NOTICE OF MEETING

The Leelanau County Board of Public Works will be conducting a meeting on Tuesday, July 18, 2023, at 4:30 p.m., in the Commissioner Meeting Room of the Leelanau County Government Center, Suttons Bay, Michigan

(Please silence all electronic/cellular devices)

(Proceedings of the meeting are being recorded and are not the official record of the meeting, the formally approved/accepted written copy of the minutes will be the official record of the meeting.)

AGENDA

CALL TO ORDER

PLEDGE OF ALLEGIANCE

MOMENT OF SILENCE/SILENT PRAYER

ROLL CALL

APPROVAL OF AGENDA / LATE ADDITIONS OR DELETIONS

PUBLIC COMMENT

Action Items:

- 1. Approval of Minutes February 14, 2023
- 2. Northport/Leelanau Township Utilities Authority (NLTUA) Report Review of recent audit, current financials and potential revenue shortages
- 3. Drainage Districts
- 4. Set Next Meeting Date/Future Subjects

PUBLIC COMMENT

COMMISSIONER COMMENTS

ADJOURNMENT

LEELANAU COUNTY BOARD OF PUBLIC WORKS Organizational Meeting – Tuesday, February 14, 2023

Tentative minutes

Proceedings of the meeting are being recorded (audio and video). The video of the meeting can be found at the following link: http://leelanau.gov/meetingdetails.asp?MAId=2483#video

Call to Order:

Meeting called to Order by County Clerk Michelle L. Crocker at 1:02 p.m. Today's meeting is being held at the Government Center, 8527 E. Government Center Drive, Suttons Bay, Michigan.

Pledge of Allegiance:

The Pledge of Allegiance to the Flag of the United States of America was recited followed by a moment of silence.

Roll Call:

Drain Commissioner County Treasurer	Steve Christensen John Gallagher, III	PRESENT PRESENT
District #1	Jamie Kramer	PRESENT
#2	James O'Rourke	PRESENT
#3	Doug Rexroat	PRESENT
#4	Ty Wessell	PRESENT
#5	Kama Ross	PRESENT
#6	Gwenne Allgaier	ABSENT (prior notice)
#7	Melinda C. Lautner	PRESENT

Public Comment:

None.

Action Items -

Election of Officers - Chairman:

County Clerk Crocker called for nominations for the position of Chairman of the Board of Public Works and stated any nomination will require a second. In the event we end up with more than one nomination, then each member will then indicate who their vote is for after nominations are closed. With a board of this size, it will take five votes to be elected Chairman.

Crocker declared nominations open.

Commissioner Wessell nominated County Treasurer John Gallagher, seconded by Commissioner Lautner.

Commissioner O'Rourke moved to close the nominations for Chairman. Seconded by Commissioner Rexroat.

Crocker called for a vote to close the nominations.

AYES – 8 (O'Rourke, Rexroat, Wessell, Ross, Lautner, Christensen, Gallagher, Kramer) NO – 0 ABSENT – 1 (Allgaier) MOTION CARRIED. Hearing no further nominations, Crocker closed nominations for Chairman.

Clerk Crocker called for all those in favor of County Treasurer Gallagher as Chairman, and the votes were as follows:

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O'Rourke - YES; Rexroat - YES; Wessell - YES; Ross - YES; Lautner - YES; Christensen - YES; Gallagher - YES; Kramer - YES.

Yes - 8 NO - 0 ABSENT - 1 (Allgaier)
```

Crocker declared Gallagher Chairman of the Board of Public Works and turned the meeting over for the election of the remaining positions.

Vice-Chairman:

Chairman Gallagher opened nominations for Vice-Chairman.

Commissioner Wessell nominated Drain Commissioner Steve Christensen. Seconded by Lautner.

There were no further nominations.

Votes were as follows:

```
Wessell- YES; Ross - YES; Lautner - YES; Christensen - YES; Gallagher - YES; Kramer - YES; O'Rourke - YES; Rexroat - YES.

Yes - 8 NO - 0 ABSENT - 1 (Allgaier)
```

Gallagher declared Christensen Vice-Chairman of the Board of Public Works.

Secretary:

Gallagher opened nominations for Secretary.

Wessell nominated County Clerk Michelle L. Crocker, or her designee, for Secretary. Seconded by Lautner.

There being no further nominations Chairman Gallagher closed nominations for Secretary.

Votes were as follows:

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Wessell – YES; Ross – YES; Lautner – YES; Christensen – YES; Gallagher – YES; Kramer – YES; O'Rourke – YES; Rexroat – YES.

Yes – 8 NO – 0 ABSENT – 1 (Allgaier)
```

Gallagher stated the nomination for County Clerk Michelle L. Crocker, or her designee, as Secretary passes.

Approval of Minutes – November 1, 2022:

MOTION BY WESSELL TO APPROVE THE NOVEMBER 1, 2022, MEETING MINUTES AS WRITTEN. SECONDED BY LAUTNER.

Discussion – none.

AYES – 8 (Wessell, Ross, Lautner, Christensen, Gallagher, Kramer, O'Rourke, Rexroat) NO – 0 ABSENT – 1 (Allgaier) MOTION CARRIED.

BPW Structure Discussion:

Administrator Allen gave a brief overview of the former Board of Public Works structure stating that it had been made up of the County Road Commission members. In December [2022] the Board of Commissioners approved a resolution to restructure the Board of Public Works to now consist of the full County Board of Commissioners, the Drain Commissioner, and the County Treasurer.

Commissioner Wessell said that both he and Chairman Gallagher had attended a NLTUA (Northport/Leelanau Township Utilities Authority) meeting in Leelanau Township and that there could be some potential issues and that is our charge.

Set Next Meeting Date/Future Subjects:

Chairman Gallagher stated that one of the future subjects is NLTUA, which will be being renamed. They have been operating in a deficit and have been working to address outstanding concerns. Currently they plan to bring forward a presentation at our next meeting.

Gallagher added and said the next tentative med Commissioners Executive meeting. The agenda other subjects as they come up.	
Additional comments from members continued.	
<u>Public Comment</u> : None.	
Board Member Comments: None.	
Adjournment:	
Motion to adjourn by Rexroat. Unanimous	support.
The meeting was adjourned by Chairman Gallag	her at 1:17 p.m.
John A. Gallagher, III, Chairman Leelanau County Board of Public Works	Alison Middleton, Administrative Deputy Clerk for Michelle L. Crocker, Leelanau County Clerk

Leelanau County, Michigan

FINANCIAL STATEMENTS AND INDEPENDENT AUDITOR'S REPORT

February 28, 2022

CONTENTS

	<u>Page</u>
MANAGEMENT'S DISCUSSION AND ANALYSIS	i
INDEPENDENT AUDITOR'S REPORT	2
BASIC FINANCIAL STATEMENTS	
STATEMENT OF NET POSITION	5
STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION	6
STATEMENT OF CASH FLOWS	7
NOTES TO FINANCIAL STATEMENTS	8

MANAGEMENT'S DISCUSSION AND ANALYSIS

Year Ended February 28, 2022

Northport/Leelanau Township Utilities Authority ("the Authority"), a local governmental unit located in Leelanau County, Michigan, has implemented the provisions of Governmental Accounting Standards Board Statement 34 (GASB 34). The Management's Discussion and Analysis, a requirement of GASB 34, is intended to be the Authority's administration's discussion and analysis of the financial results for the fiscal year ended February 28, 2022 along with specific comparative information as required.

Financial Highlights

As discussed in further detail in this discussion and analysis, the following represents the most significant highlights for the year ended February 28, 2022.

- The Authority's net assets decreased by \$18,291 or 6.9% in 2022, compared to a decrease of \$47,210 or 15.2% in 2021. Operating revenues increased by approximately \$24,000 in 2022 whereas expenses remained relatively flat compared to 2021.
- The Authority invested \$55,708 in capital assets during the year.

Overview of the Financial Statements

This annual report includes this management's discussion and analysis report, the independent auditors' report and the basic financial statements of the Authority. The financial statements also include notes that explain in more detail some of the information in the financial statements.

Required Financial Statements

The financial statements of the Authority report information of the Authority using accounting methods similar to those used by private sector companies. These statements offer short and long-term financial information about its activities. The Statement of Net Position includes all of the Authority's assets and liabilities and provides information about the nature and amounts of investments in resources (assets) and the obligations to Authority creditors (liabilities). It also provides the basis for evaluating the capital structure of the Authority and assessing the liquidity and financial flexibility of the Authority.

All of the current year's revenues and expenses are accounted for in the Statement of Revenue, Expenses and Changes in Net Position. This statement measures the success of the Authority's operations over the past year and can be used to determine whether the Authority has successfully recovered all of its costs through its user fees and other charges, profitability and credit worthiness.

The final required financial statement is the Statement of Cash Flows. The statement reports cash receipts, cash payments and net changes in cash resulting from operating, financing and investment activities and provides answers to such questions as to where did cash come from, what was cash used for and what was the change in the cash balance during the reporting period.

Notes to Financial Statements

The accompanying notes to financial statements provide information essential to a full understanding of the financial statements. The notes to financial statements are presented on pages 8-14 of this report,

MANAGEMENT'S DISCUSSION AND ANALYSIS - Continued

The Authority as a Whole

The following table shows, in a condensed format, the net position as of the current date compared to the prior year:

prior year.	2022	2021
Assets Current assets Capital assets, net of accumulated depreciation	\$ 793,613 207,401	\$ 703,820 173,704
TOTAL ASSETS	\$1,001,014	\$ 877,524
Liabilities Current liabilities	\$ 755,073	\$ 613,292
Net Position Invested in capital assets, net of related debt Unrestricted	207,401 38,540	173,704 90,528
Total net position	245,941	264,232
TOTAL LIABILITIES AND NET POSITION	\$1,001,014	\$ 877,524

Results of Operations

For the fiscal years ended February 28, 2022 and 2021, results of operations were as follows:

	<u>2022</u> <u>%</u> <u>2021</u> <u>%</u>
Operating revenue	<u>\$ 385,631</u> <u>100.00%</u> <u>\$ 361,403</u> <u>100.0%</u>
Expenses Other operating expenses Depreciation	\$ 381,911 99.0% \$ 394,313 109.1% 22,011 5.7% 14,300 4.0%
Total expenses	<u>403,922</u> <u>104.7%</u> <u>408,613</u> <u>113.1%</u>
Change in Net Position	<u>\$ (18,291)</u> <u>(4.7%)</u> <u>\$ (47,210)</u> <u>(13.1%)</u>

Capital Assets and Debt Administration

Capital Assets

The Authority's investment in capital assets as of February 28, 2022, amounted to \$207,401, net of accumulated depreciation. A summary of changes in capital assets for the year then ended follows:

	Balance <u>3/1/2021</u>	2021-22 Additions	2021-22 Disposals	Balance <u>2/28/2022</u>	
Land improvements	\$ 106,597	\$ -	\$ -	\$ 106,597	
Plant equipment	130,109	55,708	-	185,817	
Office furniture and equipment	15,337			15,337	
	252,043	55,708	-	307,751	
Less: accumulated depreciation	(78,339)	<u>(22,011)</u>		<u>(100,350</u>)	
Net capital assets	<u>\$ 173,704</u>	\$ 33,697	<u>\$ -</u>	<u>\$ 207,401</u>	

Debt Administration

The Authority had no long-term debt as of February 28, 2022 and 2021.

Economic Factors and Next Year's Budget and Rates

The management of the Authority considered many factors in setting the fiscal year 2023 budget. As always, the overriding factor was to keep expenses at or below the amount of revenue. The majority of revenue generated by the Authority is derived from operations and maintenance fees. These fees are collected from sewer customers residing in the Village of Northport and Leelanau Township. The fees are based upon a fixed amount per Residential Equivalent Unit (REU) and are billed quarterly. During the year ended February 28, 2022, the Authority approved a \$23 increase per REU per quarter. The Authority continues to evaluate the possibility of further increases in quarterly operation fees in order to build reserves for potential system failures and capital expenditures.

Subsequent to February 28, 2022, it was observed there was a reduction in flow along a portion of the gravity sewer main on North Shore Drive. The affected portion of the main is approximately 995' long. The estimated cost to repair the sewer main is in the range of \$150,000 to \$350,000. The Authority obtained an advance from the Village of Northport in the amount of \$350,000 to cover this repair. The advance bears interest at a rate of 2% and is payable over 5 years.

Contacting the Authority's Management

This financial report is designed to provide our taxpayers, creditors, investors and customers with a general overview of the Authority's finances and to demonstrate the Authority's accountability for the revenues it receives. If you have any questions concerning this report please contact Joni Scott at (231) 386-5182.



Brad P. Niergarth, CPA James G. Shumate, CPA Shelly K. Bedford, CPA Heidi M. Wendel, CPA Shelly A. Ashmore, CPA James M. Taylor, CPA Trina B. Ochs, CPA John A. Blair, CPA Aaron J. Mansfield, CPA Elizabeth A. Hedden, CPA Jonathan P. Benjamin, CPA

INDEPENDENT AUDITOR'S REPORT

To the Board of Trustees Northport/Leelanau Township Utilities Authority

Report on the Audit of the Financial Statements

Opinions

We have audited the accompanying financial statements of the business-type activities of the Northport/Leelanau Township Authority (the "Authority"), as of and for the year ended February 28, 2022, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table on contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities of the Authority as of February 28, 2022 and the respective changes in financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Authority and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.



Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Authority's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with generally accepted auditing standards and *Government Auditing Standards*, we:

Exercise professional judgment and maintain professional skepticism throughout the audit.

Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.

Obtain an understanding of internal control relevant to the audit 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 Authority's internal control. Accordingly, no such opinion is expressed.

Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.

To the Board of Trustees Northport/Leelanau Township Utilities Authority

Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Township's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standard Board who considers it to be an essential part of financial reporting for placing the basic financial statements 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.

Certified Public Accountants Traverse City, Michigan

December 16, 2022

STATEMENT OF NET POSITION

February 28, 2022

ASSETS

Current Assets	
Cash and cash equivalents	\$ 621,888
Accounts receivable, net	133,933
Other receivables	31,883
Prepaid expenses	5,909
Total Current Assets	793,613
Non-current Assets	
Capital assets, net of accumulated depreciation	207,401
Total Assets	\$ 1,001,014
Liabilities	
Accounts payable	\$ 9,222
Accrued expenses	1,684
Due to other governmental units	744,167
Total liabilities	755,073
Net Position	
Net investment in capital assets	207,401
Unrestricted	38,540
Total Net Position	\$ 245,941

STATEMENT OF REVENUE, EXPENSES AND CHANGES IN NET POSITION

Year Ended February 28, 2022

Operating Revenue	
Charges for services	\$ 381,464
Other revenue	4,167
	207.624
Total operating revenue	 385,631
Operating Expenses	
Contractual services	229,343
Utilities	77,775
Salaries and related expenses	34,071
Depreciation	22,011
Repairs and maintenance	17,038
Operating supplies	10,404
Insurance and bonds	7,303
Permits	4,434
Other	1,055
Professional fees and services	 488
	 403,922
Change in Net Position	(18,291)
Net Position, beginning of year	 264,232
Net Position, end of year	\$ 245,941

STATEMENT OF CASH FLOWS

Year Ended February 28, 2022

Cash Flows From Operating Activities	
Receipts from customers	\$ 394,778
Payments to suppliers for goods and services	(385,826)
Payments to employees	(33,508)
Cash flows from operating activities	(24,556)
Cash Flows from Non-Capital Financing Activities	
Increase in amounts due to other governmental units	173,911
Amounts paid to other governmental units	(26,858)
Cash flows from non-capital financing activities	147,053
Cash Flows From Capital and Related Financing Activities Acquisition of capital assets	(55,709)
Net Increase in Cash and Cash Equivalents	66,788
Cash and Cash Equivalents, beginning of year	555,100
Cash and Cash Equivalents, end of year	\$ 621,888

NOTES TO FINANCIAL STATEMENTS

NOTE A - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Introduction

The accounting and reporting framework and the more significant accounting principles and practices of Northport/Leelanau Township Utilities Authority (the "Authority") are discussed in subsequent sections of this note. The remainder of the notes are organized to provide explanations, including required disclosures, of the Authority's financial activities for the fiscal year ended February 28, 2022.

Description of Authority Operations and Fund Types

The Authority operates as a joint venture under the supervision and control of a Board consisting of two representatives each from the Village of Northport and Leelanau Township and one additional representative appointed by mutual consent and action of both the Leelanau Township Board and the Northport Village Council. The Authority was established as a joint venture among the above-mentioned municipalities to acquire, own, improve, enlarge, extend and operate a sewage disposal system in under the provisions of Act 233, Public Acts of Michigan, 1955, as amended.

The basic financial statements of the Authority are prepared in accordance with accounting principles generally accepted (GAAP) in the United States of America as applied to governmental units. The Authority applies all relevant Governmental Accounting Standards Board (GASB) pronouncements. All activities over which the Authority exercises oversight responsibility have been included in the reporting entity. Oversight responsibility is determined by factors such as financial interdependency, selection of governing authority, designation of management, ability to significantly influence operations, and accountability for fiscal matters of the entity.

Reporting Entity

A reporting entity is composed of the primary government, component units, and other organizations that are included to ensure the financial statements of the Authority are not misleading. The primary government of the Authority consists of all funds, departments, boards, and agencies that are not legally separate from the Authority.

Component units are legally separate organizations for which the Authority is financially accountable. The primary government is financially accountable if it appoints a voting majority of the organization's governing body and (1) it is able to impose its will on that organization or (2) there is a potential for the organization to provide specific financial benefits to, or impose specific financial burdens on, the primary government.

NOTES TO FINANCIAL STATEMENTS

In addition, the primary government is also financially accountable if an organization is fiscally dependent on and there is a potential for the organization to provide specific financial benefits to, or impose specific financial burdens on, the primary government regardless of whether the organization has (1) a separately elected governing board, (2) a governing board appointed by a high level of government, or (3) a jointly appointed board. The Authority does not have any component units.

Fund Accounting

The Authority uses funds to maintain its financial records during the year. A fund is defined as a fiscal and accounting entity with a self-balancing set of accounts.

Proprietary Fund

Proprietary fund reporting focuses on the determination of operating income, changes in net position, financial position, and cash flows.

The Authority's Enterprise Fund reports operations that provide services which are financed primarily by user charges or activities where periodic measurement of net income is appropriate for capital maintenance, public policy, management control or other purposes.

Basis of Presentation

The Authority's basic financial statements consist of a statement of net position, a statement of revenue, expenses and changes in net position, and a statement of cash flows. Government wide financial statements report information about the Authority as a whole. The Authority has only one fund which is business-type in nature, so the financial statements present one set of statements that meets both the government-wide and fund requirements.

A statement of net position provides information about the assets, liabilities, and net position of the Authority at the end of the year. Assets and liabilities are classified as either current or noncurrent. Net position is classified according to external donor restrictions or availability of assets to satisfy Authority obligations. Net investment in capital assets represents the value of capital assets, net of accumulated depreciation, reduced by the outstanding balances of any borrowings used for the acquisition, construction or improvement of those assets. Unrestricted net position includes all other net position, including that which has been designated by management to be used for other than general operation purposes.

A statement of revenue, expenses and changes in net position provides information about the Authority's financial activities during the year ended February 28, 2022. Revenue and expenses are classified as either operating or nonoperating, and all changes in net position are reported, including capital contributions. Operating revenues and expenses generally result from providing the use of sewer disposal systems. Operating expenses include the cost of maintaining the sewer disposal system, administrative expenses, and fixed asset depreciation.

NOTES TO FINANCIAL STATEMENTS

A statement of cash flows provides information about the Authority's sources and uses of cash and cash equivalents during the year ended February 28, 2022. Increases and decreases in cash and cash equivalents are classified as either operating, noncapital financing, capital financing, or investing.

Measurement Focus and Basis of Accounting

The term measurement focus is used to denote what is being measured and reported in the Authority's operating statement. The Authority is accounted for on the flow of economic resources measurement focus. The fundamental objective of this focus is to measure whether the Authority is better off or worse off economically as a result of events and transactions of the period.

The term basis of accounting is used to determine when a transaction or event is recognized on the Authority's operating statement. The Authority uses the full accrual basis of accounting. Under this basis, revenues are recorded when earned and expenses are recorded when incurred, even though actual payment or receipts may not occur until after the period ends.

Cash and Cash Equivalents

For presentation on the financial statements, investments in cash, management pools and investments with an original maturity of three months or less at the time they are purchased by the Authority are considered to be cash equivalents.

Receivables

Receivables generally consist of accounts due from customers. All receivables are net of estimated uncollectible accounts. Receivables are recognized to the extent the amounts are determined material and substantiated, not only by supporting documentation but also by a reasonable, systematic method of determining their existence, completeness, valuation, and collectability. The allowance for doubtful accounts at February 28, 2022 was \$0.

Prepaid Items

Certain payments to vendors reflect costs applicable to future fiscal years and are recorded as prepaid items in the statement of net position.

NOTES TO FINANCIAL STATEMENTS

Capital Assets

Capital assets are stated at cost. Depreciation has been provided using the straight-line method over the estimated useful life of the assets.

Capital assets are defined by the Authority as assets with an initial individual cost of more than \$1,000. Expenditures for maintenance, repairs and renewals are charged to operations as incurred and betterments are capitalized. The Authority eliminates the cost and related allowances from the accounts for assets sold or retired and resulting gains or losses therefrom are included in operations concurrently. Donated fixed assets are recorded at their fair market values as of the date received.

Capital assets are depreciated using the straight-line method over the following useful lives:

Improvements, other than buildings	20 years
Plant equipment	5 to 20 years
Office equipment	5 years

Net Position

Net position represents the difference between assets less liabilities. The Authority reports three categories of net position on the government-wide financial statements as follows:

Net investment in capital assets – consists of net capital assets reduced by outstanding balances of any related debt obligations attributable to the acquisition, construction, or improvement of those assets.

Restricted net position – net position is considered restricted if their use is constrained to a particular purpose. Restrictions are imposed by external organizations such as federal or state laws or buyers of the Authority's bonds. Restricted net position is reduced by liabilities related to the restricted assets. As of February 28, 2022, the Authority had no restricted assets.

Unrestricted net position – consists of all other net position that does not meet the definition of the above two components and is available for general use by the Authority.

The Authority's policy is to first apply restricted resources when an expense is incurred for purposes for which both restricted and unrestricted net position is available.

NOTES TO FINANCIAL STATEMENTS

Operating Revenues and Expenses

Operating revenues are those revenues that are generated directly from the primary activity of the enterprise fund. For the Authority, these revenues are charges for services. Operating expenses are the necessary costs incurred to provide the service that is the primary activity of the fund. Revenues and expenses not meeting these definitions are reported as nonoperating.

Use of Estimates in the Preparation of Financial Statements

The preparation of financial statements, in conformity with generally accepted accounting principles, requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual amounts could differ from those estimates.

NOTE B - DEPOSITS AND INVESTMENTS

Michigan Compiled Laws Section 129.91 (Public Act 20 of 1943, as amended by Act 196 P.A. 1997) authorizes local governmental units to make deposits and invest in the accounts of Federally insured banks, credit unions, and savings and loan associations that have offices in Michigan. The Authority is allowed to invest in bonds, securities and other direct obligations of the United States, or any agency or instrumentality of the United States; repurchase agreements; bankers' acceptances of United States banks; commercial paper rated within the two highest classifications, which mature not more than 270 days after the date of purchase; obligations of the State of Michigan or its political subdivisions, which are rated as investment grade; and mutual funds composed of investment vehicles that are legal for direct investment by local units of government in Michigan.

The investment policy adopted by the Board, in accordance with Public Act 196 of 1997, has authorized all of the investments in the State statutory authority as listed above. The Authority's deposits and investment policies are in accordance with statutory authority.

At February 28, 2022, the Authority's cash and equivalents, and investments include bank deposits of \$621,888.

Custodial Credit Risk

In the event of bank failure, the Township's uninsured deposits may not be returned to it. At February 28, 2022, \$391,694 of the Township's deposits were exposed to custodial credit risk because they were uninsured and uncollateralized.

NOTES TO FINANCIAL STATEMENTS

NOTE C – INVESTMENTS IN CAPITAL ASSETS

A summary of changes in capital asset activity follows:

	Balance			Balance	
	3/01/22	Additions	Deletions	2/28/22	
Business-Type Activities					
Capital Assets Being Depreciated:					
Land improvements	\$106,597	\$ -	\$ -	\$106,597	
Plant equipment	130,109	55,708	-	185,817	
Office equipment	15,337	<u>-</u> _		15,337	
	252,043	55,708	-	307,751	
Less accumulated depreciation	(78,339)	(22,011)	<u>-</u> _	<u>(100,350</u>)	
Capital assets, net of depreciation	<u>\$173,704</u>	\$ 33,697	<u>\$ -</u>	<u>\$ 207,401</u>	

NOTE D - RISK MANAGEMENT

The Authority is exposed to various risks of loss related to torts, theft of, damage to and destruction of assets; errors and omissions; injuries to employees and natural disasters. The Authority has purchased commercial property, inland marine, crime, general liability, automotive, public official's liability and employment practices liability insurance for all claims. A separate Workers Compensation policy has been purchased. Settled claims relating to commercial insurance have not exceeded the amount of insurance coverage in any of the past three fiscal years.

NOTE E – MAINTENANCE CONTRACT

The Authority contracts with Operations Management International, Inc. to provide all routine operation and maintenance of the Authority's facilities. A monthly fee is paid to the firm for standard services and is subject to an annual review. As of February 28, 2022, the monthly fee was \$14,271. For the year ended February 28, 2022, the total amount paid to the firm was \$187,500.

NOTES TO FINANCIAL STATEMENTS

NOTE F – SUBSEQUENT EVENTS

The Authority has evaluated events and transactions for potential recognition and disclosure through December 16, 2022, the date the financial statements were available to be issued.

Subsequent to year end, it was observed there was a reduction in flow along a portion of a gravity sewer main. The affected portion of the mail is approximately 995 feet long. The estimated cost to repair the sewer main is in the range of \$150,000 to \$350,000. The Authority has obtrained an advance from the Village of Northport in the amount of \$350,000 to cover the cost of this repair. The advance bears interest at a rate of 2% and is payable over the next five years, with the final payment due January 2028.

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>		<u>6</u>	<u>7</u>	<u>8</u>	
	Bond Payments	Assessment and Capacity Collection	<u>annu</u>	ual Debt sen	Annual Debt Service Collection on NLTUA Billings		New Connections	Village G/f contribution	<u>Balance</u>	
2022		\$500,079.44	\$73.00 \$	292.00	\$151,840.00	2		\$10,000	\$2,099,285.67	
2023	\$622,077	\$139,830.00	\$81.00 \$	324.00	\$168,480.00	2	\$37,340		\$1,822,858.67	
2024	\$624,752	\$136,397.00	\$85.00 \$	340.00	\$177,480.00	2	\$37,340		\$1,549,323.67	
2025	\$623,261	\$132,965.00	\$90.00 \$	360.00	\$188,640.00	2	\$37,340		\$1,285,007.67	
2026	\$625,611		\$95.00 \$	380.00	\$199,880.00	2	\$37,340		\$896,616.67	
2027	\$623,794			400.00	\$211,200.00	2	\$37,340		\$521,362.67	
2028	<u>\$625,819</u>		\$100.00 \$	200.00	\$105,600.00				\$1,143.67	
										l
	40.745.04 t	#000 0 7 4 4:			#4.000.400.00		#400 T 22	040.000		
	\$3,745,314	\$909,271.44			\$1,203,120.00		\$186,700	\$10,000		l

Jacobs Challenging today. Reinventing tomorrow.



Operations Management and Facilities Services

Northport Leelanau Township Utilities Authority Wastewater Treatment Plant

2022 Annual Report

Jacobs

Contents

A message from Project Manager Mark Huggard	1
Our team	2
Increased certifications and licenses	3
Access to regional and nationwide support resources	4
Achieving excellence together	5
2022 proactive performance highlights	9
What is motor megger testing?	
Superior permit management and regulatory compliance	
Safety	
Sustainability	
Sustainability stats of note	
Fiscal summary	
Base fee/direct cost overview	
Looking ahead	. 23
Evla ilaita	
Exhibits	
Exhibit 1 Organizational chart	
Exhibit 2 Our experienced and knowledgeable team	
Exhibit 3 Regional and national support	
Exhibit 4 Jacobs' current scope of services	
Exhibit 5 Lift station preventive maintenance tasks and intervals	
Exhibit 6 Milestones and accomplishments	8
Exhibit 7 Proactive performance highlights	9
Exhibit 8 Effluent compared to permit requirements	
Exhibit 9 NLTUA WWTP influent flow 2018-2022	. 15
Exhibit 10 PFAS water cycle	. 17
Exhibit 11 PFAS sample results EGLE requirements	. 18
Exhibit 12 Effluent PFAS results and limits	. 18
Exhibit 13 Summary of 2022 reconciliation	.21
Exhibit 14 Repair costs over \$500	.22
Exhibit 15 Repair labor hours summary	. 22
Exhibit 16 2022 work order summary	.22

Appendix A

i

Jacobs

A message from Project Manager Mark Huggard

For the past 14 years, Jacobs has been honored to collaborate with the Village of Northport/Leelanau Township Utilities Authority (NLTUA), providing operations and maintenance (O&M) for your community's wastewater treatment plant (WWTP). We are pleased to present our 2022 annual report to you, highlighting our team, operations, safety, compliance and community engagement.

2022 was an important year. I officially took on the project manager role, succeeding Liz Hart in October, and I look forward to building on the thriving environment she created for our staff so that the plant continues to be operated and maintained to the highest standard.

Our team of 15 full-time members provide O&M to your WWTP, but with Jacobs as your partner, you also have access to more than 60,000 professionals worldwide. In fact, we logged nearly 200 additional hours of support from regional specialists at no additional cost to the NLTUA.

As always, we emphasize safety and promote safe behavior among our team members. We are proud to report that our team worked more than 1,050 days without a recordable injury. This is a testament to our company's and our team's dedication to keep each other safe on the job.

In addition to serving as your partner and caring for your facilities, we are excited to be a part of the vibrant Traverse City community. During the past year we:

- Provided interim solution to main lift station pump failures saving the NLTUA additional cost
- Sourced a new sand filter media supply company, saving the NLTUA \$845
- Completed air release valve inspections and repairs reducing likelihood of failure and non-compliance
- Identified flow restriction issue on Northshore drive gravity sewer main while performing annual manhole inspections

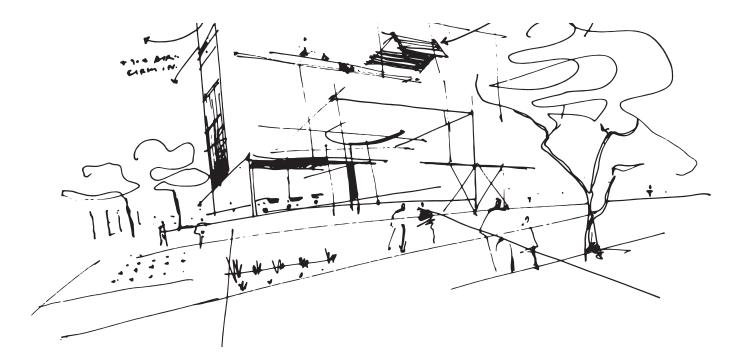
Our plans looking ahead to 2023 include:

- Sampling and analyzing biosolids perfluoroalkyl and polyfluoroalkyl substances (PFAS)
- Cleaning and televising the main lift station to treatment plant force main
- Upgrading the main lift station and 7th Street lift station controls
- Assisting the NLTUA with upgrades to the ferric chloride room and evaluating solids handling

On behalf of our team, thank you, once again, for putting your trust in us, and we look forward to continuing this productive and beneficial partnership for many years to come.

Sincerely,

Mark Huggard Project Manager



Our team

At Jacobs, we are all empowered to contribute in a meaningful manner. We approach each day with this in mind, striving to improve as a team and as individuals. Our dedication to inclusion ensures everyone's ideas are heard, which results in the best possible solutions to the many challenges we face. Effectively sharing historical knowledge through training procedures and written training materials, while collaborating to improve our current approach to operating and maintaining your facility, we learn and grow together with you as a work family.

Exhibit 1 illustrates our organizational structure; Exhibit 2 displays our teammates' names, roles, years of experience and applicable licenses and/or certifications.

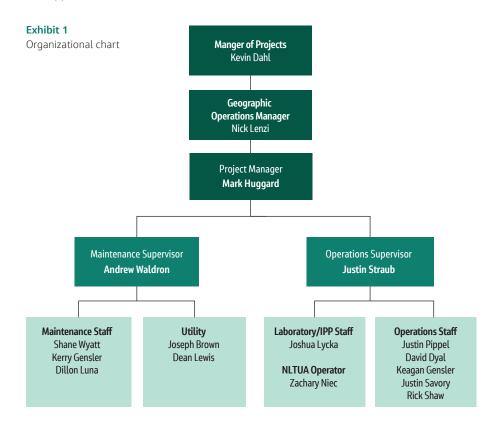


Exhibit 2Our experienced and knowledgeable team

Name and title	Years of experience	Education, certifications and/or licensure
Kevin Dahl Manager of Projects	24	Degrees: Bachelor's civil engineering; master's environmental engineering Certifications: New England Water Environment Association Class IV Wastewater Collection Systems Operator, Certified Maintenance Reliability Technician (CMRT), Certified Reliability Leader (CRL), Connecticut Class IV Wastewater Treatment Operator and Rhode Island Class IV Wastewater Treatment Operator
Nick Lenzi Geographic Operations Manager	10	Degree: Bachelor's mathematics Certifications: Water Operator Class 1, Illinois EPA Collections Operator, CRL
Mark Huggard Project Manager	21	Degree: Associate degree water environmental technologies Certifications: Wastewater A, L1 and L2 and CMRT
Andrew Waldron Maintenance Supervisor	7	Certifications: CMRT, CRL, WRRT Certification, CAT1 Mobius Vibration Analyst
Justin Straub Operations Supervisor	5	Degree: Bachelor's biology/conservation and natural resource use Certification: Wastewater C
Josh Lycka Operator/Industrial Pretreatment Program (IPP) Coordinator	5	Degree: Bachelor's natural resource management Certifications: Wastewater A and CMRT
Justin Pippel Operator	2	Degree: Bachelors Earth science and biology
Rick Shaw Operator	7	Certification: CMRT
Zack Niec Operator	5	Degree: Bachelor's environmental science
David Dyal Operator-in-Training	1	N/A
Keagan Gensler Operator-in-Training	1	N/A
Justin Savory Operator-in-Training	1	N/A
Shane Wyatt Mechanic	20	Certification: CMRT
Kerry Gensler Mechanic	16	Certification: CMRT
Dillon Luna Mechanic	1	Certifications: CMRT, boiler maintenance, fork truck and loader, arial platform lifts and crane rigging
Joseph Brown Utility Worker	32	Certification: Michigan Wastewater License B
Dean Lewis Utility Worker	1	Degree: Bachelor's in foreestry Certification: HAZWOPER

Our team brings Northport more than 150 years of combined experience.

Increased certifications and licenses

During the past contract year, two of our teammates increased their certifications. Operations Supervisor Justin Straub received his Class C wastewater license and IPP Coordinator Josh Lycka received his Class A wastewater license.



Access to regional and nationwide support resources

One of the many advantages the NLTUA has in working with Jacobs is access to the knowledge and support from a vast pool of industry leading professionals. In 2022, the NLTUA received more than \$12,000 of added value related to regional and nationwide support, at no additional cost. Exhibit 3 highlights the types of support received from the Jacobs team.

Exhibit 3Regional and national support



Achieving excellence together

Our collaborative relationship began in 2008. We have worked together for more than 14 years to ensure the treatment facility is operated in a regulatory compliant and fiscally efficient manner. Our scope of services has been summarized in Exhibit 4. Exhibit 5 illustrates tasks performed at each interval. Accomplishments Jacobs and the Northport Leelanau Township Utility Authority (NLTUA) achieved throughout the years are highlighted in Exhibit 6.

Exhibit 4Jacobs' current scope of services

Item	Description	Performance/related exhibits (see Appendix)
Scope: Wastewater and collection sy	stem operations	
Staffing and oversight	Operate, maintain and monitor the treatment facility and collection system twenty-four hours a day, seven days a week. Class C operator oversight required by the state.	Jacobs team is onsite Monday, Tuesday, Thursday and as needed plus on call twenty-four hours a day, seven days a week. Refer to the "Our team" section of the report for details pertaining to certifications held.
Reporting	Provide weekly process reports and monthly operation reports summarizing activities performed and monthly financial status; annual report summarizing operations, maintenance, compliance, financials and other pertinent information.	Jacobs provides reports to the NLTUA weekly, monthly, annually and as needed.
Meetings	Attend monthly Utility Authority meetings and meet with the client at least quarterly.	Jacobs attends the monthly Utility Authority meetings to keep the board informed of plant operations and other relative issues.
Financial management and planning	Prepare a list of proposed expenditures including chemicals and laboratory supplies to assist NLTUA in preparing an operating budget for the facility.	Jacobs coordinates the procurement of spare parts and repairs, and specialized contractors and supplies; advises and consults with the NLTUA on operational issues, capital improvements, major repairs and submits monthly financial updates to the board.
Scope: Compliance		
Effluent and groundwater quality	Manage, operate and maintain the treatment plant that allows the facility to meet or exceed its discharge permit requirements.	Refer to Appendix A. Jacobs completed the following task as required by the Department of Energy, Great Lakes and Environment (EGLE): Quarterly and annual monitoring well sampling events: annual flow meter verifications (flow meters passed their verification).
Biosolids quality Manage biosolids in accordance with the state- approved residual management plan. Facilitate biosolids hauls, ensure biosolids meet all regulatory requirements before land application, conduct sampling and analyses, field inspections and annual state required biosolids reporting.		No biosolids were land applied in 2022. EGLE requires facilities to submit annual reports indicating no land application occurred Jacobs submitted this report for 2022.
Reporting	Compile, review and submit all required reports to the regulatory authority. Interface with regulator as directed by Authority.	Jacobs submitted the monthly discharge monitoring reports, and the annual Sara Title III Tier II Report as required.

Achieving excellence together

Exhibit 4 (continued)

Jacobs' current scope of services

Item	Description	Performance/related exhibits (see Appendix)
Sample and analysis	Perform or contract and administer all laboratory testing and sampling required by the discharge permit. Maintain a laboratory analysis program with a proper data management and quality assurance/quality control plan (QA/QC).	Jacobs facilitates/performs and pays for all compliance sampling and analysis required by the facilities discharge permit. Any additional required sampling not identified is the responsibility of the NLTUA or can be performed as extra work and billed per the contract rate sheet.
Scope: Maintenance		
Routine preventive maintenance (PM) and repair	Perform PM and repairs for the project, subject to the repair limits. Track maintenance actions via computer database.	Refer to Exhibit 14 for a summary of repair costs over \$500 and Exhibit 15 repair hours summary.
Collection system	Provide a maintenance schedule detailing the following: lift station inspection/maintenance, sanitary sewer manholes and castings cleaning and inspection, gravity and low-pressure sewer flushing, perform repairs to the sanitary sewer, low pressure sewer and forcemains, subject to the Repairs Limits. And help facilitate the cleaning and televising of the sanitary sewer as needed.	Jacobs uses a computerized maintenance management system (CMMS) to plan and schedule the lift station inspection/maintenance, sanitary sewer manholes and castings cleaning/inspection, gravity and low-pressure sewer flushing, plus track repairs performed on the sanitary sewer, low pressure sewer and forcemains. In general, collection system cleaning and inspections are performed annually and repairs are performed as needed. Jacobs provides separate reports to the NLTUA pertaining to these activities. Lift stations are inspected weekly, with more in-depth inspections performed annually. See Exhibit 5 for a list of tasks performed at each of these intervals. Repairs are performed as needed.

Exhibit 5

Lift station preventive maintenance tasks and intervals

Weekly lift station tasks

Controls	Verify alarm system functions Check for alarm conditions Record pump run times and compare to historical	
Miscellaneous	Clean control room and area around lift station Check generator control panel for alarms	
Monthly lift station tasks		
Pump wet well inspections	Visual for grease and other debris Verification of backup float control switches and level transducers Clean backup float control switches	
Alarm dialer	Verify all alarm functions	
Miscellaneous	Inspect fire extinguisher	
Annual lift station tasks		
Pump wet well inspections	Grease and grit removal Stray voltage testing Pump lift rails	
Motor inspections	Amperage draws Motor winding megger testing (See the sidebar below to get a better understanding of what motor megger testing is and how it benefits the facility.) Voltage testing	
Pump inspections	Visual inspections Wear ring and impeller tolerance verification Backup control float switch positioning and level transducer verification Discharge flange gasket	
Miscellaneous	Auto alarm dialer back up battery replacement Fire extinguisher service Bypass and isolation valve function	

What is motor megger testing?

Megger testing measures resistance between phase windings of the motor under test and the ground. If an insulation breakdown exists, resistance is negatively impacted, and a departure between phases (or between one measurement and a previous one) occurs; we can then determine motor health.

Megging is a predictive maintenance tool that helps identify potential motor issues, allowing for repairs to be made before more severe damage and or failure occurs.

Achieving excellence together

Exhibit 6

Milestones and accomplishments

2008

Plant Startup - Jacobs was awarded a competitively bided 3 year contract to operate and maintain the Village of Northport's newly commissioned and unique waste water treatment facility and collection system.

2011

Jacobs was awarded a contract to operate and maintain the treatment plant and collection system, extending our partnership 3 years.

2013

Created a Biosolids Residuals Management Plan that allows the NLTUA to land apply accumulated biosolids that meet or exceed state regulations.

2014

Jacobs was awarded a contract to operate and maintain the treatment plant and collection system, extending our partnership 5 years.

Submitted the Ground Water discharge permit renewal application on behalf of the NLTUA. New ground water permit was issued in 2015.

Successfully inspected and cleaned the entire low pressure force main portion of the collection system.

2015

Completed the facilities first biosolids land application. Successfully land applying 53 dry tons of biosolids.

2017

Completed the facilities second biosolids land application. Successfully land applying 52 dry tons of biosolids.

2018

Jacobs was awarded a contract to operate and maintain the treatment plant and collection system, extending our partnership 10 years.

2019

Installed new pumps at the Northport Point Road lift station, as part of our 2018 contract renewal the pumps were purchased by Jacobs at no cost to the NLTUA, saving approximately \$8,500.

2020

Overhauled each sand filter which included removing the original sand filter media (sand), cleaning and inspecting each empty chamber and replacing the sand with new.

Successfully inspected and cleaned the entire low-pressure force main portion of the collection system.

Facilitated the completion of the following capital improvement projects (CIP) projects: lining of seven sanitary sewer manholes and the treatment plant fine screen wet well to prevent any further corrosion. Replacement of aeration blower #1.

On behalf of the NLTUA we submitted the treatment facilities groundwater permit renewal application.

2021

Identified the flow restriction issue on Northshore Drive's gravity flow sanitary sewer line while performing annual manhole inspections. The repair to the line is currently in process.

Main lift station pump failure response – Jacobs, with help from a pump repair vendor, rebuilt one operable pump using parts from both failed pumps. The interim pump enabled the station to function normally for 136 days on one pump, with a redundant bypass pump available, if needed. Had the interim pump not worked, bypass pumping and pump watch would have continued until another viable option was identified. Total cost for bypass pumping would have been more than \$120,000 if the station would have operated in this manner for the entire 136 days.

Completed the facility's third biosolids land application. Successfully land applying 42.6 dry tons of biosolids.

Replaced Kaesar blower #1.

The NLTUA facilitated the lining of six sanitary sewer manholes along Northshore Drive. This completed the lining of all 13 manholes identified for lining in the CIP plan.

2022 proactive performance highlights

While operating and maintaining the collection system and treatment facility, we identify upgrades, improvements and modifications to maintain and/or enhance operational practices. With the support of the NLTUA, we addressed several of these items throughout the year. Exhibit 7 spotlights these performance-amplifying activities.

Exhibit 7
Proactive performance highlights

Maintenance item	Description of action taken	Benefit
Programmable logic controller/human machine interface (PLC/ HMI) maintenance	Replaced all the batteries in the PLCs at the treatment plant and lift stations.	Working batteries are needed to maintain PLC function in the event of a power outage or interruption. If a PLC or HMI failure were to occur, the stored programs can be loaded into a new PLC/HMI reducing system down time and costs associated with writing new programs.
Residential grinder system maintenance	The following actions are performed each time we respond to a residential grinder system alarm:	Reduces the likelihood of repeated issues with the grinde systems and helps to reduce callout hours.
	✓ Remove grease and debris from grinder tank	
	✓ Remove all grease buildup from control float switches	
	✓ Verify all float switches operate properly and are positioned properly	
	✓ Confirm proper pump operation	
	✓ Verify alarm light is operational and audible alarm, if applicable	
	 Inspect wet well components (rail guides, lift chain, float switch support, piping, anti-syphon valve, wet well walls and lid) 	
	✓ Replace both the start and run capacitor (if not changed in past year)	
	✓ Inform homeowner of findings and what not to put in their sewer	
Collection system	In cooperation with the Leelanau Township Fire Department and Village staff, we flushed the low- pressure force mains located on Northport Point Road and Southshore Drive.	Helps decrease odors and obstructions from developing in the collection system.
	We performed annual manhole inspections. Structural: We inspect the following for corrosion, cracking, damage, missing components and alignment: lid/cover, ring and frame, cone and riser, barrel, ladder rungs and bench and channel. Hydraulic: We inspect the flow channel for grease, debris, silt, infiltration, surcharging, flow rate characteristics (slow, steady, pulsating, excessive etc.).	Enables us to identify potential structural and flow restrictions before a system surcharge or failure is encountered. As a result of these inspections, we identified the Northshore Drive gravity main issue.

Manhole inspections.

2022 proactive performance highlights

Exhibit 7 (continued)

Proactive performance highlights

Maintenance item

Description of action taken

Annual air release valve (ARV) inspections: The West Street ARV had significant grease buildup inside and was cleaned before placing back into service. We replaced failed isolation valves at East Paradesia Point Road and the Northport Point Road locations along with replacing the entire ARV at Northport Point Road due to severe corrosion. We replaced all valve handles with 316 stainless steel, which is better suited for corrosive environments. Recommendations for 2022 include: Purchasing two new ARVs and stainless steel (SST) isolation valves for replacement at the Woolsey Lake Road location and replenishing spare parts. Repair loose fused pipes at M22 and Northport Point Road ARV locations, and properly seal Northport Point Road ARV force main penetration to prevent groundwater from leaking into the ARV chamber.

Benefit

Inspecting the ARV valves on a regular schedule helps to identify and plan for maintenance needs and reduces the possibility of issues arising because of equipment failure.





Northport Point Road corroded ARV.

Northport Point Road new ARV.

Main lift station and 7th Street station controllers:

Each station is equipped with controllers that provide and monitor lift station functions, such as level control, pump operation and alarming. The controllers at both lift stations failed in 2022 after 14 years in service and are slated for replacement in 2023 as identified in the capital improvement plan (CIP). In the interim, Jacobs purchased and installed temporary controllers that allow for basic system function until the new control systems are installed. Note: The failed controllers were obsolete and no longer supported.

Description of action taken

Main lift station pumps: Installed pump #1 of two new pumps at the Main lift station on May 17, 2022, eliminating the need for continuously manned bypass pumping. Jacobs left its bypass pump onsite for redundancy until we received and installed the second pump. Both pumps were ordered near the end of 2021 following subsequent failures, but due to supply chain issues, delivery dates continued to be extended. The station operated on an interim pump. Jacobs, with support from a vendor, constructed using parts from both of the two failed lift station pumps. We received and installed pump #2 in October 2022, allowing the removal of the backup bypass pump.

Benefit

The interim pump lasted 136 days saving approximately \$120,000 in bypass pump rental and pump watch costs (Note: Had the interim pump not worked, Jacobs would have continued to seek options to alleviate bypass pumping cost). Jacobs recommends the purchase of one spare lift station pump for critical spare inventory as identified in the CIP.



Main lift station new pump install.

Annual lift station inspections: As part of Jacobs' preventive maintenance program, we completed inspections at all three lift stations (main lift station, 7th Street station and Northport Point Road). During inspections, each pump is removed from the wet well to perform visual inspections, impeller tolerance verifications, amperage and voltage checks and motor megger testing. We found the pumps at the main lift station and Northport Point Road lift station to be in good operating condition. The isolation valves for the main lift station pumps were difficult to operate and should be considered for replacement soon. The 7th Street lift station pumps are in good operating condition, but we still recommend planning pump replacement soon due to the fact the pumps are reaching the end of their useful life. This recommendation is identified in the CIP.

Lift station pumps are critical to conveying the wastewater from the collection system to the treatment plant. Inspecting the pumps regularly allows us to verify the pumps are operating within manufacturer specifications and allows us to identify and address minor issues before they progress to more costly failures.



7th Street pump annual lift station inspection.

2022 proactive performance highlights

Exhibit 7 (continued)

Proactive performance highlights

Maintenance item

Description of action taken

Treatment plant

Fine screen unit maintenance: Incoming flow enters the facility through the lower portion of the fine screen unit, screening debris larger than ¼-inch from the waste stream. The fine screen unit contains brushes that, when rotated by the auger, keep the screen clean. We inspect the brushes and proactively replace them before they no longer effectively clean the screen. In 2022, we performed a brush replacement. During replacement we also inspected the fine screen wear bars, hardware and the integrity of the auger itself and found them to be in good working order. Note: In 2014, we noticed significant pitting on the auger body, which prompted us to have the auger coated with an epoxy coating to extend its useful life.



Fine screen auger brush replacement.

We completed the semi-annual Landia mixer preventive maintenance task and installed the new Landia mixer #1. All mixers are in good condition.

Settling basin: The solids basin is located adjacent to the east side of the MBBR. The purpose of the solids basin is to allow settleable solids to separate and collect at the bottom of the basin. The solids settled are then pumped to the biosolids storage basin where they'll accumulate and digest until they're removed and land applied as biosolids. Not all solids can be pumped to the biosolids storage basin due to the fact that a portion of the solids float to the surface and accumulate creating a thick floating mat of solids. Removal of the floating solids buildup requires a significant amount of labor effort each year and, if left unattended, could adversely affect effluent quality. The accumulation of floating solids is an issue that is identified to be evaluated as detailed in the CIP.

Keaser blower replacement: Kaeser blower #2 is in process of replacement and expected to be completed in 2023. Kaeser provided the NLTUA with a blower at a reduced cost as reconciliation for the failed blower #1 last year.

Influent flow meter: In April, we identified an abnormal increase in influent flow to the treatment plant. After confirming the flow was not actual, we pinpointed the flow meter as the issue. We serviced the flow meter and verified flows for accuracy.

Benefit

When fine screen brushes begin to wear, they no longer effectively clean the screen causing the flow to automatically bypass the screening process and begin allowing debris in the waste stream to bypass and eventually cause issues with downstream moving bed biofilm reactor (MBBR) equipment. Proactively replacing the brushes prevents this from occurring.



Fine screen auger brush replacement.

Optimal operation of the mixers in the MBBR ensures media will remain in suspension, effectively removing pollutants.

Removing the floating mat of solids reduces the likely hood of decreased effluent quality.



Settling basin cleaning.

The blowers provide oxygen to the MBBR. The microorganisms in the MBBR need this air to metabolize pollutants in the waste stream. Without the proper addition of oxygen to the basin, the plant will fail to effectively treat the waste stream and possibly meet the requirements of its discharge permit.

The influent flow meter provides critical data for permit compliance and treatment process control.

Maintenance item	Description of action taken	Benefit	
	Sand filters: Sand loss occurred in 2022 when a plug in the effluent flow meter piping caused effluent to back up and wash sand into the reject chamber where it was pumped to the biosolids storage basin. The sand is not recoverable when this occurs.	Replacing the lost sand ensures the filter is operating within specifications for proper effluent polishing. Jacobs sourced a less expensive sand replacement option that met manufactures' specifications and saved approximately \$845.	
	Reject chamber: We reconfigured the pump control panel to operate both pumps at once during each pump cycle, which creates a higher scouring effect within the discharge pipe to prevent solids from accumulating and plugging the pipe.	The reject pumps are in the reject chamber. They pump wash water, ridden with solids, to the solids basin for storage and land application. Modifying the pump controls has reduced pump failure rates and reject chamber alarm call outs.	
	The biosolids basin decant return pump intermittently failed and showed significant signs of wear as the pump reached the end of its useful life. Jacobs recommended replacing the pump with a less expensive and just as reliable Sulzer brand pump versus the existing Flygt pump. To accomplish this, the conduit needed to be upgraded to fit the wiring of the new pump. Because this work aligned with installing a basin high level alarm identified in the CIP, we recommended the alarm installation and conduit upgrades (NLTUA approved) be completed at the same time.	The NLTUA saved significant costs on contractor mobilization and labor that would have occurred if these upgrades were performed separately.	
	Annual plant wet well and chamber cleanings: We flush	This reduces risk effluent interference and potential	

Annual plant wet well and chamber cleanings: We flush accumulated solids, grit and other debris from various pump wells and valve chambers.

This reduces risk effluent interference and potential permit non-compliance, decreases labor and repair cost and maintains system efficiency.



Annual plant wet well chamber cleanings.

Superior permit management and regulatory compliance

Jacobs treated more than 23.4 million gallons of wastewater at the NLTUA WWTP in 2022.

During this time, the facility produced a high-quality effluent that met or exceeded permit requirements. A detailed summary of NLTUA's effluent compared to permit requirements is provided in Exhibit 8.

Exhibit 9 is a graphical depiction of the total flows treated at the facility each year for the past five years. Comparing the peak annual total flow (2020) of the past five years to 2022's total flow, we see a 12 percent decrease of flow volume treated at the facility. This trend continued with a four percent decrease in 2022 versus 2021. The continued decrease is most likely due to efforts made by the NLTUA to eliminate residential sump connections from the sewer collection system and a decrease in infiltration. Groundwater levels decrease as the lake levels recede and reduce the inflow from unfound residential sump connections and other infiltration sources.

Exhibit 8Effluent compared to permit requirements

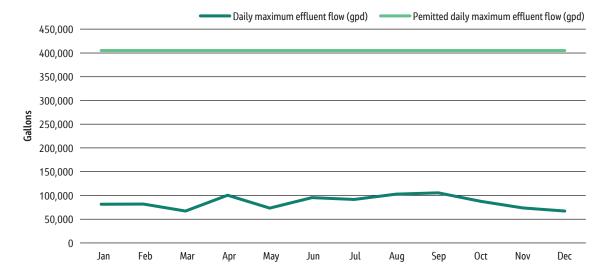
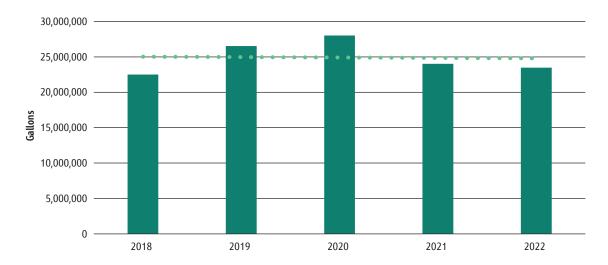




Exhibit 9
NLTUA WWTP influent flow 2018-2022



Superior permit management and regulatory compliance

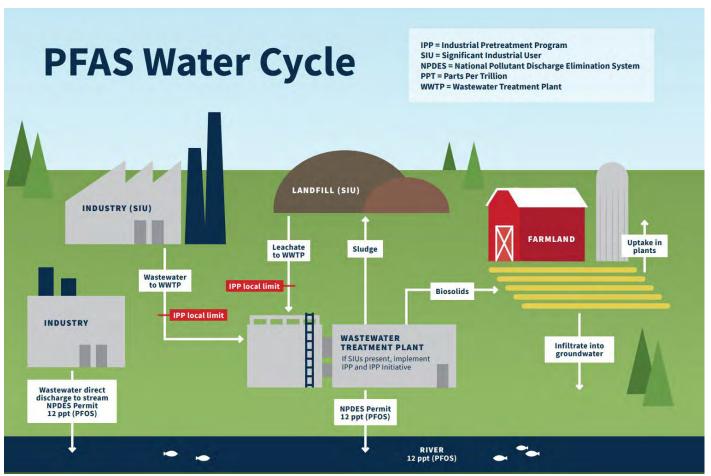
Biosolids are a byproduct of the wastewater treatment process. During treatment, the liquids are separated from the solids and stored in the biosolids basin at the facility. When the basin reaches capacity, and with prior approval from the state, the solids are hauled to preapproved farm fields for land application in accordance with regulatory requirements. Land application is an economically and environmentally sustainable means of biosolids handling that involves the beneficial reuse of biosolids as fertilizer at sites preapproved by state regulators. To approve a facility for land application, the state requires that the facility has an approved Residual (Biosolids) Management Plan (RMP) and that the sampling and analysis detailed in the plan demonstrates the biosolids generated at the facility meet state regulations.



Facility layout.

In 2021, EGLE issued a letter effectively modifying the facility's RMP to include new PFAS requirements. (Refer to Exhibit 10 for a pictorial representation of the PFAS water cycle, created by EGLE). These requirements include actionable thresholds based on the concentration of one particular PFAS compound being, perfluorooctane sulfonic acid (PFOS).

Exhibit 10PFAS water cycle



Source: Michigan.gov

Superior permit management and regulatory compliance

Jacobs facilitated biosolids PFAS sampling and analysis on August 2 and September 21. The initial biosolids sample results collected on August 2, indicated a biosolids PFOS concentration of 78 micrograms per kilogram (ug/kg), approximately 28 ug/kg above EGLE's threshold requiring reduced land application rates.

Due to lack of industries with potential to contribute PFOS to wastewater systems within the NLTUA's collection system, Jacobs performed a review of potential sources of sample contamination, eliminated these potential sources from our sampling protocol and resampled the biosolids and sampled the final effluent on September 21.

The results from the sampling event showed a reduced PFOS concentration at 20 ug/kg, which is below actionable thresholds. The final effluent result from September 21 indicated a concentration of 4 nanograms per liter (ng/L) for PFOS, below the limit of 16 ng/L. The remaining PFAS compounds regulated under EGLE's groundwater part 201 rules were also less than actionable limits.

See Exhibit 11 for EGLE's PFAS biosolids land application requirements, restrictions and sampling results. Exhibit 12 summarizes final effluent PFAs results versus limits. The biosolids and final effluent will be sampled again in spring 2023 as required by EGLE.

Exhibit 11PFAS sample results | EGLE requirements

Biosolids PFAS sampling date	Biosolids PFOS results	Effluent PFOS results	
August 2, 2022	78 ug/kg	NA	
September 22, 2022	20 ug/kg	4 ng/L	
Biosolids PFOS threshold limits	Threshold actions		
20 – 50 ug/kg	May land apply after submittal of sampling results Consider investigating sources and sampling effluent		
50-125 ug/kg	Submit results to EGLE Sample facility effluent Reduce land application rates to 1.5 of Investigate sources	dry tons per acre	
Over 125 ug/kg	Submit results to EGLE Sample facility effluent Investigate potential sources and develop source reduction program Arrange for alternative treatment or disposal of biosolids		

Exhibit 12

Effluent PFAS results and limits

PFAS compound, ng/L*	Part 201 PFAS analyte groundwater limits (ng/L)	September 22 Northport WWTP effluent results (ng/L)
PFOS	16	4
PFOA	8	5
PFNA	6	<2
PFHxS	51	3
PFHxA	400,000	9
PFBS	420	6
HFPO-DA	370	<10

^{*}Full PFAS compound names and additional PFAS information can be found on EGLE's website via the following link. https://www.michigan.gov/pfasresponse.

Safety

Jacobs' focus on safety and worker well-being—known as BeyondZero[™]—empowers our employees to create and sustain a positive, safe and healthy work environment by fostering a culture in which associates look out for each other at all times. Our Jacobs developed site-specific work safety control plan defines our team's safety responsibilities which include the development of Activity Hazard Analysis (AHAs) for routine and non-routine tasks. We reference these AHAs in our daily pre-task plans (PTPs), which are created and reviewed by all associates at our morning safety meetings. The PTP helps the team define hazards present that day and spells out the personal protective equipment (PPE) needed to guard against or eliminate those hazards.

We are proud to report the planning and vigilance underpinning our safety program has enabled us to operate for more than 1,050 days without an Occupational Safety and Health Administration (OSHA)-recordable incident.



Sustainability

Jacobs' vision is to be a recognized leader in sustainable O&M, and our mission is to collaborate and learn together to leave a more sustainable footprint for our clients and communities. Our award-winning program leverages the passion and ingenuity of our people to develop site-specific sustainability goals to reduce impact, save energy and advance environmental stewardship.

In 2022, our team participated in the Grand Traverse County Conservation District Earth Day Tree Planting event as part of our commitment to sustainability.



Top left: Project manager Mark Huggard planting trees with son and daughter. Lower left: Jacobs staff planting trees on Earth Day.

Fiscal summary

We understand that the NLTUA has many financial demands. As a result, we are focused on minimizing the financial impact operating and maintaining the wastewater treatment plant and collection system has on the budget. As we care for your system, a core part of our mission is to help you avoid, manage and decrease costs. Results of our efforts are demonstrated in the following cost reconciliation.

Base fee/direct cost overview

The NLTUA pays Jacobs a fraction of our base fee every month. Our base fee is the direct cost incurred in operating and maintaining the facility, plus our margin. Direct cost expenses include but are not limited to consumable items used to maintain equipment (belts, oils, greases and tools), expenses related to employee safety and training, laboratory expenses, office supplies and vehicle expenses. Exhibit 13 summarizes our 2022 reconciliation. Exhibit 14 illustrates 2022 repair expenses over \$500. Exhibit 15 summaries total repair hours labor, and Exhibit 16 summarizes 2022 work orders.

Exhibit 13Summary of 2022 reconciliation

Line Item	2022 total expense/payment	Comments
Expense item summary		
Total direct costs (less repairs labor over 300 hours)	\$5,353.23	The total direct cost for 2022 was \$136,316.46, exceeding the annual budget by \$10,706.46. Direct cost overages are split 50/50 between Jacobs and the NLTUA. The NLTUA's portion of the direct cost overage amounted to \$5,353.23. Cost overages were caused by labor cost increases and laboratory service increases. Direct cost includes the actual costs, incurred for the direct benefit of the project including, but not limited to, expenditures for direct labor (includes 300 repair labor hours), employee benefits, laboratory supplies, tools, safety supplies, gasoline, equipment rental, preventive maintenance materials (oil, belts, brushes, etc.), travel, office supplies, other supplies, uniforms, cell phones, postage, tools, memberships and training supplies.
Repairs non-labor	\$37,783.13	The NLTUA is responsible for repair expenses over \$8,000. Refer to Exhibit 14. for a breakdown of repair expenses over \$500. Expenses exceeding the annual limit were approved by the NLTUA
Repairs labor hours total (over 300 hours)	\$18,975.00	The NLTUA is responsible for repair labor hours exceeding the 300-hour annual limit. The repairs labor total for 2022 was 679.5 hours, amounting to 379.5 hours over the 300-hour annual limit. Major repair items contributing to repair labor hours in 2022 included, but are not limited to, air release valve repairs, main lift station failure, sand filter media replacement and residential grinder pump system repairs. Exhibit 15 contains a summary of repair labor hours.
Reconciliation summary		
Total expense overages	\$62,211.36	Includes repairs non-labor over \$8,000, repair labor hours over 300, and 50 percent of the direct cost overage.
Repair overages invoiced and paid	-\$53,173.76	Repairs exceeding the \$8,000 annual limit and repair labor hours over the annual limit of 300 hours are billed monthly.
Total reconciliation	\$9,037.60	Final year end invoice paid by NLTUA.
Jacobs' total fee 2022		
O&M base fee	\$166,409.00	Direct cost, plus margin
Total fee paid to Jacobs	\$228,520.36	Includes total direct cost, plus margin

Fiscal summary

Exhibit 14

Repair costs over \$500

Repair description	Expense amount
Grainger – New chemical metering pump for Northport Point Road lift station	\$646.00
USA Bluebook – Lift station level transmitter	\$805.05
Teledyne ISCO – Replacement control panel assembly for effluent auto sampler	\$1,030.14
Williams and Bay Pumping – Services to clean main lift station wet well	\$1,334.50
USA Bluebook/Grainger – Purchase of spare residential grinder pump float control switches, bracket bushings, relays and capacitors	\$2,214.31
Grainger – Purchase of air release valve and stainless steel valve fittings for collection system repairs	\$2,230.28
Hach Company – Purchase of one dissolved oxygen sensor controller	\$2,424.03
GFL – Plant effluent pipe cleaning and influent chamber grit removal	\$2,496.76
Red Flint Sand and Gravel – Purchased replacement media (sand) for both filters	\$3,906.60
Windemueller – Decant structure alarm and wiring upgrade	\$7,085.00
Milan Supply – Purchase of six residential grinder pumps	\$16,675.92

A total of 679.50 repair labor hours were accumulated in 2022. Residential grinder pump repairs, collection system repairs, treatment plant repairs and call out labor related to after hour alarm responses are included in this total. In 2022, treatment plant repairs accounted for 41 percent of the repair labor total. Residential grinder pump repairs made up 32 percent with the rest related to collection system repairs at 27 percent. Total repair labor hours decreased by 147 hours in 2022 versus in 2021.

Exhibit 15Repair labor hours summary

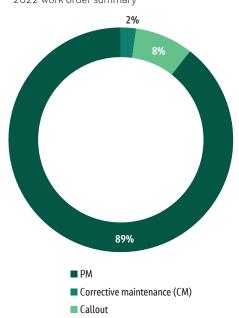
32% 27%

Residential grinder pump repair hours

■ Collection System repair hours

■ Plant repair hours

Exhibit 16 2022 work order summary





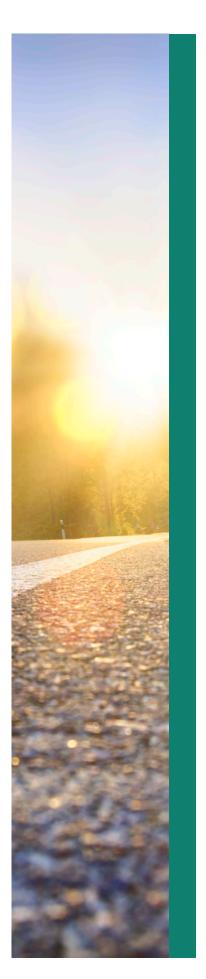
Looking ahead

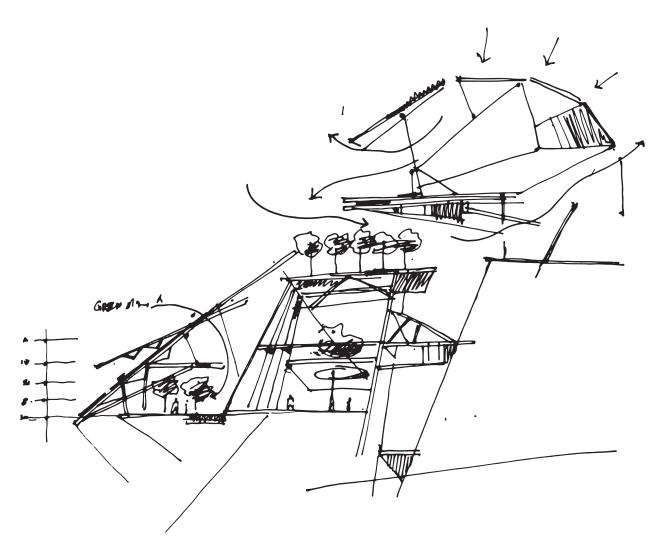
As we look to the next year, our team is thrilled to be working side by side with the NLTUA in the implementation of several projected treatment plant and collection system enhancements. Projects currently scheduled for the coming fiscal year include:

- 2023 biosolids PFAS sampling and analysis
- Main lift station to treatment plant force main cleaning and televising*
- Main lift station and 7th Street lift station controls upgrade
- Ferric room upgrade/modification
- Solids handling evaluation

The Jacobs team is proud to serve the NLTUA as your O&M partner. We will continue to work with you to achieve optimum performance and value from all essential utility infrastructure, while bringing you a world of knowledge and resources. We look forward to moving our partnership forward as we support NLTUA's community, public health and environment.

*Televising is the most effective method to inspect the sewer's internal condition. These inspections determine pipe condition and if any blockages exist that may require cleaning, replacement or repair. The inspections also help detect any cross connections between sewers and help maintain compliance with state and federal regulations.





Appendix A

Exhibit A-1WWTP performance

Parameter description	Effluent permit limit	Plant effluent quality	Importance	
Influent flow – amount of wastewater received daily in gallons (refer to Exhibit A-2).	132,000 gpd = maximum daily influent flow	Maximum daily influent flow = 102,770 gallons per day (gpd)	When the treatment system is hydraulically overloaded beyond design capacity proper treatment and or removal of pollutants may be compromised.	
Effluent flow – amount of water discharged from the treatment plant daily in gallons (refer to Exhibit A-3 and A-4).	405,000 gpd = maximum daily effluent flow 48,180,000 gallons/year = maximum annual effluent flow	Maximum daily effluent flow = 105,267 gpd total annual effluent flow = 23,469,469 gallons	Exceeding the designed effluent flow can adversely affect effluent polishing at the sand filters and rapid infiltration beds design loadings and may adversely affect groundwater quality.	
Rapid infiltration bed (RIB) application rate - amount of effluent discharged in gpd per square foot	Maximum daily RIB application rates (gpd per square foot [sqft])	Maximum daily RIB application rates	Rapid infiltration beds allow for rapid discharge of effluent and provides some additional polishing. Exceeding design application rates may adversely affect ground water quality.	
(refer to Exhibits A-5 through A-7).	RIB 3A – 12.1 gpd/sqft	3A – gpd/sqft		
	RIB 3B and 3C – 14 gpd/sqft	3B and 3C- gpd/sqft	-	
	RIBs 1 and 2 – 9 gpd/sqft	1 and 2 – gpd/sqft		
Total phosphorus (TP) – the measure of organic and inorganic phosphorus in plant effluent (refer to Exhibits A-8 and A-9).	0.5 milligrams per liter (mg/L) = daily maximum 0.3 mg/L = monthly average	Daily maximum= 1.8 mg/L, exceeding the permitted limit (refer to Exhibit A-8 for further details maximum monthly average 0.3 mg/L)	Phosphorus is an essential element for plant life, but when there is too much of it in water, it can cause eutrophication. Eutrophication is when a body of water becomes over enriched with nutrients. It often leads to algae blooms that disrupt the normal ecosystem functioning of a body of water. The algae blooms consume available oxygen and reduce sunlight in marine environments, resulting in the death of many aquatic organisms including fish.	
Biochemical oxygen demand (BOD) – the measure of the amount of pollutants in plant effluent (refer to Exhibits A-10 and A-11).	45 mg/L= daily maximum 30 mg/L= monthly average	Daily maximum= 15 mg/L maximum monthly average = 7 mg/L	When BOD concentrations in the effluent are high, it can lead to decreased dissolved oxygen (DO) in the receiving stream adversely affecting the health of the fish and other aquatic organisms.	
Effluent pH – the measure of how acidic/basic the water is (refer to Exhibits A-12 and A-13).	9.0 s.u. = maximum daily 6.5 s.u.= minimum daily	Maximum daily= 7.3 s.u. minimum daily= 6.8 s.u.	Extremes in pH can make waterways inhospitable to life. Acidic water also speeds the leaching of heavy metals harmful to fish.	
Monitoring well (MW) pH – the measure of how acidic/basic the water is (refer to Exhibits A-14 and A-15).	9.0 s.u.= maximum daily 6.5 s.u.= minimum daily	Maximum daily= 8.2 s.u. minimum eaily= 6.9 s.u.	Extremes in pH can make waterways inhospitable to life. Acidic water also speeds the leaching of heavy metals harmful to fish.	

Exhibit A-2

Influent daily maximum flow versus permitted daily maximum flow

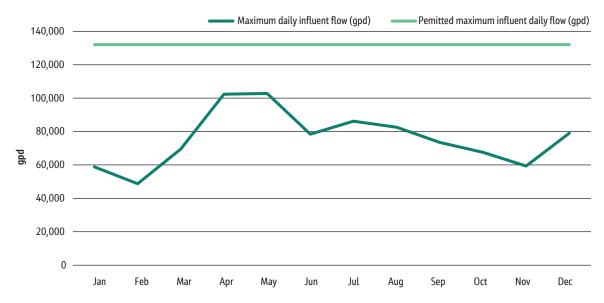


Exhibit A-3

Effluent daily maximum flow versus permitted daily maximum flow

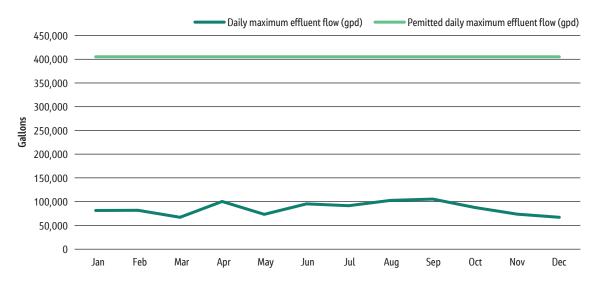


Exhibit A-4

Annual effluent flow versus permitted annual flow

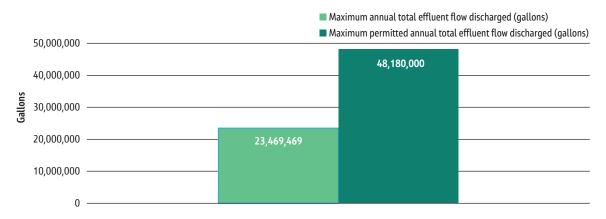


Exhibit A-5

Rapid infiltration bed 3A maximum loading versus permitted limit

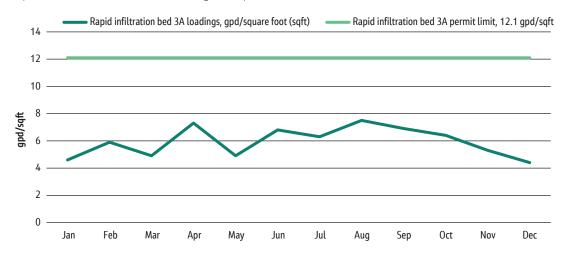


Exhibit A-6

Rapid infiltration bed 3B and 3C maximum loading versus permitted limit

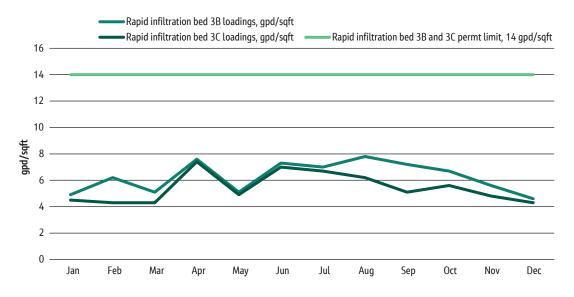
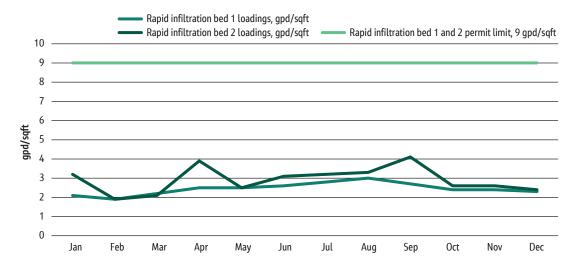


Exhibit A-7

Rapid infiltration bed 1 and 2 maximum loading versus permitted limit



On March 28, the final effluent total phosphorus result exceeded the daily maximum limit of 0.5 mg/L with a result of 0.6 mg/L. The facility returned to compliance the following day March 29, with a result of 0.2 mg/L. The sample was collected following the bypassing of the effluent flow meter for maintenance. Opening the flow meter bypass directs the effluent flow through a separate pipe, around the flow meter and to the effluent discharge chamber. This is allows isolation of the effluent flow meter for maintenance. The effluent sample was collected following the operation of the bypass valves and it's our conclusion that during this sequence settled solids within the pipe were stirred up and suspended in the effluent water causing a brief spike in effluent total phosphorus concentration.

Exhibit A-8
Effluent total phosphorus (TP) daily maximum concentration versus permitted limit

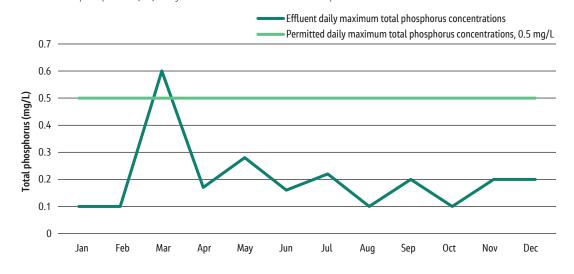


Exhibit A-9
Effluent TP monthly average concentration versus permitted limit

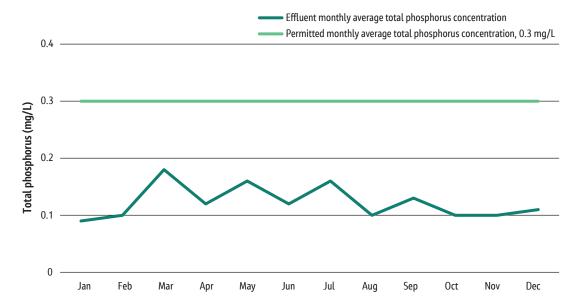


Exhibit A-10
Effluent BOD daily maximum concentration versus permitted limit

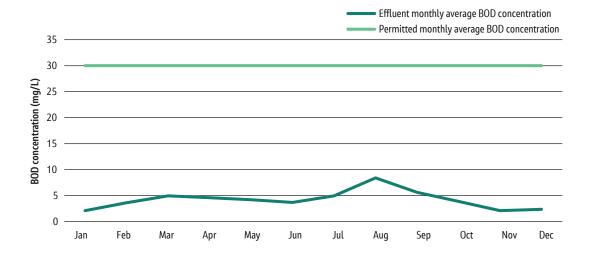


Exhibit A-11
Effluent BOD monthly average concentration versus permitted limit

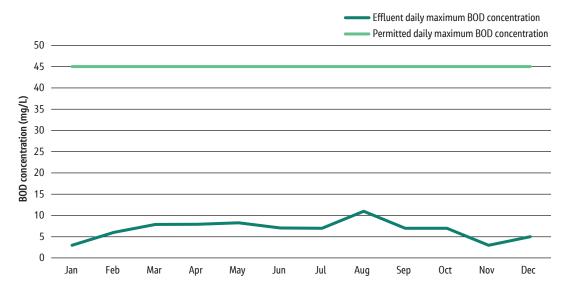


Exhibit A-12
Effluent pH monthly maximum value versus permitted maximum limit

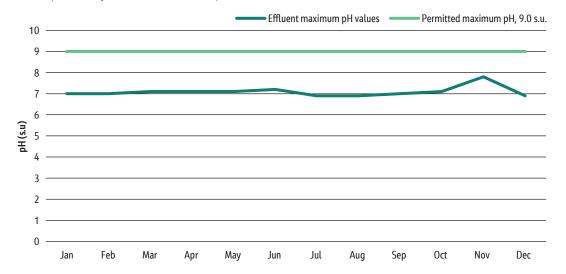


Exhibit A-13
Effluent pH monthly minimum value versus permitted minimum limit

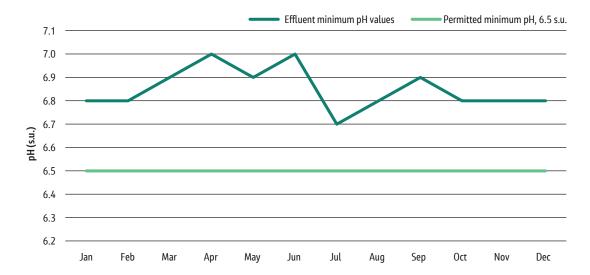


Exhibit A-14MW maximum pH versus permitted maximum pH

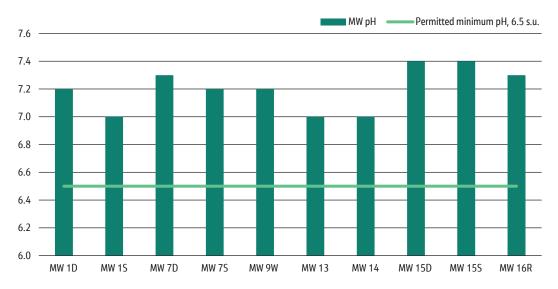
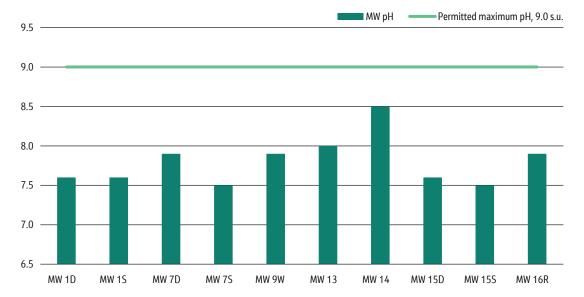


Exhibit A-15MW minimum pH versus permitted minimum pH



Our values

We do things right.

We always act with integrity — taking responsibility for our work, caring for our people and staying focused on safety and sustainability. We make investments in our clients, people and communities, so we can grow together.

We challenge the accepted.

We know that to create a better future, we must ask tough questions. We always stay curious and are not afraid to try new things.

We aim higher.

We do not settle — always looking beyond to raise the bar and deliver with excellence. We are committed to our clients by bringing innovative solutions that lead to profitable growth and shared success.

We live inclusion.

We put people at the heart of our business. We have an unparalleled focus on inclusion with a diverse team of visionaries, thinkers and doers. We embrace all perspectives, collaborating to make a positive impact.





