

PROPOSED AGENDA

CHARTER TOWNSHIP OF BRIGHTON
UTILITIES COMMITTEE
4363 BUNO ROAD
BRIGHTON, MI 48114

January 9, 2017
REGULAR MEETING
7:00 P.M.
(810) 229.0560

- A. CALL TO ORDER
- B. PLEDGE OF ALLEGIANCE
- C. ROLL CALL
- D. CALL TO THE PUBLIC
- E. APPROVAL OF THE AGENDA
- F. MINUTES
 - 1. November 28, 2016 Regular Meeting
- G. Business
 - 1. Nomination and Election of 2017 Officers (Chair, Vice-Chair, Secretary)
 - 2. Hardship Deferral of Sanitary Sewer Special Assessment.
 - 3. Sanitary Sewer Rate Analysis
- H. REPORTS / CORRESPONDENCE
 - 1. Wastewater System Monthly Operating Report - Infrastructure Alternatives
- I. CALL TO THE PUBLIC
- J. ADJOURNMENT

The Charter Township of Brighton will provide necessary reasonable auxiliary aids and services such as signers for the hearing impaired and audiotapes of printed materials being considered at the meeting to individuals with disabilities at the meeting. Individuals should contact the Charter Township of Brighton by writing or contacting: Township Manager, 4363 Buno Road, Brighton, Michigan 48114. Telephone: (810) 229.0550.

PROPOSED MINUTES

**CHARTER TOWNSHIP OF BRIGHTON
UTILITIES COMMITTEE
4363 Buno Road
BRIGHTON, MI 48114**

**November 28, 2016
REGULAR MEETING
7:00 P.M.
(810) 229.0550**

C. Moran called the meeting to order at 7:00 P.M.

PLEDGE OF ALLEGIANCE

ROLL CALL

Present: C. Moran, F. Grapentien, M. Slaton, D. Terns, J. Dorset, J. Stinedurf

Absent: None

Also Present: B. Vick (Township Manager), T. High (Infrastructure Alternatives), K. Palka (PHP), J. Rushlow (OHM)

CALL TO THE PUBLIC

D. Taylor, 3319 Oak Knoll: Read prepared statement. He stated: his disappointment in being removed from serving on the Utilities Committee, he was not absent from any meeting and termination was politically motivated. Reminded Committee the duties they are responsible for performing and stated that he performed those duties. Encouraged members to keep open mind to all issues, ask questions and challenge administrative positions. There is still too much unused capacity. Wants REU table to be reviewed. Provided handout.

M. Palmer, 10382 East Grand River: Upset that material provided to the Township was not included in the agenda packet. Accused Manager, former Supervisor, and current Supervisor of lying. Wants Manager gone. Wants his memo included as part of the minutes and is sick of Township actions.

Ba. Potocki, 8420 Woodland Shore Drive: Compared Committee and Board to North Korea. Complained that no women were on the committee. She asked why D. Taylor was removed from committee and expressed disappointment with committee.

Bo. Potocki, 8420 Woodland Shore Drive: He stated: the price on sewer is wrong, businesses get preferential treatment while residential users get left behind. D. Taylor was removed for asking too many questions. Committee should be dismissed and reconstituted.

J. Sarna, 8266 Woodland Shore Drive: He asserted sewer system was not petition driven and users were forced on. He claimed that a trustee said that sewer system is a Township asset. Does not want to pay for unused capacity. Asked why new developments are not being forced to hook up. Has not been shown any documents detailing health problems showing a need for sewer. Looking forward to going to Court.

K. Couch, 2916 Cady Drive: He said that he was told that a lawyer was representing both Kroger's and the Township and believes that represents a conflict of interest.

A, Crane, The Kroger Co. – Midwest Region, 40393 Grand River Ave., Novi, MI 48377: He clarified that the Kroger attorney does not also represent Brighton Township.

S. Raguso, 8425 Hilton Road: Allotted his three minutes to M. Palmer.

M. Palmer, 10382 East Grand River: He stated: the minutes are not accurate, that the Committee should demand information to make good decisions, he's disgusted with new appointments to the Committee. Is retired and will be at every meeting. Removing D. Taylor was a sham.

AGENDA

Motion to approve agenda by J. Dorset and supported by J. Stinedurf. **Motion carried.**

MINUTES

D. Terns moved and C. Moran supported to approve the minutes of the April 27, 2016 Meeting. **Motion carried.**

BUSINESS

1. Quarterly Sewer Analysis – Ken Palka (PHP) – K. Palka provided an overview of the sewer report which covered the period of April 1 to September 30. Discussion included grinder pump replacement and consistency in naming of funds.
2. REU Assignment Appeal – Krogers – B. Vick introduced the topic, summarizing the details of Krogers planned expansion, REU assignment process, the appeal process, applicable ordinances the information provided in Committee's agenda packets, and the responsibilities of the Committee. Also, discussed the requirement from LCWA to meter water service. J. Rushlow provided overview of his analysis and the information provided to the Committee. Krogers representative, Adam Crane, and Krogers consultant A. Boyer (LSG) discussed the Brighton Kroger with comparables presented to the Committee. Applicant lobbied for lower water REU allocation of 18. J. Rushlow explained REU table is based on Ten State Standard. Committee discussed the uniqueness of stores, sewer ordinance, sufficiency of data presented, need for metering, relationship of size of building and utility usage, the amount of monies that should be put in escrow, ancillary and primary uses, size and cost of piping, process for meter reading and verification, lack of comparables in Livingston County.

Motion by J. Stinedurf and seconded by F. Grapentien to meter the LCWA water service as required by LCWA, to place 28 water REUs in escrow and that 36 sewer REUs, already in use, remain the same. Additionally, Krogers will follow the twelve month metering requirement per the ordinance for monitoring daily water usage, and meter reading to identify max daily usage, which will dictate the assignment of water REUs and sewer O & M charges. Roll Call Vote:

Ayes: D. Terns, J. Stinedurf, C. Moran, J. Dorset, F. Grapentien

Nays: None

Motion carried.

REPORTS / CORRESPONDENCE

1. J. Stinedurf summarized the most recent planning commission meeting.
2. T. High provided an overview of the October 2016 Operators Report. Discussion included grinder pump repairs and replacements, past infiltration issue and the Asset Management Plan.

CALL TO THE PUBLIC

K. Couch, 2916 Cady Drive: President of the Lakeside Association. Disappointed that original motion for Krogers was not voted on and thinks it should have been.

J. Black, 2941 School Lake: Has worked with boards and stated that committee has a right to receive training. Encouraged committee to table issues to further study issues. Accused the Manager of spoon feeding the committee.

J. Sarna, 8266 Woodland Shore Drive: Wished original sewer users were here tonight. Liked comments about metering. Discussed 200 foot rule and Sandilla development. Sewer users should not pay for something they're not using. Thanked committee for being honest.

Ba. Potocki, 8420 Woodland Shore Drive: Thanked committee for asking intelligent questions and standing up to Krogers. Would like to know why D. Taylor was fired.

Bo. Potocki, 8420 Woodland Shore Drive: Claimed Krogers received a discounted rate for sewer REUs. Asked to have the cost of water posted on website. Objected to timeline of events surrounding Krogers appeal. Wants Township documents to be audited.

M. Palmer, 10382 East Grand River: Would like to see F. Grapentien resign. Ordinance doesn't allow residents to meter their homes. Ordinance should be changed. Questioned REU capacity of sewer system. Users are being raped. Township should not use the Ten State Standard. Wanted handouts to be included in minutes.

D. Taylor, 3319 Oak Knoll: Discussed the fairness of the REU table. Discussed the history of the construction of the sewer system. Argued that sewer system is a Township asset that benefits everyone and that original numbers justifying the construction of the sewer system were a scam.

NEXT MEETING – January 9, 2017. Primarily to discuss annual “hardship” requests.

**J. Dorset moved and C. Moran supported to adjourn at 10:20 pm.
Motion carried.**

Respectfully submitted,

Chuck Moran, Vice- Chairman

Frank Grapentien, Secretary

UTILITIES COMMITTEE

AGENDA NOTE

MEETING DATE: January 9, 2017

PERSON PLACING ITEM ON AGENDA: Township Manager

AGENDA TOPIC: Hardship Deferral of Sanitary Sewer Special Assessment.

EXPLANATION OF TOPIC: The Township's Sanitary Sewer Ordinance, in compliance with Michigan law, allows the Township to defer the payment of assessments for public improvements due to poverty. If the Township agrees to defer an assessment, the Township pays the assessment and places a lien on the property for the amount paid. The property owner signs an agreement to accept the lien. At the time the property is sold the deferred amount is paid to the Township. No interest is charged on the amount deferred. This is for the 2016 sewer assessment that will be paid by February 28, 2017.

The Township's poverty deferral process requires the property owner to file an annual application which is reviewed by the Township's Utility Committee. The Committee's recommendation is forwarded to the Township Board for final approval.

For privacy purposes the hardship deferral applicant's detailed supporting documentation are on file with the Township Manager.

Parcel number and amount:

ID: 4712-19-201-061 \$766.32 (100%)

MATERIALS ATTACHED AS SUPPORTING DOCUMENTS:

- Special Assessment Deferral Worksheet
- Completed Application and Acknowledgement of and Consent to Lien
- Applicant checklist
- Email from Township Attorney regarding Power of Attorney 1/4/2017
- Administrative Policy #706 and Annual Threshold Amounts

RECOMMENDATION: It is the recommendation of the Township Manager that the Utilities Committee recommend the approval of the sewer assessment hardship deferral for property parcel:

4712-19-201-061 \$766.32 (100%)

SUGGESTED MOTION: moved by, _____ seconded by, _____ to recommend the approval of the sewer assessment hardship deferral request for property parcels 4712-19-201-061 in the amount of \$766.32.

CHARTER TOWNSHIP OF BRIGHTON

SEWER SPECIAL ASSESSMENT DEFERRAL WORKSHEET

TAX YEAR: 2016 (FOR TAXES DUE FEB, 2017)

PARCEL NUMBER:	4712.19-201.061
OWNER NAME:	Geraldine Veilleux
PROPERTY ADDRESS:	3339 Oak Knoll

GROSS INCOME:	12469.80	Gross income may be adjusted with a factor of 0.72 to allow for 28% of employment income to meet tax liability. At the discretion of the Utilities Committee, actual tax liability as reflected on the tax returns may be utilized.
TAX ADJUSTED INCOME:	12469.80	
MEDICAL EXPENSES:	1870.00	Medical expenses are either 100% of actual expenses or 15% of adjusted income.
OTHER EXPENSES:	0	Any unusual & necessary expenses that the Utility Committee determines to be detrimental to the applicant's ability to pay property taxes.
TOTAL ADJ. INCOME:	10,599.80	

EXEMPTIONS 2 POVERTY GUIDELINES INCOME THRESHOLD FOR TOTAL EXEMPTIONS 23895

CURRENT ANNUAL INSTALLMENT = 766.32

household members = 1
 over 65 yrs old = 1
2 exemptions

NOTE: If the applicants adjusted income is less than the current year poverty income threshold the deferral shall be granted at 100%; If the income is greater than the current year poverty income threshold a partial deferral may be granted, or a deferral may be denied at the discretion of the Utilities Committee, unless assets exceed the maximum allowable amount as outlined below.

APPROVED: X DENIED _____ IF APPROVED, AMOUNT OF DEFERRAL: _____

NOTE: THE MAXIMUM ASSETS ALLOWED FOR A POVERTY DEFERRAL SHALL BE TWO (2) TIMES THE ANNUAL POVERTY THRESHOLD SET FOR GRANTING POVERTY DEFERRALS FOR SEWER SPECIAL ASSESSMENTS

NOTES: Applicants total adjusted income is less than the current year poverty income threshold; therefore a 100% deferral shall be granted per policy No. 706

**CHARTER TOWNSHIP OF BRIGHTON
APPLICATION FOR ONE YEAR DEFERRAL OF
SANITARY SEWER ASSESSMENT**

Dear Applicant:

Please complete all pages of the enclosed form, sign it, and return it to the Township along with a copy of your current Michigan Income Tax, Michigan Homestead Tax Credit Form (completed and signed) and a copy of your Federal Tax Form (W-2(s); 1099(s) completed and signed. You must include this information for all household members 18 years old and over. **If you have already applied for a Property Tax Poverty Exemption, the documents submitted will also be used for evaluating the Sewer Assessment Deferral.** If not, see page 5 for the complete list of required documentation in order to review your application for Sanitary Sewer Assessment deferral. The Township Board must have this information.

PROPERTY AND OWNER INFORMATION:

PROPERTY IDENTIFICATION NUMBER	4712-19-201-061
PROPERTY OWNER(S)	Geraldine Veilleux
PROPERTY ADDRESS	3339 Oak Knoll Dr.
SOCIAL SECURITY NUMBER(S)	
TELEPHONE NUMBER	810 229-6055
APPLICANT'S AGE	86

Year property was purchased by you: 1947

Do you own property free and clear? If not, Mortgage or Contract held by:

 Monthly payment \$ _____. Are taxes included in payment? _____.

Is there a reverse mortgage on the property? [] Yes [X] No

Are property taxes current? [X] Yes [] No If not amount past due \$ _____.

Do you own other real property? Yes No If so, please list location, value and type.

Location/Address	Value	Type

Employment Status: Are you, your spouse or other members of the household employed? *NO*

List Occupation for each below
Self
Spouse
Other Member(s)

I have enclosed copies of my Michigan and Federal Income Tax Return for all members of the household 18 years old and over.

I do not file Michigan or Federal Income Tax Returns.

I have enclosed _____.

OCCUPANTS OF YOUR HOUSEHOLD:

Name	Relationship	Total Income
<i>Geraldine Veilleux</i>	<i>SELF</i>	

Are you or any household member disabled? Yes No If yes, list names.

Any retired? Yes No If yes, list names.

Geraldine Veilleux

INCOME INFORMATION:

Sources of Wages/Pensions	Annual Income	
Soc. Security	8851.20	
Pension	818.40	
Other Income/Asset Value	Annual Income	Asset Value
Savings Accounts		
Stocks and Bonds		
Time Certificates		
Annuities, Dividends, IRA's	1664.11	
Other		
TOTAL		
Total Wages/Pensions (From above)		\$ 818.40
Total Rents, Dividends, Interest, etc.		\$ 1664.11
Total Social Security		\$ 8851.20
TOTAL HOUSEHOLD INCOME		\$ 11,333.80

EXPENSE INFORMATION:

See hardship / poverty exemption

EXPENSE	MONTHLY	ANNUAL
Rent/Mortgage	\$	\$
Food	\$	\$
Medical/Dental	\$	\$
Insurance Premiums	\$ <i>↑ increased to 253.95</i>	\$
Auto Loans	\$	\$
Utilities	\$	\$
Home Improvements	\$	\$
Other (explain)	\$	\$
TOTAL EXPENSES	\$	\$

Additional Statement(s) Attached (eg. expense information detail): Yes No

I hereby attest that all information is complete and accurate as stated above.

Signature of Applicant(s)

Alida Wolney POA

STATE OF MICHIGAN

COUNTY OF Livingston

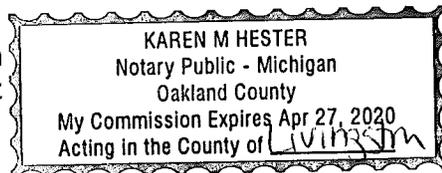
The foregoing instrument was acknowledged before me this 3rd day of January 20 17, by Geraldine Veilleux. by POA *Alida Wolney*.

Karen Hester
Notary Public, State of Michigan, County of Oakland

My commission expires: 4-27-20

Acting in the County of Livingston

Prepared By & Return To: Charter Township of Brighton
ATTN: Michele Olechnowicz
4363 Buno Road
Brighton, MI 48114



Required Documentation for Sewer Assessment Deferral

Documents must include information for all household members 18 years old and over.

Income Information:

- 2015 Federal Income Tax Return (completed and signed) *NA*
- 2015 State Income Tax Return (completed and signed) *NA*
- 2015 Social Security Income Statement
- 2015 Pension Income Statement
- Any additional documents pertaining to income for tax year 2015

Expense Information:

- Copy of all medical bills, receipts, etc., including health insurance premiums and prescription drug costs. Do not include items that are covered by Medicaid or any other medical insurance policy that you wish to have considered.
- Copy of mortgage statement indicating principal and interest paid in 2015.
- Copy of any additional expenses the applicant wishes to have considered.

Asset Information:

- Copy of the current bank statement(s) for anyone living in the household over the age of 18.

ACKNOWLEDGMENT OF AND CONSENT TO LIEN

This ACKNOWLEDGMENT OF AND CONSENT TO LIEN, is executed as of 1-3, 2017, by Geraldine Veilleux (the "PROPERTY OWNER"), address 3339 Oak Knoll Dr., Brighton, Michigan 48114, the owner of the property described in Exhibit A for the benefit of the TOWNSHIP OF BRIGHTON, LIVINGSTON COUNTY, MICHIGAN (the "TOWNSHIP").

WHEREAS, the Board of Trustees (the "Board") of the Township has taken the necessary proceedings under Act No. 188, Public Acts of Michigan 1954, as amended ("Act 188"), and Act No. 40, Public Acts of Michigan 1956, as amended ("the Drain Code"), for the design, installation, construction, and financing the cost of a sanitary sewer system to be known as the Brighton Township Sanitary Sewer Drain (the "Project"), including the establishment of the Brighton Township Sanitary Sewer Drain Special Assessment District (the "Special Assessment District");

WHEREAS, the Brighton Township Sanitary Sewer Drainage District issued bonds to finance the Project and in order to pay debt service on the bonds, the Township has caused special assessments (the "Assessment") to be levied against properties in the Special Assessment District;

WHEREAS, the Township Board, pursuant to Act 188, has established a hardship deferment program (the "Hardship Program") for certain properties subject to an Assessment in the Special Assessment District;

WHEREAS, the Property Owner has applied to the Township Board for a deferral, pursuant to the Hardship Program, of the principal of and the interest on the Assessment that was listed on the December 1, 2016 Winter Tax Bill.

WHEREAS, the Township has agreed to defer the amount of the principal of and interest on the Assessment that was listed on the December 1, 2016 Winter Tax Bill.

WHEREAS, pursuant to Act 188, as a condition of granting the hardship deferment, the Township is required to record a lien against the Property;

NOW, THEREFORE, in consideration of granting the Hardship Deferment of the payment of the Assessment on the Property, the Property Owner agrees as follows:

1. Recorded Lien. Pursuant to Act 188, the amount of \$766.32 shall constitute a recorded lien on the property.
2. Full Amount Due and Payable. In accordance with the Township Ordinance governing the deferral of the Assessment, the entire amount of the Assessment that is deferred shall be paid in full at the time of any change in ownership of the subject property.
3. Recording. The Property Owner acknowledges that this document is to be recorded in the offices of the Livingston County Register of Deeds.

IN WITNESS WHEREOF, the Property Owner has signed this Acknowledgment of and Consent to Lien as of the day and year first above written.

WITNESSES:

Karen M Hester
Karen Becking

Alida Wolney POA
 Geraldine Veilleux by POA
 alida Wolney

STATE OF MICHIGAN)
) ss
 COUNTY OF LIVINGSTON)

On this 3rd day of January, 2017, before me appeared Geraldine Veilleux ^{by POA} alida Wolney to me personally known, who, being by me duly sworn, did say that she is the Property Owner of the above described real property, they have read and signed the foregoing Acknowledgment of and Consent to Lien, and execution of said instrument is a free act and deed.

IN TESTIMONY WHEREOF, given under my hand, and seal of office this 3rd day of January, 2017.

Karen M Hester
Oakland Notary Public
 Livingston County, Michigan
 My Commission Expires: 4-27-20
 Acting in Livingston County

DRAFTED BY: Michele Olechnowicz, Receptionist, Brighton Township
 4363 Buno Rd. Brighton, MI 48114

KAREN M HESTER
 Notary Public - Michigan
 Oakland County
 My Commission Expires, Apr 27, 2020
 Acting in the County of Livingston

PLEASE RETURN TO: Township Clerk – Ann Bollin, Brighton Township
 4363 Buno Road, Brighton, MI 48114

EXHIBIT A

LEGAL DESCRIPTION FOR PARCEL 4712-19-201-061

T2N-R6E SEC 19, LOTS 21, 22 AND 23 OF SANDY SHORES SUBDIVISION.

Receptionist

From: John Harris <john.harris@harrisandliteralski.com>
Sent: Wednesday, January 04, 2017 7:44 AM
To: Receptionist
Cc: Manager
Subject: RE: 3339 Oak Knoll-Hardship Deferral

Brian:

The Power of Attorney accompanying the deferral request is acceptable to accomplish that purpose. I would advise the Township to process the deferral request.

JOHN K. HARRIS, ESQ.
HARRIS & LITERSKI

Pinehollow Place
123 Brighton Lake Rd., Ste. 205
Brighton, Michigan 48116
(810) 229-9340
(810) 229-4764 Fax
www.harrisandliteralski.com

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From: Receptionist [mailto:receptionist@brightontwp.com]
Sent: Tuesday, January 03, 2017 4:54 PM
To: john.harris@harrisandliteralski.com
Cc: Manager
Subject: 3339 Oak Knoll-Hardship Deferral

Hello Mr. Harris:

Forwarding the following attachments at the Manager's request regarding his conversation with you earlier today.

Sincerely,

Michele Olechnowicz

Receptionist
Charter Township of Brighton
4363 Buno Road
Brighton, MI 48114
Office: 810.229.0550
receptionist@brightontwp.com

CHARTER TOWNSHIP OF BRIGHTON

Administrative Policy No.:

706

Effective Date:

July 6, 2004

Amended Date:

October 21, 2013

Policy Regarding:

SEWER SPECIAL ASSESSMENT POVERTY DEFERRALS

The Township's Sanitary Sewer System Use Ordinance, in compliance with Michigan law, allows the Township Board to grant the deferment of special assessments imposed for the Township's Sanitary Sewer System in certain circumstances, in accordance with the authority set forth in Section 9a of Act 188, Public Acts 1954, as amended. Any property owner who has property located within the Sanitary Sewer District, and can demonstrate an inability to pay their annual installment due to financial hardship may apply for the deferral. The Township's deferral process requires the property owner to file an annual application with the Township Manager, to be reviewed by the Township Utilities Committee. The Committee's recommendation is forwarded to the Township Board of Trustees for final approval.

1. If the applicant has already been granted a poverty tax exemption from the Township Board of Review, they may automatically be granted a poverty deferral for the sewer special assessment by the Township Board, as recommended by the Township Utilities Committee.
2. The burden of proving poverty rests with the applicant. The applicant must supply the necessary application and supporting documents as required by this policy and procedure statement. Those documents shall include **(you must include this information for all household members 18 years old and over)**:
 - A. The completed, notarized application for the poverty deferral. This application must be submitted no later than December 21st of each year, unless otherwise indicated by the Township.
 - B. The most recent (immediate preceding year) Michigan Income tax return with all attachments including the MI-1040 CR.
 - C. The most recent (immediate preceding year) Federal Income Tax return with all attachments.
3. The determination of qualification for a sewer poverty deferral shall be based on:
 - A. The adjusted income level of the household.
 - B. The size of the family unit.
 - C. The assets and availability of income to the household.

Policy No. 706-Sewer Special Assessment Poverty Deferrals

Page 2 of 3

4. The applicant's reported income shall be reviewed and adjusted, subject to:
 - A. Gross adjusted income may be adjusted with a factor of 0.72. This allows 28 percent of employment income to meet any income tax liability. At the discretion of the Utilities Committee, actual income tax liability as reflected on the relevant tax returns may be utilized.
 - B. Adjusted income shall be adjusted with the greater of the two of the following:
 - 1) Income may be adjusted with a factor of 0.85. This allows 15 percent of such income to meet medical needs, OR
 - 2) A 100 percent allowance for medical insurance premiums paid by the applicant, for the applicant's personal benefit, as reported on the MI-1040 CR, plus expenses for medical care paid by the applicant where reimbursement is not a factor.
 - C. Any unusual and necessary expenses that the Utilities Committee determines to be detrimental to the applicant's ability to pay their annual sewer special assessment installment.

5. The determination of the size of the family unit shall be reflective of Michigan income tax procedures in general. The allowance for a family unit shall consider:
 - A. Applicant shall be entitled to one "allowable exemption" for each verified household member.
 - B. An additional "allowable exemption" may be granted for:
 - 1) Any household member who is 65 years old or older.
 - 2) Any household member who is a paraplegic or quadriplegic.
 - C. Exemption amount is equal to the amount of exemptions allowed on MI Income Tax return for the immediately preceding year.

6. The annual poverty income threshold shall be based on 150% of the State of Michigan guidelines for "poverty" which are published yearly by the State Tax Commission.

7. In the determining of the granting of any poverty deferral, all assets of the applicant (excluding the applicant's primary residence), as well as all available sources of income of funds shall be considered. The maximum assets allowed for a poverty deferral shall be two (2) times the annual poverty threshold set for granting poverty deferrals for sewer special assessments. Assets will include, but are not limited to, homes or property other than your homesteaded property, cars, boats trailers/RV's, any motorized recreational equipment, stocks and bonds, retirement accounts). **If the assets of the applicant exceed this level, a poverty deferral shall not be granted.**

8. The granting of a poverty deferral may be partial or total.

Policy No. 706- Sewer Special Assessment Poverty Deferrals
Page 3 of 3

9. The granting of a deferral shall be based on the applicant's adjusted income. If the applicants adjusted income is less than the current year poverty income threshold the deferral shall be granted at 100%. If the income is greater than the current year poverty income threshold a partial deferral may be granted, or the deferral may be denied at the discretion of the Utilities Committee.

10. Income shall be considered to include all of the following:

- A. Money, wages, and salaries before any deductions.
- B. Net receipts from non-farm self employments. These are from a person's own business, professional enterprise, or partnership, after deduction for business expenses.
- C. Net receipts from farm self-employment. These are receipts from a farm which one operates as an owner, renter, or sharecropper, after deductions for farm operating expenses.
- D. Regular payments from social security, railroad retirement, unemployment compensation, strike benefits from union funds, workers compensation, veteran's payments, public assistance (including Aid to Families with Dependent Children, Supplemental Security Income, Emergency Assistance money payments, and non-federally funded general relief money payments).
- E. Alimony, child support and military family allotments or other support from an absent family member or someone not living in the household.
- F. Private pensions, government employee pensions (including military retirement pay) and regular insurance or annuity payments.
- G. College or university scholarships, grants, fellowships and assistantship.
- H. Dividends, interest, net rental income, net royalties, periodic receipts from estates or trusts, and net gambling or lottery winnings.
- I. Money received from the sale of property such as stocks, bonds, and a house.

11. Income does NOT include the following:

- A. Withdrawals of bank deposits, borrowed money, or tax refunds.
- B. Food or housing received in lieu of wages and the value of food and fuel produced and consumed on farms.
- C. Federal non-cash benefit programs such as Medicare, Medicaid, food stamps and school lunches.

12. As a condition of granting the deferral, there shall be no reverse mortgages in place on the property. **If such mortgage is in place, the application for deferral shall be denied.**

13. As a condition of granting the deferral, the amount deferred shall constitute a lien on the subject property, and the property owner or agent shall sign a document, in recordable form, that will provide notice of the lien on the property for the deferred amount.

14. The total sum of all annual deferments, both principal and interest, shall be paid in full at the time of any change in ownership of the subject property. No additional interest shall be due on the amounts deferred. Change of ownership includes any and all transfers of ownership, including a transfer to heirs upon applicant's death.

2016 SEWER SPECIAL ASSESSMENT
POVERTY DEFERRAL INCOME THRESHOLD GUIDELINES
(FOR TAXES DUE FEBRUARY, 2017)

SIZE OF FAMILY UNIT	FEDERAL POVERTY GUIDELINES	150% OF POVERTY GUIDELINES
1	\$11,770	\$17,655
2	\$15,930	\$23,895
3	\$20,090	\$30,135
4	\$24,250	\$36,375
5	\$28,410	\$42,615
6	\$32,570	\$48,855
7	\$36,730	\$55,095
8	\$40,890	\$61,335

**UTILITIES COMMITTEE
AGENDA NOTES**

MEETING DATE: January 9, 2017

PERSON PLACING ITEM ON AGENDA: Manager

AGENDA TOPIC: Quarterly Sanitary Sewer Rate Review

EXPLANATION OF TOPIC: On an annual basis the Township reviews the quarterly sanitary sewer rates that are charged to determine if the current rates are adequate to cover the operations / maintenance and debt service obligations.

The Township performed a cash flow projection which was originally undertaken as part of the Capital Improvement Plan / Fiscal Analysis. We have also begun taking into consideration the funding obligations as delineated in the Sanitary Sewer Asset Management Plan. The attached material is a projection based upon previously accepted assumptions. Any suggestions that are listed on the attached spreadsheets are merely for illustrative purposes. However, to summarize the attached:

1. Operating and Maintenance Charge: The rate will need to increase in the near future to meet the funding shortages that are listed in the Asset Management Plan. Specifically see the description of the WWTP (page 6 and Appendix H) and the grinder pumps (page 8 and Appendix I) funding obligations. Also, the cost of defending current litigation needs to be factored in to the equation.
2. Debt Service Charge: As seen on "Scenario 1", the debt obligations continue to be met sooner than previously reported due to refinancing of the sewer bonds and new REU purchases exceeding the base assumption of 10 new REU's per year.

Ken Palka of PHP will be in attendance to explain the attached material and answer any questions.

MATERIALS ATTACHED AS SUPPORTING DOCUMENTS:

- Sewer Debt Service Cash Flow and O&M Projection 1/2/2017
- Asset Management Plan (excerpt Pages).

POSSIBLE COURSES OF ACTION: Recommend that the O&M rate be:

1. Kept the same @ \$95.50 which will lead to a funding shortage of \$159,847
2. Increased by approximately 1% - 19% which will lead to a smaller funding shortage
3. Increased by approximately 20% to \$115 to ensure that there is no funding shortage.
4. Decrease the Debt Service quarterly bill and increase the O&M portion of the bill by the same amount which would keep the

SUGGESTED MOTION: moved by, _____ seconded by, _____ to recommend to the Brighton Township Board a rate adjustment as follows:

_____.

Charter Township of Brighton
Sewer Debt Service Cash Flow Projection Analysis
Sewer O & M Rate Analysis for 3/31/18
(Prepared 1/2/17)

Explanation

1) Currently the quarterly rates for the Brighton Township Sewer System are as follows:

O & M - \$95.50 per REU

Debt Service - \$80.50 per REU

Total- \$176.00 per Qtr per REU

2) Sewer O & M Rate Analysis maintains as a guideline equity does not go below 50% of total O & M expenses.

3) If rates remain the same, \$95.50, the O & M fund will more than likely have a shortage of \$159,847 @ 3/31/18.

4) If rates are increased enough to break even with no shortage, the increase would have to be 20.42%, or a revised rate of \$115 per qtr which equates to a \$19 increase per qtr.

5) One option for the Township to consider is to reduce the Debt Service Charge the same amount as the increase in the O & M fund, thus overall customers' rates would remain the same, \$176 per Qtr per REU

6) Scenario 1 - for the Debt Service cash projection shows if rates are unchanged, maintained at \$80.50, the GF loan \$2,031,000 would be paid - off by 9/30/21.

7) Scenario 2 - for the Debt Service cash projection shows if rates are reduced by \$19.50, from \$80.50 to \$61, the GF loan \$2,031,000 would be paid - off by 9/30/22.

CHARTER TOWNSHIP OF BRIGHTON
 SEWER O & M FUND
 Rate Study Workpaper
 For The Year Ending 3/31/18
 (Completed on 1/2/17)

DESCRIPTION	ACTUAL 1 YEAR ENDING 3/31/2016	ACTUAL 9 months ENDING per GL 12/22/2016	Estimated Annualized 1 YEAR ENDING 3/31/2017	KEEP RATE SAME	20% INCREASE RATE	3% INCREASE RATE	2% INCREASE RATE	
				\$95.50	\$115.00	\$98.37	\$97.41	
	Projected 1 YEAR ENDING 3/31/2018	Projected 1 YEAR ENDING 3/31/2018	Projected 1 YEAR ENDING 3/31/2018	Projected 1 YEAR ENDING 3/31/2018	Projected 1 YEAR ENDING 3/31/2018	Projected 1 YEAR ENDING 3/31/2018	Projected 1 YEAR ENDING 3/31/2018	
REVENUES								
BILLINGS - USER CHARGE	757,446	585,309	780,412	790,190	951,538	813,896	805,994	
OTHER REVENUE - REIMB, MISC	24,962	14,914	15,000	10,000	10,000	10,000	10,000	
INTEREST INCOME	604	308	600	600	600	600	600	
TOTAL REVENUES	783,012	600,531	796,012	800,790	962,138	824,496	816,594	
EXPENSES								
OPERATING/MAINT. EXPENSES								
SUPPLIES & CHEMICALS	30,208	13,537	16,049	25,000	25,000	25,000	25,000	Estimate
CONTRACTED SERVICES - FIXED	193,708	147,341	196,455	196,455	196,455	196,455	196,455	Annual rate remains same
CONTRACTED SERVICES - OUT OF SCOPE	33,671	29,580	39,440	50,000	50,000	50,000	50,000	Estimate per operators
CONTRACTED SERVICES - SLUDGE HAULING	26,757	22,915	22,915	25,000	25,000	25,000	25,000	1 haul - estimated cost
UTILITIES - ELECTRIC/GAS	91,475	58,169	100,000	100,000	100,000	100,000	100,000	3/31/16 was warm winter; will go up 3/31/18
TELEPHONE	1,099	745	993	1,000	1,000	1,000	1,000	Estimate
R & M - GROUNDS & BLDG.	10,908	8,641	11,521	11,000	11,000	11,000	11,000	Ordinary R&M (pay major R & M from Eq Repl Fund)
R & M - EQUIP/SYSTEM	131,573	189,753	253,004	75,000	75,000	75,000	75,000	Ordinary R&M (pay major R & M from Eq Repl Fund)
LIABILITY INSURANCE	25,678	19,322	25,763	27,000	27,000	27,000	27,000	Estimate small increase
PERMITS	3,270	2,450	3,500	3,750	3,750	3,750	3,750	Estimate small increase
GRINDER PUMPS-replacements	77,851	59,344	79,125	0	0	0	0	Paid by Equip Repl Fund
TRANSFERS TO EQ./INFRASTR. REPLACEMENT FUND	185,400	104,000	104,000	100,000	100,000	100,000	100,000	Recommended minimum trans.
TOTAL OPERATING/MAINT. EXPENSES	811,598	655,797	854,768	614,205	614,205	614,205	614,205	
ADMINISTRATIVE EXPENSES								
COMPUTER SUPPORT SERVICES	2,173	747	2,500	2,500	2,500	2,500	2,500	Estimate
ADMIN FEES	4,800	3,600	4,800	4,800	4,800	4,800	4,800	Estimate
AUDIT SERVICES	4,800	4,800	4,800	4,800	4,800	4,800	4,800	Estimate
PROFESSIONAL/LEGAL/CONSULTING FEES	17,336	69,781	93,041	200,000	200,000	200,000	200,000	Due to lawsuit increased legal
INTEREST EXPENSE - G/F LOAN	4,297	4,297	4,297	4,297	4,297	4,297	4,297	Annual Interest @ 2% (GF loan \$214,832)
OFFICE & OTHER	3,123	1,575	2,000	2,100	2,100	2,100	2,100	Estimate
CONTINGENCY	0	0	0	10,000	10,000	10,000	10,000	Estimate
TOTAL ADMINISTRATIVE EXPENSES	36,529	84,800	111,438	228,497	228,497	228,497	228,497	
TOTAL EXPENSES	848,127	740,597	966,204	842,702	842,702	842,702	842,702	
NET REVENUES OVER (UNDER) EXPENSES	(65,115)	(140,066)	(170,192)	(41,912)	119,436	(18,206)	(26,108)	
BEGINNING EQUITY	538,723	473,608	473,608	303,416	303,416	303,416	303,416	
ENDING EQUITY	473,608	333,542	303,416	261,504	422,852	285,210	277,308	
GUIDELINE - 50% OF TOTAL EXPENSES	424,064	370,299	483,102	421,351	421,351	421,351	421,351	
OVERAGE/(SHORTAGE)	49,545	(36,757)	(179,686)	(159,847)	1,501	(136,141)	(144,043)	

CHARTER TOWNSHIP OF BRIGHTON
 SEWER O & M FUND
 Rate Study Workpaper
 For The Year Ending 3/31/18
 (Completed on 1/2/17)

DESCRIPTION	ACTUAL 1 YEAR ENDING 3/31/2016	ACTUAL 9 months ENDING per GL 12/22/2016	Estimated Annualized 1 YEAR ENDING 3/31/2017	KEEP RATE SAME	20%	3%	2%
				\$95.50	INCREASE RATE \$115.00	INCREASE RATE \$98.37	INCREASE RATE \$97.41
				Projected 1 YEAR ENDING 3/31/2018	Projected 1 YEAR ENDING 3/31/2018	Projected 1 YEAR ENDING 3/31/2018	Projected 1 YEAR ENDING 3/31/2018
# OF REU'S BILLED FOR O & M 1% INCREASE OVER PRIOR YEAR ASSUMED (2,008 X 1.01)				2,028	2,028	2,028	2,028
# OF QUARTERS (# OF BILLS SENT TO CUSTOMERS)				4	4	4	4
RATE CHARGED PER REU/QTR				<u>\$95.50</u>	<u>\$115.00</u>	<u>\$98.37</u>	<u>\$97.41</u>
TOTAL BILLINGS BEFORE PENALTIES				774,696	932,880	797,937	790,190
PENALTIES (AVERAGES 2% OF BILLINGS)				<u>15,494</u>	<u>18,658</u>	<u>15,959</u>	<u>15,804</u>
TOTAL BILLINGS AFTER PENALTIES				<u>790,190</u>	<u>951,538</u>	<u>813,896</u>	<u>805,994</u>
CURRENT RATE @ 3/31/17				\$ 95.50	\$ 95.50	\$ 95.50	\$ 95.50
PERCENTAGE INCREASE PLUS 1				0.0000	1.2042	1.0300	1.0200
REVISED RATE				\$95.50	\$115.00	\$98.37	\$97.41

CHARTER TOWNSHIP OF BRIGHTON
 SEWER EQUIPMENT/INFRASTRUCTURE REPLACEMENT FUND
 ACTUAL FOR YEAR ENDING 3/31/16
 PROJECTED FOR YEARS ENDING 3/31/17 & 3/31/18
 (Completed on 1/2/17)

	Actual 3/31/2016	Projected 3/31/2017	Projected 3/31/2018	
REVENUES				
TRANSFERS IN FROM O & M FUND	185,400	104,000	100,000	See O & M transfers out
INTEREST INCOME	1,826	1,900	1,235	Estimate
OTHER	0	0	0	
TOTAL REVENUES	187,226	105,900	101,235	
EXPENSES				
EQUIPMENT/INFRASTRUCTURE REPLACEMENTS	0	0	94,500	Estimate using engr Asset Mgmt Report
MAJOR REPAIRS	0	0	150,000	Estimate; Previously paid by O & M
GRINDER PUMP REPLACEMENT	0	0	120,000	Estimate per engr Asset Mgmt Report as a base
DEBT - INTEREST EXPENSE - GF	2,800	2,800	2,800	Annual Interest @ 2% (GF loan \$140,000)
DEBT - PRINCIPLE - GF	0	0	0	
OTHER	0	0	0	
TOTAL EXPENSES	2,800	2,800	367,300	
NET REVENUES OVER (UNDER) EXPENSES	184,426	103,100	(266,065)	
BEGINNING EQUITY	329,872	514,298	617,398	
ENDING EQUITY	514,298	617,398	351,333	

NOTE - In order to properly fund the Sewer Equipment/Infrastructure Replacement Fund to proper amounts the O & M rates would have to be increased tenfold in order to have the funds available to pay for future replacements, & major repairs.

BRIGHTON TWP SEWER - ORIGINAL DISTRICT
 CASH FLOW SUMMARY
 PER REQUEST OF UTILITY COMMITTEE
 STARTING 10/1/16
 PREPARED 1/2/17

- Assumptions - (1) No significant changes with original assessments.
 - (2) Includes several contracts paying over time.
 - (3) Rate remains at \$80.50, 10 REU's added per year (starting at 2,230 REU's)
 - (4) Rate remains at \$10,260; 10 REU's added per year
 - (5) No interest from investments.
 - (6) Current loan balance from G/F is \$2,081,000, No additional loans needed. Loan would be paid back 9/30/21
 - (7) Bonds are paid off by 9/2020.
 - (8) Misc chargebacks/fees projected \$10,000 per year; \$39,212 owed to GF for prior yr's chargebacks.

SCENARIO 1

PERIOD	BEGINNING BALANCE	(1) ORIGINAL ASSESSMENT	(1) ORIGINAL SPENCER ASSESSMENT	(2) INDIVIDUAL ASSESSMENTS	(3) QTRLY DS CHARGES	(4) \$10,260 NEW USER TAP FEE	(5) INTEREST FROM BANKS	(6) G/F LOANS	TOTAL RECEIPTS	(7) BOND PAYMENTS	(8) OTHER/FEES & CHARGES	(6) PRIN. & INTEREST PAYMENTS' TO G/F	TOTAL DISBURSEMENTS	ENDING BALANCE
10/01/2016 THRU 3/31/2017	1,822,574	834,792	19,815	46,435	359,433	51,300	0	0	1,311,775	94,000	44,212	12,310	150,522	2,983,827
4/1/2017 THRU 9/30/2017	2,983,827	0	0	0	360,238	51,300	0	0	411,538	1,719,000	5,000	12,310	1,736,310	1,659,055
10/01/2017 THRU 3/31/2018	1,659,055	796,416	19,020	44,970	361,043	51,300	0	0	1,272,749	77,500	5,000	12,310	94,810	2,836,994
4/1/2018 THRU 9/30/2018	2,836,994	0	0	0	361,848	51,300	0	0	413,148	1,657,500	5,000	12,310	1,674,810	1,575,332
10/01/2018 THRU 3/31/2019	1,575,332	746,710	18,226	43,508	362,653	51,300	0	0	1,222,397	45,900	5,000	12,310	63,210	2,734,519
4/1/2019 THRU 9/30/2019	2,734,519	0	0	0	363,458	51,300	0	0	414,758	1,605,900	5,000	12,310	1,623,210	1,526,067
10/01/2019 THRU 3/31/2020	1,526,067	707,304	17,432	42,045	364,263	51,300	0	0	1,182,344	30,300	5,000	12,310	47,610	2,660,801
4/1/2020 THRU 9/30/2020	2,660,801	0	0	0	365,068	51,300	0	0	416,368	1,545,300	5,000	1,403,825	2,954,125	123,044
10/01/2020 THRU 3/31/2021	123,044	0	16,638	0	365,873	51,300	0	0	433,811	5,000	500,794	505,794	51,061	1,061
4/1/2021 THRU 9/30/2021	51,061	0	0	0	366,678	51,300	0	0	417,978	0	5,000	131,000	136,000	333,039
10/01/2021 THRU 3/31/2022	333,039	0	15,844	0	367,483	51,300	0	0	434,627	0	5,000	0	5,000	762,665
4/1/2022 THRU 9/30/2022	762,666	0	0	0	368,288	51,300	0	0	419,588	0	5,000	0	5,000	1,177,254
10/01/2022 THRU 3/31/2023	1,177,254	0	15,049	0	369,093	51,300	0	0	435,442	0	5,000	0	5,000	1,607,696
4/1/2023 THRU 9/30/2023	1,607,696	0	0	0	369,898	51,300	0	0	421,198	0	5,000	0	5,000	2,023,894
10/01/2023 THRU 3/31/2024	2,023,894	0	14,255	0	0	0	0	0	14,255	0	5,000	0	5,000	2,033,149
4/1/2024 THRU 9/30/2024	2,033,149	0	0	0	0	0	0	0	0	0	0	0	0	2,033,149
10/01/2024 THRU 3/31/2025	2,033,149	0	0	0	0	0	0	0	0	0	0	0	0	2,033,149
4/1/2025 THRU 9/30/2025	2,033,149	0	0	0	0	0	0	0	0	0	0	0	0	2,033,149
10/01/2025 THRU 3/31/2026	2,033,149	0	0	0	0	0	0	0	0	0	0	0	0	2,033,149
4/1/2026 THRU 9/30/2026	2,033,149	0	0	0	0	0	0	0	0	0	0	0	0	2,033,149
10/01/2026 THRU 3/31/2027	2,033,149	0	0	0	0	0	0	0	0	0	0	0	0	2,033,149
4/1/2027 THRU 9/30/2027	2,033,149	0	0	0	0	0	0	0	0	0	0	0	0	2,033,149
10/01/2027 THRU 3/31/2028	2,033,149	0	0	0	0	0	0	0	0	0	0	0	0	2,033,149
4/1/2028 THRU 9/30/2028	2,033,149	0	0	0	0	0	0	0	0	0	0	0	0	2,033,149
10/01/2028 THRU 3/31/2029	2,033,149	0	0	0	0	0	0	0	0	0	0	0	0	2,033,149
4/1/2029 THRU 9/30/2029	2,033,149	0	0	0	0	0	0	0	0	0	0	0	0	2,033,149
10/01/2029 THRU 3/31/2030	2,033,149	0	0	0	0	0	0	0	0	0	0	0	0	2,033,149
4/1/2030 THRU 9/30/2030	2,033,149	0	0	0	0	0	0	0	0	0	0	0	0	2,033,149
		3,085,222	136,279	176,958	5,105,317	718,200	0	0	9,221,976	6,775,400	114,212	2,121,769	9,011,401	

BRIGHTON TWP SEWER - ORIGINAL DISTRICT
 CASH FLOW SUMMARY
 PER REQUEST OF UTILITY COMMITTEE
 STARTING 10/1/16
 PREPARED 1/2/17

- Assumptions
- (1) No significant changes with original assessments.
 - (2) Includes several contracts paying over time.
 - (3) Rate reduced to \$61 from \$80.50, 10 REU's added per year (starting at 2,230 REU's).
 - (4) Rate remains at \$10,260; 10 REU's added per year
 - (5) No interest from investments.
 - (6) Current loan balance from G/F is \$2,031,000, No additional loans needed. Loan would be paid back 9/30/2022.
 - (7) Bonds are paid off by 9/2020.
 - (8) Misc chargebacks/fees projected \$10,000 per year; \$39,212 owed to GF for prior yr's chargebacks.

SCENARIO 2

PERIOD	(1) BEGINNING BALANCE	(1) ORIGINAL ASSESSMENT	(1) ORIGINAL SPENCER ASSESSMENT	(2) INDIVIDUAL ASSESSMENTS	(3) QTRLY DS CHARGES	(4) \$10,260 NEW USER TAP FEE	(5) INTEREST FROM BANKS	(6) G/F LOANS	(7) TOTAL RECEIPTS	(7) BOND PAYMENTS	(8) OTHER/FEES & CHARGES	(6) PRIN. & INTEREST PAYMENTS* TO G/F	TOTAL DISBURSEMENTS	ENDING BALANCE
10/01/2016 THRU 3/31/2017	1,822,574	834,792	19,815	46,435	359,433	51,300	0	0	1,311,775	94,000	44,212	12,310	150,522	2,983,827
4/1/2017 THRU 9/30/2017	2,983,827	0	0	0	272,975	51,300	0	0	324,275	1,719,000	5,000	12,310	1,736,310	1,571,792
10/01/2017 THRU 3/31/2018	1,571,792	796,416	19,020	44,970	273,585	51,300	0	0	1,185,291	77,500	5,000	12,310	94,810	2,662,273
4/1/2018 THRU 9/30/2018	2,662,273	0	0	0	274,195	51,300	0	0	325,495	1,657,500	5,000	12,310	1,674,810	1,312,958
10/01/2018 THRU 3/31/2019	1,312,958	746,710	18,226	43,508	274,805	51,300	0	0	1,134,549	45,900	5,000	12,310	63,210	2,384,297
4/1/2019 THRU 9/30/2019	2,384,297	0	0	0	275,415	51,300	0	0	326,715	1,605,900	5,000	12,310	1,623,210	1,087,802
10/01/2019 THRU 3/31/2020	1,087,802	707,304	17,432	42,045	276,025	51,300	0	0	1,094,106	30,300	5,000	12,310	47,610	2,134,298
4/1/2020 THRU 9/30/2020	2,134,298	0	0	0	276,635	51,300	0	0	327,935	1,545,300	5,000	906,855	2,457,155	5,078
10/01/2020 THRU 3/31/2021	5,078	0	16,638	0	277,245	51,300	0	0	345,183	0	5,000	305,037	310,037	40,224
4/1/2021 THRU 9/30/2021	40,224	0	0	0	277,855	51,300	0	0	328,155	0	5,000	303,218	308,218	61,161
10/01/2021 THRU 3/31/2022	61,161	0	15,844	0	278,465	51,300	0	0	345,609	0	5,000	301,400	306,400	100,370
4/1/2022 THRU 9/30/2022	100,370	0	0	0	279,075	51,300	0	0	330,375	0	5,000	231,000	236,000	194,745
10/01/2022 THRU 3/31/2023	194,745	0	15,049	0	279,685	51,300	0	0	346,034	0	5,000	0	5,000	535,779
4/1/2023 THRU 9/30/2023	535,779	0	0	0	280,295	51,300	0	0	331,595	0	5,000	0	5,000	862,374
10/01/2023 THRU 3/31/2024	862,374	0	14,255	0	280,905	0	0	0	285,160	0	5,000	0	5,000	1,152,534
4/1/2024 THRU 9/30/2024	1,152,534	0	0	0	0	0	0	0	0	0	0	0	0	1,152,534
10/01/2024 THRU 3/31/2025	1,152,534	0	0	0	0	0	0	0	0	0	0	0	0	1,152,534
4/1/2025 THRU 9/30/2025	1,152,534	0	0	0	0	0	0	0	0	0	0	0	0	1,152,534
10/01/2025 THRU 3/31/2026	1,152,534	0	0	0	0	0	0	0	0	0	0	0	0	1,152,534
4/1/2026 THRU 9/30/2026	1,152,534	0	0	0	0	0	0	0	0	0	0	0	0	1,152,534
10/01/2026 THRU 3/31/2027	1,152,534	0	0	0	0	0	0	0	0	0	0	0	0	1,152,534
4/1/2027 THRU 9/30/2027	1,152,534	0	0	0	0	0	0	0	0	0	0	0	0	1,152,534
10/01/2027 THRU 3/31/2028	1,152,534	0	0	0	0	0	0	0	0	0	0	0	0	1,152,534
4/1/2028 THRU 9/30/2028	1,152,534	0	0	0	0	0	0	0	0	0	0	0	0	1,152,534
10/01/2028 THRU 3/31/2029	1,152,534	0	0	0	0	0	0	0	0	0	0	0	0	1,152,534
4/1/2029 THRU 9/30/2029	1,152,534	0	0	0	0	0	0	0	0	0	0	0	0	1,152,534
10/01/2029 THRU 3/31/2030	1,152,534	0	0	0	0	0	0	0	0	0	0	0	0	1,152,534
4/1/2030 THRU 9/30/2030	1,152,534	0	0	0	0	0	0	0	0	0	0	0	0	1,152,534
	<u>3,085,222</u>	<u>136,279</u>	<u>136,279</u>	<u>176,958</u>	<u>4,236,593</u>	<u>718,200</u>	<u>0</u>	<u>0</u>	<u>8,353,252</u>	<u>6,775,400</u>	<u>114,212</u>	<u>2,133,680</u>	<u>9,023,292</u>	

The capital reserves needed per year is calculated by taking the estimated cost to replace an asset divided by the remaining useful life of the asset. For example, the useful life based on condition for Asset No: 003 – Ultra Violet System Butterfly Valves, are 26 years and the estimated replacement cost is \$48,000 in 2015 dollars. This asset is currently 13 years old, therefore, in order to be able to replace the asset when it fails in 2028, a minimum of approximately \$2,300 should be saved each year starting in 2015. An inflation rate of two percent (2.0%) annually was applied to this amount to account for general monetary inflation in the market and ensure an adequate source of funds for replacement is maintained.

1. Wastewater Treatment Plant and Pump Stations

A summary of the capital reserves needed for replacement of the WWTP and pump station assets is provided in Table 4 and illustrated in Figure 3. Detailed cost analysis tables for each year have been included in Appendix D of this report.

Year		Capital Reserve Needed/Year
1	2015	\$ 652,810.00
2	2016	\$ 550,275.00
3	2017	\$ 528,980.00
4	2018	\$ 481,328.00
5	2019	\$ 475,273.00
6	2020	\$ 484,132.00
7	2021	\$ 431,280.00
8	2022	\$ 407,771.00
9	2023	\$ 393,916.00
10	2024	\$ 386,769.00

Year	Capital Reserve Needed/Year	Additional Pump Replacement Funds	Total Capital Reserve Needed/Year	
1	2015	\$ 465,738.00	\$ 134,200.00	\$ 599,938.00
2	2016	\$ 475,053.00	\$ 136,884.00	\$ 611,937.00
3	2017	\$ 144,655.00	\$ 139,621.68	\$ 284,276.68
4	2018	\$ 176,065.00	\$ 142,414.11	\$ 318,479.11
5	2019	\$ 155,602.00	\$ 145,262.40	\$ 300,864.40
6	2020	\$ 150,525.00	\$ 148,167.64	\$ 298,692.64
7	2021	\$ 150,881.00	\$ 151,131.00	\$ 302,012.00
8	2022	\$ 151,913.00	\$ 154,153.62	\$ 306,066.62
9	2023	\$ 152,420.00	\$ 157,236.69	\$ 309,656.69
10	2024	\$ 153,695.00	\$ 160,381.42	\$ 314,076.42

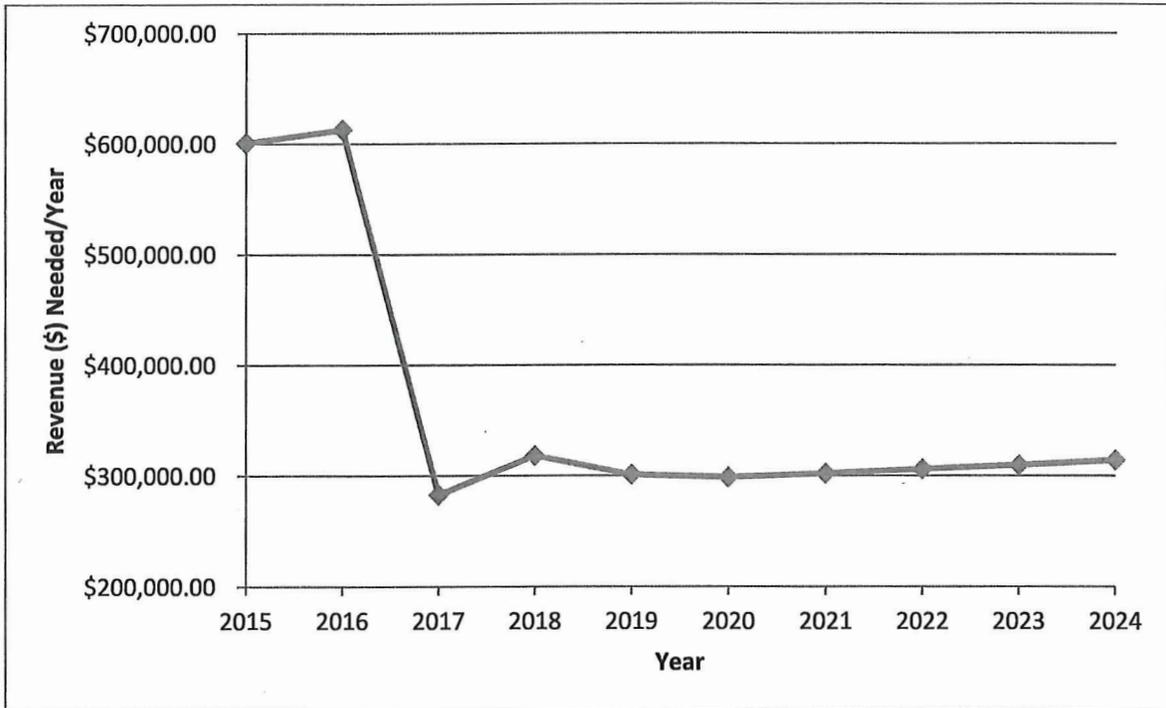


Figure 4: Grinder Pump Capital Reserves (\$) Summary

Note: A 2.0% Inflation Factor has been applied.

Given that many of the existing active grinder pumps appear to be reaching the end of their useful life within the first few years, the capital reserves needed are much higher, but then taper off to a more consistent amount once the reserves have been established. As shown in Table 5 and Figure 4, it is recommended that the Township set aside an additional \$134,200.00 (approximately 8% of the total pump replacements per year) starting in 2015 as a contingency for pump replacements due to factors other than age (i.e. lightning strikes, clogs, etc.). The 2.0% inflation factor has been applied to this contingency dollar amount as well.

Oak Knoll	2017	26	\$57,200
Old US 23	2017	1	\$2,200
Old Hawthorne Drive	2017	3	\$6,600
Parklawn	2017	7	\$15,400
Pine Ranch	2017	6	\$13,200
Point Drive	2017	1	\$2,200
School Lake	2017	16	\$35,200
Shelly Avenue	2017	6	\$13,200
Skeman	2017	7	\$15,400
Waterfront Drive	2017	4	\$8,800
Woodland Cove	2017	3	\$6,600
Woodland Shore Drive	2017	43	\$94,600
Wyndham Pointe	2017	2	\$4,400
2017 TOTAL		297	\$653,400

Carol's Drive	2018	3	\$6,600
Causeway	2018	1	\$2,200
Dominion Boulevard	2018	2	\$4,400
Grand River	2018	2	\$4,400
Hacker Road	2018	1	\$2,200
Hilton Road	2018	1	\$2,200
Kinyon	2018	1	\$2,200
Olde Hawthorne Drive	2018	4	\$8,800
Orion	2018	1	\$2,200
Parklawn	2018	2	\$4,400
Pemberton Circle	2018	2	\$4,400
Prince William Court	2018	1	\$2,200
Ridgefield Drive	2018	1	\$2,200
School Lake	2018	1	\$2,200
Whitmore Lake Road	2018	1	\$2,200
Woodland Shore Drive	2018	1	\$2,200
Woodmere Court	2018	2	\$4,400
2018 TOTAL		27	\$59,400

Asset No.	Asset Name	Asset Location	Projected Year to Fail	Cost to Replace/ Cost to Rehabilitate	Risk Factor	Notes
102	Lift Station 3 Motor Controls	Pump Station 3 – Old 23 South of Hilton	2015	\$15,000	15.0	
X 123	Pump 1	Pump Station 6	2015	\$9,000	10.0	Submersible Pump 1, bid out, awarded and scheduled for 2015 replacement
X 29	Secondary Effluent Sample Pump 1	Filter Building – Pump Room	2015	\$2,500	10.0	Replacement
24/35	Return Activated Sludge (RAS) Pump 2 & Motor	Filter Building – Pump Room	2017	\$22,500	12.7	Replacement
185	Parshall Flume Indicator	Service Building - Garage	2018	\$8,000	7.8	Replacement of electronics
26	RAS Flowmeter #1	Filter Building – Pump Room	2018	\$5,500	15.5	
27	RAS Flowmeter #2	Filter Building – Pump Room	2018	\$5,500	15.5	
28	WAS Flowmeter	Filter Building – Pump Room	2018	\$5,500	15.5	
32	Building Sump Pumps 1 and 2	Filter Building – Pump Room	2018	\$35,000	11.6	Replacement
49/50	Scum Pump & Motor	Final Settling Tanks	2018	\$35,000	10.6	Replacement
60	Oxidation Ditch #2 Rotor #3	Oxidation Ditches	2019	\$80,000	7.5	Replacement
61	Oxidation Ditch #2 Rotor #4	Oxidation Ditches	2019	\$80,000	7.5	Replacement
5-YEAR CIP TOTAL				\$399,000		

*These assets are already in failed condition

**Based on recent bid prices

.....
December 13, 2016

Mr. Brian Vick
Township Manager
Brighton Township
4363 Buno Road
Brighton, MI 48116

WASTEWATER SYSTEM MONTHLY OPERATING REPORT
November 2016

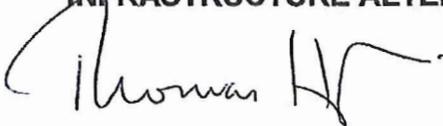
Mr. Vick,

Infrastructure Alternatives is pleased to submit this copy of the Monthly Operating Report covering the operations, maintenance, and management of your wastewater treatment facility and collection system. This Monthly Operating Report is for the month of November, 2016.

Infrastructure Alternatives continued to perform routine operation, laboratory analysis and maintenance on the collection system and lift stations as well as plant equipment during the month of November. Maintenance on the equipment at the treatment plant continues and the facility is prepared for the cold weather season that is upon us. Field work for the personnel has included lift station maintenance as well as grinder station alarm calls and emergency responses due to power failures and fluctuations from DTE that have continued to occur with regularity.

The treatment plant continued to operate within the discharge permit levels during this period with no NPDES Permit violations. Copies of the monthly reports sent to the Michigan Department of Environmental Quality are in attached.

Sincerely,
INFRASTRUCTURE ALTERNATIVES



Thomas High
Plant Manager

.....

PLANT OPERATIONS

8.4942 million gallons of wastewater was processed through the wastewater treatment plant and received full treatment during November 2016. The average daily flow into the wastewater treatment plant was 283,100 gallons. This flow rate represents approximately 43.6% of the design capacity of the Brighton Township Wastewater Treatment Plant.

Analytical testing of various parameters is performed in the plant laboratory five days per week as required by the NPDES Permit. The analytical testing shows that the effluent quality during November 2016 was well within NPDES Permit limitations. During this period, 99.4% of BOD was removed; 99.1% of Suspended Solids was removed and 94.6% of Phosphorus was removed. Daily and average values for all parameters are presented in the charts and tables in attached to this report.

COLLECTION SYSTEM AND CALLOUTS

- There were 10 grinder station callouts during November 2016:
 - November 2, 2016 – 9505 Ridgefield
 - November 3, 2016 – 9378 Lexford
 - November 3, 2016 – 9903 Dornoch
 - November 4, 2016 – 9903 Dornoch
 - November 6, 2016 – 8385 Woodland Shore Drive
 - November 11/2016 – 9085 Ridgefield
 - November 12, 2016 – 9085 Ridgefield
 - November 12, 2016 – 3487 Oak Knoll
 - November 20, 2016 – 9085 Ridgefield
 - November 30, 2016 – 2650 Parklawn

- There were two callouts to the treatment plant for power outages and equipment trips:
 - November 8, 2016 – Power outage/equipment restart
 - November 19, 2016 – Power outage/equipment restart

- There were no callouts to the pump stations for equipment failures:

- New station work:

➤ **Grinder locates**

- 1057 Xanadu
- 8321 Hilton
- 9438 Dornoch

➤ **Grinder Installations Inspections**

- 9760 Dornoch

➤ **Grinder Startup Inspections**

- 1092 Xanadu
- 9760 Dornoch

➤ **Grinder Pump Rebuilds**

- One grinder pump was rebuilt during November 2016

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

PLANT INFLUENT SHEET
BRIGHTON TOWNSHIP, MICHIGAN
November-16

WEATHER CODES
1. CLEAR
2. PARTLY CLOUDY
3. CLOUDY
4. RAIN
5. SNOW

6. WARM
7. COLD
8. WINDY
9. MELT
SNOW

PLANT NO. MI0054968
SAMPLE 500

Superintendents Signature

D A Y PN	WEATHER		FLOW	RAW SEWAGE QUALITY									
	TYPE CODE	PRECIP. IN.	TOTAL MGD	TEMP	pH	BOD-5		SS		TOTAL PHOSPHORUS		VSS	NH3-N
				DEG C	SU	MG/L	LBS	MG/L	LBS	MG/L	LBS	MG/L	MG/L
	00033	00045	50050	00011	00400	00310	85001	00530	85002	00530	85002	00535	610
1-Nov-16			0.2956	12.3	7.53	463	1141	261	643	4.11	10.1		23.5
2-Nov-16			0.2930	12.5	7.27	401	980	226	552	3.97	9.7		16.4
3-Nov-16			0.2980	12.7	7.28	360	895	178	442	3.24	8.1		21.1
4-Nov-16			0.3013	12.7	7.49	290	729			3.97	10.0		22.8
5-Nov-16			0.2990										
6-Nov-16			0.2819										
7-Nov-16			0.2811	12.3	7.31	396	928	173	406	4.07	9.5		22.8
8-Nov-16			0.2907	13.0	7.55	508	1232	238	577	3.80	9.2		22.6
9-Nov-16			0.2836	12.7	7.58	544	1287	207	490	3.94	9.3		26.2
10-Nov-16			0.2875	12.2	7.59	334	801	185	444	4.52	10.8		23.8
11-Nov-16			0.2804	11.5	7.53	548	1282	308	720	4.39	10.3		26.4
12-Nov-16			0.2900										
13-Nov-16			0.2723										
14-Nov-16			0.2919	11.0	7.56	581	1414	262	638	3.93	9.6		21.7
15-Nov-16			0.2809	12.0	7.66	543	1272	203	476	4.59	10.8		22.1
16-Nov-16			0.2951	12.1	7.69	498	1226	206	507	4.20	10.3		24.7
17-Nov-16			0.2818	10.6	7.60	410	964	276	649	4.04	9.5		22.2
18-Nov-16			0.2822	12.3	7.58	506	1191	221	520	4.13	9.7		24.1
19-Nov-16			0.2645										
20-Nov-16			0.2825										
21-Nov-16			0.2733	10.5	7.58	486	1108	220	501	3.24	7.4		21.0
22-Nov-16			0.2841	11.8	7.59	603	1429	255	604	2.85	6.8		20.4
23-Nov-16			0.2847	13.1	7.57	526	1249	247	586	3.27	7.8		23.4
24-Nov-16			0.2638	12.4	7.59	245	539	105	231	3.52	7.7		21.7
25-Nov-16			0.2434	11.9	7.64	302	613	179	363	3.86	7.8		20.4
26-Nov-16			0.2629										
27-Nov-16			0.2796										
28-Nov-16			0.2871	12.1	7.49	317	759	82	196	3.82	9.1		19.6
29-Nov-16			0.2887	11.1	7.59	407	980	313	754	3.21	7.7		22.6
30-Nov-16			0.2933	11.6	7.68	386	944	249	609	4.08	10.0		23.5
1-Dec-16													
Total		0.00	8.4942				22961		10909		201.2		
AVG			0.2831	12.0	7.54	439	1044	219	519	3.85	9.1	0	22.4
MAX		0.00	0.3013	13.1	7.69	603	1429	313	754	4.59	10.8	0	26.4
MIN		0.00	0.2434	10.5	7.27	245	539	82	196	2.85	6.8	0	16.4

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

FINAL EFFLUENT SHEET
BRIGHTON TOWNSHIP, MICHIGAN

PERMIT # MI0054968

November-16

Superintendents Signature

D A Y	BOD-5			SS			TOTAL-P			VSS	NH3-N	NH3-N	pH	DO	F. COLI*
	MG/L	LBS.	% Rem	MG/L	LBS.	%REM	MG/L	LBS.	%REM	MG/L	MG/L	LBS.	SU	MG/L	/100 ml
PN SP	310	85001	81010	530	85002	81011	00665	85004	81012	00535	00610	00610	00400	00300	31616
1-Nov-16	1.31	3.2	99.7%	2.7	6.7	99.0%	0.20	0.5	95.1%		0.013	0.03	8.04	7.1	23
2-Nov-16	0.99	2.4	99.8%	2.8	6.8	98.8%	0.18	0.4	95.4%		0.022	0.05	8.11	7.1	1
3-Nov-16	1.74	4.3	99.5%	2.0	5.0	98.9%	0.17	0.4	94.8%		0.032	0.08	8.01	7.1	14
4-Nov-16	1.82	4.6	99.4%				0.19	0.5	95.2%		0.024	0.06	8.00	7.2	3
5-Nov-16															
6-Nov-16															
7-Nov-16	2.14	5.0	99.5%	2.4	5.6	98.6%	0.19	0.4	95.3%		0.042	0.10	7.99	7.2	16
8-Nov-16	2.16	5.2	99.6%	1.9	4.6	99.2%	0.18	0.4	95.3%		0.016	0.04	8.09	7.1	4
9-Nov-16	1.56	3.7	99.7%	1.2	2.7	99.4%	0.20	0.5	94.9%		0.015	0.04	8.05	7.0	23
10-Nov-16	1.41	3.4	99.6%	1.7	4.0	99.1%	0.22	0.5	95.1%		0.013	0.03	7.94	7.0	1
11-Nov-16	4.31	10.1	99.2%	1.0	2.3	99.7%	0.23	0.5	94.8%		0.015	0.03	7.86	7.1	4
12-Nov-16															
13-Nov-16															
14-Nov-16	1.24	3.0	99.8%	1.2	2.9	99.5%	0.25	0.6	93.6%		0.036	0.09	7.91	7.2	1
15-Nov-16	1.23	2.9	99.8%	1.0	2.3	99.5%	0.25	0.6	94.6%		0.025	0.06	7.87	7.0	3
16-Nov-16	1.05	2.6	99.8%	0.8	1.8	99.6%	0.24	0.6	94.3%		0.034	0.08	7.96	7.0	1
17-Nov-16	1.32	3.1	99.7%	1.0	2.2	99.7%	0.25	0.6	93.8%		0.036	0.08	7.82	7.0	1
18-Nov-16	1.49	3.5	99.7%	1.8	4.1	99.2%	0.23	0.5	94.4%		0.016	0.04	7.87	7.2	1
19-Nov-16															0
20-Nov-16															0
21-Nov-16	3.48	7.9	99.3%	0.7	1.6	99.7%	0.20	0.5	93.8%		0.023	0.05	7.77	7.0	1
22-Nov-16	3.70	8.8	99.4%	3.6	8.4	98.6%	0.15	0.4	94.7%		0.013	0.03	7.85	7.4	3
23-Nov-16	3.79	9.0	99.3%	1.0	2.3	99.6%	0.24	0.6	92.7%		0.013	0.03	7.81	7.0	17
24-Nov-16	7.81	17.2	96.8%	2.4	5.3	97.7%	0.18	0.4	94.9%		0.032	0.07	7.64	7.2	4
25-Nov-16	0.42	0.9	99.9%	2.0	4.1	98.9%	0.20	0.4	94.8%		0.029	0.06	7.21	7.4	1
26-Nov-16															
27-Nov-16															
28-Nov-16	3.25	7.8	99.0%	1.3	3.0	98.5%	0.17	0.4	95.5%		0.494	1.18	7.80	7.1	1
29-Nov-16	4.05	9.8		1.1	2.6	99.6%	0.21	0.5	93.5%		0.014	0.03	7.84	7.1	4
30-Nov-16	3.21	7.9	99.2%	1.8	4.3	99.3%	0.22	0.5	94.6%		0.032	0.08	7.97	7.0	1
1-Dec-16															
Total		126.2			82.7			14.7							
AVG	2.43	5.7	99.4%	1.7	3.9	99.1%	0.21	0.5	94.6%		0.045	0.11	7.88	7.1	3
MAX	7.81	17.2	99.9%	3.6	8.4	99.7%	0.25	0.6	95.5%	0.0	0.494	1.18	8.11	7.4	23
MIN	0.42	0.9	96.8%	0.7	1.6	97.7%	0.15	0.4	92.7%	0.0	0.013	0.03	7.21	7.0	0
WA	4.05	9.3		2.48	6.0			252.00			0.34				9

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

MISCELLANEOUS SHEET
BRIGHTON TOWNSHIP, MICHIGAN
November-16

PERMIT # MI0054968

Superintendents Signature _____

D A Y	AUX FUEL	POWER CONSUMPTION		CHEMICALS APPLIED
	GEN GAL	#1 KWH	GAS CUFT	FERRIC GAL
PN				
SF				
1-Nov-16				28
2-Nov-16		610309	39426	29
3-Nov-16		1939	15	25
4-Nov-16		2096	19	18
5-Nov-16		2074	13	33
6-Nov-16		2211	13	9
7-Nov-16		2085	13	29
8-Nov-16		2105	-79	13
9-Nov-16		2092	118	22
10-Nov-16		2169	50	20
11-Nov-16		2038	6	16
12-Nov-16		2226	7	19
13-Nov-16		5507	43	51
14-Nov-16		2067	14	11
15-Nov-16		2205	13	13
16-Nov-16		2295	12	12
17-Nov-16		1006	20	21
18-Nov-16		2372	13	27
19-Nov-16		1704	23	15
20-Nov-16		2217	22	16
21-Nov-16		1229	26	23
22-Nov-16		1874	25	20
23-Nov-16		1861	25	32
24-Nov-16		1737	24	11
25-Nov-16		1892	22	27
26-Nov-16		2108	22	19
27-Nov-16		1958	25	20
28-Nov-16		1843	26	21
29-Nov-16		2149	18	25
30-Nov-16				16
1-Dec-16				0
TOTAL	0	667368	39974	641
AVG	0	23835	1428	21
MAX	0	610309	39426	51
MIN	0	1006	-79	0

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

ACTIVATED SLUDGE SHEET
BRIGHTON TOWNSHIP, MICHIGAN

- *PM CODE
1. CONVENTIONAL
2. STEP FEED
3. COMPLETE MIX
4. EXTENDED AER
5. CONTACT STAB

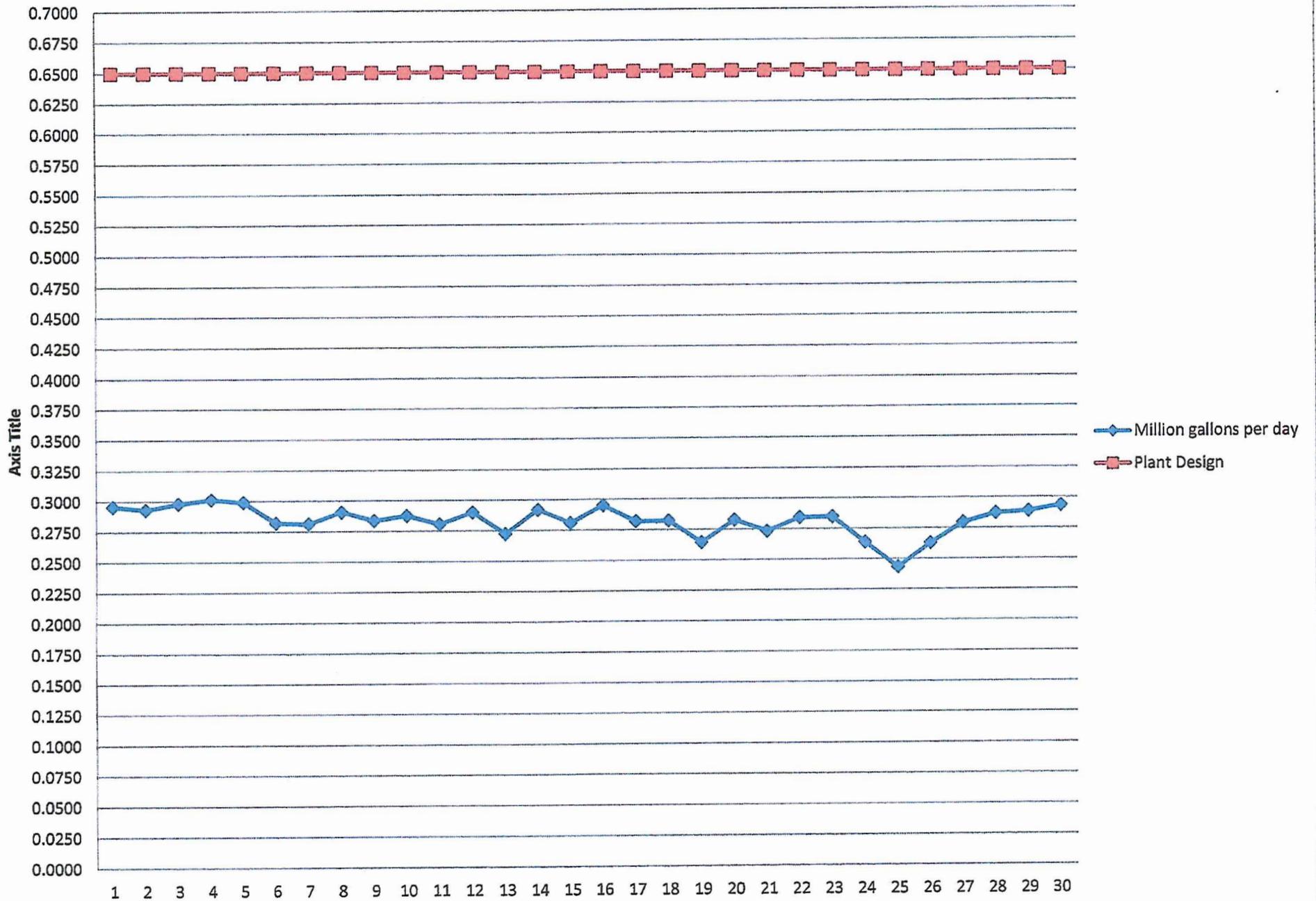
PERMIT # MI0054968

November-16

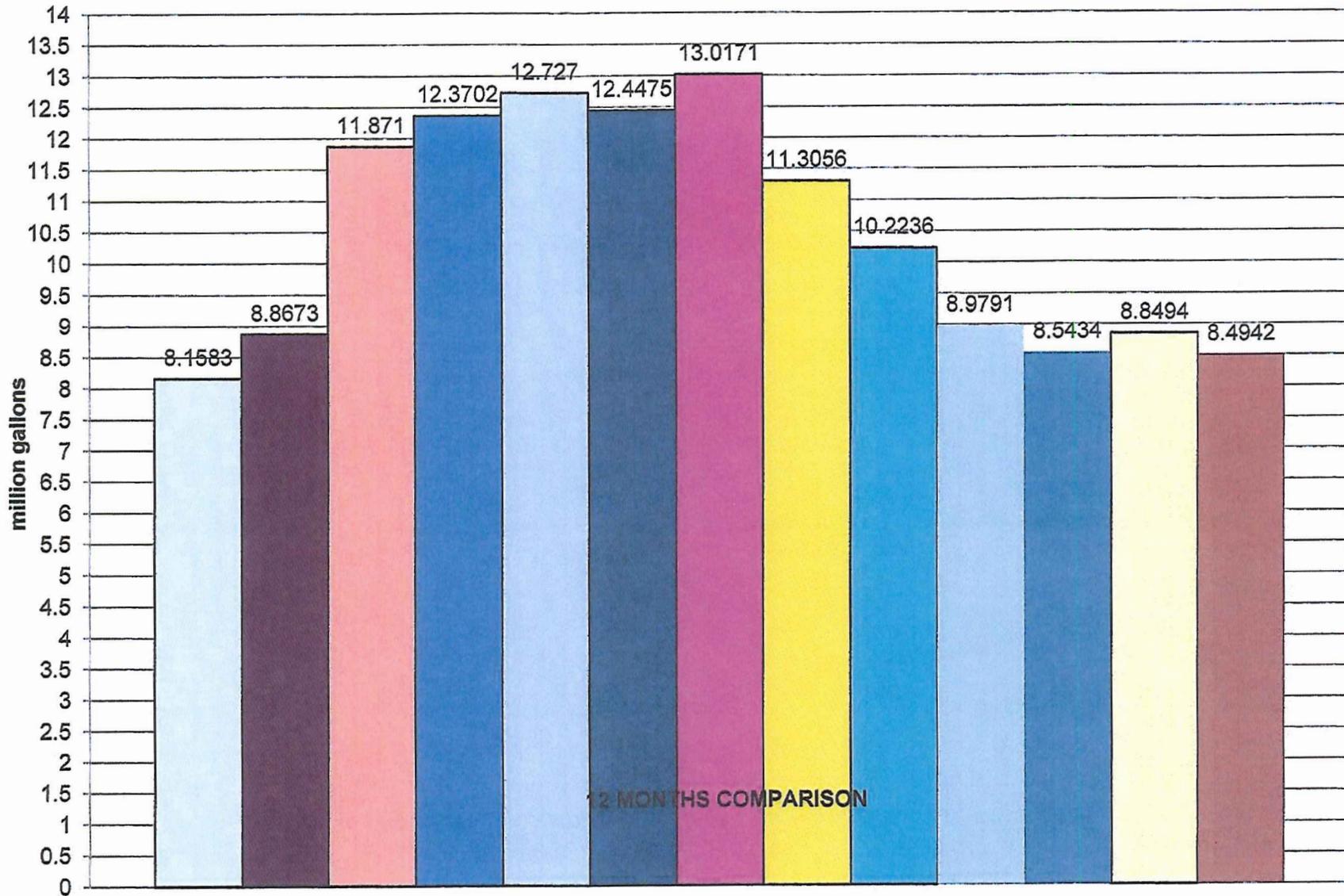
Superintendents Signature _____

D A Y	AERATION SYSTEM				MIXED LIQOUR					SECONDARY SLUDGE				PROC MODIFI CATION	
	AER VOL	DET TIME	SLUDGE AGE	ORGAN LOADING	MLSS	MLVSS	SETTL	SVI	DO	RAS		SS	VSS	WASTE	Code
	KCF	HRS.	DAYS	F/M	mg/l	mg/l	%		mg/l	MGD	%RET	mg/l	mg/l	kGAL	
PN	80993	81001	80990	80992	70323	70324	81004	81007	00300			81006	70325	80991	80889
1-Nov-16	66.8	40.6	21.9		3377		280	83		0.21	71%			5.1	4
2-Nov-16	66.8	40.9	25.5		3383		280	83		0.21	71%			0.0	4
3-Nov-16	66.8	40.2	30.8		3265					0.21	70%			0.0	4
4-Nov-16	66.8	39.8			3313		270	81		0.21	70%			5.1	4
5-Nov-16	66.8	40.1								0.21	69%			5.1	4
6-Nov-16	66.8	42.5								0.20	72%			0.0	4
7-Nov-16	66.8	42.7	37.2		3624					0.21	74%			5.1	4
8-Nov-16	66.8	41.3	26.4		3651		310	85		0.20	70%			5.1	4
9-Nov-16	66.8	42.3	29.5		3461		320	92		0.22	79%			5.1	4
10-Nov-16	66.8	41.7	34.5		3670		330	90		0.21	72%			5.1	4
11-Nov-16	66.8	42.8	21.0		3623		330	91		0.21	74%			5.1	4
12-Nov-16	66.8	41.4								0.21	72%			0.0	4
13-Nov-16	66.8	44.0								0.20	74%			0.0	4
14-Nov-16	66.8	41.1	24.5		3754		370	99		0.20	67%			5.1	4
15-Nov-16	66.8	42.7	32.9		3756					0.17	61%			5.1	4
16-Nov-16	66.8	40.6	31.5		3838		340	89		0.15	51%			5.1	4
17-Nov-16	66.8	42.6	25.3		3940		340	86		0.15	54%			10.2	4
18-Nov-16	66.8	42.5	28.0		3501		300	86		0.14	51%			10.2	4
19-Nov-16	66.8	45.3								0.14	54%			7.1	4
20-Nov-16	66.8	42.4								0.14	51%			7.1	4
21-Nov-16	66.8	43.9	28.3		3406		310	91		0.13	48%			5.1	4
22-Nov-16	66.8	42.2	22.2		3220		300	93		0.14	50%			5.1	4
23-Nov-16	66.8	42.1	24.2		3400		300	88		0.14	49%			0.0	4
24-Nov-16	66.8	45.5	58.3		3231		310	96		0.14	52%			5.1	4
25-Nov-16	66.8	49.3	39.1		3405		330	97		0.14	56%			5.1	4
26-Nov-16	66.8	45.6								0.13	50%			10.2	4
27-Nov-16	66.8	42.9								0.13	45%			0.0	4
28-Nov-16	66.8	41.8	82.2		3874		290	75		0.12	43%			5.1	4
29-Nov-16	66.8	41.5	19.1		3447		300	87		0.17	58%			5.1	4
30-Nov-16	66.8	40.9	23.0		3363					0.19	65%			5.1	4
1-Dec-16	66.8									0.00				0.0	4
Total														136.6	
AVG		42.4	31.7	#DIV/0!	3523	#DIV/0!	312	88	#DIV/0!		61%			4.4	
MAX		49.3	82.2	0.00	3940	0	370	99	0.0			0	0	10.2	
MIN		39.8	19.1	0.00	3220	0	270	75	0.0			0	0	0	

BRIGHTON TOWNSHIP WASTEWATER PLANT (DAILY FLOW)

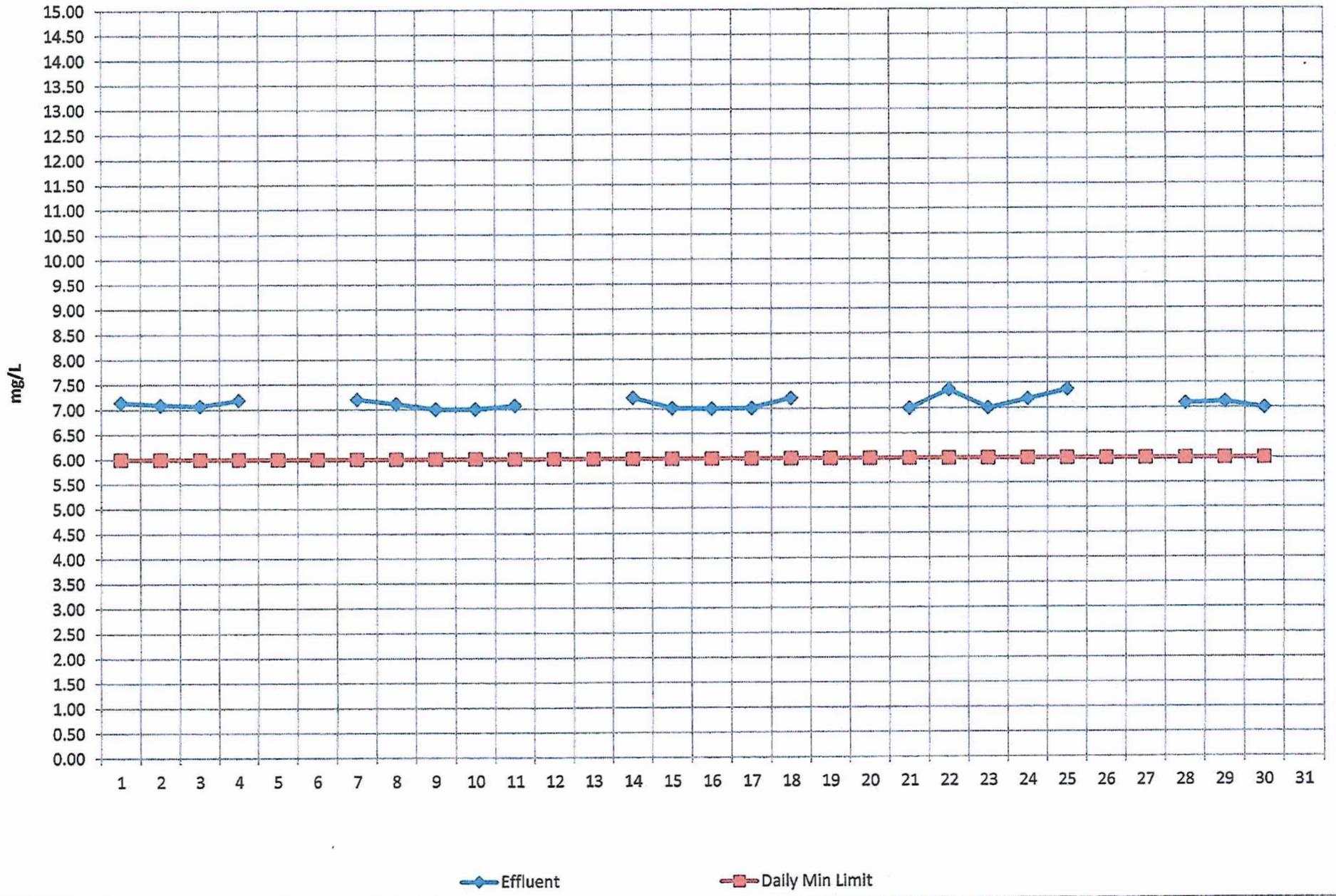


MONTHLY WASTEWATER FLOW COMPARISON

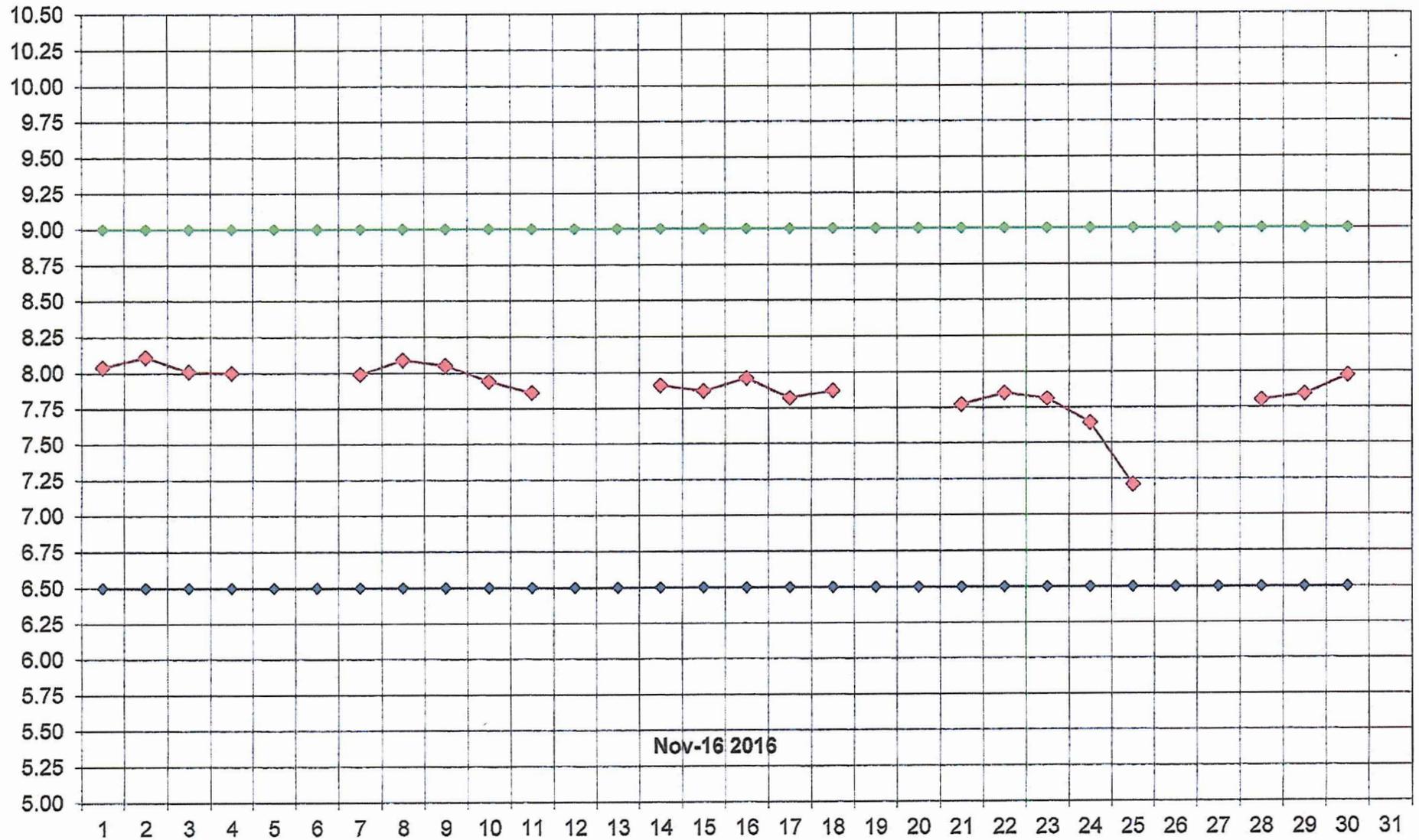


Nov-15
 Dec-15
 Jan-16
 Feb-16
 Mar-16
 Apr-16
 May-16
 Jun-16
 Jul-16
 Aug-16
 Sep-16
 Oct-16
 Nov-16

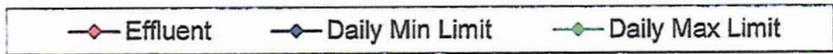
BRIGHTON TOWNSHIP WASTEWATER PLANT (Dissolved Oxygen)



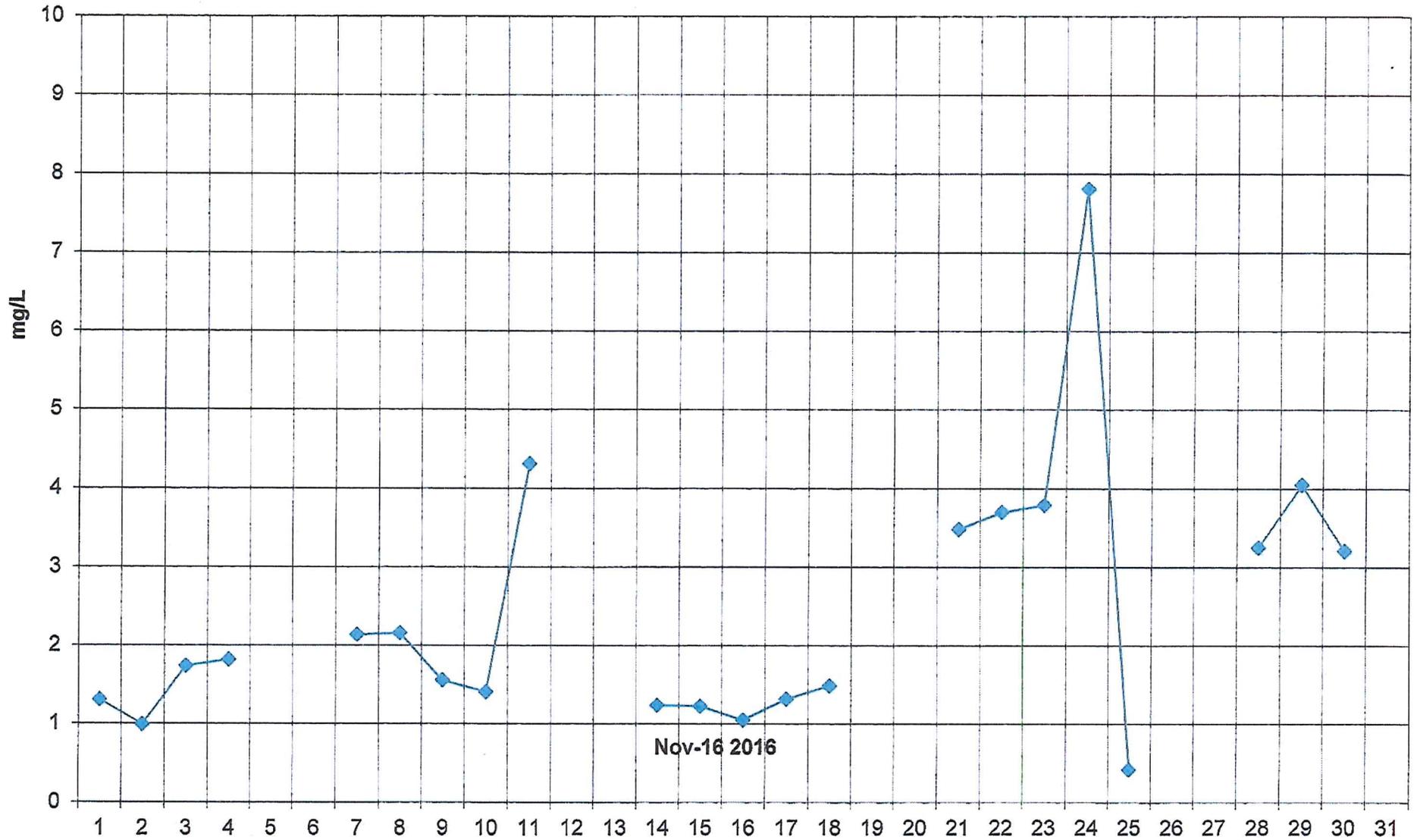
BRIGHTON TOWNSHIP WASTEWATER PLANT (pH)



Nov-16 2016

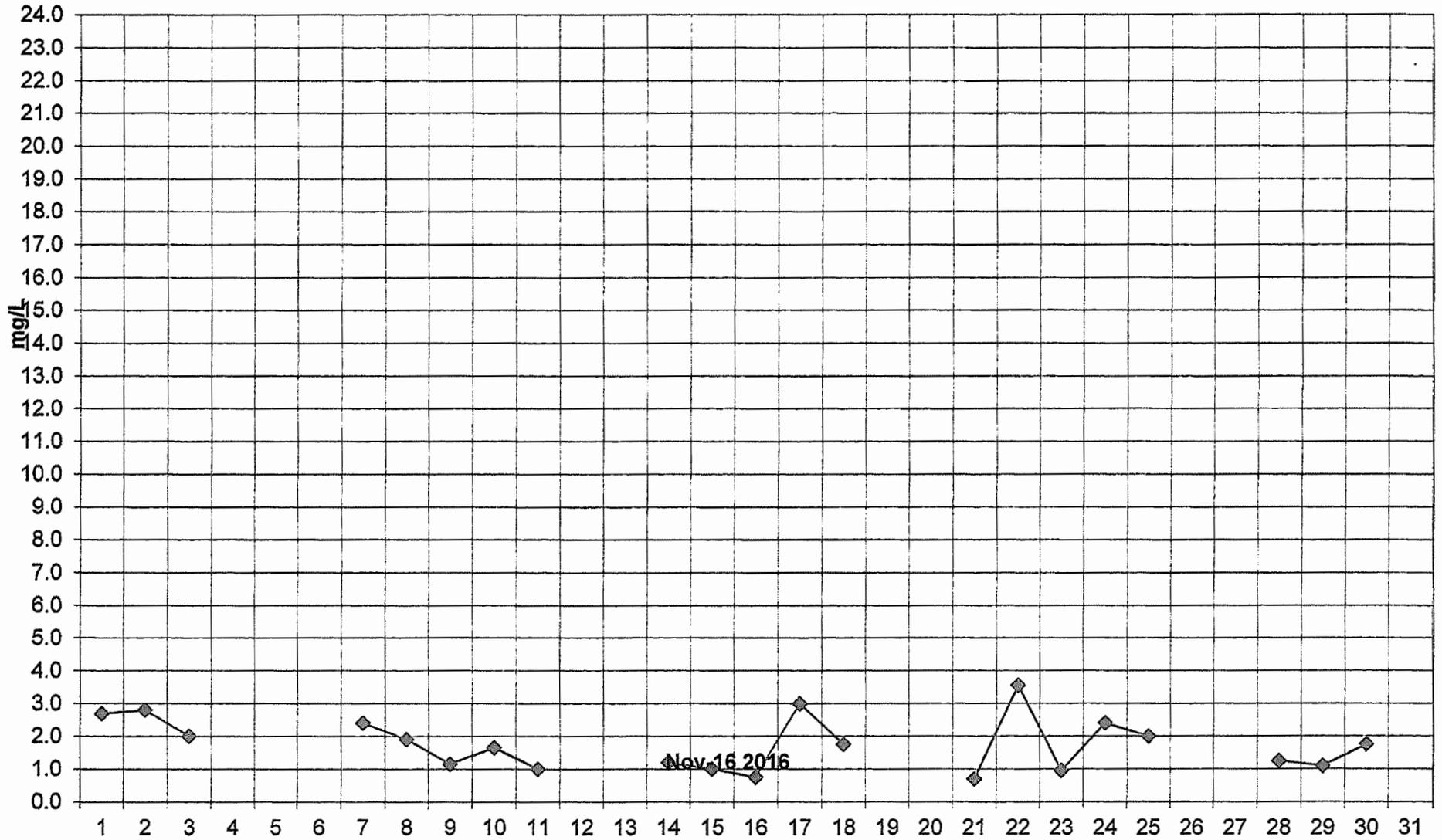


BRIGHTON TOWNSHIP WASTEWATER PLANT (Biochemical Oxygen Demand)



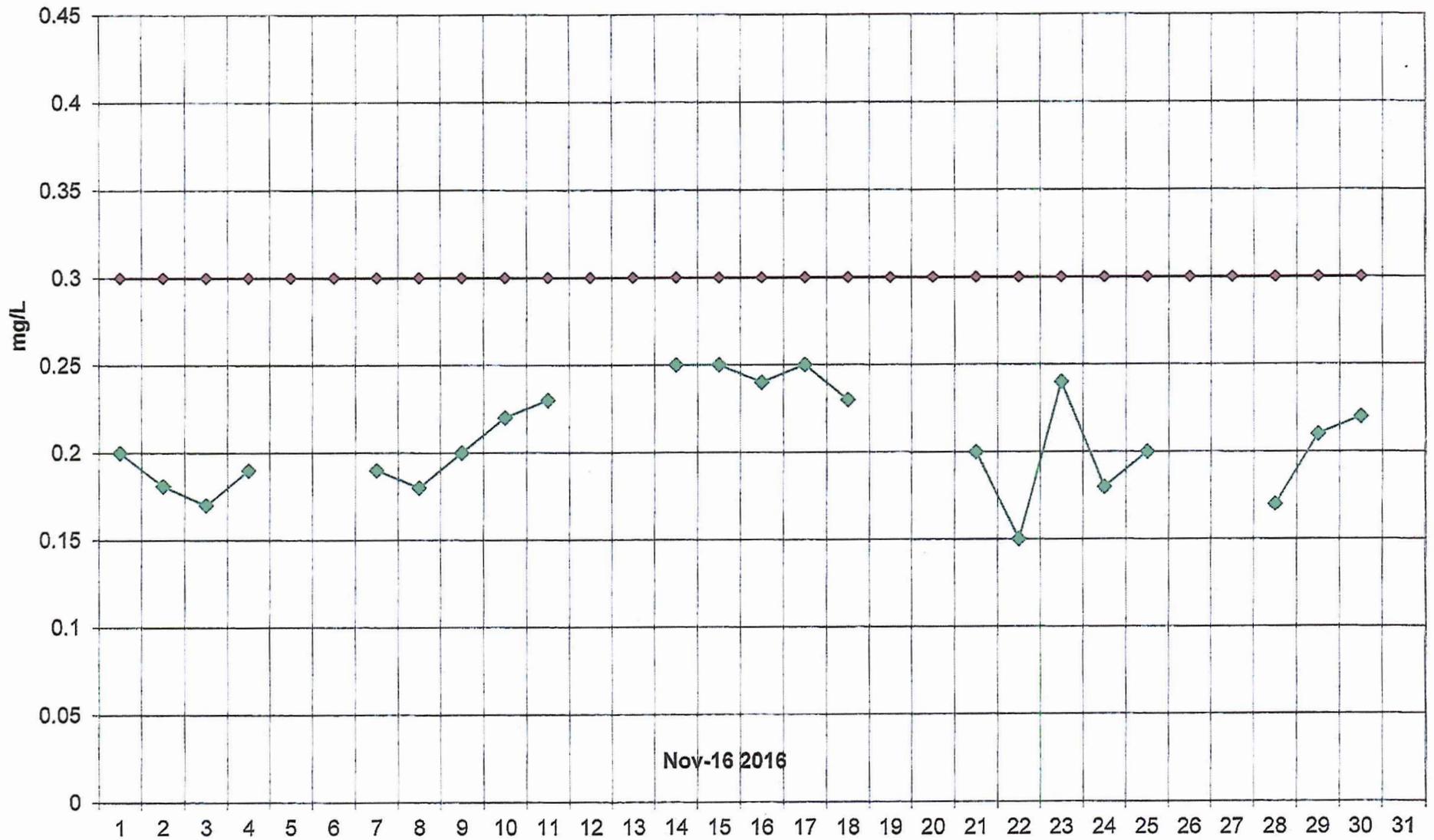
◆ Effluent ◆ 30 Day Avg Limit ▲ Daily Max Limit

BRIGHTON TOWNSHIP WASTEWATER PLANT (Suspended Solids)



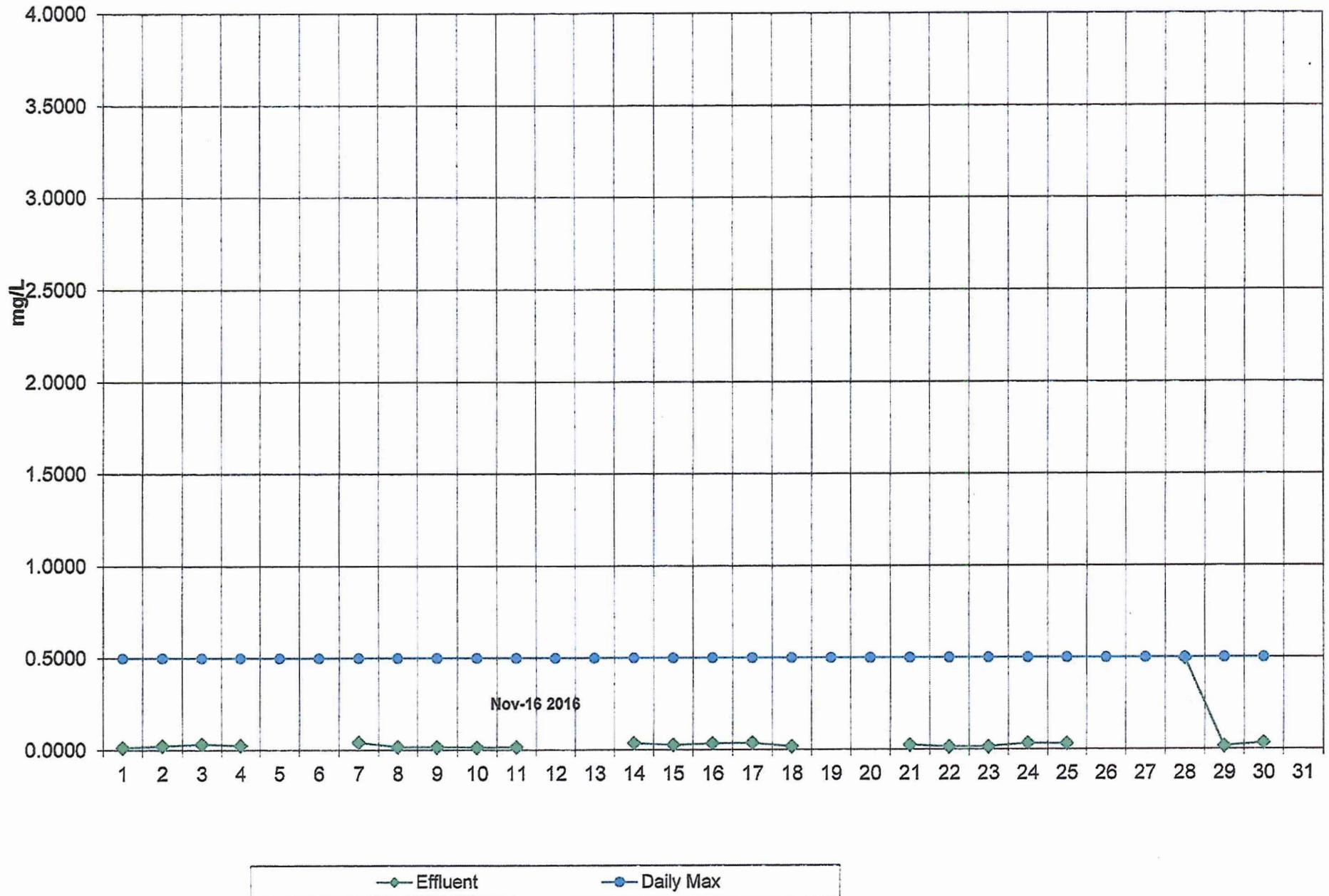
—◆— Effluent —◆— 30 Day Avg Limit

BRIGHTON TOWNSHIP WASTEWATER PLANT (Total Phosphorus)



—◆— Effluent —◆— 30 Day Avg Limit

BRIGHTON TOWNSHIP WASTEWATER PLANT (Ammonia Nitrogen)



.....
January 5, 2017

Mr. Brian Vick
Township Manager
Brighton Township
4363 Buno Road
Brighton, MI 48116

WASTEWATER SYSTEM MONTHLY OPERATING REPORT
December 2016

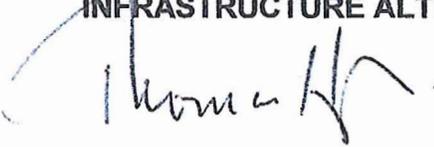
Mr. Vick,

Infrastructure Alternatives is pleased to submit this copy of the Monthly Operating Report covering the operations, maintenance, and management of your wastewater treatment facility and collection system. This Monthly Operating Report is for the month of December, 2016.

Infrastructure Alternatives continued to perform routine operation, laboratory analysis and maintenance on the collection system and lift stations as well as plant equipment during the month of December. Maintenance on the equipment at the treatment plant continues and the facility is prepared for the cold weather season that is upon us. Field work for the personnel has included lift station maintenance as well as grinder station alarm calls and emergency responses due to power failures and fluctuations from DTE that have continued to occur with regularity.

The treatment plant continued to operate within the discharge permit levels during this period with no NPDES Permit violations. Copies of the monthly reports sent to the Michigan Department of Environmental Quality are in attached.

Sincerely,
INFRASTRUCTURE ALTERNATIVES


Thomas High
Plant Manager

.....
PLANT OPERATIONS

8.9265 million gallons of wastewater was processed through the wastewater treatment plant and received full treatment during December 2016. The average daily flow into the wastewater treatment plant was 288,000 gallons. This flow rate represents approximately 44.3% of the design capacity of the Brighton Township Wastewater Treatment Plant.

Analytical testing of various parameters is performed in the plant laboratory five days per week as required by the NPDES Permit. The analytical testing shows that the effluent quality during December 2016 was well within NPDES Permit limitations. During this period, 99.3% of BOD was removed; 98.6% of Suspended Solids was removed and 94.8% of Phosphorus was removed. Daily and average values for all parameters are presented in the charts and tables in attached to this report.

COLLECTION SYSTEM AND CALLOUTS

- There were 11 grinder station callouts during December 2016:
 - December 1, 2016 – 579 Kampton
 - December 2, 2016 – 2101 Hacker
 - December 6, 2016 – 8073 Grand River
 - December 9, 2016 – 855 Old US 23
 - December 12, 2016 – 8199 W. Grand River (pump replacement)
 - December 13, 2016 – 8199 W. Grand River (electrical problem)
 - December 14, 2016 – 9126 Abbington
 - December 17, 2016 – 1580 S. Old US 23
 - December 17, 2016 – 4175 Dominion
 - December 17, 2016 – 3103 Hideaway Beach
 - December 28, 2016 – 10390 Grand River

- There was one callout to the treatment plant for power outage and equipment trips:
 - December 26, 2016 – Power outage/equipment restart

- There was one callout to the pump stations for equipment failures:
 - December 13, 2016 – Pump restart

-
- New station work:
 - Grinder locates
 - 8436 Dornach
 - 3444 Hilton Pointe Ct
 - Grinder Installations Inspections
 - 3444 Hilton Road Ct.
 - Grinder Startup Inspections
 - 9774 Medinah
 - 9760 Dornoch
 - Grinder Pump Rebuilds
 - Twelve grinder pumps were rebuilt during December 2016

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

PLANT INFLUENT SHEET
BRIGHTON TOWNSHIP, MICHIGAN
December-16

- WEATHER CODES
- | | |
|------------------|----------|
| 1. CLEAR | 6. WARM |
| 2. PARTLY CLOUDY | 7. COLD |
| 3. CLOUDY | 8. WINDY |
| 4. RAIN | 9. MELT |
| 5. SNOW | SNOW |

PLANT NO. MI0054968
SAMPLE 500

Superintendents Signature

D A Y PN	WEATHER		FLOW	RAW SEWAGE QUALITY									
	TYPE CODE	PRECIP. IN.	TOTAL MGD	TEMP	pH	BOD-5		SS		TOTAL PHOSPHORUS		VSS	NH3-N
				DEG C	SU	MG/L	LBS	MG/L	LBS	MG/L	LBS	MG/L	MG/L
	00033	00045	50050	00011	00400	00310	85001	00530	85002	00530	85002	00535	610
1-Dec-16			0.2634	12.0	7.40	684	1503	287	630	2.75	6.0		32.7
2-Dec-16			0.2941	12.1	7.32	278	682	36	88	4.03	9.9		28.4
3-Dec-16			0.2728										
4-Dec-16			0.2756										
5-Dec-16			0.2751	15.2	6.85	305	700	356	817	3.91	9.0		23.3
6-Dec-16			0.2820	11.3	7.33	266	626	244	574	3.92	9.2		28.5
7-Dec-16			0.2793	10.2	7.64	309	720	230	536	4.07	9.5		19.0
8-Dec-16			0.2687	9.6	7.71	366	820	227	509	3.87	8.7		14.9
9-Dec-16			0.2991	9.5	7.87	524	1307	226	564	3.58	8.9		16.2
10-Dec-16			0.2940										
11-Dec-16			0.2582										
12-Dec-16			0.2854	9.9	7.67	303	721	249	593	4.19	10.0		16.7
13-Dec-16			0.2721	10.0	7.60	269	610	246	558	6.49	14.7		14.0
14-Dec-16			0.3091	9.6	7.78	373	962	414	1067	5.94	15.3		15.5
15-Dec-16			0.2828	12.9	7.72	616	1453	284	670	3.77	8.9		17.8
16-Dec-16			0.2899	9.0	7.77	575	1390	243	588	3.88	9.4		12.8
17-Dec-16			0.2801										
18-Dec-16			0.2981										
19-Dec-16			0.2981	15.6	7.27	505	1256	150	373	3.33	8.3		16.5
20-Dec-16			0.3111	10.0	7.68	436	1131	234	607	3.97	10.3		16.8
21-Dec-16			0.3050	10.1	7.70	456	1160	214	544	4.21	10.7		15.4
22-Dec-16			0.3200	10.1	7.67	546	1457	291	777	3.56	9.5		17.7
23-Dec-16			0.3149	10.0	7.44	575	1510	121	318	3.89	10.2		16.4
24-Dec-16			0.2953										
25-Dec-16			0.2502										
26-Dec-16			0.3132	15.1	6.99	292	763	152	397	3.77	9.8		26.4
27-Dec-16			0.2908	10.3	7.72	347	842	271	657	4.00	9.7		15.9
28-Dec-16			0.2960	10.1	7.65	299	738	219	541	3.54	8.7		14.9
29-Dec-16			0.2831	11.5	7.63	518	1223	217	512	2.97	7.0		23.0
30-Dec-16			0.2952	9.8	7.82	642	1581	224	551	3.73	9.2		17.5
31-Dec-16			0.2738										
Total		0.00	8.9265				23153		12471		213.0		
AVG			0.2880	11.1	7.56	431	1052	233	567	3.97	9.7	0	19.1
MAX		0.00	0.3200	15.6	7.87	684	1581	414	1067	6.49	15.3	0	32.7
MIN		0.00	0.2502	9.0	6.85	266	610	36	88	2.75	6.0	0	12.8

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

FINAL EFFLUENT SHEET
BRIGHTON TOWNSHIP, MICHIGAN

PERMIT # MI0054968

December-16

Superintendents Signature

D A Y	BOD-5			SS			TOTAL-P			VSS	NH3-N	NH3-N	pH	DO	F. COLI*
	MG/L	LBS.	% Rem	MG/L	LBS.	%REM	MG/L	LBS.	%REM	MG/L	MG/L	LBS.	SU	MG/L	/100 ml
PN	310	85001	81010	530	85002	81011	00665	85004	81012	00535	00610	00610	00400	00300	31616
SF															
1-Dec-16	2.70	5.9	99.6%	2.0	4.4	99.3%	0.22	0.5	92.0%		0.033	0.07	7.13	7.0	2
2-Dec-16	0.12	0.3	100.0%	4.1	9.9	88.8%	0.19	0.5	95.3%		0.030	0.07	7.21	7.1	1
3-Dec-16															
4-Dec-16															
5-Dec-16	2.75	6.3	99.1%	2.3	5.3	99.4%	0.18	0.4	95.4%		0.039	0.09	7.30	7.0	13
6-Dec-16	2.44	5.7	99.1%	2.0	4.7	99.2%	0.19	0.4	95.2%		0.039	0.09	7.28	7.1	52
7-Dec-16	1.74	4.1	99.4%	2.0	4.7	99.1%	0.21	0.5	94.8%		0.028	0.06	8.06	7.1	21
8-Dec-16	4.00	9.0	98.9%	2.0	4.5	99.1%	0.22	0.5	94.3%		0.031	0.07	8.17	7.0	29
9-Dec-16	3.36	8.4	99.4%	2.0	5.0	99.1%	0.09	0.2	97.5%		0.014	0.03	8.55	7.1	36
10-Dec-16															
11-Dec-16															
12-Dec-16	2.41	5.7	99.2%	1.6	3.8	99.4%	0.07	0.2	98.3%		0.023	0.05	8.15	7.0	31
13-Dec-16	2.54	5.8	99.1%	2.6	5.9	98.9%	0.07	0.2	98.9%		0.026	0.06	7.96	7.1	1
14-Dec-16	2.16	5.6	99.4%	2.0	5.2	99.5%	0.08	0.2	98.7%		0.021	0.05	8.40	7.1	1
15-Dec-16	2.24	5.3	99.6%	3.0	7.0	99.0%	0.08	0.2	97.9%		0.020	0.05	8.35	7.1	2
16-Dec-16	3.05	7.4	99.5%	2.0	4.8	99.2%	0.09	0.2	97.7%		0.014	0.03	8.22	7.0	1
17-Dec-16				1.0											
18-Dec-16															0
19-Dec-16	7.19	17.9	98.6%	1.3	3.2	99.1%	0.06	0.1	98.2%		0.017	0.04	8.16	7.1	4
20-Dec-16	5.91	15.3	98.6%	1.1	2.9	99.5%	0.08	0.2	98.0%		0.027	0.07	8.26	7.4	2
21-Dec-16	5.46	13.9	98.8%	2.0	5.1	99.1%	0.11	0.3	97.4%		0.017	0.04	8.12	7.0	2
22-Dec-16	2.00	5.3	99.6%	2.9	7.7	99.0%	0.08	0.2	97.8%		0.020	0.05	8.01	7.1	1
23-Dec-16	1.43	3.8	99.8%	2.3	6.0	98.1%	0.15	0.4	96.1%		0.034	0.09	7.99	7.2	1
24-Dec-16															
25-Dec-16															
26-Dec-16	2.00	5.2	99.3%	2.0	5.2	98.7%	0.19	0.5	95.0%		0.029	0.08	7.21	7.1	14
27-Dec-16	2.00	4.9	99.4%	2.0	4.9	99.3%	0.08	0.2	98.0%		0.022	0.05	8.15	7.0	3
28-Dec-16	2.00	4.9	99.3%	2.0	4.9	99.1%	0.07	0.2	98.0%		0.020	0.05	8.05	7.1	1
29-Dec-16	2.00	4.7		2.0	4.7	99.1%	0.08	0.2	97.3%		0.019	0.04	8.17	7.2	1
30-Dec-16	2.01	4.9	99.7%	2.8	6.9	98.8%	0.06	0.1	98.4%		0.024	0.06	8.06	7.3	1
31-Dec-16															
Total		150.3			116.7			8.7							
AVG	2.80	6.8	99.3%	2.1	5.3	98.6%	0.12	0.3	96.8%		0.025	0.06	7.95	7.1	8
MAX	7.19	17.9	100.0%	4.1	9.9	99.5%	0.22	0.5	98.9%	0.0	0.039	0.09	8.55	7.4	52
MIN	0.12	0.3	98.6%	1.0	2.9	88.8%	0.06	0.1	92.0%	0.0	0.014	0.03	7.13	7.0	0
WA	4.77	12.0		2.47	5.8			244.10				0.08			32

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

ACTIVATED SLUDGE SHEET
BRIGHTON TOWNSHIP, MICHIGAN

- *PM CODE
1. CONVENTIONAL
2. STEP FEED
3. COMPLETE MIX
4. EXTENDED AER
5. CONTACT STAB

PERMIT # MI0054968

December-16

Superintendents Signature _____

D A Y	AERATION SYSTEM				MIXED LIQUOR					SECONDARY SLUDGE				PROC MODIFI CATION	
	AER VOL	DET TIME	SLUDGE AGE	ORGAN LOADING	MLSS	MLVSS	SETTL	SVI	DO	RAS		SS	VSS	WASTE	Code
	KCF	HRS.	DAYS	F/M	mg/l	mg/l	%		mg/l	MGD	%RET	mg/l	mg/l	KGAL	
PN Sr	80993	81001	80990	80992	70323	70324	81004	81007	00300			81006	70325	80991	80889
1-Dec-16	66.8	45.5	22.3		3374		290	86		0.18	69%			5.1	4
2-Dec-16	66.8	40.8	156.8		3322		300	90		0.19	64%			0.0	4
3-Dec-16	66.8	44.0								0.19	68%			0.0	4
4-Dec-16	66.8	43.5								0.19	68%			5.1	4
5-Dec-16	66.8	43.6	18.7		3661		290			0.19	67%			5.1	4
6-Dec-16	66.8	42.5	26.9		3708		300	81		0.19	67%			5.1	4
7-Dec-16	66.8	42.9	28.4		3652		310	85		0.19	67%			5.1	4
8-Dec-16	66.8	44.6	30.3		3693		300	81		0.19	69%			5.1	4
9-Dec-16	66.8	40.1	26.7		3615		290	80		0.19	63%			5.1	4
10-Dec-16	66.8	40.8								0.18	63%			5.1	4
11-Dec-16	66.8	46.4								0.18	71%			5.1	4
12-Dec-16	66.8	42.0	25.9		3687		280	76		0.18	64%			5.1	4
13-Dec-16	66.8	44.1	27.4		3667		290	79		0.18	66%			0.0	4
14-Dec-16	66.8	38.8	14.5		3726		290	78		0.19	60%			0.0	4
15-Dec-16	66.8	42.4	23.9		3845		290	75		0.19	67%			5.1	4
16-Dec-16	66.8	41.4	28.0		3942		300	76		0.19	65%			5.1	4
17-Dec-16	66.8	42.8								0.19	67%			5.1	4
18-Dec-16	66.8	40.2								0.19	63%			0.0	4
19-Dec-16	66.8	40.2	45.1		4039		300			0.18	62%			5.1	4
20-Dec-16	66.8	38.5	28.0		4083		310	76		0.18	59%			10.2	4
21-Dec-16	66.8	39.3	30.1		3926		300	76		0.19	61%			10.2	4
22-Dec-16	66.8	37.5	20.9		3902		310	79		0.19	58%			10.2	4
23-Dec-16	66.8	38.1	51.7		3939		300	76		0.18	59%			0.0	4
24-Dec-16	66.8	40.6								0.19	63%			0.0	4
25-Dec-16	66.8	47.9								0.19	77%			10.2	4
26-Dec-16	66.8	38.3	39.8		3794		320	84		0.18	58%			10.2	4
27-Dec-16	66.8	41.2	25.0		3942		300	76		0.18	62%			15.3	4
28-Dec-16	66.8	40.5	28.8		3736		280	75		0.17	56%			15.3	4
29-Dec-16	66.8	42.4	28.8		3544		260	73		0.16	56%			15.3	4
30-Dec-16	66.8	40.6	25.4		3364		250			0.15	50%			7.1	4
31-Dec-16	66.8	43.8								0.15	54%			7.1	4
Total														182.5	
AVG		41.8	34.2	#DIV/0!	3735	#DIV/0!	294	79	#DIV/0!		63%			5.9	
MAX		47.9	156.8	0.00	4083	0	320	90	0.0			0	0	15.3	
MIN		37.5	14.5	0.00	3322	0	250	73	0.0			0	0	0	

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

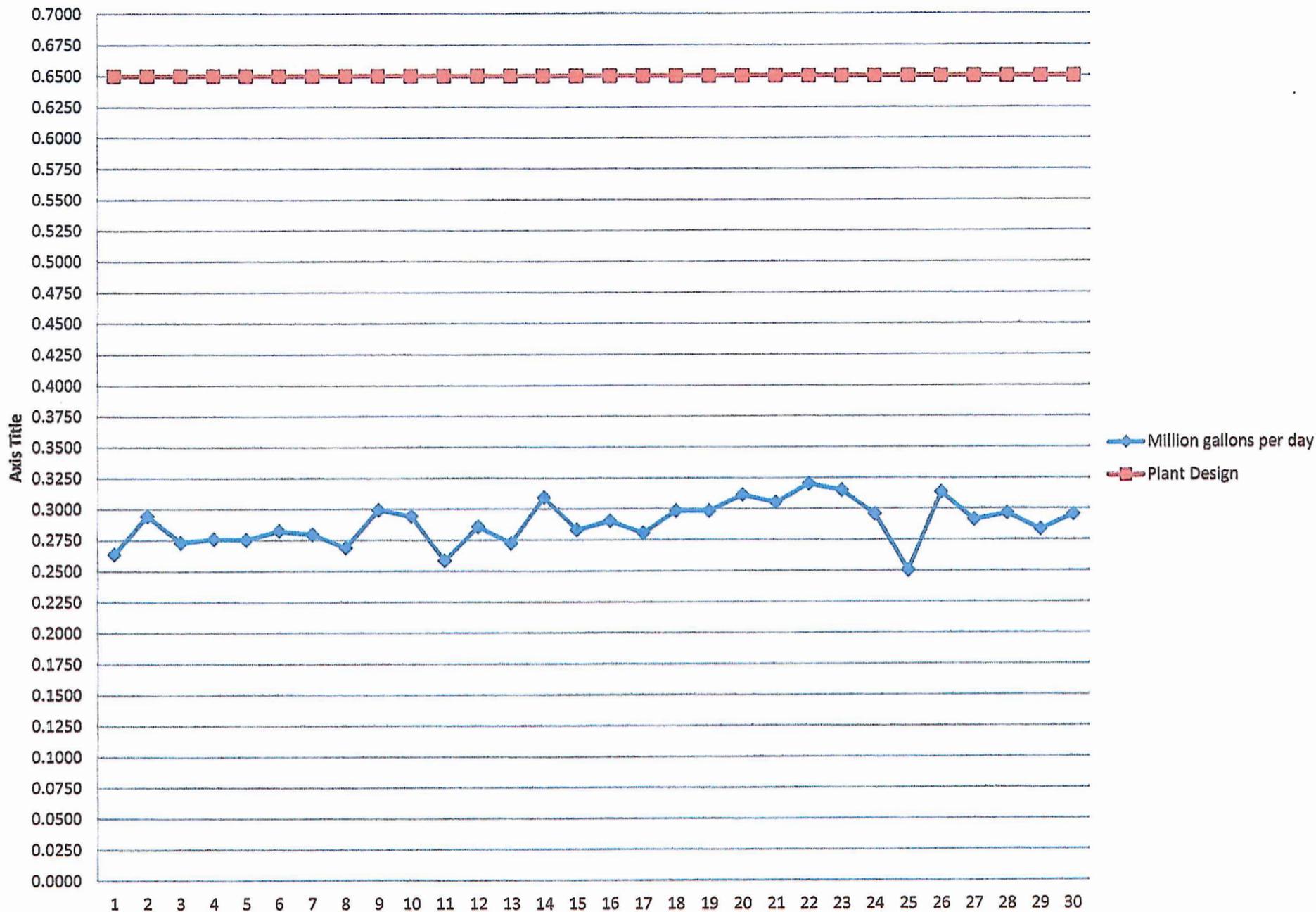
MISCELLANEOUS SHEET
BRIGHTON TOWNSHIP, MICHIGAN
December-16

PERMIT # MI0054968

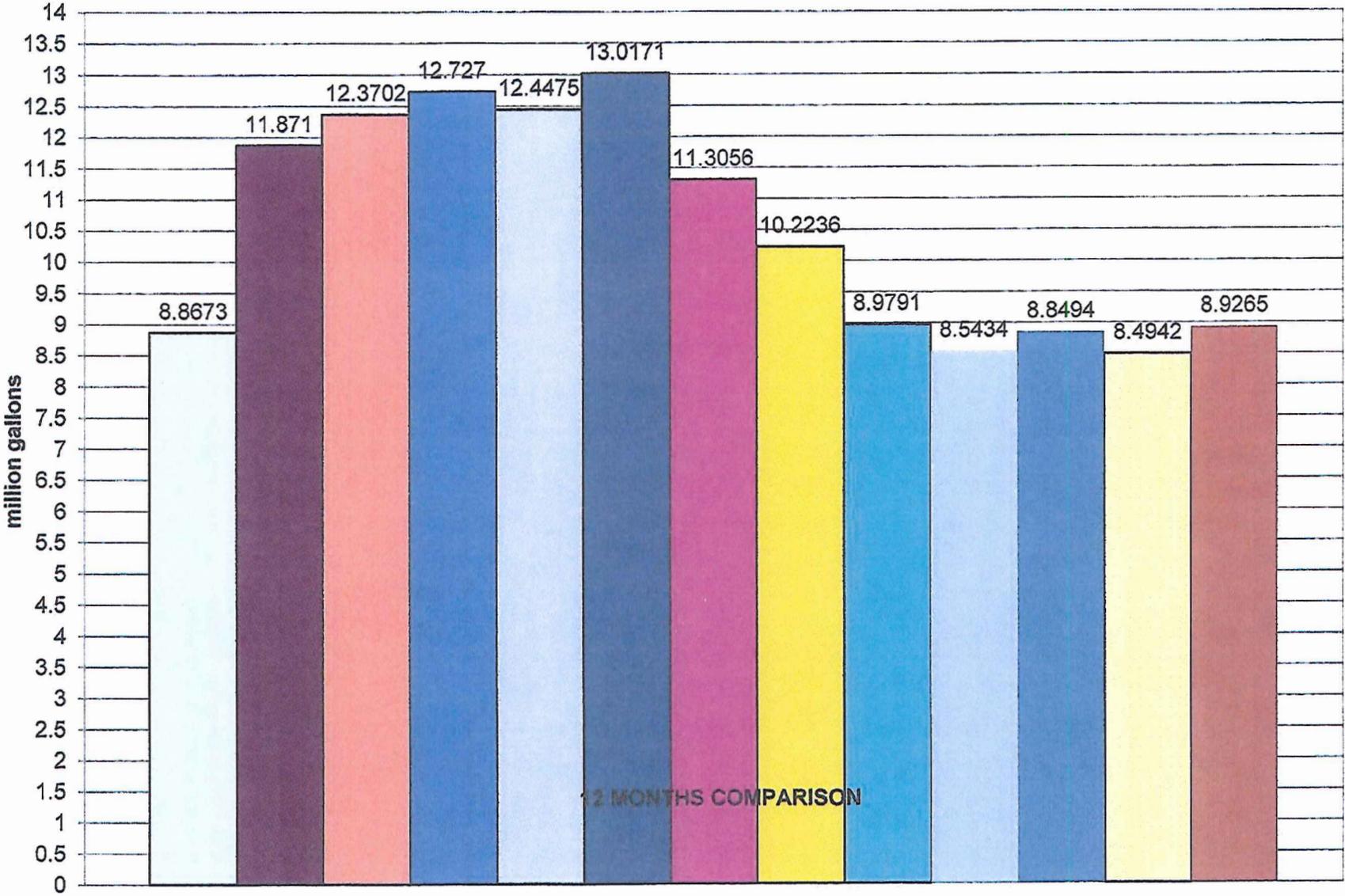
Superintendents Signature _____

D A Y	AUX FUEL GEN GAL	POWER CONSUMPTION		CHEMICALS APPLIED	
		#1 KWH	GAS CUFT	FERRIC GAL	Ferric Reading
PN					
SF					
1-Dec-16		2049	24	19	1381
2-Dec-16		2021	24	20	1362
3-Dec-16		2053	28	23	1342
4-Dec-16		2077	25	16	1319
5-Dec-16		2231	26	22	1303
6-Dec-16		2911	26	23	1281
7-Dec-16		1997	29	22	1258
8-Dec-16		1904	29	20	1236
9-Dec-16		2040	34	22	1216
10-Dec-16		2481	33	20	1194
11-Dec-16		2079	27	19	1174
12-Dec-16		2219	50	21	1155
13-Dec-16		1631	47	23	1134
14-Dec-16		2107	2	25	1111
15-Dec-16		1046	41	18	1086
16-Dec-16		1654	41	45	1068
17-Dec-16		1498	39	13	1023
18-Dec-16		2185	28	14	1010
19-Dec-16		3173	41	16	996
20-Dec-16		1344	34	19	980
21-Dec-16		1943	26	23	961
22-Dec-16		2053	32	25	938
23-Dec-16		2185	36	17	913
24-Dec-16		2065	24	42	896
25-Dec-16		2157	26	28	854
26-Dec-16		2227	20	8	826
27-Dec-16		2172	31	7	818
28-Dec-16		1896	5	15	811
29-Dec-16		474	65	22	796
30-Dec-16		2272	45	31	774
31-Dec-16		1651	31	25	743
TOTAL	0	61795	969	663	32959
AVG	0	1993	31	21	1063
MAX	0	3173	65	45	1381
MIN	0	474	2	7	743

BRIGHTON TOWNSHIP WASTEWATER PLANT (DAILY FLOW)

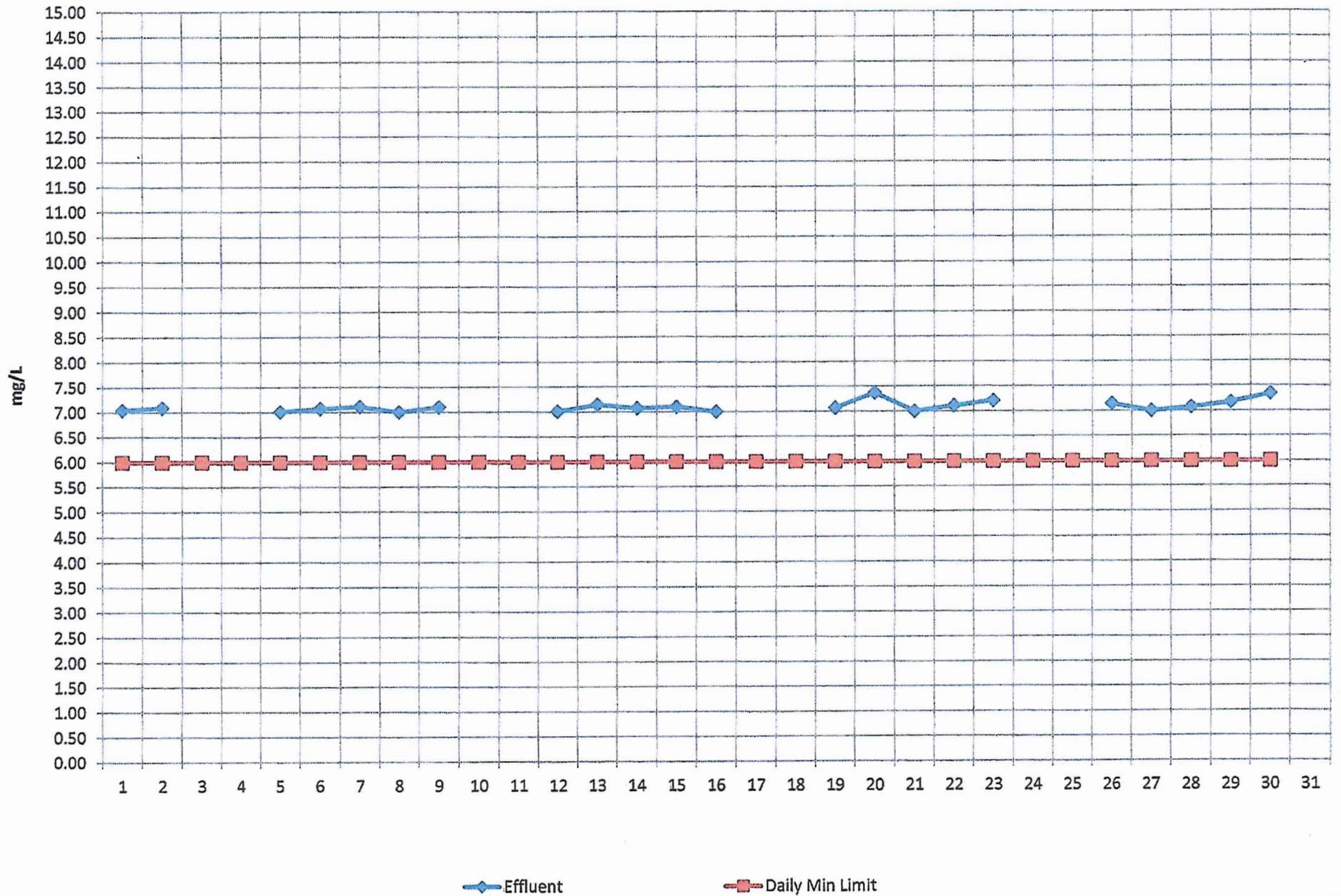


MONTHLY WASTEWATER FLOW COMPARISON

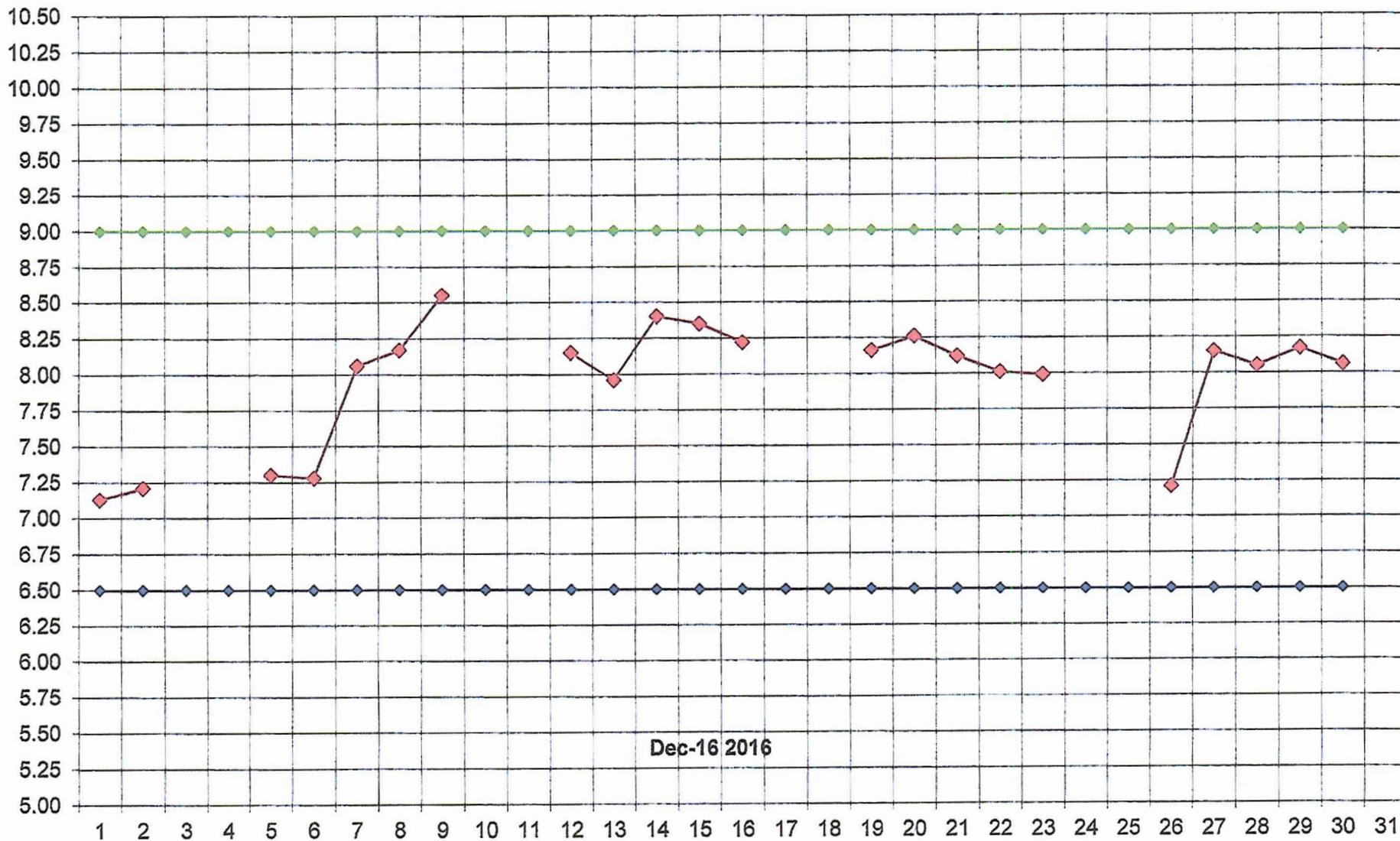


Dec-15
 Jan-16
 Feb-16
 Mar-16
 Apr-16
 May-16
 Jun-16
 Jul-16
 Aug-16
 Sep-16
 Oct-16
 Nov-16
 Dec-16

BRIGHTON TOWNSHIP WASTEWATER PLANT (Dissolved Oxygen)

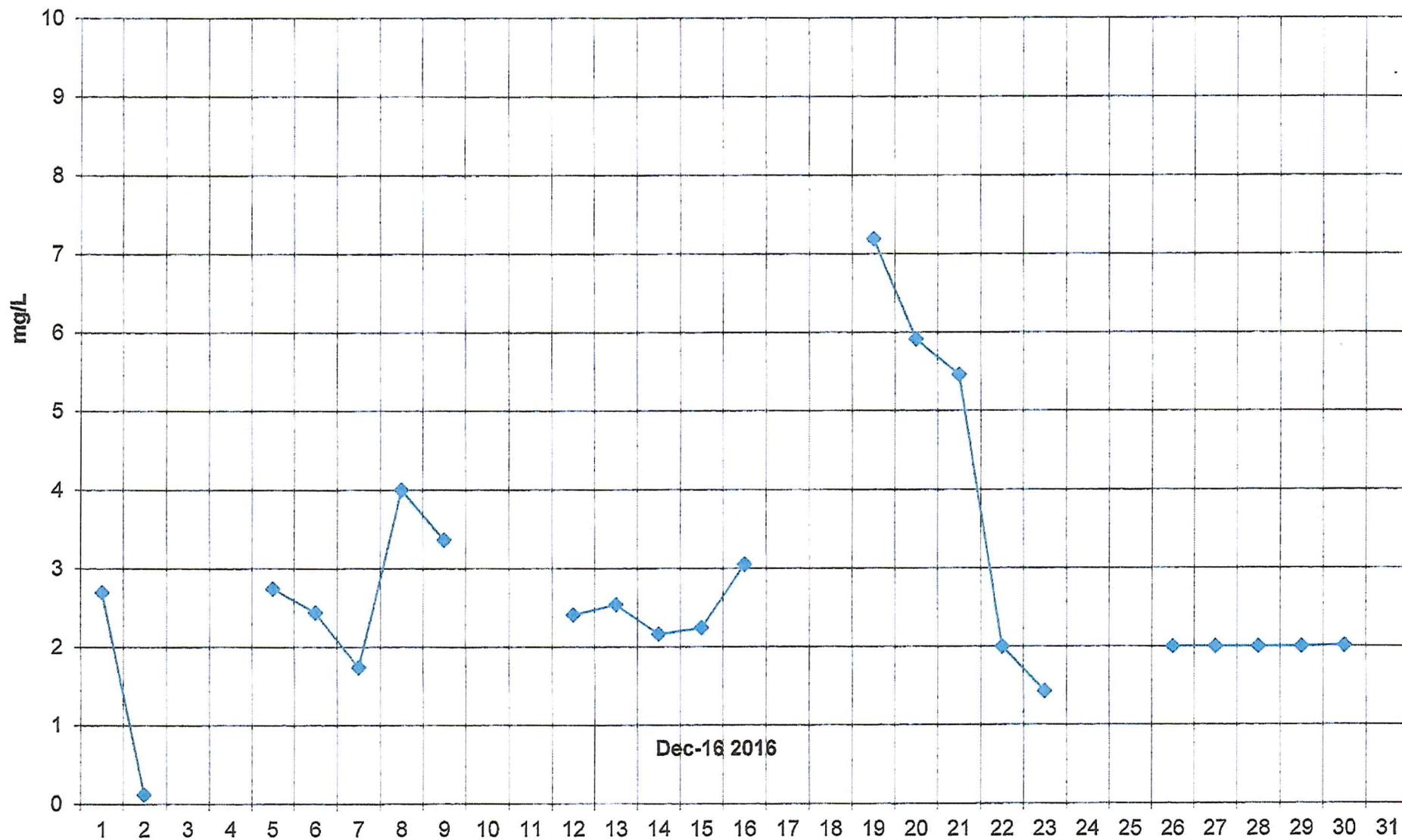


BRIGHTON TOWNSHIP WASTEWATER PLANT (pH)



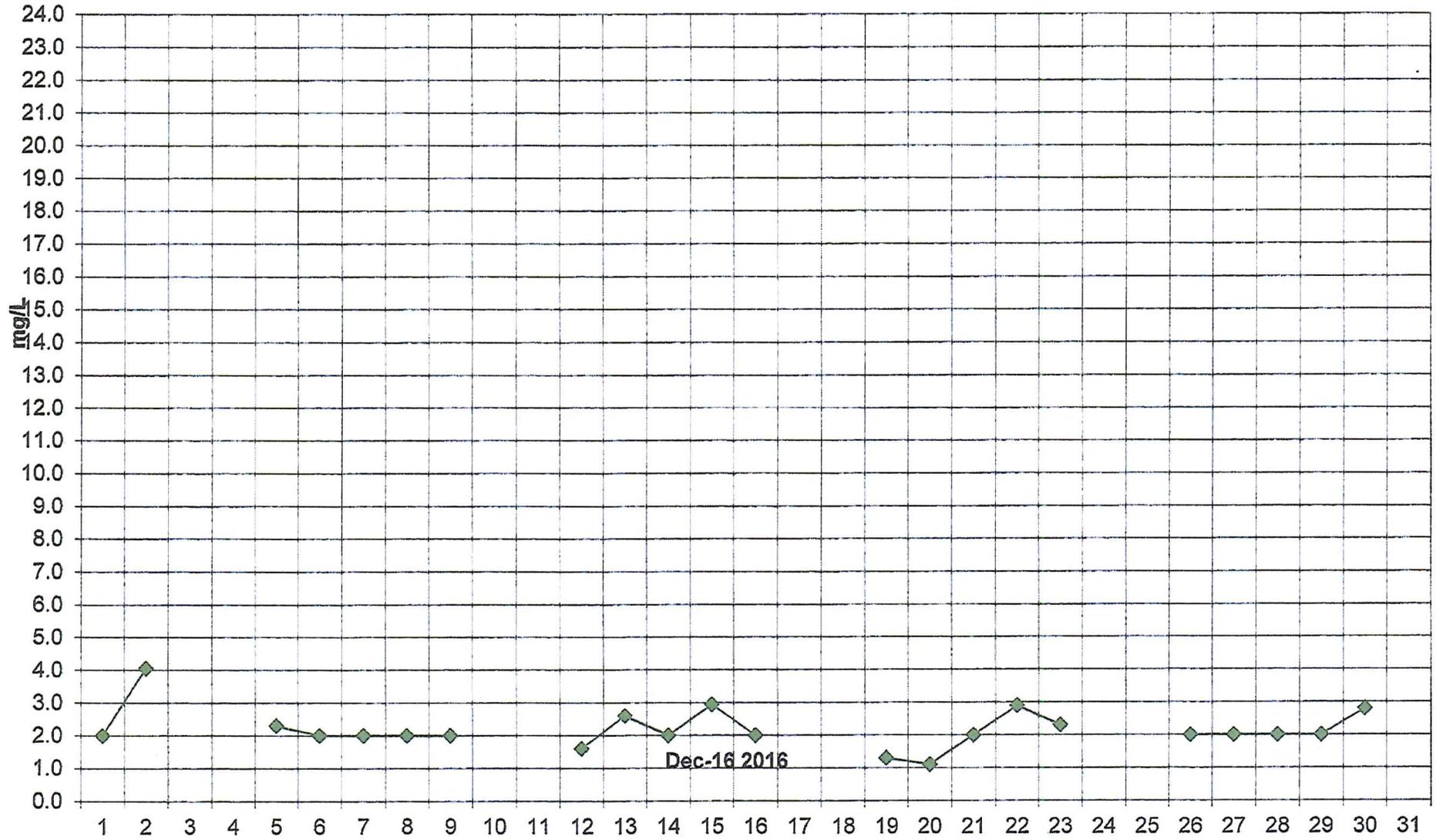
◆ Effluent ◆ Daily Min Limit ◆ Daily Max Limit

BRIGHTON TOWNSHIP WASTEWATER PLANT (Biochemical Oxygen Demand)



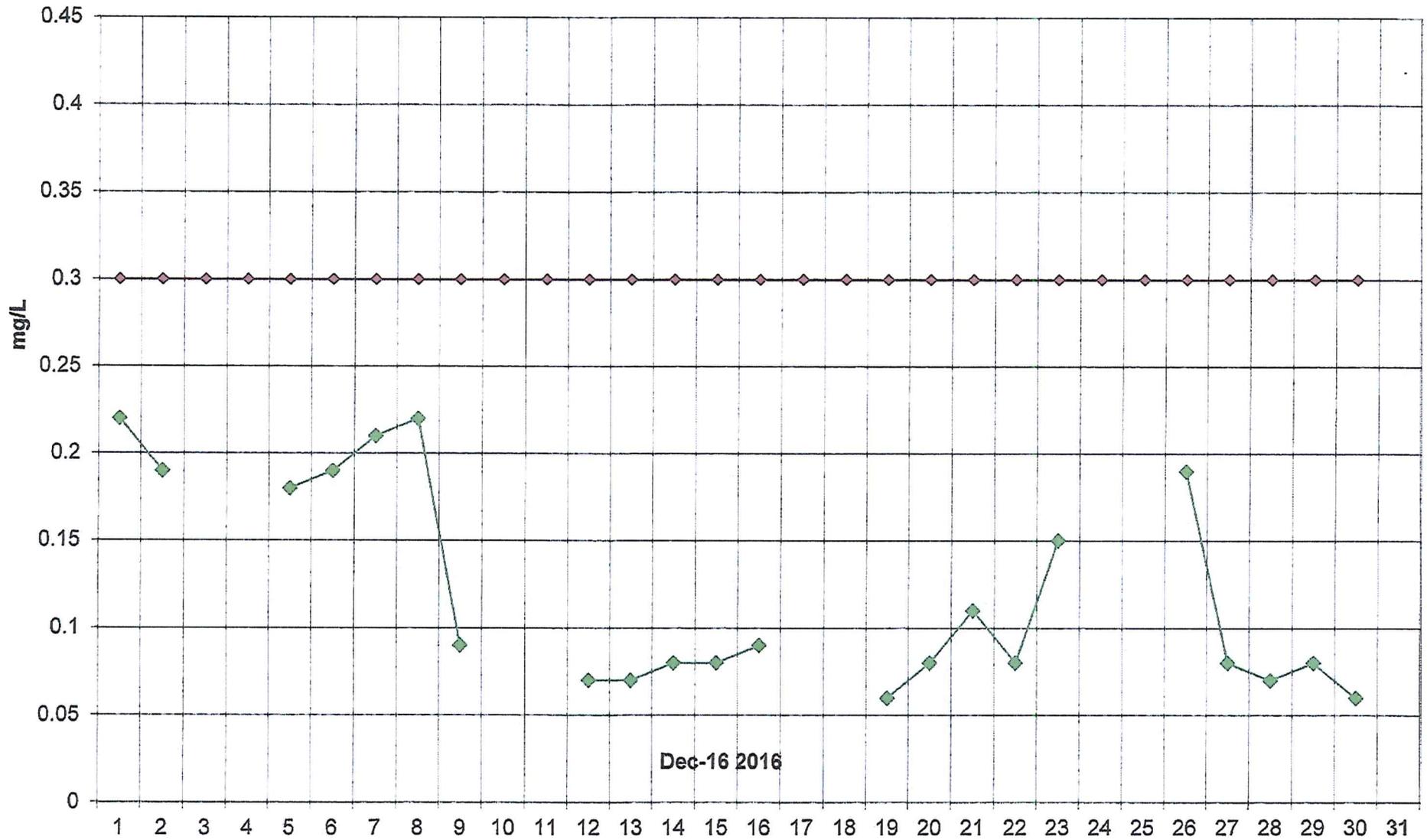
◆ Effluent ◆ 30 Day Avg Limit ▲ Daily Max Limit

BRIGHTON TOWNSHIP WASTEWATER PLANT (Suspended Solids)



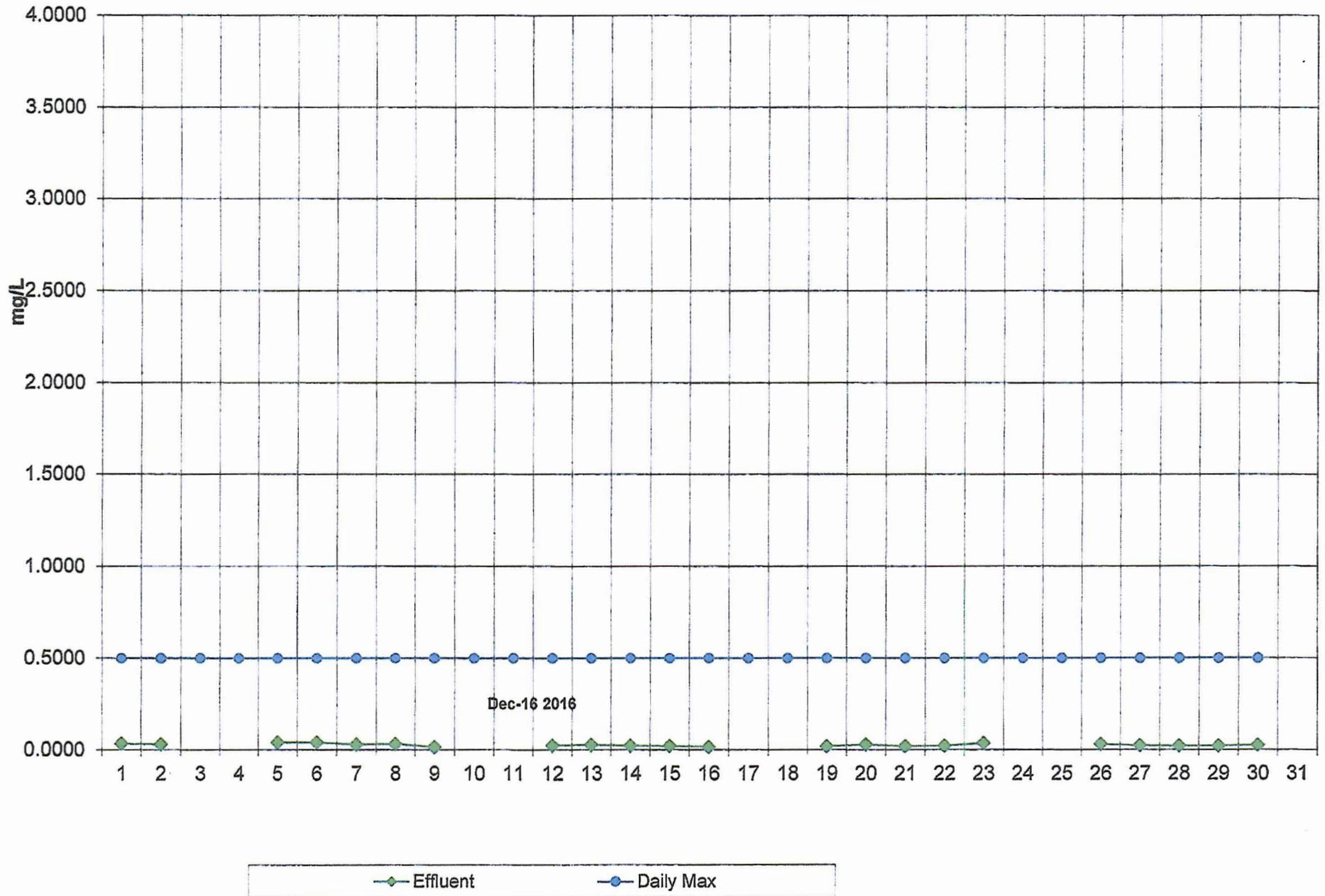
—◆— Effluent —◆— 30 Day Avg Limit

BRIGHTON TOWNSHIP WASTEWATER PLANT (Total Phosphorus)



—◆— Effluent —◆— 30 Day Avg Limit

BRIGHTON TOWNSHIP WASTEWATER PLANT (Ammonia Nitrogen)



MEMORANDUM

TO: BRIGHTON TOWNSHIP RESIDENTS
FROM: ANN M. BOLLIN, CLERK
SUBJECT: UTILITIES COMMITTEE ELECTRONIC PACKETS
DATE: MAY 6, 2016

Packets for the Brighton Township Utilities Committee meetings posted to the website contain scanned original documents. These electronic packets are subject to change based on meeting material presented to the Utilities Committee throughout the course of the meeting. For a complete original packet following the Utilities Committee meeting contact the Clerk's Office at 810-229-0560 or via email: clerk@brightontwp.com

* Correction
Added
1-9-2017

UTILITIES COMMITTEE AGENDA NOTES

MEETING DATE: January 9, 2017

PERSON PLACING ITEM ON AGENDA: Manager

AGENDA TOPIC: Quarterly Sanitary Sewer Rate Review

EXPLANATION OF TOPIC: On an annual basis the Township reviews the quarterly sanitary sewer rates that are charged to determine if the current rates are adequate to cover the operations / maintenance and debt service obligations.

The Township performed a cash flow projection which was originally undertaken as part of the Capital Improvement Plan / Fiscal Analysis. We have also begun taking into consideration the funding obligations as delineated in the Sanitary Sewer Asset Management Plan. The attached material is a projection based upon previously accepted assumptions. Any suggestions that are listed on the attached spreadsheets are merely for illustrative purposes. However, to summarize the attached:

1. **Operating and Maintenance Charge:** The rate will need to increase in the near future to meet the funding shortages that are listed in the Asset Management Plan. Specifically see the description of the WWTP (page 6 and Appendix H) and the grinder pumps (page 8 and Appendix I) funding obligations. Also, the cost of defending current litigation needs to be factored in to the equation.
2. **Debt Service Charge:** As seen on "Scenario 1", the debt obligations continue to be met sooner than previously reported due to refinancing of the sewer bonds and new REU purchases exceeding the base assumption of 10 new REU's per year.

Ken Palka of PHP will be in attendance to explain the attached material and answer any questions.

MATERIALS ATTACHED AS SUPPORTING DOCUMENTS:

- Sewer Debt Service Cash Flow and O&M Projection 1/2/2017
- Asset Management Plan (excerpt Pages).

POSSIBLE COURSES OF ACTION: Recommend that the O&M rate be:

1. Kept the same @ \$95.50 which will lead to a funding shortage of \$159,847
2. Increased by approximately 1% - 19% which will lead to a smaller funding shortage
3. Increased by approximately 20% to \$115 to ensure that there is no funding shortage.
4. Decrease the Debt Service quarterly bill and increase the O&M portion of the bill by the same amount which would keep the total quarterly bill flat (\$176) but will delay the payback to the General Fund (see column 6) by twelve months.

SUGGESTED MOTION: moved by, _____ seconded by, _____ to recommend to the Brighton Township Board a rate adjustment as follows:

_____.