



#### RIDLEY TOWNSHIP MONTHLY FLOW METER DATA

| Meter<br>No. | Meter Location                                   | Total<br>EDUs | Outside<br>EDUs |                    | January            |                 |                    | February           |              |                    | March              |              | April              |                    | April May       |                    | June               |                 |                    | Comments           |                 |  |
|--------------|--|---------------|-----------------|--------------------|--------------------|-----------------|--------------------|--------------------|--------------|--------------------|--------------------|--------------|--------------------|--------------------|-----------------|--------------------|--------------------|-----------------|--------------------|--------------------|-----------------|--|
| 1            |  |               |                 | Recorded<br>Volume | Gallons<br>EDU/Day | Outside<br>EDUs | Recorded<br>Volume | Gallons<br>EDU/Day | Outside EDUs | Recorded<br>Volume | Gallons<br>EDU/Day | Outside EDUs | Recorded<br>Volume | Gallons<br>EDU/Day | Outside<br>EDUs | Recorded<br>Volume | Gallons<br>EDU/Day | Outside<br>EDUs | Recorded<br>Volume | Gallons<br>EDU/Day | Outside<br>EDUs |  |
| 1            | MacDade Blvd (at Brighton<br>Terrace)            | 1,630         | 45              | 14,184,545         | 277                | -574,474        | 19,551,883         | 425                | -669,399     | 22,839,982         | 446                | -946,732     | 19,314,222         | 392                | -681,242        | 19,160,256         | 377                | -644,129        | 15,620,485         | 317                | -552,048        | Outside EDUs from Glenolden Borough.<br>Using average of all GB meters for<br>estimate. Flows thru GB Meter No.: 1 |
| 2            | Academy Avenue (at<br>Township line)             | 69            |                 | 1,436,556          | 672                |                 | 1,572,623          | 814                |              | 2,175,458          | 1,017              |              | 1,662,428          | 803                |                 | 1,497,995          | 700                |                 | 1,321,398          | 638                |                 |  |
| 3            | Armstrong Avenue (in rear)                       | 665           |                 | 7,189,313          | 349                |                 | 8,423,797          | 452                |              | 9,585,603          | 465                |              | 7,278,608          | 365                |                 | 7,420,722          | 360                |                 | 6,591,251          | 330                |                 |  |
|              | Unmetered Areas (average volume from all meters) | 366           |                 | 3,509,424          | 309                |                 | 4,557,861          | 445                |              | 5,311,547          | 468                |              | 4,35 <b>1</b> ,915 | 396                |                 | 4,329,950          | 382                |                 | 3,627,028          | 330                |                 | Use average EDU from all Propsect meters for estimate  |
|              | TOTAL  | 2,730         | 45              | 25,745,363         |                    |                 | 33,436,765         |                    |              | 38,965,858         |                    |              | 31,925,931         |                    |                 | 31,764,794         |                    |                 | 26,608,114         |                    |                 |  |
|              |  |               | r               |                    |                    |                 | -                  |                    |              |                    |                    |              | 1                  |                    |                 | 1                  |                    |                 | 1                  |                    |                 | T  |
| Meter<br>No. | Meter Location                                   | Total<br>EDUs | Outside<br>EDUs |                    | July               |                 |                    | August             |              |                    | Septembe           | r            |                    | October            |                 |                    | November           |                 |                    | December           |                 | Comments   |
|              |  |               |                 | Recorded<br>Volume | Gallons<br>EDU/Day | Outside<br>EDUs | Recorded<br>Volume | Gallons<br>EDU/Day | Outside EDUs | Recorded<br>Volume | Gallons<br>EDU/Day | Outside EDUs | Recorded<br>Volume | Gallons<br>EDU/Day | Outside<br>EDUs | Recorded<br>Volume | Gallons<br>EDU/Day | Outside<br>EDUs | Recorded<br>Volume | Gallons<br>EDU/Day | Outside<br>EDUs |  |
| 1            | MacDade Blvd (at Brighton<br>Terrace)            | 1,630         | 45              | 12,559,036         | 245                | -504,882        | 13,087,266         | 254                | -601,683     | 15,158,022         | 306                | -616,643     | 13,793,617         | 269                | -593,451        | 16,981,626         | 338                | -889,307        | 17,153,511         | 332                | -821,654        | Outside EDUs from Glenolden Borough.<br>Using average of all GB meters for<br>estimate. Flows thru GB Meter No.: 1 |
| 2            | Academy Avenue (at<br>Township line)             | 69            | ~               | 1,113,103          | 520                |                 | 1,132,313          | 529                |              | 1,002,171          | 484                |              | 1,243,824          | 581                |                 | 1,789,809          | 865                |                 | 1,965,728          | 919                |                 |  |
| 3            | Armstrong Avenue (in rear)                       | 665           |                 | 6,638,275          | 322                |                 | 6,654,000          | 323                |              | 6,717,771          | 337                |              | 6,936,006          | 336                |                 | 7,505,392          | 376                |                 | 8,483,949          | 412                |                 |  |
|              | Unmetered Areas (average volume from all meters) | 366           |                 | 3,125,841          | 276                |                 | 3,199,445          | 282                |              | 3,513,430          | 320                |              | 3,374,333          | 297                |                 | 4,006,827          | 365                |                 | 4,226,840          | 373                |                 | Use average EDU from all Propsect meters for estimate  |
|              | TOTAL  | 2,730         | 45              | 22,931,373         |                    |                 | 23,471,341         |                    |              | 25,774,750         |                    |              | 24,754,330         |                    |                 | 29,394,347         |                    |                 | 31,008,374         |                    |                 |  |



## Sanitary Sewer Monitoring Report

Township forces are used for inspection, troubleshooting and routine maintenance of the sanitary sewer system.

Each year, a portion of the system is cleaned and video inspected as part of the Township's Preventative Maintenance Program. The Line Cleaning Program is completed by Township personnel and is set as a 4-year program to address the entire system. The Video Inspection Program is an ongoing 9-year program. Each phase in contracted to a sewer specialty contractor. Phases 1 and 9 of the video inspections were completed in 2014. A number of I&I abatement activities and sanitary sewer repairs were completed as indicated in the summary at the end of this report.

To monitor the flow within the system, the Township has strategically placed 15 flow meters in the CDCA system, 3 meters in the Muckinipates system, and 0 meters in DELCORA system that records flow data in 15 minute intervals as part of the DELCORA metering system. This data is reviewed to ensure proper flow conditions and to help identify areas that may be experiencing abnormally low or high flows for investigating potential issues.

# **Industrial Waste Report**

DELCORA is currently responsible for issuance of Industrial Waste Permits to companies discharging into Ridley Township Sewers. The regulation governing discharge of the industrial wastes as well as any program for surveillance and monitoring of industrial waste discharges is maintained by DELCORA.

There are no known industrial permits in the Ridley Township system.

# **Springfield Township**

3800-FM-BPNPSM0507 4/2014 Chapter 94 Report



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

# CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

### For Calendar Year: 2018

Permittee is owner and/or operator of a POTW or other sewage treatment facility

Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

|      | GENERAL INFORMATION   |  |  |  |  |  |  |
|------|---|--|--|--|--|--|--|
| Per  | mittee Name:  | Sprinfield Township - Muckinipattis  | Permit No.:  | РА   |  |  |  |
| Ма   | iling Address:  | 50 Powell Road   | Effective Date:  |  |  |  |  |
| City | y, State, Zip:  | Springfield, PA 19064  | Expiration Date:   |  |  |  |  |
| Co   | ntact Person:   | Lee Fulton   | Renewal Due Date:  |  |  |  |  |
| Titl | e:  | Township Manager   | Municipality:  | Springfield Township   |  |  |  |
| Pho  | one:  | 610-544-1300   | County:  | Delaware County  |  |  |  |
| Em   | ail:  | lfulton@springfielddelco.org   | Consultant Name:   | McCormick Taylor, Inc.   |  |  |  |
|      |   | CHAPTER 94 REPORT  | COMPONENTS   |  |  |  |  |
| 1.   | Attach to this repor<br>5 years and projec<br>design capacity pe  | t a line graph depicting the monthly avera<br>cting the flows for the next 5 years. The<br>r the WQM permit. (25 Pa. Code § 94.12( | ge flows (expressed in l<br>e graph must also inclu<br>(a)(1)) | MGD) for each month for the past<br>ide a line depicting the hydraulic |  |  |  |
|      | <ul> <li>Check the appropriate boxes:</li> <li>Line graph for flows attached (Attachment)</li> <li>DEP Chapter 94 Spreadsheet used (Attachment)</li> <li>Section 1 is not applicable (report is for a collection system).</li> </ul>  |  |  |  |  |  |  |
| 2.   | <ul> <li>Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. (25 Pa. Code § 94.12(a)(2))</li> <li>Check the appropriate boxes: <ul> <li>Line graph for organic loads attached (Attachment)</li> <li>DEP Chapter 94 Spreadsheet used (Attachment)</li> <li>Section 2 is not applicable (report is for a collection system).</li> </ul> </li> </ul> |  |  |  |  |  |  |
| 3.   | 3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections, if necessary, and data used to support the projections should be included in an appendix to this report. (25 Pa. Code § 94.12(a)(3)) N/A  |  |  |  |  |  |  |

| 4. | Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4))  |
|----|--|
|    | Check the appropriate boxes:   |
|    | Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (Attachment )  |
|    | <ul> <li>List summarizing each extension or project attached (Attachment )</li> <li>Schedules describing how each project will be completed over time and effects attached (Attachment )</li> </ul>  |
|    | Comments:  |
|    | There were no sewer extensions made in 2018. In addition, there are no planned or approved extensions at this time.  |
|    |  |
|    |  |
|    |  |
|    |  |
|    |  |
| 5. | Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))   |
|    | Monitoring, maintenance and rehabilitation programs have been established in accordance with the Water Environment Federation's (WEF) Existing Sewer Evaluation and Rehabilitation (WEF MOP FD-6; ASCE MREP-62) and WEF's MOP 7.   |
|    | DELCORA installed two flow meters within the Muckinipates sewer shed within Springfield Township. The recorded data includes flow from both Springfield and Upper Darby Townships. The maintenance of these meters is the responsibility of DELCORA. These meters record the flow every 15 minutes and the transmission of information happens periodically throughout the day. Since the meters are maintained and owned by DELCORA, the required calibration report would have to be obtained from them.   |
|    | The Township's sewer lines have been catalogued and prioritized for inspection and evaluation. The Public Works Department conducts inspection and evaluation activities according to the schedule prescribed by the Township Engineer. Inspection and evaluation are facilitated through a jet cleaning truck and a closed circuit television sewer inspection truck operated by a three man crew from the Public Works Department. Public Works inspects between 10 and 20 miles of sewer line annually. The lines are evaluated for defects (breaks, roots, I/I, grease, etc.) by the field crew and also by the Public Works Superintendent and Township Engineer. Any defects discovered during evaluation are assessed, rated and prioritized for repair or further evaluation as necessary. |
|    | At this time, Springfield Township is in the process of identifying areas of concern for 2019 and a work session will be scheduled to determine areas of the sewer shed to focus on.   |
|    |  |

ſ

| 6. | Discuss the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))   |
|----|---|
|    | <ul> <li>Check the appropriate boxes:</li> <li>System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.</li> <li>System did not experience capacity-related bypassing, SSOs or surcharging during the report year.</li> </ul>   |
|    | Comments:   |
|    |   |
|    |   |
|    |   |
|    |   |
| 7. | Attach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum pumping rate with present maximum flows and the projected 2-year maximum flows for each station. (25 Pa. Code § 94.12(a)(7))  |
|    | Check the appropriate boxes:  |
|    | X The collection system does not contain pump stations □ The collection system does contain pump stations (Number)  |
|    | Discussion of condition of each pump station attached (Attachment )   |
|    |   |
| 8. | If the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the information listed below. (25 Pa. Code § 94.12(a)(8))  |
|    | a. A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of<br>amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not<br>previously been submitted.   |
|    | b. A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste<br>discharges into the sewer system during the past year.  |
|    | c. A discussion of specific problems in the sewer system or at the plant, known or suspected to be caused by industrial waste discharges and a summary of the steps being taken to alleviate or eliminate the problems. The discussion shall include a list of industries known to be discharging wastes which create problems in the plant or in the sewer system and action taken to eliminate the problem or prevent its recurrence. The report may describe pollution prevention techniques in the summary of steps taken to alleviate current problems caused by industrial waste dischargers and in actions taken to eliminate or prevent potential or recurring problems caused by industrial waste dischargers. |
|    | Check the appropriate boxes:  |
|    | <ul> <li>Industrial waste report as described in 8 a., b. and c. attached (Attachment )</li> <li>Industrial pretreatment report as required in an NPDES permit attached (Attachment )</li> </ul>  |

3800-FM-BPNPSM0507 4/2014 Chapter 94 Report

1

| 9. Existing or Projected Overload.   |  |  |  |  |
|--|--|--|--|--|
| Check the appropriate boxes:<br>This report demonstrates an existing hydraulic overload<br>This report demonstrates a projected hydraulic overload<br>This report demonstrates an existing organic overload<br>This report demonstrates a projected organic overload<br>If one or more boxes above have been checked, attach a C<br>or projected overloaded conditions under §§ 94.21 an<br>overload). (25 Pa. Code § 94.12(a)(9))<br>Corrective Action Plan attached (Attachment )  | d condition.<br>d condition.<br>condition.<br>condition.<br>Corrective Action Plan (CAP) to reduce or eliminate present<br>d/or 94.22 (relating to existing overload and projected |  |  |  |
| 10. Where required by the NPDES permit, attach a Sewage balance of solids coming in and leaving the facility over the  | Sludge Management inventory that demonstrates a mass previous calendar year.   |  |  |  |
| Sewage Sludge Management Inventory attached (Attal<br>Sewage Sludge Management Inventory attached (Attal   | chment )   |  |  |  |
| 11. For facilities with CSOs and where required by the NPDES permit, attach an Annual CSO Report (including satellite combined sewer systems).   |  |  |  |  |
| Annual CSO Report attached (Attachment)  |  |  |  |  |
| <ol> <li>For POTWs, attach a calibration report documenting that<br/>been calibrated annually. (<u>25 Pa. Code § 94,13(b)</u>)</li> </ol>  | flow measuring, indicating and recording equipment has   |  |  |  |
| Flow calibration report attached (Attachment)  |  |  |  |  |
| RESPONSIBLE OFFICI   | AL CERTIFICATION   |  |  |  |
| I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification). |  |  |  |  |
| Lee Fulton, Township Manager   | Alles Futton   |  |  |  |
| Name of Responsible Official   | Signature  |  |  |  |
| 610-544-1300   | 2-14-19  |  |  |  |
| Telephone No.  | Date   |  |  |  |

## PREPARER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

| Susan | Μ. | Guisinger-Colon, P.E. |  |
|-------|----|-----------------------|--|
|-------|----|-----------------------|--|

Name of Preparer

<u>Ynan M</u> Jignature 2/19/2019

610-640-3500 Telephone No.

Date

**Upper Darby Township** 

DEPARTMENT OF ENVIRONMENTAL PROTECTION



## For Calendar Year: 2018

| Permittee is owner | and/or operato | r of a POTW or othe | r sewage treatment facility |
|--------------------|----------------|---------------------|-----------------------------|
|                    | •              |                     |                             |

Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

|    | GENERAL INFORMATION   |                            |                   |                      |  |  |  |
|----|---|----------------------------|-------------------|----------------------|--|--|--|
| Pe | ermittee Name:  | Upper Darby Township       | Permit No.:       | PAn/a                |  |  |  |
| M  | ailing Address:   | 100 Garrett Road, Room 301 | Effective Date:   | n/a                  |  |  |  |
| Ci | ty, State, Zip:   | Upper Darby, PA 19082      | Expiration Date:  | n/a                  |  |  |  |
| Co | ontact Person:  | Daniel R. Lutz, P.E.       | Renewal Due Date: | n/a                  |  |  |  |
| Ti | le:   | Township Engineer          | Municipality:     | Upper Darby Township |  |  |  |
| Pł | one:  | 610-734-7635               | County:           | Delaware             |  |  |  |
| Er | nail:   | dlutz@upperdarby.org       | Consultant Name:  | n/a                  |  |  |  |
|    |   | CHAPTER 94 REPORT          | COMPONENTS        |                      |  |  |  |
|    | <ul> <li>Attach to this report a line graph depicting the monthly average flows (expressed in MGD) for each month for the past 5 years and projecting the flows for the next 5 years. The graph must also include a line depicting the hydraulic design capacity per the WQM permit. (<u>25 Pa. Code § 94.12(a)(1)</u>)</li> <li>Check the appropriate boxes:         <ul> <li>                 Line graph for flows attached (Attachment C)                 DEP Chapter 94 Spreadsheet used (Attachment )                Section 1 is not applicable (report is for a collection system).         </li></ul> </li> </ul> |                            |                   |                      |  |  |  |
| 2. | <ul> <li>2. Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. (25 Pa. Code § 94.12(a)(2))</li> <li>Check the appropriate boxes: <ul> <li>Line graph for organic loads attached (Attachment)</li> <li>DEP Chapter 94 Spreadsheet used (Attachment)</li> <li>Section 2 is not applicable (report is for a collection system).</li> </ul> </li> </ul>  |                            |                   |                      |  |  |  |
| 3. | 3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections, if necessary, and data used to support the projections should be included in an appendix to this report. (25 Pa. Code § 94.12(a)(3)) DEP Chapter 94 Spreadsheet was used in this report.  |                            |                   |                      |  |  |  |

| 4. | Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4)) |
|----|---|
|    | populations served. ( <u>25 Pa. Code § 94.12(a)(4)</u> )  |
|    | Check the conversion howers   |

#### Check the appropriate boxes:

Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment A**)

] List summarizing each extension or project attached (Attachment )

Schedules describing how each project will be completed over time and effects attached (Attachment )

#### Comments:

Attachment A is a plot plan of the entire Muckinipates drainage area sanitary sewer system (Figure 1 - Chapter 94 Report for 2018 to Delcora, dated 02/11/2019).

There is no known sewer extensions for year 2018.

5. Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))

#### See Attachment B.

| 6. | Discuss the condition of the sewer system including portions of the system where conveyance capacity is being  |
|----|--|
|    | exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is |
|    | underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive     |
|    | infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))      |

#### Check the appropriate boxes:

- System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.
- System did not experience capacity-related bypassing, SSOs or surcharging during the report year.

Comments:

See Attachment C.

Г

| ' 7. | Att<br>pu<br><u>94</u> | ach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum mping rate with present maximum flows and the projected 2-year maximum flows for each station. ( <u>25 Pa. Code §</u> . <u>12(a)(7)</u> )   |
|------|------------------------|--|
|      | Ch                     | eck the appropriate boxes:   |
|      | $\boxtimes$            | The collection system does not contain pump stations   |
|      |                        | The collection system does contain pump stations (Number – )   |
|      |                        | Discussion of condition of each pump station attached (Attachment )  |
|      |                        |  |
| 8.   | lf<br>infe             | the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the<br>prmation listed below. (25 Pa. Code § 94.12(a)(8))  |
| -    | a.                     | A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not previously been submitted.   |
|      | b.                     | A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste discharges into the sewer system during the past year.   |
|      | C.                     | A discussion of specific problems in the sewer system or at the plant, known or suspected to be caused by industrial waste discharges and a summary of the steps being taken to alleviate or eliminate the problems. The discussion shall include a list of industries known to be discharging wastes which create problems in the plant or in the sewer system and action taken to eliminate the problem or prevent its recurrence. The report may describe pollution prevention techniques in the summary of steps taken to alleviate current problems caused by industrial waste dischargers and in actions taken to eliminate or prevent potential or recurring problems caused by industrial waste dischargers. |
|      | Ch                     | eck the appropriate boxes:   |
|      |                        | Industrial waste report as described in 8 a., b. and c. attached (Attachment )   |
|      |                        | Industrial pretreatment report as required in an NPDES permit attached ( <b>Attachment</b> )   |
| 9.   | Exi                    | sting or Projected Overload.   |
|      | Ch                     | eck the appropriate boxes:   |
|      |                        | This report demonstrates an existing hydraulic overload condition.   |
|      |                        | This report demonstrates a projected hydraulic overload condition.   |
|      |                        | This report demonstrates an existing organic overload condition.   |
|      |                        | This report demonstrates a projected organic overload condition.   |
|      | lf o<br>or<br>ove      | ne or more boxes above have been checked, attach a Corrective Action Plan (CAP) to reduce or eliminate present projected overloaded conditions under §§ 94.21 and/or 94.22 (relating to existing overload and projected erload). (25 Pa. Code § 94.12(a)(9))   |
|      |                        | Corrective Action Plan attached (Attachment )  |
| 10.  | Wh<br>bai              | ere required by the NPDES permit, attach a Sewage Sludge Management inventory that demonstrates a mass ance of solids coming in and leaving the facility over the previous calendar year.  |
|      |                        | Sewage Sludge Management Inventory attached (Attachment )  |

| 11. For facilities with CSOs and where required by the NPDES permit, attach an Annual CSO Report (including satellite combined sewer systems).   |  |  |  |  |
|--|--|--|--|--|
| Annual CSO Report attached ( <b>Attachment</b> )   |  |  |  |  |
| 12. For POTWs, attach a calibration report documenting that flow measuring, indicating and recording equipment has been calibrated annually. (25 Pa. Code § 94.13(b))  |  |  |  |  |
| Flow calibration report attached ( <b>Attachment</b> )   |  |  |  |  |
| RESPONSIBLE OFFIC  | CIAL CERTIFICATION   |  |  |  |
| I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification). |  |  |  |  |
| Daniel R. Lutz, P.E Township Engineer  | Daniel R Leit  |  |  |  |
| Name of Responsible Official   | Signature P  |  |  |  |
| 610-734-7635   | 2/11/19  |  |  |  |
| Telephone No.  | Date   |  |  |  |
| PREPARER CI  | ERTIFICATION   |  |  |  |
| I certify under penalty of law that this document and all attach<br>or supervision in accordance with a system designed to assu<br>the information submitted. The information submitted is, to<br>complete. I am aware that there are significant penalties for<br>and imprisonment for knowledge of violations. See 18 Pa. C.S  | ments were prepared by me or otherwise under my direction<br>ure that qualified personnel properly gathered and evaluated<br>to the best of my knowledge and belief, true, accurate, and<br>submitting false information, including the possibility of fine<br>S. § 4904 (relating to unswom falsification). |  |  |  |
| Name of Preparer   | Signature  |  |  |  |
| Telephone No.  | Date   |  |  |  |

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT 2019 Chapter 94 Annual Report Upper Darby Township Muckinipates Authority / DELCORA DELAWARE COUNTY

# ATTACHMENT B

# SEWER SYSTEM OPERATIONS & MAINTENANCE

## PROGRAM FOR SANITARY SEWER MONITORING, MAINTENANCE AND REPAIR

The Upper Darby Township Sewer Division has one foreman, two operators and three laborers; also, there are two TV operators in charge of operating the TV camera.

The equipment of this Division consists of:

- One pick up truck
- Three dump trucks
- One jet truck
- One rodder truck
- TV camera truck
- Backhoe

In addition, all the equipment of the Township is available in case of an emergency. The Township uses Dukes Root Control for the removal of sewer penetrating roots where detected in the lines. This process is achieved in the following manner. Foam is pumped through a discharge hose, completely filling the mainline from manhole to manhole. Foam is compressed against all pipe surfaces, into cracks and joints, and forced up connecting sewers for maximum contact of all roots. Upon contact with the foam, roots are killed and then decay naturally and slough off. Trees are not harmed, bypass pumping and cleaning prior to treatment is not required, and sewer service is never interrupted.

The sewer crew has a routine plan to monitor and maintain the system, which includes the replacement of deteriorated sections of pipe, the cleaning of grease, built up, removal of roots and jet sewer lines at known problem locations.

The tasks of the TV camera crew along with the surveyor crew are to video the sewer lines, locate manholes, and obtain elevations of the manhole's rims and inverts. Sanitary sewer flow monitoring will continue at selected sites in order to compile flow information for unmeasured sections of the Township's sewers. The data collected will be used for I/I studies, and other reports.

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT 2019 CHAPTER 94 ANNUAL REPORT UPPER DARBY TOWNSHIP MUCKINIPATES AUTHORITY / DELCORA DELAWARE COUNTY

# ATTACHMENT C

# SEWER SYSTEM CONDITION

# CONDITION OF THE SEWER SYSTEM

The following is a description of the collection and conveyance systems:

Upper Darby Township is located in the southeastern portion of Delaware County, Pennsylvania. The Township's estimated population (2010 Census) is 82,795 people and is approximately 7.80 square miles in size.

The Upper Darby sanitary sewer system is divided into four drainage areas:

- Darby Creek
- Muckinipates Creek
- Naylor's Run Creek
- Cobbs Creek

The four drainage areas discharge sewage flows into the Southwest Philadelphia Treatment Plant.

This report focuses on flows that are conveyed to DELCORA's pump station located in the City of Chester for the Muckinipates Creek drainage area. The sewage flows from this area are conveyed via gravity lines to DELCORA's pump station where they are pumped to the Southwest Philadelphia Treatment Plant.

The drainage area is 0.70 square miles and is primarily a dense suburban, residential district with moderate commercial usage. The estimated population is 7,206 people. This area contains approximately 9.00 linear miles of sewer pipe and over 184 manholes.

The collection systems have been in existence for over 85+ years and the trunk lines are as old as 50+ years.

Table 1 depicts the pipe lengths and sizes.

TABLE 1 - PIPE LENGTHS (LF) AND SIZES (IN)

| Drainage Area | 8"     | 10" | 12"   | 15"   | 18"   | 20" | 36" |
|---------------|--------|-----|-------|-------|-------|-----|-----|
| Muckinipates  | 40,153 | 893 | 1,577 | 2,529 | 2,318 | 0   | 0   |
| Creek         |        |     |       |       |       |     |     |

## HYDRAULIC AND ORGANIC LOADINGS

The following is the existing hydraulic loading to the DELCORA system:

The Daily Average Flow at present is 1.12 MGD which has been determined by a combination of flow metering and estimation provided by DELCORA. The following table illustrates the

average annual monthly flows expressed in million gallons per day (MGD) for the past five years.

| Muckinipates Authority (MA) Service Area |       |       |       |       |       |  |
|--|-------|-------|-------|-------|-------|--|
| 2014 – 2018 Monthly Average Flows (MGD)  |       |       |       |       |       |  |
| Year                                     |       |       |       |       |       |  |
|  | 2014  | 2015  | 2016  | 2017  | 2018  |  |
| Month                                    |       |       |       |       |       |  |
| Jan                                      | 1.276 | 1.171 | 1.053 | 1.065 | 1.168 |  |
| Feb                                      | 1.505 | 1.095 | 1.259 | 1.066 | 1.306 |  |
| Mar                                      | 1.269 | 1.287 | 1.202 | 1.161 | 1.336 |  |
| Apr                                      | 1.353 | 1.127 | 1.082 | 1.154 | 1.225 |  |
| May                                      | 1.511 | 0.997 | 1.124 | 1.219 | 1.189 |  |
| Jun                                      | 1.110 | 1.077 | 1.014 | 1.083 | 1.047 |  |
| Jul                                      | 1.029 | 1.037 | 1.030 | 1.145 | 0.916 |  |
| Aug                                      | 1.039 | 1.000 | 0.964 | 1.103 | 0.942 |  |
| Sep                                      | 0.994 | 0.987 | 1.011 | 1.090 | 0.964 |  |
| Oct                                      | 0.967 | 1.040 | 1.029 | 1.062 | 0.965 |  |
| Nov                                      | 1.032 | 0.973 | 1.010 | 1.057 | 1.208 |  |
| Dec                                      | 1.096 | 1.100 | 1.033 | 1.106 | 1.189 |  |
| Annual Avg                               | 1.182 | 1.074 | 1.068 | 1.109 | 1.121 |  |
| Max 3-Mo. Avg                            | 1.377 | 1.184 | 1.181 | 1.178 | 1.289 |  |
| Max:Avg Ratio                            | 1.166 | 1.103 | 1.106 | 1.062 | 1.150 |  |

Monthly average organic loading is tested and recorded by DELCORA and is reported within their annual report.

# 5-YEAR HYDRAULIC LOADING PROJECTIONS

The following is the projected hydraulic loading to the DELCORA system:

It is anticipated that the Township will add approximately 25 new EDUs with an anticipated flow of 6,250 GPD from various proposed land use developments and redevelopments over the next five years. The hydraulic loading forecast between year 2019 and 2023 it is estimated to increase by 0.011 MGD due to various proposed land use developments and redevelopments within the Township. The projected flows are expressed as the average annual monthly flows expressed in million gallons per day (MGD) for the next five years.

| Muckinipates Authority (MA) Service Area          |       |       |       |       |       |  |
|---|-------|-------|-------|-------|-------|--|
| 2019 - 2023 Projected Monthly Average Flows (MGD) |       |       |       |       |       |  |
| Year  |       |       |       |       |       |  |
|   | 2019  | 2020  | 2021  | 2022  | 2023  |  |
| Month   |       |       |       |       |       |  |
| Jan   | 1.149 | 1.151 | 1.153 | 1.156 | 1.158 |  |
| Feb   | 1.248 | 1.251 | 1.253 | 1.255 | 1.257 |  |
| Mar   | 1.253 | 1.255 | 1.258 | 1.260 | 1.262 |  |
| Apr   | 1.190 | 1.193 | 1.195 | 1.197 | 1.199 |  |
| May   | 1.210 | 1.212 | 1.215 | 1.217 | 1.219 |  |
| Jun   | 1.068 | 1.071 | 1.073 | 1.075 | 1.077 |  |
| Jul   | 1.033 | 1.036 | 1.038 | 1.040 | 1.042 |  |
| Aug   | 1.012 | 1.014 | 1.016 | 1.019 | 1.021 |  |
| Sep   | 1.012 | 1.014 | 1.016 | 1.018 | 1.021 |  |
| Oct   | 1.015 | 1.017 | 1.019 | 1.021 | 1.024 |  |
| Νον   | 1.058 | 1.061 | 1.063 | 1.065 | 1.067 |  |
| Dec   | 1.107 | 1.109 | 1.112 | 1.114 | 1.116 |  |
| Annual Avg  | 1.113 | 1.115 | 1.117 | 1.120 | 1.122 |  |
| Max 3-Mo. Avg                                     | 1.243 | 1.246 | 1.248 | 1.251 | 1.254 |  |
| Max:Avg Ratio                                     | 1.117 | 1.117 | 1.117 | 1.117 | 1.117 |  |



## CHAPTER 94

MUNICIPAL WASTELOAD MANAGEMENT 2019 Chapter 94 Annual Report Upper Darby Township Muckinipates Authority / DELCORA Delaware County

# ATTACHMENT A

DRAINAGE AREA MAP & SEWER EXTENSIONS

