

OTTAWA COUNTY
SANITARY ENGINEERING DEPARTMENT

315 Madison Street, Room 105
Ottawa County Courthouse
Port Clinton, Ohio 43452

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February 22, 2018

To: Board of Ottawa County Commissioners
From: James K. Frey, P.E., P.S.
Re: 2017 Year End Report

Attached please find the Ottawa County Sanitary Engineering Department's 2017 Year End Highlight Report of Operations and Capital Improvements.

As the New Year progresses, we continue to focus upon enhancing our ability to provide safe and reliable environmental services. Through the dedication, commitment and hard work of our staff, the department has earned a solid reputation throughout Ohio's water and sewer industry for being a leader in providing common sense solutions to clean water challenges.

Our goals and objectives remain clear . . . 1) comply with the ever increasing regulatory requirements of our state and federal government, 2) continue to implement cost control measures to maintain reasonable rates and charges, and 3) provide prompt and reliable service to our customers.

Cc: **File**

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2017

SANITARY ENGINEERING DEPARTMENT
YEAR END REPORT

Danbury Township Wastewater Treatment System

1. Operated the Danbury Wastewater Treatment System within the original appropriated operations budget. Revenues (\$2,355,458.35) exceeded actual operating expenses (\$2,029,292.51) by \$326,165.84 for the year allowing for an end of the year transfer of an additional \$200,000.00 to the repair and replacement fund for planned future capital improvements.
2. Completed the plans, specifications and plan of financing for the \$1.2 million dollar Danbury Township WWTS capital improvement projects to maintain the integrity of the wastewater plant, pump stations, and collection system.
3. The 2017 average annual residential sewer rate in Danbury Township was \$324.00 (\$27.00 per month, per EDU). The latest average annual residential sewer rate throughout Ohio (based upon 2016 data available through the Ohio EPA's Economic Analysis Unit) was \$661.00 (\$55.08 per month); which is more than double the Danbury Wastewater Treatment System's residential sewer rate.
4. Treated 438,268,000 gallons of wastewater, an increase of 12.3% from 2016.
5. Maintained compliance with EPA, NPDES permit treatment requirements, with no final effluent violations.
6. Responded to eighteen (18) E1 Grinder Pump service calls.
7. Repaired zero (0) gravity sewer main break.
8. Issued fifty-nine (59) new permits to connect and/or repair permits to the sanitary sewer system totaling \$86,454.39 in up-front permit fees and charges.
9. Zero (0) permits to connect were issued to the sanitary sewer system with deferred connection fees in the amount of \$0.00.
10. Maintained certified delinquent receipts at \$14,688.33 (0.66%) of billed receipts (0.66% in 2016).

11. Worked with developers to review plans for future sanitary sewer extensions in Regatta Subdivision, Rocky Point RV Park, Memorial Shoreway (Johnsons Island), Willow Bend RV Park, African Lion Safari, and State Route 163 Extension.
12. Completed a 2016 Annual Sewer System Overflow (SSO) Report for the Danbury Township Collection System. Experienced two (2) collection system surcharge violations (SSO) in 2017.
13. Conducted three hundred four (304) manhole inspections.
14. Performed forty-two (42) video camera investigations of private/public collection systems to confirm problems and/or record drawing infrastructure information covering 9,162 lineal feet of pipe.
15. Issued twenty-seven (27) notice of violation letters to property owners. Twenty-two (22) are confirmed to be in compliance.
16. Conducted two (2) meetings with development engineers and one (1) with a development general contractor regarding possible subdivision developments.
17. Raised/repaired twenty-nine (29) manholes.
18. Completed Bio-Augmentation 2-year exploratory program for lagoon system.
19. Removed 1,057,000 gallons of thickened sludge for land application.
20. Completed EPA permit renewal for Danbury Wastewater Treatment System.
21. Reconditioned and upgraded #3 odor/corrosion control injection system.
22. Started-up odor/corrosion control injection at Johnson's Island #1 and Pump Station #8.

Portage/Catawba Island Wastewater Treatment System

1. Operated the Portage/Catawba Island Wastewater Treatment System within the original appropriated operations budget. System revenues (\$2,241,183.86) exceeded actual operation expenses (\$2,059,879.44) by \$181,304.42 for the year allowing for an end of the year transfer of an additional \$90,000.00 to the repair and replacement fund for planned future capital improvements.
2. Completed the plans, specifications and plan of financing for the \$2.6 million dollar Portage/Catawba Island WWTS capital improvement projects to maintain the integrity of the WWTP and collection system. Secured a 20-year, \$1.26 million dollar Water Pollution Control Loan at 0.35% from the Ohio EPA that will save the county an estimated \$393,000 compared to a market-rate loan.
3. Increased sanitary sewer rates by \$2.00 per equivalent dwelling unit on January 1, 2017. The 2017 average annual residential sewer rate in the Portage/Catawba Island Wastewater System was \$396.00 (\$33.00 per month, per EDU). The latest average

annual residential sewer rate throughout Ohio (based upon 2016 data available through the Ohio EPA's Economic Analysis Unit) was \$661.00 (\$55.08) per month); which is almost 67% greater than the Portage/Catawba Island Wastewater Treatment System's rate.

4. Treated 151,941,000 gallons of wastewater, an increase of 7.36% from 2016.
5. Complied with EPA NPDES permit treatment requirements with no effluent limit violations.
6. Completed a 2016 Annual Sewer System Overflow (SSO) Report for the Portage/Catawba Island Collection System. Experienced one (1) collection system surcharge violation in 2017.
7. Issued seventy-four (74) new permits to connect and/or repair permits to the sanitary sewer system totaling \$181,609.00 in up-front permit fees and charges.
8. Five (5) permits to connect were issued to the sanitary sewer system with deferred connection fees in the amount of \$8,627.50.
9. Maintained certified delinquent receipts at \$6,210.64 (0.31%) of the billed receipts (0.33% in 2016).
10. Worked with developers to review plans for future sanitary sewer extensions in Mon Ami Condominium Development, State Route 163 Airport Storage Condominiums, Willowcove Campground and RV Boataminium, Weyhe Road Extension, and Twin Oast Brewery (Quinstock).
11. Responded to one hundred eighty-four (184) E-1 grinder pump service calls.
12. Repaired one (1) pressure sewer main break and six (6) pressure sewer services.
13. Conducted two hundred fifteen (215) manhole inspections.
14. Performed fifty-nine (59) video camera investigations of private/public collection systems to confirm problems and/or record drawing infrastructure information covering 17,534 linear feet of pipe.
15. Performed smoke testing on 2,161 linear feet of sewer pipe.
16. Performed thirteen (13) infiltration/inflow site and/or office meeting with mobile home/RV park owner and/or association members.
17. Issued forty-two (42) notice of violation letters to property owners. Thirty-two (32) are confirmed to be in compliance.
18. Conducted five (5) meetings with development engineers and four (4) with development general contractors regarding possible subdivision developments.
19. Repaired two (2) gravity sewer breaks and five (5) gravity sewer lateral break.

20. Raised/repaired twenty-four (24) manhole castings.
21. Maintained odor control improvements at the Portage/Catawba Island Wastewater Treatment Plant to minimize gases released throughout the treatment process.
22. Sealed marina waste and raw station at plant to eliminate the release of odors.
23. Increased bio-filter odor control system at plant by 50%.
24. Reconditioned one (1) blower for air supply to variable volume reactor tanks.
25. Replaced marina waste pumping station.
26. Replaced drain valve for sludge truck fill station.
27. Calibrated sludge pump meter to insure accurate volume of sludge removed.
28. Increased sludge contract limit from 3% to 4% solids, resulting in a potential of up to 25% cost savings.
29. Removed 791,000 gallons of thickened sludge for land application.
30. Initiated Return Activated Sludge Pump Rebuild Program.
31. Reduced backflow certification costs by changing contractors.
32. Tim Almendinger and William Miller were certified by E-1 as Environment One Pressure Sewer Pump Maintenance Technicians allowing Ottawa County a 10% discount on future E-1 grinder pumps and parts.
33. Power washed and sealed all concrete structures at WWTP.
34. Painted all air supply piping from blowers to treatment tanks.
35. Replaced roofing on blower, vehicle storage & chemical storage buildings.
36. Completed Pollution Minimization Plan for Ohio EPA.
37. Sponsored an AWWA tour of the Portage/Catawba Island facility

Ottawa County Regional Water Distribution System

1. Operated the Ottawa County Regional Water Distribution System within the original appropriated operations budget. System revenues (\$4,175,949.82) exceeded operating expenses (\$4,067,189.98) by \$108,759.84 for the year allowing the county to continue to set aside funding for future capital improvements.
2. Completed the plans, specifications and plan of financing for the \$1,005,745.00 Regional Water Elevated Water Tower Rehabilitation Project. Secured a \$137,872.00 Ohio Public Works Commission, 20-year, 0.0% loan to help minimize up-front local

share project costs. Awarded a contract to M & K Painting for the project in October of 2017.

3. The average annual residential water rate throughout the Regional Water Distribution System was \$442.56 (\$36.88 per month, per EDU). The latest average annual residential water rate throughout Ohio (based upon 2016 data available through the Ohio EPA's Economic Analysis Unit) was \$628.00 (\$52.33 per month); which is almost 42% higher than the regional water rate.
4. Issued one hundred thirty (130) new permits to connect and/or repair permits to the public water system totaling \$217,036.49 in up-front fees and charges.
5. Five (5) permits to connect were issued to the public water system with deferred connection fees in the amount of \$13,460.00.
6. Collected \$16,105.00 in backflow testing fees (864 devices were tested).
7. Certified delinquent receipts were \$6,588.13 (0.17%) of the billed receipts (0.13% in 2016).
8. Repaired thirty-six (36) hydrants and thirty-two (32) blow-offs. Replaced one (1) hydrant damaged by automobile accident.
9. Repaired zero (0) water main breaks.
10. Repaired eighteen (18) water service leaks.
11. Completed twenty-two (22) excavations to repair valve boxes and test stations.
12. Completed twelve (12) depressurizations that resulted in boil advisories for three hundred thirty-nine (339) services.
13. Repaired zero (0) frozen service lines.
14. Mailed out nineteen (19) meter pit/yoke and/or riser violation letters. Ten (10) are confirmed to be in compliance.
15. Continued to implement Ottawa County's backflow prevention program including education of the general public and performing inspection surveys.
16. Continued an in-house monitoring program to verify the accuracy of the regional water system master meters.
17. Continued the in-house program of testing and upgrading approximately twenty seven (27) cathodic protection test stations.
18. Replaced twenty-seven (27) failed anodes.
19. Tested and calibrated nineteen (16) retail meters including: three (3) 5/8" & 3/4"; two (2) 1"; two (2) 1 1/2"; four (4) 2"; one (1) 3" and four (4) 6" meters.

20. Tested Oak Harbor's 8" meter one (1) time, tested Lakeshore Drive's 10" meter one (1) time and tested Port Clinton's 16" meter one (1) time.
21. Performed ERT and meter maintenance on 1,047 (ERT maintenance, missed meter, meter maintenance, and rereads).
22. Performed spring and fall flushing of 818 fire hydrants and 225 blow-offs.
23. Annual Regional Water Loss percentage for 2017 was maintained at 7%.
24. Installed twelve (12) meter pit insulation kits.
25. Worked with developers to review plans for future water extensions in Dock on the Bay Mobile Home Park, Mon Ami Condominium Development, Regatta Subdivision, Willow Bend RV Park, and Rocky Point RV Park.

Ottawa County Regional Water Treatment Plant & Transmission System

1. Operated the Ottawa County Regional Water Treatment Plant and Transmission System within the original appropriated operations budget. System revenues (3,343,717.66) exceeded total expenses (\$3,217,548.38) by \$126,169.28 for the year allowing for an end of the year transfer of an additional \$100,000.00 to the repair and replacement fund for planned future capital improvements.
2. Hired Jones and Henry Engineers, Ltd. to design and oversee construction of the \$553,000.00 Regional Water Clarifier Recoating Project. Applied for a \$175,000.00 Ohio Public Works Commissioner Grant to help defer the local share cost of the project.
3. Water Treatment Plant production – 1.212 billion gallons (high service flows).
4. Conducted three (3) Regional Water Policy Board meetings to continue to maintain a positive working partnership with the City of Port Clinton and Village of Oak Harbor.
5. Completed FY 2017 with zero (0) treatment violations.
6. Posted Consumer Confidence Report on the department website and mailed out billing message notices to all county distribution water customers referencing the report's availability.
7. Operated the Water Treatment Plant 24 hour per day, 7 days a week throughout the entire year to maximize treatment capabilities.
8. Updated the Drinking Water System Contingency Plan as required by EPA; including language to address algae/microcystin concerns.
9. Developed and submitted a General Plan for HABs to Ohio Environmental Protection Agency.
10. Developed and submitted Lead & Copper mapping to Ohio Environmental Protection Agency.

11. Conducted various tours of the water plant for the general public; including a tour of water plant to the Danbury High School Science class.
12. Hosted a Microcystin Table Top Exercise with Ottawa County EMA, Ottawa County health Department, Village of Oak Harbor, City of Port Clinton, and Ottawa County Sanitary Engineering Department.
13. Hosted the AWWA Regional Summer conference at Erie/Ottawa Air Museum.
14. Attended regional and state AWWA conferences.
15. Completed one (1) EPA sanitary survey.
16. Attended Lake Erie Water Treatment Plant Group meeting.
17. Cleaned wet wells at the raw; all three clarifiers, flumes to and from clarifiers, and pretreatment basis.
18. Micro lab recertification renewed for four (4) operators.
19. Recertified all personnel in chemical lab.
20. Secured chemical recertification for the entire operation's staff.
21. Authorized Shannon Chemicals to evaluate one (1) set of corrosion coupons.
22. Participated in various public information events as presenters of information and experiences regarding the presence of HAB (Harmful Algal Blooms) in the western basin of Lake Erie and the difficulties HAB's present in water treatment.
23. Served as a member of The Ohio State University Sea Grant review panel to award Ohio Department of Higher Education grant funds to various universities for HAB research projects.
24. Utilized the interconnection between the Village of Marblehead and Ottawa County to supply Marblehead with water while they were having repairs made to one of their filters.
25. Purchased a Crown Lift to assist with the lifting PAC (Powdered Activated Carbon) bags.
26. Supplied samples to USGS for study on microcystin toxins.
27. Installed Mag meter at both the raw meter vault and high service.
28. Contracted with Ovivo to perform filter evaluations.
29. Painted Maintenance Building (Rm 122), Utility Room (Rm 121), Chemical Feed and Storage Building (Rm 124), Alum and Caustic Soda Feed and Storage (Rm 126), and Pump Room (Rm 143)

Erie Township Sanitary Sewer Project, Phase I

1. Completed the easement acquisitions, plan of financing and assessment process for the \$1,573,847.48 Erie Township Sanitary Sewer Project, Phase I. Secured a \$1,067,886 Army Corps of Engineers, Section 594 Grant to minimize the local share cost of the project. Advertised for construction bids on December 16, 2017.

Salem Township Sewer District

1. Continued to provide operational/maintenance support services, as needed, to the Riverview Health Care Campus and Ottawa County Fairgrounds wastewater pump stations.

Ottawa County Radio Tower (Regional Water Transmission)

1. Continued ongoing operation and maintenance of the radio tower.
2. System Revenues: FY 2017 - \$50,794.44
System O & M Expenses: FY 2017- \$12,905.95
3. Transferred a total of \$23,250.00 from the Radio Tower fund to the Regional Water Plant and Transmission Main fund to support the Regional Water Treatment Plant operations.

Safety

1. Participated in Ottawa County Safety & Risk Management meetings.
2. Completed forty-seven (47) confined space entries without incident.

General

1. Responded to 4,214 locates via Ohio Utilities Protection Services (OUPS).
2. Responded to 6,150 service calls (CMI 3,115) including: 2,779 in the newly implemented Mobile 311 and 256 in Muni-Link.
3. Rebuilt one hundred fifteen (115) E1 Grinder Pumps in-house.
4. Continued to update and maintain a department website to disseminate information to the general public.
5. Continued to serve on the Ottawa Regional Planning Commission (ORPC).
6. Switched over to Muni-Link to provide cloud based utility billing services in 2017. Initiated an effort to re-sign customers for "e-bill" and "on-line" billing services. New billing software was placed into operation December 1, 2017 requiring customers to re-enroll for "e-bill".

7. Continued to participate in the Toledo Metropolitan Area Council of Governments Environmental Council (TMACOG) meetings.
8. Continued to work with TMACOG and local communities to update the area wide water quality management plan, a.k.a. 208 Plan, for areas of need throughout Ottawa County.
9. Processed thirty-two (32) property splits resulting in assessment re-distributions for Danbury, Portage/Catawba Island Sewer, and Regional Water Customers. Processed thirty-two (32) property splits resulting in no changes in assessments.
10. Reviewed seven (7) Administrative Approval property splits.
11. Continued to sign-up customers for the electronic funds transfer method of water and sewer bill payment. Total as of December 31, 2017 was 3,458 customers.
12. Updated the FY-2017 5-Year Capital Improvement Plan for water & sewer throughout Ottawa County.
13. Administered and maintained the water and sewer monthly billing system for 9,857 accounts.
14. Attended the County Commissioner Association of Ohio/County Engineers Association of Ohio/Sanitary Engineers Association of Ohio summer and winter conferences.
15. Managed several personnel changes, including: Hired Wesley Brewster as Wastewater Operator III/Maintenance and Matthew Berry as Water Operator III/Maintenance, Carter Rumball, Spencer Wadsworth, and Alex Camerato as Summer Seasonal Laborers; accepted the retirement of Mike Pasqualini; and accepted the resignation of Paul Wilkins.
16. Collected \$2,355.90 in deferred assessments from agricultural properties that have been developed and no longer qualify as agriculturally deferred. The deferred assessments were then paid back to the Ohio Water and Sewer Rotary Commission.
17. Continued to serve as the alternate on the District 5 executive, integrating, and local Ohio Public Works Commission State Issue II Committees.
18. Advertised for bids and contracted for the delivery of chemicals for the Danbury and Portage-Catawba Island Wastewater Treatment Plants and the Ottawa County Regional Water Treatment Plant through 2018.
19. Provided the necessary training and educational support to maintain professional operations and engineering licenses through required continued education hours.
20. Continued maintenance of all public records relating to department operations in compliance with applicable public record laws. Ensured availability, upon request within a reasonable time frame, as evidenced by several different records requests.
21. Internet auction, Gov Deals sales of \$362.27 plus \$188.80 in scrap metal recycling.

22. Processed a total of 1,680 shut-off notices and actually turned off a total of 234 accounts for the entire year of 2017.
23. Printed and mailed out 118,798 invoices in 2017 through Smartbill.
24. Processed 110,685 receipts; including 11,366 bank checks, 1,921 cash payments, 40,234 direct payment (ACH), 97 electronic fund transfer (EFT), 2,249 official payments, 45,023 scanned payments, and 9,795 scan/hand posted payments.
25. Processed twelve (12) Sheriff Sales.
26. Served on the Ottawa County Improvement Corporation Business Attraction Strategy Committee working to attract and promote businesses to Ottawa County.
27. Refinanced \$2,105,000 in existing debt at an old interest rate of 4.5% for the Regional Water Treatment Plant & Transmission System and the Portage-Catawba Island Sanitary Sewer System with a new debt issuance at a rate of 3.18% resulting in a combined savings of \$188,431 over the life of the bonds.
28. Negotiated a new three year labor agreement with the Teamsters Local #20.
29. Hired Poggemeyer Design Group to prepare an Unsewered Area General Plan for Allen and Jerusalem Townships.
30. Implemented Mobile311 software to track work orders for the Danbury Sewer Collection System, PCI Collection System and Regional Water Distribution System. Mobile311 will also be used to satisfy Ohio EPA requirements for an asset management system once their requirements are finalized. Continued to update data sets within GIS with new water and sewer taps, repairs, and private replacement projects. Continued the ongoing effort with the Ottawa County Auditor's Office and the Ottawa County Engineer's Office to create a consolidated GIS network that other Governmental agencies within Ottawa County can utilize to help serve the customers and citizens of the County.

cc: file