Wastewater System Improvements throughout Tolono including the WWTP Improvements, multiple lift station replacement/rehabilitation projects, and the sanitary sewer extension to serve the south side of the Village that was previously mentioned.*

Pertinent technical excerpts from the IEPA report have been included in Attachment below which provides greater schematic detail of the proposed improvements at the WWTP. The total anticipated cost to complete the WWTP improvements is \$9,253,000. The detailed engineer's opinion of probable cost was completed as part of the IEPA project plan for the WWTP Improvements and a separate copy has been included in the attachments as part of 'Engineer's Cost Estimates' in this application.

**A copy of the IEPA project plan which will be submitted to IEPA by the end of this month is included in the 'Engineering Information' provided at the end of the application as supplementary information (see page 226).**

***Client Review  
Meeting Handout***

**Wastewater  
System Upgrade:  
Project Plan  
Report**

*Prepared for*

***Village of  
Tolono, Illinois***

June 15, 2020



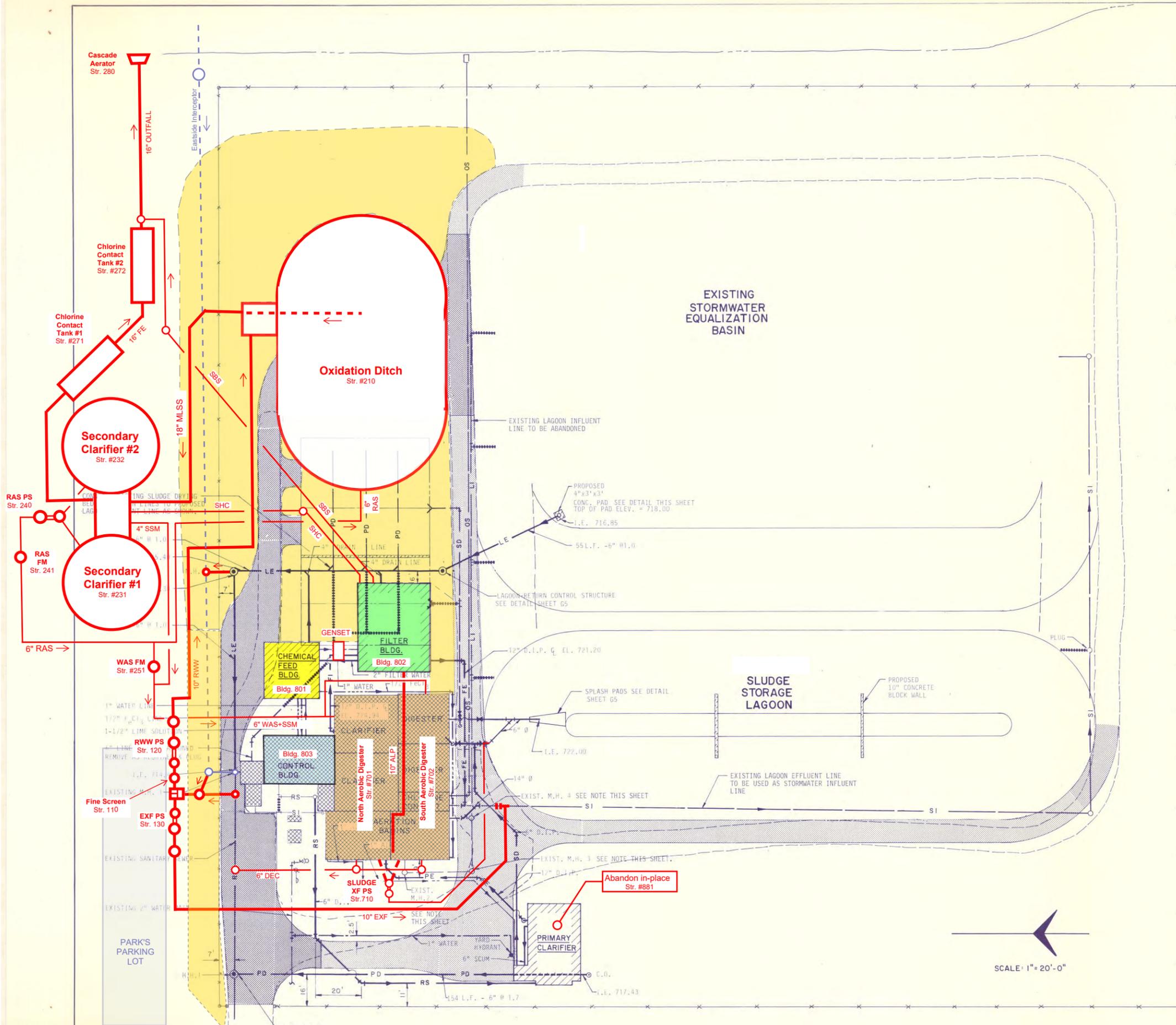
**Donohue & Associates, Inc.**  
1605 South State Street, Suite 1C  
Champaign, IL 61820

Project No. 13531.006

[www.donohue-associates.com](http://www.donohue-associates.com)

***Project "A"***

***Wastewater Treatment Plant  
Upgrade***



**LEGEND**

[Pattern]	PROPOSED BITUMINOUS CONCRETE ROADWAY
[Pattern]	PROPOSED CRUSHED STONE ROADWAY
[Pattern]	PROPOSED STRUCTURES
[Pattern]	EXISTING STRUCTURES
○	EXISTING SANITARY MANHOLE
⊙	PROPOSED SANITARY MANHOLE
⊕	EXISTING YARD HYDRANT AND VALVE
⊕	PROPOSED YARD HYDRANT
⊕	EXISTING LIGHT POLE
⊕	PROPOSED VALVE WITH VALVE BOX
⊕	PROPOSED CLEANOUT
---	EXISTING WATER LINE
---	PROPOSED WATER LINE
---	PROPOSED AIR LINE
---	PROPOSED LIME SOLUTION LINE
---	PROPOSED FERRIC CHLORIDE LINE (FeCl <sub>3</sub> )
-----	EXISTING LINE TO BE REMOVED
RS	EXISTING RAW SEWAGE LINE
RS	PROPOSED RAW SEWAGE LINE
PD	EXISTING PLANT DRAIN LINE
PD	PROPOSED PLANT DRAIN LINE
SI	STORMWATER INFLUENT LINE
LE	PROPOSED LAGOON EFFLUENT LINE
SD	EXISTING SLUDGE DRAW-OFF LINE
SD	PROPOSED SLUDGE DRAW-OFF LINE
PE	PROPOSED PRIMARY EFFLUENT LINE
FI	PROPOSED FILTER INFLUENT LINE
FE	PROPOSED FILTER EFFLUENT LINE
OS	EXISTING OUTFALL SEWER LINE
LI	EXISTING LAGOON INFLUENT LINE

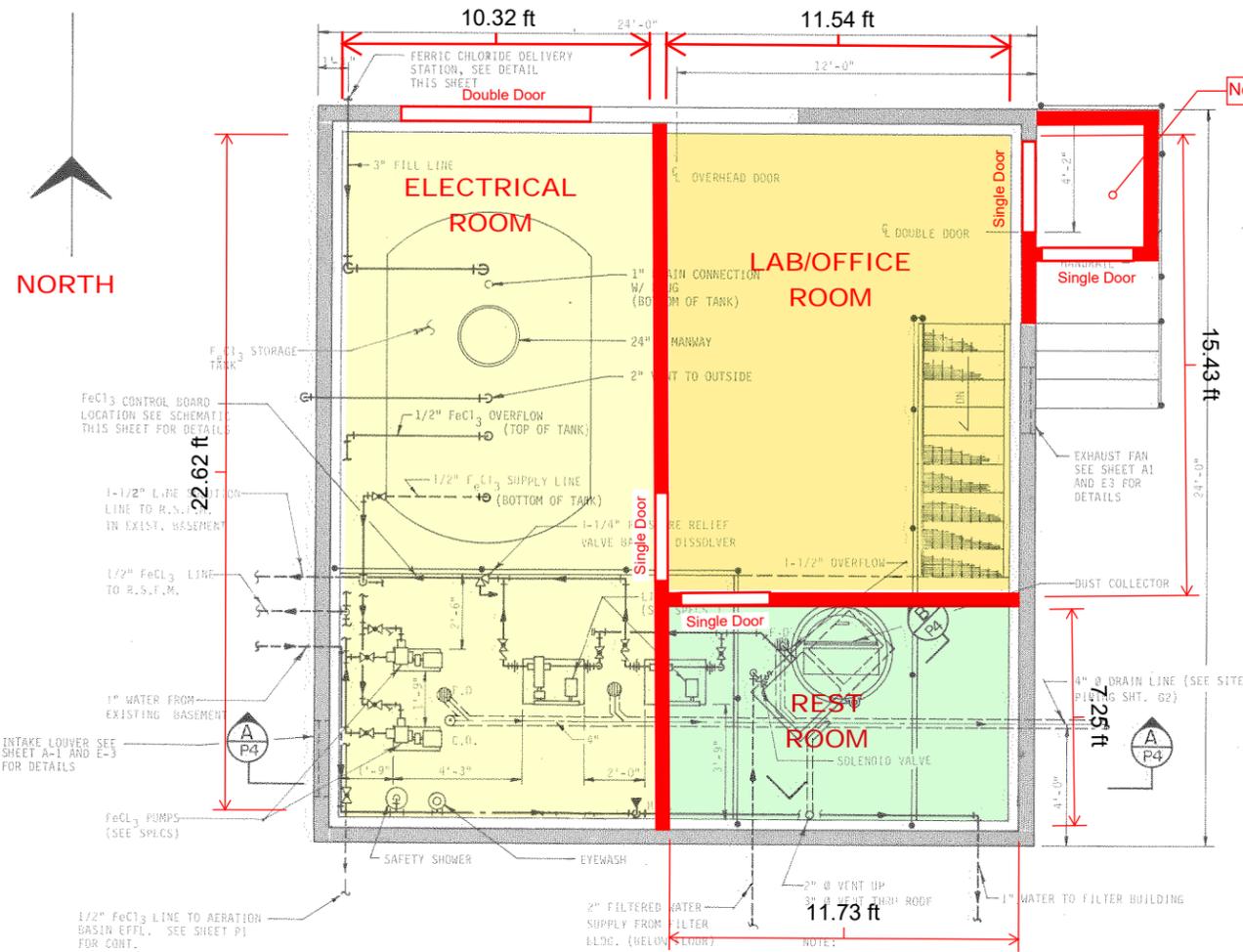
- Indicates existing Control Building to be demolished.
- Indicates existing structures to be converted to Aerobic Digesters
- Indicates existing Chemical Building to be converted to a new Lab/Control Building (and to house SCADA + the MCC)
- Indicates existing Filter Building to be converted to a new Chemical & Blower Building
- Indicates new crushed stone paving

SCALE: 1" = 20'-0"

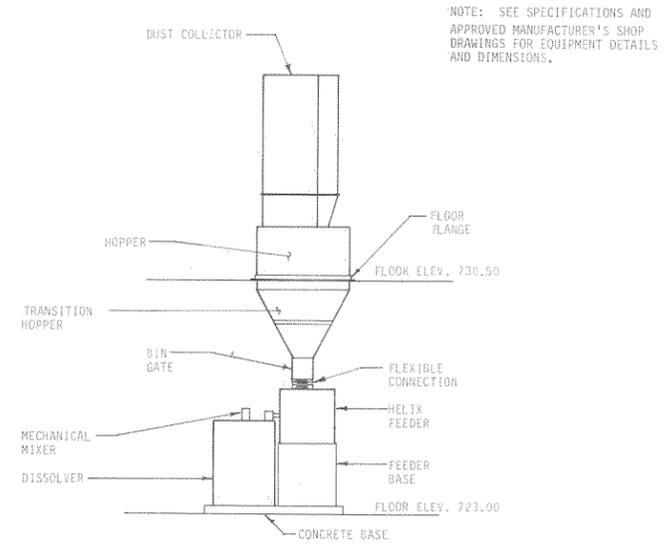
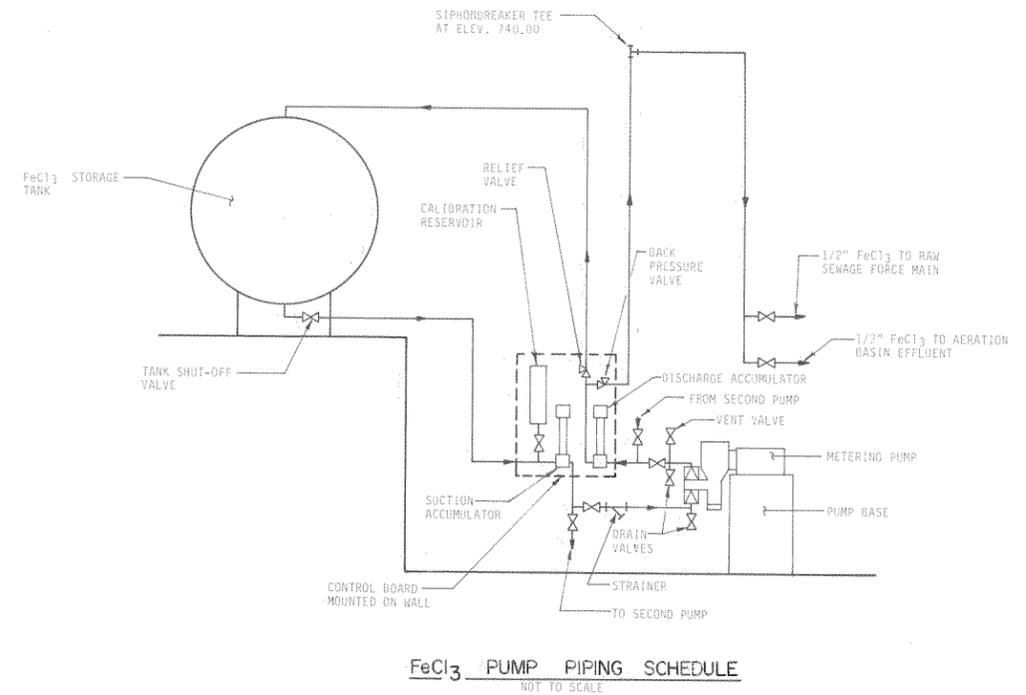
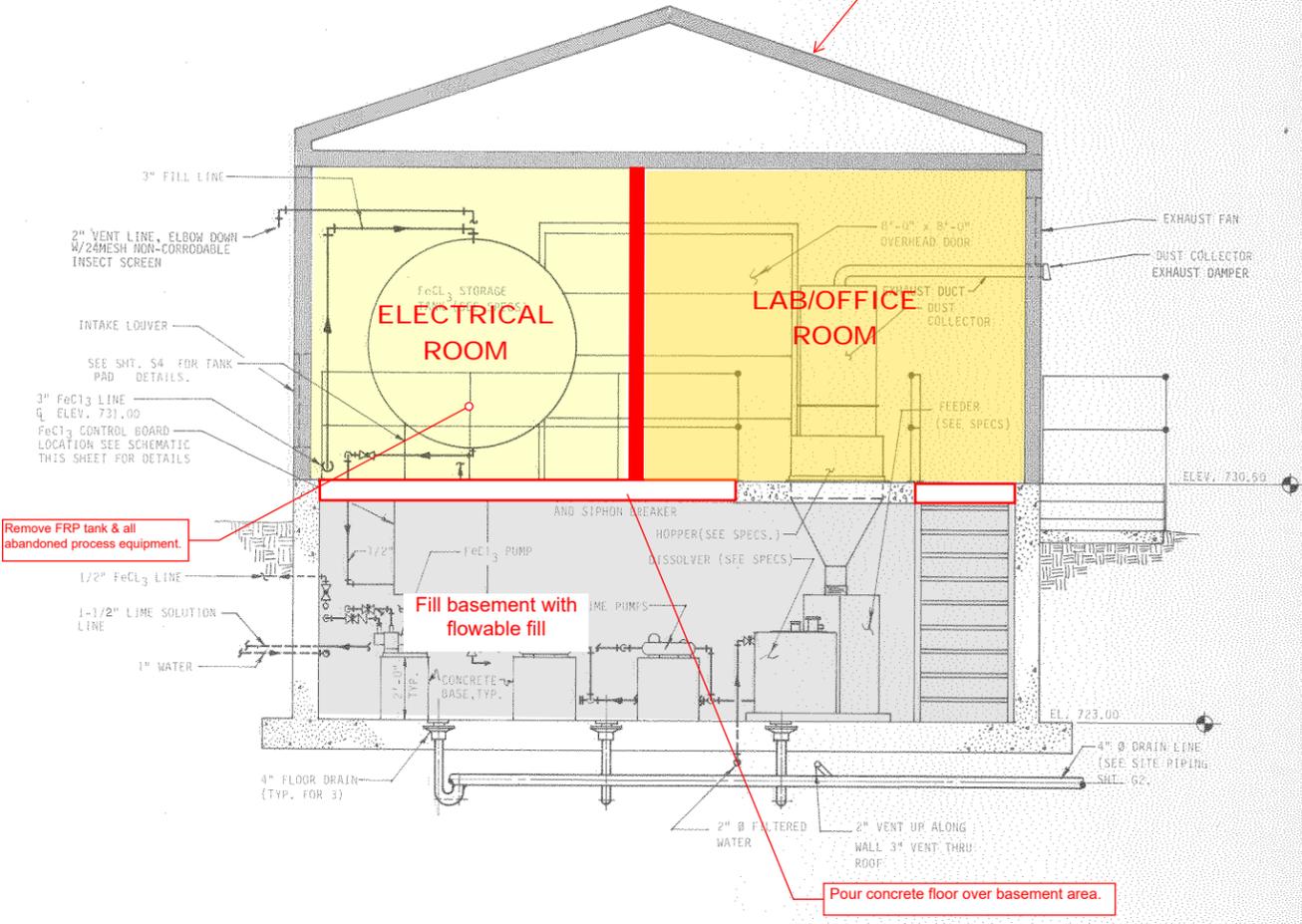
**Figure 26**  
Wastewater Treatment Plant -  
Site Modifications Plan

NOTE:  
SEE STRUCTURAL SHEET S3 & S7  
FOR DETAILS OF STAIRS, HANDRAIL  
AND GRATING.

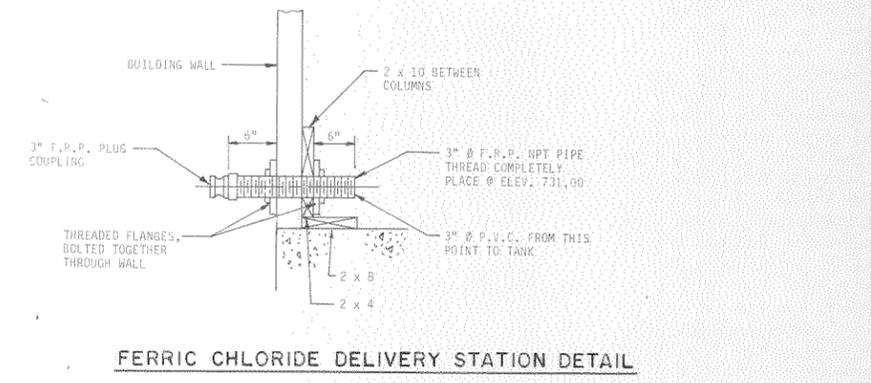
Remove deteriorated metal clad pole barn & replace with higher quality metal building.



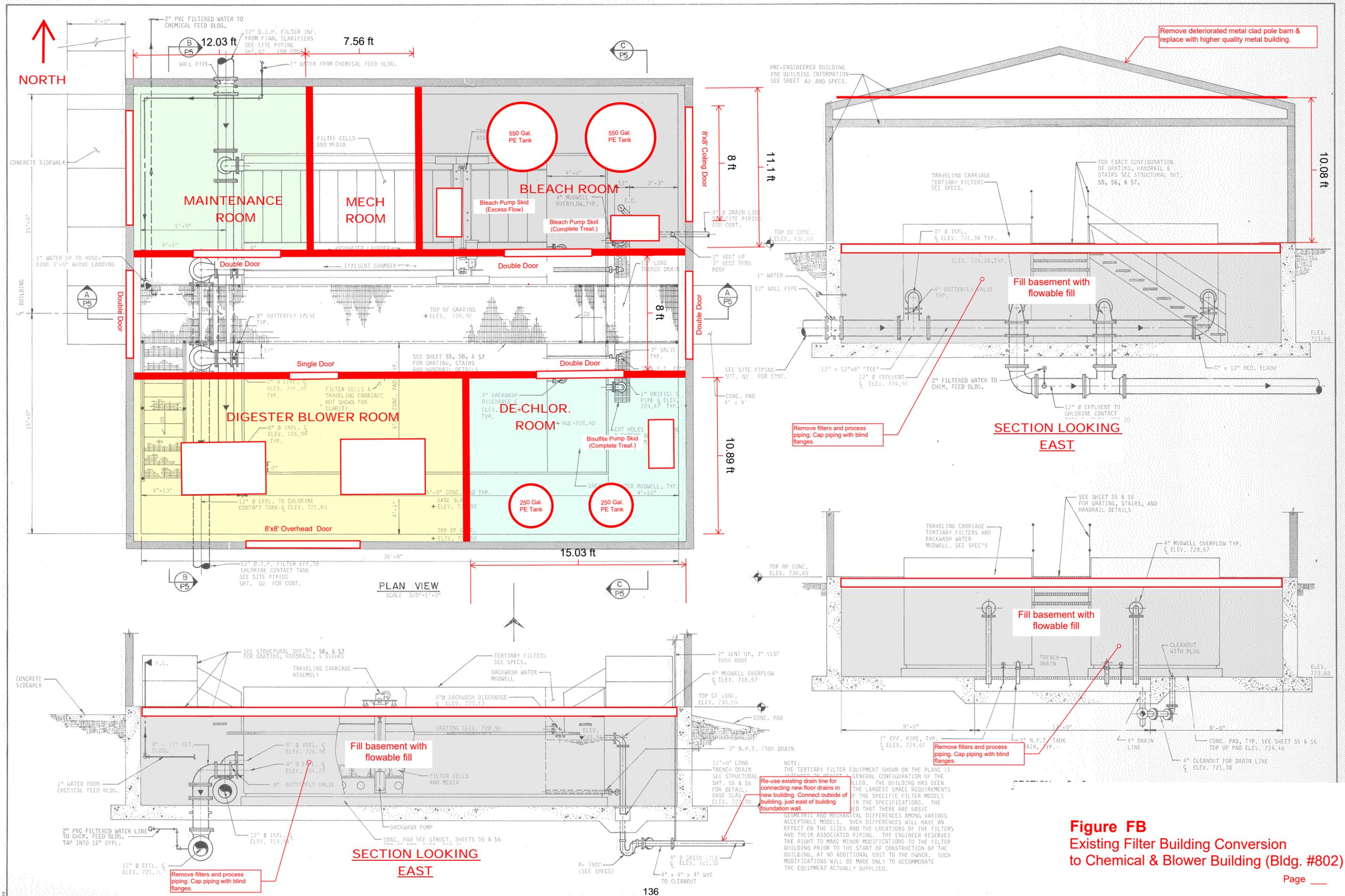
NOTE:  
THE SAFETY SHOWER SHALL BE PROVIDED BY FISHER SCIENTIFIC CO., NO. 91-583 OR APPROVED EQUAL. THE EYEWASH SHALL BE PROVIDED BY FISHER SCIENTIFIC CO., NO. 91-573 OR APPROVED EQUAL.



NOTE: SEE SPECIFICATIONS AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR EQUIPMENT DETAILS AND DIMENSIONS.



**Figure CB**  
Existing Chemical Building Conversion to Lab & Electrical Building (Bldg. #801)



Remove deteriorated metal clad pole barn & replace with higher quality metal building.

Fill basement with flowable fill

SECTION LOOKING EAST

Remove filters and process piping. Cap piping with blind flanges.

Fill basement with flowable fill

**Figure FB**  
Existing Filter Building Conversion to Chemical & Blower Building (Bldg. #802)

NOTE: THE TERTIARY FILTER EQUIPMENT SHOWN ON THE PLANS IS INTENDED TO BE REPLACED BY EQUIPMENT OF A DIFFERENT GENERAL CONFIGURATION OF THE FILTERS. THE BUILDING HAS BEEN DESIGNED TO ACCOMMODATE THE LARGEST SPACE REQUIREMENTS OF THE SPECIFIC FILTER MODELS IN THE SPECIFICATIONS. THE ENGINEER RESERVES THE RIGHT TO MAKE MINOR MODIFICATIONS TO THE FILTER BUILDING PRIOR TO THE START OF CONSTRUCTION OF THE BUILDING, AT NO ADDITIONAL COST TO THE OWNER. SUCH MODIFICATIONS WILL BE MADE ONLY TO ACCOMMODATE THE EQUIPMENT ACTUALLY SUPPLIED.

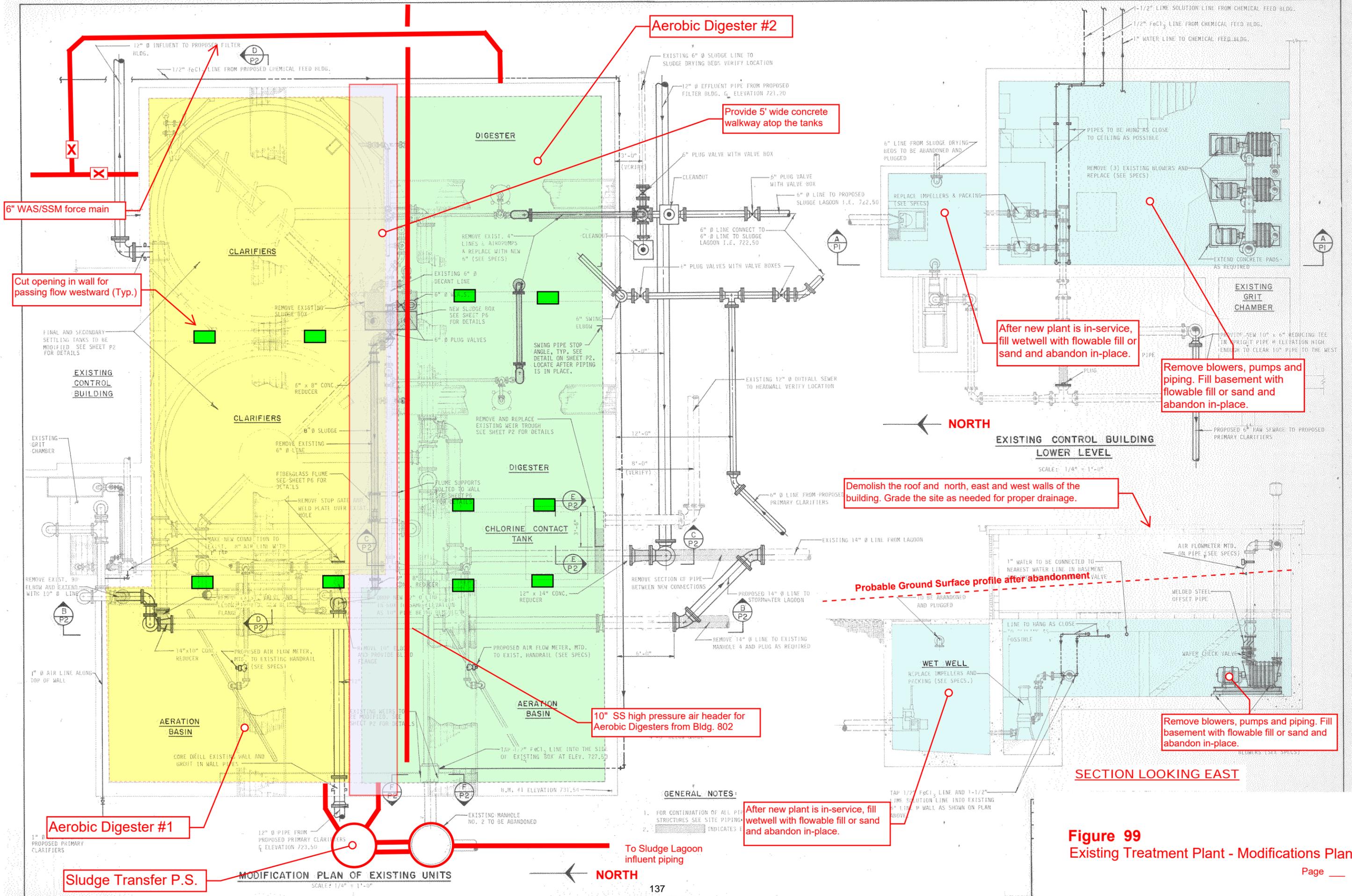
Re-use existing drain line for connecting new floor drains in new building. Connect outside of building, just east of building foundation wall.

Remove filters and process piping. Cap piping with blind flanges.

Remove filters and process piping. Cap piping with blind flanges.

SECTION LOOKING EAST

PLAN VIEW  
SCALE 3/8"=1'-0"



**Aerobic Digester #2**

Provide 5' wide concrete walkway atop the tanks

6" WAS/SSM force main

Cut opening in wall for passing flow westward (Typ.)

After new plant is in-service, fill wetwell with flowable fill or sand and abandon in-place.

Remove blowers, pumps and piping. Fill basement with flowable fill or sand and abandon in-place.

Demolish the roof and north, east and west walls of the building. Grade the site as needed for proper drainage.

10" SS high pressure air header for Aerobic Digesters from Bldg. 802

Remove blowers, pumps and piping. Fill basement with flowable fill or sand and abandon in-place.

**Aerobic Digester #1**

**Sludge Transfer P.S.**

**GENERAL NOTES:**

1. FOR CONTINUATION OF ALL PIPING STRUCTURES SEE SITE PIPING.
2. [Symbol] INDICATES [Symbol]

After new plant is in-service, fill wetwell with flowable fill or sand and abandon in-place.

**Figure 99**  
Existing Treatment Plant - Modifications Plan

Village of Tolono, Illinois  
Wastewater System Project Plan  
Project "A" - WWTF Upgrade with Oxidation Ditch Treatment  
PROJECT COST OPINION  
15-Jun-20

Structure	Name	Legal + Admin	Design	Bid + Const. Engr.	Const	Other **	Contingency	TOTAL
110	FINE SCREEN STRUCTURE	\$0	\$24,000	\$26,000	\$317,000	\$3,000	\$32,000	\$402,000
120	RAW INFLUENT PUMP STATION	\$0	\$37,000	\$40,000	\$480,000	\$3,000	\$48,000	\$608,000
130	EXCESS FLOW PUMP STATION	\$0	\$43,000	\$46,000	\$553,000	\$0	\$55,000	\$697,000
210	OXIDATION DITCH	\$0	\$134,000	\$144,000	\$1,742,000	\$8,000	\$174,000	\$2,202,000
231-232	SECONDARY CLARIFIERS	\$0	\$112,000	\$120,000	\$1,452,000	\$4,000	\$145,000	\$1,833,000
240+241	RETURN ACTIVATED SLUDGE (RAS) PUMP STATION	\$0	\$27,000	\$29,000	\$347,000	\$2,000	\$35,000	\$440,000
251	WASTE ACTIVATED SLUDGE (WAS) FLOW METER VAULT	\$0	\$2,000	\$3,000	\$32,000	\$0	\$3,000	\$40,000
271+272	CHLORINE CONTACT TANKS	\$0	\$8,000	\$9,000	\$106,000	\$0	\$11,000	\$134,000
280	CASCADE AERATOR	\$0	\$6,000	\$6,000	\$72,000	\$0	\$7,000	\$91,000
701+702	AEROBIC DIGESTERS	\$0	\$22,000	\$23,000	\$280,000	\$0	\$28,000	\$353,000
710	SLUDGE TRANSFER PUMP STATION	\$0	\$14,000	\$15,000	\$185,000	\$0	\$19,000	\$233,000
801	CONVERT OLD CHEMICAL BLDG. TO LAB & CONTROL BUILDING	\$0	\$9,000	\$10,000	\$118,000	\$0	\$12,000	\$149,000
802	CONVERT FILTER BLDG. TO CHEM & BLOWER BUILDING	\$0	\$42,000	\$45,000	\$540,000	\$0	\$54,000	\$681,000
803	DEMOLISH OLD CONTROL BUILDING	\$0	\$7,000	\$7,000	\$90,000	\$3,000	\$9,000	\$116,000
881	REMOVALS AT OLD PRIMARY CLARIFIERS	\$0	\$2,000	\$2,000	\$23,000	\$0	\$2,000	\$29,000
900	SITE ELECTRICAL & SCADA UPGRADES	\$0	\$55,000	\$58,000	\$708,000	\$0	\$71,000	\$892,000
980	SITE CIVIL UPGRADES	\$0	\$22,000	\$23,000	\$280,000	\$0	\$28,000	\$353,000
TOTALS =		\$0	\$566,000	\$606,000	\$7,325,000	\$23,000	\$733,000	\$9,253,000

\*\* Other Costs include soil borings & asbestos/lead paint surveys.

## *Insert copies of Construction Permits here.*

Construction permits that will need to be obtained include:

- 1) IEPA Water Pollution Control Construction Permit for WWTP Improvements
- 2) IEPA Notice of Intent for General Permit to Discharge Storm Water Associated with Construction Site Activities
- 3) Modified Illinois NPDES Discharge Permit

<b>Date</b>	<b>Task</b>
06/30/20	IEPA Project Plan for Wastewater System Improvements submitted for review
06/30/20	Rebuild Illinois Public Infrastructure Grant Application Submittal
08/30/20	Notice of Grant Awards for Rebuild Illinois Public Infrastructure Grants
09/15/20	Execute contract for Engineering Services
11/01/20	Finalization of Grant Award for Rebuild Illinois Public Infrastructure Grants
11/01/20	Land surveying complete
01/01/21	IEPA Project Plan Approval
01/15/21	30% Design Review with the Village
03/15/21	60% Design Review with the Village
05/01/21	90% Design Review with the Village
05/15/21	All permits to be submitted for review on or before this date
08/15/21	All permits to be issued on or before this date
09/01/21	Advertisement for Bids
09/29/21	Bid Opening
10/08/21	IEPA Loan Closing
10/15/21	Bid Award / Notice of Award
11/01/21	Contract Execution / Notice to Proceed
01/01/22	Begin Construction
11/01/22	Substantial Completion
12/31/22	Final Completion

***Insert Proof of Land Ownership here.***

The WWTP is located in Section 35, Township 18 North, Range 8 East, in the 3rd Principal Meridian.  
**Trustee's Deeds and Warranty Deeds are attached below as proof of land ownership.**



8 0 2 2 8 6 6  
Tx:4010541

3N

**WARRANTY DEED**

530002973

**2012R11585**

REC ON: 05/10/2012 4:28:21 PM

CHAMPAIGN COUNTY

**BARBARA A. FRASCA, RECORDER**

REC FEE: 25.00

PAGES 3

PLAT ACT: 0PLAT PAGE:

**(Recorder's Stamp)**

**THE GRANTORS, MARK F. MEHARRY and BRIAN F. MEHARRY, County of Champaign, State of Illinois, for and in consideration of ten dollars (\$10.00) and other good and valuable consideration, in hand paid, the receipt of which is hereby acknowledged,**

**CONVEYS AND WARRANTS to VILLAGES OF TOLONO, at Illinois Municipal Corporation, all interest in the following described real estate:**

See attached Exhibit "A"

- Subject to:
- (1) Real estate taxes for the year 2011 and thereafter;
  - (2) Covenants, conditions, restrictions and easements apparent or of record;
  - (3) Applicable zoning laws and ordinances;
  - (4) Grantors retain an easement to allow construction of an underground storm sewer easement over the south 15 feet of the foregoing tract, so long as Grantee constructs a detention basin on the above property on or before December 20, 2017 (if no such construction occurs, this easement shall no longer exist.) Said easement shall be used to access the referenced detention basin and shall be sized to provide storm water detention volume sufficient to allow development of the balance of the original 20 acre parcel for R-2 Zone Residential, or approximately 0.208 acre-foot per acre of development or 1.56 acre-feet if 7.51 acres are developed.

situated in the County of Champaign, in the State of Illinois, hereby releasing and waiving all rights under and by virtue of the Homestead Exemption Laws of said State.

Dated this 9<sup>th</sup> day of May, 2012.

  
MARK F. MEHARRY

  
BRIAN F. MEHARRY

STATE OF ILLINOIS )  
 )SS.  
COUNTY OF CHAMPAIGN )

I, the undersigned, a Notary Public in and for the County and State aforesaid, do hereby certify that **MARK F. MEHARRY** personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he signed, sealed and delivered said instrument as his free and voluntary act, for the uses and purposes therein set forth, including the release and waiver of the right of the homestead.

Given under my hand and official seal this 9<sup>th</sup> day of May, 2012.

Blake Weaver  
Notary Public

STATE OF ILLINOIS )  
 )SS.  
COUNTY OF CHAMPAIGN )



I, the undersigned, a Notary Public in and for the County and State aforesaid, do hereby certify that **BRIAN F. MEHARRY** personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he signed, sealed and delivered said instrument as his free and voluntary act, for the uses and purposes therein set forth, including the release and waiver of the right of the homestead.

Given under my hand and official seal this 9<sup>th</sup> day of May, 2012.

Blake Weaver  
Notary Public

Exempt under provisions of Paragraph b  
Section 4 Real Estate Transfer Tax Act.

5/9/2012 Blake Weaver  
Date Buyer, Seller or Representative



Prepared by:  
Blake Weaver  
Novak Weaver Solberg  
130 W. Main  
Urbana, IL 61801  
(217) 384-0000

Send tax bill to:  
Village of Tolono  
P.O. Box 667  
Tolono, IL 61880

Return to:  
Marc Miller  
Miller & Hendren, LLP  
30 E. Main, Suite 200  
Champaign, IL 61824

**STREET ADDRESS:**

**CITY:** Tolono

**COUNTY:** Champaign

**TAX NUMBER:** 29-26-35-200-021

**LEGAL DESCRIPTION:**

That part of the Northeast Quarter of the Northeast Quarter of Section 35, Township 18 North, Range 8 East of the Third Principal Meridian, in Champaign County, Illinois, described as follows:

Beginning at a point 4.42 chains South of the Northeast corner of Section 35, Township 18 North, Range 8 East of the Third Principal Meridian, thence West 14.18 chains to a stone which has been set in the center of the Public Highway 2.96 chains Southwesterly along the center line of said Highway from the stone located in the center of said Highway approximately 96 links West of the Southwest corner of the Catholic Church referred to in a Deed from John Louks and Sarah B. Louks to John L. Spaulding; thence Southwesterly along the center of said Public Highway 13.49 chains; thence East 15.54 chains to the Section line; thence North along the Section line to the place of beginning, in Champaign County, Illinois;

EXCEPT that parcel described as: Commencing at the Northeast corner of the Northeast Quarter of Section 35, Township 18 North, Range 8 East of the Third Principal Meridian, in Champaign County, Illinois, proceed South  $00^{\circ}37'53''$  East along the East line of said Northeast Quarter, 291.72 feet (4.42 chains) to the true point of beginning; thence continue South  $00^{\circ}37'53''$  East along said East line, 144.26 feet; thence North  $89^{\circ}19'34''$  West, 303.28 feet; thence North  $00^{\circ}22'50''$  East, 144.26 feet to the South line of a tract of land owned by Saint Patrick Church; thence South  $89^{\circ}19'10''$  East along said South line, 300.73 feet to the true point of beginning, in Champaign County, Illinois.

ALSO EXCEPT that parcel described as: Commencing of the Public Highway 2.96 chains Southwesterly along the center line of said Highway from the stone located in the center of said Highway approximately 96 links West of the Southwest corner of the Catholic Church referred to in a Deed from John Louks and Sarah B. Louks to John L. Spaulding; said point also being the Southwest Corner of Southview I Subdivision, Champaign County, Illinois, as recorded in Plat Book "CC," page 229 in the Champaign County Recorder's Office and the True Point of Beginning; thence South  $05^{\circ}18'21''$  West along said center of the Public Highway, 581.73 feet; thence South  $05^{\circ}50'32''$  West along said center of the Public Highway, 187.47 feet; thence South  $05^{\circ}50'52''$  West along said center of the Public Highway, 117.56 feet; thence South  $89^{\circ}07'05''$  East, 443.19 feet; thence North  $03^{\circ}48'47''$  East, 284.10 feet; thence North  $03^{\circ}10'36''$  East, 601.36 feet to a point on the south line of said Southview I Subdivision; thence North  $89^{\circ}13'06''$  West, 410.73 feet to the True Point of Beginning, in Champaign County, Illinois.

600  
200  
800

The above space for recorder's use only

THIS INDENTURE, made this 29th day of July, 1988, between Paul D. Meharry and Jean F. Meharry, as Trustees under the provisions of a deed or deeds in trust, duly recorded and delivered to said trustee in pursuance of a trust agreement dated the 19th day of September, 1980, and known as Meharry Farm Trust, party of the first part, and Village of Tolono, Illinois, a Municipal Corporation

WITNESSETH, That said party of the first part, in consideration of the sum of Two Thousand & no/100----- DOLLARS. and other good and valuable considerations in hand paid, does hereby grant, sell and convey unto said party of the second part, the following described real estate, situated in Champaign County, Illinois, to-wit:

PART OF THE EAST 1/2 OF THE SOUTH EAST 1/4 OF SECTION 35, TOWNSHIP 18 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTH EAST CORNER OF THE NORTH EAST 1/4 OF SECTION 35, TOWNSHIP 18 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, THENCE NORTH 0 DEGREES, 00 MINUTES, 00 SECONDS EAST 1047.64 FEET ON THE EAST LINE OF SAID SECTION 35, THENCE NORTH 88 DEGREES, 34 MINUTES, 10 SECONDS WEST 417.00 FEET; THENCE NORTH 0 DEGREES, 00 MINUTES, 00 SECONDS EAST 387.00 FEET TO THE TRUE POINT OF BEGINNING, THENCE NORTH 88 DEGREES, 34 MINUTES, 10 SECONDS WEST 100 FEET, THENCE DUE SOUTH 100 FEET, THENCE DUE EAST 100 FEET, THENCE DUE NORTH 100 FEET TO THE POINT OF BEGINNING, SITUATED IN CHAMPAIGN COUNTY, ILLINOIS.

CHAMPAIGN COUNTY

SEP 13 1988

Subject to 1988 General Taxes

STAMPS - 0 -

together with the tenements and appurtenances thereunto belonging. TO HAVE AND TO HOLD the same unto said party of the second part, and to the proper use, benefit and behoof forever of said party of the second part

This deed is executed pursuant to and in the exercise of the power and authority granted to and vested in said trustee by the terms of said deed or deeds in trust delivered to said trustee in pursuance of the trust agreement above mentioned. This deed is made subject to the lien of every trust deed or mortgage (if any there be) of record in said county given to secure the payment of money, and remaining unreleased at the date of the delivery hereof.

IN WITNESS WHEREOF, said party of the first part has caused

X Paul D. Meharry  
Paul D. Meharry  
Jean F. Meharry  
Jean F. Meharry

As Trustees as aforesaid

COUNTY OF Ill. STATE OF ILLINOIS

I, the undersigned, a Notary Public in and for said County, in the state aforesaid, DO HEREBY CERTIFY, THAT Paul D. Meharry and Jean F. Meharry, Trustees under Trust Agreement dated Sept. 19, 1980 and known as Meharry Farm Trust, personally known to me to be the same persons whose names are subscribed to the foregoing instrument as such trustees appeared before me this day in person and acknowledged that they signed and delivered the said instrument as their own free and voluntary act, and as the free and voluntary act of said Trustees for the uses and purposes therein set forth:

OFFICIAL SEAL ROBERT W. FINPROCK NOTARY PUBLIC, STATE OF ILLINOIS MY COMMISSION EXPIRES 8-16-91

Given under my hand and Notarial Seal this 29th day of July 1988

Robert W. Finprock  
Notary Public

NAME | THIS DOCUMENT WAS PREPARED BY & RETURN TO: Harold A. Miller, Atty. Miller & Hendren 30 Main PO Box 987 Champaign, Il 61820

FOR INFORMATION ONLY INSERT STREET ADDRESS OF ABOVE DESCRIBED PROPERTY HERE

Send tax bill to: Village Clerk Village of Tolono Village Town Hall Tolono, Illinois 61880

The within transfer is exempt under provisions of Paragraph B, Section 4, Real Estate Transfer Tax Act, July 1988.

Date July 29, 1988

Signature [Signature]

This space for affixing riders and revenue stamps

Document Number

State of Illinois )  
 )  
County of Champaign )  
 )

Exemption from Plat Act

Paul D. Meharry and Jean F. Meharry being first sworn state:

- 1) They were the owners as Trustees of the tract described on the attached deed conveying said property to the Village of Tolono, Illinois.
- 2) Said conveyance is exempt from the Plat Act under Paragraph 3 (transfer to the owner of adjacent land) and under paragraph 6 (transfer for public use), as set forth in Article 1, Section 1 (b) of chapter 109 of the Illinois Revised Statutes.

*Paul D. Meharry*  
\_\_\_\_\_  
Paul D. Meharry



*Jean F. Meharry*  
\_\_\_\_\_  
Jean F. Meharry

Subscribed and Sworn to  
before me this 29<sup>th</sup> day of  
July, 1988.

*Robert W. Finfrock*  
\_\_\_\_\_  
Notary Public



60776 287  
194

88R19959

DOC # \_\_\_\_\_  
CHAMPAIGN COUNTY, ILL.  
1603 --- 0139

'88 SEP 13 PM 3 07

*Naomi Q. Jarobas*

RECORDER

WARRANTY DEED

BOOK 971 PAGE 399

Document No.

1323

THE GRANTORS, CHESTER W. FACKLER and LUCILLE FACKLER, of Belmont, California, individually and as husband and wife, and PAUL H. FACKLER and CATHERINE FACKLER of Livermore, California, individually and as husband and wife, and RICHARD D. FACKLER and WILMA FACKLER, individually and as husband and wife,

For Recorder's Certificate Only

71R16180  
F. 12/8/71

of Champaign, and State of Illinois for and in consideration of ONE DOLLAR (\$1.00) and other good and valuable consideration in hand paid, CONVEY and WARRANT to VILLAGE OF TOLONO, a municipal corporation,

of the County of Champaign, and State of Illinois, the following described Real Estate:

Commencing at the Southeast corner of the Northeast Quarter (NE 1/4) of Section 35, T 18 N, R 8 E, Third P.M.; thence N 0°-00'-00" E 1047.64 feet on the East line of said Section 35 to the true point of beginning; thence N 88°-34'-10" W 417.00 feet; thence N 0°-00'-00"E 387.00 feet; thence N 88°-34'-10" W 575.92 feet to the East Right-of-Way line of the existing Public Road; thence N 6°-12'-14" E 30.10 feet on the East Right-of-Way line of said Public Road; thence S 88°-34'-10" E 990.45 feet to the East line of the Northeast Quarter (NE 1/4) of said Section 35; thence S 0°-00'-00" E 417.00 feet on the East line of the Northeast Quarter (NE 1/4) of said Section 35 to the point of beginning, said tract containing 4.388 acres more or less.

situated in the County of Champaign, in the State of Illinois, hereby releasing and waiving all rights under and by virtue of the Homestead Exemption Laws of the State of Illinois.

Dated this 4th day of August, A. D. 1970. Chester W. Fackler (SEAL) Paul H. Fackler (SEAL) Lucille Fackler (SEAL) Catherine Fackler (SEAL) Richard D. Fackler (SEAL) Wilma Fackler (SEAL)

STATE OF ILLINOIS, } Champaign County, } ss.

I, the undersigned, a Notary Public in and for said County and State aforesaid, DO HEREBY CERTIFY, that RICHARD D. FACKLER and WILMA FACKLER, individually and as husband and wife,



personally known to me to be the same persons... whose names... subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that they signed, sealed and delivered the said instrument as their free and voluntary act, for the uses and purposes therein set forth, including the release and waiver of the right of homestead.

Given under my hand and Notarial Seal this 4th day of August, 1970. Notary Public

Send Tax Bill to Vill. of Tolono, a municipal corporation. Address c/o Village Clinic City and State Tolono, Illinois

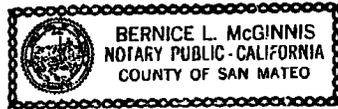
STATE OF CALIFORNIA  
COUNTY OF *San Mateo* } SS.

BOOK 971 Page 400



I, the undersigned, a Notary Public in and for said County and State aforesaid, DO HEREBY CERTIFY that CHESTER W. FACKLER and LUCILLE FACKLER, individually and as husband and wife, personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that they signed, sealed and delivered the said instrument as their free and voluntary act, for the uses and purposes therein set forth, including the release and waiver of the right of homestead.

Given under my hand and Notarial Seal this 11<sup>th</sup> day of August A. D. 1970.



My Commission Expires September 21, 1970

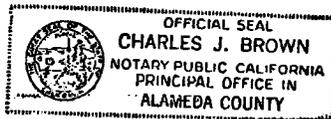
*Bernice L. McGinnis*  
Notary Public

STATE OF CALIFORNIA  
COUNTY OF } SS.

PLACE  
SEAL  
HERE

I, the undersigned, a Notary Public in and for said County and State aforesaid, DO HEREBY CERTIFY that PAUL H. FACKLER and CATHERINE FACKLER, individually and as husband and wife, personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that they signed, seal and delivered the said instrument as their free and voluntary act, for the uses and purposes therein set forth, including the release and waiver of the right of homestead.

Given under my hand and Notarial Seal this 11<sup>th</sup> day of August, A. D. 1970.



*Charles J. Brown*  
Notary Public

CHARLES J. BROWN - Notary Public - Cal.  
COM. EXP. SEPT. 7, 1971 - ALAMEDA CO.  
344 South J Street, Livermore, Calif. 94550

**PRIVATE PROPERTY EASEMENTS**

**Total Number of Easements Needed**                    0

**Total Number of Easements Signed**                    0

**Percentage of Easements Signed\***                    0

<b>Name</b>	<b>Address</b>	<b>Easement Signed</b>

***Insert copy of Water Purchase or Wastewater Treatment Agreement here.***

The WWTP discharges effluents to Hackett Branch under NPDES Permit No. IL0031453 (attached)



# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

BRUCE RAUNER, GOVERNOR

ALEC MESSINA, ACTING DIRECTOR

217/782-0610

November 18, 2016

Village of Tolono  
P.O. Box 667  
507 West Strong Street  
Tolono, Illinois 61880

Re: Village of Tolono  
Village of Tolono STP  
NPDES Permit No. IL0031453  
Final Permit

NOV 22 2016  
RECEIVED ENVIRONMENTAL  
PROTECTION AGENCY  
CHAMPAIGN

Gentlemen:

Attached is the final NPDES Permit for your discharge. The Permit as issued covers discharge limitations, monitoring, and reporting requirements. Failure to meet any portion of the Permit could result in civil and/or criminal penalties. The Illinois Environmental Protection Agency is ready and willing to assist you in interpreting any of the conditions of the Permit as they relate specifically to your discharge.

Pursuant to the Final NPDES Electronic Reporting Rule, all permittees must report DMRs electronically beginning no later than December 21, 2016. The Agency utilizes NetDMR, a web based application, which allows the submittal of electronic Discharge Monitoring Reports instead of paper Discharge Monitoring Reports (DMRs). More information regarding NetDMR can be found on the Agency website, <http://epa.state.il.us/water/net-dmr/index.html>. If your facility is not registered in the NetDMR program, a supply of preprinted paper DMR Forms will be sent to your facility during the interim period prior to your registration in the NetDMR program. Additional information and instructions will accompany the preprinted DMRs. Please see the attachment regarding the electronic reporting rule.

The attached Permit is effective as of the date indicated on the first page of the Permit. Until the effective date of any re-issued Permit, the limitations and conditions of the previously-issued Permit remain in full effect. You have the right to appeal any condition of the Permit to the Illinois Pollution Control Board within a 35 day period following the issuance date.

4302 N. Main St., Rockford, IL 61103 (815) 987-7760  
9511 Harrison St., Des Plaines, IL 60016 (847) 294-4000  
595 S. State, Elgin, IL 60123 (847) 608-3131  
2125 S. First St., Champaign, IL 61820 (217) 278-5800

2009 Mall St., Collinsville, IL 62234 (618) 346-5120  
412 SW Washington St., Suite D, Peoria, IL 61602 (309) 671-3022  
2309 W. Main St., Suite 116, Marion, IL 62959 (618) 993-7200  
100 W. Randolph, Suite 10-300, Chicago, IL 60601

Page 2

Should you have questions concerning the Permit, please contact Rong-Juan Yang at 217/782-0610.

Sincerely,

A handwritten signature in black ink that reads "Alan Keller". The signature is written in a cursive, flowing style.

Alan Keller, P.E.  
Manager, Permit Section  
Division of Water Pollution Control

SAK:RJY:16090801.daa

Attachment: Final Permit

cc: Records  
Compliance Assurance Section  
Champaign Region  
Billing  
Farnsworth Group, Inc.

NPDES Permit No. IL0031453

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Reissued (NPDES) Permit

Expiration Date: November 30, 2021

Issue Date: November 18, 2016  
Effective Date: December 1, 2016

Name and Address of Permittee:

Village of Tolono  
507 West Strong Street  
Tolono, Illinois 61880

Facility Name and Address:

Village of Tolono STP  
South Bourne Street  
Tolono, Illinois 61880  
(Champaign County)

Receiving Waters: Hackett Branch

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of the Ill. Adm. Code, Subtitle C, Chapter I, and the Clean Water Act (CWA), the above-named Permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the Effluent Limitations, Monitoring, and Reporting requirements; Special Conditions and Attachment H Standard Conditions attached herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the Permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.



Alan Keller, P.E.  
Manager, Permit Section  
Division of Water Pollution Control

SAK:RJV:16090801.daa

NPDES Permit No. IL0031453

Effluent Limitations, Monitoring, and Reporting

FINAL

Discharge Number(s) and Name(s): 001 STP Outfall

Load limits computed based on a design average flow (DAF) of 0.235 MGD (design maximum flow (DMF) of 0.588 MGD).

From the effective date of this Permit until the expiration date, the effluent of the above discharge(s) shall be monitored and limited at all times as follows:

<u>Parameter</u>	<u>LOAD LIMITS lbs/day</u>			<u>CONCENTRATION LIMITS mg/L</u>			<u>Sample Frequency</u>	<u>Sample Type</u>	
	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum</u>			
Flow (MGD)							Continuous		
CBOD <sub>5</sub> *******	20 (49)		39 (98)	10		20	2 Days/Week	Composite	
Suspended Solids****	24 (59)		47 (118)	12		24	2 Days/Week	Composite	
pH	Shall be in the range of 6 to 9 Standard Units							2 Days/Week	Grab
Fecal Coliform	Monitor only (May through October)							1 Day/Month	Grab
Total Phosphorus (as P)	Monitor Only							1 Day/Month	Composite
Chlorine Residual						0.05	***	Grab	
Ammonia Nitrogen:									
As (N)									
April.-Oct.	2.9 (7.4)		5.9 (15)	1.5		3.0	2 Days/Week	Composite	
Nov.-Feb.	7.8 (20)		9.2 (23)	4.0		4.7	2 Days/Week	Composite	
March	3.1 (7.9)	7.8 (20)	14 (34)	1.6	4.0	6.9	2 Days/Week	Composite	
Dissolved Oxygen				Monthly Average not less than	Weekly Average not less than	Daily Minimum			
March-July				N.A.	6.0	5.0	2 Days/Week	Grab	
August-February				5.5	4.0	3.5	2 Days/Week	Grab	

\*Load limits based on design maximum flow shall apply only when flow exceeds design average flow.

\*\*Carbonaceous BOD<sub>5</sub> (CBOD<sub>5</sub>) testing shall be in accordance with 40 CFR 136.

\*\*\*See Special Condition 10.

\*\*\*\*BOD<sub>5</sub> and Suspended Solids (85% removal required): In accordance with 40 CFR 133, the 30-day average percent removal shall not be less than 85 percent. The percent removal need not be reported to the IEPA on DMRs but influent and effluent data must be available, as required elsewhere in this Permit, for IEPA inspection and review. For measuring compliance with this requirement, 5 mg/L shall be added to the effluent CBOD<sub>5</sub> concentration to determine the effluent BOD<sub>5</sub> concentration. Percent removal is a percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of the raw wastewater influent concentrations to the facility and the 30-day average values of the effluent pollutant concentrations for a given time period.

Flow shall be reported on the Discharge Monitoring Report (DMR) as monthly average and daily maximum.

Fecal Coliform shall be reported on the DMR as a daily maximum value.

pH shall be reported on the DMR as minimum and maximum value.

Chlorine Residual shall be reported on the DMR as daily maximum value.

Dissolved oxygen shall be reported on the DMR as a minimum value.

Total Phosphorus shall be reported on the DMR as a daily maximum value.

## NPDES Permit No. IL0031453

Effluent Limitations, Monitoring, and Reporting

## FINAL

Discharge Number(s) and Name(s): 002 Excess Flow Outfall (flows in excess of 408 gpm)

These flow facilities shall not be utilized until the main treatment facility is receiving its design maximum flow (DMF)\* (flow in excess of 408 gpm)

From the effective date of this Permit until the expiration date, the effluent of the above discharge(s) shall be monitored and limited at all times as follows:

<u>Parameter</u>	<u>CONCENTRATION LIMITS (mg/L)</u>		<u>Sample Frequency</u>	<u>Sample Type</u>
	<u>Monthly Average</u>	<u>Weekly Average</u>		
Total Flow (MG)			Daily When Discharging	Continuous
BOD <sub>5</sub> **	30	45	Daily When Discharging	Grab
Suspended Solids**	30	45	Daily When Discharging	Grab
Fecal Coliform	Daily Maximum shall not exceed 400 per 100 mL		Daily When Discharging	Grab
pH	Shall be in the range of 6 to 9 Standard Units		Daily When Discharging	Grab
Chlorine Residual	0.75		Daily When Discharging	Grab
Ammonia Nitrogen (as N)***	Monitor only		Daily When Discharging	Grab
Total Phosphorus (as P)	Monitor only		Daily When Discharging	Grab
Dissolved Oxygen	Monitor only		Daily When Discharging	Grab

\*An explanation shall be provided in comments section of the DMR should these facilities be used when the main treatment facility is not receiving Design Maximum Flow (DMF). The explanation shall identify the reasons the main facility is at a diminished treatment capacity. Additionally, the Permittee shall comply with the provisions of Special Condition 7.

\*\*BOD<sub>5</sub> and Suspended Solids (85% removal required): In accordance with 40 CFR 133, the 30-day average percent removal shall not be less than 85 percent. The percent removal need not be reported to the IEPA on DMRs but influent and effluent data must be available, as required elsewhere in this Permit, for IEPA inspection and review. For measuring compliance with this requirement, 5 mg/L shall be added to the effluent CBOD<sub>5</sub> concentration to determine the effluent BOD<sub>5</sub> concentration. Percent removal is a percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of the raw wastewater influent concentrations to the facility and the 30-day average values of the effluent pollutant concentrations for a given time period.

\*\*\* See Special Condition 14.

The duration of each 002 discharge and rainfall event (i.e., start and ending time) including rainfall intensity shall be provided in the comment section of the DMR.

Total flow in million gallons shall be reported on the Discharge Monitoring Report (DMR) in the quantity maximum column. The main treatment facility flows at the time that 002 Excess Flow Facilities are first utilized shall be reported in the comment section of the DMR in gallons per minute (gpm).

Fecal Coliform shall be reported on the DMR as daily maximum value.

BOD<sub>5</sub> and Suspended Solids shall be reported on the DMR as a monthly and weekly average value.

pH shall be reported on the DMR as a minimum and a maximum value.

Chlorine Residual shall be reported on the DMR as a monthly and weekly average value.

Ammonia Nitrogen shall be reported on the DMR as a daily maximum value.

Total Phosphorus shall be reported on the DMR as a daily maximum value.

Dissolved Oxygen shall be reported on the DMR as a minimum value.

NPDES Permit No. IL0031453

Influent Monitoring, and Reporting

The influent to the plant shall be monitored as follows:

<u>Parameter</u>	<u>Sample Frequency</u>	<u>Sample Type</u>
Flow (MGD)	Continuous	
BOD <sub>5</sub>	2 Days/Week and Daily When 002 is Discharging	Composite
Suspended Solids	2 Days/Week and Daily When 002 is Discharging	Composite

Influent samples shall be taken at a point representative of the influent.

Flow (MGD) shall be reported on the Discharge Monitoring Report (DMR) as monthly average and daily maximum.

BOD<sub>5</sub> and Suspended Solids shall be reported on the DMR as a monthly average concentration.

Special Conditions

SPECIAL CONDITION 1. This Permit may be modified to include different final effluent limitations or requirements which are consistent with applicable laws and regulations. The IEPA will public notice the permit modification.

SPECIAL CONDITION 2. The use or operation of this facility shall be by or under the supervision of a Certified Class 2 operator.

SPECIAL CONDITION 3. The IEPA may request in writing submittal of operational information in a specified form and at a required frequency at any time during the effective period of this Permit.

SPECIAL CONDITION 4. The IEPA may request more frequent monitoring by permit modification pursuant to 40 CFR § 122.63 and Without Public Notice.

SPECIAL CONDITION 5. The effluent, alone or in combination with other sources, shall not cause a violation of any applicable water quality standard outlined in 35 Ill. Adm. Code 302 and 303.

SPECIAL CONDITION 6. The Permittee shall record monitoring results on Discharge Monitoring Report (DMR) Forms using one such form for each outfall each month.

In the event that an outfall does not discharge during a monthly reporting period, the DMR Form shall be submitted with no discharge indicated.

The Permittee will be required to submit electronic DMRs (NetDMRs) instead of mailing paper DMRs to the IEPA beginning December 21, 2016. More information, including registration information for the NetDMR program, can be obtained on the IEPA website, <http://www.epa.state.il.us/water/net-dmr/index.html>.

The completed Discharge Monitoring Report forms shall be submitted to IEPA no later than the 25th day of the following month, unless otherwise specified by the permitting authority.

Permittees not using NetDMRs during the interim period before December 21, 2016 shall mail Discharge Monitoring Reports with an original signature to the IEPA at the following address:

Illinois Environmental Protection Agency  
Division of Water Pollution Control  
Attention: Compliance Assurance Section, Mail Code # 19  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

SPECIAL CONDITION 7. The provisions of 40 CFR Section 122.41(m) & (n) are incorporated herein by reference.

SPECIAL CONDITION 8. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

SPECIAL CONDITION 9. Consistent with permit modification procedures in 40 CFR 122.62 and 63, this Permit may be modified to include requirements for the Permittee on a continuing basis to evaluate and detail its efforts to effectively control sources of infiltration and inflow into the sewer system and to submit reports to the IEPA if necessary.

SPECIAL CONDITION 10. For Discharge No. 001, any use of chlorine to control slime growths, odors or as an operational control, etc. shall not exceed the limit of 0.05 mg/L (daily maximum) total residual chlorine in the effluent. Sampling is required on a daily grab basis during the chlorination process. Reporting shall be submitted on the DMR's on a monthly basis.

SPECIAL CONDITION 11. During January of each year the Permittee shall submit annual fiscal data regarding sewerage system operations to the Illinois Environmental Protection Agency/Division of Water Pollution Control/Compliance Assurance Section. The Permittee may use any fiscal year period provided the period ends within twelve (12) months of the submission date.

Submission shall be on forms provided by IEPA titled "Fiscal Report Form For NPDES Permittees".

SPECIAL CONDITION 12. The Permittee shall work towards the goals of achieving no discharges from sanitary sewer overflows or basement back-ups and ensuring that overflows or back-ups, when they do occur do not cause or contribute to violations of applicable standards or cause impairment in any adjacent receiving water. Overflows from sanitary sewers are expressly prohibited by this permit and by Ill. Adm. Code 306.304. In order to accomplish these goals of complying with this prohibition and mitigating the adverse impacts of any such overflows if they do occur, the Permittee shall (A) identify and report to IEPA all SSOs that do occur, and (B) develop, implement and submit to the IEPA a Capacity, Management, Operations, and Maintenance (CMOM) plan which includes an Asset

Special Conditions

Management strategy within 24 months of the effective date of this Permit or review and revise any existing plan accordingly. The Permittee shall modify the Plan to incorporate any comments that it receives from IEPA and shall implement the modified plan as soon as possible. The Permittee should work as appropriate, in consultation with affected authorities at the local, county, and/or state level to develop the plan components involving third party notification of overflow events. The Permittee may be required to construct additional sewage transport and/or treatment facilities in future permits or other enforceable documents should the implemented CMOM plan indicate that the Permittee's facilities are not capable of conveying and treating the flow for which they are designed.

The CMOM plan shall include the following elements:

**A. Measures and Activities:**

1. A complete map and system inventory for the collection system owned and operated by the Permittee;
2. Organizational structure; budgeting; training of personnel; legal authorities; schedules for maintenance, sewer system cleaning, and preventative rehabilitation; checklists, and mechanisms to ensure that preventative maintenance is performed on equipment owned and operated by the Permittee;
3. Documentation of unplanned maintenance;
4. An assessment of the capacity of the collection and treatment system owned and operated by the Permittee at critical junctions and immediately upstream of locations where overflows and backups occur or are likely to occur; use flow monitoring as necessary;
5. Identification and prioritization of structural deficiencies in the system owned and operated by the Permittee;
6. Operational control, including documented system control procedures, scheduled inspections and testing;
7. The Permittee shall develop and implement an Asset Management strategy to ensure the long-term sustainability of the collection system. Asset Management shall be used to assist the Permittee in making decisions on when it is most appropriate to repair, replace or rehabilitate particular assets and develop long-term funding strategies; and
8. Asset Management shall include but is not limited to the following elements:
  - a. Asset Inventory and State of the Asset;
  - b. Level of Service;
  - c. Critical Asset Identification;
  - d. Life Cycle Cost; and
  - e. Long-Term Funding Strategy.

**B. Design and Performance Provisions:**

1. Monitor the effectiveness of CMOM;
2. Upgrade the elements of the CMOM plan as necessary; and
3. Maintain a summary of CMOM activities.

**C. Overflow Response Plan:**

1. Know where overflows and back-ups within the facilities owned and operated by the Permittee occur;
2. Respond to each overflow or back-up to determine additional actions such as clean up; and
3. Locations where basement back-ups and/or sanitary sewer overflows occur shall be evaluated as soon as practicable for excessive inflow/infiltration, obstructions or other causes of overflows or back-ups as set forth in the System Evaluation Plan.

**D. System Evaluation Plan:**

1. Summary of existing SSO and Excessive I/I areas in the system and sources of contribution;
2. Evaluate plans to reduce I/I and eliminate SSOs;
3. Special provisions for Pump Stations and force mains and other unique system components; and
4. Construction plans and schedules for correction.

**E. Reporting and Monitoring Requirements:**

1. Program for SSO detection and reporting; and
2. Program for tracking and reporting basement back-ups, including general public complaints.

**F. Third Party Notice Plan:**

1. Describes how, under various overflow scenarios, the public, as well as other entities, would be notified of overflows within the Permittee's system that may endanger public health, safety or welfare;

Special Conditions

2. Identifies overflows within the Permittee's system that would be reported, giving consideration to various types of events including events with potential widespread impacts;
3. Identifies who shall receive the notification;
4. Identifies the specific information that would be reported including actions that will be taken to respond to the overflow;
5. Includes a description of the lines of communication; and
6. Includes the identities and contact information of responsible POTW officials and local, county, and/or state level officials.

For additional information concerning USEPA CMOM guidance and Asset Management please refer to the following web site addresses. [http://www.epa.gov/npdes/pubs/cmom\\_guide\\_for\\_collection\\_systems.pdf](http://www.epa.gov/npdes/pubs/cmom_guide_for_collection_systems.pdf) and [http://water.epa.gov/type/watersheds/wastewater/upload/guide\\_smallsystems\\_assetmanagement\\_bestpractices.pdf](http://water.epa.gov/type/watersheds/wastewater/upload/guide_smallsystems_assetmanagement_bestpractices.pdf)

**SPECIAL CONDITION 13.** For the duration of this Permit, the Permittee shall determine the quantity of sludge produced by the treatment facility in dry tons or gallons with average percent total solids analysis. The Permittee shall maintain adequate records of the quantities of sludge produced and have said records available for U.S. EPA and IEPA inspection. The Permittee shall submit to the IEPA, at a minimum, a semi-annual summary report of the quantities of sludge generated and disposed of, in units of dry tons or gallons (average total percent solids) by different disposal methods including but not limited to application on farmland, application on reclamation land, landfilling, public distribution, dedicated land disposal, sod farms, storage lagoons or any other specified disposal method. Said reports shall be submitted to the IEPA by January 31 and July 31 of each year reporting the preceding January thru June and July thru December interval of sludge disposal operations.

Duty to Mitigate. The Permittee shall take all reasonable steps to minimize any sludge use or disposal in violation of this Permit.

Sludge monitoring must be conducted according to test procedures approved under 40 CFR 136 unless otherwise specified in 40 CFR 503, unless other test procedures have been specified in this Permit.

Planned Changes. The Permittee shall give notice to the IEPA on the semi-annual report of any changes in sludge use and disposal.

The Permittee shall retain records of all sludge monitoring, and reports required by the Sludge Permit as referenced in Standard Condition 25 for a period of at least five (5) years from the date of this Permit.

If the Permittee monitors any pollutant more frequently than required by this permit or the Sludge Permit, the results of this monitoring shall be included in the reporting of data submitted to the IEPA.

The Permittee shall comply with existing federal regulations governing sewage sludge use or disposal and shall comply with all existing applicable regulations in any jurisdiction in which the sewage sludge is actually used or disposed.

The Permittee shall comply with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish the standards for sewage sludge use or disposal even if the permit has not been modified to incorporate the requirement.

The Permittee shall ensure that the applicable requirements in 40 CFR Part 503 are met when the sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator.

Monitoring reports for sludge shall be reported on the form titled "Sludge Management Reports" to the following address:

Illinois Environmental Protection Agency  
Bureau of Water  
Compliance Assurance Section  
Mail Code #19  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

**SPECIAL CONDITION 14.** The Agency shall consider all monitoring data submitted by the discharger in accordance with the monitoring requirements of this permit for all parameters, including but not limited to data pertaining to ammonia and dissolved oxygen for discharges from Discharge Number 002, to determine whether the discharges are at levels which cause, have the reasonable potential to cause or contribute to exceedances of water quality standards; and, if so, to develop appropriate water quality based effluent limitations. If the discharger wants the Agency to consider mixing when determining the need for and establishment of water quality based effluent limitations, the discharger shall submit a study plan on mixing to the Agency for the Agency's review and comment within two (2) months of the effective date of this Permit.

**Attachment H**

**Standard Conditions**

**Definitions**

**Act** means the Illinois Environmental Protection Act, 415 ILCS 5 as Amended.

**Agency** means the Illinois Environmental Protection Agency.

**Board** means the Illinois Pollution Control Board.

**Clean Water Act** (formerly referred to as the Federal Water Pollution Control Act) means Pub. L 92-500, as amended. 33 U.S.C. 1251 et seq.

**NPDES** (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

**USEPA** means the United States Environmental Protection Agency.

**Daily Discharge** means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

**Maximum Daily Discharge Limitation** (daily maximum) means the highest allowable daily discharge.

**Average Monthly Discharge Limitation** (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

**Average Weekly Discharge Limitation** (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

**Best Management Practices** (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**Aliquot** means a sample of specified volume used to make up a total composite sample.

**Grab Sample** means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

**24-Hour Composite Sample** means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

**8-Hour Composite Sample** means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

**Flow Proportional Composite Sample** means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

- (1) **Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.
- (2) **Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.
- (3) **Need to halt or reduce activity not a defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (4) **Duty to mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
- (5) **Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.
- (6) **Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62 and 40 CFR 122.63. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- (7) **Property rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.
- (8) **Duty to provide information.** The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency upon request, copies of records required to be kept by this permit.

(9) **Inspection and entry.** The permittee shall allow an authorized representative of the Agency or USEPA (including an authorized contractor acting as a representative of the Agency or USEPA), upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.

(10) **Monitoring and records.**

- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. Records related to the permittee's sewage sludge use and disposal activities shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Agency or USEPA at any time.
- (c) Records of monitoring information shall include:
  - (1) The date, exact place, and time of sampling or measurements;
  - (2) The individual(s) who performed the sampling or measurements;
  - (3) The date(s) analyses were performed;
  - (4) The individual(s) who performed the analyses;
  - (5) The analytical techniques or methods used; and
  - (6) The results of such analyses.
- (d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

(11) **Signatory requirement.** All applications, reports or information submitted to the Agency shall be signed and certified.

- (a) **Application.** All permit applications shall be signed as follows:
  - (1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation;
  - (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
  - (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.
- (b) **Reports.** All reports required by permits, or other information requested by the Agency shall be signed by a

person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- (1) The authorization is made in writing by a person described in paragraph (a); and
  - (2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and
  - (3) The written authorization is submitted to the Agency.
- (c) **Changes of Authorization.** If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.
- (d) **Certification.** Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

(12) **Reporting requirements.**

- (a) **Planned changes.** The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required when:
  - (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source pursuant to 40 CFR 122.29 (b); or
  - (2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements pursuant to 40 CFR 122.42 (a)(1).
  - (3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- (b) **Anticipated noncompliance.** The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) **Transfers.** This permit is not transferable to any person except after notice to the Agency.
- (d) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

- (e) **Monitoring reports.** Monitoring results shall be reported at the intervals specified elsewhere in this permit.
- (1) Monitoring results must be reported on a Discharge Monitoring Report (DMR).
  - (2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
  - (3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.
- (f) **Twenty-four hour reporting.** The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24-hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24-hours:
- (1) Any unanticipated bypass which exceeds any effluent limitation in the permit.
  - (2) Any upset which exceeds any effluent limitation in the permit.
  - (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit or any pollutant which may endanger health or the environment.  
The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24-hours.
- (g) **Other noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs (12) (d), (e), or (f), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12) (f).
- (h) **Other information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.
- (13) **Bypass.**
- (a) **Definitions.**
    - (1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
    - (2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
  - (b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (13)(c) and (13)(d).
- (c) **Notice.**
- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
  - (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (12)(f) (24-hour notice).
- (d) **Prohibition of bypass.**
- (1) Bypass is prohibited, and the Agency may take enforcement action against a permittee for bypass, unless:
    - (i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
    - (ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
    - (iii) The permittee submitted notices as required under paragraph (13)(c).
  - (2) The Agency may approve an anticipated bypass, after considering its adverse effects, if the Agency determines that it will meet the three conditions listed above in paragraph (13)(d)(1).
- (14) **Upset.**
- (a) **Definition.** Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
  - (b) **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (14)(c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
  - (c) **Conditions necessary for a demonstration of upset.** A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
    - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
    - (2) The permitted facility was at the time being properly operated; and
    - (3) The permittee submitted notice of the upset as required in paragraph (12)(f)(2) (24-hour notice).
    - (4) The permittee complied with any remedial measures required under paragraph (4).
  - (d) **Burden of proof.** In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

- (15) **Transfer of permits.** Permits may be transferred by modification or automatic transfer as described below:
- (a) Transfers by modification. Except as provided in paragraph (b), a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued pursuant to 40 CFR 122.62 (b) (2), or a minor modification made pursuant to 40 CFR 122.63 (d), to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.
  - (b) Automatic transfers. As an alternative to transfers under paragraph (a), any NPDES permit may be automatically transferred to a new permittee if:
    - (1) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date;
    - (2) The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage and liability between the existing and new permittees; and
    - (3) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement.
- (16) All manufacturing, commercial, mining, and silvicultural dischargers must notify the Agency as soon as they know or have reason to believe:
- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
    - (1) One hundred micrograms per liter (100 ug/l);
    - (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6 dinitrophenol; and one milligram per liter (1 mg/l) for antimony.
    - (3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or
    - (4) The level established by the Agency in this permit.
  - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application.
- (17) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following:
- (a) Any new introduction of pollutants into that POTW from an indirect discharge which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - (b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
  - (c) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
- (18) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:
- (a) User charges pursuant to Section 204 (b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35;
  - (b) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and
  - (c) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act.
- (19) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation.
- (20) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.
- (21) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit.
- (22) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed \$25,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Additional penalties for violating these sections of the Clean Water Act are identified in 40 CFR 122.41 (a)(2) and (3).
- (23) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.
- (24) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.
- (25) Collected screening, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.
- (26) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.
- (27) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board or any court with jurisdiction.
- (28) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit is held invalid, the remaining provisions of this permit shall continue in full force and effect.

***Insert copy of Option to Purchase here.***

*Not Applicable*

***Insert Copy of Fair Housing Resolution here.***

See Attached

Village of Tolono  
507 W. Strong St.  
Tolono, IL 61880

**FAIR HOUSING RESOLUTION**

WHEREAS, under the Federal Fair Housing Act, Title VIII of the Civil Rights Act of 1968, and as amended; it is prohibited to discriminate in the sale, rental, leasing, or financing of housing to any person because of race, color, religion, sex, disability, familial status, or national origin;

LET IT BE KNOWN TO ALL PERSONS that it is the policy of the Village of Tolono to implement programs to ensure equal opportunity in housing for all persons regardless of race, color, religion, sex, disability, familial status, or national origin. Therefore, the Village of Tolono does hereby pass the following Resolution:

NOW, THEREFORE, BE IT RESOLVED as follows:

That the Village of Tolono shall not discriminate in the sale, rental, leasing, or financing of housing because of race, color, religion, sex, disability, familial status, or national origin.

Passed this 23<sup>rd</sup> Day of June, 2020.



Robert Murphy  
Village President

ATTEST:



Brandy Dalton  
Village Clerk

***Insert W-9 here.***

# Request for Taxpayer Identification Number and Certification

**Give Form to the  
requester. Do not  
send to the IRS.**

▶ Go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9) for instructions and the latest information.

Print or type. See Specific Instructions on page 3.	<p><b>1</b> Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. <b>Village of Tolono</b></p> <p><b>2</b> Business name/disregarded entity name, if different from above</p> <p><b>3</b> Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only <b>one</b> of the following seven boxes.</p> <p><input type="checkbox"/> Individual/sole proprietor or single-member LLC      <input type="checkbox"/> C Corporation      <input type="checkbox"/> S Corporation      <input type="checkbox"/> Partnership      <input type="checkbox"/> Trust/estate</p> <p><input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____</p> <p><b>Note:</b> Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is <b>not</b> disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.</p> <p><input checked="" type="checkbox"/> Other (see instructions) ▶ <b>GOVERNMENT</b></p>	<p><b>4</b> Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):</p> <p>Exempt payee code (if any) <u>  <b>3</b>  </u></p> <p>Exemption from FATCA reporting code (if any) _____</p> <p><small>(Applies to accounts maintained outside the U.S.)</small></p>
	<p><b>5</b> Address (number, street, and apt. or suite no.) See instructions. <b>507 W. STRONG ST., PO BOX 667</b></p> <p><b>6</b> City, state, and ZIP code <b>TOLONO, IL 61880</b></p>	<p>Requester's name and address (optional)</p>
	<p><b>7</b> List account number(s) here (optional)</p>	

**Part I Taxpayer Identification Number (TIN)**

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

**Note:** If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

<b>Social security number</b>									
<b>or</b>									
<b>Employer identification number</b>									
3	7	-	6	0	1	4	6	0	0

**Part II Certification**

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

<b>Sign Here</b>	Signature of U.S. person ▶ <i>Brandy E Dalton</i>	Date ▶
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## General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9).

### Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

*If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.*

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting*, later, for further information.

**Note:** If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**Definition of a U.S. person.** For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

**Special rules for partnerships.** Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

**Foreign person.** If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, *Withholding of Tax on Nonresident Aliens and Foreign Entities*).

**Nonresident alien who becomes a resident alien.** Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

**Example.** Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

## Backup Withholding

**What is backup withholding?** Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

**Payments you receive will be subject to backup withholding if:**

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the instructions for Part II for details),
3. The IRS tells the requester that you furnished an incorrect TIN,
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or
5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships*, earlier.

## What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

## Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

## Penalties

**Failure to furnish TIN.** If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

**Civil penalty for false information with respect to withholding.** If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

**Criminal penalty for falsifying information.** Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

**Misuse of TINs.** If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

## Specific Instructions

### Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

**Note: ITIN applicant:** Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or “doing business as” (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C corporation, or S corporation.** Enter the entity’s name as shown on the entity’s tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a “disregarded entity.” See Regulations section 301.7701-2(c)(2)(iii). Enter the owner’s name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner’s name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity’s name on line 2, “Business name/disregarded entity name.” If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

### Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

### Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation
• Individual • Sole proprietorship, or • Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.	Individual/sole proprietor or single-member LLC
• LLC treated as a partnership for U.S. federal tax purposes, • LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or • LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
• Partnership	Partnership
• Trust/estate	Trust/estate

### Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

#### Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys’ fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 <sup>1</sup>	Generally, exempt payees 1 through 5 <sup>2</sup>
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

<sup>1</sup> See Form 1099-MISC, Miscellaneous Income, and its instructions.

<sup>2</sup> However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

**Exemption from FATCA reporting code.** The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

**Note:** You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

### Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

### Line 6

Enter your city, state, and ZIP code.

## Part I. Taxpayer Identification Number (TIN)

**Enter your TIN in the appropriate box.** If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

**Note:** See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

**How to get a TIN.** If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at [www.SSA.gov](http://www.SSA.gov). You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at [www.irs.gov/Businesses](http://www.irs.gov/Businesses) and clicking on Employer Identification Number (EIN) under Starting a Business. Go to [www.irs.gov/Forms](http://www.irs.gov/Forms) to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to [www.irs.gov/OrderForms](http://www.irs.gov/OrderForms) to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

**Note:** Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

**Caution:** A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

## Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

**Signature requirements.** Complete the certification as indicated in items 1 through 5 below.

**1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.**

You must give your correct TIN, but you do not have to sign the certification.

**2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983.**

You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

**3. Real estate transactions.** You must sign the certification. You may cross out item 2 of the certification.

**4. Other payments.** You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

**5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions.** You must give your correct TIN, but you do not have to sign the certification.

**What Name and Number To Give the Requester**

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account <sup>1</sup>
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor <sup>2</sup>
5. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee <sup>1</sup>
b. So-called trust account that is not a legal or valid trust under state law	The actual owner <sup>1</sup>
6. Sole proprietorship or disregarded entity owned by an individual	The owner <sup>3</sup>
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor*
For this type of account:	Give name and EIN of:
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity <sup>4</sup>
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee

For this type of account:	Give name and EIN of:
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

<sup>1</sup> List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

<sup>2</sup> Circle the minor's name and furnish the minor's SSN.

<sup>3</sup> You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

<sup>4</sup> List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships*, earlier.

\*Note: The grantor also must provide a Form W-9 to trustee of trust.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

**Secure Your Tax Records From Identity Theft**

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

**Protect yourself from suspicious emails or phishing schemes.**

Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to [phishing@irs.gov](mailto:phishing@irs.gov). You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at [spam@uce.gov](mailto:spam@uce.gov) or report them at [www.ftc.gov/complaint](http://www.ftc.gov/complaint). You can contact the FTC at [www.ftc.gov/idtheft](http://www.ftc.gov/idtheft) or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see [www.IdentityTheft.gov](http://www.IdentityTheft.gov) and Pub. 5027.

Visit [www.irs.gov/IdentityTheft](http://www.irs.gov/IdentityTheft) to learn more about identity theft and how to reduce your risk.

## Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

***Insert SAM Registration (CAGE#) here.***

**⚠️ ALERT: SAM.gov will be down for scheduled maintenance Saturday, 06/13/2020 from 8:00 AM to 1:00 PM**

## Entity Dashboard

- ▶ [Entity Overview](#)
- ▶ [Entity Registration](#)
  - ▶ [Core Data](#)
  - ▶ [Assertions](#)
  - ▶ [Reps & Certs](#)
  - ▶ [POCs](#)
- ▶ [Reports](#)
  - ▶ [Service Contract Report](#)
  - ▶ [BioPreferred Report](#)
- ▶ [Exclusions](#)
  - ▶ [Active Exclusions](#)
  - ▶ [Inactive Exclusions](#)
  - ▶ [Excluded Family Members](#)

**Tolono, Village of**  
**DUNS: 093874980 CAGE Code: 7SL54**  
**Status: Active**  
**Expiration Date: 09/10/2020**  
**Purpose of Registration: Federal Assistance Awards Only**

507 W Strong St  
 Tolono, IL, 61880-9038,  
 UNITED STATES

### Entity Overview

#### Entity Registration Summary

**DUNS:** 093874980  
**Name:** Tolono, Village of  
**Business Type:** US Local Government  
**Last Updated By:** Brandy Dalton  
**Registration Status:** Active  
**Activation Date:** 09/11/2019  
**Expiration Date:** 09/10/2020

#### Exclusion Summary

**Active Exclusion Records?** No

***Insert IRS Certification Letter here.***

 **IRS** Department of the Treasury  
Internal Revenue Service  
Stop 6055 C-1  
Kansas City MO 64999

OMB Clearance No.: 1545-0074

In reply refer to: 0922265797  
Nov. 26, 2019 LTR 147C 0  
37-6014600 000000 00  
Input Op: 0922265797 00005279  
BODC: WI

COUNTY OF CHAMPAIGN  
VILLAGE OF TOLONO  
PO BOX 667  
TOLONO IL 61880-0667

027753

Employer identification number: 37-6014600

Dear Taxpayer:

We received your request dated Aug. 20, 2019, asking us to verify your employer identification number and name.

Your employer identification number (EIN) is 37-6014600. Please keep this letter in your permanent records. Enter your name and EIN on all federal business tax returns and on related correspondence.

You can get any of the forms or publications mentioned in this letter by visiting our website at [www.irs.gov/forms-pubs](http://www.irs.gov/forms-pubs) or by calling 800-TAX-FORM (800-829-3676).

If you have questions, you can call us at 800-829-0115.

If you prefer, you can write to us at the address at the top of the first page of this letter.

When you write, include a copy of this letter, and provide your telephone number and the hours we can reach you in the spaces below.

Telephone number ( ) \_\_\_\_\_ Hours \_\_\_\_\_

Keep a copy of this letter for your records.

Thank you for your cooperation.

0922265797  
Nov. 26, 2019 LTR 147C 0  
37-6014600 000000 00  
Input Op: 0922265797 00005280

COUNTY OF CHAMPAIGN  
VILLAGE OF TOLONO  
PO BOX 667  
TOLONO IL 61880-0667

Sincerely yours,

*Tina M. Benvenuto*

Tina M. Benvenuto  
Operations Mgr., Doc. Perfection

Enclosures:  
Copy of this letter

*Insert Latest Government Audit here.*

VILLAGE OF TOLONO, ILLINOIS

Tolono, Illinois

**Financial Statements  
and Supplementary Information**

For the Year Ended

April 30, 2019

## CONTENTS

	<i>Page</i>
INDEPENDENT AUDITOR’S REPORT .....	1-3
 BASIC FINANCIAL STATEMENTS	
Statement of Net Position – Modified Cash Basis (Governmental Activities) and GAAP Basis (Business-Type Activities) (Exhibit A) .....	4
Statement of Activities – Modified Cash Basis (Governmental Activities) and GAAP Basis (Business-Type Activities) (Exhibit B) .....	5
Balance Sheet – Modified Cash Basis – <i>Governmental Funds</i> (Exhibit C) .....	6
Statement of Revenues, Expenditures, and Changes in Fund Balances – Modified Cash Basis – <i>Governmental Funds</i> (Exhibit D) .....	7
Statement of Expenditures – Budget and Actual – Modified Cash Basis – <i>Major Governmental Funds</i> (Exhibit E).....	8
Balance Sheet – <i>Proprietary Funds</i> (Exhibit F).....	9
Statement of Revenues, Expenses, and Changes in Net Position – <i>Proprietary Funds</i> (Exhibit G) .....	10
Statement of Cash Flows – <i>Proprietary Funds</i> (Exhibit H) .....	11
Notes to Basic Financial Statements.....	12-34
 REQUIRED SUPPLEMENTARY INFORMATION	
IMRF Schedule of Changes in Net Pension Liability and Related Ratios (Unaudited).....	35
IMRF Schedule of Employer Contributions (Unaudited).....	36
Notes to Required Supplementary Information – IMRF Schedule of Employer Contributions (Unaudited) .....	37

SUPPLEMENTARY INFORMATION

Combining Balance Sheet – Modified Cash Basis – *Audit and ESDA Subfunds*  
(Schedule 1) .....38

Combining Statement of Revenues, Expenditures, and Changes in Fund Balances –  
Modified Cash Basis – *Audit and ESDA Subfunds*  
(Schedule 2) .....39

Statement of Expenditures – Budget and Actual – Modified Cash Basis –  
*Audit and ESDA Subfunds*  
(Schedule 3) .....40

Property Tax Levies, Rates, Extensions, and Collections  
(Table 1).....41

INDEPENDENT AUDITOR’S REPORT ON  
TAX INCREMENT FINANCING.....42

## INDEPENDENT AUDITOR'S REPORT

Board of Village Trustees  
Village of Tolono, Illinois  
Tolono, Illinois

We have audited the accompanying modified cash basis financial statements of the governmental activities and governmental funds and the financial statements prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) of the business-type activities and proprietary funds of the Village of Tolono, Illinois as of and for the year ended April 30, 2019, and the related notes to the financial statements, which collectively comprise the Village of Tolono, Illinois' basic financial statements as listed in the table of contents.

### **Management's Responsibility for the Financial Statements**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the modified cash basis of accounting described in Note 1 or GAAP, as applicable; this includes determining that the modified cash basis of accounting is an acceptable basis for the preparation of the financial statements of the governmental activities and governmental funds in the circumstances. Management is also responsible for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### **Auditor's Responsibility**

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.



CERTIFIED PUBLIC ACCOUNTANTS and CONSULTANTS

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

## **Opinions**

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective modified cash basis financial position of the governmental activities and each major governmental fund, and the GAAP basis financial position of the business-type activities and each major proprietary fund of the Village of Tolono, Illinois, as of April 30, 2019, and the respective changes in modified cash basis or GAAP basis financial position, as applicable; and, where applicable, GAAP basis cash flows thereof, and the respective modified cash basis budgetary comparisons for the General Fund and each major special revenue fund for the year then ended.

## **Basis of Accounting**

We draw attention to Note 1 of the financial statements, which describes the basis of accounting. The financial statements of the governmental activities and the governmental funds are prepared on the modified cash basis of accounting, which is a basis of accounting other than accounting principles generally accepted in the United States of America. Our opinions are not modified with respect to this matter.

## **Other Matters**

### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the IMRF Schedule of Changes in Net Pension Liability and Related Ratios and IMRF Schedule of Employer Contributions on pages 35-37 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements presented on the GAAP basis in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's

responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Management of the Village of Tolono, Illinois has omitted the management's discussion and analysis that accounting principles generally accepted in the United States of America requires to be presented to supplement the basic financial statements. Such missing information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements presented on the GAAP basis in an appropriate operational, economic, or historical context. Our opinion on the basic financial statements is not affected by the missing information.

*Other Information*

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Village of Tolono, Illinois' basic financial statements. Schedules 1 through 3 and Table 1 are presented for purposes of additional analysis and are not required parts of the basic financial statements. Schedules 1 through 3 and Table 1 are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information in Schedules 1 through 3 and Table 1 is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

  
Champaign, Illinois  
August 5, 2019

VILLAGE OF TOLONO, ILLINOIS  
Statement of Net Position - Modified Cash Basis (Governmental Activities) and  
GAAP Basis (Business-Type Activities)  
April 30, 2019

	<u>Governmental Activities</u>	<u>Business-Type Activities</u>	<u>Total</u>
<b>Assets</b>			
Cash	\$ 596,138	\$ 495,276	\$ 1,091,414
Accounts Receivable	-	107,538	107,538
Supplies and Parts Inventory	-	9,515	9,515
Capital Assets:			
Land (Not Being Depreciated)	-	3,392	3,392
Waterworks System	-	369,902	369,902
Waterworks Equipment	-	19,528	19,528
Sewerage System	-	427,127	427,127
Sewerage Equipment	-	77,964	77,964
Total Assets	<u>596,138</u>	<u>1,510,242</u>	<u>2,106,380</u>
<b>Liabilities</b>			
Current Liabilities	4,293	51,904	56,197
Noncurrent Liabilities:			
Due Within One Year	344,528	-	344,528
Due After One Year	4,337,347	-	4,337,347
Total Liabilities	<u>4,686,168</u>	<u>51,904</u>	<u>4,738,072</u>
<b>Net Position</b>			
Net Investment in Capital Assets	-	897,913	897,913
Restricted for:			
Streets and Alleys	72,756	-	72,756
TIF District	27,915	-	27,915
IMRF Tax Levy Restriction	1,652	-	1,652
Unrestricted	(4,192,353)	560,425	(3,631,928)
Total Net Position	<u>\$ (4,090,030)</u>	<u>\$ 1,458,338</u>	<u>\$ (2,631,692)</u>

See Accompanying Notes

VILLAGE OF TOLONO, ILLINOIS  
 Statement of Activities - Modified Cash Basis (Governmental Activities) and  
 GAAP Basis (Business-Type Activities)  
 For the Year Ended April 30, 2019

	Business-Type Activities		Governmental Activities					
	Total	Water and Sewer	Total	General Government	Public Works	Public Safety	Recreation	Redevelopment
<b>Expenses</b>								
Salaries and Related Expenses	\$ 521,540	\$ 160,112	\$ 361,428	\$ 37,694	\$ 115,895	\$ 207,839	\$ -	\$ -
Materials and Supplies	40,186	21,910	18,276	1,480	7,054	9,742	-	-
Contractual Services	1,738,592	276,770	1,461,822	89,221	377,269	138,011	-	857,321
Depreciation	94,489	94,489	-	-	-	-	-	-
Water Purchases	348,455	348,455	-	-	-	-	-	-
Electricity for Pumping	38,919	38,919	-	-	-	-	-	-
Interest	154,886	-	154,886	-	-	-	-	154,886
Capital Outlay	80,984	-	80,984	-	27,903	45,081	-	8,000
Other	89,741	42,457	47,284	9,113	643	790	36,738	-
Total Expenses	<u>3,107,792</u>	<u>983,112</u>	<u>2,124,680</u>	<u>137,508</u>	<u>528,764</u>	<u>401,463</u>	<u>36,738</u>	<u>1,020,207</u>
<b>Program Revenues</b>								
Charges for Services:								
User Fees, Fines, Licenses and Permits	920,548	901,506	19,042	2,740	10,136	6,166	-	-
Operating Grants and Contributions:								
Grants	30,000	-	30,000	-	30,000	-	-	-
Total Program Revenues	<u>950,548</u>	<u>901,506</u>	<u>49,042</u>	<u>2,740</u>	<u>40,136</u>	<u>6,166</u>	<u>-</u>	<u>-</u>
Net Program Expense	<u>2,157,244</u>	<u>81,606</u>	<u>2,075,638</u>	<u>134,768</u>	<u>488,628</u>	<u>395,297</u>	<u>36,738</u>	<u>1,020,207</u>
<b>General Revenues</b>								
Taxes:								
TIF District Receipts	1,351,927	-	1,351,927					
Income Tax	334,665	-	334,665					
Sales Tax	250,911	-	250,911					
Property Tax	160,054	-	160,054					
Motor Fuel Tax	87,762	-	87,762					
Use Tax	101,918	-	101,918					
Gaming Tax	30,339	-	30,339					
Road and Bridge Allocation	27,346	-	27,346					
Municipal Utility Tax	21,310	-	21,310					
Replacement Tax	7,081	-	7,081					
Interest Income	18,698	-	18,698					
Other	34,781	-	34,781					
Total General Revenues	<u>2,426,792</u>	<u>-</u>	<u>2,426,792</u>					
<b>Change in Net Position</b>	269,548	(81,606)	351,154					
<b>Net Position, May 1, 2018</b>	(2,901,240)	1,539,944	(4,441,184)					
<b>Net Position, April 30, 2019</b>	<u>\$ (2,631,692)</u>	<u>\$ 1,458,338</u>	<u>\$ (4,090,030)</u>					

VILLAGE OF TOLONO, ILLINOIS  
 Balance Sheet - Modified Cash Basis  
 Governmental Funds  
 April 30, 2019

	<u>General Fund</u>	<u>Police Fund</u>	<u>Street and Alley Fund</u>	<u>Motor Fuel Tax Fund</u>	<u>Tax Increment Financing Fund</u>	<u>Total</u>
<b>ASSETS</b>						
<b>Current Assets</b>						
Cash	\$ 495,467	\$ -	\$ -	\$ 72,756	\$ 27,915	\$ 596,138
<b>LIABILITIES AND FUND BALANCES</b>						
<b>Liabilities</b>						
Payroll Liabilities	\$ 4,293	\$ -	\$ -	\$ -	\$ -	\$ 4,293
<b>Fund Balances</b>						
<i>Restricted</i>						
TIF District	-	-	-	-	27,915	27,915
Streets and Alleys	-	-	-	72,756	-	72,756
IMRF Taxy Levy Restriction	1,652	-	-	-	-	1,652
<i>Unassigned</i>	489,522	-	-	-	-	489,522
Total Fund Balances	<u>491,174</u>	<u>-</u>	<u>-</u>	<u>72,756</u>	<u>27,915</u>	<u>591,845</u>
Total Liabilities and Fund Balances	<u>\$ 495,467</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 72,756</u>	<u>\$ 27,915</u>	<u>\$ 596,138</u>
<b>Reconciliation to Statement of Net Position</b>						
Total Fund Balances						\$ 591,845
The governmental funds are reported on the modified cash basis, which, as it applies to the governmental funds, as discussed in Note 1, does not include Long Term Debt. However, the modified cash basis, as it applies to the governmental activities on Exhibit A, as discussed in Note 1, does include Long Term Debt. This amount is the outstanding principal amount on the Long Term Debt.						(4,681,875)
Net Position of Governmental Activities						<u>\$ (4,090,030)</u>

See Accompanying Notes

VILLAGE OF TOLONO, ILLINOIS  
Statement of Revenues, Expenditures, and  
Changes in Fund Balances - Modified Cash Basis  
Governmental Funds  
For the Year Ended April 30, 2019

	General Fund	Police Fund	Street and Alley Fund	Motor Fuel Tax Fund	Tax Increment Financing Fund	Total
<b>Revenues</b>						
Local Taxes:						
Property Tax	\$ 140,143	\$ 19,911	\$ -	\$ -	\$ -	\$ 160,054
Municipal Utility Tax	21,310	-	-	-	-	21,310
Road and Bridge Allocation	-	-	27,346	-	-	27,346
TIF District Receipts	-	-	-	-	1,351,927	1,351,927
State Taxes:						
Income Tax	334,665	-	-	-	-	334,665
Motor Fuel Tax	-	-	-	87,762	-	87,762
Sales Tax	250,911	-	-	-	-	250,911
Use Tax	101,918	-	-	-	-	101,918
Replacement Tax	7,081	-	-	-	-	7,081
Gaming Tax	30,339	-	-	-	-	30,339
Other:						
Licenses and Permits	2,740	-	10,136	-	-	12,876
Fines	-	6,166	-	-	-	6,166
Interest Income	18,698	-	-	-	-	18,698
Rental Income	16,534	-	-	-	-	16,534
Grant Revenue	-	-	30,000	-	-	30,000
Miscellaneous	7,759	1,410	9,078	-	-	18,247
Total Revenues	<u>932,098</u>	<u>27,487</u>	<u>76,560</u>	<u>87,762</u>	<u>1,351,927</u>	<u>2,475,834</u>
<b>Expenditures</b>						
Current:						
General Government	137,508	-	-	-	-	137,508
Public Works	24,537	-	290,352	185,972	-	500,861
Public Safety	25,380	331,002	-	-	-	356,382
Recreation	36,738	-	-	-	-	36,738
Redevelopment	-	-	-	-	857,321	857,321
Debt Service:						
Principal Repayments	-	-	-	-	337,533	337,533
Interest Expense	-	-	-	-	154,886	154,886
Capital Outlay	54,435	10,081	8,468	-	8,000	80,984
Total Expenditures	<u>278,598</u>	<u>341,083</u>	<u>298,820</u>	<u>185,972</u>	<u>1,357,740</u>	<u>2,462,213</u>
<b>Excess (Deficit) of Revenue Over Expenditures</b>	<u>653,500</u>	<u>(313,596)</u>	<u>(222,260)</u>	<u>(98,210)</u>	<u>(5,813)</u>	<u>13,621</u>
<b>Other Financing Sources (Uses)</b>						
Transfers In	-	313,596	222,260	-	-	535,856
Transfers Out	(535,856)	-	-	-	-	(535,856)
Net Other Financing Sources (Uses)	<u>(535,856)</u>	<u>313,596</u>	<u>222,260</u>	<u>-</u>	<u>-</u>	<u>-</u>
<b>Net Change in Fund Balances</b>	117,644	-	-	(98,210)	(5,813)	13,621
<b>Fund Balances, May 1, 2018</b>	<u>373,530</u>	<u>-</u>	<u>-</u>	<u>170,966</u>	<u>33,728</u>	<u>578,224</u>
<b>Fund Balances, April 30, 2019</b>	<u>\$ 491,174</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 72,756</u>	<u>\$ 27,915</u>	<u>\$ 591,845</u>
<b>Reconciliation to the Statement of Activities</b>						
Net Changes in Fund Balances						\$ 13,621
Principal Repayment on Debt						337,533
Change in Net Position of Governmental Activities						<u>\$ 351,154</u>

See Accompanying Notes

VILLAGE OF TOLONO, ILLINOIS  
Statement of Expenditures - Budget and Actual - Modified Cash Basis  
*Major Governmental Funds*  
For the Year Ended April 30, 2019

	Budget		Actual	Under/(Over) Budget
	Original	Final		
<b>General Fund*</b>				
<i>Current</i>				
General Government:				
Salaries and Related Expenditures	\$ 140,814	\$ 140,814	\$ 37,694	\$ 103,120
Materials and Supplies	9,220	9,220	1,480	7,740
Contractual Services	150,566	150,566	73,136	77,430
Other	32,390	32,390	9,113	23,277
Total General Government Expenditures	<u>332,990</u>	<u>332,990</u>	<u>121,423</u>	<u>211,567</u>
Public Works:				
Salaries and Related Expenditures	-	-	21,221	(21,221)
Contractual Services	8,000	8,000	3,316	4,684
Total Public Works Expenditures	<u>8,000</u>	<u>8,000</u>	<u>24,537</u>	<u>(16,537)</u>
Public Safety:				
Salaries and Related Expenditures	-	-	15,380	(15,380)
Recreation:				
Other	33,600	33,600	36,738	(3,138)
Total Current Expenditures	<u>374,590</u>	<u>374,590</u>	<u>198,078</u>	<u>176,512</u>
<i>Capital Outlay</i>	17,500	17,500	19,435	(1,935)
Total General Fund Expenditures	<u>\$ 392,090</u>	<u>\$ 392,090</u>	<u>\$ 217,513</u>	<u>\$ 174,577</u>
<b>Police Fund</b>				
<i>Current</i>				
Public Safety:				
Salaries and Related Expenditures	\$ 348,631	\$ 348,631	\$ 192,459	\$ 156,172
Materials and Supplies	12,600	12,600	9,742	2,858
Contractual Services	171,708	171,708	128,011	43,697
Other	1,500	1,500	790	710
Total Public Safety Expenditures	<u>534,439</u>	<u>534,439</u>	<u>331,002</u>	<u>203,437</u>
<i>Capital Outlay</i>	10,000	10,000	10,081	(81)
Total Police Fund Expenditures	<u>\$ 544,439</u>	<u>\$ 544,439</u>	<u>\$ 341,083</u>	<u>\$ 203,356</u>
<b>Street and Alley Fund</b>				
<i>Current</i>				
Public Works:				
Salaries and Related Expenditures	\$ 126,571	\$ 126,571	\$ 94,674	\$ 31,897
Materials and Supplies	11,000	11,000	7,054	3,946
Contractual Services	291,917	291,917	187,981	103,936
Other	1,000	1,000	643	357
Total Public Works Expenditures	<u>430,488</u>	<u>430,488</u>	<u>290,352</u>	<u>140,136</u>
<i>Capital Outlay</i>	9,100	9,100	8,468	632
Total Street and Alley Fund Expenditures	<u>\$ 439,588</u>	<u>\$ 439,588</u>	<u>\$ 298,820</u>	<u>\$ 140,768</u>
<b>Motor Fuel Tax Fund</b>				
<i>Current</i>				
Public Works:				
Street Maintenance	\$ 195,098	\$ 195,098	\$ 185,972	\$ 9,126
<b>Tax Increment Financing Fund</b>				
<i>Current</i>				
Redevelopment and Debt Service				
Contractual Services	\$ 1,375,000	\$ 1,375,000	\$ 1,349,740	\$ 25,260
<i>Capital Outlay</i>	-	-	8,000	(8,000)
Total Tax Increment Financing Expenditures	<u>\$ 1,375,000</u>	<u>\$ 1,375,000</u>	<u>\$ 1,357,740</u>	<u>\$ 17,260</u>

\* Excludes appropriations and actual amounts for the Audit subfund and ESDA subfund

See Accompanying Notes

VILLAGE OF TOLONO, ILLINOIS  
Balance Sheet  
*Proprietary Funds*  
April 30, 2019

	Enterprise Funds			Total
	Waterworks and Sewerage Fund	Waterworks Operation Fund	Sewerage Operation Fund	
ASSETS				
<b>Current Assets</b>				
Cash	\$ 124,024	\$ -	\$ 371,252	\$ 495,276
Accounts Receivable	-	69,099	38,439	107,538
Supplies and Parts Inventory	-	9,515	-	9,515
Total Current Assets	<u>124,024</u>	<u>78,614</u>	<u>409,691</u>	<u>612,329</u>
<b>Capital Assets</b>				
Land (Not Being Depreciated)	-	1,392	2,000	3,392
Waterworks System and Equipment	-	389,430	-	389,430
Sewerage System and Equipment	-	-	505,091	505,091
Total Capital Assets	<u>-</u>	<u>390,822</u>	<u>507,091</u>	<u>897,913</u>
Total Assets	<u>\$ 124,024</u>	<u>\$ 469,436</u>	<u>\$ 916,782</u>	<u>\$ 1,510,242</u>
LIABILITIES AND NET POSITION				
<b>Current Liabilities</b>				
Accounts Payable	\$ -	\$ 33,310	\$ 18,594	\$ 51,904
<b>Net Position</b>				
Net Investment in Capital Assets	-	390,822	507,091	897,913
Unrestricted	124,024	45,304	391,097	560,425
Total Net Position	<u>124,024</u>	<u>436,126</u>	<u>898,188</u>	<u>1,458,338</u>
Total Liabilities and Net Position	<u>\$ 124,024</u>	<u>\$ 469,436</u>	<u>\$ 916,782</u>	<u>\$ 1,510,242</u>

See Accompanying Notes

VILLAGE OF TOLONO, ILLINOIS  
Statement of Revenues, Expenses, and  
Changes in Net Position  
*Proprietary Funds*  
For the Year Ended April 30, 2019

	Enterprise Funds			Total
	Waterworks and Sewerage Fund	Waterworks Operation Fund	Sewerage Operation Fund	
<b>Operating Revenue</b>				
User Fees	\$ -	\$ 525,522	\$ 375,984	\$ 901,506
<b>Operating Expenses</b>				
Contractual Services	-	38,416	238,354	276,770
Water Purchased	-	348,455	-	348,455
Electricity for Pumping	-	-	38,919	38,919
Depreciation	-	26,685	67,804	94,489
Salaries and Related Expenses	-	82,063	78,049	160,112
Materials and Supplies	-	12,456	9,454	21,910
Other	-	42,426	31	42,457
Total Operating Expenses	-	550,501	432,611	983,112
<b>Operating Income (Loss)</b>	-	(24,979)	(56,627)	(81,606)
<b>Transfers</b>				
Transfers In	-	121,711	-	121,711
Transfers Out	(121,711)	-	-	(121,711)
Net Transfers	(121,711)	121,711	-	-
<b>Change in Net Position</b>	(121,711)	96,732	(56,627)	(81,606)
<b>Net Position, May 1, 2018</b>	245,735	339,394	954,815	1,539,944
<b>Net Position, April 30, 2019</b>	\$ 124,024	\$ 436,126	\$ 898,188	\$ 1,458,338

See Accompanying Notes

VILLAGE OF TOLONO, ILLINOIS  
Statement of Cash Flows  
*Proprietary Funds*  
For the Year Ended April 30, 2019

	Enterprise Funds			Total
	Waterworks and Sewerage Fund	Waterworks Operation Fund	Sewerage Operation Fund	
<b>Cash Flows from Operating Activities</b>				
Receipts from Customers	\$ -	\$ 518,315	\$ 372,552	\$ 890,867
Payments to Vendors	-	(422,624)	(283,949)	(706,573)
Payments to Employees	-	(82,063)	(78,049)	(160,112)
Net Cash Provided by (Used In) Operating Activities	-	13,628	10,554	24,182
<b>Cash Flows from Capital and Related Financing Activities</b>				
Purchase of Property and Equipment	-	(135,339)	(16,273)	(151,612)
<b>Cash Flows from Noncapital Financing Activities</b>				
Transfers	(121,711)	121,711	-	-
<b>Increase (Decrease) in Cash</b>	(121,711)	-	(5,719)	(127,430)
<b>Cash, May 1, 2018</b>	245,735	-	376,971	622,706
<b>Cash, April 30, 2019</b>	<u>\$ 124,024</u>	<u>\$ -</u>	<u>\$ 371,252</u>	<u>\$ 495,276</u>
<b>Reconciliation of Operating Income (Loss) to Net Cash Provided by (Used In) Operating Activities</b>				
Operating Income (Loss)	\$ -	\$ (24,979)	\$ (56,627)	\$ (81,606)
Adjustment to Reconcile Operating Income (Loss) to Net Cash Provided by (Used In) Operating Activities:				
Depreciation	-	26,685	67,804	94,489
(Increase) Decrease in Accounts Receivable	-	(7,207)	(3,432)	(10,639)
(Increase) Decrease in Inventory	-	19,693	-	19,693
Increase (Decrease) in Accounts Payable	-	(564)	2,809	2,245
Net Cash Provided by (Used In) Operating Activities	<u>\$ -</u>	<u>\$ 13,628</u>	<u>\$ 10,554</u>	<u>\$ 24,182</u>

See Accompanying Notes

VILLAGE OF TOLONO, ILLINOIS  
Notes to Basic Financial Statements  
April 30, 2019

**1. Summary of Significant Accounting Policies**

As discussed further in Note 1(c), the financial statements for the governmental activities and the governmental funds are presented on the modified cash basis of accounting and the financial statements for the business-type activities and the proprietary funds are presented in accordance with accounting principles generally accepted in the United States of America (GAAP). The modified cash basis of accounting differs from GAAP. GAAP includes all relevant Governmental Accounting Standards Board (GASB) pronouncements plus other sources of accounting and financial reporting guidance noted in GASB Statement 76, *The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments*.

a. Financial Reporting Entity

The Village of Tolono, Illinois' (the Village) financial reporting entity is composed of the following:

Primary Government	Village of Tolono, Illinois
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In determining the financial reporting entity, the Village complies with the provisions of GASB Statement No. 14, *The Financial Reporting Entity*, as amended by GASB Statement No. 61, *The Financial Reporting Entity: Omnibus an Amendment of GASB Statements No. 14 and No. 34*. Based on the operational and financial criteria of those statements, the Village does not have a component unit that should be reported as part of the reporting entity.

b. Basis of Presentation

*Government-Wide Financial Statements*

The Statement of Net Position and Statement of Activities display information about the reporting government as a whole. They include all funds of the reporting entity. The statements distinguish between governmental and business-type activities. Governmental activities generally are financed through taxes, intergovernmental revenues, and other non-exchange revenues. Business-type activities are financed in whole or in part by fees charged to external parties for goods or services. Eliminations have been made within the governmental activities to prevent double counting of internal balances.

### *Fund Financial Statements*

Fund financial statements of the reporting entity are organized into funds, each of which is considered to be a separate accounting entity. Each fund is accounted for by providing a separate set of self-balancing accounts that constitutes its assets, liabilities, fund equity, revenues, and expenditures/expenses. Funds are organized into two major categories: governmental and proprietary. The Village presently has no fiduciary funds. An emphasis is placed on major funds within the governmental and proprietary categories. A fund is considered major if it is the primary operating fund of the Village or meets the following criteria:

- Total assets plus deferred outflows of resources, liabilities plus deferred inflows of resources, revenues, or expenditures/expenses of that individual governmental or enterprise fund are at least 10 percent of the corresponding total for all funds of that category or type.
- Total assets plus deferred outflows of resources, liabilities plus deferred inflows of resources, revenues, or expenditures/expenses of the individual governmental fund or enterprise fund are at least 5 percent of the corresponding total for all governmental and enterprise funds combined.

The funds of the financial reporting entity are described below:

#### *Governmental Funds*

**General Fund** – The General Fund is the primary operating fund of the Village and is always classified as a major fund. It is used to account for all activities except those legally or administratively required to be accounted for in other funds.

The Village's General Fund as presented in the financial statements Exhibit C and Exhibit D includes the Audit and ESDA subfunds. The General Fund information presented in the budgetary comparison financial statement, Exhibit E, includes only the Village's General Fund and excludes the Audit and ESDA subfunds.

**Special Revenue Funds** – Special Revenue Funds are used to account for the proceeds of specific revenue sources that are restricted or committed to expenditures for specified purposes other than debt services or capital projects. The reporting entity includes the following special revenue funds, which are reported as major funds:

Fund	Brief Description
Police Fund	Accounts for operations of the Village's Police Department, which is supported by funds transferred from the General Fund and significantly funded by levied property taxes and fines that are restricted and committed, respectively, to public safety.
Street and Alley Fund	Accounts for operations of the Village's Public Works Department, which is responsible for repair and maintenance of the Village's infrastructure including the storm sewers. This fund is supported by funds transferred from the General Fund and significantly funded by road and bridge property tax allocations from Champaign County, and liquor license receipts, which are committed to this fund.
Motor Fuel Tax Fund	Accounts for the restricted motor fuel tax provided by the State of Illinois and expenditures for road repair and replacement.
Tax Increment Financing Fund	Accounts for property taxes received from the incremental increase in the assessed value of real property in the Village's TIF District and expenditures for redevelopment projects in the TIF District, debt service on TIF District debt, and administration of the TIF District.

*Proprietary Funds*

Enterprise Fund – Enterprise funds are used to account for business-like activities provided to the general public. These activities are financed primarily by user charges, and the measurement of financial activity focuses on net income measurement similar to the private sector.

The reporting entity includes the following enterprise funds that are reported as major:

Fund	Brief Description
Waterworks and Sewerage Fund	Previously accounted for the revenue from water and sewer services provided by the Village and provided funding to the Village's other proprietary funds, which operate the water and sewer systems. During Fiscal Year 2011, the Village began to account for water and sewer revenues in the Waterworks Operation Fund and Sewerage Operation Fund, respectively.
Waterworks Operation Fund	Accounts for revenue from water services and expenses incurred to operate and maintain the Village's water system.
Sewerage Operation Fund	Accounts for revenues from sewer services and expenses incurred to operate and maintain the Village's sanitary sewer system.

The Motor Fuel Tax Fund and the Waterworks and Sewerage Fund do not meet the requirements for presentation as major funds. The Village's management has chosen to present these funds as major to maintain consistency with past presentations.

c. Measurement Focus and Basis of Accounting

Measurement focus is a term used to describe “how” transactions are recorded within the various financial statements. Basis of accounting refers to “when” transactions are recorded regardless of the measurement focus applied.

*Measurement Focus*

In the government-wide Statement of Net Position and the Statement of Activities, both governmental and business-type activities are presented using the “economic resources” measurement focus. The governmental activities are presented within the limitations of the modified cash basis of accounting, as defined below.

In the fund financial statements, the “current financial resources” measurement focus, within the limitations of the modified cash basis, is used for governmental funds and the “economic resources” measurement focus is used for proprietary funds:

- All governmental funds utilize a “current financial resources” measurement focus.

Only current financial assets and liabilities are generally included on their balance sheets. Their operating statements present sources and uses of available spendable financial resources during a given period. These funds use fund balance as their measure of available spendable financial resources.

- The proprietary funds utilize an “economic resources” measurement focus. The accounting objectives of this measurement focus are the determination of operating income, changes in net position (or cost recovery), financial position, and cash flows. All assets and liabilities (whether current or non-current, financial or non-financial) associated with their activities are reported. Proprietary fund equity is classified as net position.

### *Basis of Accounting*

In the government-wide Statement of Net Position and Statement of Activities and the governmental funds financial statements, governmental activities are presented using the modified cash basis of accounting. This basis recognizes assets, liabilities, net position/fund equity, revenues, and expenditures/expenses when they result from cash transactions with a provision for payroll tax liabilities, current pension liabilities, and long-term debt (excluding personnel related long-term debt) in the governmental activities, and payroll tax liabilities and current pension liabilities for the governmental funds. This basis measures and reports cash and changes in cash resulting from cash receipts and disbursements. This basis is a comprehensive basis of accounting other than accounting principles generally accepted in the United States of America.

As a result of the use of this modified cash basis of accounting, certain assets and their related revenues (such as accounts receivable and revenue for billed or provided services not yet collected) and certain liabilities and their related expenses (such as accounts payable and expenses for goods or services received but not yet paid, and accrued expenses and liabilities) *are not recorded* in the financial statements for the governmental activities and governmental funds.

In the government-wide Statement of Net Position and Statement of Activities and the proprietary fund financial statements, business-type activities are presented using the accrual basis of accounting. Revenue is recognized when earned and expenses are recognized when incurred.

If the Village utilized the basis of accounting recognized as generally accepted in the United States of America for the governmental funds, the fund financial statements for governmental funds would use the modified accrual basis of accounting and the government-wide financial statements would be presented on the accrual basis of accounting for the governmental activities.

d. Accounts Receivable

User accounts receivable is reported at the amount management expects to collect on balances outstanding at year-end. Based on high historical collection rates, no allowance for doubtful accounts receivable is provided at April 30, 2019.

e. Inventory

Inventory is valued at cost using the first-in, first-out method.

f. Capital Assets

Proprietary fund capital assets are valued at historical cost or estimated historical cost, if actual historical cost is not available. Donated capital assets are valued at estimated acquisition value at the date of donation. Depreciation is computed using the straight-line method over estimated useful lives. The estimated useful lives used are as follows:

Waterworks:

Water Mains	30 - 40	Years
Water Associated Equipment	10 - 30	Years
Water Meters	10 - 20	Years
Other Equipment	5 - 10	Years

Sewerage:

Sewerage Equipment	5 - 10	Years
Sewerage Plant	40	Years
Sewerage Distribution System	40	Years

The governmental activities do not capitalize or depreciate property and equipment.

g. Use of Restricted Resources

When an expense is incurred that can be paid using either restricted or unrestricted resources (net position), the Village's policy is to first apply the expense toward restricted resources and then toward unrestricted resources.

h. Fund Balance

Fund balances are classified as follows:

**Non-Spendable** – Amounts that cannot be spent either because they are not in a spendable form or because they are legally or contractually required to be maintained intact

**Restricted** – Amounts that can be spent only for specific purposes because of the Village charter, state or federal laws, or externally imposed conditions by grantors or creditors

**Committed** – Amounts that can be used only for specific purposes determined by a resolution of the Board of Village Trustees

**Assigned** – Amounts that are constrained by the Board of Village Trustees’ intent to be used for specific purposes but are neither restricted nor committed. Intent is expressed by (a) the Board of Village Trustees itself or (b) a body or official to which the Board of Village Trustees has delegated the authority to assign amounts to be used for specific purposes. The Village’s highest level of decision-making authority is the Board of Village Trustees, who is authorized to assign amounts to a specific purpose.

**Unassigned** – All amounts not included in other spendable classifications

When an expenditure is incurred for purposes for which both restricted and unrestricted (committed, assigned, or unassigned) fund balance is available, the Village considers restricted funds to have been spent first. When an expenditure is incurred for which committed, assigned, or unassigned fund balances are available, the Village considers amounts to have been spent first out of committed funds, then assigned funds, and finally unassigned funds, as needed, unless the Board of Village Trustees has provided otherwise in its commitment or assignment actions.

i. Program Revenues

Program Revenues on the Statement of Activities include the following:

Governmental Activities:

Fines	Amounts remitted to the Village by violators of Village ordinances
Licenses and Permits	Amounts remitted to the Village by entities and persons making use of legal privileges issued by the Village
Operating Grants and Contributions	Grants and contributions used to support street and alley projects for the Village

Business-Type Activities:

User Fees	Fees paid by the public for water and sewerage service
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j. Operating and Non-Operating Revenues and Expenses of Proprietary Funds

Operating revenues and expenses for proprietary funds are those that result from providing services. It also includes all revenue and expenses not related to capital and related financing, non-capital financing, or investing activities.

k. Estimates

These financial statements include estimates and assumptions made by the Village's management that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates. The significant estimates at April 30, 2019 include the estimate of the useful lives of capital assets and the valuation of the disclosed liability for pensions.

**2. Legal Budgets**

Legal budgets are prepared in the form of an appropriations ordinance for Village funds using the same accounting basis and practices as are used to account for and prepare financial reports. Unexpended appropriations lapse at the end of the fiscal year. Once a budget is approved, it can be amended at the function and fund level by approval of a majority of the members of the Board of Village Trustees after a public notice and hearing. Appropriation transfers between budget line items may be presented to the board at their regular meetings. Each transfer must have board approval. Such transfers are made before the fact and are reflected in the official minutes of the board. The legal level of budgetary control (i.e., the level at which expenditures may not legally exceed appropriations) is the fund level. All transfers in the financial statements were approved after fiscal year-end.

A comparison of budget to actual expenditures is provided for the major governmental funds. As supplementary information, a budget to actual comparison is also provided for the Audit and ESDA subfunds since legal budgets were passed for those funds. The Village's appropriation ordinance includes some revenue projections; however, the Village's management has elected not to present budgeted revenues in the budget to actual comparison financial statement.

**3. Property Taxes**

The Village's property tax is levied each year on or before the last Tuesday in December on all taxable real property located in the Village. The Board of Village Trustees passed the 2018 tax levy on November 20, 2018. Property taxes attach as an enforceable lien on property as of January 1 and are typically payable in two installments on June 1 and September 1. The Village receives significant distributions of tax receipts approximately one month after these due dates. Property tax receipts in these financial statements are from the 2017 tax levy.

**4. Cash**

*Authorized Investments*

The Village is authorized to invest excess funds in instruments outlined under Chapter 30, Section 235 of the Illinois Compiled Statutes. Such instruments include obligations of the U.S. Treasury, savings accounts, certificates of deposit, and money market mutual funds.

*Custodial Credit Risk – Bank Deposits*

Custodial credit risk is the risk that in the event of a bank failure, the Village’s deposits, including amounts in checking, savings, and money market accounts may not be returned to it. The Village’s investment policy addresses custodial credit risk by requiring depository banks to pledge sufficient collateral to cover deposits over federal deposit insurance limits. At April 30, 2019, \$875,091 of the Village’s bank deposits of \$1,125,091, which reconciled to a book balance of \$1,091,414, was exposed to custodial credit risk. The \$875,091 balance exposed to custodial credit risk was collateralized by an irrevocable letter of credit issued by Busey Bank and held by the Federal Home Loan Bank of Chicago. The letter of credit has a limit of \$3,500,000 and is accessible by the Village through August 14, 2019.

**5. Accounts Receivable**

Accounts receivable include the following at April 30, 2019:

	Waterworks Operation Fund	Sewerage Operation Fund	Business-Type Activities
Billed	\$ 46,027	\$ 25,832	\$ 71,859
Unbilled	23,072	12,607	35,679
Total Accounts Receivable	<u>\$ 69,099</u>	<u>\$ 38,439</u>	<u>\$ 107,538</u>

## 6. Capital Assets

The following is a summary of the changes in the capital assets of the proprietary funds and business-type activities for the year ended April 30, 2019:

	April 30, 2018	Additions	Retirements	April 30, 2019
Land (Not Depreciable)	\$ 3,392	\$ -	\$ -	\$ 3,392
Depreciable Property and Equipment:				
<i>Waterworks</i>				
System	841,729	133,168	-	974,897
Equipment and Vehicles	99,522	2,171	-	101,693
<i>Sewerage</i>				
System	2,833,500	2,168	-	2,835,668
Equipment and Vehicles	536,454	14,105	-	550,559
Less: Accumulated Depreciation	(3,473,807)	(94,489)	-	(3,568,296)
Capital Assets	<u>\$ 840,790</u>	<u>\$ 57,123</u>	<u>\$ -</u>	<u>\$ 897,913</u>

Depreciation for fiscal year 2019 was \$26,685 for Waterworks and \$67,804 for Sewerage.

## 7. Tax Increment Financing General Obligation Bonds (Alternative Revenue Source)

On March 29, 2012, the Village issued \$3,500,000 of General Obligation Bonds (Alternate Revenue Source) to defray the costs associated with the redevelopment of the Tolono Tax Increment Financing (TIF) District in the Village of Tolono, and, consequently, these bonds have been accounted for in the TIF Fund. MidAmerica National Bank of Canton, Illinois is the paying agent and registrar for the issue known as the General Obligation Bond (Alternate Revenue Source), Series 2012. These bonds mature serially on December 15 of each calendar year through 2026 in amounts ranging from \$100,000 to \$475,000 and bearing interest ranging from 0.75 to 3.45 percent, payable June 15 and December 15 annually. These bonds are subject to early redemption at any time as of and after December 15, 2020, at the Village's discretion.

The Village has pledged future TIF Fund incremental property taxes to repay these bonds. Principal and interest on the bonds are payable through 2026 from the TIF Fund's incremental property taxes. Annual principal and interest on the bonds are expected to require approximately a maximum of 27 percent of such revenues. However, after other TIF District annual commitments are honored from the TIF Fund's incremental property taxes, annual principal and interest on the bonds are expected to require approximately a

maximum of 85 percent of the remaining revenue assuming principal and interest on other fixed debt (see Notes 8 and 9) continue to be paid from the TIF Fund and the remaining TIF Fund developer commitments (see Note 18) are required to be paid in full.

There was principal and interest of \$287,633 paid for fiscal year 2019. Other TIF District commitments totaled \$1,082,487 for fiscal year 2019. The TIF Fund's incremental property tax revenues totaled \$1,351,927 for fiscal year 2019. At April 30, 2019, pledged future revenues totaled \$2,949,519, which was the amount of the remaining principal and interest on the bonds.

Aggregate future principal and interest payments required on these bonds are as follows:

Fiscal Year Ended April 30	Principal	Interest	Total
2020	\$ 205,000	\$ 78,328	\$ 283,328
2021	210,000	73,510	283,510
2022	220,000	68,050	288,050
2023	225,000	61,780	286,780
2024	330,000	55,030	385,030
2025-2027	1,330,000	92,821	1,422,821
Total	<u>\$ 2,520,000</u>	<u>\$ 429,519</u>	<u>\$ 2,949,519</u>

Total interest paid in fiscal year 2019 on these bonds was \$82,633.

The 2012 bond ordinance calls for two funded reserves. The project fund reserve requires the Village to hold the net proceeds from the bond issuance in reserve for payment of costs related to the capital projects and costs of issuance. Upon completion of the project, any remaining funds are required to be moved to the bond fund reserve. The Village has completed the project and the remaining balance in the project fund was moved to the bond fund reserve and was fully expended in fiscal year 2017 for debt related payments. The bond fund reserve requires one half of the next principal and interest payment amounts to be set aside from each of the two property tax installments paid by the TIF District taxpayers. At April 30, 2019, the required balance from this requirement was \$0 because the Village has not received property tax payments for 2018 as of April 30, 2019. At April 30, 2019 the balance was \$0 in both the project fund reserve and the bond fund reserve.

## 8. General Obligation Debt Certificates

During fiscal years 2016 and 2015, the Village issued \$1,700,000 of general obligation (limited debt) debt certificates to defray the costs associated with the redevelopment of the TIF District in the Village of Tolono, and, consequently, these debt certificates have been accounted for in the TIF Fund. Hickory Point Bank & Trust of Champaign, Illinois is the purchaser for the issue known as the General Obligation Debt Certificates, Series 2015. These debt certificates mature serially on March 17 of each calendar year through

2027 in amounts ranging from \$5,000 to \$335,000 and bearing interest at 3.30 percent through March 17, 2019, then 3.50 percent through March 17, 2023, and then bearing interest at the four-year Federal Home Loan Bank Chicago (FHLBC) rate on March 17, 2023 plus 1.75 percent with a cap of 5.00 percent, payable September 17 and March 17 annually.

Aggregate future principal maturities and interest payments required on these debt certificates are as follows for fiscal years ending April 30, assuming an interest rate of 3.60 percent as of March 17, 2023:

Fiscal Year Ended April 30	Principal	Interest	Total
2020	\$ 65,000	\$ 52,675	\$ 117,675
2021	65,000	50,400	115,400
2022	65,000	48,125	113,125
2023	70,000	45,850	115,850
2024	245,000	44,640	289,640
2025-2027	995,000	71,640	1,066,640
Total	<u>\$ 1,505,000</u>	<u>\$ 313,330</u>	<u>\$ 1,818,330</u>

Total interest paid in fiscal year 2019 on the debt certificates was \$51,695.

The 2016 debt certificate ordinance calls for one funded reserve. The project fund reserve requires the Village to hold the net proceeds from the debt certificate issuance in reserve for payment of costs related to the capital projects and costs of issuance. The reserve was fully expended after paying fiscal year 2017 debt payments.

## **9. General Obligation Note Payable**

During fiscal year 2017, the Village secured an \$800,000 closed-end line of credit to defray the costs associated with new police station construction, which is a TIF District project. This note payable has been accounted for in the TIF Fund. During fiscal years 2017 and 2018, the Village borrowed \$800,000 against this line of credit. These debt certificates mature serially on February 14 of each calendar year 2018 through 2027 in amounts ranging from \$70,592 to \$93,949 and bearing interest at 2.75 through February 14, 2022, then at the five-year Federal Home Loan Bank Chicago (FHLBC) rate on February 14, 2022 plus 2.00 percent with a cap of 5.00 percent, payable February 14 and August 14 annually.

Aggregate future principal maturities and interest payments required on this note payable are as follows for fiscal years ending April 30, assuming an interest rate of 4.00 percent as of February 14, 2022:

Fiscal Year Ended April 30	Principal	Interest	Total
2020	\$ 74,528	\$ 19,061	\$ 93,589
2021	76,577	17,039	93,616
2022	78,683	14,962	93,645
2023	77,292	23,321	100,613
2024	81,157	19,422	100,579
2025-2027	268,638	33,697	302,335
Total	<u>\$ 656,875</u>	<u>\$ 127,502</u>	<u>\$ 784,377</u>

Total interest paid in fiscal year 2019 on this note payable was \$20,552.

#### 10. Changes in Long-Term Debt

The following is a summary of changes in long-term debt of the governmental activities for the year ended April 30, 2019:

	April 30, 2018	Issued	Retired	April 30, 2019	Due Within One Year
Alternate Revenue Source Bond	\$ 2,725,000	\$ -	\$ 205,000	\$ 2,520,000	\$ 205,000
General Obligation Debt Certificate	1,565,000	-	60,000	1,505,000	65,000
General Obligation Note Payable	729,408	-	72,533	656,875	74,528
Total	<u>\$ 4,770,000</u>	<u>\$ -</u>	<u>\$ 337,533</u>	<u>\$ 4,681,875</u>	<u>\$ 344,528</u>

**11. Legal Debt Margin**

At April 30, 2019, the estimated legal debt margin was determined as follows:

Assessed Valuation (Tax Year 2018)	<u>\$ 56,337,000</u>
Statutory Debt Limitation (8.625 percent of Assessed Valuation)	4,859,066
Total General Obligation Indebtedness at April 30, 2019	<u>2,161,875</u>
Legal Debt Margin	<u>\$ 2,697,191</u>

Note: By Illinois statute, the legal debt margin excludes alternative revenue source debt. The Village's General Obligation Bond is an alternative revenue source debt and thus it is not included in the legal debt margin calculation.

**12. Restricted Net Position and Fund Balances and Committed Fund Balance**

As of April 30, 2019, the Village's governmental activities and Motor Fuel Tax Fund had \$72,756 restricted for future street and alley maintenance expenditures. The restricted net position and fund balance for street and alley expenditures are from the motor fuel taxes provided by the State of Illinois and are restricted for that purpose by state statutes.

As of April 30, 2019, the Village's governmental activities and TIF Fund had \$27,915 restricted for future TIF District expenditures. The restricted net position and fund balance for TIF District expenditures are from the incremental increase in the assessed value of real property in the Village's TIF District and are restricted by state statutes to redevelopment expenditures for the TIF District.

As of April 30, 2019, the Village's governmental activities and General Fund had \$1,652 restricted for future IMRF expenditures. The restricted net position and fund balance for municipality IMRF contributions are restricted by enabling legislation.

**13. Restricted Property Tax Activity**

The Village had the following restricted property tax activity in the General Fund during the year ended April 30, 2019:

	Restricted Purpose			
	Insurance Liability	IMRF	Audit	ESDA
Restricted Balance				
at April 30, 2018	\$ -	\$ -	\$ -	\$ -
Property Taxes Received	4,385	40,558	7,907	816
Expenditures Incurred	(4,385)	(38,906)	(7,907)	(816)
Restricted Balance				
at April 30, 2019	\$ -	\$ 1,652	\$ -	\$ -

**14. Pension Plan – Defined Benefit Pension Plan**

*Plan Description*

The Village’s defined benefit pension plan, an agent multi-employer plan, for regular employees provides retirement and disability benefits, post retirement increases, and death benefits to plan members and beneficiaries. The Village’s plan is managed by the Illinois Municipal Retirement Fund (IMRF), the administrator of a multi-employer public pension fund. A summary of IMRF’s pension benefits is provided in the “Benefits Provided” section below. Details of all benefits are available from IMRF. Benefit provisions are established by statute and may only be changed by the General Assembly of the State of Illinois. IMRF issues a publicly available Comprehensive Annual Financial Report that includes financial statements, detailed information about the pension plan’s fiduciary net position, and required supplementary information. The report is available for download at [www.imrf.org](http://www.imrf.org).

*Benefits Provided*

IMRF has three benefit plans. The vast majority of IMRF members, including the Village, participate in the Regular Plan.

All three IMRF benefit plans have two tiers. Employees hired before January 1, 2011, are eligible for Tier 1 benefits. Tier 1 employees are vested for pension benefits when they have at least eight years of qualifying service credit. Tier 1 employees who retire at age 55 (at reduced benefits) or after age 60 (at full benefits) with eight years of service are entitled to an annual retirement benefit, payable monthly for life, in an amount equal to 1-2/3 percent of the final rate of earnings for the first 15 years of service credit, plus 2 percent for each year of service credit after 15 years to a maximum of 75 percent of their final rate of earnings. Final rate of earnings is the highest total earnings during any consecutive 48 months within the last 10 years of service, divided by 48. Under Tier 1,

the pension is increased by 3 percent of the original amount on January 1 every year after retirement.

Employees hired on or after January 1, 2011, are eligible for Tier 2 benefits. For Tier 2 employees, pension benefits vest after ten years of service. Participating employees who retire at age 62 (at reduced benefits) or after age 67 (at full benefits) with ten years of service are entitled to an annual retirement benefit, payable monthly for life, in an amount equal to 1-2/3 percent of the final rate of earnings for the first 15 years of service credit, plus 2 percent for each year of service credit after 15 years to a maximum of 75 percent of their final rate of earnings. Final rate of earnings is the highest total earnings during any 96 consecutive months within the last 10 years of service, divided by 96. Under Tier 2, the pension is increased on January 1 every year after retirement, upon reaching age 67, by the lesser of: 3 percent of the original pension amount, or 1/2 of the increase in the Consumer Price Index of the original pension amount.

There have been no changes in benefits between measurement dates.

*Employees Covered by Benefit Terms*

As of December 31, 2018, the following employees were covered by the benefit terms:

Retirees and Beneficiaries currently receiving benefits	7
Inactive Plan Members entitled to but not yet receiving benefits	11
Active Plan Members	6
Total	24

*Contributions*

As set by statute, the Village’s regular plan members are required to contribute 4.50 percent of their annual covered salary. The statute requires employers to contribute the amount necessary, in addition to member contributions, to finance the retirement coverage of its own employees. The Village’s annual contribution rate for calendar year 2018 was 10.58 percent. For the fiscal year ended April 30, 2019, the Village contributed \$38,906 to the plan. The employer also contributes for disability benefits, death benefits and supplemental retirement benefits, all of which are pooled at the IMRF level. Contribution rates for disability and death benefits are set by the IMRF Board of Trustees, while the supplemental retirement benefits rate is set by statute.

*Net Pension Liability*

The Village’s net pension liability was measured as of December 31, 2018. The total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date.

### *Actuarial Assumptions*

The following are the methods and assumptions used to determine total pension liability at December 31, 2018:

- The Actuarial Cost Method used was Entry Age Normal
- The Asset Valuation Method used was Market Value of Assets
- The Inflation Rate was assumed to be 2.50 percent
- Salary Increases were expected to be 3.39 percent to 14.25 percent, including inflation
- The Investment Rate of Return was assumed to be 7.25 percent
- Projected Retirement Age was from the Experience-based Table of Rates, specific to the type of eligibility condition, last updated for the 2017 valuation according to an experience study from years 2014 to 2016
- The IMRF-specific rates for Mortality (for non-disabled retirees) were developed from the RP-2014 Blue Collar Health Annuitant Mortality Table with adjustments to match current IMRF experience
- For Disabled Retirees, an IMRF-specific mortality table was used with fully generational projection scale MP-2017 (base year 2015). The IMRF-specific rates were developed from the RP-2014 Disabled Retirees Mortality Table, applying the same adjustments that were applied for non-disabled lives
- For Active Members, an IMRF-specific mortality table was used with fully generational projection scale MP-2017 (base year 2015). The IMRF-specific rates were developed from the RP-2014 Employee Mortality Table with adjustments to match current IMRF experience
- The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense, and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return to the target asset allocation percent and adding expected inflation.

The target allocation and best estimates of geometric real rates of return for each major asset class are summarized in the following table:

Asset Class	Portfolio Target Percentage	Long-Term Expected Real Rate of Return
Domestic Equity	37%	7.15%
International Equity	18%	7.25%
Fixed Income	28%	3.75%
Real Estate	9%	6.25%
Alternative Investments	7%	3.2-8.5%
Cash Equivalents	1%	2.50%
Total	100%	

There were changes to the investment rate of return between the measurement dates.

*Single Discount Rate*

A single discount rate of 7.25 percent was used to measure the total pension liability. The projection of cash flow used to determine this Single Discount Rate assumed that the plan members' contributions will be made at the current contribution rate, and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. The Single Discount Rate reflects:

1. A long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits), and
2. The tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of the most recent valuation, the expected rate of return on plan investments is 7.25 percent, the municipal bond rate is 3.71 percent, and the resulting single discount rate is 7.25 percent.

*Changes in the Net Pension Liability*

	Total Pension Liability (A)	Plan Fiduciary Net Position (B)	Net Position Liability (Asset) (A) - (B)
	<u>                    </u>	<u>                    </u>	<u>                    </u>
Balances at December 31, 2017	\$ 1,539,503	\$ 1,409,436	\$ 130,067
Changes for the year:			
Service Cost	28,710	-	28,710
Interest on the Total Pension Liability	113,223	-	113,223
Changes of Benefit Terms	-	-	-
Differences Between Expected and Actual Experience of the Total Pension Liability	72,260	-	72,260
Changes of Assumptions	44,790	-	44,790
Contributions - Employer	-	36,783	(36,783)
Contributions - Employees	-	13,263	(13,263)
Net Investment Income	-	(72,208)	72,208
Benefit Payments, including Refunds of Employee Contributions	(88,436)	(88,436)	-
Other (Net Transfer)	-	106,072	(106,072)
Net Changes	<u>170,547</u>	<u>(4,526)</u>	<u>175,073</u>
Balances at December 31, 2018	<u>\$ 1,710,050</u>	<u>\$ 1,404,910</u>	<u>\$ 305,140</u>

*Sensitivity of the Net Pension Liability to Changes in the Discount Rate*

The following presents the plan's net pension liability calculated using a Single Discount rate of 7.25 percent, as well as what the plan's net pension liability (asset) would be if it were calculated using a Single Discount Rate that is 1 percent lower or 1 percent higher:

	1% Decrease (6.25%)	Current Discount (7.25%)	1% Increase (8.25%)
	<u>                    </u>	<u>                    </u>	<u>                    </u>
Total Pension Liability	\$ 1,912,660	\$ 1,710,050	\$ 1,542,745
Plan Fiduciary Net Position	1,404,910	1,404,910	1,404,910
Net Pension Liability (Asset)	<u>\$ 507,750</u>	<u>\$ 305,140</u>	<u>\$ 137,835</u>

*Pension Expense, Deferred Outflow of Resources and Deferred Inflows of Resources Related to Pensions*

**This section is presented for informational purposes only. As the Village funds the pension plan mainly through property tax levies received in the General Fund, and the General Fund is presented on the modified cash basis, the following accrual based financial statement elements are not recorded by the Village.**

For the year ended December 31, 2018, the Village's accrual basis pension income was \$40,615. At December 31, 2018, the Village's accrual basis deferred outflows of resources and deferred inflows of resources related to pensions were from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows/ (Inflows) of Resources
Differences between expected and actual experience	\$ 66,137	\$ 12,507	\$ 53,630
Changes in assumptions	29,155	19,848	9,307
Net difference between projected and actual earnings on pension plan investments	<u>93,373</u>	<u>-</u>	<u>93,373</u>
Total Deferred Amounts to be Recognized in Pension Expense in Future Periods	<u>\$ 188,665</u>	<u>\$ 32,355</u>	<u>\$ 156,310</u>

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in the accrual basis pension expense in future periods as follows:

Year Ending December 31	Net Deferred Outflows/ (Inflows) of Resources
2019	\$ 55,588
2020	51,449
2021	13,183
2022	36,090
Total	<u>\$ 156,310</u>

#### *Payables to the Pension Plan*

At April 30, 2019, the Village reported payables to IMRF of \$2,421 for legally required employer contributions, \$1,030 for legally required employee contributions, and \$378 for voluntary employee contributions which had been withheld from employee wages but not yet remitted to IMRF.

**15. Interfund Transfers**

The following is a schedule of interfund transfers made during the fiscal year:

	<u>Transfer In</u>	<u>Transfer Out</u>
Governmental Funds:		
General Fund	\$ -	\$ 535,856
Police Fund	313,596	-
Street and Alley Fund	222,260	-
Proprietary Funds:		
Waterworks Operation Fund	121,711	-
Waterworks and Sewerage Fund	-	121,711
Total All Funds	<u>\$ 657,567</u>	<u>\$ 657,567</u>

The purpose of the transfers from the General Fund to the other governmental funds and from the Waterworks and Sewerage Fund to the Waterworks Operation Fund was to cover necessary expenditures in these recipient funds as deemed appropriate by the Village Board.

**16. Risk of Loss**

Significant losses are covered by commercial insurance for property, liability, and workers' compensation. During the year ended April 30, 2019, there were no significant reductions in coverage. There have been no settlement amounts that have exceeded insurance coverage or that have been uncovered by insurance in the past three years.

**17. Tax Increment Financing District**

In 2003, the Village established a Tax Increment Financing (TIF) District. This District is an area within the Village designated as a redevelopment project area. The Village redevelops, improves, and maintains the designated area in order to increase the assessed value, which generates more property tax receipts from that District. The activities of the TIF District are accounted for in the TIF Fund, a special revenue fund.

For the year ended April 30, 2019, property tax receipts of \$1,351,927 were received from the TIF District.

**18. Redevelopment Commitments**

The Village has entered into a number of redevelopment agreements with outside parties to encourage residential and commercial development within the Village's TIF District. As an incentive to developers, the Village has committed to reimburse certain eligible project expenses to developers from the TIF District's receipts over periods ranging from ten years to the life of the TIF District. As of April 30, 2019, the maximum amount committed to developers was \$8,489,606 and the total paid to developers was \$6,650,920. The timing of future payments for these commitments and the amounts of

those payments cannot be estimated as they are dependent on the actual costs incurred by the developers and the attainment of agreed upon development milestones. In relation to one of its redevelopment agreements, the Village has committed to issue TIF revenue bonds to pay the developer for eligible project expenses in the event the incremental property tax generated by the redeveloped property is insufficient to pay the developer. Such bonds would not be general obligations of the Village, but would only be payable from the incremental property tax revenue generated by the property in the developer's project.

The Village has also entered into an agreement with the local school district to compensate that governmental unit for the impact of additional students resulting from residential development within the TIF District, which has been assisted by financial incentives or infrastructure improvements provided by the Village. This agreement will terminate with the end of the TIF District in 2026 or earlier if all redevelopment projects as listed in the TIF District's Redevelopment Plan have been completed. The timing of future payments for this commitment and the amounts of those payments cannot be estimated as they are dependent upon events that have not yet occurred. The amount paid in fiscal year 2019 was \$291,010.

The Village has also entered into an agreement with the local fire protection district to pay \$850,000 to that governmental unit for the reimbursement of capital costs incurred. Under the terms of the agreement, the Village made a one-time lump sum payment in the amount of \$250,000 in fiscal year 2015 and will make annual installments of \$50,000 to be paid on December 15 annually through 2026.

These financial statements do not include any expense/expenditure or liability related to the future payments on these redevelopment commitments.

## **19. Other Commitments**

The Village has entered into an annexation agreement with a local business. The agreement requires the Village to rebate property taxes back to the business for a period of twenty years ending in fiscal year 2021. The total estimated amount to be rebated back to the business over the twenty years is \$82,000. These rebates will be paid by the Village's General Fund. As of April 30, 2019, the Village has paid \$60,652 in rebate payments. These financial statements do not include any expense/expenditure or liability related to the unpaid portion of these commitments. No rebate was paid in the year ended April 30, 2019.

## **20. Employee Separation Pay Commitment**

At separation from employment, employees are eligible to receive compensation for all unused vacation time. At April 30, 2019, the Village's potential liability for employee separation pay was \$19,908. These financial statements do not include a liability or expenditure/expense for this amount. The distribution of this commitment among the Village's funds approximates \$11,752 for the Police Fund, \$2,420 for the General Fund, \$3,155 for the Street and Alley Fund, and \$2,581 for the enterprise funds.

**21. Lease Agreement**

The Village has a lease agreement with a communications company for a parcel of Village land on which a communications tower was constructed. The initial five-year term of the lease ended in July 2012 with tenant options to renew for a total of fifteen additional years. The tenant exercised its first five-year renewal of the lease through July 2017. The lease agreement calls for monthly rental payments of \$925, adjusted annually by 3 percent from the date of execution. As of date of the auditor’s report, the tenant has continued to make monthly rent payments, but a formal extension has not been made beyond July 2017, and the lease is now considered a month-to-month agreement.

**22. Other Capital Commitments**

Through the date of the independent auditor’s report, the Village has entered into contracts for the following:

<u>Purpose</u>	<u>Responsible Fund</u>	<u>Total Commitment</u>	<u>Fiscal Year of Expenditure</u>
Old Fire Station Purchase	General	\$ 5,000	2020
End Loader Equipment Purchase	General/Street and Alley/Water	118,744	2020
Engineering Services for Lift Station Replacement Project	Water/Sewer	40,000	2020

**23. Subsequent Events**

On July 16, 2019, the Village entered into a capital lease agreement for new water meters and water meter software. The lease term is for seven years and requires an annual payment of \$64,100, beginning July 15, 2020, with an option to purchase at the end of the lease for \$1.

**24. New Government Accounting Standard**

In March 2018, GASB issued GASB Statement 88 (GASB 88), *Certain Disclosures Related to Debt, Including Borrowings and Direct Placements*. The provisions of GASB 88 will improve the information that is disclosed in the notes to governmental financial statements related to debt. GASB 88 is effective for the Village's Fiscal Year 2020. The Village's management is currently reviewing what impact, if any, this new standard will have on its future financial statements and disclosures.

VILLAGE OF TOLONO, ILLINOIS  
IMRF Schedule of Changes in Net Pension Liability and Related Ratios  
Calendar Years

Required Supplementary Information  
(Unaudited)

	(2), (3) 2018	2017	2016	(1) 2015
<b>Total Pension Liability</b>				
Service Cost	\$ 28,710	\$ 31,624	\$ 40,402	\$ 37,714
Interest on the Total Pension Liability	113,223	108,389	109,526	102,493
Changes of Benefit Terms	-	-	-	-
Differences Between Expected and Actual Experience of the Total Pension Liability	72,260	59,211	(84,966)	26,472
Changes of Assumptions	44,790	(53,768)	(17,012)	(3,648)
Benefit Payments, including Refunds of Employee Contributions	(88,436)	(70,643)	(86,268)	(59,917)
Net Change in Total Pension Liability	170,547	74,813	(38,318)	103,114
Total Pension Liability - Beginning	1,539,503	1,464,690	1,503,008	1,399,894
Total Pension Liability - Ending (A)	<u>\$ 1,710,050</u>	<u>\$ 1,539,503</u>	<u>\$ 1,464,690</u>	<u>\$ 1,503,008</u>
<b>Plan Fiduciary Net Position</b>				
Contributions - Employer	\$ 36,783	\$ 68,002	\$ 308,280	\$ 60,984
Contributions - Employees	13,263	16,649	13,347	14,683
Net Investment Income	(72,208)	204,790	61,460	4,064
Benefit Payments, including Refunds of Employee Contributions	(88,436)	(70,643)	(86,268)	(59,917)
Other (Net Transfer)	106,072	(11,481)	15,742	64,896
Net Change in Plan Fiduciary Net Position	(4,526)	207,317	312,561	84,710
Plan Fiduciary Net Position - Beginning	1,409,436	1,202,119	889,558	804,848
Plan Fiduciary Net Position - Ending (B)	<u>\$ 1,404,910</u>	<u>\$ 1,409,436</u>	<u>\$ 1,202,119</u>	<u>\$ 889,558</u>
Net Pension Liability - Ending (A) - (B)	<u>\$ 305,140</u>	<u>\$ 130,067</u>	<u>\$ 262,571</u>	<u>\$ 613,450</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	82.16%	91.55%	82.07%	59.19%
Covered Payroll	\$ 294,733	\$ 369,978	\$ 296,600	\$ 326,289
Net Pension Liability as a Percentage of Covered Payroll	103.53%	35.16%	88.53%	188.01%

Notes:

- (1) This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, information is presented for those years for which information is available.
- (2) There were no benefit changes during the year.
- (3) Assumption changes for the actuarial calculation of the total pension liability included:
  - a. Investment rate of return decreased from 7.50 percent to 7.25 percent

VILLAGE OF TOLONO, ILLINOIS  
IMRF Schedule of Employer Contributions  
Calendar Years

Required Supplementary Information  
(Unaudited)

(1) Year Ended December 31	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a Percentage of Covered Payroll
2018	\$ 36,784	\$ 36,783	\$ 1	\$ 294,733	12.48%
2017	68,001	68,002	(1)	369,978	18.38%
2016	58,520	308,280	(249,760)	296,600	103.94%
2015	60,983	60,984	(1)	326,289	18.69%
2014	55,481	55,481	-	297,805	18.63%
2013	57,946	57,946	-	311,703	18.59%

Note:

(1) This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, information is presented for those years for which information is available.

VILLAGE OF TOLONO, ILLINOIS  
Notes to Required Supplementary Information - IMRF Schedule of Employer Contributions  
(Unaudited)  
April 30, 2019

**Summary of Actuarial Methods and Assumptions Used in the Calculation of the 2018 Contribution Rate\***

Valuation Date:

Notes: Actuarially determined contribution rates are calculated as of December 31 each year, which is 12 months prior to the beginning of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine 2018 Contribution Rates:

Actuarial Cost Method:	Aggregate Entry Age Normal
Amortization Method:	Level Percentage of Payroll, Closed
Remaining Amortization Period:	25-year closed period
Asset Valuation Method:	5-year smoothed market; 20% corridor
Wage Growth:	3.50%
Price Inflation:	2.75% - approximate; No explicit price inflation assumption is used in this valuation.
Salary Increases:	3.75% to 14.50% including inflation
Investment Rate of Return:	7.50%
Retirement Age:	Experience - based table of rates that are specific to the type of eligibility condition. Last updated for the 2014 valuation pursuant to an experience study of the period 2011 - 2013
Mortality:	For non-disabled retirees, an IMRF specific mortality table was used with fully generational projection scale MP-2014 (base year 2012). The IMRF specific rates were developed from the RP-2014 Blue Collar Health Annuitant Mortality Table with adjustments to match current IMRF experience. For disabled retirees, an IMRF specific mortality table was used with fully generational projection scale MP-2014 (base year 2012). The IMRF specific rates were developed from the RP-2014 Disabled Retirees Mortality Table applying the same adjustment that were applied for non-disabled lives. For active members, an IMRF specific mortality table was used with fully generational projection scale MP-2014 (base year 2012). The IMRF specific rates were developed from the RP-2014 Employees Mortality Table with adjustments to match current IMRF experience.

Other Information:

Notes: There were no benefit changes during the year

\* Based on Valuation Assumptions used in the December 31, 2016, actuarial valuation. There is a two year lag between valuation and rate setting.

VILLAGE OF TOLONO, ILLINOIS  
Combining Balance Sheet - Modified Cash Basis  
*Audit and ESDA Subfunds*  
April 30, 2019

	<u>Audit Fund</u>	<u>ESDA Fund</u>	<u>Total</u>
ASSETS			
Cash	\$ -	\$ -	\$ -
	<u>          </u>	<u>          </u>	<u>          </u>
LIABILITIES AND FUND BALANCES			
Liabilities	\$ -	\$ -	\$ -
Fund Balances:			
Unassigned	-	-	-
	<u>          </u>	<u>          </u>	<u>          </u>
Total Liabilities and Fund Balances	\$ -	\$ -	\$ -
	<u>          </u>	<u>          </u>	<u>          </u>

VILLAGE OF TOLONO, ILLINOIS  
Combining Statement of Revenues, Expenditures, and  
Changes in Fund Balances - Modified Cash Basis  
*Audit and ESDA Subfunds*  
For the Year Ended April 30, 2019

	<u>Audit Fund</u>	<u>ESDA Fund</u>	<u>Total</u>
<b>Revenues</b>			
Local Taxes:			
Property Tax	\$ 7,907	\$ 816	\$ 8,723
<b>Expenditures</b>			
Current:			
General Government	16,085	-	16,085
Public Safety	-	45,000	45,000
Total Expenditures	<u>16,085</u>	<u>45,000</u>	<u>61,085</u>
<b>Excess (Deficit) of Revenue Over Expenditures</b>	(8,178)	(44,184)	(52,362)
<b>Other Financing Source (Uses)</b>			
Transfers In	<u>8,178</u>	<u>44,184</u>	<u>52,362</u>
<b>Net Change in Fund Balances</b>	-	-	-
<b>Fund Balances, May 1, 2018</b>	<u>-</u>	<u>-</u>	<u>-</u>
<b>Fund Balances, April 30, 2019</b>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

VILLAGE OF TOLONO, ILLINOIS  
Statement of Expenditures - Budget and Actual - Modified Cash Basis  
*Audit and ESDA Subfunds*  
For the Year Ended April 30, 2019

	Budget		Actual	Under/(Over) Budget
	Original	Final		
<b>Audit Fund</b>				
Current:				
General Government				
Contractual Services	\$ 20,000	\$ 20,000	\$ 16,085	\$ 3,915
<b>ESDA Fund</b>				
Current:				
Public Safety				
Contractual Services	\$ 11,000	\$ 11,000	\$ 10,000	\$ 1,000
Capital Outlay	38,500	38,500	35,000	3,500
Total ESDA Expenditures	\$ 49,500	\$ 49,500	\$ 45,000	\$ 4,500

VILLAGE OF TOLONO, ILLINOIS  
Property Tax Levies, Rates, Extensions, and Collections  
For the Four Years Ended April 30

Fiscal Year of Receipt <i>Levy Year</i>	2020	2019	2018	2017
	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
<b>Assessed Valuations</b>	\$ 38,963,640	\$ 37,150,329	\$ 35,373,098	\$ 34,201,407
<b>Tax Levies</b>				
General	\$ 88,305	\$ 86,895	\$ 85,100	\$ 83,900
Police Protection	20,335	20,010	19,600	19,300
ESDA	835	830	825	805
Audit	8,080	7,945	7,800	7,700
Insurance Liability	4,480	4,405	4,350	4,290
IMRF	41,425	40,740	39,900	39,375
Total Tax Levies	<u>\$ 163,460</u>	<u>\$ 160,825</u>	<u>\$ 157,575</u>	<u>\$ 155,370</u>
<b>Tax Rates</b>				
General	0.2267	0.2328	0.2393	0.2453
Police Protection	0.0522	0.0536	0.0551	0.0564
ESDA	0.0022	0.0022	0.0023	0.0024
Audit	0.0208	0.0213	0.0220	0.0225
Insurance Liability	0.0115	0.0118	0.0122	0.0125
IMRF	0.1064	0.1092	0.1122	0.1151
Total Tax Rates	<u>0.4198</u>	<u>0.4309</u>	<u>0.4431</u>	<u>0.4542</u>
<b>Tax Extensions</b>				
General	\$ 88,331	\$ 86,486	\$ 84,648	\$ 83,896
Police Protection	20,339	19,913	19,491	19,290
ESDA	857	817	814	821
Audit	8,104	7,913	7,782	7,695
Insurance Liability	4,481	4,384	4,316	4,275
IMRF	41,457	40,568	39,689	39,366
Total Tax Extensions	<u>\$ 163,569</u>	<u>\$ 160,081</u>	<u>\$ 156,740</u>	<u>\$ 155,343</u>
<b>Tax Collections</b>				
General		\$ 86,477	\$ 84,840	\$ 84,008
Police Protection		19,911	19,541	19,318
ESDA		816	801	824
Audit		7,907	7,807	7,699
Insurance Liability		4,385	4,320	4,277
IMRF		40,558	39,774	39,415
Total Tax Collections		<u>\$ 160,054</u>	<u>\$ 157,083</u>	<u>\$ 155,541</u>
<b>Percentage of Extension Collected</b>		<u>99.98%</u>	<u>100.22%</u>	<u>100.13%</u>

## INDEPENDENT AUDITOR'S REPORT ON TAX INCREMENT FINANCING

Board of Village Trustees  
Village of Tolono, Illinois  
Tolono, Illinois

We have audited, in accordance with auditing standards generally accepted in the United States of America, the accompanying financial statements and related notes of the Village of Tolono, Illinois as of and for the year ended April 30, 2019, as listed in the table of contents, and have issued our report thereon dated August 5, 2019.

In connection with our audit, we tested expenditures of the Village of Tolono, Illinois' Tax Increment Financing district. The results of our tests indicate that for the items tested, the Village of Tolono, Illinois complied with Subsection (q) of Section 11-74.4-3 of Public Act 85-1142, "An Act in Relation to Tax Increment Financing." Additionally, nothing came to our attention that caused us to believe that the Village of Tolono, Illinois was not in compliance with the statutory requirements of Subsection (q) of Section 11-74.4-3 of Public Act 85-1142, insofar as they relate to accounting matters. However, our audit was not directed primarily toward obtaining knowledge of such noncompliance. Accordingly, had we performed additional procedures, other matters may have come to our attention regarding the Village of Tolono, Illinois' noncompliance with the above-referenced statutory requirements, insofar as they relate to accounting matters.

This report is intended solely for the information and use of the Board of Village Trustees, management, and others within the Village of Tolono, Illinois, and the Comptroller of the State of Illinois, and is not intended to be and should not be used by anyone other than these specified parties.

  
Champaign, Illinois  
August 5, 2019



CERTIFIED PUBLIC ACCOUNTANTS and CONSULTANTS

## ATTACHMENT: ENGINEERING INFORMATION

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- 1) Sanitary Sewer System Flow Study
  - Detailed flow study performed throughout collection system
- 2) WWTP Capital Improvements Plan
  - High level conceptual view of improvements needed at WWTP and costs
- 3) Water & Sewer Rate Study
  - Evaluation of Village's current rates and revenue compared to capital improvement needs
- 4) Water & Sewer Special Meeting Powerpoint Presentation
  - Presentation highlighting the findings of the previous 3 studies mentioned above
- 5) IEPA Project Plan



VILLAGE OF TOLONO, IL

## Sanitary Sewer System Flow Study Technical Report

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September 2019



Prepared by:

**Donohue & Associates, Inc.**  
1605 South State Street, Suite 1C, Champaign, IL 61820  
donohue-associates.com

Donohue Project No.: 13523

**TECHNICAL REPORT**

**VILLAGE OF TOLONO, IL**

**SANITARY SEWER SYSTEM FLOW STUDY**

**CHAMPAIGN, IL**

**PROJECT NO. 13523**

**CERTIFICATION**

I hereby certify that this technical report was prepared by me and that I am a duly Licensed Professional Engineer under the laws of the State of Illinois.



License Expires: November 30, 2019

Dated Signed: September 24, 2019

A handwritten signature in blue ink that reads "Tim A. Cowan". The signature is written over a horizontal line.

Tim A. Cowan  
Printed Name

Project Manager  
Title

**Donohue & Associates, Inc.**

**Illinois-registered Professional Design Firm No. 184.001924**

## TABLE OF CONTENTS

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CERTIFICATION.....	1
EXECUTIVE SUMMARY .....	3
BACKGROUND.....	4
FLOW MONITORING DATA & ANALYSIS.....	5
IDENTIFIED CONCERNS.....	10
RECOMMENDED IMPROVEMENTS, BUDGETARY COSTS, AND SCHEDULE.....	12

### Appendix 1 – Phase 1 Summary

*Note: Monitoring location map was marked up to indicate actual locations where monitors were installed*

### Appendix 2 – Summary of Flow Data

### Appendix 3 – Flow Charts

WWTP Total Flow Chart  
East Side Flow Chart  
West Side Flow Chart

## EXECUTIVE SUMMARY

This report is primarily intended to identify capacity concerns within the Village of Tolono's existing sanitary sewer collection system. This report will also provide general condition assessments of the Village's lift stations and the WWTP. Ultimately, this report should provide assistance with long-term planning for the Village's sanitary sewer collection system. The following phases of this study were completed previously:

Phase 1 – Existing collection system analysis and lift station evaluation

Phase 2 – Flow monitoring and data analysis

The following sanitary sewer system improvements are recommended and will be discussed further in this report:

- 1) East St. Lift Station Replacement
- 2) WWTP Capital Improvements
- 3) Elizabeth Street Lift Station Improvements
- 4) Watson Street Lift Station Improvements
- 5) Sewer Cleaning & Inspection Program
- 6) Sewer Repair/Rehabilitation/Replacement

## BACKGROUND

The Village's wastewater system serves approximately 673 acres, including 1,158 single-family residential properties, 30 commercial properties, and 14 multi-family properties. There are no special waste generators within the Village's existing service area.

The Village's collection system is comprised of approximately 80,100 feet of gravity sanitary sewer and six (6) municipal lift stations (not including the WWTP influent lift station or Unity High School & Jr. High Lift Station) and force mains. The majority of the collection system and WWTP were built with the original system constructed in the early 1970's. Collection system additions since the original construction include the extension to serve the Linshar Fields subdivision in the 1990's and the Deerpath, Windstone, Kinderwood, and Southview subdivisions in the 2000's. The WWTP is an activated sludge WWTP that has had some upgrades including the construction of a primary clarifier, filter building, sludge storage lagoon in the 1980's and the addition of a roughing filter in 2011.

General steps to evaluate an existing sanitary sewer collection system and wastewater treatment plant (WWTP) are as follows:

- 1) Review existing maps, plans, and data about the existing infrastructure
- 2) Meet with operations and maintenance staff to discuss existing concerns
- 3) Inspect condition and operation of existing WWTP and lift stations within the collection system
- 4) Evaluate treatment process and identify improvement needs
- 5) Delineate drainage basins based on existing infrastructure that flows to individual lift stations
- 6) Identify any special waste generators
- 7) Estimate theoretical flows to WWTP and lift station drainage basins based on State recommended design standards
- 8) Develop flow monitoring plan to determine actual flows to the WWTP and within the collection system at reasonable intervals to divide the system into somewhat equal parts based on total length of sewers within the collection system
- 9) Install flow monitors to determine actual flows during dry weather and wet weather
- 10) Analyze data collected during flow monitoring to identify capacity concerns at the WWTP and within the collection system
- 11) Prioritize areas requiring improvement or additional physical investigation including cleaning, manhole inspections, sewer televising, dye testing, and smoke testing based on existing condition, operation, and capacity concerns.

With the exception of treatment process evaluation (Step 4) which is being completed as part of the WWTP Capital Improvement Planning study, steps 1 – 7 were completed during Phase 1 and are summarized in the Phase 1 Summary attached in [Appendix 1](#). The Phase 1 Summary monitoring locations map has been marked up to indicate actual locations where monitors were installed.

Step 7 was completed during Phase 2 using six (6) Teledyne ISCO Model 2150 Area Velocity Flow Meters and one (1) Teledyne ISCO Model 676 Rain Logging System installed at the locations shown on the Flow Monitor Location Map in Appendix A.

Steps 8 – 9 were completed as part of Phase 3 and will be discussed in this report.

## FLOW MONITORING DATA & ANALYSIS

As previously mentioned, area-velocity flow meters were installed at strategic locations in the Village to determine average daily flows and peak hourly flows from different areas of the Village to help pinpoint capacity concerns within the sanitary sewer collection system. In addition, this data can be used to efficiently plan for future investigation and rehabilitation efforts to minimize inflow and infiltration and reduce the overall load on the existing WWTP.

### DEVICE LIMITATIONS, DATA IRREGULARITIES, AND DATA EXCLUDED FROM FURTHER ANALYSIS

Although submerged area-velocity sensors are one of the primary recommended methods for measuring flow in this application, they are not flawless; interpretation of data is a key component of the process. Based on discussions with the flow monitoring equipment representatives, ideal flow measurement parameters for these devices in this application have a consistent depth of 1" or greater and a consistent velocity of 1 foot per second or greater. Data irregularities resulting from obscure velocity and level readings may occur during turbulent flows, low flows, or possibly when debris is blocking the sensor. Invalid data should not be used for analysis.

The six (6) flow monitors and rain gauge were originally installed on March 14, 2019.

Data was collected during the first two weeks and monitors on the east side of the system required adjustment/relocation. Final monitor adjustments and relocations were performed on March 29<sup>th</sup>, 2019. No east side flow monitoring data prior to March 30<sup>th</sup>, 2019 was used for further analysis.

There were some perceived velocity measurement issues at the Elizabeth St. Monitor, potentially due to sensor blockage, between April 6<sup>th</sup> and May 8<sup>th</sup>. Attempts to clear the blockage from the surface were made at the beginning of May but did not appear to be effective until the rain event on May 9<sup>th</sup> dislodged the blockage. There was also questionable flow data from the east side monitors beyond June 7<sup>th</sup>, where downstream monitors were consistently indicating less flow than upstream monitors. All data from the specific monitors and monitoring periods above was deemed invalid and was not user in further analysis.

Both the West Side monitor and the Cory Street monitor consistently measured velocities less than 1 ft/sec, however based on visual observation, this appeared accurate. The West Side monitor was frequently surcharged due to restrictions at the influent lift station to the WWTP. Low velocities observed at Cory Street may have been due to a flattened downstream sewer run or possibly solids buildup in the sewer run immediately downstream. Based on visual observations, this data was considered to be accurate and was used for further analysis.

A summary of the flow data identifying invalid data and other flow analysis is included in **Appendix 2.**

DATA ANALYSIS AND SUMMARY

EPA criteria for excess dry and wet weather flows are 120 Gallons per Capita per Day (GPCD) and 275 GPCD respectively. Based on estimated census data, the Village of Tolono currently serves 3,449 people; thus indicating excessive dry weather daily flows at and above 413,880 GPD and excessive wet weather daily flows at and above 948,475 GPD.

A summary of the observed data analysis is shown in the table below:

	PEAK HOURLY FLOW (3/30/19)	PEAK DAILY FLOW (3/30/19)	AVERAGE DRY WEATHER FLOW (6/2/19 TO 6/6/19)	PEAKING FACTOR	IEPA THEORETICAL PEAKING FACTOR <sup>2</sup>
	GPD	GPD	GPD	UNITLESS	UNITLESS
WWTP <sup>1</sup>	1,120,167	767,354	225,546	4.97	3.54
EAST	476,667	337,846	92,786	5.14	3.82
ELIZABETH	409,667	284,465	86,044	4.76	3.84
WASHINGTON	221,667	166,182	31,742	6.98	4.07
WEST	643,500	429,508	132,760	4.85	3.72
WATSON	312,250	222,921	58,857	5.31	3.94
CORY	133,083	85,094	38,278	3.48	4.03

1) WWTP Totals were calculated by combining East and West flows.

2) Illinois' design recommendation for new collection systems varies based on population served; IEPA Theoretical Peaking Factor was calculated using average dry weather flow and 100 GPCD to determine equivalent population served.

Flow charts for WWTP Total Flow, East Side Flow, and West Side Flow are included in **Appendix 3**.

In order to determine Average Dry Weather (ADW) flow, we utilized data between the dates of June 2<sup>nd</sup>, 2019 to June 6<sup>th</sup>, 2019 when there was no recorded rainfall. There was little, to no, rainfall in the three (3) days leading up to June 2<sup>nd</sup>, 2019 which allowed the effects from previous rain events to subside. The total system ADW flow from this period was approximately 225,000 Gallons Per Day (GPD) which compares very closely (within 10%) to the Village's average daily water usage during the study period, of approximately 244,000 GPD, indicating the data's validity.

According to EPA's guide to estimating infiltration and inflow, groundwater infiltration (GWI) can be estimated by averaging the flows from midnight to 6:00 a.m. during the same period used to determine the ADW. However, based on the data collected, it appeared that water usage flows dropped more significantly from 1:00 a.m. to 6:00 a.m., so this time period was used to estimate GWI. Based on this criteria, the follow groundwater infiltration estimates were generated:

	ESTIMATED GROUNDWATER INFILTRATION (6/2/19 TO 6/6/19) <sup>3</sup>	AVERAGE DRY WEATHER FLOW (6/2/19 TO 6/6/19)	% INFILTRATION	INCH-DIAMETER-MILE <sup>4</sup>	GPD/IDM <sup>5</sup>
	GPD	GPD	%	IDM	
WWTP <sup>1,2</sup>	99,624	225,546	44%	130	764
EAST <sup>2</sup>	33,581	92,786	36%	70	478
ELIZABETH <sup>2</sup>	34,432	86,044	40%	60	572
WASHINGTON <sup>2</sup>	10,664	31,742	34%	53	202
WEST	66,042	132,760	50%	43	1,521
WATSON	25,113	58,857	43%	30	833
CORY	7,294	38,278	19%	16	460

- 1) WWTP Totals were calculated by combining East and West flows.
- 2) Average Dry Weather Flow is likely ~5,760 GPD higher during school year, which would reduce % infiltration
- 3) Based on average of minimum observed flows from 1 a.m. to 6 a.m. during Average Dry Weather period
- 4) Based on the estimated lengths/sizes of existing Village-owned sanitary sewers upstream of monitoring location.
- 5) Generally, anything equal to or greater than 3,000 GPD/IDM is considered excessive infiltration.

Another general measure of infiltration and inflow is the capture coefficient of storm events. Capture coefficient is a measure of the percentage of total rainfall volume from a storm event that inflows or infiltrates the collection system. Collection systems exceeding 5% capture capacity may be considered to be in poor condition but capture capacity is highly subjective since it depends on preexisting moisture conditions.

	SERVICE AREA	TOTAL AVERAGE SEWER FLOW VOLUME <sup>2</sup>	TOTAL SEWER FLOW VOLUME DURING STORM EVENT <sup>2</sup>	NET SEWER FLOW VOLUME DURING STORM EVENT	TOTAL RAINFALL VOLUME DURING STORM EVENT <sup>3</sup>	CAPTURE COEFFICIENT
	ACRES	GAL	GAL	GAL	GAL	%
WWTP <sup>1</sup>	689	694,235	1,447,010	752,776	20,765,884	3.63%
EAST	405	303,356	629,205	325,849	12,206,361	2.67%
ELIZABETH	331	241,015	536,118	295,103	9,976,063	2.96%
WASHINGTON	128	171,740	326,885	155,146	3,857,813	4.02%
WEST	284	375,016	817,806	442,790	8,559,523	5.17%
WATSON	225	180,117	430,615	250,498	6,781,312	3.69%
CORY	66	82,290	170,458	88,169	1,989,185	4.43%

- 1) WWTP Totals were calculated by combining East and West flows.
- 2) Sewer flow volume is based on flows from 3/29/19 @10:00 p.m. to 4/1/2019 @ 12:00 a.m. when flows returned to average conditions.
- 3) Rainfall volume is based on service area and total rainfall from 3/29/19 @10:00 p.m. to 3/30/19 @ 5:30 p.m.

Although there were an abundance of rain events during the monitoring period, no single event resulted in a storm that exceed a 2-month recurrence interval based on ISWS Bulletin 70 which contains the current standards for stormwater design in Illinois. That being said, the impacts of stormwater discussed in this report may not account for larger events that inevitably will occur. During the study period, peak flows occurred on March 30<sup>th</sup>, 2019 following multiple rain events during that day and the days prior. The peak hourly flows from the monitors varied between 3.48 up to 6.98 times the normal ADW.

In Illinois, new collection systems are recommended to be designed to convey peak hourly flows which are approximately 4 times the average daily flows (varies based on population served). Although some of the areas peaking factors exceed 4, the observed peak flows are not an immediate concern in regards to sewer capacity assuming that sewers were constructed at minimum grade in accordance with current standards. If any area posed minor concerns for sewer capacity, it would be the sewers at the downstream end of the Elizabeth St. area since the peak hourly flow observed during the study period was 83% of the full flow capacity of an 8-inch sewer at minimum grade which is the largest diameter sewer in the area. Aside from a single incident that occurred due to pump failure, the director of public works indicated that there have been no sanitary sewer overflow events reported since he started there in January of 2016.

The lift stations downstream of the monitored locations do not present an immediate capacity concern either except for the influent lift station at the WWTP. A draw down test could not be performed at the WWTP due to frequent operation under surcharged conditions so its performance cannot be verified. However, the following information suggests the WWTP influent lift station is likely a hydraulic limitation:

- 1) The contract operator expressed concern that it could not keep up during storm events,
- 2) The total daily flow on March 30<sup>th</sup> exceeded the facility's NPDES permitted daily maximum flow of 0.588 MGD by approximately 30%,
- 3) And the sewer at the closest upstream monitor to the influent lift station, the West Side monitor, was consistently at a level above 90% of the total pipe height.

With no significant capacity concerns in the system, other than at the plant, further analysis should be performed to determine the financial impacts of conveying and treating this extraneous flow.

The overall average daily flows compared to the dry weather flows observed during the study period and net value was extrapolated over a year's time to estimate the total infiltration and inflow pumped and treated in a year.

	AVERAGE DAILY FLOW <sup>3</sup>	AVERAGE DRY WEATHER FLOW (6/2/19 TO 6/7/19)	ESTIMATED TOTAL ANNUAL FLOW	ESTIMATED ANNUAL INFLOW & INFILTRATION
	GPD	GPD	GALLONS	GALLONS
WWTP <sup>1,2</sup>	333,233	225,546	121,629,921	39,305,742
EAST <sup>2</sup>	145,611	92,786	53,147,891	19,281,069
ELIZABETH <sup>2</sup>	115,687	86,044	42,225,792	10,819,740
WASHINGTON <sup>2</sup>	82,435	31,742	30,088,777	18,503,000
WEST	180,008	132,760	65,702,751	17,245,394
WATSON	86,456	58,857	31,556,497	10,073,669
CORY	39,499	38,278	14,417,175	445,873

- 1) WWTP Totals were calculated by combining East and West flows.
- 2) Average Dry Weather Flow is likely ~5,760 GPD higher during school year, which would reduce % infiltration
- 3) Estimated annual inflow & infiltration calculated by subtracting ADW flow from Average Daily Flow and multiplying 365 days

Based on information provided by the Village from the past few years, annual costs to power and operate the lift stations and WWTP are approximately \$60,000. With a total estimated annual flow of 122 million gallons, and assuming electrical costs are directly proportional to flow, we can estimate that it costs approximately \$492 per 1 million gallons to pump and treat wastewater. Based on these estimates, the

Village is spending nearly \$20,000 annually to treat extraneous flow. Mechanical and electrical equipment will likely require replacement more frequently due to the added wear and tear from conveying and treating this extraneous flow. An exact dollar figure cannot be associated with this but it should be noted as a negative financial impact from this extraneous flow. The costs and benefits of reducing this extraneous flow are discussed later in this report.

## IDENTIFIED CONCERNS

### Lift Stations

During Phase 1 of this study the Village's lift stations were inspected visually, draw down tests were performed (if feasible), and theoretical flows from service areas upstream of the lift stations were calculated. The majority of the Village's lift stations are in fair condition and aside from the WWTP influent lift station, none of them appeared to have capacity concerns. However, the age and condition of the East St. Lift Station (also referred to as Walnut Street Lift Station) warrants immediate replacement. The lift station is capable of keeping up with flows but the brackets, lifting chains, force main in the wet well, and the wet well structure are all extremely corroded and could fail at any time. This is a critical lift station being that it is immediately downstream from the Unity High School & Junior High. The Village was made aware and has already engaged Donohue and Associates to begin redesign of the lift station.

Other lift station concerns to note would be:

- WWTP Influent Station – Appears to be under capacity based on frequent surcharging upstream of WWTP and comments by the on-site operator. This will be analyzed further as part of a WWTP Capital Improvement Plan that is underway.
- Larmon St. Lift Station – Normally operated surcharging upstream sewers. Operation should be discussed with contract operator to see if float switch levels can be adjusted to prevent surcharging upstream sewers.
- Elizabeth Street & Watson Street Lift Stations – Both are in fair/good condition, aside from somewhat frequent clogging in the Elizabeth Street Station, but both are can-type lift stations which require confined space entry to service and operate the station. At some point the Village should consider retrofitting or replacing these stations to allow for servicing and operation to be done without requiring confined space entry.

### Collection System

Aside from reviewing as-built drawings and opening a few key manholes during flow monitoring, the collection system was not visually inspected as part of this study. Based on the flow monitoring completed during Phase 2 of this study, it appears that nearly 1/3 of the total water pumped and treated by the Village is groundwater infiltration or stormwater inflow. Although 1/3 of the total flow may seem significant, there are no significant capacity concerns within the collection system. Realistically, a significant portion, assume one-half, of the extraneous flow is likely being contributed via service laterals/connections, so performing improvements to eliminate inflow and infiltration from the Village's sewer mains and manholes would not be expected to remove all of the extraneous flows. Sanitary sewer rehabilitation projects consisting of sewer inspection, spot repairs, and CIPP liners typically cost \$40 to \$60 per lineal foot depending on the scale of the project, degree of failure, and level of rehabilitation selected. The financial impacts are not necessarily significant enough at this point to justify a rehabilitation or replacement plan but it may be worthwhile to begin allocating funds towards an annual cleaning and televising program to begin identifying any major structural defects within the gravity sewers. Cleaning and televising sewers is one of the most important, low-cost maintenance tasks that can be performed. Typically, cleaning and televising services will cost between \$2 to \$5 per lineal foot, dependent on the total length and size of sewers to be inspected.

If future inspection funds were to be prioritized based on observed groundwater infiltration percentages, funds would be spent as follows:

- |                                       |                               |
|---------------------------------------|-------------------------------|
| 1) West Side Interceptor Service Area | ~7,209 feet of gravity sewer  |
| 2) Watson Street Service Area         | ~18,423 feet of gravity sewer |
| 3) Elizabeth Street Service Area      | ~15,219 feet of gravity sewer |
| 4) East Side Interceptor Service Area | ~9,612 feet of gravity sewer  |
| 5) Washington Street Service Area     | ~20,025 feet of gravity sewer |
| 6) Cory Street Service Area           | ~10,413 feet of gravity sewer |

If future inspection funds were to be prioritized based on observed peaking factors, potentially indicating extraneous flow contributions from stormwater inflow, funds would be spent as follows:

- |                                       |                               |
|---------------------------------------|-------------------------------|
| 1) Washington St. Service Area        | ~20,025 feet of gravity sewer |
| 2) Watson Street Service Area         | ~18,423 feet of gravity sewer |
| 3) East Side Interceptor Service Area | ~9,612 feet of gravity sewer  |
| 4) West Side Interceptor Service Area | ~7,209 feet of gravity sewer  |
| 5) Elizabeth Street Service Area      | ~15,219 feet of gravity sewer |
| 6) Cory Street Service Area           | ~10,413 feet of gravity sewer |

In addition to the prioritizing future inspection funds based on infiltration and inflow, we would recommend also prioritizing based on age of the infrastructure. Older sewers have a higher potential for deficiencies, as well as potentially being built to lesser standards than today. Sewers downstream of proposed expansion areas or development may also take priority to identify any concerns before adding flow to the downstream collection system. A reasonable goal may be to clean and televise all of the Village's sewers over the next 10 years. At \$3.50/foot, with 80,100 feet of gravity sewer, spread over 1,300 users, this would equate to approximately \$1.80/user/month. Upon completion of cleaning and televising, sewers found to have significant structural damage, root infiltration, solids build up, or other deficiencies may require further maintenance, repair, rehabilitation, or replacement.

### WWTP

The WWTP was visually inspected during Phase 1 of this study along with review of past as-built plans of the plant. Based on the visual inspection, the plant has significant signs of age and deterioration including spalling concrete and corroded mechanical components and piping. The plant's ability to treat the wastewater was not analyzed as part of this study. Based on the flow monitoring during Phase 2 of this study, the plant's capacity is a concern but it is currently operational. During average dry weather, the WWTP is operated at its NPDES rated daily average flow. However, it is more regularly operating about 40% over its NPDES rated daily average flow, and peak flows during our study exceeded its NPDES rated daily maximum flow. The Village recently engaged Donohue & Associates to develop a WWTP Capital Improvement Plan (CIP) due to existing capacity concerns and increasing interest from existing and proposed adjacent developments to expand and connect to the Village's system. The CIP will further evaluate the existing plant's condition and ability to convey and treat existing and anticipated future flows. The final report for the CIP will identify existing treatment deficiencies and will provide recommended improvements with planning level cost estimates to ensure the plant is capable of conveying and treating the anticipated flows and loadings while remaining in compliance.

## RECOMMENDED IMPROVEMENTS, BUDGETARY COSTS, AND SCHEDULE

Based on the concerns identified in this report, the most critical sanitary sewer system improvements, along with their associated budgetary costs and estimated schedule for completion, are as follows:

1) East St. Lift Station Replacement	\$300,000	2020
2) WWTP Capital Improvements	TBD	TBD
3) Elizabeth Street Lift Station Improvements	\$100,000 - 300,000	2020-2025
4) Watson Street Lift Station Improvements	\$100,000 - 300,000	2025-2030
5) Sewer Cleaning & Inspection Program	\$28,000/yr.	2020 to 2030
6) Sewer Repair/Rehabilitation/Replacement	TBD	TBD

Budgetary costs and estimated schedule for completion for the WWTP Capital Improvements will be identified in the WWTP CIP. Sewer repair/rehabilitation/replacement costs and schedule will be dependent on concerns identified during sewer cleaning and inspection.

# APPENDIX 1

## Phase 1 Summary

**VILLAGE OF TOLONO  
CHAMPAIGN COUNTY, ILLINOIS**

**Sanitary Sewer Flow Study**

**PHASE I SUMMARY**

**August 2018**

**Prepared By:**



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## Wastewater Treatment Plant

### Service Area and Theoretical Flow Calculations



Tolono's WWTP is located on the southeast edge of the Village limits and accessed from Bourne Street. The lift station at the WWTP serves the entire Village, with an area of approximately 673 acres, including 1,158 single-family residential properties, 30 commercial properties, and 14 multi-family properties. The theoretical average design flow for the WWTP was calculated to be 0.467 MGD (325 GPM) with a peaking factor of 3.27 and a theoretical peak hourly design flow of 1.529 MGD (1,062 GPM). Theoretical flow was calculated based on typical sewage flows from residential and commercial properties in accordance with Part 370 - Illinois Recommended Standards for Sewage Works.

### WWTP Details & History

The WWTP utilizes a dry-pit lift station to dose the treatment process. The WWTP, constructed along with the collection system in the early 1970's, has had some upgrades including the construction of a primary clarifier, filter building, sludge storage lagoon (1980's) and the addition of a roughing filter (2011). The lift station at the WWTP is equipped with three (3) vertical solids-handling pumps as well as a high-water level bypass pump which discharges to an equalization lagoon and is dosed back through the treatment process when flows return to normal. The influent structure is a 10' x 10' concrete box, located on the north side of the control building, and is equipped with a sewage grinder positioned in the front of the influent sewer from the north. Each discharge line is equipped with a check valve and plug valve which are located in the basement of the control building along with the pumps and the control panels. The pumps are controlled by float switches. The pump pit in the basement of the control building is equipped with a sump pump. The three discharge force mains come together into a common force main which discharges to the first cell of the primary clarifier (1984). The flow schematic through the rest of the treatment plant can be seen in the 2011 roughing filter addition. Currently, the WWTP operator does not operate the tertiary filters.



### Operation Observations

A drawdown test was not performed at the influent lift station to the WWTP. Defining an accurate cross-sectional area of the influent lift station, which is imperative for draw down test calculations, was not feasible based on the wet well's construction. The downstream treatment process and its flow restrictions may control the pump station's operation. More detailed pump information was requested from the contract operator but is yet to be provided.

### Initial Analysis:

The lift station at the WWTP is in fair overall condition. The pumps, piping, and valves in the basement of the control building all appear to be in fair and operable condition.

The influent lift station at the WWTP serves the entire community and is critical to the function of both the collection system and the WWTP. **Phase 2 of the study will include the installation of permanent flow monitor at the WWTP influent to better quantify the total flow;** this information will be extremely useful when evaluating the actual average and peak hourly flows of the current collection system and will help analyze the feasibility of future service area expansion and its potential effects on the existing plant.

## Elizabeth St. Lift Station

### Service Area and Theoretical Flow Calculations

The Elizabeth St. Lift Station is located at the northwest corner of Elizabeth St. and Marshall on the southeast side of Tolono. This lift station serves an area of approximately 351 acres, including 582 single-family residential properties, 15 commercial properties, and 6 multi-family properties. This includes the area and properties served from two (2) upstream sub-basins described as Walnut St. Basin (which also serves Unity High School) and Larmon St. Basin. The theoretical average design flow for this area was calculated to be 0.230 MGD (160 GPM) with a peaking factor of 3.54 and a theoretical peak hourly design flow of 0.815 MGD (566 GPM). The theoretical flow was calculated based on typical sewage flows from residential and commercial properties in accordance with Part 370 - Illinois Recommended Standards for Sewage Works.



### Station Details & History



The Elizabeth St. Lift Station is a dry-pit lift station that was constructed with the original sanitary sewer system in the early 1970's. It utilizes a 6-ft. diameter, precast concrete manhole, directly east of the lift station, as a wet well, which has two influent sewers; one from the north and one from the south. The buried, dry pit, metal lift station is equipped with electrical controls, air compressor, dehumidifier, two (2) vertical solids-handling pumps, check valves, plug valves, and a sump pit with a pump that discharges back to the wet well.

The pumps are controlled using a bubbler system which requires a bubbler tube installed in the wet well, mechanical air supply, and a pressure switch. Although inexpensive initially, these systems are uncommon in new construction due to higher operation and maintenance costs. The station is equipped with an above-ground, force main bypass connection. The force main currently discharges to a sanitary manhole approximately 13 feet west of the existing pump station where the old force main is capped (to the west) and a gravity sanitary sewer runs south along Elizabeth St. to the East Side Interceptor Sewer running along the south side of Benham St.

### Operation Observations

During the drawdown test performed on 7/9/2018, the observed average inflow rate was 61 GPM and the effluent pumping rates were 300 GPM (south pump) and 455 GPM (north pump). Using the average, observed inflow rate and calculated effective capacity of 269 gallons between the lead pump on level and the pump off level, the average detention time is 4 minutes 26 seconds. With an average pump cycle time of 57 seconds, the average total cycle time was 5 minutes 23 seconds. With two (2) pumps alternating, each pump operates between 5-6 times every hour under these flow conditions. This many starts per hour is not an immediate cause for concern but too many starts per hour can negatively impact the life of the motor. Pump manufacturer recommendations for pump starts per hour should be reviewed and compared to the operation observed during the drawn down test.

### Initial Analysis:

The Elizabeth St. Lift Station is in fair overall condition. All of the components in the buried can station appear to be functional and free of corrosion or major wear. According to conversations with the contract operator's on-site representative (Doug, ERH Enterprises), the primary concerns with this station are related to the bubbler system level control and system capacity; although it wasn't clear whether it is the pumps, force main, or downstream sewer capacity that causes the capacity concern. The buried can lift station is not an ideal setup for safety of maintenance personnel. Since confined space entry is required to record daily pump hours and perform regular maintenance, maintenance personnel must take precautions on a daily basis to comply with OSHA requirements.

The actual flow observed is significantly lower than the theoretical flow at this station. Based on the observed average flow during the draw down test and the theoretical peaking factor, the current pumps appear to be capable of meeting peak hourly flow rates aside from potential, upstream inflow and infiltration.

This station serves the largest collection area in the community besides the WWTP and should be considered as one of the highest priorities in the sanitary sewer collection system. **At least one flow monitor should be dedicated to the Elizabeth St. area during Phase 2 of this study, if not two.** Dependent upon the flow monitoring results collected during Phase 2 of this study, this station may need minor improvements or it may be a good candidate for full replacement of the lift station and force main.

## Watson St. Lift Station

### Service Area and Theoretical Flow Calculations



The Watson St. Lift Station is located south of Illini FS on the east side of Route 45. This lift station serves an area of approximately 224 acres, including 392 single-family residential properties, 15 commercial properties, and 8 multi-family properties. This includes the area and properties served from another upstream sub-basin described as the Deer Path Basin. The theoretical average design flow for this area was calculated to be 0.173 MGD (120 GPM) with a peaking factor of 3.63 and a theoretical peak hourly design flow of 0.627 MGD (436 GPM). The theoretical flow was calculated based on typical sewage flows from residential and commercial properties in accordance with Part 370 - Illinois Recommended Standards for Sewage Works.

### Station Details & History

The Watson St. Lift Station is a dry-pit lift station that was constructed with the original sanitary sewer system in the early 1970's. It utilizes a 6-ft. diameter, precast concrete manhole, directly north of the lift station, as a wet well which has one influent sewer from the north. The buried, dry pit, metal lift station is equipped with electrical controls, air compressor, dehumidifier, two vertical solids-handling pumps, check valves, plug valves, and a sump pit with a pump that discharges to the wet well. The pumps are controlled using a bubbler system which requires a bubbler tube installed in the wet well, mechanical air supply, and a pressure switch. Although inexpensive initially, these systems are uncommon in new construction due to higher operation and maintenance costs. The station is equipped with an above-ground, force main bypass connection. The force main currently discharges to a sanitary manhole located approximately 698 feet south of the existing pump station. This gravity sanitary sewer, which runs south and west, eventually reaches the WWTP through the West Side Interceptor Sewer running down Bourne St.



### Operation Observations

During the drawdown test performed on 7/10/2018, the observed average inflow rate was 49 GPM and the effluent pumping rates were 309 GPM and 345 GPM. Using the average inflow rate and calculated effective capacity of 209 gallons between the lead pump on level and the pump off level, the average detention time was 4 minutes 14 seconds. With an average pump cycle time of 45 seconds, the total average cycle time was 4 minutes 59 seconds. With two pumps alternating, each pump operates around 6 times every hour under these flow conditions. This many starts per hour is not an immediate cause for concern but too many starts per hour can negatively impact the life of the motor. Pump manufacturer recommendations for pump starts per hour should be reviewed and compared to the operation observed during the drawn down test.

### Initial Analysis:

The Watson St. Lift Station is in fair overall condition. All of the components in the buried can station appear to be functional and free of corrosion or major wear. According to conversations with the contract operator's on-site representative (Doug, ERH Enterprises), the primary concerns with this station are related to the bubbler system level control. The buried can lift station is not an ideal setup for safety of maintenance personnel. Since confined space entry is required to record daily pump hours and perform regular maintenance, maintenance personnel must take precautions on a daily basis to comply with OSHA requirements.

The actual flow observed is significantly lower than the theoretical flow at this station. Based on the observed average flow during the draw down test and the theoretical peaking factor, the current pumps appear to be capable of meeting peak hourly flow rates aside from potential, upstream inflow and infiltration.

This station serves the third largest collection area in the community and should be considered as one of the highest priorities in the sanitary sewer collection system. **At least one flow monitor should be dedicated to the Watson St. area during Phase 2 of this study, if not two.** Dependent upon the flow monitoring results collected during Phase 2 of this study, this station may need minor improvements or it may be a good candidate for full replacement of the lift station and force main.

## Third St. Lift Station

### Service Area and Theoretical Flow Calculations

The Third St. Lift Station is located on the west side of Third St. between Benham and Marshall on the southeast side of Tolono. This lift station serves an area of approximately 39 acres, including 93 single-family residential properties, with no commercial or multi-family properties. There are no separate sub-basins contributing to this area. The theoretical average design flow for this area was calculated to be 0.033 MGD (23 GPM) with a peaking factor of 4.06 and a theoretical peak hourly design flow of 0.132 MGD (92 GPM). The theoretical flow was calculated based on typical sewage flows from residential and commercial properties in accordance with Part 370 - Illinois Recommended Standards for Sewage Works.



### Station Details & History



The Third St. Lift Station is a submersible lift station that was constructed with the original sanitary sewer system in the early 1970's. It has a 5-ft. diameter, precast concrete manhole as the wet well with one influent sewer from the north and a precast concrete valve vault directly south of the wet well. The control panel is located north of the lift station in an electrical cabinet mounted to a concrete pad. The pumps are controlled by float switches and the 3-inch diameter force main discharge lines are each equipped with pressure gauges, check valves, and plug valves in the valve vault. The station can be bypassed by connecting a temporary pump and force main to a vertical gate valve located on the common force main in the valve vault. The valve vault is not equipped with a drain line or sump pump to dewater it. The force main originally discharged approximately 30 feet north of the station to an 8" sanitary sewer that flowed west down the alley between Benham and Marshall. The force main was rerouted approximately 163 feet south to the East Side Interceptor Sewer, located on the south side of Benham St. Rerouting the force main eliminated pumping the wastewater a second time through the Elizabeth St. Lift Station.

### Operation Observations

During the drawdown test performed on 7/10/2018, the observed average inflow rate was 9 GPM and the effluent pumping rates were 49 GPM (east pump) and 71 GPM (west pump). Using the average inflow rate and calculated effective capacity of 130 gallons between the lead pump on level and the pump off level, the average detention time was 14 minutes 46 seconds. With an average pump cycle time of 2 minutes 41 seconds, the total average cycle time was 17 minutes 27 seconds. With two pumps alternating, each pump operates around 2 times every hour under these flow conditions. Detention time is not an immediate concern but should be monitored to prevent septicity and H<sub>2</sub>S corrosion. IEPA recommends to avoid detention times longer than 30 minutes.

### Initial Analysis:

The Third St. Lift Station is in fair overall condition. The brackets, guiderails, and lifting chains are all in fair condition with minor signs of corrosion. The force main in the wet well does have significant signs of corrosion and may be worth replacing in the near future. The piping and valves in valve vault all appear to have been replaced recently and are in good condition. The Village has experienced a couple of recent sanitary sewer surcharges during rain events at this station. Based on reports from the contract operator and the public works director, they were both related to pump malfunctions, the second of which occurred while one pump was removed for repair and no temporary bypass plan was in place.

The actual flow observed is significantly lower than the theoretical flow at this station. Based on the observed average flow during the draw down test and the theoretical peaking factor, the current pumps appear to be capable of meeting peak hourly flow rates aside from potential, upstream inflow and infiltration.

This station serves both new and older developed properties in the Village. With the recent surcharge events it will be imperative to identify whether or not the electrical feed and pumps are designed properly or if the failures are solely due to extreme inflow and infiltration in the collection system. **Flow monitoring during Phase 2 of this study is not likely going to be performed to directly isolate the Third St. area because it only accounts for about 7% of the theoretical average design flow and 7% of the total gravity sanitary sewer collection system. Analysis of flow data collected from other monitors should indicate if there are inflow and infiltration concerns in the East Side Interceptor Sewer and Third St.**

## Larmon St. Lift Station

### Service Area and Theoretical Flow Calculations



The Larmon St. Lift Station is located on the east edge of the Village limits between Larmon St. and Boone St. This lift station serves an area of approximately 16 acres, including 36 single-family residential properties and no commercial or multi-family properties. There are no separate sub-basins contributing to this area. The theoretical average design flow for this area was calculated to be 0.013 MGD (9 GPM) with a peaking factor of 4.21 and a theoretical peak hourly design flow of 0.053 MGD (37 GPM). The theoretical flow was calculated based on typical sewage flows from residential and commercial properties in accordance with Part 370 - Illinois Recommended Standards for Sewage Works.

### Station Details & History

The Larmon St. Lift Station is a submersible lift station that was constructed to serve the Linshar Fields development in the 1990's. It has a 5-ft. diameter, precast concrete manhole as the wet well with one influent sewer from the north. The precast concrete valve vault is located directly west of the wet well and has been landscaped around by the adjacent homeowner. The control panel is located southwest of the lift station in an electrical cabinet mounted to a concrete pad within the same landscaped area as the valve vault. The pumps are controlled by float switches and the 3-inch diameter force main discharge lines are each equipped with pressure gauges, check valves, and plug valves in the valve vault. The station can be bypassed by connecting a temporary pump and force main to a vertical gate valve located on the common force main in the valve vault. The valve vault is not equipped with a drain line or sump pump to dewater it and was full of water when we first opened it. The force main runs approximately 1,637 feet to the northwest and discharge to a sanitary manhole located on Broadway, east of Third St.



### Operation Observations

A drawdown test could not be performed with any accuracy due to current operating conditions. The lift station's floats were set at levels that operated the lift station with upstream sanitary sewers in constant surcharge. Without having a reasonable estimate of effective capacity between pumping cycles, it was not possible to perform a draw down test. The pumps were operated in hand just to confirm our understanding of flow schematics into and out of the station. Since there are no serious concerns at this station reported by the Village or contract operator we opted not to spend time adjusting operations to perform a draw down test. We intend to discuss its operation with the contract operator to see if there is justification for the operation settings at this station.

### Initial Analysis:

The Larmon St. Lift Station is in fair overall condition. The brackets for the guiderails are the only component with significant signs of corrosion. The guiderails, lifting chains, and force all appear to be in fair condition with minor signs of corrosion. The piping and valves in valve vault all appear to be in good condition.

This station serves one of the newest developments in Tolono. This station has little need for immediate action other than possibly adjusting the pump operating levels. **Flow monitoring during Phase 2 of this study is not going to be performed to isolate the Larmon St. area unless data collected warrants further investigation.**

## Walnut St. Lift Station

### Service Area and Theoretical Flow Calculations

The Walnut St. Lift Station is located at the southwest corner of Walnut St. and East St. near the ball diamond at East Side Park in Tolono. This lift station serves an area of approximately 84 acres, including 77 single-family residential properties, Unity High School & Junior High, and no other commercial or multi-family properties. There are no separate sub-basins contributing to this area. The theoretical average design flow for this area was calculated to be 0.038 MGD (27 GPM) with a peaking factor of 4.03 and a theoretical peak hourly design flow of 0.155 MGD (107 GPM). The theoretical flow was calculated based on typical sewage flows from residential and commercial properties in accordance with Part 370 - Illinois Recommended Standards for Sewage Works.



### Station Details & History



The Walnut St. Lift Station is a submersible lift station that was retrofitted into a sewage ejector station that was constructed as part of the original sanitary sewer system in the early 1970's. It has a 7-ft. diameter, steel manhole as the wet well with one influent sewer from the east and a precast concrete valve vault directly west of the wet well. The control panel is located north of the lift station in an electrical cabinet mounted on two 4"x4" timber posts. The pumps are controlled by float switches and the 4-inch diameter force main discharge lines are each equipped with pressure gauges, check

valves, and plug valves in the valve vault. The station can be bypassed by connecting a temporary pump and force main to a vertical gate valve located on the common force main in the valve vault. The valve vault is not equipped with a drain line or sump pump to dewater it and was full of water (above ground level). The 4-inch cast-iron force main discharges approximately 392 feet to the west of the station to a sanitary manhole at the intersection of Walnut and Lincoln. The flow from the Walnut St. service area is pumped into the Elizabeth St. service area.

### Operation Observations

During the drawdown test performed on 7/10/2018, the observed average inflow rate was 13 GPM and the effluent pumping rates were 266 GPM (south pump) and 285 GPM (north pump). Using the average inflow rate and calculated effective capacity of 70 gallons between the lead pump on level and the pump off level, the average detention time was 5 minutes 17 seconds. With an average pump cycle time of 16 seconds, the total average cycle time was 5 minutes 33 seconds. With two pumps alternating, each pump operates around 5-6 times every hour under these flow conditions. This many starts per hour is not an immediate cause for concern but too many starts per hour can negatively impact the life of the motor. Pump manufacturer recommendations for pump starts per hour should be reviewed and compared to the operation observed during the drawn down test.

### Initial Analysis:

The Walnut St. Lift Station is a critical lift station due to the fact that it serves Unity High School and Junior High. The existing station is in extremely poor condition overall. The brackets, lifting chains, force main in the wet well, and the wet well are all extremely corroded and could fail at any time. The guide rails appear to be in good condition. The piping and valves in the valve vault all appear to have been replaced recently and are in good condition.

The actual flow observed is significantly lower than the theoretical flow at this station. Based on the observed average flow and the theoretical peaking factor, the current pumps appear to be sized larger than necessary to meet hourly peak flow rates; of course, this is without regard to any potential, upstream stormwater inflow and infiltration.

Based on the condition of the existing station components and Unity High School and Junior High's dependency on it, this station should be considered for replacement immediately. **This service area may be a good candidate for flow monitoring in Phase 2 of this study to help identify stormwater inflow and infiltration upstream of this lift station, as well as help accurately size a replacement lift station.**



## Deer Path Lift Station

### Service Area and Theoretical Flow Calculations

The Deer Path Lift Station (also referred to as Condit St. Lift Station) is located on the east side of Condit St. just south of Walnut St. and the Deer Path Subdivision on the northwest side of Tolono. This lift station serves an area of approximately 38 acres, including 90 single-family residential properties and no commercial or multi-family properties. There are separate no sub-basins contributing to this area. The theoretical average design flow for this area was calculated to be 0.032 MGD (22 GPM) with a peaking factor of 4.07 and a theoretical peak design flow of 0.128 MGD (89 GPM). The theoretical flow was calculated based on typical sewage flows from residential and commercial properties in accordance with Part 370 - Illinois Recommended Standards for Sewage Works.



### Station Details & History



The Deer Path Lift Station is a submersible lift station that was constructed during Phase 2 of the Deer Path Subdivision in 2002-2003. It has a 6-ft. diameter, precast concrete manhole as the wet well with one influent sewer from the north and a precast concrete valve vault directly south of the wet well. The control panel is located northeast of the lift station in an electrical cabinet mounted to two 6"x6" timber posts. The pumps are controlled by float switches and the 3-inch diameter force main discharge lines are each equipped with pressure gauges, check valves, and plug valves in the valve vault. There was no visible sign of a connection to the common force main for bypass pumping. The valve vault is not equipped with a drain line or sump pump to dewater it and had approximately 1 foot of standing water in the bottom of the vault. The force main discharges approximately 53 feet west of the lift station to a sanitary manhole on the west side of Condit St.

### Operation Observations

During the drawdown test performed on 7/9/2018 and 7/10/2018, the observed average inflow rate was 9 GPM and the effluent pumping rates were 350 GPM (west pump) and 329 GPM (east pump). Using the average inflow rate and calculated effective capacity of 217 gallons between the lead pump on level and the pump off level, the average detention time was 23 minutes 43 seconds. With an average pump cycle time of 39 seconds, the total average cycle time was 24 minutes 22 seconds. With two pumps alternating, each pump operates around 1-2 times every hour under these flow conditions. The detention time causes some concern and should be monitored closely to prevent septicity and H<sub>2</sub>S corrosion. IEPA recommends to avoid detention times longer than 30 minutes.

### Initial Analysis:

The Deer Path Lift Station is in good overall condition. The brackets, guiderails, lifting chains, and force main are all in fair condition with minor signs of corrosion. The piping and valves in valve vault all appear to be in good condition. It should be noted that on a separate trip, during wet weather, there were significant signs of infiltration into the wet well through the manhole joints.

The actual flow observed was significantly lower than the theoretical flow at this station. Based on the observed average flow and the theoretical peaking factor, the current pumps appear to be sized larger than necessary to meet peak hourly flow rates; of course, this is without regard to any potential, upstream stormwater inflow and infiltration.

This station serves one of the newest developments in Tolono. This station has little cause for concern immediately but it may be a good candidate for some minor improvements to prevent infiltration at the wet well. **Flow monitoring during Phase 2 of this study is not going to be performed to isolate the Deer Path area unless data collected warrants further investigation.**

## **Phase 1 Final Recommendations**

Upon completion of Phase 1 investigation along with input from Tolono's Public Works Director, we have developed a flow monitoring plan which includes the installation of six flow monitors at the following locations:

**1 – East Side Interceptor**                      *Monitors 55% of total sewer system (12% net)*

*The monitor is proposed to be installed in the North invert of the sanitary manhole directly north of WWTP influent wet well.*

**2 – West Side Interceptor**                      *Monitors 45% of total sewer system (9% net)*

*The monitor is proposed to be installed in the West invert of the sanitary manhole directly north of WWTP influent wet well.*

**3 – Elizabeth Street Area**                      *Monitors 43% of total sewer system (19% net)*

*The monitor is proposed to be installed in the South invert of the sanitary manhole directly north of the Elizabeth St. Lift Station wet well.*

**4 – Watson Street Area**                      *Monitors 36% of total sewer system (23% net)*

*The monitor is proposed to be installed in the South invert of the sanitary manhole directly north of the Watson St. Lift Station wet well.*

**5 – Elizabeth/Reynolds**                      *Monitors 25% of total sewer system (25% net)*

*The monitor is proposed to be installed in the North invert of the sanitary manhole located at the intersection of Elizabeth St. and Reynolds St.*

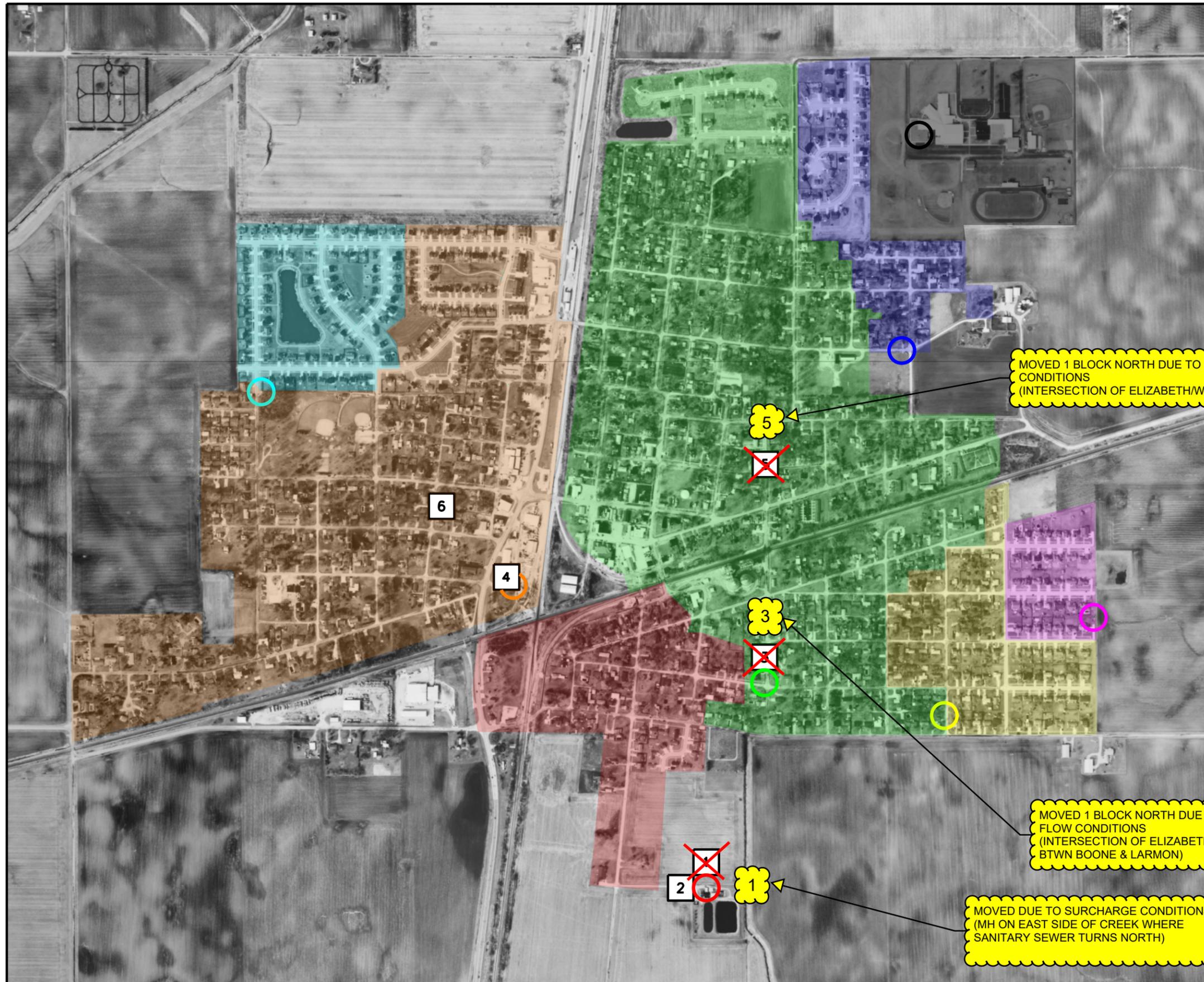
**6 – Cory Street**                      *Monitors 13% of total sewer system (13% net)*

*The monitor is proposed to be installed in the East invert of the sanitary manhole located at the Cory St. and the alley between Linden and Holden.*

All flow monitor locations are subject to change upon further investigation with Gasvoda and Associates to ensure good flow characteristics are present for monitoring at the proposed locations. The percentages listed above are based on total length of gravity sanitary sewers which is estimated to be 80,100 feet. The net percentages are the percentage of the system which is solely monitored through the proposed location and is not monitored at any upstream locations. Please see attached location map for proposed locations.

The original estimate for Phase 2 services was based on using five monitors, not six, so there will be some additional costs for equipment rental/install. We do plan to meet with Gasvoda and Associates to consider options for a permanent installation but it will likely be more cost effective to plan for more adequate permanent influent flow monitoring as part of more significant WWTP upgrades in the future.

We originally planned to begin monitoring in early Spring of 2019 and divide the costs of Phase 2 between the Village's 2018 and 2019 fiscal years. If the Village is interested in beginning monitoring sooner, we could begin Phase 2 within 30 days of authorized notice to proceed with Phase 2.



- EXISTING LIFT STATION
- PROPOSED MONITORING LOCATION

MOVED 1 BLOCK NORTH DUE TO POOR FLOW CONDITIONS  
(INTERSECTION OF ELIZABETH/WASHINGTON)

- MONITOR LOCATIONS & NAMES**
- 1) WEST SIDE INTERCEPTOR
  - 2) EAST SIDE INTERCEPTOR
  - 3) ELIZABETH STREET
  - 4) WATSON STREET
  - 5) WASHINGTON STREET
  - 6) CORY STREET

MOVED 1 BLOCK NORTH DUE TO POOR FLOW CONDITIONS  
(INTERSECTION OF ELIZABETH & ALLEY BTWN BOONE & LARMON)

MOVED DUE TO SURCHARGE CONDITIONS  
(MH ON EAST SIDE OF CREEK WHERE SANITARY SEWER TURNS NORTH)



DATE	REVISION	SCALE: 1:800	SCALEBAR:	CLIENT:	PROJECT NAME:	SHEET NO.
		DATE: 8/23/2018	0' 200' 400' 800'	VILLAGE OF TOLONO	SANITARY SEWER SYSTEM FLOW STUDY	1
SOURCE OF ORTHOIMAGERY: Illinois Natural Resources Geospatial Data Clearinghouse, Illinois State Geological Survey http://www.isgs.uiuc.edu/nsd/home/webdocs/idot2011/ (2011 Illinois Department of Transportation Orthophotos; accessed July 11, 2014)		CHECKED BY: TAC	256	TOLONO, ILLINOIS	SHEET TITLE:	OF 1 SHEETS
		DESIGNED BY: TAC			PROPOSED MONITORING LOCATIONS	

## APPENDIX 2

### Summary of Flow Data

**VILLAGE OF TOLONO  
SANITARY SEWER SYSTEM FLOW STUDY  
SUMMARY OF FLOW DATA**

Date	Average Water Usage (Gal)	Rainfall (in)	Total WWTP	Total Flow (Gallons)					
				East Interceptor	Elizabeth St.	Washington St.	West Interceptor	Watson St.	Cory St.
03/14/19	220,925	0.00	PARTIAL DAY	PARTIAL DAY	PARTIAL DAY	PARTIAL DAY	PARTIAL DAY	PARTIAL DAY	PARTIAL DAY
03/15/19	220,925	0.00	390,953	145,611	115,687	82,435	245,342	117,434	73,283
03/16/19	220,925	0.00	372,898	145,611	115,687	82,435	227,287	108,579	66,796
03/17/19	220,925	0.00	359,286	145,611	115,687	82,435	213,675	106,126	60,084
03/18/19	220,925	0.00	337,737	145,611	115,687	82,435	192,126	88,330	48,898
03/19/19	220,925	0.00	322,728	145,611	115,687	82,435	177,117	78,450	45,953
03/20/19	220,925	0.11	320,295	145,611	115,687	82,435	174,684	80,588	44,238
03/21/19	220,925	0.01	311,045	145,611	115,687	82,435	165,434	79,474	43,506
03/22/19	220,925	0.00	310,598	145,611	115,687	82,435	164,987	77,922	43,754
03/23/19	220,925	0.00	309,693	145,611	115,687	82,435	164,082	73,293	41,886
03/24/19	220,925	0.22	319,498	145,611	115,687	82,435	173,887	78,572	42,812
03/25/19	220,925	0.08	305,591	145,611	115,687	82,435	159,980	69,527	36,886
03/26/19	220,925	0.00	294,817	145,611	115,687	82,435	149,206	66,762	32,077
03/27/19	220,925	0.00	293,731	145,611	115,687	82,435	148,120	65,452	31,816
03/28/19	220,925	0.66	313,701	145,611	115,687	82,435	168,090	73,948	32,237
03/29/19	220,925	0.19	342,448	145,611	115,687	82,435	196,837	94,292	38,029
03/30/19	220,925	0.99	767,354	337,846	284,465	166,182	429,508	222,921	85,094
03/31/19	220,925	0.00	645,731	276,683	239,774	151,567	369,048	198,467	81,818
04/01/19	238,462	0.00	470,607	212,870	169,998	130,779	257,737	129,770	57,920
04/02/19	238,462	0.00	398,017	184,547	143,214	111,738	213,470	108,357	51,910
04/03/19	238,462	0.00	344,337	155,759	133,892	109,620	188,578	105,639	46,513
04/04/19	238,462	0.08	324,004	147,921	115,924	101,244	176,083	84,833	45,623
04/05/19	238,462	0.01	299,813	135,788	96,245	96,008	164,025	79,911	40,245
04/06/19	238,462	0.00	295,021	131,261	87,730	93,093	163,760	84,740	42,826
04/07/19	238,462	0.22	304,627	134,573	94,677	97,921	170,054	87,034	40,430
04/08/19	238,462	0.16	323,258	150,121	103,756	105,519	173,137	88,443	39,852
04/09/19	238,462	0.00	284,988	133,974	88,266	96,167	151,014	81,401	37,233
04/10/19	238,462	0.31	319,022	146,417	103,984	103,531	172,605	87,243	35,887
04/11/19	238,462	0.12	295,799	135,912	88,169	92,961	159,887	82,348	35,020
04/12/19	238,462	0.35	397,208	175,068	141,385	108,178	222,140	103,636	42,379
04/13/19	238,462	0.00	346,938	152,468	88,644	92,425	194,470	95,437	40,987
04/14/19	238,462	0.65	514,829	230,074	146,902	124,442	284,755	147,664	55,178
04/15/19	238,462	0.00	454,401	204,889	147,504	116,430	249,512	122,131	50,374
04/16/19	238,462	0.00	398,762	175,513	93,494	97,476	223,249	100,817	43,406
04/17/19	238,462	0.00	334,102	150,026	96,043	92,531	184,076	90,173	43,873
04/18/19	238,462	0.67	439,721	198,458	120,499	107,971	241,263	124,967	50,477
04/19/19	238,462	0.11	463,388	210,375	141,943	110,711	253,013	128,321	53,172
04/20/19	238,462	0.00	405,354	181,329	90,263	100,145	224,025	108,892	40,960
04/21/19	238,462	0.00	350,092	155,544	84,906	94,387	194,548	99,683	39,975
04/22/19	238,462	0.00	316,437	140,729	82,945	91,232	175,708	89,897	38,347
04/23/19	238,462	0.00	285,997	125,416	81,802	90,513	160,581	80,041	33,038
04/24/19	238,462	0.00	275,864	120,543	87,120	92,684	155,321	77,408	37,588
04/25/19	238,462	0.43	295,576	136,287	91,545	97,778	159,289	79,902	32,558
04/26/19	238,462	0.05	300,073	129,145	94,629	92,629	170,928	77,555	33,562
04/27/19	238,462	0.23	286,647	123,409	81,076	90,146	163,238	79,772	31,872
04/28/19	238,462	0.04	293,401	127,748	91,542	93,308	165,653	83,867	32,929
04/29/19	238,462	0.06	274,000	119,742	87,551	97,492	154,258	74,557	33,978
04/30/19	238,462	0.49	254,647	109,751	84,085	93,516	144,896	70,753	34,452
05/01/19	241,097	0.05	300,969	135,812	100,255	95,636	165,157	76,044	31,074
05/02/19	241,097	0.28	315,985	143,212	103,038	95,313	172,773	78,345	31,927
05/03/19	241,097	0.00	328,868	146,496	94,893	95,442	182,372	78,147	31,589
05/04/19	241,097	0.04	370,194	143,500	86,108	90,965	226,694	80,776	33,239
05/05/19	241,097	0.00	341,267	136,106	84,086	93,985	205,161	88,895	35,922
05/06/19	241,097	0.00	273,951	118,773	77,438	83,622	155,178	77,265	33,769
05/07/19	241,097	0.00	253,779	113,683	75,945	70,645	140,096	71,941	32,353
05/08/19	241,097	0.00	293,136	117,488	79,766	69,572	175,648	74,990	27,237
05/09/19	241,097	1.00	474,893	223,536	178,247	92,053	251,357	137,749	44,696
05/10/19	241,097	0.00	406,788	163,352	127,524	75,257	243,436	103,317	37,240
05/11/19	241,097	0.16	359,188	149,767	102,081	66,936	209,421	95,949	39,523
05/12/19	241,097	0.02	338,129	145,169	101,060	62,330	192,960	95,543	42,867
05/13/19	241,097	0.00	302,024	130,704	107,764	59,707	171,320	80,760	37,341
05/14/19	241,097	0.00	272,206	121,497	108,011	57,816	150,709	77,109	38,819
05/15/19	241,097	0.03	274,411	113,857	100,553	55,859	160,554	73,260	40,635
05/16/19	241,097	0.00	259,979	112,090	75,551	57,102	147,889	71,813	36,512
05/17/19	241,097	0.00	247,200	104,482	64,855	53,224	142,718	66,577	32,816
05/18/19	241,097	0.00	235,260	99,770	68,471	48,726	135,490	65,439	33,970
05/19/19	241,097	0.30	278,283	117,797	59,927	55,478	160,486	74,393	35,996
05/20/19	241,097	0.00	260,013	105,993	65,495	55,223	154,020	65,942	32,515
05/21/19	241,097	0.63	242,457	104,965	97,572	56,937	137,492	63,327	28,569
05/22/19	241,097	0.43	490,974	214,868	173,334	81,039	276,106	132,910	41,973
05/23/19	241,097	0.30	427,743	178,852	143,720	74,961	248,891	118,967	36,765
05/24/19	241,097	0.00	345,071	143,608	116,676	69,598	201,463	97,908	34,470
05/25/19	241,097	0.00	306,864	130,115	96,887	63,245	176,749	89,503	32,359
05/26/19	241,097	0.38	385,540	164,535	148,791	76,145	221,005	113,242	37,874
05/27/19	241,097	0.00	346,527	149,251	118,753	71,088	197,276	100,242	35,742
05/28/19	241,097	0.00	294,916	119,532	119,532	64,170	166,157	83,445	33,310
05/29/19	241,097	0.24	300,303	131,077	108,769	60,895	169,226	82,014	28,960
05/30/19	241,097	0.06	271,624	122,569	101,261	54,697	149,055	72,582	30,136
05/31/19	241,097	0.00	263,785	113,351	94,032	46,558	150,434	67,927	28,238
06/01/19	282,236	0.00	242,969	107,973	88,578	34,693	134,996	66,793	32,338
06/02/19	282,236	0.00	238,876	103,431	100,669	32,435	135,445	63,379	39,984
06/03/19	282,236	0.00	231,505	94,971	79,328	25,927	136,534	59,064	37,873
06/04/19	282,236	0.00	225,099	95,227	74,907	34,146	129,872	57,677	36,319
06/05/19	282,236	0.00	210,698	85,054	85,880	31,293	125,644	52,763	37,809
06/06/19	282,236	0.00	221,564	85,259	89,475	34,979	136,305	61,450	39,429
06/07/19	282,236	0.00	191,900	69,471	88,732	32,816	122,429	51,813	33,282
06/08/19	282,236	0.11	198,205	70,257	90,168	30,409	127,948	54,671	33,592
06/09/19	282,236	0.00	217,399	90,248	101,642	43,669	127,151	56,680	33,400
06/10/19	282,236	0.00	192,117	74,301	63,474	74,455	117,816	49,894	30,414
06/11/19	282,236	0.00	179,982	62,805	85,598	80,754	117,177	51,326	30,588
06/12/19	282,236	0.49	196,291	71,727	76,884	82,490	124,564	53,953	29,346
06/13/19	282,236	0.00	214,306	84,598	65,790	85,724	129,708	60,248	32,853
06/14/19	282,236	0.04	191,782	76,193	48,470	80,258	115,589	58,841	31,833
06/15/19	282,236	0.81	257,950	105,924	61,046	97,907	152,929	78,047	36,557
06/16/19	282,236	0.09	265,620	108,267	69,544	98,664	157,353	76,973	33,906
06/17/19	282,236	0.00	230,902	89,622	61,493	87,042	141,280	68,111	32,729

INVALID DATA

DRY WEATHER DATA

PEAK FLOW DATA

AVERAGE DAILY DATA SUBSTITUTED FOR INVALID DATA

## APPENDIX 3

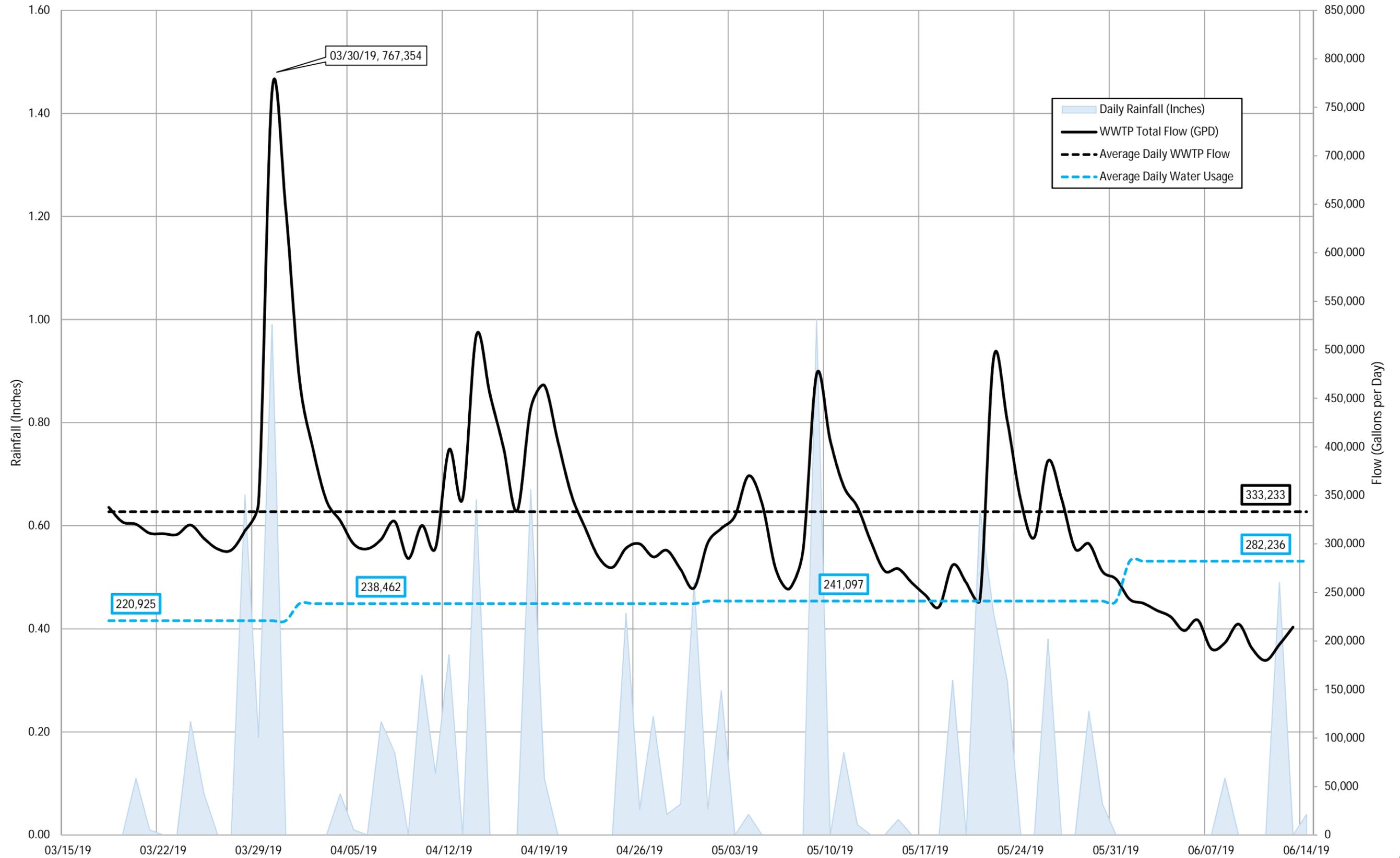
### Flow Charts

*WWTP Total Flow Chart*

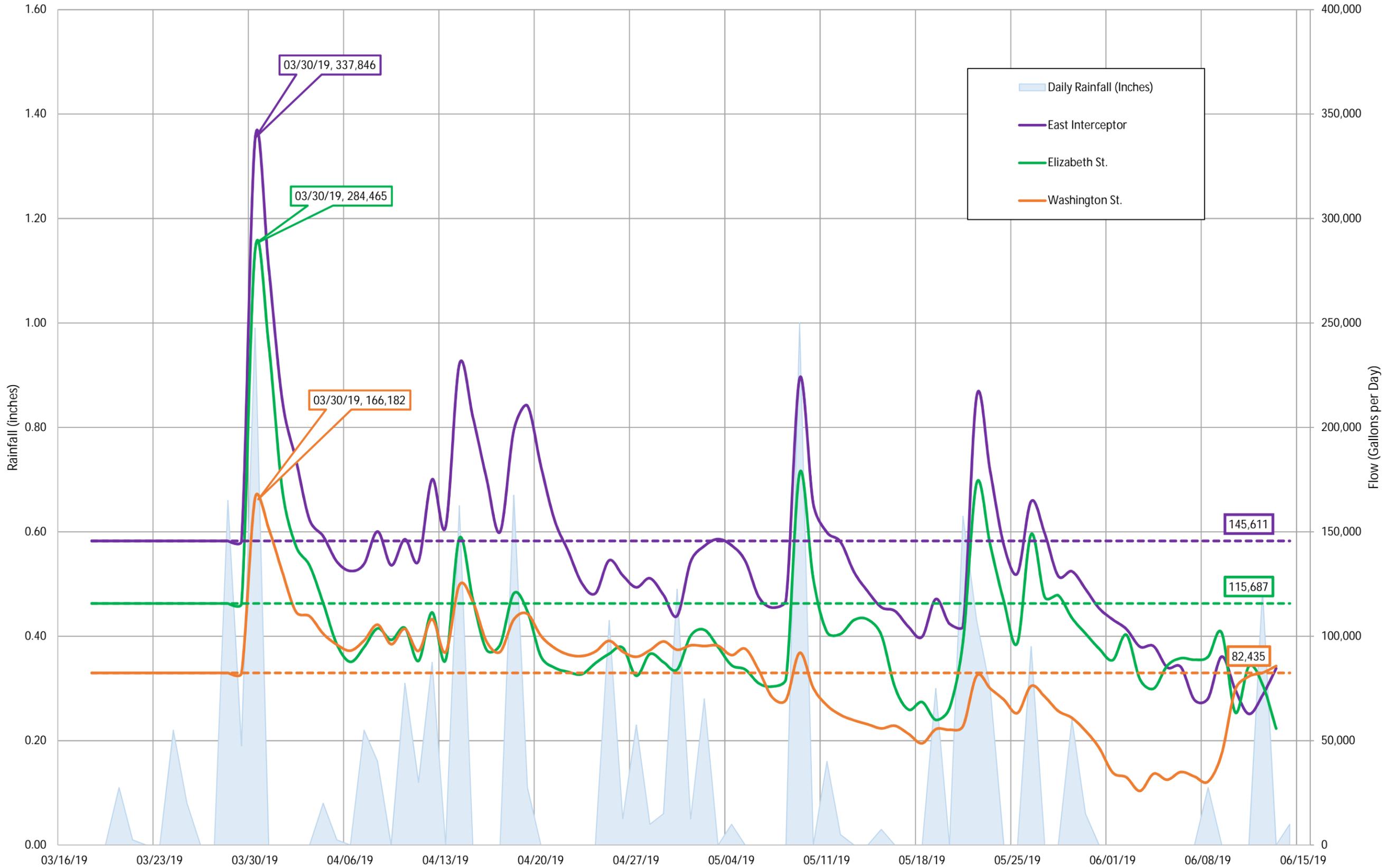
*East Side Flow Chart*

*West Side Flow Chart*

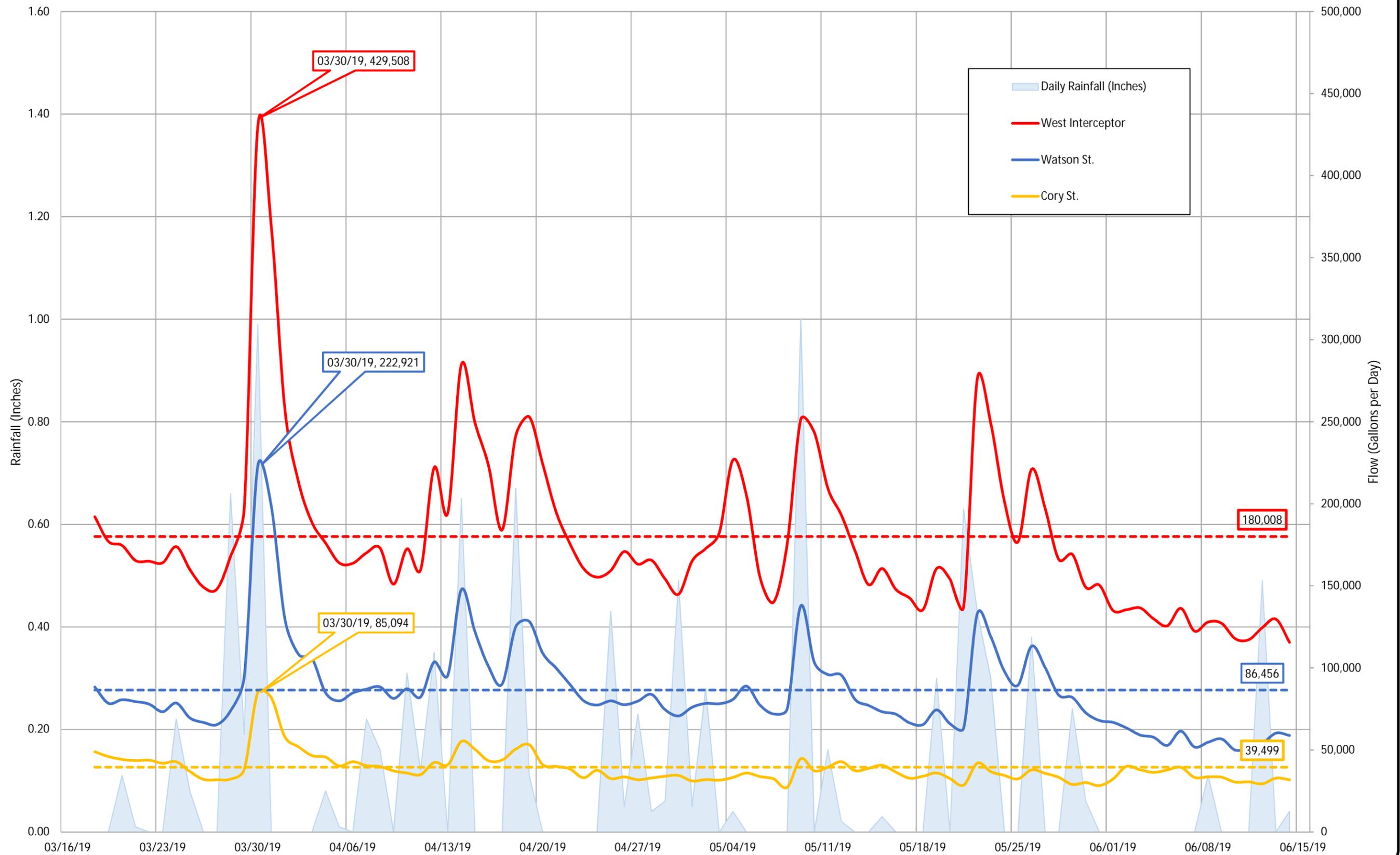
# WWTP TOTAL FLOW CHART



EAST SIDE FLOW CHART



# WEST SIDE FLOW CHART



Village of Tolono

South Bourne Street | Tolono, Illinois, 61880



## WWTP Facility Improvements Facility Plan

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October 2019



Prepared by:

Donohue & Associates, Inc.  
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donohue-associates.com

Donohue Project No.: 13531.003

## TABLE OF CONTENTS

---

1.	EXECUTIVE SUMMARY.....	1
1.1	BACKGROUND.....	1
1.2	PURPOSE.....	1
1.3	RECOMMENDED PROJECTS.....	1
	PROJECT PLANNING.....	2
1.4	FACILITY PLANNING AREA.....	2
1.5	ENVIRONMENTAL RESOURCES.....	3
1.6	PLANNING PERIOD.....	3
1.7	POPULATION PROJECTION & INCOME STATISTICS.....	3
1.8	FACILITY PLANNING AREA IMPACTS.....	3
1.9	ZONING AND LAND USES.....	3
2.	EXISTING CONDITIONS.....	4
2.1	DESIGN AND CURRENT FLOWS.....	4
2.2	DESIGN AND CURRENT CONCENTRATIONS AND LOADINGS.....	4
2.3	TREATMENT PROCESS OVERVIEW.....	5
2.4	HEADWORKS AND STORMWATER.....	9
2.5	PRIMARY TREATMENT.....	11
2.6	SECONDARY TREATMENT.....	13
2.7	DISINFECTION.....	16
2.8	SOLIDS HANDLING.....	16
2.9	GENERAL UPGRADES.....	18
3.	WATER QUALITY & EFFLUENT LIMITS.....	19
3.1	GENERAL.....	19
3.2	EXISTING EFFLUENT LIMITS.....	19
3.3	FUTURE EFFLUENT LIMITS.....	20
4.	WWTP IMPROVEMENTS.....	21
4.1	INTRODUCTION.....	21
4.2	EVALUATION OF ALTERNATIVES.....	21
4.2.1	OXIDATION DITCH.....	22
4.2.2	SBR.....	23
4.2.3	MBR.....	24
4.2.4	PACKAGE PLANT.....	25
4.2.5	ALGAEWHEEL.....	26
4.2.6	LEMTEC LAGOON.....	27
4.3	Recommendation.....	29
5.	FINANCIAL AND RATE IMPACTS.....	30

## LIST OF TABLES

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Table 3-1 Design, Current and Future flows .....	4
Table 3-2 Design and Current Concentrations and Loadings.....	5
Table 3-3 Existing Unit Process Capacities.....	8
Table 4-1 NPDES Permit Limits Outfall 001 .....	19
Table 4-2 NPDES Permit Limits Outfall 002 .....	19

## LIST OF FIGURES

---

Figure 2-1 Tolono Aerial .....	2
Figure 3-1 Tolono WWTP and Lagoon Aerial .....	6
Figure 3-2 Tolono WWTP .....	7
Figure 3-3 Existing Unit Capacities .....	9
Figure 3-4 Influent Pumps.....	10
Figure 3-5 Influent Wet Well and Stormwater Pump and Cover .....	11
Figure 3-6 Primary Clarifier.....	12
Figure 3-7 Primary Clarifier and Roughing Filter.....	12
Figure 3-8 Aeration Basins.....	13
Figure 3-9 Aeration Basin Blowers .....	14
Figure 3-10 Final Clarifiers .....	15
Figure 3-11 Final Clarifier Effluent Weir .....	15
Figure 3-12 Chlorine Contact Tank with Chlorine Building.....	16
Figure 3-13 Aerobic Digester .....	17
Figure 3-14 Sludge Storage Lagoon.....	18
Figure 5-1 Evoqua Oxidization Ditch Proposal Layout.....	22
Figure 5-2 Oxidation ditch Aerial Layout .....	22
Figure 5-3 SBR Example Reactors Aqua-Aerobics .....	23
Figure 5-4 Proposed Layout Aqua-Aerobics.....	23
Figure 5-5 MBR Layout Schematic.....	24
Figure 5-6 MBR Aerial Layout .....	24
Figure 5-7 Package Plant Flow Schematic.....	25
Figure 5-8 Package Plant Aerial Layout .....	25
Figure 5-9 Aglaewheel .....	26
Figure 5-10 LemTec Lagoon Example .....	27
Figure 5-11 LemTec Proposed Aerial layout .....	28

## APPENDICES

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Appendix A – NPDES Permit

Appendix B – Zoning Map

Appendix C – Design Basis

Appendix D – Cost Estimates

## ABBREVIATIONS

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BOD	Biological oxygen demand
DAF	Design average flow
DMF	Design maximum flow
GPD	gallons per day
GPM	gallons per minute
IEPA	Illinois Environmental Protection Agency
MG	Million gallon
MGD	Million gallons per day
NPDES	National Pollutant Discharge Elimination System
SCFM	Standard cubic feet per minute
SWD	Side water depth
TSS	Total suspended solids
WWTP	Wastewater treatment plant

## 1. EXECUTIVE SUMMARY

### 1.1 BACKGROUND

The Village of Tolono owns and operates the Wastewater Treatment Plant (WWTP) which treats wastewater generated by domestic and commercial customers. Currently the WWTP is operating above capacity. The Village is also considering taking waste from a nearby mobile home park, an elementary school, and some new residential developments. The Village has identified necessary wastewater treatment facility improvements required to bring age depreciated facilities up to date.

### 1.2 PURPOSE

The purpose of this Facility Plan Report is to document the basis of design for the improvements to the WWTP and to assess the cost of these upgrades, quantify the cost of financing the capital project and to estimate the impact of this financing on customer's sewer bills.

### 1.3 RECOMMENDED PROJECTS

The Recommended Project includes construction of an oxidation ditch system, forecasted at a total initial cost of \$5.6 million. This is a substantial capital cost to the Village and will likely require some type of financing to make it affordable. Detailed financing scenarios for these improvement is excluded from this report because financing of these improvements is being analyzed along with other sewer system capital improvements as part of a rate study that is being completed in November 2019.

## PROJECT PLANNING

### 1.4 FACILITY PLANNING AREA

The WWTP is located on South Bourne Street in Tolono, Illinois and discharges effluent to Hackett Branch under NPDES Permit No. IL0031453 (Appendix A), as shown in Figure 0-1.

The WWTP is currently rated for 0.235 MGD design average flow (DAF) and 0.588 MGD design maximum flow (DMF). The WWTP is located in Section 35, Township 18 North, Range 8 East, in the 3rd Principal Meridian. Figure 2 below shows the Tolono WWTP location on a USGS map.

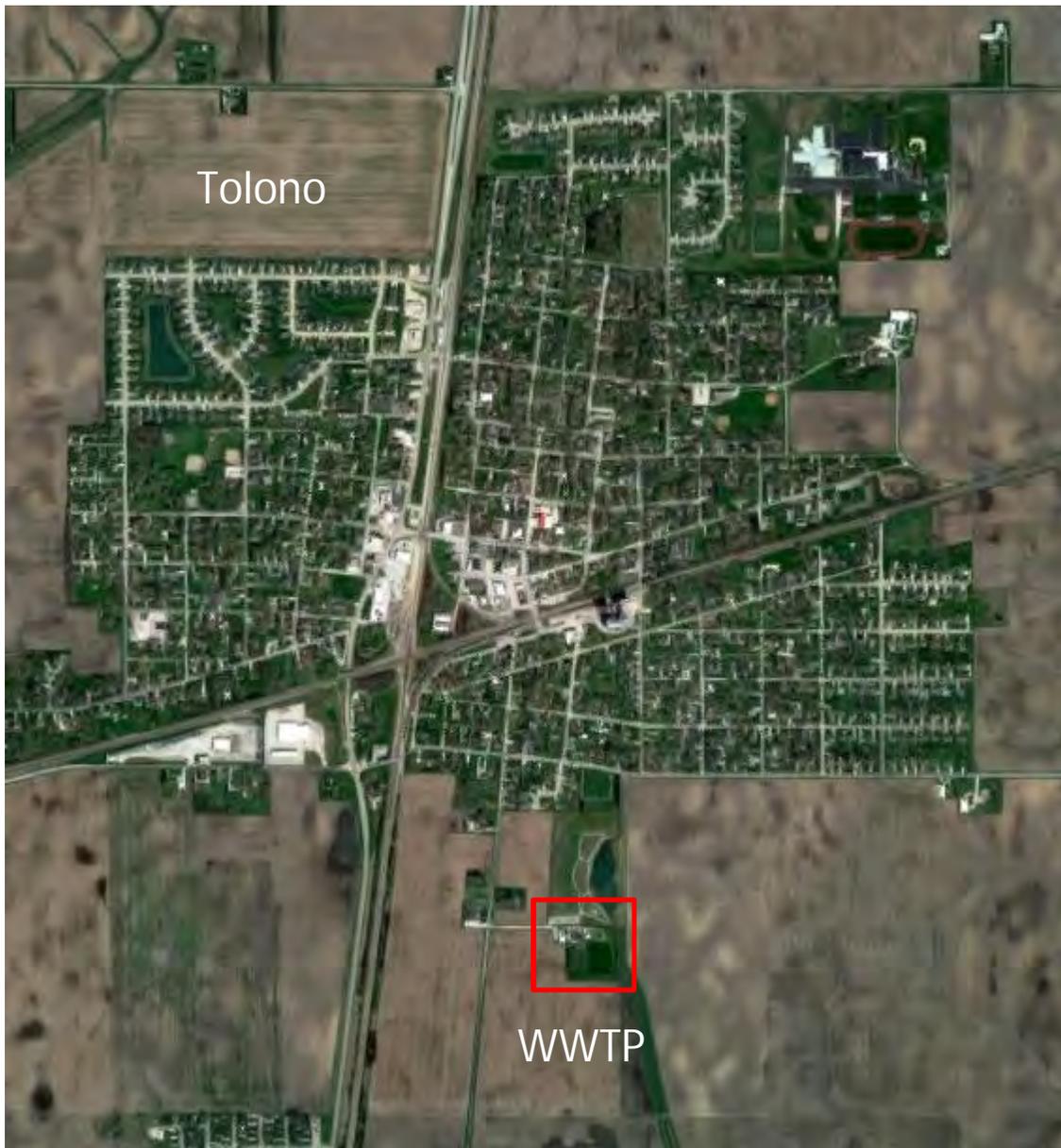


Figure 0-1 Tolono Aerial

## 1.5 ENVIRONMENTAL RESOURCES

The recommended plant improvements are all located within the existing plant facility, therefore minimal environmental impact is expected. During full design Donohue will coordinate to solicit input from agencies associated with environmental issues such as wetlands; flood plains; unique plant or animal communities or other important fish and wildlife habitats; historic, archeological, and cultural features; and any other factors that would be significantly affected by the proposed improvements.

## 1.6 PLANNING PERIOD

The project planning period is a 20-year period, extending from 2020 to 2040. It is intended that all equipment (except SCADA-related hardware and software) proposed in this report have a design life of at least 20 years. User charge calculations within the aforementioned rate study will be compiled assuming a 20-year payback of the instruments of finance, such as Illinois EPA Water Pollution Control Loan Program loans.

## 1.7 POPULATION PROJECTION & INCOME STATISTICS

The City of Tolono is located in Champaign County in central Illinois. The Village currently occupies an area of approximately 2.14 square miles. The Village's population listed in the 2000 U.S. census was listed as 2,700 persons. The Village's population listed in the 2010 U.S. census was listed as 3,447 persons, approximately a 28% increase. The estimated 2017 population was 3,449, approximately no change from the 2010 census. The City currently serves a total of 1,158 homes. The Village is anticipates to increase the existing population served by expanding the service area to existing developments of nearby Oaks Mobile Home Park, Unity West Elementary School and Southside residential community, for an additional 841 users. The Village also anticipates future growth from new developments in the proposed service area from the Oaks Mobile Home Park, the Southside residential area, and other new residential developments near East Side Park and the existing Woodworth Property, west of Village Hall, for an additional 650 users. Based on an estimated growth of 1% per year paired the expanded service area growth stated above, the future service population is estimated to be 5,180 users in 2040. This corresponds to the design average daily flow of 500,000 gallons per day discussed in Chapter 2.

The U.S. Census Bureau reports that Tolono's average Median Household Income (MHI) for 2013-2017 was \$69,712. The statewide average MHI for all of Illinois for 2013-2017 was reported to be \$61,229.

## 1.8 FACILITY PLANNING AREA IMPACTS

The WWTP's proposed service area is currently within the Village of Tolono's existing Facilities Planning Area and this project proposes no changes to the Village's FPA boundaries.

## 1.9 ZONING AND LAND USES

The proposed upgrades will be constructed within the premises of the WWTP site. The current City Zoning Map as published by the Plan Commission shows the site to be zoned in the "AG-1" agriculture zoned district, in future corporate limits. The most recent zoning map can be found in Appendix B. These improvements are consistent with the other facilities currently on the site and the scope of this project does not intend to alter the zoning or nature of the land uses within the WWTP.

## 2. EXISTING CONDITIONS

### 2.1 DESIGN AND CURRENT FLOWS

The current and design treatment capacities, the additional flows and the future design flows are summarized in Table 2-1. Existing and new development growth was detailed in the previous section. The total average day flows from existing developments that could be incorporated immediately is estimated to be 0.044 MGD. The total average day flows from future developments is expected to be 0.065 MGD. The total increase in average flow would therefore be 0.110 MGD. The future flows shown in Table 2-1 include the Oaks Park and new residential development flows.

Table 2-1 Design, Current and Future flows

Flows (MGD)	DAF	DMF
<b>Original Design Flows</b>	0.235	0.588
<b>Current Flows*</b>	0.333	0.767
<b>Existing Development to be Incorporated</b>	0.044	0.035
<b>Future Development Growth</b>	0.065	0.074
<b>Population Growth (~1%)</b>	0.058	0.124
<b>Future Design Flows</b>	0.500	1.00

\*2019 Sanitary Sewer System Flow Study

0.512

1.710

Revised Future Design Values from IEPA Project Plan

The daily maximum flow (DMF) values were estimated during this study and have been revised as part of the IEPA project plan with greater analysis and accuracy.

The following sub-sections details the unit process design criteria for the treatment system. A complete design basis spreadsheet for the treatment system is included in Appendix C. The next chapter provides more details for the recommended improvements.

### 2.2 DESIGN AND CURRENT CONCENTRATIONS AND LOADINGS

The original design and current concentrations and loadings are shown in Table 2-2. The design influent data was from the existing O&M manuals. The current conditions are based on one grab sample per month. Due to the minimal existing conditions data the facility design alternatives were based on the more conservative original design concentrations.

Before design it is recommended that the Village complete a special sampling campaign to better characterize the influent conditions including but not limited to concentrations and loading of BOD, TSS, ammonia and total phosphorus.

Table 2-2 Design and Current Concentrations and Loadings

Monthly Average		Design	Current Conditions *	
		Influent	Influent	Effluent
Flow	MGD	0.235	0.168	0.135
BOD	mg/L	277	134	6.7
	ppd	543	-	6.7
TSS	mg/L	323	154	8.8
	ppd	633	-	8.9
Ammonia	mg/L	19	-	1.07
	ppd	37	-	1.57
Phosphorus	mg/L	9	-	1.67

\* 2017-2019 DMR Data

### 2.3 TREATMENT PROCESS OVERVIEW

The Tolono WWTP was designed and built in the early 1970's with improvements in the 1980's and 2011. The 1984 update added a sludge storage lagoon, primary clarification and made other minor plant improvements. In 2011 a roughing filter was added to primary treatment to reduce the loading to the aeration basins. The majority of the process equipment is over thirty years old and has exceeded the original design life. Aerials of the facility are shown in Figure 2-1 and Figure 2-2.



Figure 2-1 Tolono WWTP and Lagoon Aerial



Figure 2-2 Tolono WWTP

Flow enters the raw influent wet well through a 12-inch influent sewer and a sewage comminutor, and is then pumped to either primary treatment (<0.588 MGD) or the stormwater equalization basin (>0.588 MGD). Stormwater can later flow back to the influent pumping well for full treatment or be discharged to the Hackett Branch after disinfection via gravity.

The raw influent pump discharge to two rectangular primary clarifier (10' x 31' each). During primary clarification flow is also pumped up through a primary roughing filter (11' diameter x 15' height) to reduce loading to the aeration basin. Flow exits the roughing filter and enters back into the one of the primary clarifiers. All flow then exits through the primary clarifier effluent troughs and flows via gravity to the two aeration basins (24' x 20' each), which are run in parallel.

Aeration basin effluent then enters two 24'x24' square final clarifiers. Flow can be sent to the chlorine contact tank (21' x 6.2') or discharged to the Hackett Branch. As the NPDES permit does not currently require seasonal disinfection flow is sent directly to the Hackett Branch. There are two tertiary sand filters that are not currently in use that were originally constructed for secondary effluent polishing.

Primary sludge from the primary clarifiers and waste activated sludge from secondary treatment is combined and digested in two aerobic digesters. There is currently no thickening at the plant. Digested sludge is then sent to the sludge storage lagoon. Sludge is typically dredged and land applied every other year. A summary of the existing unit process capacities, based on Ten State Standard Recommendations, is shown in Table 2-3. Any factor that would contribute to limiting the capacities of these unit processes will be discussed in the following sections. Loading to the plant has been defined by the current and future flows along with the original design influent BOD, TSS and ammonia.

Table 2-3 Existing Unit Process Capacities

	<b>Treatment</b>	<b>Number</b>	<b>Capacity</b>	<b>Sizing</b>
<b>Headworks</b>	Influent Pumping	3	3 - 410 gpm @ 37'	
	Comminutor	1		
<b>Primary Treatment</b>	Primary Clarifiers	2	0.62 MGD @ 1,000 gpd/sf 0.93 MGD @ 1,500 gpd/sf	31' x 10' x 6.69' SWD ea
	Roughing Filter Unit	1	0.68 MGD @ 5 gpm/sf	11' diameter x 15' depth
<b>Secondary Treatment</b>	Aeration Basins	2	13,920 cf	24' x 20' x 14.5 SWD ea
	Final Clarifiers	2	1.38 MGD @ 1,200 gpd/sf 2.76 MGD @ 20,000 gpd/f	24' x 24' x 11.5 SWD ea
	Tertiary Filters (out of service)	2		16 cells/filter 11" sand depth
	Blowers	3	767 scfm each	
<b>Disinfection</b>	Chlorine Contact Tank	1	0.90 MGD @ 15 min	21' x 6.2' x 9.75 SWD
<b>Solids Handling</b>	Aerobic Digesters	2	11,986 cf	21.2' x 20.2' x 14 SWD
	Sludge Lagoon	1		72,495 cuft
<b>Stormwater</b>	Stormwater Pumps	1	900 gpm	
	Stormwater Equalization Basin	1		2.7 MG

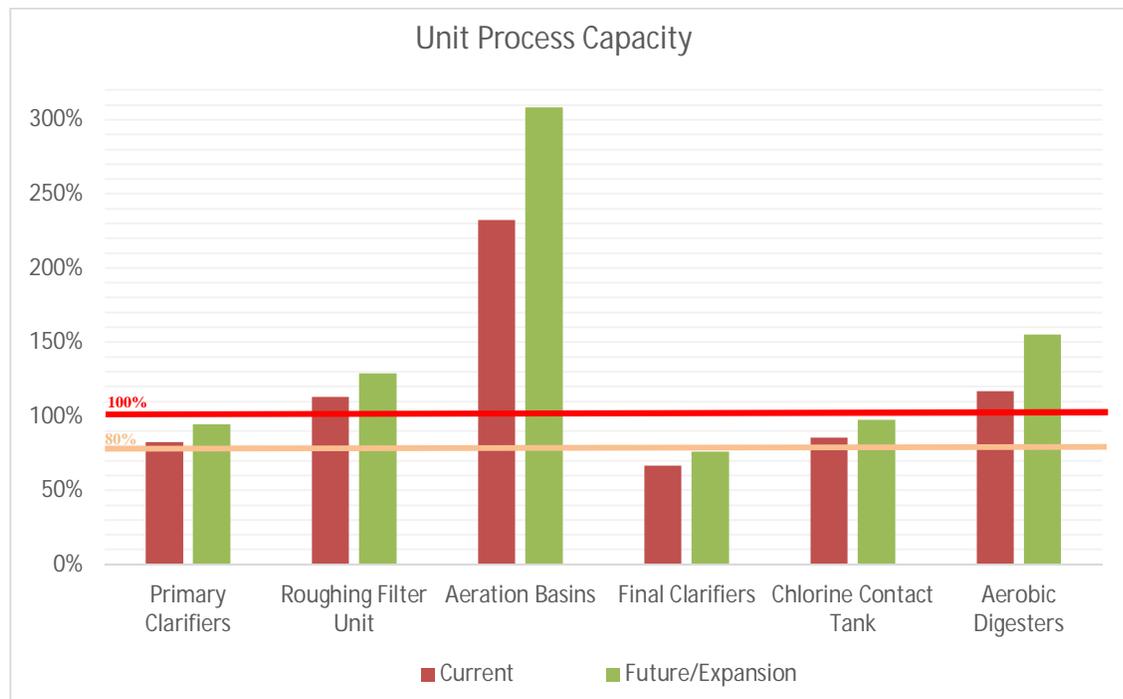


Figure 2-3 Existing Unit Capacities

\*Primary clarifier capacity based on a 10' SWD, actual SWD 6.69'

\*Secondary clarifier capacity based on 12' SWD, actual SWD 11.52'

## 2.4 HEADWORKS AND STORMWATER

The WWTP does not currently have a main headworks facility, instead influent sewage enters through a 12-inch line into muffin monster comminutor (sewage grinder) operated continuously and into the influent wet well. The raw wastewater can either be pumped to primary treatment, via three influent pumps located in the main control build, or pumped to the stormwater equalization basins, via one stormwater pump. All flows 0 – 0.588 MGD are pumped to primary treatment and all flows above 0.588 MGD are pumped to the stormwater equalization basin. The stormwater pump will turn on at a set wet well depth. Raw influent pumps are three influent Fairbank Morse 7.5 hp centrifugal pumps shown in Figure 2-4, located in the basement of the main control building east of the wet well.

The stormwater pump is located above ground, outside but covered south of the influent wet well and has a suction elevation higher than that of the influent pumps. The stormwater pump has a capacity of 900 gpm.

The plant currently lacks any influent screening or grit removal. In addition, due to age of the stormwater pump, the discharge piping leaks through a flange a large percentage of the pumped stormwater back into the influent wet well.

The influent pumps are shown in Figure 2-4. Influent wet well (grating), covered stormwater pump, and control building are shown in Figure 2-5.



Figure 2-4 Influent Pumps

Recommended upgrades are:

1. New screening/ headworks facilities
2. New stormwater pump and discharge piping
3. New flow metering



Figure 2-5 Influent Wet Well and Stormwater Pump and Cover

## 2.5 PRIMARY TREATMENT

Primary treatment consists of two rectangular primary clarifiers, shown in Figure 2-6, and one primary roughing filters shown in Figure 2-7. The two rectangular primary clarifiers have dimensions of 31' length, 10' width and 6.69' operating SWD each for a total volume of 0.031 MGD and total surface area of 620 sqft. Ten State Standards recommends a surface overflow rate of 1,000 gpd/ft<sup>2</sup> for design average flow and 1,500-2,000 gpd/ft<sup>2</sup> for peak hourly flow. Based on these standards the clarifiers should be sized for 0.62 MGD average day and 0.93 MGD peak hourly (at 1,500 gpd/ft<sup>2</sup>); however, Ten States also recommends a minimum side water depth of 10 feet. As the existing depth of the primary clarifiers is shallower than 10' the primary clarifiers likely do not allow enough room between the sludge blanket and the effluent trough decreasing the removal efficiency. The roughing filter was likely added to aid in primary treatment and decrease the loading to the aeration basin. The roughing filter is limited to the peak pump capacity which is 0.63 MGD.



Figure 2-6 Primary Clarifier



Figure 2-7 Primary Clarifier and Roughing Filter  
Recommended upgrades are:

1. Additional primary treatment

2. primary clarifier mechanisms
3. Larger primary roughing filter pumps

## 2.6 SECONDARY TREATMENT

Secondary treatment consists of two aeration basins run in parallel shown in Figure 2-8, and two square final clarifiers shown in Figure 2-10 and Figure 2-11. The two aeration basins have dimensions of 24' length, 20' width and 14.5' SWD, for a total volume of 0.104 MG. For a single-stage nitrification plant Ten State Standard recommends volumetric loading of 15 lb BOD/kcf, however Donohue has had success permitting plants up to 23 lb BOD/kcf. Based on conservative primary treatment BOD and TSS removal estimates, at 23 lb BOD/kcf the aeration basins are currently sized for an average daily flow of 0.22 MGD, and are likely currently experiencing average loading rates of 34 lb BOD/kcf. Future average day flows would increase loadings to 46 lb BOD/kcf. The estimated current and future air flow requirements are 254 scfm and 337 scfm respectively.

Blowers shown in Figure 2-9 feed the aeration basins, the aerobic digesters and the clarifier scum and sludge airlift pumps. There are currently three centrifugal blowers each with an output of 767 SCFM for a total output of 2301 SCFM.

The two square final clarifiers have dimensions of 24' by 24' and 11.52' operating SWD each for a total volume of 0.10 MG and total surface area of 1152 sqft. Ten State Standards recommends a surface overflow rate of 1,200 gpd/ft<sup>2</sup> for peak hourly flow. Based on these standards the clarifiers should be sized for 1.38 MGD peak hourly flows. To avoid the use of a tertiary filter or other polishing step the IEPA requires clarifier be sized for no more than 600 gpd/ft<sup>2</sup> average daily flow, which would limit the clarifier average daily flow to 0.691 MGD. In addition to the general age of the clarifier's mechanisms it was noted that the clarifiers tend to have a buildup of floatable solids in the corners.

The facility also has two out of service tertiary filters.



Figure 2-8 Aeration Basins



Figure 2-9 Aeration Basin Blowers



Figure 2-10 Final Clarifiers



Figure 2-11 Final Clarifier Effluent Weir

Recommended upgrades are:

1. New valves and piping
2. New diffusers
3. Additional aeration basins

4. Either expanded secondary clarifiers or rehabilitate tertiary filters
  - a. New clarifier mechanisms
5. New blowers

## 2.7 DISINFECTION

Disinfection currently is only required on stormwater. The chlorine contact tank is located between the aeration basins and the aerobic digesters, shown under the white building in Figure 2-12. The chlorine contact tank has dimensions of 21' length, 6.2' width, and 9.75' SWD for a total volume of 0.0094 MG. Based on the recommended 15 minute detention time hourly flow, the existing chlorine contact tank is sized for 0.89 MGD peak hourly flow.



Figure 2-12 Chlorine Contact Tank with Chlorine Building

## 2.8 SOLIDS HANDLING

Solids handling is completed through aerobic digestion. The plant does not have thickening so WAS and primary sludge are sent directly to digestion. There are two aerobic digesters sized 21.2' length, 20.2' width and 14' SWD, for a total volume of 11,986 cubic feet. The original design required 9,871 cubic feet, current average flows and future average flows require 13,987 cubic feet and 18,574 cubic feet of volume, respectively. The max required airflow for the future average day flows is 830 SCFM, a little over a third of the total blower capacity.

Digested sludge is stored in the sludge lagoon, with a storage volume of 0.52 MG shown in Figure 2-14. The lagoon was originally designed for 120 days of sludge storage.



Figure 2-13 Aerobic Digester



Figure 2-14 Sludge Storage Lagoon

Recommended upgrades are:

1. Additional blowers
2. Additional aerobic digesters

## 2.9 GENERAL UPGRADES

General recommended upgrades are:

1. National Fire Protection Agency (NFPA) 820 Code compliance upgrades
  - a. Additional HVAC to 6 air changes per hour to declassify spaces
2. Grating and handrail safety upgrades
3. General concrete repairs on basins and clarifiers
4. Demolishing or rehabilitating the existing chemical storage building
5. New valves and piping

### 3. WATER QUALITY & EFFLUENT LIMITS

#### 3.1 GENERAL

Illinois EPA has indicated that this receiving stream segment, Water Body Segment BERB-TO-C1 of the Hackett Branch, as being as an impaired water for aquatic life. The impairment for aquatic life potential causes is identified as total phosphorus or dissolved oxygen.

#### 3.2 EXISTING EFFLUENT LIMITS

The discharge from the WWTP is regulated by NPDES Permit No. IL0031453. The draft reissued permit public notice ended on October 14<sup>th</sup> 2016. The discharge limits for BOD<sub>5</sub> at outfall 001 (Hackett Branch) are set by IEPA at 10 mg/L on a monthly average and a 20 mg/L daily maximum. The discharge limits at outfall 001 for total suspended solids (TSS) are set at 12 mg/L on a monthly average and a 24 mg/L daily maximum. The discharge limits for both BOD<sub>5</sub> and TSS at outfall 002 (Excess Flow) are set by IEPA at 30 mg/L on a monthly average and a 45 mg/L weekly average.

For outfall 001, ammonia limits for April through October are currently set for a monthly average of 1.5 mg/l and a daily maximum of 3.0 mg/l. Ammonia limits for November through February are currently set at a monthly average of 4.0 mg/L with a daily maximum concentration of 4.7 mg/l. Ammonia limits for the month of March are set at a monthly average of 1.6 mg/L and a daily maximum of 6.9 mg/L. Ammonia is monitor only on outfall 002.

The plant currently requires phosphorus monitoring only at both outfalls 001 and 002. Fecal coliform is monitored May through October at outfall 001. At outfall 002 fecal coliforms cannot exceed a monthly average of 400 per 100 ML. Permit limits for outfall 001 and 002 are shown in Table 3-1 and Table 3-2.

Table 3-1 NPDES Permit Limits Outfall 001

	Monthly Average (mg/L)	Daily Maximum (mg/L)
<b>CBOD5</b>	10	20
<b>TSS</b>	12	24
<b>pH</b>	6-9	
<b>Fecal Coliform</b>	Monitor only	
<b>Total Phosphorus</b>	Monitor only	
<b>Ammonia</b>		
<b>April – Oct.</b>	1.5	3.0
<b>Nov. – Feb.</b>	4.0	4.7
<b>March</b>	1.6	6.9
<b>DO</b>		
<b>March – July</b>	Daily min 5.0 mg/L, Weekly avg. 6.0	
<b>Aug. – Feb.</b>	Daily min 4.5 mg/L, Weekly avg. 4.0	

Table 3-2 NPDES Permit Limits Outfall 002

	Monthly Average (mg/L)	Weekly Average (mg/L)

<b>CBOD5</b>	30	45
<b>TSS</b>	30	45
<b>pH</b>	6-9	
<b>Fecal Coliform</b>	Daily maximum 400 per 100 ML	
<b>Total Phosphorus</b>	Monitor only	
<b>Ammonia</b>	Monitor only	
<b>Dissolved Oxygen</b>	Monitor only	
<b>Chlorine Residual</b>	0.75	

### 3.3 FUTURE EFFLUENT LIMITS

This project assumes there will be no major changes to the new NPDES permit. However, it is likely that over the 20 year planning period phosphorus limits will be added. The plant currently has a disinfection exemption that is based on the physical characteristics of the receiving stream. There is a possibility that IEPA may remove the exemption in the coming years.

## 4. WWTP IMPROVEMENTS

### 4.1 INTRODUCTION

At the WWTP, improvements will be constructed to achieve compliance with current design standards and to update processes at the end of their design life. It has been determined that not only are most of the process equipment and infrastructures at the end of their useful life, almost all of the existing processes are under sized for the current flows and loadings. The future estimated flows are estimated to be almost double the original design. The current processes are undersized for the future estimated flows and loadings:

- Primary clarifiers
- Aeration basins
- Secondary clarifiers
- Aerobic digestion

The following are past or quickly approaching the end of their useful life:

- Influent pumps
- Stormwater pump
- Blowers
- Clarifiers mechanisms
- Most valves and metering

The following upgrades are required for safety and to meet National Fire Protection Agency (NFPA) 820 code:

- Improve ventilation to 6 air changes per hour to declassify the space
- General concrete repairs
- New grating and handrails

Based on the needed improvements, the two main update options are to either update and expand all the existing processes; new headworks, primary, secondary, disinfection and solids handling; or to invest in a new treatment system and reuse the existing infrastructure. Updating and reusing the existing infrastructure was determined to be both prohibitively expensive and technically difficult for construction and rehabilitation due to existing infrastructure age and condition, therefore the evaluated alternatives are new treatment facilities that utilizes minimal existing infrastructure. All alternative will reuse the existing headworks (with upgrades), sludge lagoon, excess flow lagoon and chlorine contact.

### 4.2 EVALUATION OF ALTERNATIVES

Each alternative is briefly described in the following sections including planning level capital costs, recommended basin sizing and potential advantages and disadvantages of each technology. A breakdown of the planning level cost estimates can be found in Appendix D.

### 4.2.1 OXIDATION DITCH

An oxidation ditch is a modified activated sludge system that typically utilizes oval shaped basins divided into multiple channels. Oxidation ditches can be a complete mix system or modified for plug flow, and typically operate with higher SRTs. Oxidation ditches can also be modified with anaerobic and anoxic zones for nutrient removal and/or simultaneous nitrification-denitrification. Oxidization ditches can typical function without primary treatment but still require headworks (screening and possibly grit removal) and secondary clarification. Possible advantages of an oxidation ditch include: simple operation, well known technology, nutrient removal, and longer SRT to minimize shock loading. Possible disadvantages include: requiring secondary clarification and general larger footprint than other technologies. A proposed oxidation ditch by Evoqua is shown in Figure 4-1, and an aerial layout is shown in Figure 4-2. A planning level capital cost for an oxidation ditch is \$5.6 million.

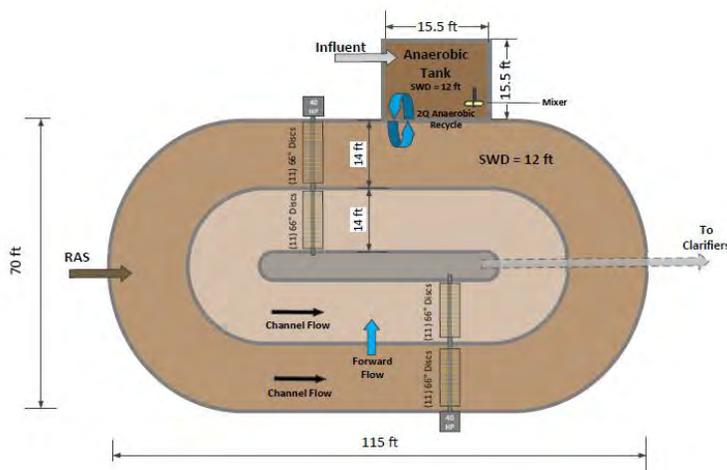


Figure 4-1 Evoqua Oxidization Ditch Proposal Layout



Figure 4-2 Oxidation ditch Aerial Layout

### 4.2.2 SBR

A sequence batch reactor (SBR) uses a single basin to complete all phases of a typical activated sludge treatment process: primary treatment, aeration/activated sludge and final clarification. A system is usually designed with multiple basins to allow for cycling between the two. A figure of an example SBR plant from Aqua-Aerobics is shown in Figure 4-3. An aerial layout of the proposed SBR system is shown in Figure 4-4. Potential advantages of an SBR system include: no recycling or separate clarifiers, simple construction and O&M. Potential disadvantages include: requires tertiary filtration to meet effluent limits, and requires very deep basins for the required reactor volume. A planning level capital cost for a SBR is \$5.8 million.



Figure 4-3 SBR Example Reactors Aqua-Aerobics



Figure 4-4 Proposed Layout Aqua-Aerobics

### 4.2.3 MBR

Membrane bioreactors (MBR) is a treatment process that uses membranes for solids separation instead of traditional clarifiers. Membranes operate at a much higher solids removal than traditional clarifiers allowing for significantly higher MLSS in the aerobic tanks (8,000 – 10,000 mg/L). The higher solids allow for greater treatment in a smaller footprint. MBRs can be operated with or without traditional primary treatments but do require 2 mm screens, in addition to traditional headworks, upstream of reactor basins to ensure the longevity and operation of the membranes. A schematic of a GE MBR is shown in Figure 4-5. An aerial layout of the proposed MBR system is shown in Figure 4-6. The potential advantages of an MBR system are the small footprint and the ability to handle load fluctuations. The potential disadvantages of an MBR system are the high recycle rates and the higher O&M costs. A planning level capital cost for a MBR is \$7.0 million.

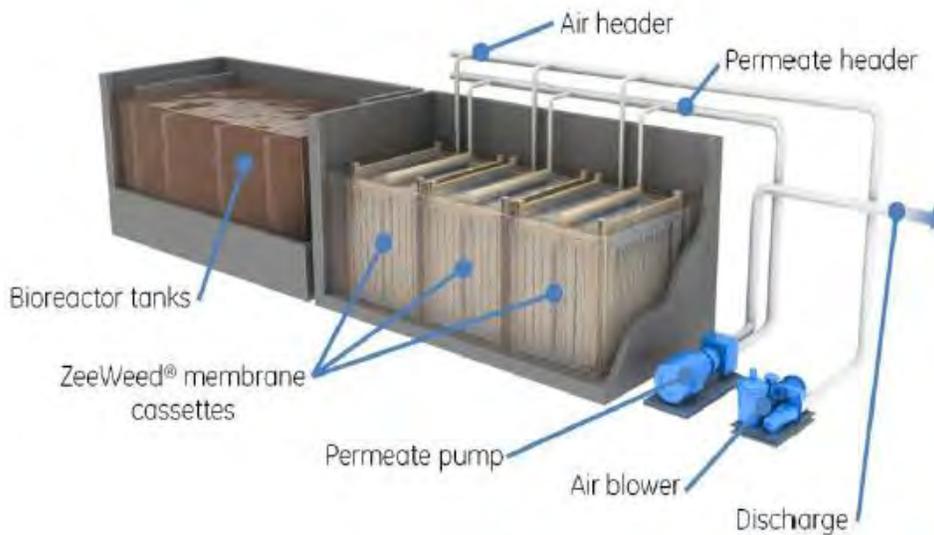


Figure 4-5 MBR Layout Schematic



Figure 4-6 MBR Aerial Layout

### 4.2.4 PACKAGE PLANT

A package plant is a pre-manufactured process plant, typically used for lower flows. Package plant can refer to any treatment process that comes fully manufactured including: SBRs, oxidation ditches and contact stabilization. For the purposes of comparison and costs estimating an extended aeration system from Smith & Loveless was reviewed. The proposed system contains flow equalization, traditional activated sludge and clarification, filtration and sludge storage. A flow schematic of the proposed package plant is shown in Figure 4-7. An aerial layout of the package plant system is shown in Figure 4-8. Possible advantages of a typical extended aeration package plant are easy O&M, no primary treatment, and responding well to load variations. Possible disadvantages of a package plant are typically higher aeration costs, limited future flexibility and larger footprint. A planning level capital cost for package plant is \$6.4 million.

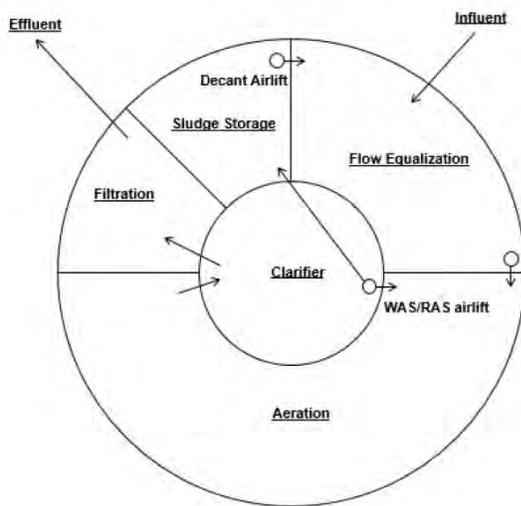


Figure 4-7 Package Plant Flow Schematic



Figure 4-8 Package Plant Aerial Layout

#### 4.2.5 ALGAEWHEEL

Algaewheel is a rotating algal contactor (RAC) which combines algal biofilms and moving bed bioreactors (MBBR) technology for a small footprint treatment process. Algaewheel was a considered alternative as it is a small footprint, low O&M and effective treatment process; however, it was determined that the future flows and loadings are currently too high for the current Algaewheel technology, which is currently designed for smaller flows and loadings. An Algaewheel schematic is shown in Figure 4-9.

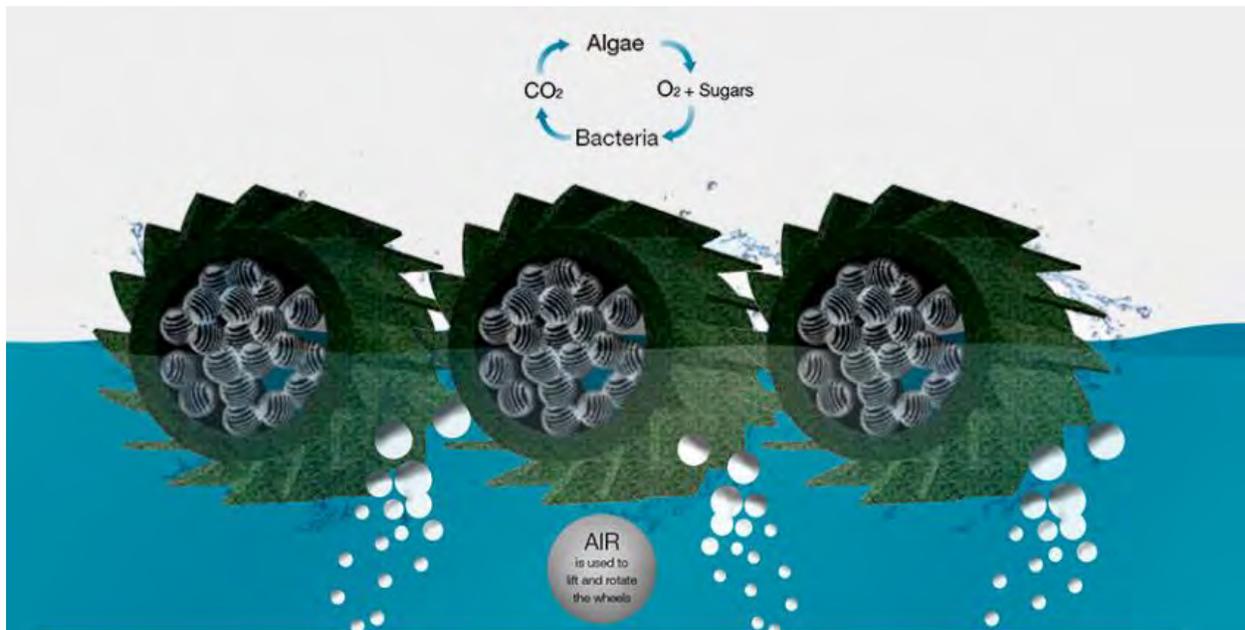


Figure 4-9 Algaewheel

### 4.2.6 LEMTEC LAGOON

LemTec is a lagoon based treatment process which utilizes aerated lagoons, and typically 2 to 3 stages/lagoons to complete aeration and aerobic treatment to remove BOD, solids management for solids separation, reduction and storage, and tertiary treatment for ammonia polishing. Possible advantages of the lagoon system are no primary treatment, simplest operation, and nutrient removal. Possible disadvantage of a lagoon system is the large footprint. An example process flow of a LemTec lagoon is shown in Figure 4-10. The proposed LemTec layout is shown in Figure 4-11. A planning level capital cost for a LemTec lagoon system is \$6.4 million.

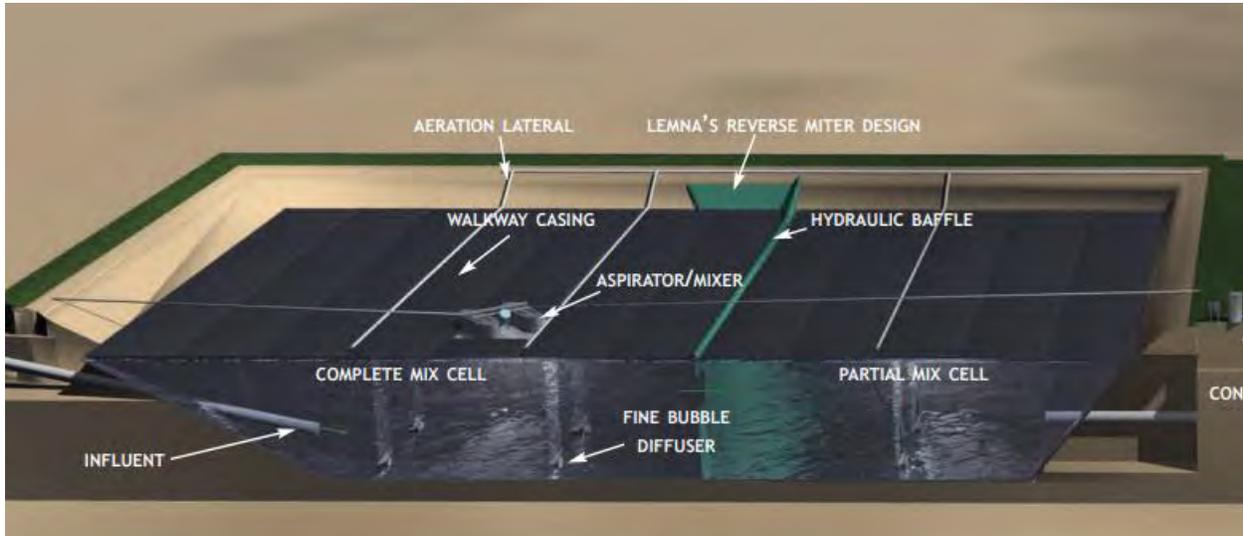


Figure 4-10 LemTec Lagoon Example

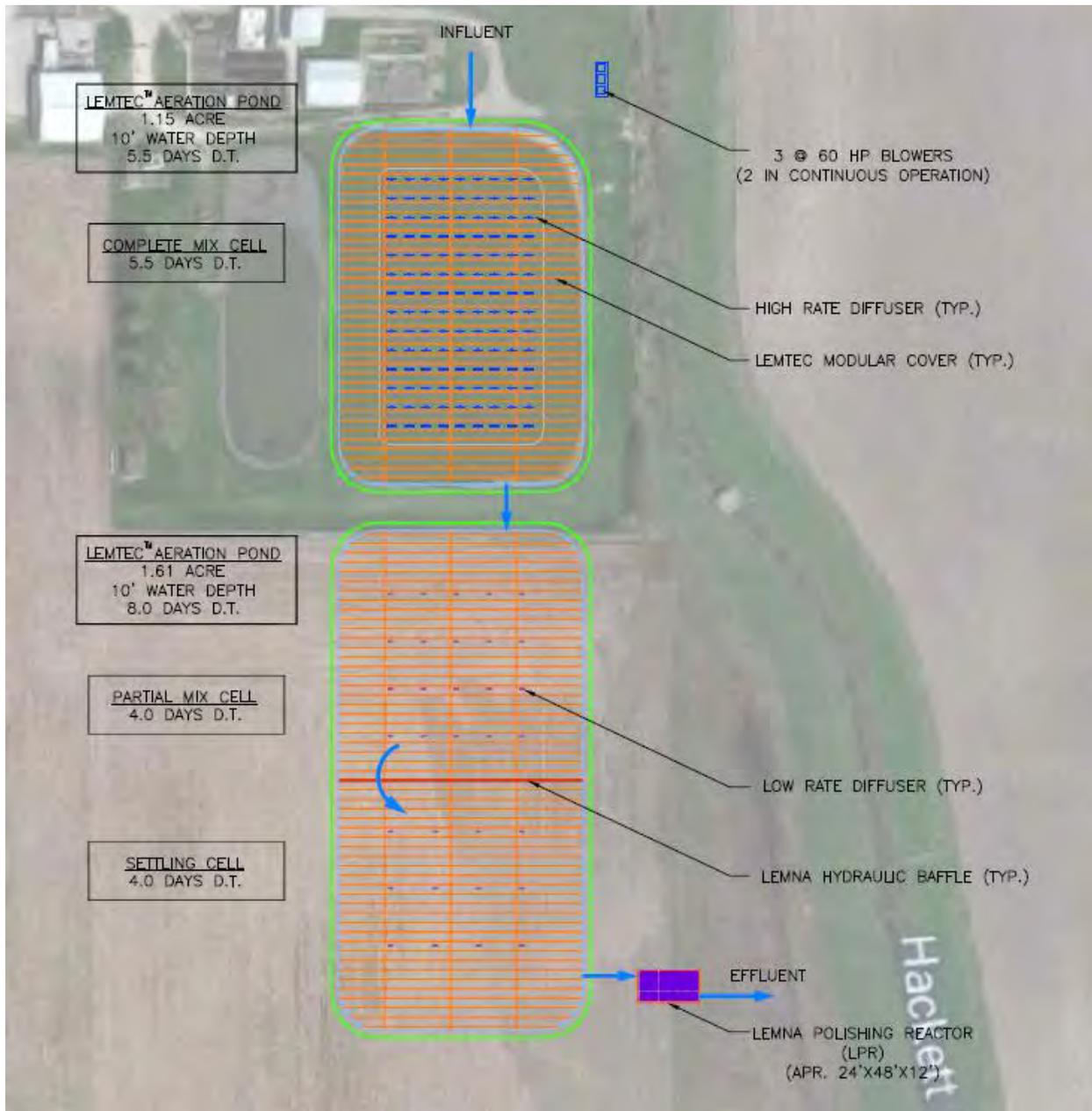


Figure 4-11 LemTec Proposed Aerial layout

### 4.3 RECOMMENDATION

The oxidation ditch is the recommended alternative due to the low capital costs, the ability to more easily meet future nutrient removal requirements, the flexibility to treat higher future flows, and the relative ease of installation and operation.

## 5. FINANCIAL AND RATE IMPACTS

A specific recommended financial plan and impacts study on both the water and wastewater systems, which includes the capital costs of the recommended alternative, is detailed in a separate Rate Study completed in November 2019.

## Village of Tolono

507 W. Strong Street P.O. Box 667 | Tolono, Illinois, 61880



## WATER AND SEWER RATE STUDY

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November 2019



Prepared by:

### **Donohue & Associates, Inc.**

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Donohue Project No.: 13531.004

## **TABLE OF CONTENTS**

---

<b>1. EXECUTIVE SUMMARY</b> .....	<b>1</b>
<b>2. BACKGROUND INFORMATION</b> .....	<b>2</b>
2.1    WATER SYSTEM.....	2
2.2    SEWER SYSTEM .....	2
<b>3. EXISTING FINANCIAL INFORMATION</b> .....	<b>3</b>
3.1    WATER FUND REVENUES, EXPENSES, AND RATE STRUCTURE .....	4
3.2    SEWER FUND REVENUES, RATES, & EXPENSES.....	5
<b>4. CAPITAL PROJECTS, PRIORITIZATION, AND PLANNING COSTS</b> .....	<b>6</b>
4.1    WATER SYSTEM.....	6
4.2    SEWER SYSTEM .....	7
<b>5. CAPITAL IMPROVEMENT SEQUENCING ALTERNATIVES</b> .....	<b>9</b>
5.1    ALTERNATIVE 1 – PAY-AS-YOU-GO .....	9
5.2    ALTERNATIVE 2 – LONG-TERM FINANCING.....	9
<b>6. RATE ADJUSTMENT ALTERNATIVES</b> .....	<b>14</b>
6.1    ALTERNATIVE 1 – PAY-AS-YOU-GO RATE ADJUSTMENTS.....	16
6.2    ALTERNATIVE 2 – LONG-TERM FINANCING ADJUSTMENTS .....	19
<b>7. RECOMMENDED CAPITAL IMPROVEMENT SEQUENCING &amp; RATE ADJUSTMENTS</b> .....	<b>22</b>

## **LIST OF TABLES**

---

Table 5.1 – Pay-As-You-Go Water System Capital Improvement Sequencing	10
Table 5.2 – Pay-As-You-Go Sewer System Capital Improvement Sequencing	11
Table 5.3 – Long-Term Financing Water System Capital Improvement Sequencing	12
Table 5.4 – Long-Term Financing Sewer System Capital Improvement Sequencing	13
Table 6.1 – Pay-As-You-Go Rate Adjustments	17
Table 6.2 – Long-Term Financing Rate Adjustments	20

## **APPENDICES**

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Appendix A – Budget Information Fiscal Years 2016-2020

## **ABBREVIATIONS**

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FY	Fiscal Year
GPD	gallons per day
IEPA	Illinois Environmental Protection Agency
MG	Million gallon
MGD	Million gallons per day
NPDES	National Pollutant Discharge Elimination System
PWSLP	Public Water Supply Loan Program
SRF	State Revolving Funds
WPCLP	Water Pollution Control Loan Program
WWTP	Wastewater treatment plant

## 1. EXECUTIVE SUMMARY

Donohue & Associates, Inc. was retained by the Village of Tolono to perform an engineering study to determine required capital improvements and corresponding rates for water and sewer service charges. This report is primarily intended to analyze the Village of Tolono's water and sewer system rates, rate structure, and rate adjustments necessary to fund anticipated capital improvement over the next 20 years.

Donohue worked with the Village to identify infrastructure, equipment, and processes that are depreciated, nearing the end of their useful life, or underperforming that will need replacement soon. The identified improvements were then prioritized and planning-level costs estimates were assigned to each one. Although there are not major capacity concerns within the existing collection system, the WWTP improvement alternatives were developed with the understanding that the plant is normally operating beyond its rated design capacity and that there are significant existing/proposed developments that have a desire to connect to the Village's system.

Donohue reviewed the budgets and audited financials of the Village. Based on the existing financial information and projected capital improvement needs, revenues and expenses were forecasted for the Village's water and sewer budgets over the next 20 years, fiscal years 2021 through 2040.

The Village's only outstanding debt related to the water or sewer system at this time is their water meter replacement project which was financed over a 7 year term. The meter replacements began in 2019 and are planned to be completed by the end of 2020. The loan for this work is schedule to be paid in annual payments of \$64,100.43 from 2021 through 2027.

All of the aforementioned data and analysis was used to develop two alternate capital improvement plans based on how the Village would like to finance capital improvement projects.

Based on the analysis in this report, if the Village plans to continue to operate and maintain both the water and sewer system in good condition, we would recommend pursuing low-interest IEPA, long-term financing for water and sewer capital improvement projects. There is potential for principal forgiveness (similar to grant funds) for both water and sewer improvements with this funding source. A summary of anticipated adjustments to the water and sewer rates over the next 20 years to proactively perform proper maintenance and capital improvements is as follows:

Water:	FY 2021 – 2023	10% increase
	FY 2024 – 2040	Cost-of-living-adjustment (assumed to be 3%)
Sewer:	FY 2021 – 2024	10% increase
	FY 2025 – 2035	5% increase
	FY 2036 – 2040	Cost-of-living-adjustment (assumed to be 3%)

## **2. BACKGROUND INFORMATION**

### **2.1 WATER SYSTEM**

The Village purchases bulk water from Illinois American Water Company who owns operates, and maintains the existing ground storage tank located on Holden Street, between Borne & Calhoun. The Village owns, operates, and maintains the water distribution system throughout the Village, from the connection point to the ground storage tank, including all of the mains, valves, hydrants, services from the main to the meter pit, and the meter pits. Water distribution system additions since the original construction include various main improvements in the 1970's along with main extensions to serve Linshar Fields subdivision in the 1990's and the Deerpath, Windstone, Kinderwood, and Southview subdivisions in the 2000's. The Village has just recently begun replacing existing water meters throughout the Village to allow for improved metering/billing and remote read capability.

### **2.2 SEWER SYSTEM**

The Village's sewer collection system is comprised of approximately 80,100 feet of gravity sanitary sewer and six (6) municipal lift stations (not including the WWTP influent lift station) and force mains. The majority of the collection system and WWTP were built with the original system constructed in the early 1970's. Collection system additions since the original construction include the extension to serve the Linshar Fields subdivision in the 1990's and the Deerpath, Windstone, Kinderwood, and Southview subdivisions in the 2000's. Aside from the subdivision additions, the only notable collection system improvements the Village has made since 2000 was the installation of the East Side Interceptor. The WWTP is an activated sludge WWTP that has had some upgrades including the construction of a primary clarifier, filter building, sludge storage lagoon in the 1980's and the addition of a roughing filter in 2011. The Village owns, operates, and maintains the gravity sewers and contracts ERH Enterprises to operate and maintain their WWTP and Lift Stations.

### 3. EXISTING FINANCIAL INFORMATION

Historical budget and actual revenue and expenditure information was obtained from the Village to determine historical trends for expenses and revenues for the Water and Sewer Funds. This information was used to project annual operating and maintenance expenses in these areas.

The period reviewed included:

- Actual revenues and expenses from FY 2015-2016 (Referred to as 2016)
- Actual revenues and expenses from FY 2016-2017 (Referred to as 2017)
- Actual revenues and expenses from FY 2017-2018 (Referred to as 2018)
- Actual revenues and expenses from FY 2018-2019 (Referred to as 2019)
- Budgeted revenues and expenses for FY 2019-2020 (Referred to as 2020)

This information was provided by the Village. A copy of this information is included in **Appendix A.**

Based on information provided by the Village's Clerk, as of April 30th, 2019 (end of FY 2019) the Village had an ending balance of \$1,458,338 in their sub-account for water/sewer. We have identified this amount as the Village's current reserve funds for water and sewer improvements. The Village does not have a sub-account for each utility so we elected to split these reserve funds as follows:

Water	20%	\$291,667.60
Sewer	80%	\$1,166,670.40

This split was decided based on identified capital projects and associated costs discussed later in the report for each utility. The Village's sewer system has more costly capital projects and less revenue to support them at this point.

### 3.1 WATER FUND REVENUES, EXPENSES, AND RATE STRUCTURE

The water fund revenues and expenses during the period from 2016-2020 were combined into 5 categories for simplification. Summaries of annual revenues and expenses over the time period are shown in the following tables:

WATER FUND REVENUES					
SOURCE	2016	2017	2018	2019	2020
Service Charges	\$410,857	\$418,052	\$497,820	\$513,551	\$540,850
Connection Fees	\$2,250	\$1,800	\$2,275	\$450	\$0
Fines & Forfeit	\$0	\$0	\$0	\$0	\$0
Other Revenue	\$2,805	\$2,655	\$4,003	\$4,314	\$5,000
<b>Total</b>	<b>\$415,912</b>	<b>\$422,507</b>	<b>\$504,098</b>	<b>\$518,315</b>	<b>\$545,850</b>

WATER FUND EXPENSES					
SOURCE	2016	2017	2018	2019	2020
Water Purchase	\$313,171	\$325,295	\$377,195	\$351,683	\$425,000
Personnel	\$69,069	\$100,260	\$105,592	\$49,271	\$84,264
O & M	\$10,551	\$12,980	\$11,226	\$19,172	\$23,700
Professional Services	\$2,200	\$13,102	\$1,937	\$27,513	\$12,750
Existing Capital Improvements	\$40,492	\$26,072	\$25,945	\$141,183	\$33,100
Other Expenses	\$49,105	\$49,525	\$41,956	\$18,412	\$28,200
<b>Total</b>	<b>\$484,588</b>	<b>\$527,234</b>	<b>\$563,851</b>	<b>\$607,234</b>	<b>\$618,014</b>

WATER FUND NET INCOME					
PROFIT/LOSS	2016	2017	2018	2019	2020
<b>INCOME (LOSS)</b>	<b>(68,676)</b>	<b>(\$104,728)</b>	<b>(\$59,754)</b>	<b>(\$88,920)</b>	<b>(\$90,664)</b>

Charges for services are the revenue that the Village receives from the payment of water bills. These charges include both fixed fees and volume fees as discussed further below. Normal monthly water usage rates over the last five years are depicted below.

MONTHLY WATER USER RATES					
COMPONENT	2016	2017	2018	2019	2020
Fixed Fee for First 2,000 Gallons	\$11.41	\$11.41	\$13.69	\$14.37	\$16.87
Volume Fee per 1,000 Gallons After	\$5.70	\$5.70	\$6.84	\$7.18	\$7.18

### 3.2 SEWER FUND REVENUES, RATES, & EXPENSES

The sewer fund revenues and expenses during the period from 2016-20120 were combined into 5 categories for simplification. Summaries of annual revenues and expenses over the time period are shown in the following tables:

SEWER FUND REVENUES					
SOURCE	2016	2017	2018	2019	2020
Service Charges	\$298,741	\$304,882	\$354,698	\$371,808	\$418,850
Connection Fees	\$2,250	\$1,800	\$2,275	\$450	-
Fines & Forfeit	-	-	-	-	-
Other Revenue	-	\$518	\$125	\$294	-
<b>Total</b>	<b>\$300,991</b>	<b>\$307,200</b>	<b>\$357,098</b>	<b>\$372,552</b>	<b>\$418,850</b>

SEWER FUND EXPENSES					
SOURCE	2016	2017	2018	2019	2020
Personnel	\$76,838	\$118,712	\$113,669	\$87,220	\$117,647
O & M	\$69,206	\$70,555	\$5,627	\$61,673	\$87,400
Professional Services	\$4,514	\$4,948	\$6,366	\$32,630	\$103,750
Existing Capital Projects	\$138,461	\$161,886	\$143,850	\$173,951	\$250,000
Other Expenses	\$81,871	\$85,397	\$82,913	\$21,207	\$27,300
<b>Total</b>	<b>\$370,890</b>	<b>\$441,498</b>	<b>\$402,425</b>	<b>\$376,681</b>	<b>\$586,097</b>

SEWER FUND NET INCOME					
PROFIT/LOSS	2016	2017	2018	2019	2020
Net Income	(\$69,899)	(\$134,298)	(\$45,327)	(\$4,129)	(\$167,247)

Charges for services are the revenue that the Village receives from the payment of sewer bills. These charges include both fixed fees and volume fees as discussed further below. Normal monthly sewer usage rates over the last five years are depicted below.

MONTHLY SEWER USER RATES					
COMPONENT	2016	2017	2018	2019	2020
Fixed Fee for First 2,000 Gallons	\$8.30	\$8.30	\$9.96	\$10.46	\$13.48
Volume Fee per 1,000 Gallons After	\$3.30	\$3.30	\$3.96	\$4.16	\$4.37

## 4. CAPITAL PROJECTS, PRIORITIZATION, AND PLANNING COSTS

### 4.1 WATER SYSTEM

Future capital improvement needs have been identified through discussion with the Village’s public works director. The following table identifies water system improvements needed and their corresponding priority, estimated time frame, and preliminary probable cost.

PRIORITY	PROJECT DESCRIPTION	ESTIMATED TIME FRAME	PRELIMINARY PROBABLE COST
1	Broadway & Reynolds Water Main Replacement	Immediate	\$250,000
2	Vorcey-Leda-Clifford-Borne Streets Water Main Replacement	1-5 years	\$250,000
3	Meadow Lane Water Main Looping	1-5 years	\$150,000
4	Miscellaneous Hydrant & Valve Replacement	1-15 years	\$200,000
5	Distribution System Future Main Renewal	Bi-Annually (Beginning 2030)	\$230,000

Priorities and estimated time frames were established based on condition assessments and input from the Village’s Public Works Director.

Broadway & Reynolds Water Main Replacement project has been designed and permitted and is awaiting funds to construct.

The Vorcey-Leda-Clifford-Borne Streets Water Main Replacement project was identified to replace undersized mains that have experienced frequent breaks recently.

The Meadow Lane Water Main Looping project would provide improved water quality for the area by looping the main that feeds Unity South Elementary and miscellaneous commercial/residential properties in the area with the main that feeds The Oaks Mobile Home Park. Every summer there are reports of low chlorine residual and water quality complaints at the Oak Mobile Home Park when the school is on break.

Specific hydrant/valve replacement locations have yet to be identified but based on discussions with the Public Works director, we have budgeted for up to 40 locations for valve and/or hydrant replacements.

It is very likely that there will be additional main replacement needs in the future that have not been identified yet since a significant portion of distribution system was constructed more than 50 years ago. In order to prepare for this, we assume the Village should budget \$230,000 bi-annually beginning in fiscal year 2030.

## 4.2 SEWER SYSTEM

Future capital improvement needs have been identified through a series of engineering studies performed by Donohue over the past couple years. The following table identifies sewer system improvements needed and their corresponding priority, estimated time frame, and preliminary probable cost.

PRIORITY	PROJECT DESCRIPTION	ESTIMATED TIME FRAME	PRELIMINARY PROBABLE COST
1	WWTP Improvements	1-3 years	\$5,600,000
2	Southside Sewer Extension	1-3 years	\$1,658,000
3	Elizabeth St. Lift Station	3-5 years	\$100,000 - \$300,000
4	Watson St. Lift Station	5-10 years	\$100,000 - \$300,000
5	Collection System Future Sewer & Lift Station Renewal	Bi-Annually (Beginning 2029)	\$408,000

Priorities and estimated time frames were established based on condition assessments and input from the Village’s Public Works Director.

The East St. Lift Station Replacement project is in the design/permitting phase now and planned to be constructed in 2020 so for now it has been excluded from future capital improvement projects.

Ideally, the WWTP improvements would be completed before, or in concurrence with, extending service to additional users.

The Southside Sewer Extension is proposed to serve The Oaks mobile home park, Unity West Elementary School, a couple small commercial properties, and 17 residential properties. The Oaks is the largest existing user in this area and have expressed interest to expand the existing park if they can abandon their septic system and connect to the Village’s sewer system.

Both the WWTP Improvements and the Southside Sewer Extension would likely require financing but the sewer extension could possibly be funded through a special service area surcharge to split the capital costs amongst the new users from the service area.

The Elizabeth St. Lift Station and the Watson St. Lift Station are both can-type stations which require personnel to perform confined space entry for operation and maintenance. Elizabeth St. has been noted to have some clogging issues as well. These are both good candidates for rehabilitation or replacement to resolve clogging issues and alleviate the need for personnel confined space entry.

It is very likely that there will be additional collection system capital improvement needs in the future that have not been identified yet since the majority of the sewer system was constructed more than 50 years ago. In order to prepare for this, we assume the Village should budget \$408,000 bi-annually beginning in Fiscal Year 2029. This does not account for future WWTP rehabilitation or replacement.

Although it is not included in the above chart as a capital project, IEPA recommends communities clean and inspect 20% of their gravity sewers annually but realize that some communities struggle to complete this due to financial constraints. A reasonable goal would be to complete 10% annually so that all sewers are being cleaned/inspected every 10 years. This has not been performed in the past, nor accounted for in the annual sewer budget. An initial annual allocation of \$28,000 (proportionally increased annually with cost-of-living adjustments) is recommended and should allow the Village to meet the goal of inspecting 10% of their collection system annually.

## 5. CAPITAL IMPROVEMENT SEQUENCING ALTERNATIVES

Two capital improvement plan alternatives were developed based on estimated time frame in which improvement projects are needed.

### 5.1 ALTERNATIVE 1 – PAY-AS-YOU-GO

In the pay-as-you-go alternative it was assumed that capital projects will be performed as funds become available and will be paid for using cash reserves from the water and sewer funds instead of procuring loans or bonds.

For this alternative, capital projects were assigned a year based on priority in an attempt to spread costs out evenly and minimize major rate increases. Annual increases in service charges were adjusted in order to keep the sewer and water fund account balances positive. Due to the significant project costs related to the sewer system, this alternative would require significant annual rate increases as well as postponing improvements beyond the existing system components' anticipated useful lives.

The result of this analysis for the water and sewer utilities, respectively, are shown in **Tables 5.1 and 5.2.**

### 5.2 ALTERNATIVE 2 – LONG-TERM FINANCING

In the long-term financing alternative it was assumed that capital projects will all be designed and constructed in consecutive years. Design costs would be paid by the Village and would be eligible for reimbursement through the loan, if desired. The long-term financing alternative was developed based on current IEPA terms for the Public Water Supply Loan Program (PWSLP) and Water Pollution Control Loan Program (WPCLP). Currently, the Village of Tolono is eligible for financing based on IEPA's small community rate. The current terms for water and sewer improvements are as follows:

**Water:** Up to 30 years at approximately 1.500% (75% of market rate at time of loan closing)

*\*Eligible for 60% Principal Forgiveness (\$800,000 maximum)*

**Sewer:** Up to 30 years at approximately 1.500% (75% of market rate at time of loan closing)

*\*Eligible for 15% Principal Forgiveness*

*\*Although the Village is currently eligible for principal forgiveness, it has not been accounted for in the capital improvement plan since the program is subject to change annually.*

Capital improvements related to the water system in this alternative are slated to be designed and constructed over the years of 2021 and 2022 and financed over a 20 year term.

Capital improvements related to the sewer system in this alternative are slated to be designed and constructed between the years of 2022 to 2024. There may be a desire to complete the Southside Sewer Extension sooner to accommodate additional development which may be feasible but would likely require some additional sampling at the WWTP to determine if it could adequately treat the additional flow prior to constructing the WWTP Improvements. Annual increases in service charges were adjusted in order to keep the sewer and water fund account balances positive.

The result of this analysis for the water and sewer utilities, respectively, are shown in **Tables 5.3 and 5.4.**

WATER FUND 51

Table 5.1 - Pay-As-You-Go Water System Capital Improvement Sequencing

	Past			Current	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
FISCAL YEAR	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
ESTIMATED # OF USERS <sup>1</sup>	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357
AVERAGE MONTHLY COST PER USER	\$25.23	\$25.67	\$30.57	\$31.54	\$33.21	\$41.52	\$45.67	\$47.04	\$48.45	\$49.90	\$51.40	\$52.94	\$54.53	\$56.17	\$57.85	\$59.59	\$61.37	\$63.22	\$65.11	\$67.07	\$69.08	\$71.15	\$73.28	\$75.48	\$77.75

REVENUES																									
Service Revenue Adjustment	-	2%	19%	3%	5%	25%	10%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Services Charges	\$410,857.40	\$418,052.11	\$497,820.29	\$513,550.82	\$540,850.00	\$676,062.50	\$743,668.75	\$765,978.81	\$788,958.18	\$812,626.92	\$837,005.73	\$862,115.90	\$887,979.38	\$914,618.76	\$942,057.32	\$970,319.04	\$999,428.61	\$1,029,411.47	\$1,060,293.82	\$1,092,102.63	\$1,124,865.71	\$1,158,611.68	\$1,193,370.03	\$1,229,171.13	\$1,266,046.27
Connection Fees	\$2,250.00	\$1,800.00	\$2,275.00	\$450.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Fines & Forfeits	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other Revenue	\$2,805.00	\$2,654.76	\$4,002.64	\$4,314.30	\$5,000.00	\$5,150.00	\$5,304.50	\$5,463.64	\$5,627.54	\$5,796.37	\$5,970.26	\$6,149.37	\$6,333.85	\$6,523.87	\$6,719.58	\$6,921.17	\$7,128.80	\$7,342.67	\$7,562.95	\$7,789.84	\$8,023.53	\$8,264.24	\$8,512.17	\$8,767.53	\$9,030.56
<b>TOTAL REVENUES</b>	<b>\$415,912.40</b>	<b>\$422,506.87</b>	<b>\$504,097.93</b>	<b>\$518,315.12</b>	<b>\$545,850.00</b>	<b>\$681,212.50</b>	<b>\$748,973.25</b>	<b>\$771,442.45</b>	<b>\$794,585.72</b>	<b>\$818,423.29</b>	<b>\$842,975.99</b>	<b>\$868,265.27</b>	<b>\$894,313.23</b>	<b>\$921,142.63</b>	<b>\$948,776.90</b>	<b>\$977,240.21</b>	<b>\$1,006,557.42</b>	<b>\$1,036,754.14</b>	<b>\$1,067,856.77</b>	<b>\$1,099,892.47</b>	<b>\$1,132,889.24</b>	<b>\$1,166,875.92</b>	<b>\$1,201,882.20</b>	<b>\$1,237,938.66</b>	<b>\$1,275,076.82</b>

EXPENSES																									
Water Purchase <sup>2</sup>	\$313,170.72	\$325,295.46	\$377,194.80	\$351,682.90	\$425,000.00	\$396,164.68	\$408,049.62	\$420,291.11	\$432,899.84	\$445,886.83	\$459,263.44	\$473,041.34	\$487,232.58	\$501,849.56	\$516,905.05	\$532,412.20	\$548,384.56	\$564,836.10	\$581,781.18	\$599,234.62	\$617,211.66	\$635,728.01	\$654,799.85	\$674,443.84	\$694,677.16
Personnel <sup>2</sup>	\$69,069.23	\$100,260.33	\$105,592.17	\$49,271.40	\$84,264.00	\$82,100.47	\$84,563.48	\$87,100.38	\$89,713.40	\$92,404.80	\$95,176.94	\$98,032.25	\$100,973.22	\$104,002.41	\$107,122.49	\$110,336.16	\$113,646.25	\$117,055.63	\$120,567.30	\$124,184.32	\$127,909.85	\$131,747.15	\$135,699.56	\$139,770.55	\$143,963.66
Operation & Maintenance <sup>2</sup>	\$10,551.18	\$12,979.72	\$11,225.61	\$19,172.46	\$23,700.00	\$18,573.67	\$19,130.88	\$19,704.81	\$20,295.95	\$20,904.83	\$21,531.97	\$22,177.93	\$22,843.27	\$23,528.57	\$24,234.43	\$24,961.46	\$25,710.30	\$26,481.61	\$27,276.06	\$28,094.34	\$28,937.17	\$29,805.29	\$30,699.45	\$31,620.43	\$32,569.04
Professional Services <sup>2</sup>	\$2,200.00	\$13,102.02	\$1,937.36	\$27,512.75	\$12,750.00	\$14,488.70	\$14,923.37	\$15,371.07	\$15,832.20	\$16,307.16	\$16,796.38	\$17,300.27	\$17,819.28	\$18,353.86	\$18,904.47	\$19,471.61	\$20,055.76	\$20,657.43	\$21,277.15	\$21,915.47	\$22,572.93	\$23,250.12	\$23,947.62	\$24,666.05	\$25,406.03
Existing Capital Projects	\$40,492.00	\$26,071.98	\$25,945.46	\$141,182.99	\$33,100.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Existing Debt Service - Water Meters	-	-	-	-	-	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Proposed Capital Projects <sup>3</sup>	-	-	-	-	\$11,000.00	\$257,500.00	\$0.00	\$273,181.75	\$0.00	\$173,891.11	\$0.00	\$245,974.77	\$0.00	\$0.00	\$230,000.00	\$0.00	\$230,000.00	\$0.00	\$230,000.00	\$0.00	\$230,000.00	\$0.00	\$230,000.00	\$0.00	\$230,000.00
Other Expenses <sup>2</sup>	\$49,105.32	\$49,524.89	\$41,956.45	\$18,412.26	\$28,200.00	\$30,408.59	\$31,320.85	\$32,260.47	\$33,228.29	\$34,225.14	\$35,251.89	\$36,309.45	\$37,398.73	\$38,520.69	\$39,676.31	\$40,866.60	\$42,092.60	\$43,355.38	\$44,656.04	\$45,995.72	\$47,375.59	\$48,796.86	\$50,260.77	\$51,768.59	\$53,321.65
<b>TOTAL EXPENSES</b>	<b>\$484,588.45</b>	<b>\$527,234.40</b>	<b>\$563,851.85</b>	<b>\$607,234.76</b>	<b>\$618,014.00</b>	<b>\$863,336.54</b>	<b>\$622,088.62</b>	<b>\$912,010.02</b>	<b>\$656,070.10</b>	<b>\$847,720.30</b>	<b>\$692,121.06</b>	<b>\$956,936.45</b>	<b>\$666,267.08</b>	<b>\$686,255.09</b>	<b>\$936,842.75</b>	<b>\$728,048.03</b>	<b>\$979,889.47</b>	<b>\$772,386.15</b>	<b>\$1,025,557.74</b>	<b>\$819,424.47</b>	<b>\$1,074,007.21</b>	<b>\$869,327.42</b>	<b>\$1,125,407.24</b>	<b>\$922,269.46</b>	<b>\$1,179,937.55</b>

<b>INCOME (LOSS)</b>	<b>(\$68,676.05)</b>	<b>(\$104,727.53)</b>	<b>(\$59,753.92)</b>	<b>(\$88,919.64)</b>	<b>(\$72,164.00)</b>	<b>(\$182,124.04)</b>	\$126,884.63	<b>(\$140,567.57)</b>	\$138,515.62	<b>(\$29,297.01)</b>	\$150,854.94	<b>(\$88,671.18)</b>	\$228,046.15	\$234,887.53	\$11,934.16	\$249,192.18	\$26,667.95	\$264,367.99	\$42,299.03	\$280,468.00	\$58,882.04	\$297,548.50	\$76,474.95	\$315,669.20	\$95,139.28
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<b>RESERVE FUNDS<sup>4</sup></b>	\$613,744.74	\$545,068.69	\$440,341.16	\$380,587.24	\$291,667.60	\$219,503.60	\$37,379.56	\$164,264.19	\$23,696.62	\$162,212.24	\$132,915.23	\$283,770.16	\$195,098.99	\$423,145.14	\$658,032.67	\$669,966.83	\$919,159.01	\$945,826.96	\$1,210,194.94	\$1,252,493.97	\$1,532,961.97	\$1,591,844.00	\$1,889,392.50	\$1,965,867.46	\$2,281,536.66
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<b>BALANCE (LOSS)</b>	<b>\$545,068.69</b>	<b>\$440,341.16</b>	<b>\$380,587.24</b>	<b>\$291,667.60</b>	<b>\$219,503.60</b>	<b>\$37,379.56</b>	<b>\$164,264.19</b>	<b>\$23,696.62</b>	<b>\$162,212.24</b>	<b>\$132,915.23</b>	<b>\$283,770.16</b>	<b>\$195,098.99</b>	<b>\$423,145.14</b>	<b>\$658,032.67</b>	<b>\$669,966.83</b>	<b>\$919,159.01</b>	<b>\$945,826.96</b>	<b>\$1,210,194.94</b>	<b>\$1,252,493.97</b>	<b>\$1,532,961.97</b>	<b>\$1,591,844.00</b>	<b>\$1,889,392.50</b>	<b>\$1,965,867.46</b>	<b>\$2,281,536.66</b>	<b>\$2,376,675.93</b>
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Proposed Capital Projects <sup>2</sup>																									
Broadway & Reynolds Water Main Replacement (Construction 2021)					\$250,000.00	\$257,500.00																			
Vorcey-Leda-Clifford-Borne Streets Water Main Replacement (Design/Construction 2023)					\$250,000.00			\$273,181.75																	
Meadow Lane Water Main Looping (Design/Construction 2025)					\$150,000.00					\$173,891.11															
Miscellaneous Hydrant & Valve Replacement (Design/Construction 2027)					\$200,000.00							\$245,974.77													
Water System Mapping Updates (2020)					\$11,000.00																				
<sup>3</sup> Distribution System Future Water Main Renewal (~\$230k every other year beginning in 2030)															\$230,000.00		\$230,000.00		\$230,000.00		\$230,000.00		\$230,000.00		\$230,000.00

<sup>1</sup> Total number of users is likely to increase but estimates are based on number of users remaining the same

<sup>2</sup> 2020 Cost estimates will be inflated by 3% annually

<sup>3</sup> Proposed Capital Projects include \$11,000 in 2020 for mapping if it is not completed with the proposed project plan for IEPA financing.

<sup>4</sup> Total ending balance for Water/Sewer Fund as of 4/30/2019 was \$1,458,338. This value assumes 20% will be dedicated towards water system capital improvements and 80% will be dedicated towards sewer system capital improvements.

<sup>5</sup> Annual renewal calculated assuming 50% of hydrants/valves will need replaced at 40 years and all distribution mains need replaced every 80 years which would include replacement of existing services and remaining hydrants/valves

SEWER FUND 52

Table 5.2 - Pay-As-You-Go Sewer System Capital Improvement Sequencing

	Past			Current	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
FISCAL YEAR	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
ESTIMATED # OF USERS <sup>1</sup>	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	
AVERAGE MONTHLY COST PER USER	\$19.21	\$19.60	\$22.81	\$23.91	\$26.93	\$33.67	\$42.08	\$52.60	\$65.75	\$82.19	\$102.74	\$107.88	\$113.27	\$118.93	\$124.88	\$128.63	\$132.48	\$136.46	\$140.55	\$144.77	\$149.11	\$153.59	\$158.19	\$162.94	\$167.83	
<b>REVENUES</b>																										
Service Revenue Adjustment	-	2%	16%	5%	13%	25%	25%	25%	25%	25%	25%	5%	5%	5%	5%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Services Charges	\$298,741.00	\$304,881.55	\$354,698.58	\$371,808.26	\$418,850.00	\$523,562.50	\$654,453.13	\$818,066.41	\$1,022,583.01	\$1,278,228.76	\$1,597,785.95	\$1,677,675.25	\$1,761,559.01	\$1,849,636.96	\$1,942,118.81	\$2,000,382.37	\$2,060,393.84	\$2,122,205.66	\$2,185,871.83	\$2,251,447.98	\$2,318,991.42	\$2,388,561.17	\$2,460,218.00	\$2,534,024.54	\$2,610,045.28	
Connection Fees	\$2,250.00	\$1,800.00	\$2,275.00	\$450.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Fines & Forfeits	\$0.00	\$0.00	-\$0.10	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other Revenue	\$0.00	\$518.11	\$124.76	\$294.30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>TOTAL REVENUES</b>	<b>\$300,991.00</b>	<b>\$307,199.66</b>	<b>\$357,098.24</b>	<b>\$372,552.56</b>	<b>\$418,850.00</b>	<b>\$523,562.50</b>	<b>\$654,453.13</b>	<b>\$818,066.41</b>	<b>\$1,022,583.01</b>	<b>\$1,278,228.76</b>	<b>\$1,597,785.95</b>	<b>\$1,677,675.25</b>	<b>\$1,761,559.01</b>	<b>\$1,849,636.96</b>	<b>\$1,942,118.81</b>	<b>\$2,000,382.37</b>	<b>\$2,060,393.84</b>	<b>\$2,122,205.66</b>	<b>\$2,185,871.83</b>	<b>\$2,251,447.98</b>	<b>\$2,318,991.42</b>	<b>\$2,388,561.17</b>	<b>\$2,460,218.00</b>	<b>\$2,534,024.54</b>	<b>\$2,610,045.28</b>	
<b>EXPENSES</b>																										
Personnel <sup>2</sup>	\$76,837.67	\$118,711.80	\$113,668.71	\$87,220.18	\$117,647.00	\$109,363.99	\$112,644.91	\$116,024.26	\$119,504.98	\$123,090.13	\$126,782.84	\$130,586.32	\$134,503.91	\$138,539.03	\$142,695.20	\$146,976.06	\$151,385.34	\$155,926.90	\$160,604.70	\$165,422.85	\$170,385.53	\$175,497.10	\$180,762.01	\$186,184.87	\$191,770.42	
Operation & Maintenance <sup>2,3</sup>	\$69,206.49	\$70,554.73	\$55,626.65	\$61,672.88	\$87,400.00	\$99,120.17	\$102,093.78	\$105,156.59	\$108,311.29	\$111,560.63	\$114,907.45	\$118,354.67	\$121,905.31	\$125,562.47	\$129,329.34	\$133,209.22	\$137,205.50	\$141,321.66	\$145,561.31	\$149,928.15	\$154,426.00	\$159,058.78	\$163,830.54	\$168,745.46	\$173,807.82	
Professional Services <sup>2</sup>	\$4,513.60	\$4,948.50	\$6,365.75	\$32,629.61	\$103,750.00	\$49,009.24	\$50,479.52	\$51,993.90	\$53,553.72	\$55,160.33	\$56,815.14	\$58,519.60	\$60,275.18	\$62,083.44	\$63,945.94	\$65,864.32	\$67,840.25	\$69,875.46	\$71,971.72	\$74,130.87	\$76,354.80	\$78,645.44	\$81,004.81	\$83,434.95	\$85,938.00	
Existing Capital Projects	\$138,460.94	\$161,886.29	\$143,850.56	\$173,950.70	\$250,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Existing Debt Service - None	-	-	-	-	-	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Proposed Capital Projects	-	-	-	-	-	\$0.00	\$318,270.00	\$0.00	\$337,652.64	\$0.00	\$0.00	\$0.00	\$709,391.25	\$4,777,685.39	\$4,500,775.95	\$408,000.00	\$0.00	\$408,000.00	\$0.00	\$408,000.00	\$0.00	\$408,000.00	\$0.00	\$408,000.00	\$0.00	
Other Expenses <sup>2</sup>	\$81,871.63	\$85,396.88	\$82,913.09	\$21,207.54	\$27,300.00	\$45,121.08	\$46,474.72	\$47,868.96	\$49,305.03	\$50,784.18	\$52,307.70	\$53,876.93	\$55,493.24	\$57,158.04	\$58,872.78	\$60,638.96	\$62,458.13	\$64,331.88	\$66,261.83	\$68,249.69	\$70,297.18	\$72,406.09	\$74,578.28	\$76,815.62	\$79,120.09	
<b>TOTAL EXPENSES</b>	<b>\$370,890.33</b>	<b>\$441,498.20</b>	<b>\$402,424.76</b>	<b>\$376,680.91</b>	<b>\$586,097.00</b>	<b>\$302,614.48</b>	<b>\$629,962.92</b>	<b>\$321,043.71</b>	<b>\$668,327.66</b>	<b>\$340,595.27</b>	<b>\$350,813.13</b>	<b>\$361,337.52</b>	<b>\$1,081,568.89</b>	<b>\$5,161,028.37</b>	<b>\$4,895,619.22</b>	<b>\$814,688.56</b>	<b>\$418,889.22</b>	<b>\$839,455.90</b>	<b>\$444,399.57</b>	<b>\$865,731.56</b>	<b>\$471,463.51</b>	<b>\$893,607.41</b>	<b>\$500,175.63</b>	<b>\$923,180.90</b>	<b>\$530,636.33</b>	
<b>INCOME (LOSS)</b>	<b>(\$69,899.33)</b>	<b>(\$134,298.54)</b>	<b>(\$45,326.52)</b>	<b>(\$4,128.35)</b>	<b>(\$167,247.00)</b>	<b>\$220,948.02</b>	<b>\$24,490.21</b>	<b>\$497,022.70</b>	<b>\$354,255.35</b>	<b>\$937,633.49</b>	<b>\$1,246,972.82</b>	<b>\$1,316,337.73</b>	<b>\$679,990.12</b>	<b>(\$3,311,391.41)</b>	<b>(\$2,953,500.41)</b>	<b>\$1,185,693.81</b>	<b>\$1,641,504.62</b>	<b>\$1,282,749.76</b>	<b>\$1,741,472.26</b>	<b>\$1,385,716.42</b>	<b>\$1,847,527.92</b>	<b>\$1,494,953.75</b>	<b>\$1,960,042.37</b>	<b>\$1,610,843.64</b>	<b>\$2,079,408.95</b>	
<b>RESERVE FUNDS<sup>4</sup></b>	<b>\$1,420,323.14</b>	<b>\$1,350,423.81</b>	<b>\$1,216,125.27</b>	<b>\$1,170,798.75</b>	<b>\$1,166,670.40</b>	<b>\$999,423.40</b>	<b>\$1,220,371.42</b>	<b>\$1,244,861.62</b>	<b>\$1,741,884.32</b>	<b>\$2,096,139.67</b>	<b>\$3,033,773.16</b>	<b>\$4,280,745.99</b>	<b>\$5,597,083.71</b>	<b>\$6,277,073.83</b>	<b>\$2,965,682.42</b>	<b>\$12,182.01</b>	<b>\$1,197,875.82</b>	<b>\$2,839,380.45</b>	<b>\$4,122,130.21</b>	<b>\$5,863,602.47</b>	<b>\$7,249,318.89</b>	<b>\$9,096,846.81</b>	<b>\$10,591,800.56</b>	<b>\$12,551,842.93</b>	<b>\$14,162,686.57</b>	
<b>BALANCE (LOSS)</b>	<b>\$1,350,423.81</b>	<b>\$1,216,125.27</b>	<b>\$1,170,798.75</b>	<b>\$1,166,670.40</b>	<b>\$999,423.40</b>	<b>\$1,220,371.42</b>	<b>\$1,244,861.62</b>	<b>\$1,741,884.32</b>	<b>\$2,096,139.67</b>	<b>\$3,033,773.16</b>	<b>\$4,280,745.99</b>	<b>\$5,597,083.71</b>	<b>\$6,277,073.83</b>	<b>\$2,965,682.42</b>	<b>\$12,182.01</b>	<b>\$1,197,875.82</b>	<b>\$2,839,380.45</b>	<b>\$4,122,130.21</b>	<b>\$5,863,602.47</b>	<b>\$7,249,318.89</b>	<b>\$9,096,846.81</b>	<b>#####</b>	<b>#####</b>	<b>#####</b>	<b>#####</b>	
<b>Proposed Capital Projects<sup>2</sup></b>	<b>\$7,858,000.00</b>	<b>\$0.00</b>	<b>\$318,270.00</b>	<b>\$0.00</b>	<b>\$337,652.64</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$709,391.25</b>	<b>\$4,777,685.39</b>	<b>\$4,500,775.95</b>	<b>\$408,000.00</b>	<b>\$0.00</b>	<b>\$408,000.00</b>	<b>\$0.00</b>	<b>\$408,000.00</b>	<b>\$0.00</b>	<b>\$408,000.00</b>	<b>\$0.00</b>	<b>\$408,000.00</b>	<b>\$0.00</b>	<b>\$408,000.00</b>	<b>\$0.00</b>	
Southside Sanitary Sewer Extension (Design 2028, Construction 2028-2029)	\$1,658,000.00											\$1,081,656.97	\$1,114,106.68													
Elizabeth St. Lift Station Rehab (Design/Construction 2022)	\$300,000.00		\$318,270.00																							
Watson St. Lift Station Rehab (Design/Construction 2024)	\$300,000.00				\$337,652.64																					
WWTP Replacement (Design 2028, Construction 2029-2030)	\$5,600,000.00											\$709,391.25	\$3,288,028.42	\$3,386,669.28												
<sup>5</sup> Collection System Future Sewer & Lift Station Renewal (~\$408k every other year beginning in 2029)	\$0.00													\$408,000.00	\$408,000.00	\$408,000.00	\$408,000.00	\$408,000.00	\$408,000.00	\$408,000.00	\$408,000.00	\$408,000.00	\$408,000.00	\$408,000.00		
<b>Annual Sanitary Sewer Inspection<sup>3</sup></b>	<b>\$28,000.00</b>	<b>\$28,840.00</b>	<b>\$29,705.20</b>	<b>\$30,596.36</b>	<b>\$31,514.25</b>	<b>\$32,459.67</b>	<b>\$33,433.46</b>	<b>\$34,436.47</b>	<b>\$35,469.56</b>	<b>\$36,533.65</b>	<b>\$37,629.66</b>	<b>\$38,758.55</b>	<b>\$39,921.30</b>	<b>\$41,118.94</b>	<b>\$42,352.51</b>	<b>\$43,623.09</b>	<b>\$44,931.78</b>	<b>\$46,279.73</b>	<b>\$47,668.13</b>	<b>\$49,098.17</b>	<b>\$50,571.11</b>					

<sup>1</sup> Total number of users is likely to increase but estimates are based on number of users remaining the same

<sup>2</sup> 2020 Cost estimates will be inflated by 3%

<sup>3</sup> Proposed annual sanitary sewer inspection costs are included in projected Operation & Maintenance

<sup>4</sup> Total ending balance for Water/Sewer Fund as of 4/30/2019 was \$1,458,338. This value assumes 20% will be dedicated towards water system capital improvements and 80% will be dedicated towards sewer system capital improvements.

<sup>5</sup> Annual renewal calculated assuming pumps replaced every 10 years, lift station rehab at 20 years, and lift station replacement every 40 years, 50 year gravity sewer rehab(25%/replacement(25%), 100 year gravity sewer rehab(25%/replacement(25%), force main replacement every 80 years.

WATER FUND 51

Table 5.3 - Long-Term Financing Water System Capital Improvement Sequencing

	Past			Current	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
FISCAL YEAR	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
ESTIMATED # OF USERS <sup>1</sup>	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	1357	
AVERAGE MONTHLY COST PER USER	\$25.23	\$25.67	\$30.57	\$31.54	\$33.21	\$36.53	\$40.19	\$44.21	\$45.53	\$46.90	\$48.31	\$49.76	\$51.25	\$52.79	\$54.37	\$56.00	\$57.68	\$59.41	\$61.19	\$63.03	\$64.92	\$66.87	\$68.87	\$70.94	\$73.07	
<b>REVENUES</b>																										
Service Revenue Adjustment	-	2%	19%	3%	5%	10%	10%	10%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	
Services Charges	\$410,857.40	\$418,052.11	\$497,820.29	\$513,550.82	\$540,850.00	\$594,935.00	\$654,428.50	\$719,871.35	\$741,467.49	\$763,711.52	\$786,622.86	\$810,221.55	\$834,528.19	\$859,564.04	\$885,350.96	\$911,911.49	\$939,268.83	\$967,446.90	\$996,470.31	\$1,026,364.41	\$1,057,155.35	\$1,088,870.01	\$1,121,536.11	\$1,155,182.19	\$1,189,837.66	
Connection Fees	\$2,250.00	\$1,800.00	\$2,275.00	\$450.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Fines & Forfeits	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Other Revenue	\$2,805.00	\$2,654.76	\$4,002.64	\$4,314.30	\$5,000.00	\$5,150.00	\$5,304.50	\$5,463.64	\$5,627.54	\$5,796.37	\$5,970.26	\$6,149.37	\$6,333.85	\$6,523.87	\$6,719.58	\$6,921.17	\$7,128.80	\$7,342.67	\$7,562.95	\$7,789.84	\$8,023.53	\$8,264.24	\$8,512.17	\$8,767.53	\$9,030.56	
<b>TOTAL REVENUES</b>	<b>\$415,912.40</b>	<b>\$422,506.87</b>	<b>\$504,097.93</b>	<b>\$518,315.12</b>	<b>\$545,850.00</b>	<b>\$600,085.00</b>	<b>\$659,733.00</b>	<b>\$725,334.99</b>	<b>\$747,095.03</b>	<b>\$769,507.89</b>	<b>\$792,593.12</b>	<b>\$816,370.92</b>	<b>\$840,862.04</b>	<b>\$866,087.90</b>	<b>\$892,070.54</b>	<b>\$918,832.66</b>	<b>\$946,397.64</b>	<b>\$974,789.57</b>	<b>\$1,004,033.25</b>	<b>\$1,034,154.25</b>	<b>\$1,065,178.88</b>	<b>\$1,097,134.25</b>	<b>\$1,130,048.27</b>	<b>\$1,163,949.72</b>	<b>\$1,198,868.21</b>	

<b>EXPENSES</b>																										
Water Purchase <sup>2</sup>	\$313,170.72	\$325,295.46	\$377,194.80	\$351,682.90	\$425,000.00	\$396,164.68	\$408,049.62	\$420,291.11	\$432,899.84	\$445,886.83	\$459,263.44	\$473,041.34	\$487,232.58	\$501,849.56	\$516,905.05	\$532,412.20	\$548,384.56	\$564,836.10	\$581,781.18	\$599,234.62	\$617,211.66	\$635,728.01	\$654,799.85	\$674,443.84	\$694,677.16	
Personnel <sup>2</sup>	\$69,069.23	\$100,260.33	\$105,592.17	\$49,271.40	\$84,264.00	\$82,100.47	\$84,563.48	\$87,100.38	\$89,713.40	\$92,404.80	\$95,176.94	\$98,032.25	\$100,973.22	\$104,002.41	\$107,122.49	\$110,336.16	\$113,646.25	\$117,055.63	\$120,567.30	\$124,184.32	\$127,909.85	\$131,747.15	\$135,699.56	\$139,770.55	\$143,963.66	
Operation & Maintenance <sup>2</sup>	\$10,551.18	\$12,979.72	\$11,225.61	\$19,172.46	\$23,700.00	\$18,573.67	\$19,130.88	\$19,704.81	\$20,295.95	\$20,904.83	\$21,531.97	\$22,177.93	\$22,843.27	\$23,528.57	\$24,234.43	\$24,961.46	\$25,710.30	\$26,481.61	\$27,276.06	\$28,094.34	\$28,937.17	\$29,805.29	\$30,699.45	\$31,620.43	\$32,569.04	
Professional Services <sup>3</sup>	\$2,200.00	\$13,102.02	\$1,937.36	\$27,512.75	\$12,750.00	\$14,488.70	\$14,923.37	\$15,371.07	\$15,832.20	\$16,307.16	\$16,796.38	\$17,300.27	\$17,819.28	\$18,353.86	\$18,904.47	\$19,471.61	\$20,055.76	\$20,657.43	\$21,277.15	\$21,915.47	\$22,572.93	\$23,250.12	\$23,947.62	\$24,666.05	\$25,406.03	
Existing Capital Projects	\$40,492.00	\$26,071.98	\$25,945.46	\$141,182.99	\$33,100.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Existing Debt Service - Water Meters	-	-	-	-	-	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	\$64,100.43	
Proposed Capital Projects <sup>3</sup>	-	-	-	-	\$29,500.00	\$112,869.58	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	\$56,321.97	
Other Expenses <sup>2</sup>	\$49,105.32	\$49,524.89	\$41,956.45	\$18,412.26	\$28,200.00	\$30,408.59	\$31,320.85	\$32,260.47	\$33,228.29	\$34,225.14	\$35,251.89	\$36,309.45	\$37,398.73	\$38,520.69	\$39,676.31	\$40,866.60	\$42,092.60	\$43,355.38	\$44,656.04	\$45,995.72	\$47,375.59	\$48,796.86	\$50,260.77	\$51,768.59	\$53,321.65	
<b>TOTAL EXPENSES</b>	<b>\$484,588.45</b>	<b>\$527,234.40</b>	<b>\$563,851.85</b>	<b>\$607,234.76</b>	<b>\$636,514.00</b>	<b>\$718,706.12</b>	<b>\$678,410.60</b>	<b>\$695,150.24</b>	<b>\$712,392.08</b>	<b>\$730,151.17</b>	<b>\$748,443.03</b>	<b>\$767,283.65</b>	<b>\$782,589.06</b>	<b>\$742,577.07</b>	<b>\$993,164.72</b>	<b>\$784,370.00</b>	<b>\$1,036,211.44</b>	<b>\$828,708.13</b>	<b>\$1,081,879.71</b>	<b>\$875,746.44</b>	<b>\$1,130,329.18</b>	<b>\$925,649.39</b>	<b>\$1,181,729.22</b>	<b>\$978,591.43</b>	<b>\$1,236,259.52</b>	

<b>INCOME (LOSS)</b>	<b>(\$68,676.05)</b>	<b>(\$104,727.53)</b>	<b>(\$59,753.92)</b>	<b>(\$88,919.64)</b>	<b>(\$90,664.00)</b>	<b>(\$118,621.12)</b>	<b>(\$18,677.60)</b>	<b>\$30,184.74</b>	<b>\$34,702.96</b>	<b>\$39,356.72</b>	<b>\$44,150.09</b>	<b>\$49,087.27</b>	<b>\$118,272.99</b>	<b>\$123,510.84</b>	<b>(\$101,094.18)</b>	<b>\$134,462.66</b>	<b>(\$89,813.81)</b>	<b>\$146,081.44</b>	<b>(\$77,846.46)</b>	<b>\$158,407.81</b>	<b>(\$65,150.30)</b>	<b>\$171,484.85</b>	<b>(\$51,680.94)</b>	<b>\$185,358.29</b>	<b>(\$37,391.31)</b>
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<b>RESERVE FUNDS<sup>4</sup></b>	<b>\$613,744.74</b>	<b>\$545,068.69</b>	<b>\$440,341.16</b>	<b>\$380,587.24</b>	<b>\$291,667.60</b>	<b>\$201,003.60</b>	<b>\$82,382.48</b>	<b>\$63,704.89</b>	<b>\$93,889.63</b>	<b>\$128,592.59</b>	<b>\$167,949.31</b>	<b>\$212,099.40</b>	<b>\$261,186.67</b>	<b>\$379,459.66</b>	<b>\$502,970.50</b>	<b>\$401,876.32</b>	<b>\$536,338.97</b>	<b>\$446,525.17</b>	<b>\$592,606.61</b>	<b>\$514,760.15</b>	<b>\$673,167.95</b>	<b>\$608,017.65</b>	<b>\$779,502.50</b>	<b>\$727,821.56</b>	<b>\$913,179.85</b>
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<b>BALANCE (LOSS)</b>	<b>\$545,068.69</b>	<b>\$440,341.16</b>	<b>\$380,587.24</b>	<b>\$291,667.60</b>	<b>\$201,003.60</b>	<b>\$82,382.48</b>	<b>\$63,704.89</b>	<b>\$93,889.63</b>	<b>\$128,592.59</b>	<b>\$167,949.31</b>	<b>\$212,099.40</b>	<b>\$261,186.67</b>	<b>\$379,459.66</b>	<b>\$502,970.50</b>	<b>\$401,876.32</b>	<b>\$536,338.97</b>	<b>\$446,525.17</b>	<b>\$592,606.61</b>	<b>\$514,760.15</b>	<b>\$673,167.95</b>	<b>\$608,017.65</b>	<b>\$779,502.50</b>	<b>\$727,821.56</b>	<b>\$913,179.85</b>	<b>\$875,788.54</b>
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<b>Water System Capital Improvement Project Plan (2020)<sup>3</sup></b>	<b>\$29,500.00</b>
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<b>Proposed Capital Projects<sup>2,5,6</sup></b>	<b>\$850,000.00</b>	<b>\$51,069.58</b>																							
Broadway & Reynolds Water Main Replacement (Design is already complete, Construction 2022)	\$250,000.00	\$0.00	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82
Vorcey-Leda-Clifford-Borne Streets Water Main Replacement (Design 2021, Construction 2022)	\$250,000.00	\$25,750.00	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82	\$1,544.82
Meadow Lane Water Main Looping (Design 2021, Construction 2022)	\$150,000.00	\$15,450.00	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89	\$926.89
Miscellaneous Hydrant & Valve Replacement (Design 2021, Construction 2022)	\$200,000.00	\$20,600.00	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86	\$1,235.86
<sup>6</sup> Distribution System Future Water Main Renewal (~\$230k every other year beginning in 2030)														\$230,000.00		\$230,000.00		\$230,000.00		\$230,000.00		\$230,000.00		\$230,000.00	

<sup>1</sup> Total number of users is likely to increase but estimates are based on number of users remaining the same

<sup>2</sup> 2020 Cost estimates will be inflated by 3% annually

<sup>3</sup> Proposed Capital Projects include \$29,500 in 2020 for completion of proposed project plan which includes system mapping for IEPA financing.

<sup>4</sup> Total ending balance for Water/Sewer Fund as of 4/30/2019 was \$1,458,338. This value assumes 20% will be dedicated towards water system capital improvements and 80% will be dedicated towards sewer system capital improvements.

<sup>5</sup> Financing assumes all proposed capital projects are constructed in 2022 and financed in accordance with current IEPA SRF terms 1.500% over 20 years (no principal forgiveness is included in these calculations)

<sup>6</sup> Annual renewal calculated assuming 50% of hydrants/valves will need replaced at 40 years and all distribution mains need replaced every 80 years which would include replacement of existing services and remaining hydrants/valves

SEWER FUND 52

Table 5.4 - Long-Term Financing Sewer System Capital Improvement Sequencing

	Past			Current	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
FISCAL YEAR	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
ESTIMATED # OF USERS <sup>1</sup>	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	1296	
AVERAGE MONTHLY COST PER USER	\$19.21	\$19.60	\$22.81	\$23.91	\$26.93	\$29.63	\$32.59	\$35.85	\$39.43	\$41.40	\$43.47	\$45.65	\$47.93	\$50.33	\$52.84	\$55.48	\$58.26	\$61.17	\$64.23	\$67.44	\$69.46	\$71.55	\$73.69	\$75.91	\$78.18	
<b>REVENUES</b>																										
Service Revenue Adjustment	-	2%	16%	5%	13%	10%	10%	10%	10%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	3%	3%	3%	3%	3%	
Services Charges	\$298,741.00	\$304,881.55	\$354,698.58	\$371,808.26	\$418,850.00	\$460,735.00	\$506,808.50	\$557,489.35	\$613,238.29	\$643,900.20	\$676,095.21	\$709,899.97	\$745,394.97	\$782,664.72	\$821,797.95	\$862,887.85	\$906,032.24	\$951,333.85	\$998,900.55	\$1,048,845.57	\$1,080,310.94	\$1,112,720.27	\$1,146,101.88	\$1,180,484.93	\$1,215,899.48	
Connection Fees	\$2,250.00	\$1,800.00	\$2,275.00	\$450.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Fines & Forfeits	\$0.00	\$0.00	-\$0.10	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Other Revenue	\$0.00	\$518.11	\$124.76	\$294.30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
<b>TOTAL REVENUES</b>	<b>\$300,991.00</b>	<b>\$307,199.66</b>	<b>\$357,098.24</b>	<b>\$372,552.56</b>	<b>\$418,850.00</b>	<b>\$460,735.00</b>	<b>\$506,808.50</b>	<b>\$557,489.35</b>	<b>\$613,238.29</b>	<b>\$643,900.20</b>	<b>\$676,095.21</b>	<b>\$709,899.97</b>	<b>\$745,394.97</b>	<b>\$782,664.72</b>	<b>\$821,797.95</b>	<b>\$862,887.85</b>	<b>\$906,032.24</b>	<b>\$951,333.85</b>	<b>\$998,900.55</b>	<b>\$1,048,845.57</b>	<b>\$1,080,310.94</b>	<b>\$1,112,720.27</b>	<b>\$1,146,101.88</b>	<b>\$1,180,484.93</b>	<b>\$1,215,899.48</b>	
<b>EXPENSES</b>																										
Personnel <sup>2</sup>	\$76,837.67	\$118,711.80	\$113,668.71	\$87,220.18	\$117,647.00	\$109,363.99	\$112,644.91	\$116,024.26	\$119,504.98	\$123,090.13	\$126,782.84	\$130,586.32	\$134,503.91	\$138,539.03	\$142,695.20	\$146,976.06	\$151,385.34	\$155,926.90	\$160,604.70	\$165,422.85	\$170,385.53	\$175,497.10	\$180,762.01	\$186,184.87	\$191,770.42	
Operation & Maintenance <sup>2,3</sup>	\$69,206.49	\$70,554.73	\$55,626.65	\$61,672.88	\$87,400.00	\$99,120.17	\$102,093.78	\$105,156.59	\$108,311.29	\$111,560.63	\$114,907.45	\$118,354.67	\$121,905.31	\$125,562.47	\$129,329.34	\$133,209.22	\$137,205.50	\$141,321.66	\$145,561.31	\$149,928.15	\$154,426.00	\$159,058.78	\$163,830.54	\$168,745.46	\$173,807.82	
Professional Services <sup>2</sup>	\$4,513.60	\$4,948.50	\$6,365.75	\$32,629.61	\$103,750.00	\$49,009.24	\$50,479.52	\$51,993.90	\$53,553.72	\$55,160.33	\$56,815.14	\$58,519.60	\$60,275.18	\$62,083.44	\$63,945.94	\$65,864.32	\$67,840.25	\$69,875.46	\$71,971.72	\$74,130.87	\$76,354.80	\$78,645.44	\$81,004.81	\$83,434.95	\$85,938.00	
Existing Capital Projects	\$138,460.94	\$161,886.29	\$143,850.56	\$173,950.70	\$250,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Existing Debt Service - None	-	-	-	-	-	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Proposed Capital Projects <sup>4</sup>	-	-	-	-	\$28,500.00	\$0.00	\$432,741.11	\$445,723.34	\$330,034.63	\$330,034.63	\$330,034.63	\$330,034.63	\$330,034.63	\$330,034.63	\$330,034.63	\$330,034.63	\$330,034.63	\$330,034.63	\$330,034.63	\$330,034.63	\$330,034.63	\$330,034.63	\$330,034.63	\$330,034.63	\$330,034.63	
Other Expenses <sup>2</sup>	\$81,871.63	\$85,396.88	\$82,913.09	\$21,207.54	\$27,300.00	\$45,121.08	\$46,474.72	\$47,868.96	\$49,305.03	\$50,784.18	\$52,307.70	\$53,876.93	\$55,493.24	\$57,158.04	\$58,872.78	\$60,638.96	\$62,458.13	\$64,331.88	\$66,261.83	\$68,249.69	\$70,297.18	\$72,406.09	\$74,578.28	\$76,815.62	\$79,120.09	
<b>TOTAL EXPENSES</b>	<b>\$370,890.33</b>	<b>\$441,498.20</b>	<b>\$402,424.76</b>	<b>\$376,680.91</b>	<b>\$614,597.00</b>	<b>\$302,614.48</b>	<b>\$744,434.03</b>	<b>\$766,767.05</b>	<b>\$660,709.64</b>	<b>\$670,629.90</b>	<b>\$680,847.75</b>	<b>\$691,372.15</b>	<b>\$702,212.27</b>	<b>\$712,377.60</b>	<b>\$724,877.89</b>	<b>\$738,923.85</b>	<b>\$754,490.52</b>	<b>\$771,623.19</b>	<b>\$790,377.84</b>	<b>\$810,766.19</b>	<b>\$832,912.81</b>	<b>\$857,659.72</b>	<b>\$884,995.57</b>	<b>\$914,918.97</b>	<b>\$948,519.53</b>	
<b>INCOME (LOSS)</b>	<b>(\$69,899.33)</b>	<b>(\$134,298.54)</b>	<b>(\$45,326.52)</b>	<b>(\$4,128.35)</b>	<b>(\$195,747.00)</b>	<b>\$158,120.52</b>	<b>(\$237,625.53)</b>	<b>(\$209,277.70)</b>	<b>(\$47,471.36)</b>	<b>(\$26,729.70)</b>	<b>(\$4,752.54)</b>	<b>\$18,527.82</b>	<b>\$43,182.70</b>	<b>(\$38,712.89)</b>	<b>\$96,920.06</b>	<b>(\$281,835.34)</b>	<b>\$157,108.40</b>	<b>(\$218,156.67)</b>	<b>\$224,466.35</b>	<b>(\$146,920.61)</b>	<b>\$278,812.81</b>	<b>(\$110,921.77)</b>	<b>\$315,891.62</b>	<b>(\$72,730.59)</b>	<b>\$355,228.53</b>	
<b>RESERVE FUNDS<sup>5</sup></b>	<b>\$1,420,323.14</b>	<b>\$1,350,423.81</b>	<b>\$1,216,125.27</b>	<b>\$1,170,798.75</b>	<b>\$1,166,670.40</b>	<b>\$970,923.40</b>	<b>\$1,129,043.92</b>	<b>\$891,418.39</b>	<b>\$682,140.69</b>	<b>\$634,669.33</b>	<b>\$607,939.63</b>	<b>\$603,187.09</b>	<b>\$621,714.91</b>	<b>\$664,897.61</b>	<b>\$326,184.72</b>	<b>\$423,104.78</b>	<b>\$141,269.44</b>	<b>\$298,377.84</b>	<b>\$80,221.17</b>	<b>\$304,687.52</b>	<b>\$157,766.91</b>	<b>\$436,579.72</b>	<b>\$325,657.95</b>	<b>\$641,549.57</b>	<b>\$568,818.97</b>	
<b>BALANCE (LOSS)</b>	<b>\$1,350,423.81</b>	<b>\$1,216,125.27</b>	<b>\$1,170,798.75</b>	<b>\$1,166,670.40</b>	<b>\$970,923.40</b>	<b>\$1,129,043.92</b>	<b>\$891,418.39</b>	<b>\$682,140.69</b>	<b>\$634,669.33</b>	<b>\$607,939.63</b>	<b>\$603,187.09</b>	<b>\$621,714.91</b>	<b>\$664,897.61</b>	<b>\$326,184.72</b>	<b>\$423,104.78</b>	<b>\$141,269.44</b>	<b>\$298,377.84</b>	<b>\$80,221.17</b>	<b>\$304,687.52</b>	<b>\$157,766.91</b>	<b>\$436,579.72</b>	<b>\$325,657.95</b>	<b>\$641,549.57</b>	<b>\$568,818.97</b>	<b>\$924,047.50</b>	
<b>Wastewater System Capital Improvement Project Plan (2020)<sup>4</sup></b>																								<b>\$28,500.00</b>		
<b>Proposed Capital Projects<sup>2, 6, 7</sup></b>					<b>\$7,858,000.00</b>	<b>\$0.00</b>	<b>\$432,741.11</b>	<b>\$445,723.34</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	<b>\$330,034.63</b>	
Southside Sanitary Sewer Extension (Design 2022-2023, Construction 2024)					\$1,658,000.00		\$87,948.61	\$90,587.07	\$69,932.36	\$69,932.36	\$69,932.36	\$69,932.36	\$69,932.36	\$69,932.36	\$69,932.36	\$69,932.36	\$69,932.36	\$69,932.36	\$69,932.36	\$69,932.36	\$69,932.36	\$69,932.36	\$69,932.36	\$69,932.36	\$69,932.36	
Elizabeth St. Lift Station Rehab (Design 2022-2023, Construction 2024)					\$300,000.00		\$23,870.25	\$24,586.36	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64		
Watson St. Lift Station Rehab (Design 2022-2023, Construction 2024)					\$300,000.00		\$23,870.25	\$24,586.36	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64	\$11,950.64		
WWTP Replacement (Design 2022-2023, Construction 2024)					\$5,600,000.00		\$297,052.00	\$305,963.56	\$236,200.98	\$236,200.98	\$236,200.98	\$236,200.98	\$236,200.98	\$236,200.98	\$236,200.98	\$236,200.98	\$236,200.98	\$236,200.98	\$236,200.98	\$236,200.98	\$236,200.98	\$236,200.98	\$236,200.98	\$236,200.98		
Collection System Future Sewer & Lift Station Renewal (~\$408k every other year beginning in 2029)					\$0.00								\$408,000.00		\$408,000.00		\$408,000.00		\$408,000.00		\$408,000.00		\$408,000.00			
<b>Annual Sanitary Sewer Inspection<sup>3</sup></b>					<b>\$28,000.00</b>	<b>\$28,840.00</b>	<b>\$29,705.20</b>	<b>\$30,596.36</b>	<b>\$31,514.25</b>	<b>\$32,459.67</b>	<b>\$33,433.46</b>	<b>\$34,436.47</b>	<b>\$35,469.56</b>	<b>\$36,533.65</b>	<b>\$37,629.66</b>	<b>\$38,758.55</b>	<b>\$39,921.30</b>	<b>\$41,118.94</b>	<b>\$42,352.51</b>	<b>\$43,623.09</b>	<b>\$44,931.78</b>	<b>\$46,279.73</b>	<b>\$47,668.13</b>	<b>\$49,098.17</b>	<b>\$50,571.11</b>	

<sup>1</sup> Total number of users is likely to increase but estimates are based on number of users remaining the same

<sup>2</sup> 2020 Cost estimates will be inflated by 3% annually

<sup>3</sup> Proposed annual sanitary sewer inspection costs are included in projected Operation & Maintenance

<sup>4</sup> Proposed Capital Projects include \$28,500 in 2020 for completion of proposed project plan for IEPA financing.

<sup>5</sup> Total ending balance for Water/Sewer Fund as of 4/30/2019 was \$1,458,338. This value assumes 20% will be dedicated towards water system capital improvements and 80% will be dedicated towards sewer system capital improvements.

<sup>6</sup> Financing assumes all proposed capital projects are constructed in 2024 and financed in accordance with current IEPA SRF terms 1.500% over 30 years (no principal forgiveness is included in these calculations)

<sup>7</sup> Annual renewal calculated assuming pumps replaced every 10 years, lift station rehab at 20 years, and lift station replacement every 40 years, 50 year gravity sewer rehab(25%/replacement(25%), 100 year gravity sewer rehab(25%/replacement(25%), force main replacement every 80 years.

## 6. RATE ADJUSTMENT ALTERNATIVES

One question frequently posed during a rate study is “What are adjacent communities’ water and sewer rates?” Although adjacent communities may have some similarities in population and economics, their water and sewer systems may be vastly different. However, we did reach out to adjacent communities that we felt were somewhat comparable to Tolono for reference. See the chart below.

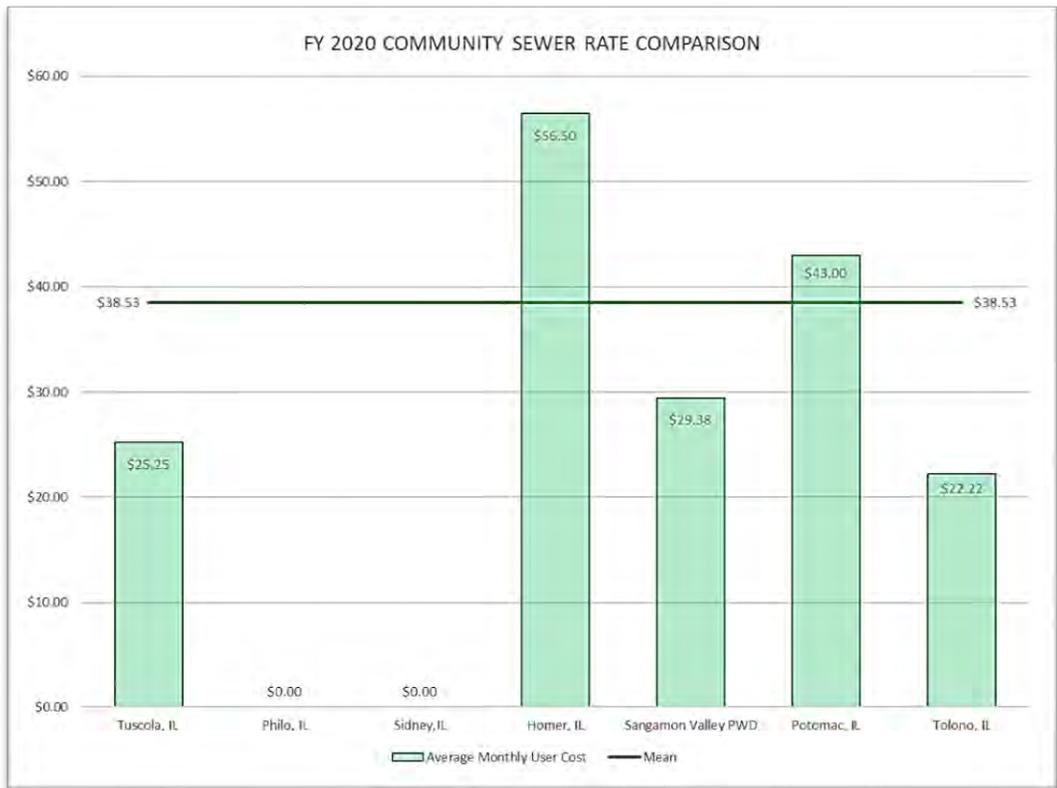
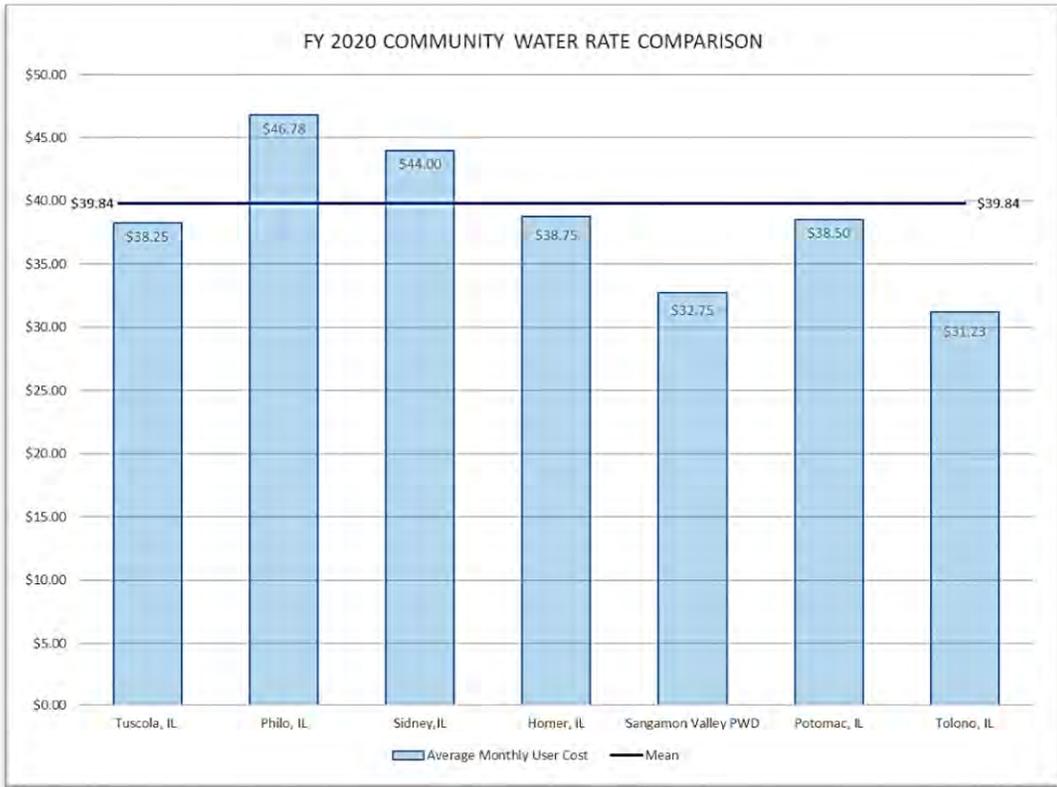
**Current Community Water & Sewer Rates**

Location	Water		Sewer		Water	Sewer
	Fixed Fee	Volume Charge	Fixed Fee	Volume Charge	User Rate at 4,000 Gallons/Month	User Rate at 4,000 Gallons/Month
Tuscola, IL	\$14.25/1,000 Gallons	\$8.00/additional 1,000 Gallons	\$7.25/1,000 Gallons	\$6.00/additional 1,000 Gallons	\$38.25	\$25.25
Philo, IL	\$16.50 Customer Charge	\$7.57/1,000 Gallons	No Sewer		\$46.78	\$0.00
Sidney, IL	\$22/First 2,000 Gallons	\$11/additional 1,000 Gallons	No Sewer		\$44.00	\$0.00
Homer, IL	\$17.50/1,500 Gallons	\$8.50/additional 1,000 Gallons	\$39.00/1,500 Gallons	\$7.00/additional 1,000 Gallons	\$38.75	\$56.50
Sangamon Valley PWD	\$19.55/2,000 Gallons	\$6.60/additional 1,000 Gallons	\$16.18/2,000 Gallons	\$6.60/additional 1,000 Gallons	\$32.75	\$29.38
Potomac, IL	\$28.50/2,000 Gallons	\$5.00/additional 1,000 Gallons	\$33.00/2,000 Gallons	\$5.00/additional 1,000 Gallons	\$38.50	\$43.00
Tolono, IL	\$16.87/2,000 Gallons	\$7.18/additional 1,000 Gallons	\$13.48/2,000 Gallons	\$4.37/additional 1,000 Gallons	\$31.23	\$22.22

NOTE: Rates do not account for special fees, taxes, surcharges that may be imposed by municipalities or private utility companies.

The mean average monthly user cost for water service in the adjacent communities listed above is \$39.84/month, approximately 28% higher than Tolono’s current average user rate. The mean average monthly user cost for sewer service in the adjacent communities listed above (with sewer service) is \$38.53/month, nearly 75% higher than Tolono’s current average user rate. This information is also displayed graphically on the following page.

Increases in both the water and sewer service charges are needed to maintain positive balances in the respective funds in all capital improvement sequencing alternatives as shown in Chapter 5. When projecting budgets 20 years into the future, it was assumed that all revenues, except for service charges, were negligible as is evident based on past financial information; over the past 5 years, service charges have comprised approximately 99% of water and sewer revenue. Service charge adjustments were developed for each capital improvement sequencing alternative to ensure a positive fund balance in all fiscal years. Although it is likely that water usage will increase as the number of users increase, rate adjustments were developed assuming that water usage and number of users remains constant to ensure the projections are conservative.



## 6.1 ALTERNATIVE 1 – PAY-AS-YOU-GO RATE ADJUSTMENTS

Based on the projections in Section 5.1, in order to maintain a positive balance in the water fund and complete improvements in a timely fashion, it would require a 25% increase in revenue in FY 2021, followed by an additional 10% increase in revenue in FY 2022, after which a standard cost-of-living adjustment could be applied annually (estimated at 3%).

In order to maintain a positive balance in the sewer fund while attempting to incrementally increase rates would require a 25% increase in revenue in each of fiscal years 2021-2026, followed by an additional 5% increase in revenue in fiscal years 2027-2030, after which a standard cost-of-living adjustment could be applied annually (estimated at 3%).

**Table 6.1** on the following page simply applies the required revenue percentage increases across the board to the existing rate structure. It also shows the estimated impact to an assumed average user, consuming 4,000 gallons of water per month.

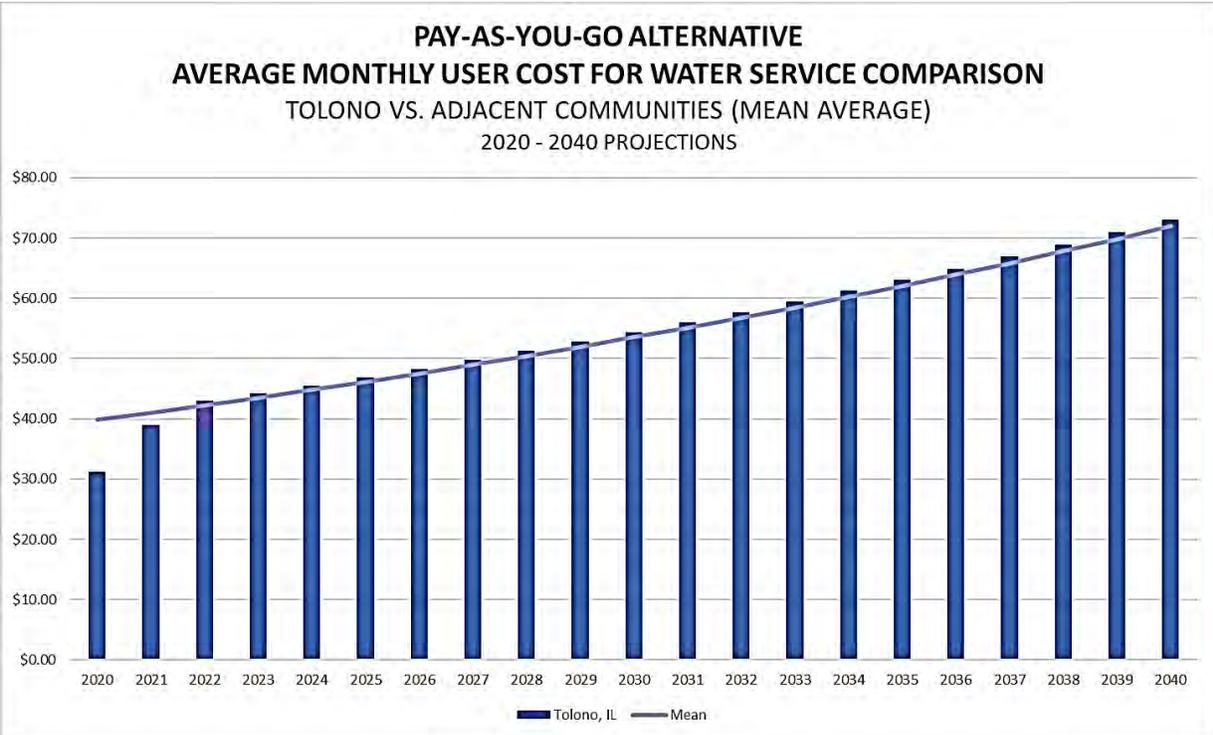
Water rate adjustments are reasonable in comparison to recent adjustments and it does not force identified improvement needs to a point that critical failure is a concern.

Sewer rate adjustments nearly quadruple an average user’s monthly bill over the next 6 years. This alternative also forces identified high-priority improvements, like the WWTP Improvements and Southside Sewer Extension, further into the future increasing risks for critical failures and delaying anticipated development.

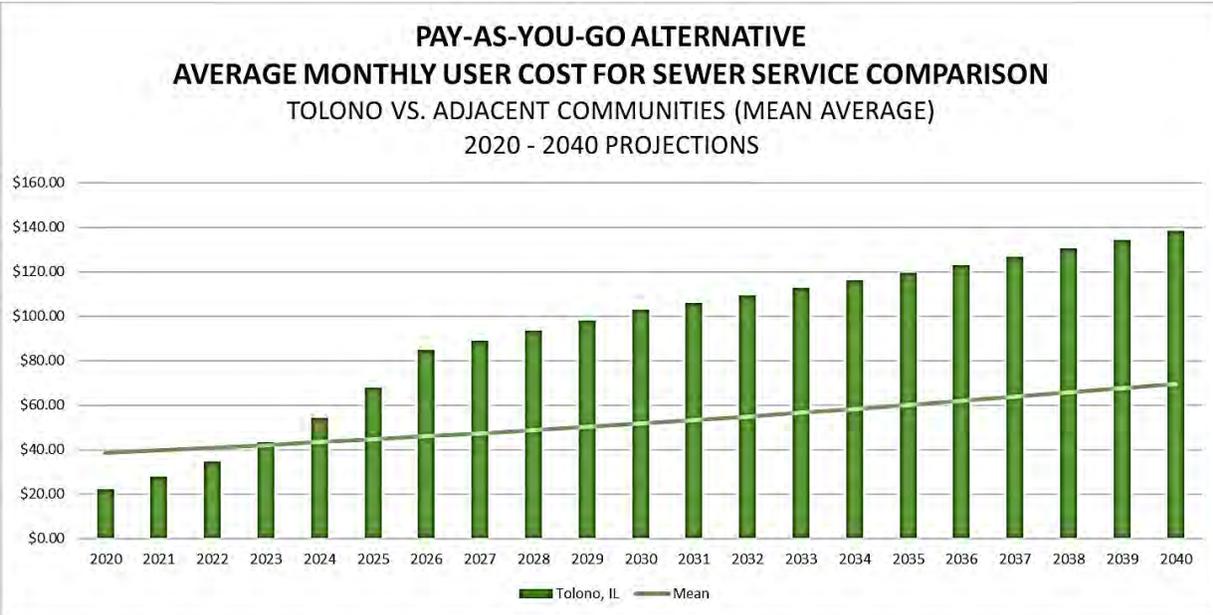
Tolono’s proposed rate adjustments associated with this alternative over the next 20 years is compared to the current mean average monthly user costs for water and sewer service in adjacent communities (inflated with an assumed cost-of-living-adjustment of 3% annually) over the next 20 years. This comparison is graphically depicted following Table 6.1.

Table 6.1 - Pay-As-You-Go Rate Adjustments

Year	Water				Sewer				Water If Average User is 4,000 Gallons/Month	Sewer If Average User is 4,000 Gallons/Month	Combined If Average User is 4,000 Gallons/Month
	Fixed Fee	% Increase	Usage Fee	% Increase	Fixed Fee	% Increase	Usage Fee	% Increase			
2016	\$ 11,411	0%	\$ 5.70	0%	\$ 8.30	0%	\$ 3.30	0%	\$22.81	\$14.90	\$37.71
2017	\$ 11,411	0%	\$ 5.70	0%	\$ 8.30	0%	\$ 3.30	0%	\$22.81	\$14.90	\$37.71
2018	\$ 13,69	20%	\$ 6.84	20%	\$ 9.96	20%	\$ 3.96	20%	\$27.37	\$17.88	\$45.25
2019	\$ 14,37	5%	\$ 7.18	5%	\$ 10.46	5%	\$ 4.16	5%	\$28.73	\$18.78	\$47.51
2020	\$ 16,87	17%	\$ 7.18	0%	\$ 13.48	29%	\$ 4.37	5%	\$31.23	\$22.22	\$53.45
2021	\$ 21,09	25%	\$ 8.98	25%	\$ 16.85	25%	\$ 5.46	25%	\$39.04	\$27.78	\$66.81
2022	\$ 23,20	10%	\$ 9.87	10%	\$ 21.06	25%	\$ 6.83	25%	\$42.94	\$34.72	\$77.66
2023	\$ 23,89	3%	\$ 10.17	3%	\$ 26.33	25%	\$ 8.54	25%	\$44.23	\$43.40	\$87.63
2024	\$ 24,61	3%	\$ 10.47	3%	\$ 32.91	25%	\$ 10.67	25%	\$45.56	\$54.25	\$99.80
2025	\$ 25,35	3%	\$ 10.79	3%	\$ 41.14	25%	\$ 13.34	25%	\$46.92	\$67.81	\$114.73
2026	\$ 26,11	3%	\$ 11.11	3%	\$ 51.42	25%	\$ 16.67	25%	\$48.33	\$84.76	\$133.09
2027	\$ 26,89	3%	\$ 11.44	3%	\$ 53.99	5%	\$ 17.50	5%	\$49.78	\$89.00	\$138.78
2028	\$ 27,70	3%	\$ 11.79	3%	\$ 56.69	5%	\$ 18.38	5%	\$51.27	\$93.45	\$144.72
2029	\$ 28,53	3%	\$ 12.14	3%	\$ 59.53	5%	\$ 19.30	5%	\$52.81	\$98.12	\$150.94
2030	\$ 29,38	3%	\$ 12.51	3%	\$ 62.50	5%	\$ 20.26	5%	\$54.40	\$103.03	\$157.43
2031	\$ 30,27	3%	\$ 12.88	3%	\$ 64.38	3%	\$ 20.87	3%	\$56.03	\$106.12	\$162.15
2032	\$ 31,17	3%	\$ 13.27	3%	\$ 66.31	3%	\$ 21.50	3%	\$57.71	\$109.30	\$167.01
2033	\$ 32,11	3%	\$ 13.67	3%	\$ 68.30	3%	\$ 22.14	3%	\$59.44	\$112.58	\$172.02
2034	\$ 33,07	3%	\$ 14.08	3%	\$ 70.35	3%	\$ 22.81	3%	\$61.22	\$115.96	\$177.18
2035	\$ 34,06	3%	\$ 14.50	3%	\$ 72.46	3%	\$ 23.49	3%	\$63.06	\$119.44	\$182.50
2036	\$ 35,09	3%	\$ 14.93	3%	\$ 74.63	3%	\$ 24.19	3%	\$64.95	\$123.02	\$187.98
2037	\$ 36,14	3%	\$ 15.38	3%	\$ 76.87	3%	\$ 24.92	3%	\$66.90	\$126.71	\$193.61
2038	\$ 37,22	3%	\$ 15.84	3%	\$ 79.18	3%	\$ 25.67	3%	\$68.91	\$130.51	\$199.42
2039	\$ 38,34	3%	\$ 16.32	3%	\$ 81.55	3%	\$ 26.44	3%	\$70.98	\$134.43	\$205.41
2040	\$ 39,49	3%	\$ 16.81	3%	\$ 84.00	3%	\$ 27.23	3%	\$73.10	\$138.46	\$211.57



As can be seen above, the Village’s proposed average monthly user cost for water service trends slightly higher than the mean average of the adjacent communities in the pay-as-you-go alternative. Ultimately, it trends about 2% above the mean average in 2040.



As can be seen above, the Village’s proposed average monthly user cost for sewer service trends much higher than the mean average of the adjacent communities in the pay-as-you-go alternative. Although rates could be reduced upon completion of some of the major capital improvement projects this would require public understanding and support that higher rates would be required in the years leading up to the improvements and belief that rate reduction would actually occur in the future.

## 6.2 ALTERNATIVE 2 – LONG-TERM FINANCING ADJUSTMENTS

Based on the projections in Section 5.2, in order to maintain a positive balance in the water fund and complete improvements in a timely fashion, it would require a 10% increase in revenue in each of fiscal year's 2021-2023, after which a standard cost-of-living adjustment could be applied annually (estimated at 3%).

In order to maintain a positive balance in the sewer fund, while attempting to incrementally increase rates, and complete improvements in a timely fashion, it would require a 10% increase in revenue in each of fiscal years 2021-2024, followed by an additional 5% increase in revenue in fiscal years 2025-2035, after which a standard cost-of-living adjustment could be applied annually (estimated at 3%).

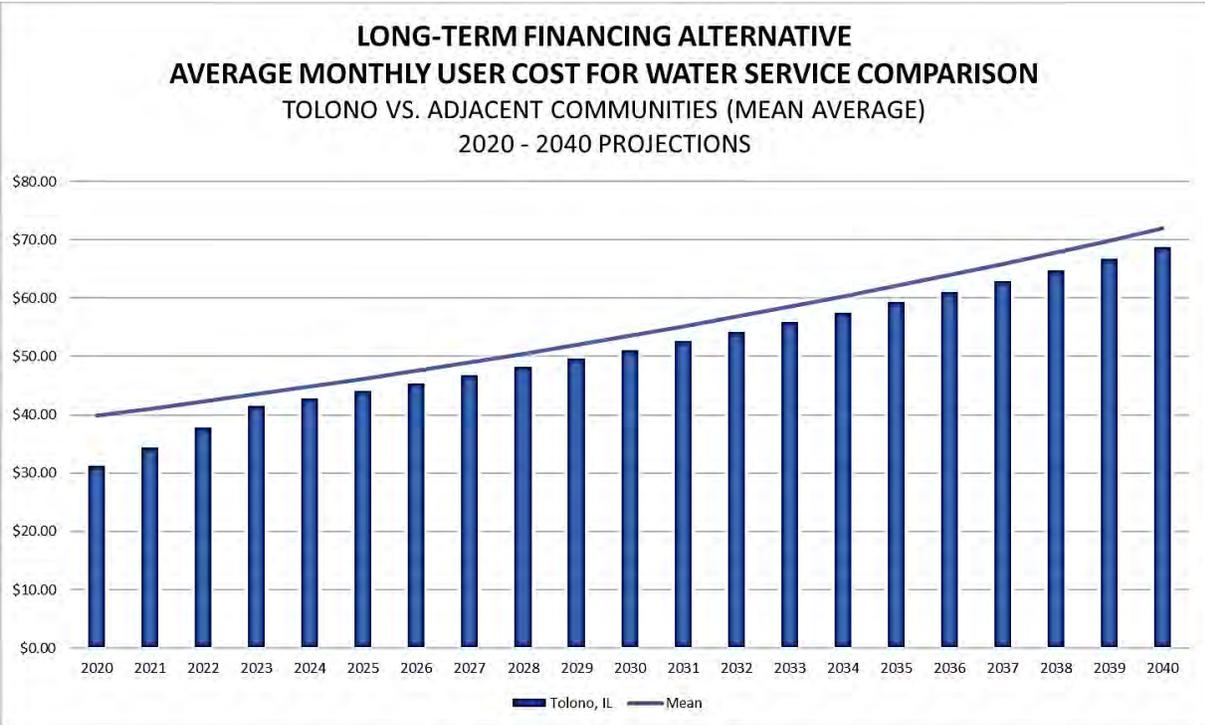
**Table 6.2** on the following page simply applies the required revenue percentage increases across the board to the existing rate structure. It also shows the estimated impact to an assumed average user, consuming 4,000 gallons of water per month.

Both water and sewer rate adjustments are reasonable in comparison to recent adjustments and it does not force identified improvement needs to a point that critical failure is a concern.

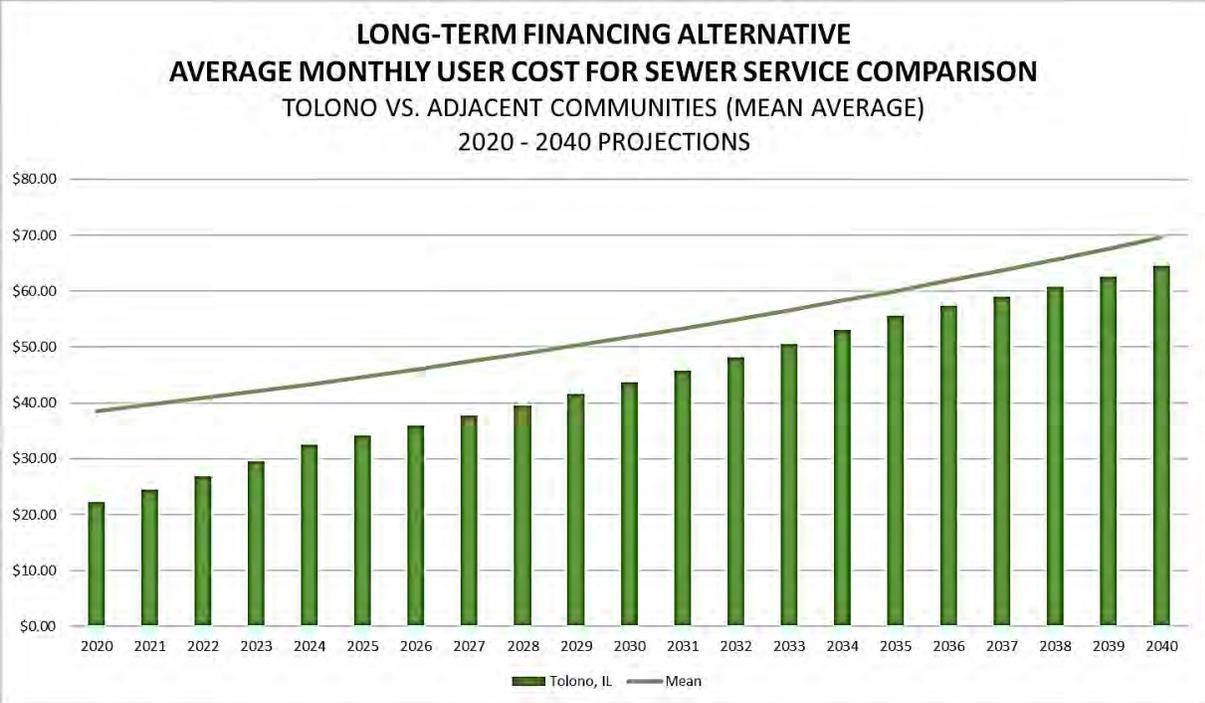
Tolono's proposed rate adjustments associated with this alternative over the next 20 years is compared to the current mean average monthly user costs for water and sewer service in adjacent communities (inflated with an assumed cost-of-living-adjustment of 3% annually) over the next 20 years. This comparison is graphically depicted following Table 6.2.

Table 6.2 - Long-Term Financing Rate Adjustments

Year	Water			Sewer			Water If Average User is 4,000 Gallons/Month	Sewer If Average User is 4,000 Gallons/Month	Combined If Average User is 4,000 Gallons/Month
	Fixed Fee	% Increase	Usage Fee	% Increase	Usage Fee	% Increase			
2016	\$ 11,411	0%	\$ 5.70	0%	\$ 8.30	0%	\$ 22.81	\$ 14.90	\$ 37.71
2017	\$ 11,411	0%	\$ 5.70	0%	\$ 8.30	0%	\$ 22.81	\$ 14.90	\$ 37.71
2018	\$ 13,691	20%	\$ 6.84	20%	\$ 9.96	20%	\$ 27.37	\$ 17.88	\$ 45.25
2019	\$ 14,371	5%	\$ 7.18	5%	\$ 10.46	5%	\$ 28.73	\$ 18.78	\$ 47.51
2020	\$ 16,871	17%	\$ 7.18	0%	\$ 13.48	29%	\$ 31.23	\$ 22.22	\$ 53.45
2021	\$ 18,561	10%	\$ 7.90	10%	\$ 14.83	10%	\$ 34.35	\$ 24.44	\$ 58.80
2022	\$ 20,411	10%	\$ 8.69	10%	\$ 16.31	10%	\$ 37.79	\$ 26.89	\$ 64.67
2023	\$ 22,451	10%	\$ 9.56	10%	\$ 17.94	10%	\$ 41.57	\$ 29.57	\$ 71.14
2024	\$ 23,131	3%	\$ 9.84	3%	\$ 19.74	10%	\$ 42.81	\$ 32.53	\$ 75.35
2025	\$ 23,821	3%	\$ 10.14	3%	\$ 20.72	5%	\$ 44.10	\$ 34.16	\$ 78.26
2026	\$ 24,541	3%	\$ 10.44	3%	\$ 21.76	5%	\$ 45.42	\$ 35.87	\$ 81.29
2027	\$ 25,271	3%	\$ 10.76	3%	\$ 22.85	5%	\$ 46.78	\$ 37.66	\$ 84.44
2028	\$ 26,031	3%	\$ 11.08	3%	\$ 23.99	5%	\$ 48.19	\$ 39.54	\$ 87.73
2029	\$ 26,811	3%	\$ 11.41	3%	\$ 25.19	5%	\$ 49.63	\$ 41.52	\$ 91.15
2030	\$ 27,621	3%	\$ 11.75	3%	\$ 26.45	5%	\$ 51.12	\$ 43.60	\$ 94.72
2031	\$ 28,441	3%	\$ 12.11	3%	\$ 27.77	5%	\$ 52.66	\$ 45.78	\$ 98.43
2032	\$ 29,301	3%	\$ 12.47	3%	\$ 29.16	5%	\$ 54.24	\$ 48.07	\$ 102.30
2033	\$ 30,181	3%	\$ 12.84	3%	\$ 30.62	5%	\$ 55.86	\$ 50.47	\$ 106.33
2034	\$ 31,081	3%	\$ 13.23	3%	\$ 32.15	5%	\$ 57.54	\$ 52.99	\$ 110.53
2035	\$ 32,011	3%	\$ 13.63	3%	\$ 33.76	5%	\$ 59.26	\$ 55.64	\$ 114.91
2036	\$ 32,971	3%	\$ 14.03	3%	\$ 34.77	3%	\$ 61.04	\$ 57.31	\$ 118.35
2037	\$ 33,961	3%	\$ 14.46	3%	\$ 35.81	3%	\$ 62.87	\$ 59.03	\$ 121.90
2038	\$ 34,981	3%	\$ 14.89	3%	\$ 36.89	3%	\$ 64.76	\$ 60.80	\$ 125.56
2039	\$ 36,031	3%	\$ 15.34	3%	\$ 37.99	3%	\$ 66.70	\$ 62.62	\$ 129.33
2040	\$ 37,111	3%	\$ 15.80	3%	\$ 39.13	3%	\$ 68.70	\$ 64.50	\$ 133.21



As can be seen above, the Village’s proposed average monthly user cost for water service trends slightly below the mean average of the adjacent communities in the long-term financing alternative. Ultimately, it trends about 5% below the mean average in year 2040.



As can be seen above, the Village’s proposed average monthly user cost for sewer service trends below the mean average of the adjacent communities in the long-term financing alternative. Ultimately, it trends about 7% below the mean average in year 2040.

## **7. RECOMMENDED CAPITAL IMPROVEMENT SEQUENCING & RATE ADJUSTMENTS**

Based on the identified capital improvement needs, their respective priority, and alternatives for sequencing and financing the improvements, if the Village plans to continue to operate and maintain both the water and sewer system in good condition, we would recommend pursuing low-interest IEPA, long-term financing for water and sewer capital improvement projects. Benefits of financing these improvements include:

- 1) Minimized impacts to annual water and sewer rates
- 2) Potential for principal forgiveness (similar to grants)
- 3) Allows improvements to be completed in timely fashion to minimize risks for critical failures

IEPA requires capital improvement project plans to pursue funding through their PWSLP and WPCLP. Although terms of these programs are reviewed and adjusted annually, once a project plan is approved, it is valid for 5 years allowing any/all improvements within the approved project plan to be completed over that time frame in accordance with the terms of the program at the time improvements are being designed/constructed. The Village's current eligibility for these programs is discussed in Section 5.2 of this report. Should the Village decide to pursue capital improvement spending and rate adjustments as recommended, Donohue and Associates, Inc. has provided proposals to the Village to complete both a water system capital improvement project plan and a sewer system capital improvement project plan.

November 13, 2019



# Water & Sewer Utilities Special Meeting



The background features a series of overlapping, wavy bands in shades of blue and green, creating a sense of motion and depth. A prominent blue circle is centered on the left side, containing the text 'Introduction'.

# Introduction

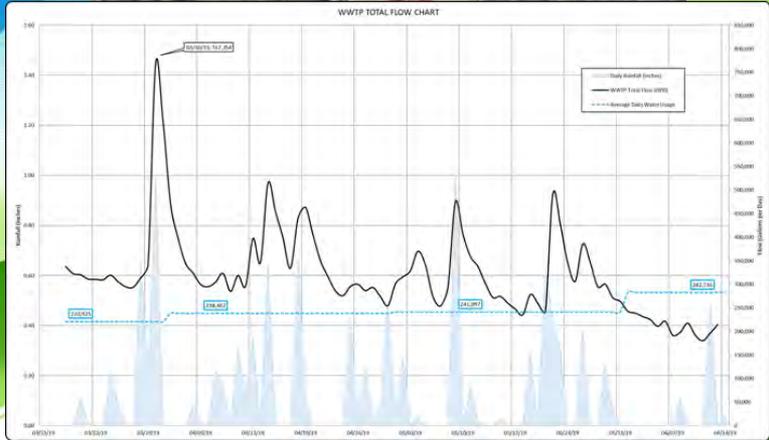
# Introduction

- The Village and Donohue have partnered on multiple studies over the past 2 years to begin evaluation of the Village's water and wastewater infrastructure to begin long-term planning.
- The most critical water and wastewater infrastructure improvement needs have been identified and planning level costs have been estimated.
- Capital expenditures have been projected over the next 20 years to develop a plan for water and sewer rate adjustments to ensure these utilities are maintained in good operational condition.

# Studies Completed

- **Sanitary Sewer System Flow Study (2018 – 2019)**
  - Purpose: Analyze inflow/infiltration, identify capacity concerns, and evaluate overall condition of the Village's existing sanitary sewer collection system.
- **WWTP Capital Improvement Planning (2019)**
  - Purpose: Evaluate the existing WWTP to develop a listing of major capital projects and planning level costs.
- **Water and Wastewater System Rate Study (2019)**
  - Purpose: Review the Village's existing water and sewer rates to project future rate adjustments necessary to perform proper system operation and maintenance and construct capital projects.

# Sanitary Sewer System Flow Study



# Existing Collection System

- Serves approximately 1,158 single-family residential properties, 30 commercial properties, and 14 multi-family properties.
- The majority of the existing collection system was constructed as part of the original construction in the early 1970's.
- Comprised of approximately 80,100 feet of gravity sanitary sewer, 3,000 feet of force main, and 6 lift stations (not including the lift station owned/operated by Unity High/Jr. High or the lift station at the WWTP).

# Existing WWTP

- Located southeast of the Village, on the east side of South Bourne Street.
- Activated sludge plant was originally constructed in the early 1970's.
- Significant upgrades in 1980's including addition of a primary clarifier, filter building, and sludge storage lagoon.
- Addition of roughing filter in 2011.

# Lift Station Assessments

- **Visual Observations**

- Elizabeth Street – Fair Condition, confined space entry concerns
- Watson Street – Fair Condition, confined space entry concerns
- Third Street – Fair Condition, signs of force main corrosion in wet well
- Larmon Street – Fair Condition, signs of corrosion on guide rail brackets
- **East Street – Extremely Poor Condition, all components within the wet well are significantly corroded**
- Condit Street – Good Condition, signs of groundwater infiltration in wet well

- **Operational Concerns**

- Drawdown tests were performed to identify theoretical capacity concerns at each lift station with the exception of Larmon Street which was surcharged
- There were no capacity concerns identified based on theoretical flow data and drawdown tests
- Operator expressed concerns with pump clogging at Elizabeth Street
- Larmon Street should be further analyzed to determine if surcharging is due to physical construction or float switch

# WWTP Assessments

- **Visual Observations**

- Plant shows significant signs of age and deterioration including spalling concrete and corroded mechanical components and piping.
- Influent lift station appears to be undersized to handle normal flows as was evident by upstream sewers being regularly surcharged.

- **Operational Concerns**

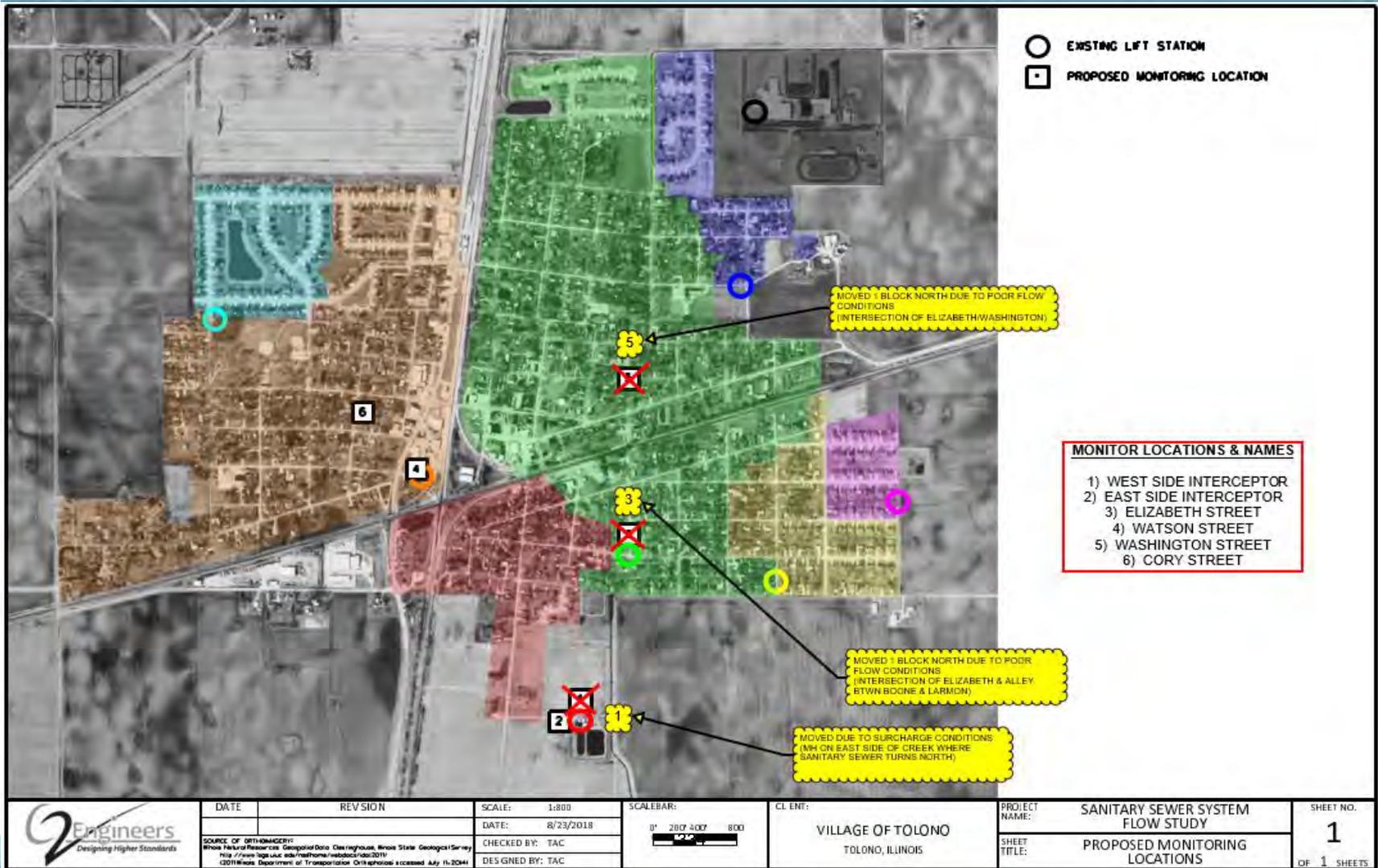
- Drawdown test could not be performed on the lift station but it appears to be undersized based on visual observations.
- Village's average daily water usage over the past couple years is ~0.240 MGD which exceeds the plant's design rating for average daily flow of 0.235 MGD
- Multiple treatment processes that were part of the plant's process design are not operated

➤ *Only a general assessment was performed as part of this study. The WWTP was analyzed in more detail as part of another study.*

# Collection System Delineation

- Existing plans were reviewed and some additional sanitary sewer mapping efforts were performed to identify drainage areas upstream of each lift station.
- Collection system was then delineated into 6 basins in an attempt to monitor semi-equal lengths of gravity sewer in each basin
- Due to poor monitoring flow conditions in proposed monitoring locations, some monitors had to be adjusted during the study.

# Final Monitoring Locations



# Flow Monitoring Summary

- Monitored flows March 14, 2019 to June 19, 2019 (3 months).
- Average dry weather flows during the study period corresponded well to average daily water usage indicating the data's validity.
- The peak storm event occurred on March 30, 2019 following multiple rain events during the days prior.
- No single event resulted in a storm that exceeded a 2-month recurrence interval indicating that the peak flows observed during this study are likely exceeded multiple times in a year.
- Based on the data collected, it appears that nearly 1/3 of the total water pumped and treated by the Village may be related to groundwater infiltration or stormwater inflow.

# Infiltration

- Infiltration is groundwater that enters sanitary sewer systems through defective pipes, pipe joints, connections, or manholes.
- Sanitary sewer systems and treatment facilities are not meant to convey and treat this clean water
- If left unmonitored, it can have many negative effects including system surcharging, property damage, and increased operational costs

	ESTIMATED GROUNDWATER INFILTRATION (6/2/19 TO 6/6/19)	AVERAGE DRY WEATHER FLOW (6/2/19 TO 6/6/19)	% INFILTRATION	INCH-DIAMETER-MILE	GPD/IDM
	GPD	GPD	%	IDM	
WWTP	99,624	225,546	44%	130	764
EAST	33,581	92,786	36%	70	478
ELIZABETH	34,432	86,044	40%	60	572
WASHINGTON	10,664	31,742	34%	53	202
WEST	66,042	132,760	50%	43	1,521
WATSON	25,113	58,857	43%	30	833
CORY	7,294	38,278	19%	16	460

The West Side Interceptor area yielded the highest observed groundwater infiltration percentage, followed by Watson Street Area, and Elizabeth Street Area.

As a general rule of thumb, anything equal to or greater than 3,000 GPD/IDM is considered excessive infiltration. There were no areas observed during the study to have excessive infiltration.

# Inflow

- Inflow is water, other than sanitary flow, that enters the sanitary sewer system from sources such as roof leaders, basement drains, yard drains, and cross connections between storm and sanitary sewer facilities
- The comparison of the peak hourly flow to the average dry weather flow is defined as the peaking factor
- High peaking factors can possibly be an indicator for potential sources of inflow

	PEAK HOURLY FLOW (3/30/19)	PEAK DAILY FLOW (3/30/19)	AVERAGE DRY WEATHER FLOW (6/2/19 TO 6/6/19)	PEAKING FACTOR	IEPA THEORETICAL PEAKING FACTOR
	GPD	GPD	GPD	UNITLESS	UNITLESS
WWTP	1,120,167	767,354	225,546	4.97	3.54
EAST	476,667	337,846	92,786	5.14	3.82
ELIZABETH	409,667	284,465	86,044	4.76	3.84
WASHINGTON	221,667	166,182	31,742	6.98	4.07
WEST	643,500	429,508	132,760	4.85	3.72
WATSON	312,250	222,921	58,857	5.31	3.94
CORY	133,083	85,094	38,278	3.48	4.03

The Washington Street area yielded the highest peaking factor, followed by Watson Street Area, and the East Side Interceptor Area.

EPA suggests inflow may be considered excessive if the average wet weather flow exceeds 275 gallons per person per day (GPPD). Using the observed peak daily flow of ~767,000 GPD and the current population of 3,449, we calculated the wet weather flow per person per day to be 222 GPPD during the peak observed event indicating that system inflow is not excessive at this time.

# Collection System Conclusions

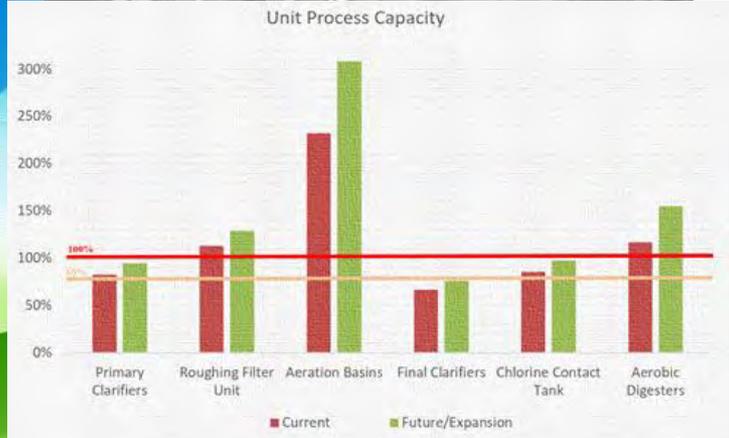
- 1) Although groundwater infiltration and stormwater inflow are present in the Village's existing system, neither are considered excessive at this point and there are no significant capacity concerns within the collection system.
- 2) Financial impacts of conveying and treating excess flow do not warrant reduction.
- 3) Annual sanitary sewer cleaning and televising is an EPA recommended best management practice and is a low-cost maintenance item that can begin to identify major sources of groundwater infiltration and stormwater inflow.
- 4) A reasonable goal would be to inspect 10% of the Village's sewers annually ~\$28k/year
- 5) Inspection should be focused in areas with older infrastructure and in areas with more significant groundwater infiltration and stormwater inflow as identified in the report.
- 6) Due to condition, the East Street Lift Station should be replaced as soon as possible.
- 7) Elizabeth Street Lift Station and Watson Street Lift Station should be considered for rehabilitation/replacement in the near future to improve safety and operation.

# WWTP Conclusions

- 1) The WWTP's flow capacity is a concern based on the comparison of the plant's design ratings versus observed flow data.
- 2) Recommend performing more detailed analysis of the WWTP to identify and plan for capital improvement needs with increasing interest for expansion of service area and population.

Questions?

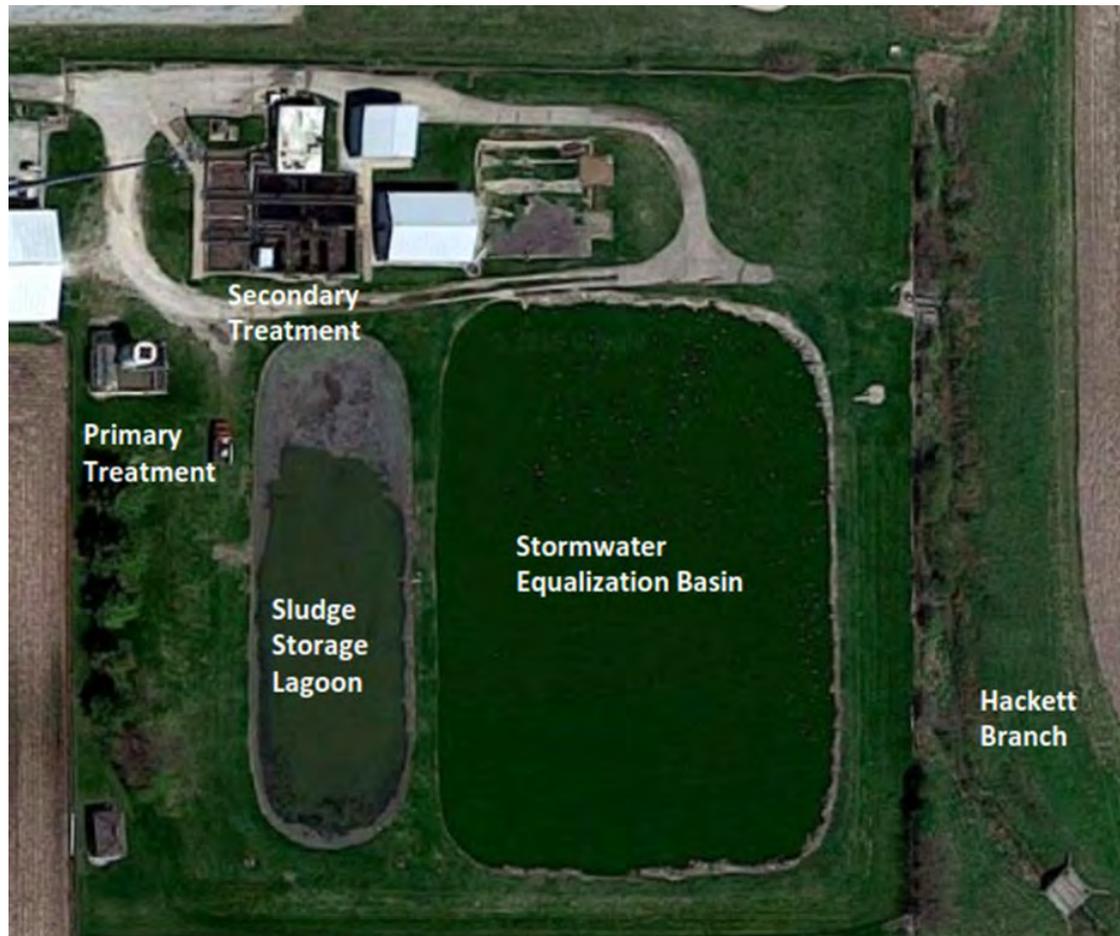
# WWTP Capital Improvement Planning



# Background & Purpose

- The Village is considering extending its service area to include adjacent developments.
- Based on results from the sanitary sewer flow study, the WWTP is already regularly operating beyond its capacity and requires further analysis before extending service.
- Donohue was hired to identify improvement needs at the plant, determine a basis of design for the improvements, and assess the cost of these upgrades

# Existing WWTP



# Existing WWTP



# WWTP Capacity Analysis

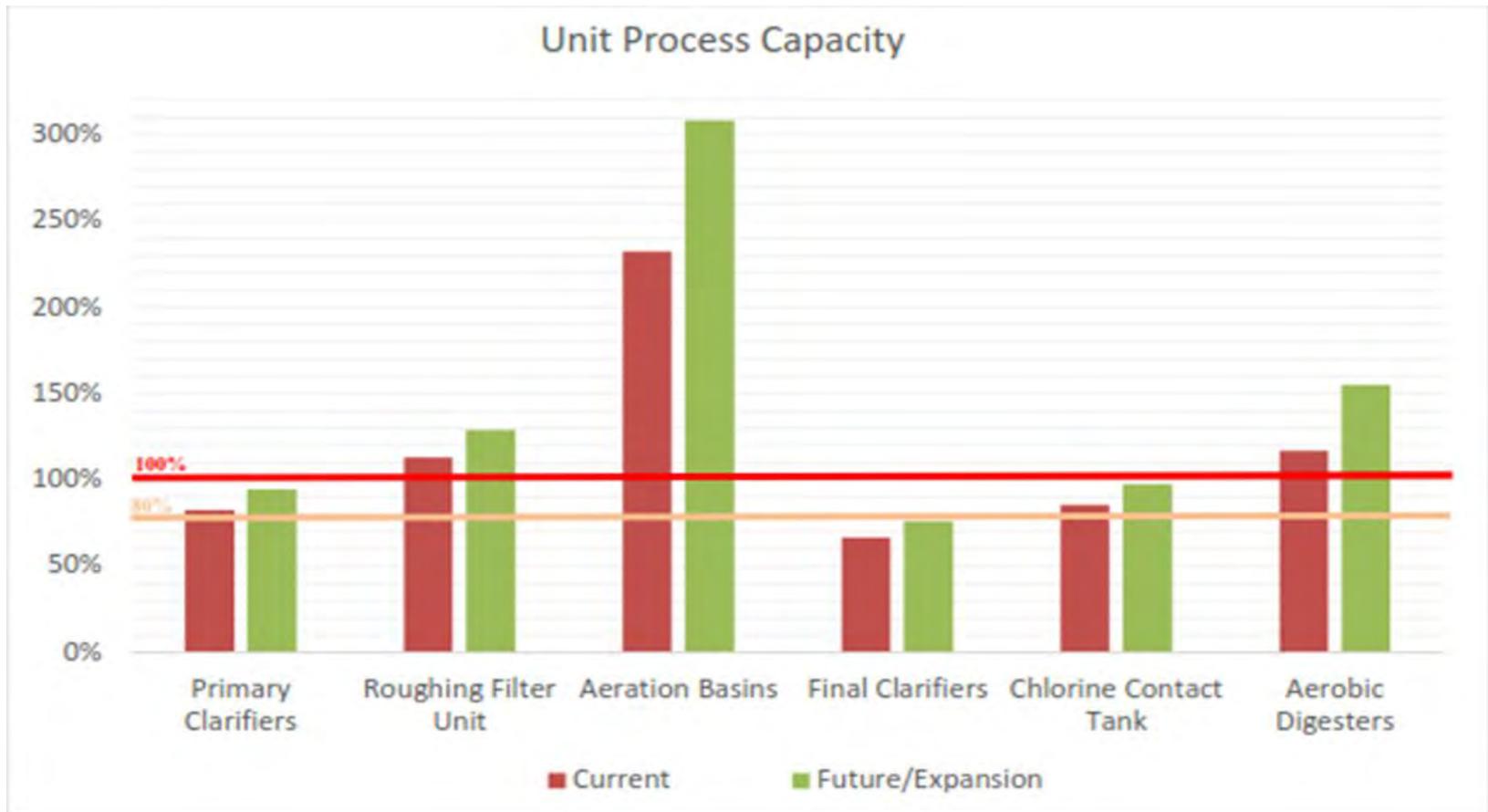
Currently operating ~40% over original design

Flows (MGD)	DAF	DMF
Original Design Flows	0.235	0.588
Current Flows*	0.333	0.767
Existing Development to be Incorporated	0.044	0.035
Future Development Growth	0.065	0.074
Population Growth (~1%)	0.058	0.124
Future Design Flows	0.500	1.00

\*2019 Sanitary Sewer System Flow Study

- **Existing Development considered for incorporation:**
  - The Oaks Mobile Home Park
  - Unity West Elementary School
  - Residential/Commercial properties located between The Oaks and the school
- **Future Development considered for incorporation:**
  - The Oaks Mobile Home Park Extension
  - Additional residential development near Unity West Elementary School
  - Additional residential development near East Side Park
  - Additional residential development west of Village Hall

# Unit Process Capacity



# WWTP Loading Analysis

		Design	Current Conditions *	
Monthly Average		Influent	Influent	Effluent
Flow	MGD	0.235	0.168	0.135
BOD	mg/L	277	134	6.7
	ppd	543	-	6.7
TSS	mg/L	323	154	8.8
	ppd	633	-	8.9
Ammonia	mg/L	19	-	1.07
	ppd	37	-	1.57
Phosphorus	mg/L	9	-	1.67

\* 2017-2019 DMR Data

- Due to minimal existing conditions data, facility design alternatives were based on the more conservative original design concentrations.
- Before design it is recommended that the Village complete a special sampling campaign to better characterize the influent concentrations.

# WWTP Loading Analysis

NPDES Permit Limits Outfall 001

	Monthly Average (mg/L)	Daily Maximum (mg/L)
CBOD5	10	20
TSS	12	24
pH	6-9	
Fecal Coliform	Monitor only	
Total Phosphorus	Monitor only	
Ammonia		
April – Oct.	1.5	3.0
Nov. – Feb.	4.0	4.7
March	1.6	6.9
DO		
March – July	Daily min 5.0 mg/L, Weekly avg. 6.0	
Aug. – Feb.	Daily min 4.5 mg/L, Weekly avg. 4.0	

NPDES Permit Limits Outfall 002

	Monthly Average (mg/L)	Weekly Average (mg/L)
CBOD5	30	45
TSS	30	45
pH	6-9	
Fecal Coliform	Daily maximum 400 per 100 ML	
Total Phosphorus	Monitor only	
Ammonia	Monitor only	
Dissolved Oxygen	Monitor only	
Chlorine Residual	0.75	

- Outfall 001 – Normal Discharge
- Outfall 002 – Excess Flow Discharge
- No major changes projected over the 20 year planning period
  - IEPA may implement Phosphorous limits.
  - IEPA may remove disinfection exemption.
  - IEPA may implement lower ammonia limits.

# Identified Concerns

- **Processes that are past or quickly approaching the end of their useful life:**
  - Influent Pumps
  - Stormwater Pump
  - Blowers
  - Clarifier Mechanisms
  - Most valves and metering
- **Processes undersized for the future estimated flows and loadings:**
  - Primary Clarifiers
  - Aeration Basins
  - Secondary Clarifiers
  - Aerobic Digestion
- **Safety and Code Compliance concerns:**
  - Improved ventilation needed to declassify space (NFPA 820)
  - Concrete repairs
  - Grating and handrail improvements

# NFPA 820

- **NFPA stands for National Fire Protection Association**
- **Section 820 defines the protection standard in wastewater treatment facilities**
- **Any modifications to existing WWTP will be required to bring non-compliant items into compliance**
  - **Most older WWTP do not have adequate ventilation for areas with hazardous gases or separation of spaces i.e. electrical equipment separated from hazardous gases**
  - **Spaces are typically fall into two classifications**
    - **Class 1/Division 1 – flammable gases present under normal operating conditions**
    - **Class 1/Division 2 - flammable gases present under abnormal operating conditions (leak or accident)**
  - **The existing control building is classified as Class 1/Division 2 and will require:**
    - **Added ventilation for 6 air changes per hour (recommended)**

# Recommended Upgrades

## ● Headworks & Stormwater

- New screening/headworks facilities
- New stormwater pump and discharge piping
- New flow metering

## ● Primary Treatment

- Additional primary treatment
- Primary clarifier mechanisms
- Larger primary roughing filter pumps

## ● Secondary Treatment

- New valves and piping
- New air diffusers
- Additional aeration basins
- Either expand secondary clarifiers or rehabilitate tertiary filters
- New blowers

## ● Disinfection

- No recommended upgrades at this time.

## ● Solids Handling

- Additional blowers
- Additional aerobic digesters

## ● General

- NFPA 820 Code Compliance Upgrades
- Grating & handrail safety upgrades
- Concrete repairs on basins/clarifiers
- Demolish or rehabilitate existing chemical storage building
- New valves and piping

# Improvement Alternatives

- **Update/expand all existing processes, reusing existing infrastructure**

- *Updating and reusing the existing infrastructure was determined to be both prohibitively expensive and technically difficult for construction and rehabilitation due to existing infrastructure age and condition*

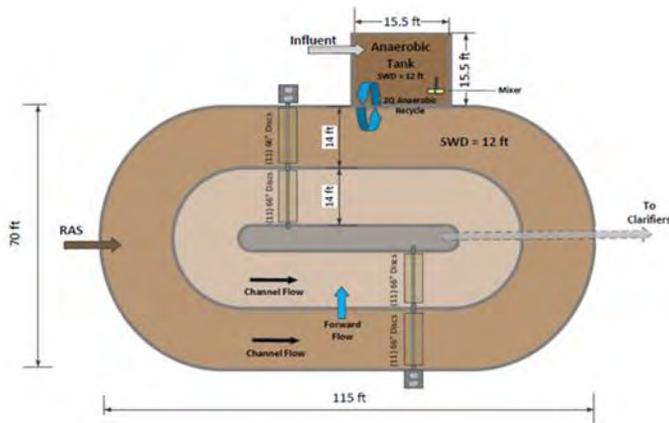


- **Invest into a new treatment system utilizing minimal existing infrastructure**

- All of the new treatment system would include upgrading the existing headworks and reusing the existing sludge lagoon, excess flow lagoon, and chlorine contact tank.
- New treatment systems evaluated include:
  1. Oxidation Ditch
  2. Sequencing Batch Reactor (SBR)
  3. Membrane Bioreactors (MBR)
  4. Package Plant
  5. Algaewheel
  6. Lemtec Lagoon

# Oxidation Ditch

- Planning level cost estimate = \$5.6 Million
- Advantages:
  - Simple operation/maintenance
  - Well-known technology
  - Nutrient removal
  - Minimizes shock loading
- Disadvantages:
  - Requires secondary clarification
  - Larger footprint



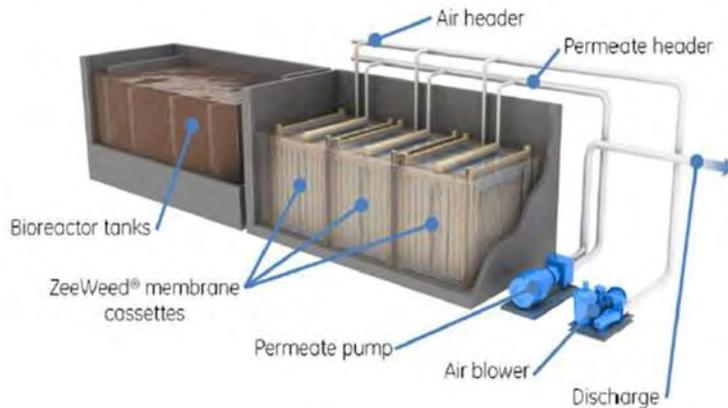
# Sequencing Batch Reactor (SBR)

- Planning level cost estimate = \$5.8 Million
- Advantages:
  - No recycling or separate clarifiers
  - Simple construction
  - Simple operation/maintenance
- Disadvantages:
  - Requires tertiary filtration
  - Requires very deep basins



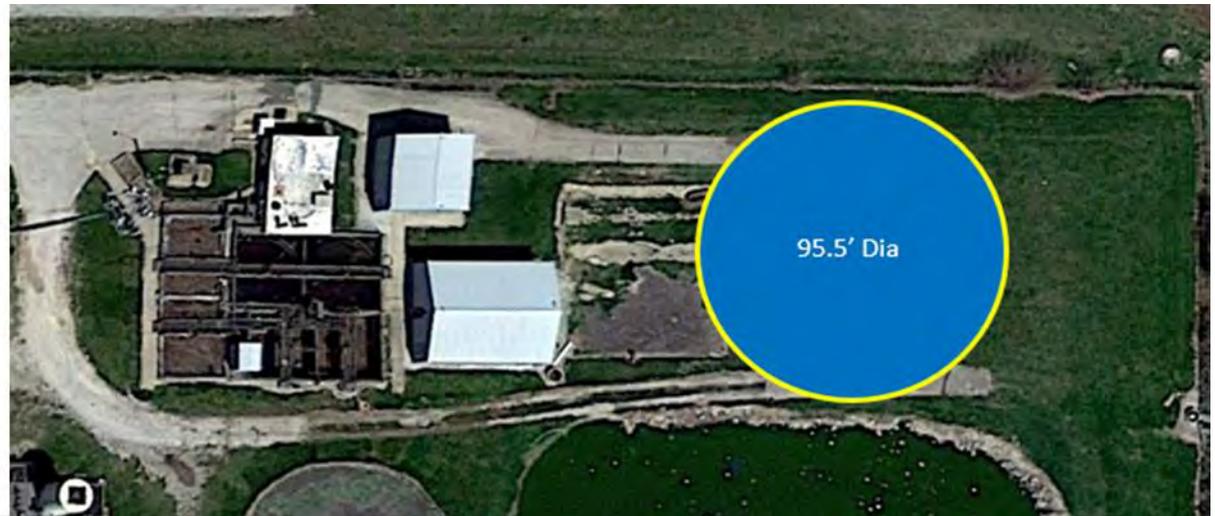
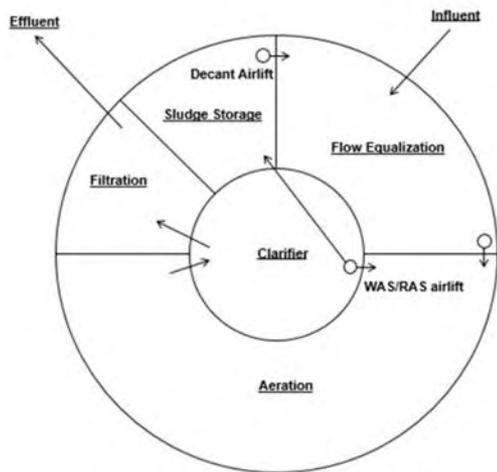
# Membrane Bioreactors (MBR)

- Planning level cost estimate = \$7.0 Million
- Advantages:
  - Small footprint
  - Good at handling load fluctuations
- Disadvantages:
  - High recycle rates
  - Higher operation/maintenance costs



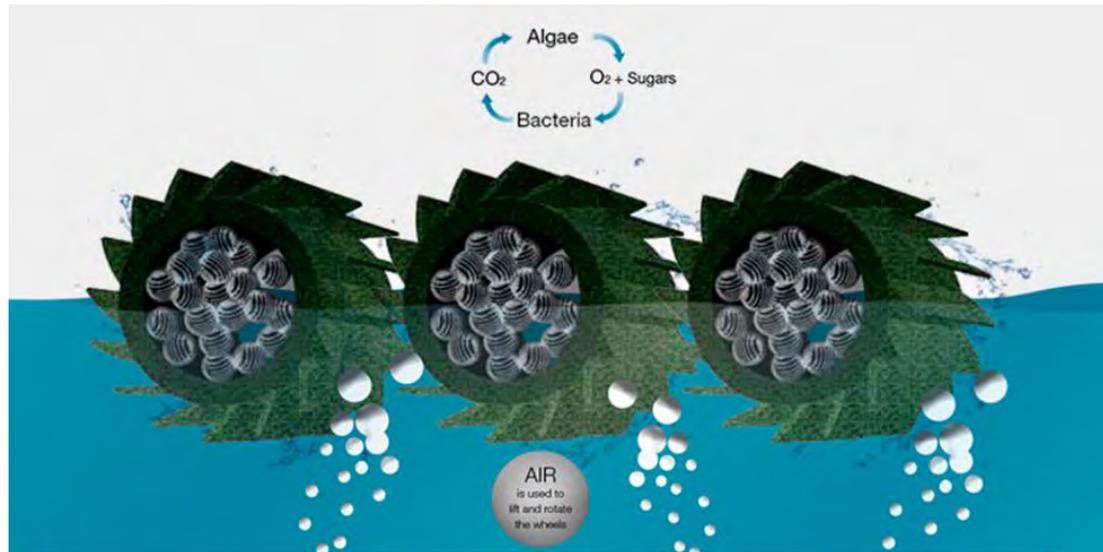
# Package Plant

- Planning level cost estimate = \$6.4 Million
- Advantages:
  - Simple operation/maintenance
  - No primary treatment required
  - Good at handling load fluctuations
- Disadvantages:
  - Higher aeration costs
  - Limited future flexibility
  - Larger footprint



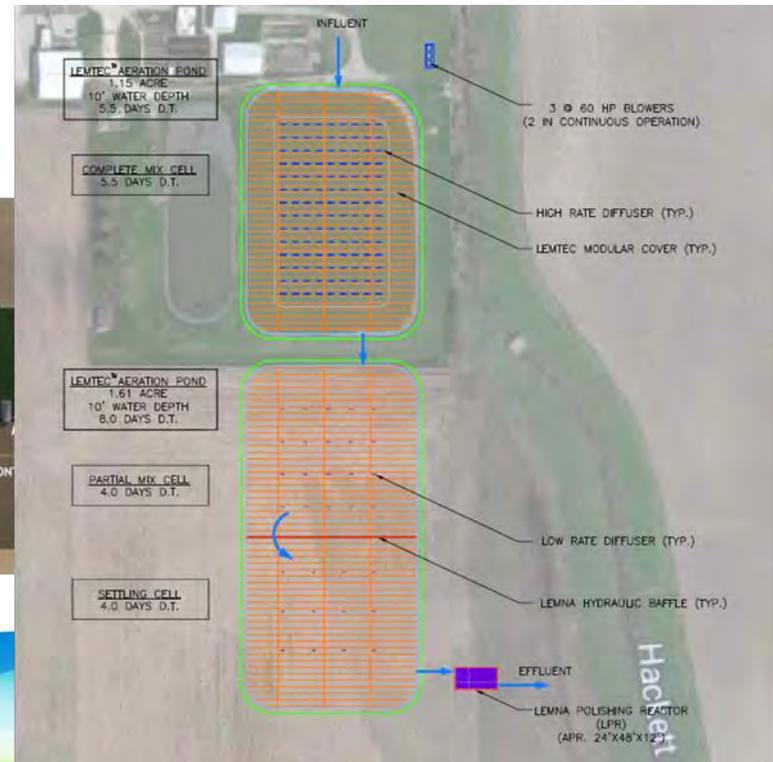
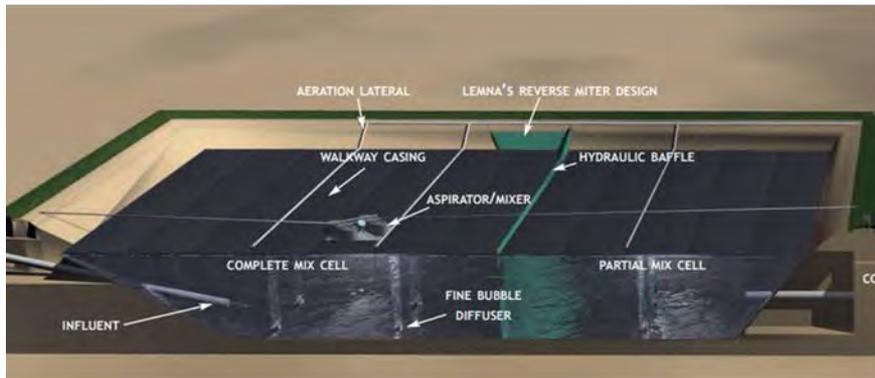
# Algaewheel

- Algaewheel was initially considered because it is a treatment process with a relatively small footprint and low operation/maintenance costs
- Unfortunately, estimated future flows and loadings are currently beyond Algaewheel's capabilities to treat economically.



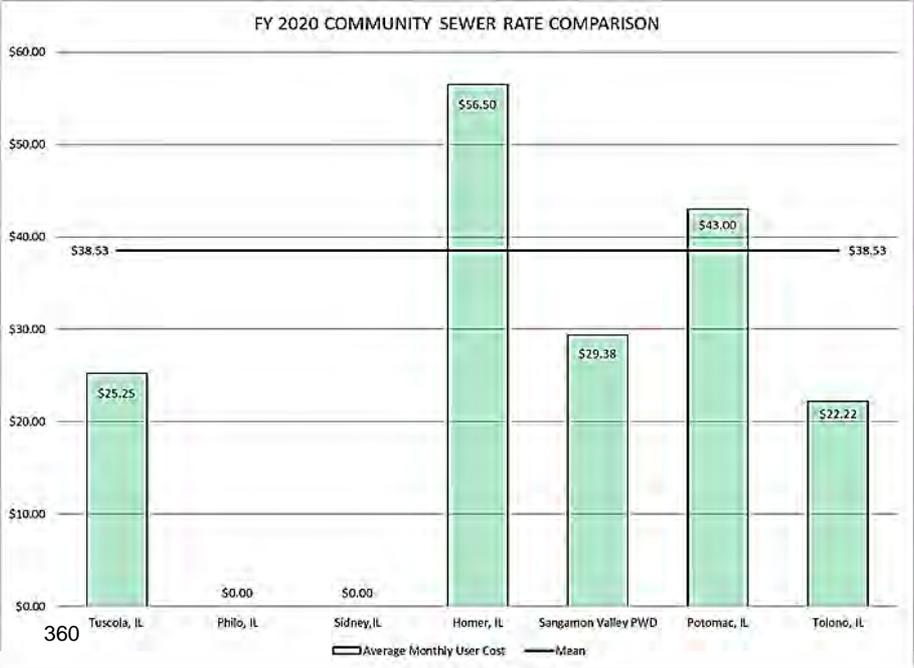
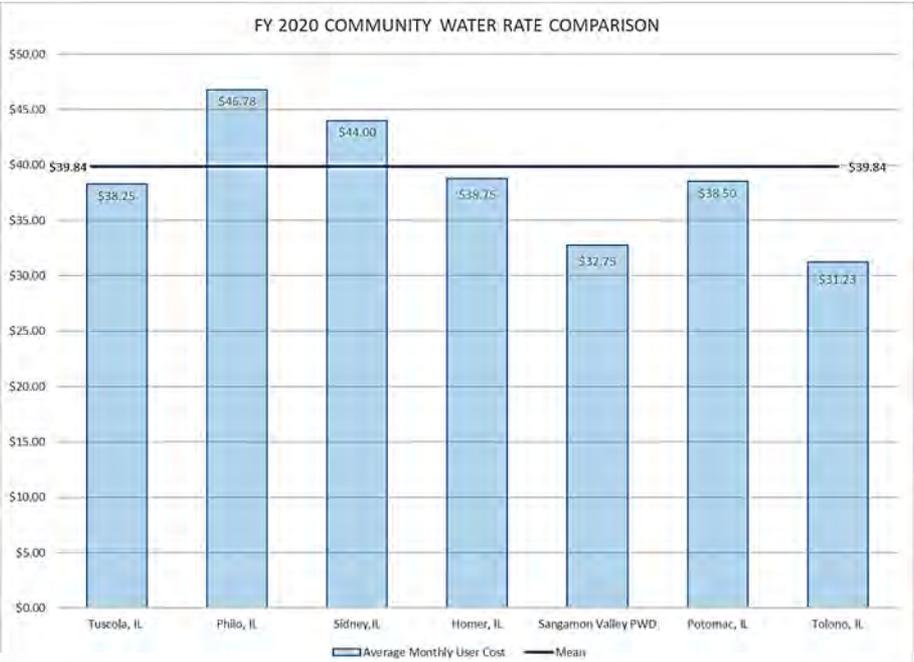
# Lemtec Lagoon

- Planning level cost estimate = \$6.4 Million
- Advantages:
  - Simplest operation/maintenance
  - No primary treatment required
  - Nutrient removal
- Disadvantages:
  - Largest footprint
  - Larger footprint



Questions?

# Water & Sewer Rate Study



# Existing Financial Review

- Reviewed actual revenues and expenses from the past 4 fiscal years.
- Reviewed budgeted revenues and expenses for current fiscal year
- Identified Water/Sewer Reserves as of 4/30/2019
  - Total Reserve Funds = \$1,458,338.00
- Reserve funds were split based on identified capital projects:
  - Water System (20%) = \$291,667.60
  - Sewer System (80%) = \$1,166,670.40

# Water Funds, Expenses, & Rate Structure

## WATER FUND REVENUES

SOURCE	2016	2017	2018	2019	2020
Service Charges	\$410,857	\$418,052	\$497,820	\$513,551	\$540,850
Connection Fees	\$2,250	\$1,800	\$2,275	\$450	\$0
Fines & Forfeit	\$0	\$0	\$0	\$0	\$0
Other Revenue	\$2,805	\$2,655	\$4,003	\$4,314	\$5,000
<b>Total</b>	<b>\$415,912</b>	<b>\$422,507</b>	<b>\$504,098</b>	<b>\$518,315</b>	<b>\$545,850</b>

## WATER FUND EXPENSES

SOURCE	2016	2017	2018	2019	2020
Water Purchase	\$313,171	\$325,295	\$377,195	\$351,683	\$425,000
Personnel	\$69,069	\$100,260	\$105,592	\$49,271	\$84,264
O & M	\$10,551	\$12,980	\$11,226	\$19,172	\$23,700
Professional Services	\$2,200	\$13,102	\$1,937	\$27,513	\$12,750
Existing Capital Improvements	\$40,492	\$26,072	\$25,945	\$141,183	\$33,100
Other Expenses	\$49,105	\$49,525	\$41,956	\$18,412	\$28,200
<b>Total</b>	<b>\$484,588</b>	<b>\$527,234</b>	<b>\$563,851</b>	<b>\$607,234</b>	<b>\$618,014</b>

## WATER FUND NET INCOME

PROFIT/LOSS	2016	2017	2018	2019	2020
<b>INCOME (LOSS)</b>	<b>(68,676)</b>	<b>(\$104,728)</b>	<b>(\$59,754)</b>	<b>(\$88,920)</b>	<b>(\$90,664)</b>

## MONTHLY WATER USER RATES

COMPONENT	2016	2017	2018	2019	2020
Fixed Fee for First 2,000 Gallons	\$11.41	\$11.41	\$13.69	\$14.37	\$16.87
Volume Fee per 1,000 Gallons After	\$5.70	\$5.70	\$6.84	\$7.18	\$7.18

# Sewer Funds, Expenses, & Rate Structure

## SEWER FUND REVENUES

SOURCE	2016	2017	2018	2019	2020
Service Charges	\$298,741	\$304,882	\$354,698	\$371,808	\$418,850
Connection Fees	\$2,250	\$1,800	\$2,275	\$450	-
Fines & Forfeit	-	-	-	-	-
Other Revenue	-	\$518	\$125	\$294	-
<b>Total</b>	<b>\$300,991</b>	<b>\$307,200</b>	<b>\$357,098</b>	<b>\$372,552</b>	<b>\$418,850</b>

## SEWER FUND EXPENSES

SOURCE	2016	2017	2018	2019	2020
Personnel	\$76,838	\$118,712	\$113,669	\$87,220	\$117,647
O & M	\$69,206	\$70,555	\$5,627	\$61,673	\$87,400
Professional Services	\$4,514	\$4,948	\$6,366	\$32,630	\$103,750
Existing Capital Projects	\$138,461	\$161,886	\$143,850	\$173,951	\$250,000
Other Expenses	\$81,871	\$85,397	\$82,913	\$21,207	\$27,300
<b>Total</b>	<b>\$370,890</b>	<b>\$441,498</b>	<b>\$402,425</b>	<b>\$376,681</b>	<b>\$586,097</b>

## SEWER FUND NET INCOME

PROFIT/LOSS	2016	2017	2018	2019	2020
Net Income	(\$69,899)	(\$134,298)	(\$45,327)	(\$4,129)	(\$167,247)

## MONTHLY SEWER USER RATES

COMPONENT	2016	2017	2018	2019	2020
Fixed Fee for First 2,000 Gallons	\$8.30	\$8.30	\$9.96	\$10.46	\$13.48
Volume Fee per 1,000 Gallons After	\$3.30	\$3.30	\$3.96	\$4.16	\$4.37

# Current Community Rates

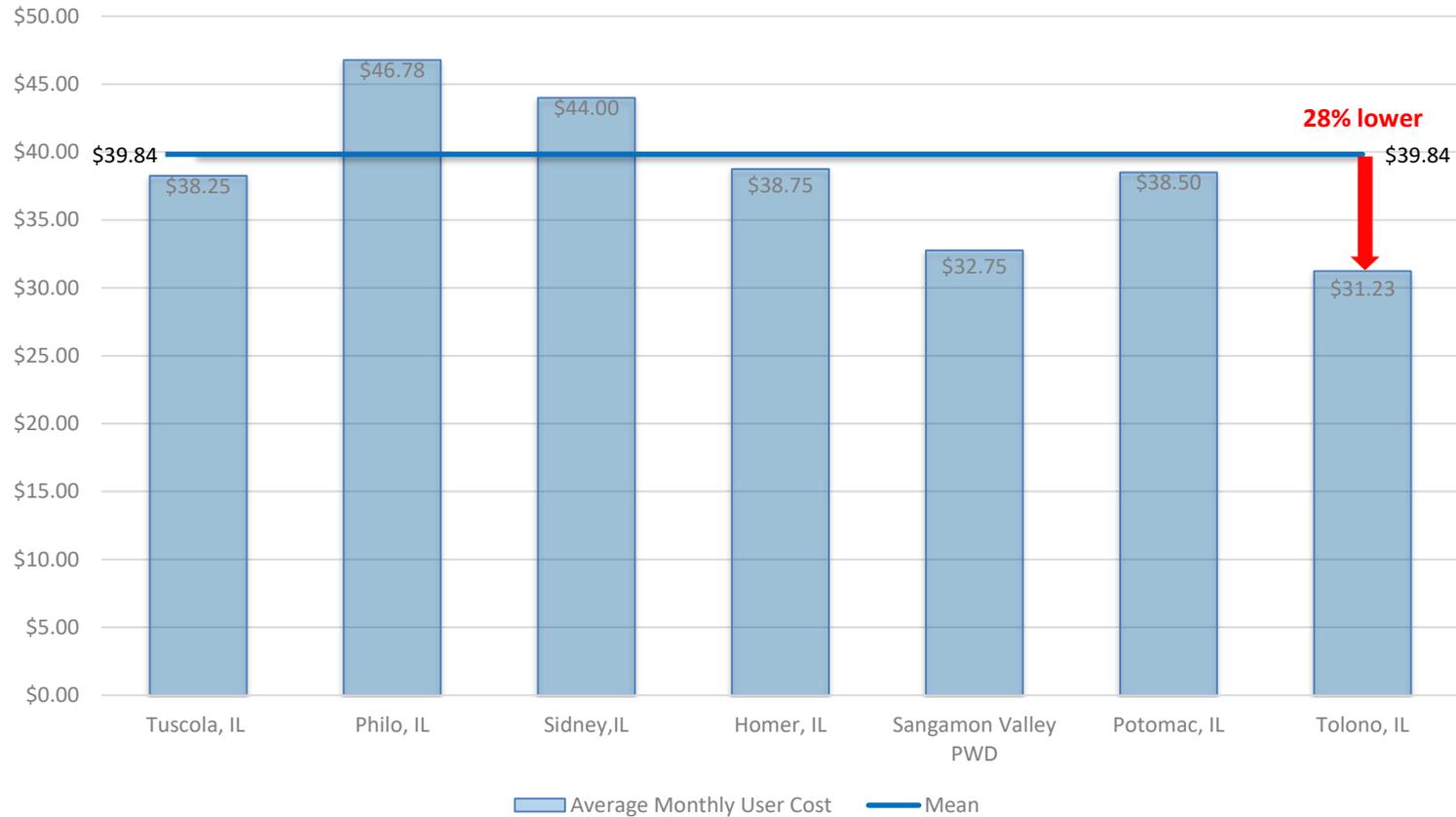
Location	Water		Sewer		Water	Sewer
	Fixed Fee	Volume Charge	Fixed Fee	Volume Charge	User Rate at 4,000 Gallons/Month	User Rate at 4,000 Gallons/Month
Tuscola, IL	\$14.25/1,000 Gallons	\$8.00/additional 1,000 Gallons	\$7.25/1,000 Gallons	\$6.00/additional 1,000 Gallons	\$38.25	\$25.25
Philo, IL	\$16.50 Customer Charge	\$7.57/1,000 Gallons	No Sewer		\$46.78	\$0.00
Sidney, IL	\$22/First 2,000 Gallons	\$11/additional 1,000 Gallons	No Sewer		\$44.00	\$0.00
Homer, IL	\$17.50/1,500 Gallons	\$8.50/additional 1,000 Gallons	\$39.00/1,500 Gallons	\$7.00/additional 1,000 Gallons	\$38.75	\$56.50
Sangamon Valley PWD	\$19.55/2,000 Gallons	\$6.60/additional 1,000 Gallons	\$16.18/2,000 Gallons	\$6.60/additional 1,000 Gallons	\$32.75	\$29.38
Potomac, IL	\$28.50/2,000 Gallons	\$5.00/additional 1,000 Gallons	\$33.00/2,000 Gallons	\$5.00/additional 1,000 Gallons	\$38.50	\$43.00
Tolono, IL	\$16.87/2,000 Gallons	\$7.18/additional 1,000 Gallons	\$13.48/2,000 Gallons	\$4.37/additional 1,000 Gallons	\$31.23	\$22.22

Note: Rates do not account for special fees, taxes, surcharges, that may be imposed by municipalities or private utility companies.

- Adjacent system rates may be used as a general measure but even though adjacent communities may have similarities in population and economics, system expenses may be vastly different.
- Average monthly user is assumed to be 4,000 gallons per month
- The mean average monthly user cost for water service in the adjacent communities listed above is \$39.84/month, approximately 28% higher than Tolono's current average user rate.
- The mean average monthly user cost for sewer service in the adjacent communities listed above is \$38.53/month, approximately 75% higher than Tolono's current average user rate.

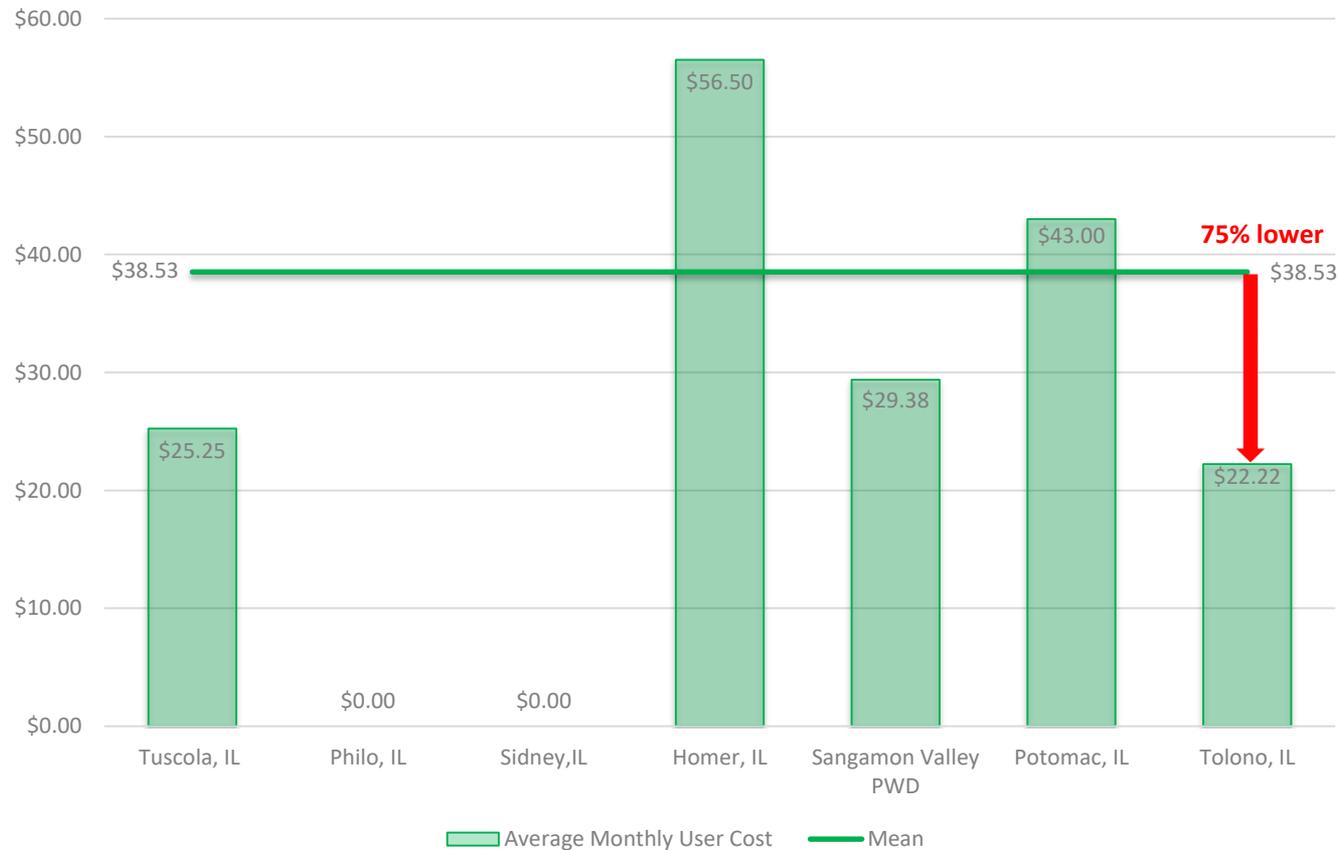
# Current Community Rates

FY 2020 COMMUNITY WATER RATE COMPARISON



# Current Community Rates

FY 2020 COMMUNITY SEWER RATE COMPARISON



# Capital Projects

## Water System

PRIORITY	PROJECT DESCRIPTION	ESTIMATED TIME FRAME	PRELIMINARY PROBABLE COST
1	Broadway & Reynolds Water Main Replacement	Immediate	\$250,000
2	Vorcey-Leda-Clifford-Borne Streets Water Main Replacement	1-5 years	\$250,000
3	Meadow Lane Water Main Looping	1-5 years	\$150,000
4	Miscellaneous Hydrant & Valve Replacement	1-15 years	\$200,000
5	Distribution System Future Main Renewal	Bi-Annually (Beginning 2030)	\$230,000

Note: Water distribution system mapping is desired but not considered a capital project.

## Sewer System

PRIORITY	PROJECT DESCRIPTION	ESTIMATED TIME FRAME	PRELIMINARY PROBABLE COST
1	WWTP Improvements	1-3 years	\$5,600,000
2	Southside Sewer Extension	1-3 years	\$1,658,000
3	Elizabeth St. Lift Station	3-5 years	\$100,000 - \$300,000
4	Watson St. Lift Station	5-10 years	\$100,000 - \$300,000
5	Collection System Future Sewer & Lift Station Renewal	Bi-Annually (Beginning 2029)	\$408,000

Note: Annual sewer cleaning/inspection is recommended but not considered a capital project.

# Sequencing Alternatives

## Alternative 1 – Pay-as-you-go

- In this alternative it is assumed that capital projects will be performed as funds become available and will be paid for using cash reserves instead of procuring financing.

## Alternative 2 – Long-Term Financing

- In this alternative it is assumed that capital projects will be designed and constructed in consecutive years. Design costs would be paid for by the Village and would be eligible for reimbursement through the loan, if desired. Long-term financing projections were formulated based on current IEPA terms for the Public Water Supply Loan Program (PWSLP) and Water Pollution Control Loan Program (WPCLP). The Village is currently eligible for a reduced rate and principal forgiveness.

**Water:** Up to 30 years at approximately 1.500% (75% of market rate at time of loan closing)

*\*Eligible for 60% Principal Forgiveness (\$800,000 maximum)*

**Sewer:** Up to 30 years at approximately 1.500% (75% of market rate at time of loan closing)

*\*Eligible for 15% Principal Forgiveness*

*\*Although the Village is currently eligible for principal forgiveness, it has not been accounted for in the capital improvement plan since the program is subject to change annually.*

# Rate Adjustments

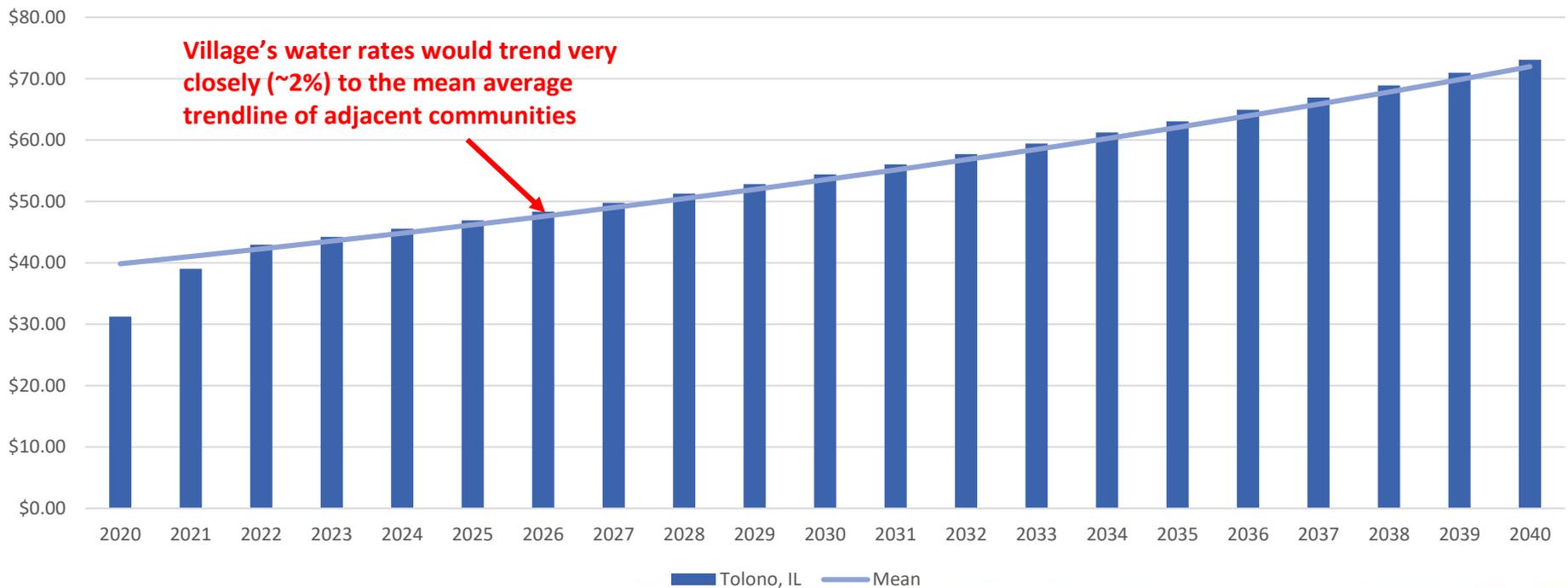
## Pay-As-You-Go

Year	Water				Sewer				Water	Sewer	Combined
	Fixed Fee	% Increase	Usage Fee	% Increase	Fixed Fee	% Increase	Usage Fee	% Increase	If Average User is 4,000 Gallons/Month	If Average User is 4,000 Gallons/Month	If Average User is 4,000 Gallons/Month
2016	\$ 11.41	0%	\$ 5.70	0%	\$ 8.30	0%	\$ 3.30	0%	\$22.81	\$14.90	\$37.71
2017	\$ 11.41	0%	\$ 5.70	0%	\$ 8.30	0%	\$ 3.30	0%	\$22.81	\$14.90	\$37.71
2018	\$ 13.69	20%	\$ 6.84	20%	\$ 9.96	20%	\$ 3.96	20%	\$27.37	\$17.88	\$45.25
2019	\$ 14.37	5%	\$ 7.18	5%	\$ 10.46	5%	\$ 4.16	5%	\$28.73	\$18.78	\$47.51
2020	\$ 16.87	17%	\$ 7.18	0%	\$ 13.48	29%	\$ 4.37	5%	\$31.23	\$22.22	\$53.45
2021	\$ 21.09	25%	\$ 8.98	25%	\$ 16.85	25%	\$ 5.46	25%	\$39.04	\$27.78	\$66.81
2022	\$ 23.20	10%	\$ 9.87	10%	\$ 21.06	25%	\$ 6.83	25%	\$42.94	\$34.72	\$77.66
2023	\$ 23.89	3%	\$ 10.17	3%	\$ 26.33	25%	\$ 8.54	25%	\$44.23	\$43.40	\$87.63
2024	\$ 24.61	3%	\$ 10.47	3%	\$ 32.91	25%	\$ 10.67	25%	\$45.56	\$54.25	\$99.80
2025	\$ 25.35	3%	\$ 10.79	3%	\$ 41.14	25%	\$ 13.34	25%	\$46.92	\$67.81	\$114.73
2026	\$ 26.11	3%	\$ 11.11	3%	\$ 51.42	25%	\$ 16.67	25%	\$48.33	\$84.76	\$133.09
2027	\$ 26.89	3%	\$ 11.44	3%	\$ 53.99	5%	\$ 17.50	5%	\$49.78	\$89.00	\$138.78
2028	\$ 27.70	3%	\$ 11.79	3%	\$ 56.69	5%	\$ 18.38	5%	\$51.27	\$93.45	\$144.72
2029	\$ 28.53	3%	\$ 12.14	3%	\$ 59.53	5%	\$ 19.30	5%	\$52.81	\$98.12	\$150.94
2030	\$ 29.38	3%	\$ 12.51	3%	\$ 62.50	5%	\$ 20.26	5%	\$54.40	\$103.03	\$157.43
2031	\$ 30.27	3%	\$ 12.88	3%	\$ 64.38	3%	\$ 20.87	3%	\$56.03	\$106.12	\$162.15
2032	\$ 31.17	3%	\$ 13.27	3%	\$ 66.31	3%	\$ 21.50	3%	\$57.71	\$109.30	\$167.01
2033	\$ 32.11	3%	\$ 13.67	3%	\$ 68.30	3%	\$ 22.14	3%	\$59.44	\$112.58	\$172.02
2034	\$ 33.07	3%	\$ 14.08	3%	\$ 70.35	3%	\$ 22.81	3%	\$61.22	\$115.96	\$177.18
2035	\$ 34.06	3%	\$ 14.50	3%	\$ 72.46	3%	\$ 23.49	3%	\$63.06	\$119.44	\$182.50
2036	\$ 35.09	3%	\$ 14.93	3%	\$ 74.63	3%	\$ 24.19	3%	\$64.95	\$123.02	\$187.98
2037	\$ 36.14	3%	\$ 15.38	3%	\$ 76.87	3%	\$ 24.92	3%	\$66.90	\$126.71	\$193.61
2038	\$ 37.22	3%	\$ 15.84	3%	\$ 79.18	3%	\$ 25.67	3%	\$68.91	\$130.51	\$199.42
2039	\$ 38.34	3%	\$ 16.32	3%	\$ 81.55	3%	\$ 26.44	3%	\$70.98	\$134.43	\$205.41
2040	\$ 39.49	3%	\$ 16.81	3%	\$ 84.00	3%	\$ 27.23	3%	\$73.10	\$138.46	\$211.57

# Rate Adjustments

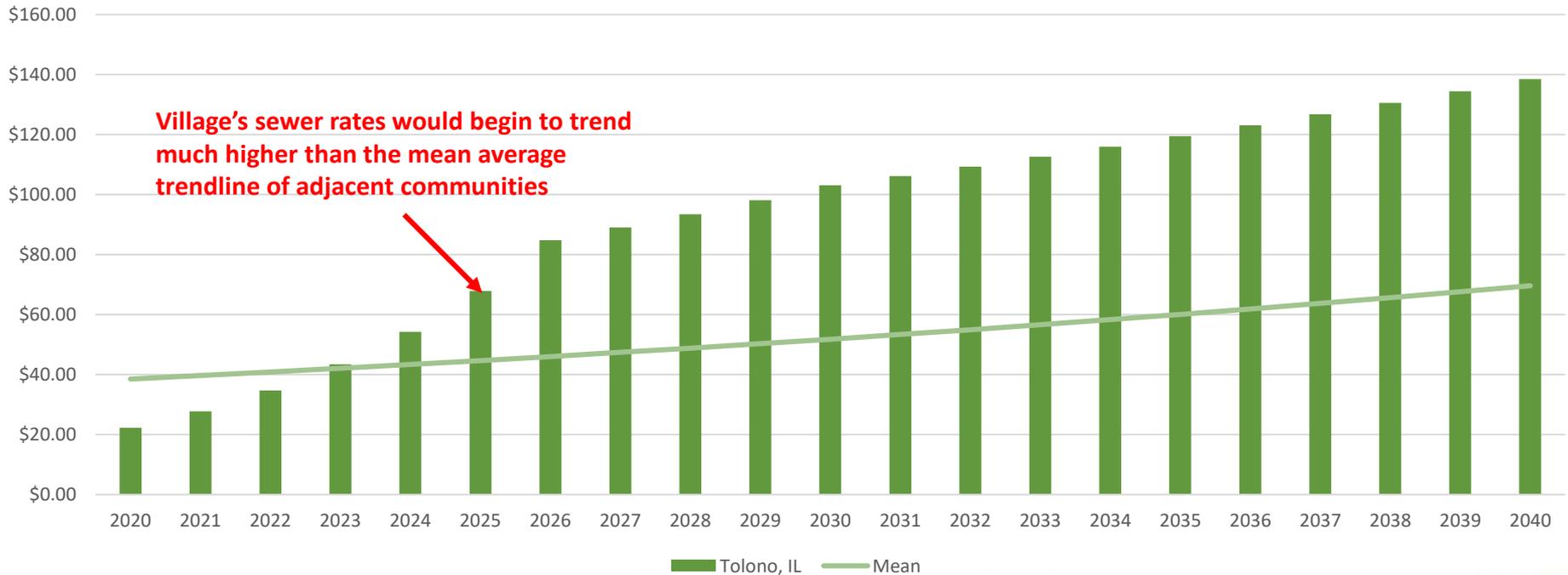
## Pay-As-You-Go

**PAY-AS-YOU-GO ALTERNATIVE**  
**AVERAGE MONTHLY USER COST FOR WATER SERVICE COMPARISON**  
**TOLONO VS. ADJACENT COMMUNITIES (MEAN AVERAGE)**  
**2020 - 2040 PROJECTIONS**



# Rate Adjustments Pay-As-You-Go

**PAY-AS-YOU-GO ALTERNATIVE**  
**AVERAGE MONTHLY USER COST FOR SEWER SERVICE COMPARISON**  
TOLONO VS. ADJACENT COMMUNITIES (MEAN AVERAGE)  
2020 - 2040 PROJECTIONS



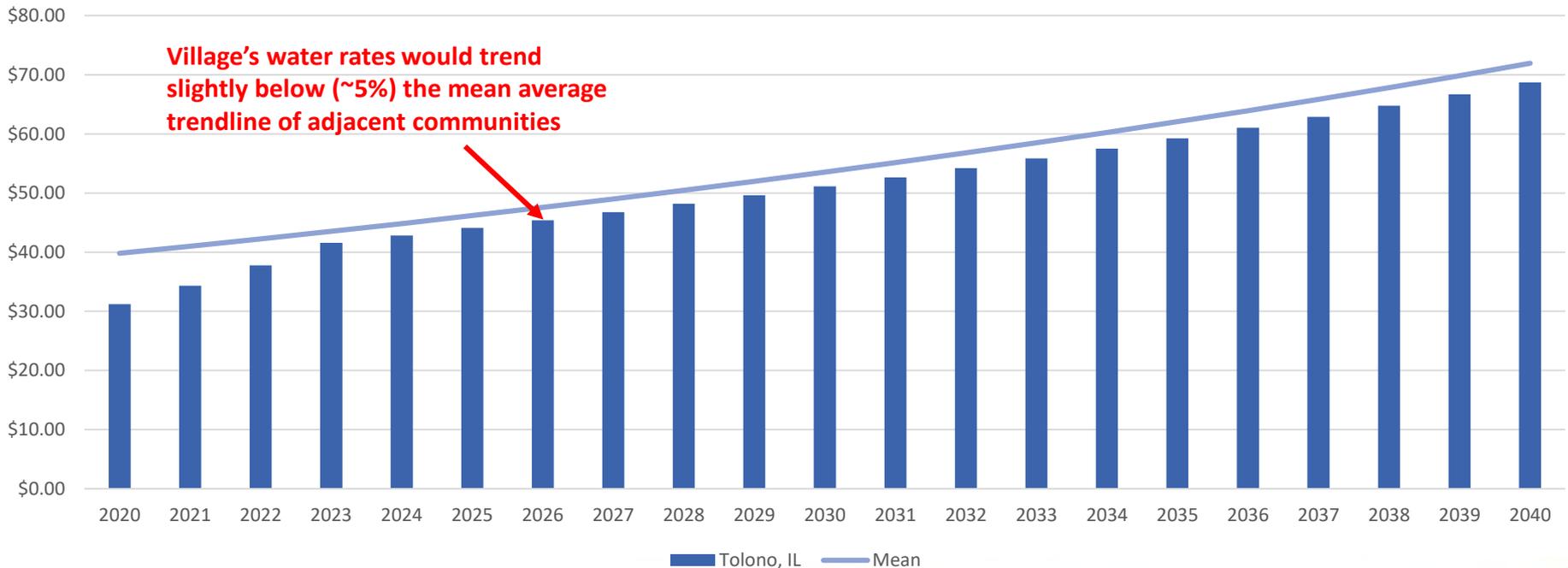
# Rate Adjustments Long-Term Financing

Year	Water				Sewer				Water If Average User is 4,000 Gallons/Month	Sewer If Average User is 4,000 Gallons/Month	Combined If Average User is 4,000 Gallons/Month
	Fixed Fee	% Increase	Usage Fee	% Increase	Fixed Fee	% Increase	Usage Fee	% Increase			
2016	\$ 11.41	0%	\$ 5.70	0%	\$ 8.30	0%	\$ 3.30	0%	\$22.81	\$14.90	\$37.71
2017	\$ 11.41	0%	\$ 5.70	0%	\$ 8.30	0%	\$ 3.30	0%	\$22.81	\$14.90	\$37.71
2018	\$ 13.69	20%	\$ 6.84	20%	\$ 9.96	20%	\$ 3.96	20%	\$27.37	\$17.88	\$45.25
2019	\$ 14.37	5%	\$ 7.18	5%	\$ 10.46	5%	\$ 4.16	5%	\$28.73	\$18.78	\$47.51
2020	\$ 16.87	17%	\$ 7.18	0%	\$ 13.48	29%	\$ 4.37	5%	\$31.23	\$22.22	\$53.45
2021	\$ 18.56	10%	\$ 7.90	10%	\$ 14.83	10%	\$ 4.81	10%	\$34.35	\$24.44	\$58.80
2022	\$ 20.41	10%	\$ 8.69	10%	\$ 16.31	10%	\$ 5.29	10%	\$37.79	\$26.89	\$64.67
2023	\$ 22.45	10%	\$ 9.56	10%	\$ 17.94	10%	\$ 5.82	10%	\$41.57	\$29.57	\$71.14
2024	\$ 23.13	3%	\$ 9.84	3%	\$ 19.74	10%	\$ 6.40	10%	\$42.81	\$32.53	\$75.35
2025	\$ 23.82	3%	\$ 10.14	3%	\$ 20.72	5%	\$ 6.72	5%	\$44.10	\$34.16	\$78.26
2026	\$ 24.54	3%	\$ 10.44	3%	\$ 21.76	5%	\$ 7.05	5%	\$45.42	\$35.87	\$81.29
2027	\$ 25.27	3%	\$ 10.76	3%	\$ 22.85	5%	\$ 7.41	5%	\$46.78	\$37.66	\$84.44
2028	\$ 26.03	3%	\$ 11.08	3%	\$ 23.99	5%	\$ 7.78	5%	\$48.19	\$39.54	\$87.73
2029	\$ 26.81	3%	\$ 11.41	3%	\$ 25.19	5%	\$ 8.17	5%	\$49.63	\$41.52	\$91.15
2030	\$ 27.62	3%	\$ 11.75	3%	\$ 26.45	5%	\$ 8.57	5%	\$51.12	\$43.60	\$94.72
2031	\$ 28.44	3%	\$ 12.11	3%	\$ 27.77	5%	\$ 9.00	5%	\$52.66	\$45.78	\$98.43
2032	\$ 29.30	3%	\$ 12.47	3%	\$ 29.16	5%	\$ 9.45	5%	\$54.24	\$48.07	\$102.30
2033	\$ 30.18	3%	\$ 12.84	3%	\$ 30.62	5%	\$ 9.93	5%	\$55.86	\$50.47	\$106.33
2034	\$ 31.08	3%	\$ 13.23	3%	\$ 32.15	5%	\$ 10.42	5%	\$57.54	\$52.99	\$110.53
2035	\$ 32.01	3%	\$ 13.63	3%	\$ 33.76	5%	\$ 10.94	5%	\$59.26	\$55.64	\$114.91
2036	\$ 32.97	3%	\$ 14.03	3%	\$ 34.77	3%	\$ 11.27	3%	\$61.04	\$57.31	\$118.35
2037	\$ 33.96	3%	\$ 14.46	3%	\$ 35.81	3%	\$ 11.61	3%	\$62.87	\$59.03	\$121.90
2038	\$ 34.98	3%	\$ 14.89	3%	\$ 36.89	3%	\$ 11.96	3%	\$64.76	\$60.80	\$125.56
2039	\$ 36.03	3%	\$ 15.34	3%	\$ 37.99	3%	\$ 12.32	3%	\$66.70	\$62.62	\$129.33
2040	\$ 37.11	3%	\$ 15.80	3%	\$ 39.13	3%	\$ 12.69	3%	\$68.70	\$64.50	\$133.21

# Rate Adjustments

## Long-Term Financing

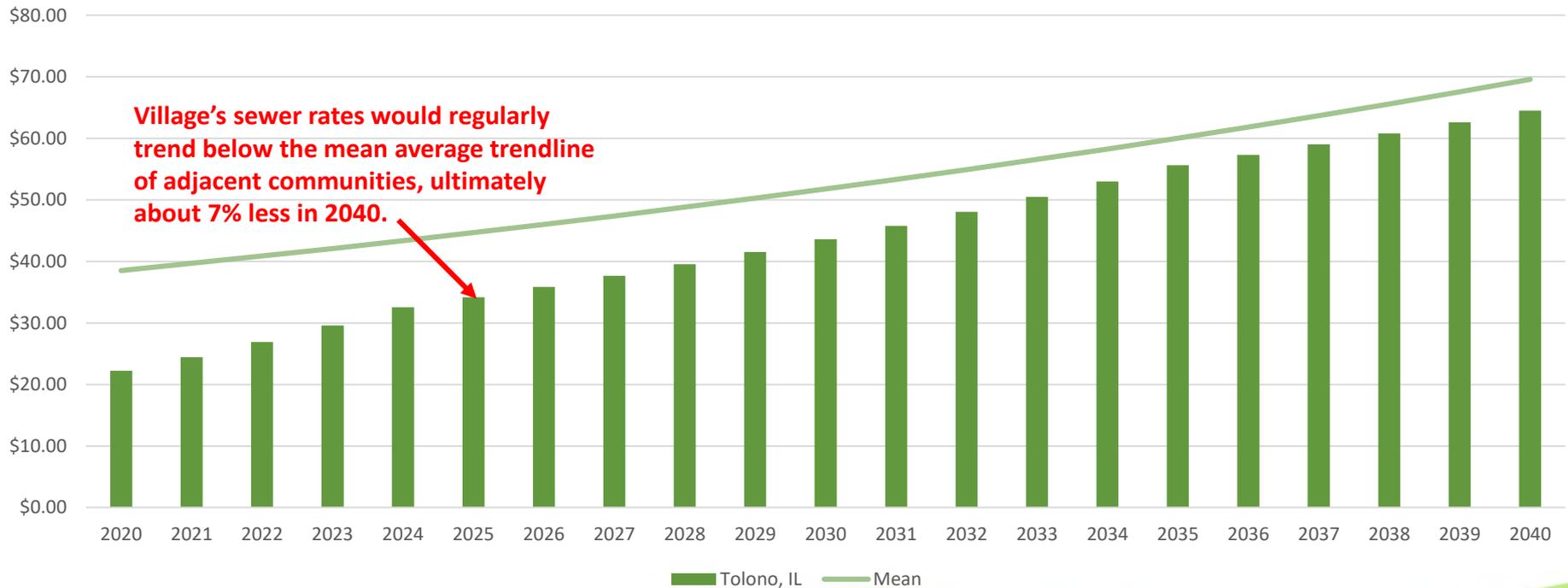
**LONG-TERM FINANCING ALTERNATIVE**  
**AVERAGE MONTHLY USER COST FOR WATER SERVICE COMPARISON**  
**TOLONO VS. ADJACENT COMMUNITIES (MEAN AVERAGE)**  
**2020 - 2040 PROJECTIONS**



# Rate Adjustments

## Long-Term Financing

**LONG-TERM FINANCING ALTERNATIVE**  
**AVERAGE MONTHLY USER COST FOR SEWER SERVICE COMPARISON**  
TOLONO VS. ADJACENT COMMUNITIES (MEAN AVERAGE)  
2020 - 2040 PROJECTIONS



# Recommended Capital Project Sequencing and Rate Adjustments

- If the Village plans to continue to operate and maintain both the water and sewer system in good condition, we would recommend pursuing low-interest IEPA long-term financing
- Benefits of financing these improvements include:
  - Minimized impacts to annual water and sewer rates
  - Potential for principal forgiveness (similar to grants)
  - Allows improvements to be completed in a timely fashion minimizing risks for critical failures

# What are the next steps?

- Does the Village want to commit to performing the capital projects and proper operations/maintenance tasks necessary to maintain both systems in good condition?
  - If yes, does the Village want to proceed with completion of the capital improvement project plans (required by IEPA) to apply for funding?
  - If no, does the Village want to entertain proposals to purchase the existing water and sewer systems?
- Donohue has provided proposals to complete project plans for the water and sewer system should the Village opt to proceed as recommended
  - Task Order #5 – Water System Capital Improvements Project Plan \$29,500
    - Includes water distribution system mapping
  - Task Order #6 – Wastewater System Capital Improvements Project Plan \$28,500

Questions?

# Contact Information

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