

**FILED**  
March 3, 2020  
INDIANA UTILITY  
REGULATORY COMMISSION

**PETITIONERS' EXHIBIT 20**

**STATE OF INDIANA**

**INDIANA UTILITY REGULATORY COMMISSION**

**IN THE MATTER OF THE PETITION OF THE  
CITY OF VALPARAISO, INDIANA, AND  
VALPARAISO CITY UTILITIES FOR  
APPROVAL OF A REGULATORY  
ORDINANCE ESTABLISHING A SERVICE  
TERRITORY FOR THE CITY'S MUNICIPAL  
SEWER SYSTEM PURSUANT TO IND. CODE  
CH. 8-1.5-6**

**CAUSE NO. 45306**

**SETTLEMENT TESTIMONY**

**OF**

**STEVE POULOS**

**ON BEHALF OF PETITIONERS  
THE CITY OF VALPARAISO, INDIANA,  
and VALPARAISO CITY UTILITIES**

**CAUSE NO. 45306**  
**SETTLEMENT TESTIMONY OF STEVE POULOS**  
**ON BEHALF OF PETITIONERS**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Steve Poulos, and my business address is Valparaiso City Utilities (VCU),  
3 205 Billings Street, Valparaiso, IN 46383.

4 **Q. ARE YOU THE SAME STEVE POULOS WHO PREVIOUSLY FILED DIRECT**  
5 **TESTIMONY AND EXHIBITS IN THIS CAUSE?**

6 A. Yes. I am.

7 **Q. HAVE YOU REVIEWED THE PREFILED TESTIMONY AND EXHIBITS**  
8 **FILED BY THE OTHER PARTIES IN THIS CAUSE?**

9 A. Yes, I have reviewed the prefiled testimony and exhibits filed by the Town of Chesterton,  
10 Indiana (Chesterton), the Indiana Office of Utility Consumer Counselor (OUCC), and  
11 Aqua Indiana, Inc. (Aqua).

12 **Q. WHAT IS THE PURPOSE OF YOUR SETTLEMENT TESTIMONY?**

13 A. I am sponsoring submission of the Joint Stipulation and Settlement Agreement  
14 (Settlement) entered into by the City of Valparaiso, Indiana, (Valparaiso), VCU,  
15 Chesterton, and the Chesterton Utility Service Board. (Valparaiso and VCU are  
16 collectively referred to as Valparaiso or Petitioners. Chesterton and its Utility Service  
17 Board are collectively referred to as Chesterton). The Settlement is attached to my  
18 testimony as Petitioners' Exhibit No. 21.

19 I will explain Valparaiso's support for the Settlement, specifically the settlement  
20 process and how the public interest will be served if the Commission approves the

1 Settlement. I will also address some technical issues that were raised by Chesterton in its  
2 case-in-chief filing regarding Valparaiso's ability to provide service to the proposed  
3 regulated territory.

4 **Q. WOULD YOU PLEASE SUMMARIZE THE TERMS OF THE SETTLEMENT?**

5 A. In this case, Valparaiso requested approval of its Ordinance No. 27-2019 (Valparaiso  
6 Regulatory Ordinance), which created a wastewater service area (Valparaiso Regulated  
7 Territory) in certain areas outside of Valparaiso's corporate boundaries, including areas  
8 identified in Valparaiso's Sewer Master Plan and areas related to Valparaiso's acquisition  
9 of the Damon Run Conservancy District sewer utility system (Damon Run System).  
10 Subsequent to Valparaiso filing this case, Chesterton filed a petition for approval of its  
11 Ordinance 2014-11 (Chesterton Regulatory Ordinance) in Cause No 45312 and was  
12 granted intervention in this case. The regulated territories created in the two ordinances  
13 included an overlap area located between Valparaiso and Chesterton. In the Settlement,  
14 Chesterton and Valparaiso have agreed to a division of the overlap area and certain other  
15 modifications of their respective regulated territories to resolve their disputes in this case.

16 **Q. WHAT ARE THE SPECIFIC TERMS OF THE SETTLEMENT RELATED TO**  
17 **VALPARAISO'S REGULATED TERRITORY?**

18 Valparaiso and Chesterton have agreed that the Valparaiso Regulated Territory shall  
19 comprise the area depicted on the map attached to the Settlement as Exhibit 1, which  
20 includes the following:

- 21 • the areas originally requested by Valparaiso south of U.S. Highway 6, with the  
22 exception of the Porter County Recapture Area;

- 1           • all existing Damon Run Customers, with the exception of Liberty Elementary and
- 2           Intermediate Schools; and
- 3           • the area marked on the map located directly south of the Damon Run service area
- 4           and north of U.S. Highway 6.

5   **Q.   WHAT ARE THE SPECIFIC TERMS OF THE SETTLEMENT RELATED TO**  
6   **CHESTERTON'S REGULATED TERRITORY?**

7   A.   Valparaiso and Chesterton have agreed that the Chesterton Regulated Territory shall  
8   comprise the area depicted on the map attached to the Settlement as Exhibit 2, which  
9   includes the following:

- 10           • all areas north of U.S. Highway 6 that are not included in the Valparaiso
- 11           Regulated Territory; and
- 12           • the Porter County Recapture Area.

13   **Q.   DOES THE SETTLEMENT REQUIRE VALPARAISO AND CHESTERTON TO**  
14   **AMEND THEIR RESPECTIVE REGULATORY ORDINANCES?**

15   A.   Yes. The Settlement requires both Valparaiso and Chesterton to use best efforts to have  
16   their respective legislative bodies amend their regulatory ordinances to reflect the terms  
17   of the Settlement. Valparaiso plans to vote on the amendment to its regulatory ordinance  
18   on March 9, 2020. Once the amendment is approved, Valparaiso will submit its amended  
19   regulatory ordinance in this Cause for the Commission's approval. Chesterton will submit  
20   its amended regulatory ordinance for approval in Cause No. 45312. Valparaiso has agreed  
21   not to oppose the approval of Chesterton's amended regulatory ordinance in Cause No.  
22   45312 so long as it is consistent with the terms of the Settlement.

1 **Q. WHAT OTHER AGREEMENTS DID VALPARAISO AND CHESTERTON**  
2 **MAKE IN THE SETTLEMENT?**

3 A. Valparaiso and Chesterton have agreed not to provide sewer service in each other's  
4 regulated territories, and Chesterton has agreed that if requested by Valparaiso, it will  
5 enter into good faith negotiations to provide wholesale sewer service to Valparaiso's  
6 Damon Run system on terms mutually agreeable to Valparaiso and Chesterton.

7 **Q. ARE THERE OTHER ISSUES THAT YOU WISH TO ADDRESS?**

8 A. Yes. I wish to address some issues raised by Chesterton's case-in-chief testimony  
9 regarding Valparaiso's ability to provide service to its Regulated Territory. Specifically, I  
10 will address issues related to the capacity of the City of Portage's wastewater treatment  
11 plant, the capacity of Valparaiso's wastewater treatment plant, and Valparaiso's alleged  
12 operational issues. Valparaiso's engineering witness, Mr. Kenning, will provide  
13 testimony addressing Valparaiso's ability to extend a sewer main to connect the Damon  
14 Run system to Valparaiso's wastewater treatment plant, and Valparaiso's accounting  
15 witness, Mr. Julien, will provide testimony addressing Valparaiso's sewer utility rates for  
16 the Damon Run area.

17 **Q. MR. DEBRULER TESTIFIED THAT PORTAGE MAY NOT HAVE**  
18 **SUFFICIENT CAPACITY TO SERVE ANY ADDITIONAL CUSTOMERS FROM**  
19 **VALPARAISO'S REGULATED TERRITORY, DO YOU HAVE ANY RESPONSE**  
20 **TO HIS TESTIMONY?**

21 A. Yes. As part of our negotiations and due diligence associated with the acquisition of  
22 Damon Run, I spoke with the Portage Mayor, other Portage representatives, and  
23 Portage's wastewater treatment plant superintendent, Don Slawnikowski, about Portage's

1 ability to provide service to the present and future anticipated flows from the Damon Run  
 2 area. Portage has contractually agreed that it has sufficient capacity available and that it  
 3 will be responsible for serving all flows from the Damon Run service area for the  
 4 foreseeable future.

5 After reading Mr. DeBruler's testimony, I had specific conversations with Mr.  
 6 Slawnikowski regarding Portage's anticipated treatment capacity. He informed me that  
 7 the recent increases in Portage's influent flow are due to a significant inflow and  
 8 infiltration (I&I) problem within Portage's collection system. Mr. Slawnikowski assured  
 9 me that Portage will make the necessary repairs to reduce the I&I problem, which should  
 10 increase the amount of Portage's available treatment capacity. I have also been advised  
 11 that Portage's wastewater treatment plant's capacity rating was recently increased from  
 12 4.95 million gallons per day (MGD) to 5.3 MGD. See Petitioners' Exhibit No. 22,  
 13 attached.

14 **Q. DOES VCU HAVE ALTERNATIVE PLANS SHOULD PORTAGE BECOME**  
 15 **UNABLE TO SUPPLY SUFFICIENTY CAPACITY?**

16 A. Yes. First, Portage is contractually obligated to provide at least 345,720 gallons per day  
 17 (GPD) of capacity. Should Portage be unable to provide this amount of capacity, it would  
 18 be a breach of contract, and Valparaiso would be entitled to damages. Second, Valparaiso  
 19 has engaged in discussions with Aqua about the potential for Aqua to treat some or all of  
 20 the flow currently being treated by Portage. Those discussions are ongoing. Third, as part  
 21 of the Settlement in this case, Chesterton has agreed to engage in good faith negotiations  
 22 to provide wholesale sewer service to Valparaiso for the Damon Run area if requested by  
 23 Valparaiso. Finally, if none of these options are technically or financially feasible, VCU

1 has the financial resources (i.e. cash, borrowing, or a combination of the two) to construct  
2 the necessary facilities to interconnect the Damon Run system to its own treatment plant  
3 as soon a necessary.

4 **Q. MR. DEBRULER ALSO TESTIFIED THAT VCU MAY NOT HAVE**  
5 **SUFFICIENT CAPACITY TO SERVE ANY ADDITIONAL CUSTOMERS FROM**  
6 **VALPARAISO'S REGULATED TERRITORY, DO YOU HAVE ANY RESPONSE**  
7 **TO HIS TESTIMONY?**

8 A. Yes. I have attached to my testimony as Petitioners' Exhibit No. 23 a Technical  
9 Memorandum created for VCU on February 19, 2020, by Dale Kocarek, PE, BCEE, at  
10 Stantec (Technical Memo), which addresses the wastewater treatment plant flows. The  
11 Technical Memo shows that the VCU wastewater treatment plant (referred to in the  
12 Technical Memo as the Elden Kuehl Pollution Control Facility or EKPCF) is operating at  
13 approximately 73.7% of its wastewater treatment capacity, after accounting for  
14 precipitation because VCU is a combined sewer/storm water system. Based on VCU's  
15 overall design capacity of 8 MGD, the treatment plant has approximately 2 MGD of total  
16 available capacity and 1.3 MGD of available capacity before facing the possibility of a  
17 sewer ban.

18 During the spring of 2019, we discovered that the raw influent meter that  
19 measures flow into the treatment plant was measuring significantly higher than the final  
20 effluent meter, resulting in an overstatement of the amount of flow entering the treatment  
21 plant. As seen in the Technical Memo, the level of agreement between the raw influent  
22 meter and final effluent meter at the facility was rated good to excellent (< 10%  
23 difference) between 2016 and 2018. However, in 2019, the level of agreement was rated

1 poor (> 20% difference). After several unsuccessful attempts to recalibrate the raw  
2 influent meter, the sensor/probe was replaced in December 2019, and since that time, the  
3 agreement between the raw influent meter and final effluent meter has been excellent (<  
4 5% difference). The influent flows since December 2019 show that the treatment plant is  
5 using approximately 69% of its treatment capacity on a daily basis. Based on this,  
6 Valparaiso has sufficient capacity to provide service to the Valparaiso Regulated  
7 Territory.

8 **Q. MR. DEBRULER RAISED CERTAIN OPERATIONAL CONCERNS**  
9 **REGARDING THE VCU WASTEWATER SYSTEM, DO YOU HAVE ANY**  
10 **RESPONSE TO HIS TESTIMONY?**

11 A. Yes. VCU operates a combined sewer/storm water collection system and the EKPCF  
12 wastewater treatment plant. 12% of the VCU system collects both sanitary wastewater  
13 and storm water for treatment at the EKPCF. VCU's facilities currently comprise  
14 approximately 202 miles of sewer lines (sanitary, combined, and force mains), 5,000  
15 manholes, 32 lift stations, and an 8.0 MGD design capacity wastewater treatment plant  
16 with a peak capacity of 18 MGD. VCU is the largest wastewater utility provider in Porter  
17 County, Indiana.

18 VCU properly and accurately reports all sanitary sewer overflows (SSOs) upon  
19 discovery. VCU also reports all building basement wastewater backups and all releases  
20 caused by a problem with a private sewer lateral, which is above and beyond what is  
21 required by the Indiana Department of Environmental Management (IDEM). The chart  
22 below illustrates VCU's reported SSOs between 2015 and 2019, both in the municipal  
23 system and in private customer sewer lines.



<b>Valparaiso City Utilities</b>					
<b>Sanitary Sewer Overflows (SSOs)</b>					
<b>2015 - 2019</b>					
<b>Year</b>	<b>Non-Capacity (1)</b>	<b>Capacity (2)</b>	<b>Total</b>	<b>SSOs/100 Miles of Sewers (3)</b>	<b>Private (4)</b>
<b>2015</b>	3	1	4	2.0	10
<b>2016</b>	3	1	4	2.0	15
<b>2017</b>	5	-	5	2.5	7
<b>2018</b>	3	-	3	1.5	5
<b>2019</b>	10	4	14	6.9	3
<b>Yearly Average</b>	<b>4.8</b>	<b>2</b>	<b>6</b>	<b>2.97</b>	<b>8</b>

**Notes:**

1. Non Capacity Sewer Overflow is a discharge related to maintenance issues. (Dry Weather)
2. Capacity Sewer Overflow is a discharge that occurs as a result of inflow and infiltration. (Rain Events)
3. USEPA National Average of municipal sewer system SSOs per 100 miles of sewer is 4.6 per year
4. Private Sewer Overflows caused by problems within customer controlled piping. (Private)
  - (i) SSO's reported as **Non-Capacity** and **Capacity** of sewers are VCU's responsibility

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Over the last five years, VCU has averaged 2.97 municipal-system-related SSOs per 100 miles of sewers, which is lower than the national municipal average of 4.5 SSOs per 100 miles of sewers as reported in the U.S. Environmental Protection Agency's (EPA) *Report to Congress on the Impacts and Controls of CSOs and SSOs* (August 2004).

As part of Valparaiso's Long-Term Control Plan (LTCP) requirements, which VCU satisfied in 2012, VCU invested approximately \$15 million in strategic sewer separations and the construction of a combined sewer overflow (CSO) wet-weather treatment facility. These investments resulted in the removal of over 50 million gallons of storm water within the combined sewer system leading to significant reductions in the number and volume of basement backups and CSOs as well as the treatment and disinfection of collected storm water.

In addition to the LTCP requirements that were satisfied in 2012, VCU, as part of its ongoing annual Capital Improvement Plan (CIP), has invested \$12 million in

1 additional capital in sewer main replacements, sewer lining, and additional sewer  
2 separation projects. These ongoing CIP investments will continue to improve the quality  
3 and performance of VCU's collection system. VCU also embedded a financial  
4 mechanism to help pay for the replacement of aging infrastructure in its current rates,  
5 which were implemented in 2013. In 2018, VCU invested over \$80,000 to upgrade its  
6 computerized maintenance management system, which inventories and assesses the  
7 condition of VCU's infrastructure. This risk-based assessment program allows for the  
8 planning and scheduling of infrastructure improvements based on condition and  
9 performance, and has resulted in significant reductions in the number of CSOs at the  
10 treatment plant and SSOs throughout the Valparaiso community.

11 **Q. DO YOU HAVE ANY CONCERN THAT VCU IS TECHNICALLY AND**  
12 **FINANCIALLY ABLE TO PROVIDE SERVICE IN THE VALPARAISO**  
13 **REGULATED TERRITORY?**

14 A. No, I do not. VCU is a financially and operationally strong combined water, wastewater,  
15 and storm water utility that is proactive in its management of utility assets and is a good  
16 steward of the environment in meeting its regulatory responsibilities. VCU has sufficient  
17 facilities and treatment capacity to provide superior sanitary sewer service to its current  
18 customers and to the potential customers in the Valparaiso Regulated Territory.

19 **Q. DO YOU HAVE ANY CONCERN THAT CHESTERTON IS TECHNICALLY**  
20 **AND FINANCIALLY ABLE TO PROVIDE SERVICE IN THE CHESTERTON**  
21 **REGULATED TERRITORY?**

22 A. No, I do not. Although I have not conducted a personal review or inspection of  
23 Chesterton's sewer utility operations, based on my review of the testimony provided and

1 Chesterton's reputation, I have no reason to believe that Chesterton would be unable to  
2 provide quality, safe sewer utility service to existing and potential customers in the  
3 Chesterton Regulated Territory.

4 **Q. IS THE SETTLEMENT IN THE PUBLIC INTEREST?**

5 A. Yes. Valparaiso and Chesterton engaged in arms-length negotiations over the period of  
6 several months to resolve the dispute over their respective service territories. This  
7 negotiation resulted in the Settlement in this Cause, which fully resolves the Parties'  
8 issues in this case, and provides stability and predictability of service to the current and  
9 future customers in the two regulated territories. The Settlement ensures that all  
10 customers in the disputed area will have access to quality, affordable sewer service. The  
11 Settlement also supports Valparaiso's plan to bring both immediate and long-term rate  
12 relief to the Damon Run system customers, and it allows the Liberty Elementary and  
13 Intermediate schools to be served by Chesterton as are the majority of the other Duneland  
14 Township schools. Finally, the Settlement protects the substantial investment already  
15 made by Chesterton and Porter County, Indiana, to potentially provide sewer utility  
16 service in the Porter County Recapture Area.

17 **Q. DO YOU RECOMMEND THAT THE COMMISSION APPROVE THE**  
18 **SETTLEMENT AND VALPARAISO'S AMENDED REGULATORY**  
19 **ORDINANCE?**


20 A. Yes, I do.

21 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

22 A. Yes, it does.


**VERIFICATION**

I affirm under the Penalties for perjury that the foregoing representations are true to the best of my knowledge, information, and belief.

  
\_\_\_\_\_  
Steve Poulos, Utilities Director  
Valparaiso City Utilities

\_\_\_\_\_  
March 3, 2020  
Date

Respectfully submitted,

  
\_\_\_\_\_  
J. Christopher Janak, Atty. No. 18499-49  
Jeffery A. Earl, Atty. No. 27821-64  
BOSE MCKINNEY & EVANS LLP  
111 Monument Circle, Suite 2700  
Indianapolis, IN 46122  
(317) 684-5000  
[cjanak@boselaw.com](mailto:cjanak@boselaw.com)  
[jearl@boselaw.com](mailto:jearl@boselaw.com)

**CERTIFICATE OF SERVICE**

I certify that on March 3, 2020, the attached document was filed electronically with the Indiana Utility Regulatory Commission and was served electronically on the following parties:

**Indiana Office of Utility Consumer Counselor**

Dan LeVay

Jason Haas

[dlevay@oucc.in.gov](mailto:dlevay@oucc.in.gov)

[thaas@oucc.in.gov](mailto:thaas@oucc.in.gov)

**Town of Chesterton, Indiana**

David T. McGimpsey

Matthew S. Johns

Dentons Bingham Greenebaum LLP

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**Aqua Indiana**

Mark R. Alson

Steven W. Krohne

Ice Miller LLP

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\_\_\_\_\_  
Jeffery A. Earl, Atty. No. 27821-64

# Petitioners' Exhibit 21

**STATE OF INDIANA  
INDIANA UTILITY REGULATORY COMMISSION**

**IN THE MATTER OF THE PETITION OF THE )  
CITY OF VALPARAISO, INDIANA, AND )  
VALPARAISO CITY UTILITIES FOR )  
APPROVAL OF A REGULATORY ORDINANCE ) CAUSE NO. 45306  
ESTABLISHING A SERVICE TERRITORY FOR )  
THE CITY'S MUNICIPAL SEWER SYSTEM )  
PURSUANT TO IND. CODE CH. 8-1.5-6 )**

**JOINT STIPULATION AND SETTLEMENT AGREEMENT**

On October 15, 2019, the City of Valparaiso, Indiana, and Valparaiso City Utilities (together, “Petitioner” or “Valparaiso”) filed with the Indiana Utility Regulatory Commission (the “Commission”) its Petition initiating this Cause. Petitions to intervene filed by the Town of Chesterton, Indiana, acting by and through the Town of Chesterton Utility Service Board (together, “Chesterton”), and Aqua Indiana, Inc. (“Aqua Indiana”), respectively, were granted by a Docket Entry issued on December 4, 2019. Chesterton also filed a Petition for an exclusive sewer service area in Cause No. 45312. The Indiana Office of the Utility Consumer Counselor (“OUCC”) and Aqua Indiana are also parties to Cause No. 45312. Chesterton and Valparaiso (collectively, the “Parties”, and individually, a “Party”) have after arms-length settlement negotiations reached an agreement with respect to all of the issues before the Commission in this Cause. The Parties therefore stipulate and agree for purposes of resolving all of the issues in this Cause, to the terms and conditions set forth in this Joint Stipulation and Settlement Agreement (this “Settlement”).

**1. Valparaiso Exclusive Sewer Service Territory.**

- A. Modified Regulated Territory. The Parties stipulate and agree that Valparaiso should be granted an exclusive sewer service territory (the

“Valparaiso Area”) over a modified area from that contained in its Petition initiating this Cause as depicted on Exhibit 1 attached hereto and made a part hereof. The Valparaiso Area includes those areas originally requested by Valparaiso that are south of U.S. Highway 6, with the exception of the Porter County Recapture Area. North of U.S. Highway 6, the Valparaiso Area includes all existing Damon Run customers, with the exception of Liberty Intermediate and Elementary Schools, and the marked area located directly south of the Damon Run service area.

- B. Valparaiso Common Council Action. Valparaiso agrees to use its best efforts to have the Common Council of the City of Valparaiso approve modifications to Ordinance 27-2019 consistent with this Settlement, and to submit the amended regulatory ordinance along with this Settlement for approval by the Commission.

**2. Chesterton Exclusive Sewer Service Territory in Cause No. 45312.**

- A. Modified Exclusive Service Area. The Parties stipulate and agree that Chesterton will submit evidence in Cause No. 45312 covering a modified exclusive sewer service territory as depicted as the “Chesterton Utility Service Area” on Exhibit 2 attached hereto and made a part hereof. The “Chesterton Utility Service Area” includes, but is not limited to, the Porter County Recapture Area and all disputed areas north of U.S. Highway 6 not included in the Valparaiso Area.
- B. No Opposition to Chesterton’s Requested Relief in Cause No. 45312. Valparaiso stipulates and agrees that it will not oppose Chesterton’s requested relief in Cause No. 45312, as modified by this Settlement.
- C. Action by Town Council of Town of Chesterton. Chesterton agrees to use its best efforts to have the Town Council of the Town of Chesterton approve modifications to Ordinance 2014-11 consistent with this Settlement, and to submit the amended regulatory ordinance for approval in Cause No. 45312.

**3. No Sewer Service in Other’s Area.**

- A. No Sewer Service by Valparaiso in Chesterton Utility Service Area. Valparaiso stipulates and agrees that it will not provide sewer service in the “Chesterton



Utility Service Area” as depicted on Exhibit 2 attached hereto and made a part hereof, whether or not Chesterton is granted an exclusive sewer service territory over such area in Cause No. 45312.

B. No Sewer Service by Chesterton in Valparaiso Area. Chesterton stipulates and agrees that they will not provide sewer service in the Valparaiso Area, whether or not Valparaiso is granted an exclusive sewer service territory over such area in this Cause.

4. **Future Wholesale Service to Damon Run System.** If requested by Valparaiso, Chesterton agrees to enter into good faith negotiations to provide wholesale sewer service to Valparaiso’s Damon Run system on terms mutually agreeable to Valparaiso and Chesterton.
5. **Submission of Evidence in Cause No. 45306.** The Parties stipulate to the admission into evidence in this Cause of the testimony each previously filed (Valparaiso’s case-in-chief and supplemental direct testimony and Chesterton’s case-in-chief), and any testimony in support of this Settlement offered by the Parties or any of them. Further, each Party waives cross-examination of the other’s witnesses with respect to such testimony. The Parties shall not offer any further testimony or evidence in this proceeding, other than this Settlement and the above-identified testimony and exhibits. If the Commission should request additional evidence to support the Settlement, the Parties shall cooperate to provide such requested additional evidence.
6. **Proposed Final Order.** The Parties agree to cooperate on the preparation and submission to the Commission of a proposed order that reflects the terms of this Settlement and the settlement testimony submitted pursuant to Section 5 hereof.
7. **Sufficiency of Evidence.** The Parties stipulate and agree that the evidentiary material identified immediately above constitutes a sufficient evidentiary basis for the issuance of a final order by the Commission adopting the terms of this Settlement, and granting the relief as requested herein by Valparaiso and agreed to by the Parties.
8. **Commission Alteration of Agreement.** The concurrence of the Parties with the terms of this Settlement is expressly predicated upon the Commission’s approval of this Settlement. If the Commission alters this Settlement in any material way, unless

that alteration is unanimously and explicitly consented to by the Parties, this Settlement shall be deemed withdrawn.

9. **Authorization.** The undersigned represent that they are fully authorized to execute this Settlement on behalf of their respective clients or parties, who will be bound thereby.
10. **Non-Precedential Nature of Settlement.** The Parties stipulate and agree that this Settlement shall not be cited as precedent against Chesterton or Valparaiso in any subsequent proceeding or deemed an admission by any party in any other proceeding, except as necessary to enforce the terms of this Settlement or the final order to be issued in this Cause before the Commission or any court of competent jurisdiction on these particular issues and in this particular matter. This Settlement is solely the result of compromise in the settlement process and, as provided herein, is without prejudice to and shall not constitute a waiver of any position that any of the Parties may take with respect to any or all of the items resolved herein in any future regulatory or other proceeding, and, failing approval by the Commission, shall not be admissible in any subsequent proceeding.
11. **Counterparts.** This Settlement may be executed in one or more counterparts (or upon separate signature pages bound together into one or more counterparts), all of which taken together shall constitute one agreement.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the Parties have executed this Settlement on the dates set forth below.

City of Valparaiso, Indiana

By: Matthew R. Murphy  
Matt Murphy  
Mayor

Dated: 2/26/2020

Valparaiso City Utilities

By: David Bengs  
David Bengs  
President of Board

Dated: 2/25/2020

Town of Chesterton, Indiana

By: Sharon Darnell  
Sharon Darnell  
Town Council President

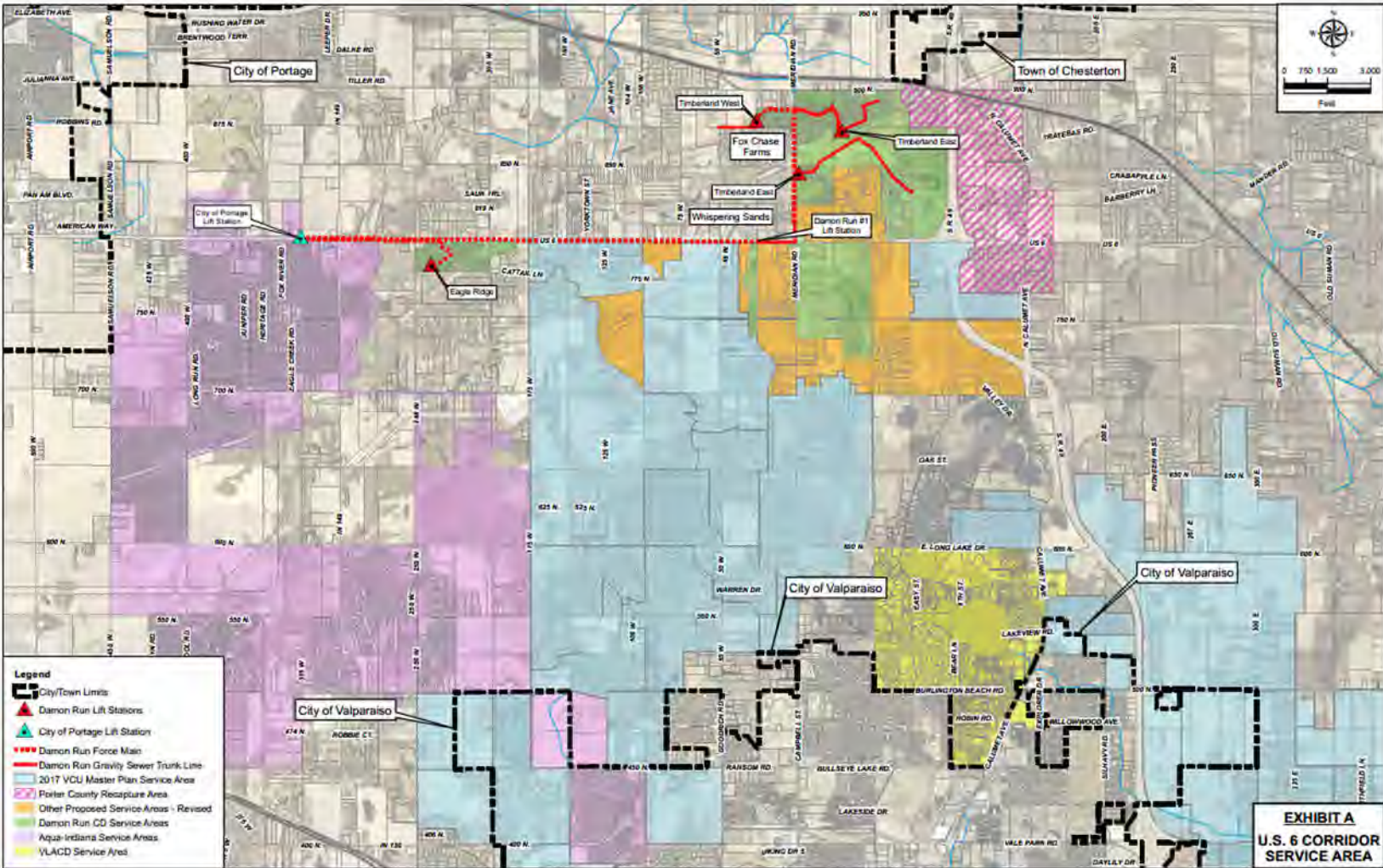
Dated: 2/27/2020

Town of Chesterton Utility Service Board

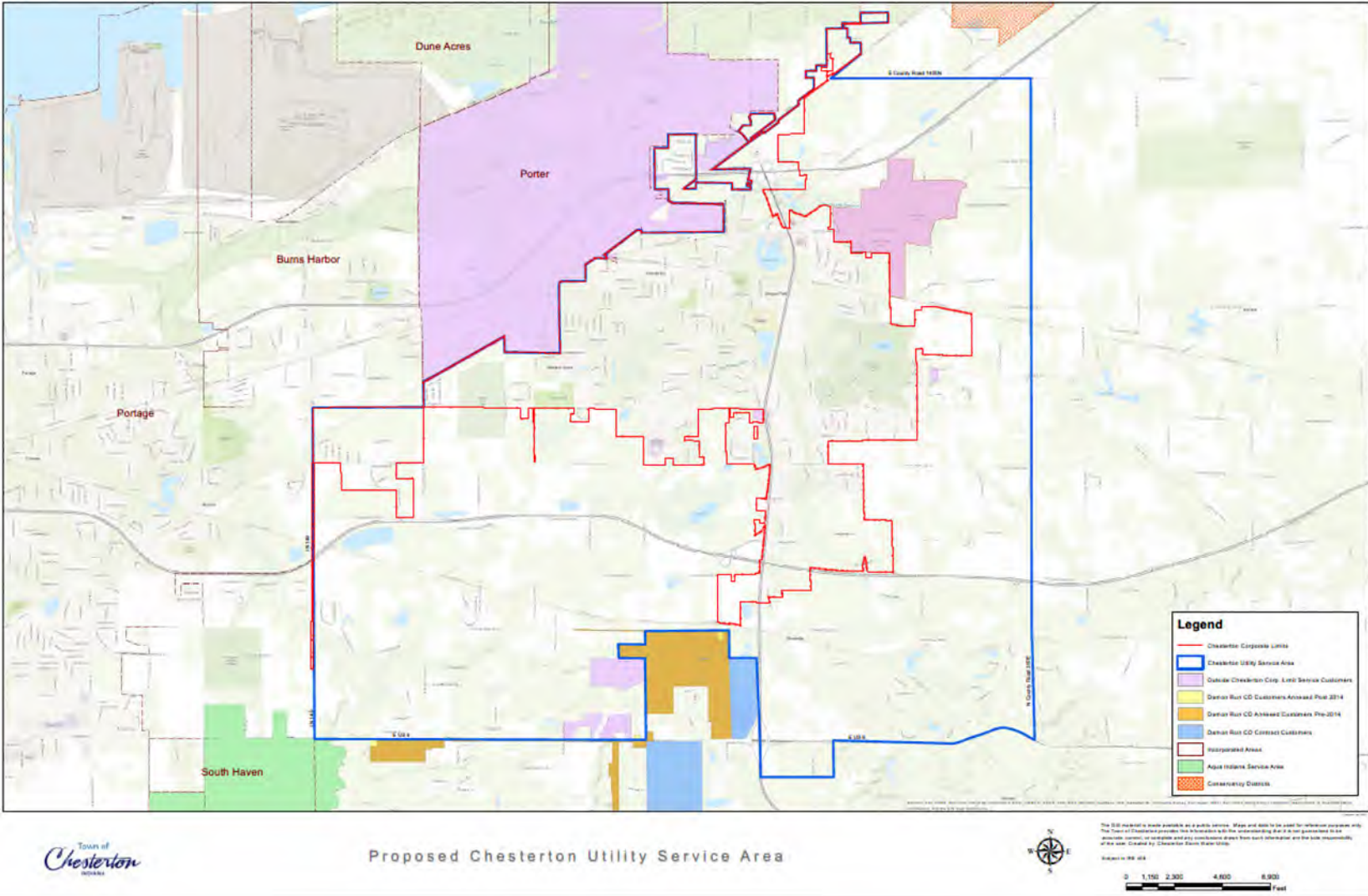
By: Lawrence Brandt  
Lawrence Brandt  
President

Dated: 2/27/20

**EXHIBIT 1**



**EXHIBIT 2**



# Petitioners' Exhibit 22



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb  
Governor

January 6, 2020

Bruno Pigott  
Commissioner

Mr. Don Slawnikowski, Superintendent  
City of Portage  
5500 Old Porter Road  
Portage, Indiana 46368

Dear Mr. Slawnikowski:

Re: City of Portage  
Wastewater Treatment Facility  
Capacity Rating Modification  
NPDES Permit No. IN0024368  
Portage, Indiana  
Porter County

This office received a capacity rating modification request on September 16, 2019, for the City of Portage Wastewater Treatment Facility. The current average design capacity of 4.95 MGD was established in a construction permit that was issued on April 2, 1997, for the proposed treatment facility expansion at that time.

A proposed biosolids processing improvements project was permitted on August 11, 2017. It was the intent of the City that the proposed biosolids improvements project would lend additional support for a subsequent treatment facility capacity rating increase. Upon review of the proposed capacity rating modification request, and supporting analysis, it is determined that there is sufficient basis for approval of a capacity rating increase from 4.95 MGD to 5.3 MGD. The established existing peak flow rating of 12 MGD will remain unchanged.

Key factors that were considered during the review of this request, and provided support for approval, included:

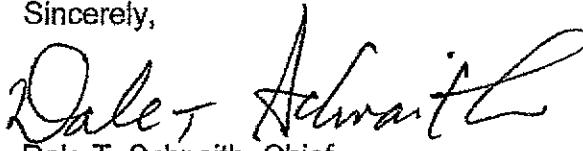
1. Influent organic (CBOD) concentration in recent years has been shown to be significantly lower than the original design basis of 285 mg/l. Current waste concentrations, along with projected growth, support a new influent CBOD basis of 220 mg/l at the new plant capacity rating of 5.3 MGD. This corresponds to a lower CBOD loading (9,724 lbs/day) than the original design basis (11,766 lbs/day).



2. The existing treatment facility has primary clarifiers which historically have shown to remove 25% of CBOD. Current practice, however, typically has the primary sludge reintroduced to the primary effluent to maintain adequate F:M ratio in the oxidation ditch. The result is no effective CBOD removal and load reduction on the oxidation ditch. That said, the resulting new loading basis on the oxidation ditch at 5.3 MGD is a modest increase to 19.2 lbs CBOD/1000 cf from the original design basis of 17.4 lbs CBOD/1000 cf (includes 25% removal in primaries). If needed, the City has the ability to waste primary sludge to reduce organic loading on the oxidation ditch.
3. The existing treatment facility has demonstrated reliable performance in recent years, and has consistently met the permit limits for CBOD, TSS, ammonia-N, and E.coli.
4. The recent biosolids processing improvements project enhanced the sludge treatment, thickening and dewatering facilities to accommodate the anticipated plant capacity rating increase.

Based on review of the supporting analysis, and the above considerations, you are advised that the average design capacity rating is increased to 5.3 MGD with the peak rating remaining at 12 MGD. It is important to note that the City is responsible for modifying the NPDES Permit to accurately reflect this rating increase. If you have any questions, please contact me at 317-232-8657.

Sincerely,



Dale T. Schnaith, Chief  
Facility Construction and  
Engineering Support Section  
Office of Water Quality

cc: Karen Saavedra, PE, American Structurepoint, Inc.  
Leigh Voss, NPDES Permits Section



# Petitioners' Exhibit 23

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To:	Steve Poulos, Utilities Director Valparaiso City Utilities	From:	Dale Kocarek, PE, BCEE Stantec, Columbus OH
File:	Technical Memorandum on Flows	Date:	February 19, 2020

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**Reference: Valparaiso City Utilities, EKPCF: Technical Memorandum on Flows**

## **PURPOSE**

The purpose of this technical memorandum is to address questions pertaining to flows treated at the EKPCF pertaining to the following:

- Accuracy of influent and effluent flow metering stations at the EKPCF
- Wet weather flows entering the EKPCF
- Remaining capacity at the wastewater treatment plant (WWTP)

## **HISTORIC GROWTH**

Population data for the City of Valparaiso Indiana over the last 50 years shows an increase of approximately 300 persons each year. The growth adheres to a linear growth model.

## **FLOW COMPUTATION**

There are several variables to consider when evaluating flows, the most significant of which is precipitation and wet weather flow patterns. Both of which can have significant impact on measuring average flows.

The two most common ways to look at flows are simple averages and a statistical approach using probability. Average values reflect all numerical values in a sample set including those of varying levels of magnitude and reoccurrence. Average values are heavily influenced by wet weather conditions, which is significant as the City of Valparaiso is a CSO community.

A favored approach by the engineering community is to use probability using a statistical approach. Using this approach, flow data is ordered from largest to smallest for all 365 days. The median is an exact midpoint of data in each period from high to low. Given that the median is the midpoint (50% value), median values disregard higher than normal readings typically associated with wet weather flow conditions and may vary year to year. Median values represent the central tendency of data reflective of true growth in the service area from residential, commercial, and industrial users.

Median values for the EKPCF for the years 2018 and 2019 are 5.096 MGD and 5.175 MGD with a difference of 0.079 MGD (79,000 GPD).

It should be noted that the probability based approach is a useful tool when the data set is accurate and complete. The data supplied to me for 2018 and 2019 is a complete and accurate set.

February 19, 2020

Steve Poulos, Utilities Director

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**Reference:** Valparaiso City Utilities, EKPCF: Technical Memorandum on Flows

## **INFLUENT AND EFFLUENT FLOW METERS AT THE EKPCF**

### **Influent Flow Meter**

The influent meter is a Hach Area Velocity Sensor that measures flow in a circular pipe using a Sigma 950 flow meter. The system operates without a primary flow monitoring device such as a flume. This flow meter is identical to ones that Stantec uses for sewer system flow monitoring in sewer system studies and modeling projects. Given the location of this meter at the front of the plant, the circular pipe is also prone to obstruction from debris, making cleaning necessary.

The pipe section where the flow meter is upstream of the step screens. During low flow conditions, the pipe section is believed to operate in an open channel flow regime, but under higher flow conditions, the pipe will run as a pressure conduit (surcharged).

Given its inherent lack of accuracy compared to the effluent flow monitoring system, the influent meter is not intended for NPDES compliance flow monitoring where a higher degree of accuracy is desired.

Throughout 2019, plant operations personnel had the flow meter recalibrated three times before replacing it late in the year. Prior to the last year, flows recorded at the influent and effluent flow monitoring stations were generally within 10% of each other.

### **Effluent Flow Meter**

Effluent flow monitoring is provided by a Parshall flume. In addition to being used for NPDES flow reporting, this system is used to provide flow information to the UV disinfection system. The effluent flow system includes a primary flow device and an ultrasonic sensor. Flumes equipped with ultra-sonic sensing devices to record flow depth near the throat of the flume are noted for high accuracy. Flumes are accurate to <5%, but open channel meter systems on the influent station are usually not accurate to < 15%. In conclusion, the Parshall Flume at the effluent station can be expected to provide a higher degree of accuracy than the influent flow metering system ahead of the step screens.

February 19, 2020

Steve Poulos, Utilities Director

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Reference: Valparaiso City Utilities, EKPCF: Technical Memorandum on Flows

## **WET WEATHER PEAK FLOWS**

### **Wet Weather Flow Response**

The sewer system for the City of Valparaiso is a partially combined sewer system with the combined sewers limited to a small older area. As a result, incoming average flows to the EKPCF can vary substantially based on rainfall, the season, and background soil moisture conditions. Peak flows can increase by up to approximately 300%, compared to the median value. This is typical of facilities that are served by a combined sewer system. Peak daily flows entering the system reach 18 MGD to 19 MGD for least one day each year.

### **Hydraulic Peaking Factor**

It is customary that all wastewater treatment plants include a hydraulic peaking factor. The EKPCF has a hydraulic peaking factor that allows it to process of 18 MGD to 19 MGD and provide well treated effluent. The size of the hydraulic pipe lines, conduits, and grade line allows for this flow to be conveyed and treated through the plant.

## **TRUE CAPACITY OF EKPCF**

We believe that the consideration of the median value versus average value is more accurate in that it reflects more accurately the true flow and loading contributions by the user base than the use of averages. As was stated above, average values are influenced by wet weather flows.

The EKPCF is a conventional activated sludge treatment plant with an NPDES Permit rated capacity of 8.0 MGD. Using the median flow value for 2019 of 5.175 MGD, the % capacity of the EKPCF is calculated at  $5.175 \text{ MGD} / 8.00 \text{ MGD} \times 100\% = 65\%$ . While it is acknowledged that flows on some days may be higher than 5.175 MGD, the loadings associated with this flow are reflective of sewage contributions of the user base of the City of Valparaiso.

It should be noted that the 70% probability for the year 2019 is associated with a flow rate of 5.9 MGD.

Reference: Valparaiso City Utilities, EKPCF: Technical Memorandum on Flows

## **COMPARISON OF INFLUENT AND EFFLUENT FLOW METERING DATA FROM 2016-2020**

### **Approach**

Monthly average flow data for 2016 to February 2020 is included in Appendix B. Based on the data, each flow meter was compared for flows and percentage differences. Flow data are monthly averages and provide an average reading for all days during the month.

Given that the flow meters are of different types, located in different areas of the plant and for different purposes, it can be expected that the data recorded may be different. Another factor is that the time of travel in the plant is typically greater than 12 making temporal differences expected.

For the purpose of this analysis, which is presented in Appendix B, the following categories were created based on levels of agreement between influent and effluent flow meters using monthly averages from 2016 to the present.

*Excellent: < 5%*  
*Good: 5.1 to 10%*  
*Satisfactory: 10.1 to 15%*  
*Marginal: 15.1 to 20%*  
*Poor: >20%*

**Reference:** Valparaiso City Utilities, EKPCF: Technical Memorandum on Flows

## **Discussion**

The following was noted:

- Both flow metering systems appear to have been installed correctly and in locations where reasonable flow measure is possible.
- Neither flow meter is influenced significantly by recycle flow streams. The exception is the influent flow meter, which sees flows from sludge lagoon #10 during several months of the year when sludge lagoon #10 is supernated and flow directed to the sewer in front of the plant.
- Monthly average flow meter data in 2016 and 2017 showed excellent agreement in being within 5% for most months.
- Data from December 2018 and December 2019 lacked the excellent to good agreement seen in prior years.
- However, following replacement of the meter probe in December 2019 after several attempts by outside contract technician to recalibrate the meter, excellent agreement was again obtained. The most recent few months starting in December 2019, excellent agreement is obtained.

### **Stantec Consulting Services Inc.**

**Dale Kocarek** PE, BCEE

Associate

Phone: 614 485 5038

Fax: 614 486 4387

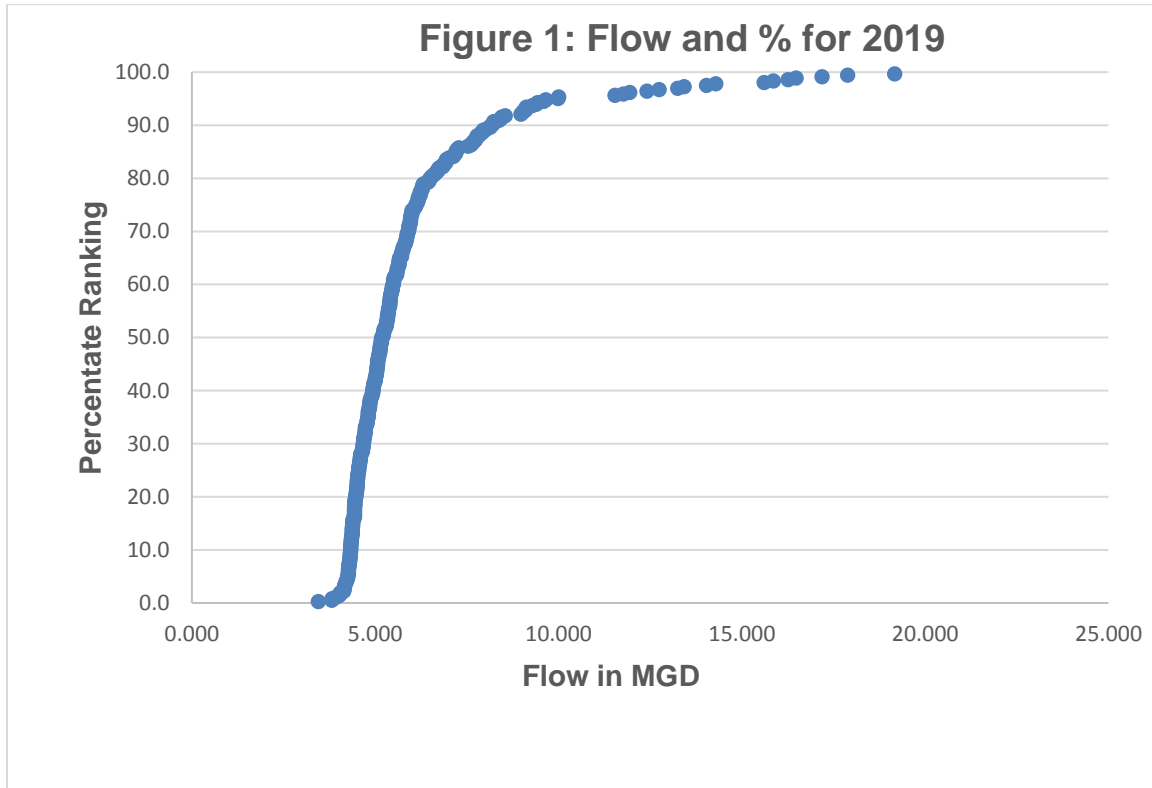
Dale.Kocarek@stantec.com

Attachment: Appendix A and Appendix B

Reference: Valparaiso City Utilities, EKPCF: Technical Memorandum on Flows

## APPENDIX A

Figure 1 is a graphical illustration of a probability flow scatter graph for the year 2019.



The median Value for 2019 is 5.175 MGD. Median represents the 50% value. The highest value was 19.12 MGD. The second highest day was 17.9 MGD. The lowest day was 3.447 MGD

Reference: Valparaiso City Utilities, EKPCF: Technical Memorandum on Flows

## APPENDIX B

The following data is monthly average values on influent and effluent flow meters between 2016 and February 2020.

Levels of agreement are color coded. Shades of green are considered good and excellent. Yellow is acceptable agreement, and red shows poor agreement between both meters.

2016	Month	Influent	Effluent	% Difference	Agreement
	January	5.410	5.140	4.99%	Excellent
	February	5.500	5.423	1.40%	Excellent
	March	6.240	6.250	-0.16%	Excellent
	April	6.520	6.375	2.22%	Excellent
	May	5.270	5.415	-2.75%	Excellent
	June	4.530	4.477	1.17%	Excellent
	July	5.680	5.899	-3.86%	Excellent
	August	7.030	7.160	-1.85%	Excellent
	September	4.980	5.080	-2.01%	Excellent
	October	6.090	6.110	-0.33%	Excellent
	November	5.490	5.470	0.36%	Excellent
	December	5.500	5.230	4.91%	Excellent

2017	Month	Influent	Effluent	% Difference	Agreement
	January	6.500	6.335	2.54%	Excellent
	February	5.280	5.266	0.27%	Excellent
	March	6.440	6.077	5.64%	Good
	April	7.420	7.395	0.34%	Excellent
	May	6.630	6.820	-2.87%	Excellent
	June	5.610	5.414	3.49%	Excellent
	July	5.290	5.480	-3.59%	Excellent
	August	4.970	4.930	0.80%	Excellent
	September	4.890	4.870	0.41%	Excellent
	October	6.600	6.530	1.06%	Excellent
	November	5.940	5.790	2.53%	Excellent
	December	4.660	4.480	3.86%	Excellent



Reference: Valparaiso City Utilities, EKPCF: Technical Memorandum on Flows

2018	Month	Influent	Effluent	% Difference	Agreement
	January	5.477	5.234	4.44%	Excellent
	February	7.442	7.266	2.36%	Excellent
	March	5.960	5.445	8.64%	Good
	April	6.293	5.614	10.79%	Satisfactory
	May	5.842	5.901	-1.01%	Excellent
	June	6.203	5.384	13.20%	Satisfactory
	July	5.740	5.309	7.51%	Good
	August	6.081	5.882	3.27%	Excellent
	September	6.130	5.249	14.37%	Satisfactory
	October	5.935	5.429	8.53%	Good
	November	6.110	5.849	4.27%	Excellent
	December	7.180	6.380	11.14%	Satisfactory

2019	Month	Influent	Effluent	% Difference	Agreement
	January	6.295	5.467	13.15%	Satisfactory
	February	7.804	6.695	14.21%	Satisfactory
	March	7.046	6.037	14.32%	Satisfactory
	April	7.048	7.304	-3.63%	Excellent
	May	9.438	8.190	13.22%	Satisfactory
	June	7.179	5.726	20.24%	Poor
	July	6.128	4.896	20.10%	Poor
	August	5.754	4.770	17.10%	Marginal
	September	7.086	5.595	21.04%	Poor
	October	6.982	5.754	17.59%	Marginal
	November	7.076	5.205	26.44%	Poor
	December	5.070	5.120	-0.99%	Excellent

2020	Month	Influent	Effluent	%Difference	Agreement
	January	6.403	6.289	1.78%	Excellent
	February	5.009	5.000	0.18%	Excellent

The levels of agreement are also graphically illustrated in Figure 2 below.

Reference: Valparaiso City Utilities, EKPCF: Technical Memorandum on Flows

Figure 2: Comparison of Influent and Effluent Average Flow Data: 2016 to 2020

