



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHAPTER 94

MUNICIPAL WASTELOAD MANAGEMENT

Overview and Summary

Bureau of Point and Non-Point Source Management

For more information, visit www.depweb.state.pa.us/chapter94

Municipal Wasteload Management – General Information and Reporting

Municipal Wasteload Management is a planning process whereby the owner or operator of a wastewater treatment plant (“treatment plant”) monitors both the volume and organic strength of the wastewater received by the plant and takes appropriate actions to prevent the treatment plant from receiving either too much flow or organic material for the treatment plant to treat properly. Municipal Wasteload Management also applies to owners or operators of sewage collection and conveyance systems and pump stations (“sewer systems”) who monitor flows or the usage of pumps to ensure that the sewer systems are capable of conveying flows to the treatment plant.

All treatment plants and sewer systems owned by or serving a municipality are covered by the Department of Environmental Protection’s (DEP’s) Municipal Wasteload Management Regulations in [Chapter 94](#) (available at www.pacode.com, select “Browse” and “25 Environmental Protection”). The purpose of these regulations is to provide adequate sewage conveyance and treatment for future needs, prevent sewerage facilities from becoming overloaded, limit additional connections to overloaded facilities, correct overload conditions and prevent the introduction of industrial discharges into sewer systems that will interfere with operations or pass through the treatment plant. Ultimately, these regulations protect Pennsylvania’s waters from inadequately treated wastewater discharges.

What are Chapter 94 Reports?

DEP’s regulations at Chapter 94, [Section 94.12](#) require that treatment plant permittees (“permittees”) submit two copies of an annual report to the appropriate DEP regional office by March 31 each year. These reports are generally called “Chapter 94 Reports.” The reporting period is the previous calendar year; for example, the report due by March 31, 2015, must cover the period of Jan. 1, 2014, through Dec. 31, 2014. Such reports must, in part, evaluate the existing and projected hydraulic and organic loads to treatment plants and sewer systems to determine whether such facilities should be upgraded. The report must be signed by the preparer and by the permittee.

What are the Required Components of a Chapter 94 Report?

A complete Chapter 94 Report includes all of the information required by Chapter 94, Sections 94.12(a)(1) through (9) and Section 94.13(b). In addition, if required by a POTW’s National Pollutant Discharge Elimination System (NPDES) permit, a Chapter 94 Report must include a Combined Sewer Overflow (CSO) Annual Status Report containing the elements identified in the NPDES permit and a solids management inventory that demonstrates a mass balance of solids entering the treatment plant through influent flow and hauled-in wastes and exiting the treatment plant in the effluent and sewage sludge or biosolids.

The required elements of a Chapter 94 Report include:

- Graphical analysis of hydraulic and organic loads for the last five years.
- Graphical analysis of projected hydraulic and organic loads for the next five years.
- A brief discussion of the basis for hydraulic and organic load projections, where data used to support those projections should be included in an appendix to the report.
- Map(s) of sewer extensions constructed in the last calendar year and all proposed projects that will result in construction of public sewers; the map(s) must be accompanied by a list summarizing each extension or project and the population served by the extension or project.
- A discussion of programs for sewer system monitoring, maintenance repair, 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.

- A discussion of the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next five years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, combined sewer overflows, sanitary sewer overflows, excessive infiltration and other sewer system problems.
- A discussion of the condition of sewage pumping stations, including a comparison of the maximum pumping rate with present maximum flows and the projected two-year maximum flows for each station.
- A proposed plan to reduce or eliminate existing or projected overload conditions under Sections 94.21 and 94.22 (relating to existing overload and projected overload).
- If applicable, an additional report must be prepared relating to industrial discharges to the sewer system, including: a copy of any ordinance or regulation governing industrial waste discharges or a copy of the amendments to the ordinance or regulation; 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; a discussion addressing the problems in the sewer system and/or facility caused by the industrial waste discharges and a summary of the measures taken to mitigate the problem.

DEP has prepared a Chapter 94 Report template (Document ID 3800-FM-BPNPSM0507) to facilitate the submission of consistent Chapter 94 Reports throughout Pennsylvania and strongly recommends its use.

Are Municipalities That Own a Sewer System But Not a Treatment Plant Required to Submit a Chapter 94 Report?

Such "tributary municipalities" are not required to submit Chapter 94 Reports directly to DEP. According to Chapter 94, Section 94.12(b), municipalities with sewer systems that contribute sewage flows to another municipality's treatment plant must submit the relevant information in Chapter 94, Sections 94.12(a)(1) through (9) and Section 94.13(b) to the municipality that owns or operates the treatment plant. The municipality owning or operating the treatment plant must incorporate the information from tributary municipalities into its own Chapter 94 Report for submission to DEP.

How Should Hauled-In Wastes be Considered in a Chapter 94 Report?

All contributions to organic and hydraulic load to a treatment plant must be considered, including wastes such as septage that are received by the treatment plant. If the treatment plant receives hauled-in wastes upstream from a system that collects composite samples of the influent wastewater throughout the period such wastes are received, the 5-day Biochemical Oxygen Demand (BOD₅) results should reflect the organic strength of those wastes. Where hauled-in wastes are introduced downstream of an influent composite sampling system, and where influent composite sampling is not performed, the permittee should include the organic strength of hauled-in wastes in its organic load reporting.

There are three Discharge Monitoring Report (DMR) [Supplemental Reports](#) that should be used (and may be required by the NPDES permit) to document the receipt of hauled-in wastes and the overall organic strength (BOD₅ load) of influent wastewater:

- [Influent and Process Control](#), Form 3800-FM-BPNPSM0436 - permittees should ensure that the organic strength of hauled-in wastes is included in the calculation of average monthly BOD₅ load (lbs/day). The average monthly BOD₅ load reported on this form should match that the value reported in the Chapter 94 Report.
- [Hauled In Municipal Wastes](#), Form 3800-FM-BPNPSM0437 - permittees should document the dates received, volumes and other information for hauled-in municipal wastes such as septage. Each load of hauled-in municipal wastes do not need to be sampled for BOD₅, but periodic

sampling is recommended to ensure a representative BOD₅ value is reported on the Influent and Process Control form.

- [Hauled In Residual Wastes](#), Form 3800-FM-BPNPSM0450 - permittees should document the dates received, volumes and other information for hauled-in residual wastes such as food processing waste. Each load of hauled-in residual wastes do not need to be sampled for BOD₅, but periodic sampling is recommended to ensure a representative BOD₅ value is reported on the Influent and Process Control form.

Where septage or other hauled-in wastes are received directly in aerobic or anaerobic digesters, it is generally not necessary to take hauled-in waste organic strength into account for influent BOD₅ load. In addition, digester supernatant generally does not need to be accounted for.

Which Flow Data is Required - Influent or Effluent?

For Chapter 94 Reports, influent flow monitoring is encouraged but not required. If the treatment plant is already equipped with an influent flow meter, influent data should be used for Chapter 94 Reports. Effluent flow monitoring is acceptable where there is no influent flow meter.

How Frequently Should Operators Collect BOD₅ Data for Chapter 94 Reports?

For treatment plants, the sample frequency for influent BOD₅ may be specified in the NPDES permit. Where this is not the case, DEP expects that monitoring is done sufficiently to properly characterize influent organic strength. In general, influent samples should be collected at least once per week for BOD₅ analysis for most treatment plants, but may be collected less frequently for small plants.

Are Municipalities Required to Conduct Flow Monitoring for Sewage Collection Systems?

Sewer system flow monitoring may be required in some cases by DEP. Where not required, it is nonetheless highly encouraged so that the carrying capacity of sewer lines (based on pipe diameter, slope and other factors) may be compared to actual flow data to evaluate the possible need for upgrades.

If a Treatment Plant is not Owned or Operated by a Municipality, is a Chapter 94 Report Required?

This depends on the NPDES permit for the treatment plant. For example, a treatment plant that serves a municipality but is leased or otherwise operated by a private entity may be required in its NPDES permit to submit a Chapter 94 Report. However, a treatment plant whose sewer system does not extend beyond property owned by a single entity (e.g., a mobile home park) typically is not required to submit a Chapter 94 Report.

Municipal Wasteload Management – Report Graphs and Calculations

How is a Hydraulic Loading Graph Developed?

Chapter 94, Section 94.12(a)(1), requires that Chapter 94 Reports contain, “A line graph depicting the monthly average flows (expressed in millions of gallons per day) for each month for the past five years and projecting the flows for the next five years. The graph shall also include a line depicting the hydraulic design flow (also expressed in millions of gallons per day) of the plant included in the water quality management permit...” This applies to treatment plants but not sewer systems.

To develop this line graph, municipalities with treatment plants should start by recording the monthly average flows (“hydraulic loads”) in million gallons per day (MGD) in tabular format. The example in Table 1 below uses DEP’s Chapter 94 Spreadsheet, available at www.depweb.state.pa.us/chapter94. This spreadsheet contains all of the DEP-approved calculations discussed in this publication, and DEP strongly encourages its use in developing Chapter 94 Reports. If an effluent flow meter is used to represent influent hydraulic loads, the values reported in the table should match those reported to DEP on DMRs.

Table 1: Monthly Average Flows for Chapter 94 Reports

Monthly Average Flows for Past Five Years (MGD)					
Month	2009	2010	2011	2012	2013
January	1.354	1.7	1.788	1.589	1.488
February	1.389	1.734	1.812	1.957	1.455
March	1.934	1.487	1.365	1.347	1.887
April	1.968	1.521	1.399	1.355	1.366
May	1.333	1.956	2.633	1.954	1.908
June	1.367	1.99	2.667	1.465	2.224
July	1.001	1.899	1.254	1.355	1.355
August	1.035	1.933	1.288	1.973	1.788
September	1.822	1.822	1.687	2.432	1.667
October	1.765	1.345	1.876	1.654	1.988
November	1.222	1.845	1.0	1.765	1.344
December	1.256	1.879	1.034	2.111	1.779
Annual Avg	1.454	1.759	1.65	1.746	1.687
Max 3-Mo Avg	1.764	1.948	2.233	2.02	1.833
Max : Avg Ratio	1.21	1.11	1.35	1.16	1.09
Existing EDUs	5,820.0	6,250.0	6,640.0	7,060.0	7,550.0
Flow/EDU (GPD)	249.8	281.4	248.5	247.3	223.4

Note: The DEP Chapter 94 Spreadsheet requires at least one full year of hydraulic loads in order to calculate projected loads but does not require five full years if the facility has begun operating less than five years ago from the reporting period end date.

Next, calculate the following statistics for these data (these calculations are done automatically by the DEP Chapter 94 Spreadsheet):

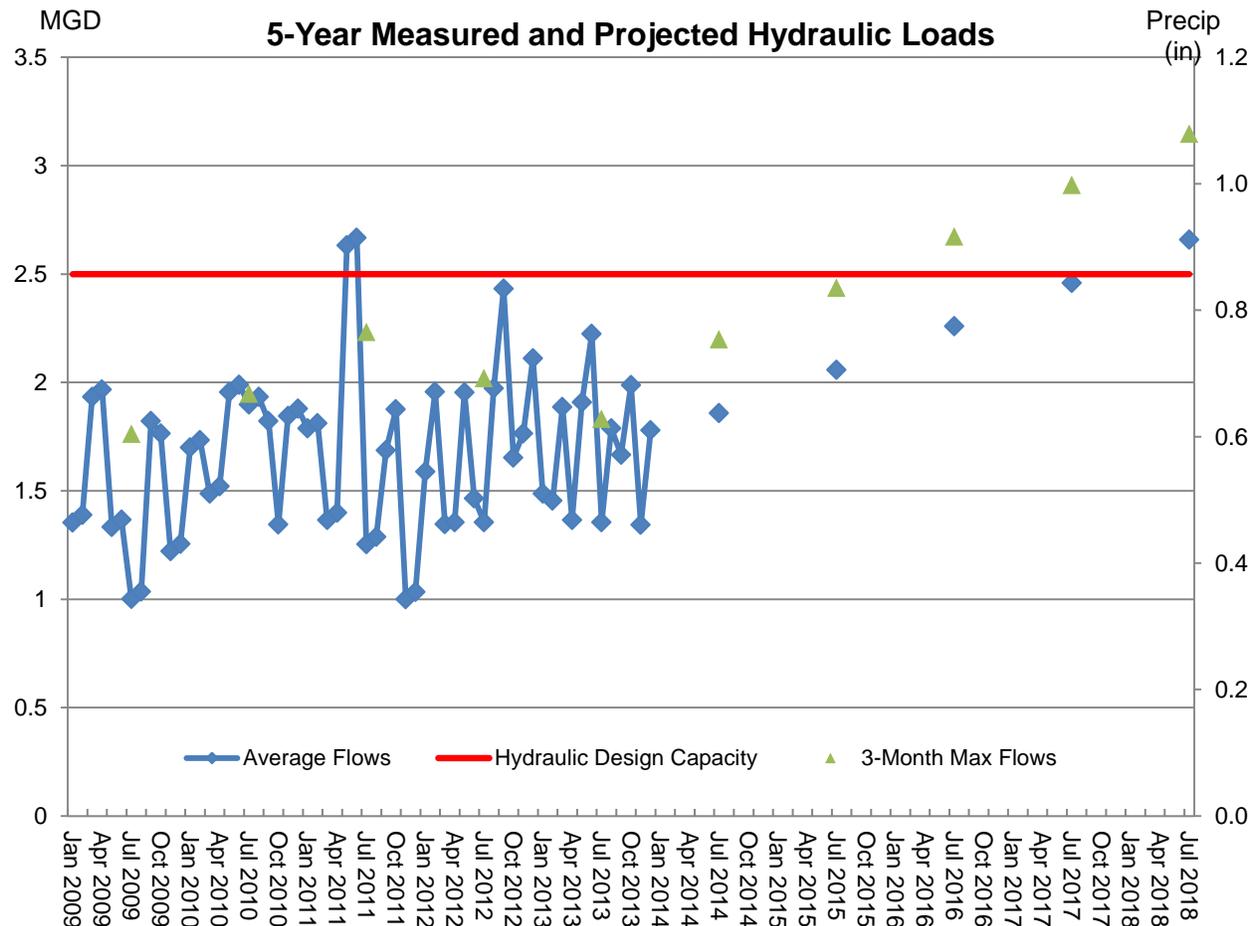
- Annual average flow (“Annual Avg”) - the sum of all monthly average flows for each year.
- Maximum three consecutive month average flow (“Max 3-Mo Avg”) – the rolling average flow of every three consecutive month period. Note that this also includes months that cover portions of two calendar years, e.g., November, December and January.
- Peaking factor (“Max : Avg Ratio”) - the highest three consecutive month average flow (for each year) divided by the annual average flow for the year.
- Flow per EDU – the annual average flow for a year divided by the number of Equivalent Dwelling Units (EDUs) connected to the treatment plant at the end of the reporting year, in gallons per day (GPD).
- five-year annual average flow – the average of the annual average flows for the past five years.
- five-year average peaking factor – the average of the peaking factors for the past five years.
- five-year average flow per EDU – the average of the Flow per EDU for the past five years.

Note: The DEP Chapter 94 Spreadsheet does not display the five-year average annual flow, peaking factor or flow per EDU.

What Does a Hydraulic Load Graph Look Like?

A hydraulic load graph is a line graph depicting the monthly average flows, in MGD, received at the treatment plant over the past five years, and annual average flows projected for the next five years, versus time, and typically looks like Figure 1 below (from the DEP Chapter 94 Spreadsheet).

Figure 1: Hydraulic Load Graph



Note that plotting of monthly precipitation data is optional.

What is an Equivalent Dwelling Unit (EDU)?

For the purpose of implementing the projections required by Chapter 94, an EDU is a conversion factor for non-residential establishments, such as schools or hotels. It is used to convert the wastewater flow volume from a non-residential establishment to an equivalent number of residential dwellings. The wastewater flow from a residence (one EDU) is generally calculated as follows:

$$100 \frac{\text{gallons per day}}{\text{person}} \times 3.5 \frac{\text{persons}}{\text{dwelling unit}} = 350 \frac{\text{gallons per day}}{\text{dwelling unit}}$$

For example, a hotel with a wastewater flow of 5,250 gallons per day will be equivalent to 15 EDUs:

$$5,250 \frac{\text{gallons per day}}{\text{day}} \div 350 \frac{\text{gallons per day}}{\text{dwelling unit}} = 15 \text{ dwelling units (EDUs)}$$

How is an Organic Loading Graph Developed?

Chapter 94, Section 94.12(a)(1), requires that Chapter 94 Reports contain, “A line graph depicting the monthly average organic loading (expressed pounds per day of BOD₅) for each month for the past five years and projecting the monthly average organic loading for the next five years. The graph shall also include a line depicting the organic loading design (also expressed in pounds per day of BOD₅) of the plant included in the water quality management permit...” This applies to treatment plants but not sewer systems.

To develop this line graph, municipalities with treatment plants should start by recording the monthly average organic loads (“organic loads”) in pounds per day (lbs/day) of BOD₅ in tabular format. The example below uses DEP’s Chapter 94 Spreadsheet.

Table 2: Monthly Average BOD₅ (Organic) Loads for Chapter 94 Reports

	<u>Monthly Average BOD5 Loads for Past Five Years (lbs/day)</u>				
Month					
January	2,566	3,212	2,466	2,556	2,884
February	2,148	2,567	2,783	2,448	2,365
March	3,003	2,634	3,442	2,987	2,144
April	2,213	2,783	2,578	2,356	2,212
May	2,456	2,145	2,995	2,700	2,887
June	2,587	2,237	2,367	2,734	2,547
July	3,112	3,566	2,969	2,124	2,755
August	2,874	2,490	2,996	2,367	2,999
September	2,245	2,033	3,007	3,233	2,476
October	2,590	2,167	2,886	2,996	2,154
November	2,343	2,558	2,345	2,745	2,177
December	2,765	2,288	2,888	2,667	2,887

Annual Avg	2,575	2,557	2,810	2,659	2,541
Max Mo Avg	3,112	3,566	3,442	3,233	2,999
Max : Avg Ratio	1.21	1.39	1.22	1.22	1.18
Existing EDUs	5,820	6,250	6,640	7,060	7,550
Load/EDU	0.442	0.409	0.423	0.377	0.337

Note: The DEP Chapter 94 Spreadsheet requires at least one full year of organic loads in order to calculate projected loads but does not require five full years if the facility has begun operating less than five years ago from the reporting period end date.

Next, calculate the following statistics for these data:

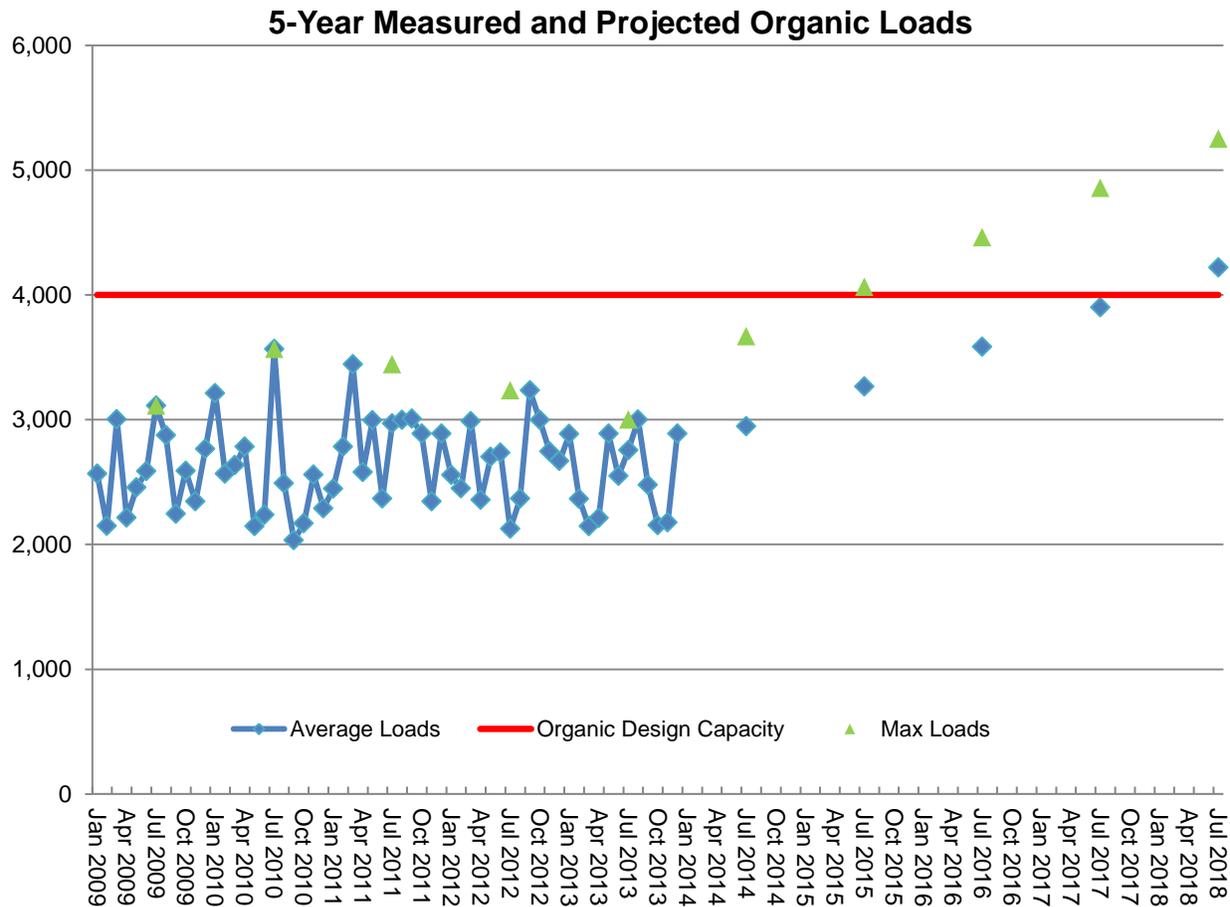
- Annual average organic load (“Annual Avg”) - the sum of all monthly average organic loads for each year.
- Maximum month average organic load (“Max Mo Avg”) – the highest monthly average organic load for each year.
- Peaking factor (“Max: Avg Ratio”) - the maximum monthly average organic load for a year divided by the annual average organic load for the year.
- (Organic) Load per EDU – the annual average organic load for a year divided by the number of EDUs connected to the treatment plant at the end of the reporting year.
- five-year annual average organic load – the average of the annual average organic loads for the past five years.
- five-year average peaking factor – the average of the peaking factors for the past five years.
- five-year average organic load per EDU – the average of the annual average organic loads per EDU for the past five years.

Note: The DEP Chapter 94 Spreadsheet does not display the five-year average annual organic load, peaking factor or load per EDU.

What Does an Organic Loading Graph Look Like?

An organic loading graph is a line graph showing the existing and projected organic load received at the treatment plant versus time, and typically looks like Figure 2 below (from the DEP Chapter 94 Spreadsheet).

Figure 2: Organic Load Graph



How are Hydraulic Loads Projected?

Municipalities usually work with developers in order to be able to provide the capacity that the developers need to build their developments. Typically, a summary of the number of new connections that are planned for the next five years is presented in a Chapter 94 Report as a table; for example:

New EDUs	800.0	800.0	800.0	800.0	800.0
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The projected annual average **hydraulic loads** for the next five years are calculated by:

1. Multiplying the new EDUs by the Flow per EDU (calculated previously); and
2. Adding the increased flow to the five-year annual average flow as the basis for the first annual average projected flow. However, if there is a historical upward trend in flows, DEP recommends that the annual average flow for the reporting year be used as the basis for the first annual average projected flow. For the second, third, fourth and fifth years, add flows from new EDUs to the prior year’s annual average projected flow.

The projected three-month maximum average flow, which is used to determine whether there is a projected hydraulic overload, is calculated by multiplying the projected flow by the peaking factor previously referenced.

Based on the data given in the Table 1 example above, the five-year annual average flow for the years 2009-2013 is calculated to be 1.659 MGD $[(1.454 + 1.759 + 1.65 + 1.746 + 1.687) / 5]$, the five-year average peaking factor is calculated to be 1.184 $[(1.21 + 1.11 + 1.35 + 1.16 + 1.09) / 5]$, and the five-year average flow per EDU is calculated to be 250 GPD/EDU $[(249.8 + 281.4 + 248.5 + 247.3 + 223.4) / 5]$.

Assuming the new EDUs for 2014 through 2018 is 800 annually, the projected hydraulic loads for 2014 are calculated as follows:

1. Projected annual average hydraulic load for 2014 =

five-year annual average flow* + [New EDUs in 2014 x Flow per EDU (GPD/EDU) x 1 MGD/10⁶ GPD]

$$1.659 \text{ MGD} + [800 \text{ EDUs} \times 250 \text{ GPD/EDU} \times 1 \text{ MGD}/10^6 \text{ GPD}] = \mathbf{1.859 \text{ MGD}}$$

* Note: if there was a progressive upward trend of increasing annual average flow between 2009 and 2013, the 2013 annual average flow would be used instead of the five-year annual average flow.

2. Projected three-month maximum average flow for 2014 =

Projected annual average hydraulic load for 2014 x peaking factor

$$1.859 \text{ MGD} \times 1.184 = \mathbf{2.2 \text{ MGD}}$$

The projected hydraulic loads for 2015 are calculated as follows:

1. Projected annual average hydraulic load for 2015 =

Projected annual average hydraulic load for 2014 + [New EDUs in 2014 x Flow per EDU (GPD/EDU) x 1 MGD/10⁶ GPD]

$$1.859 \text{ MGD} + [800 \text{ EDUs} \times 250 \text{ GPD/EDU} \times 1 \text{ MGD}/10^6 \text{ GPD}] = \mathbf{2.059 \text{ MGD}}$$

2. Projected three-month maximum average flow for 2015 =

Projected annual average hydraulic load for 2015 x peaking factor

$$2.059 \text{ MGD} \times 1.184 = \mathbf{2.437 \text{ MGD}}$$

Continue the sequence in computing the hydraulic loads for the years 2016 through 2018.

How are Organic Loads Projected?

The projected annual average **organic loads** for the next five years are calculated by:

1. Multiplying the new EDUs by the Load per EDU (calculated previously); and
2. Adding the increased organic load to the five-year annual average organic load as the basis for the first annual average projected flow. However, if there is a historical upward trend in organic loads, DEP recommends that the annual average load for the reporting year be used

as the basis for the first annual average projected load. For the second, third, fourth and fifth years, add loads from new EDUs to the prior year's annual average projected organic load.

The projected organic loads for the next five years are calculated by:

1. multiplying the additional EDUs by the average load per EDU; and,
2. add the increased load to the previous annual average organic load, using the five-year annual average organic load as the basis for the first projected load, except where a historical upward trend in annual organic loads are observed, in which case DEP recommends using the annual average load for the reporting year. The projected maximum monthly average organic load is calculated by multiplying the projected organic load by the peaking factor previously referenced.

Based on the data given in the Table 2 example above, the five-year annual average organic load for the years 2009-2013 is calculated to be 2,628 lbs/day, the five-year average peaking factor is calculated to be 1.245 and the five-year average load per EDU is calculated to be 0.3976 lbs/day/EDU.

Assuming the new EDUs for 2014 through 2018 is 800 annually, the projected organic loads for 2014 are calculated as follows:

1. Projected annual average organic load for 2014 =

five-year annual average load* + [New EDUs in 2014 x Load per EDU (lbs/day/EDU)]

2,628 lbs/day + [800 EDUs x 0.3976 lbs/day/EDU] = **2,946 lbs/day**

* Note: if there was a progressive upward trend of increasing annual average organic load between 2009 and 2013, the 2013 annual average organic load would be used instead of the 5-year annual average organic load.

2. Projected maximum monthly average organic load for 2014 =

Projected annual average organic load for 2014 x peaking factor

2,946 lbs/day x 1.245 = **3,668 lbs/day**

The projected organic loads for 2015 are calculated as follows:

1. Projected annual average organic load for 2015 =

Projected annual average organic load for 2014 + [New EDUs in 2015 x Load per EDU]

2,946 lbs/day + [800 EDUs x 0.3976 lbs/day/EDU] = **3,264 lbs/day**

2. Projected maximum monthly average organic load for 2015 =

Projected annual average hydraulic load for 2015 x peaking factor

3,264 lbs/day x 1.245 = **4,064 lbs/day**

Continue the sequence in computing the organic loads for the years 2016 through 2018.

Wasteload Management – Corrective Action

What is an Existing Organic Overload?

An existing organic overload is a condition in which the amount of organic mass (in the form of lbs/day BOD₅) from contributing sources (i.e., domestic, commercial and infiltration/inflow) entering a sewer system results in an exceedance of the organic design capacity of the treatment plant, in any month. The capacity is that which is identified in a Water Quality Management (WQM) permit issued by DEP.

What is a Projected Organic Overload?

A projected organic overload is a determination, derived from a mathematical analysis, that the projected maximum monthly average organic load entering the treatment plant will exceed the treatment plant's organic design capacity in the next five years.

What is an Existing Hydraulic Overload?

An existing hydraulic overload of a sewer system is a condition in which the amount of flow from contributing sources entering the sewer system results in exceeding the hydraulic carrying capacity of the sewer system, including pump stations. An existing hydraulic overload of a sewer system may be demonstrated by an overflow from a manhole in a separate sanitary sewer, an overflow of a pump station or a backup of sewage into a basement, not resulting from a blockage in the system.

An existing hydraulic overload of a treatment plant is a condition in which the amount of flow from contributing sources entering the treatment plant results in an exceedance of the hydraulic design capacity of the treatment plant for three consecutive months or otherwise results in an overflow (or bypass to avoid an overflow) of a treatment unit. The hydraulic design capacity is that which is identified in a WQM permit issued by DEP.

What is a Projected Hydraulic Overload?

A projected hydraulic overload of a treatment plant is an estimate, derived from a mathematical analysis, that the maximum three-month average flow rate will exceed the hydraulic design capacity in the next five years. A projected hydraulic overload of a sewer system is an estimate that the hydraulic carrying capacity will be exceeded in the next five years or when a surcharge condition is observed or is projected in a separate sanitary sewer system.

What Steps Must Municipalities Take to Address Existing Overloads?

Chapter 94 places the responsibility of preventing and correcting overloads on the permittee of the system. If the data or graphical analysis in the Chapter 94 Report reveals that sewerage facilities (treatment plants or sewer systems) are hydraulically or organically overloaded, the regulation requires the owners of the facility to take immediate and appropriate measures to reduce the overload at the facilities.

When a facility becomes overloaded, the first step that the permittee must take is the submission of a Corrective Action Plan (CAP) to DEP. The CAP addresses the measures that will be undertaken to reduce the overload and provide adequate capacity for future demands, and must include a timeline for complying with these requirements. The CAP may be submitted to DEP when the permittee becomes aware of an overload, but at a minimum the CAP must be submitted with the Chapter 94 Report (or within 90 days of notification that the facility is overloaded) to the appropriate regional office of DEP for its review and approval.

In addition to identifying measures to reduce the overload, the CAP must include a program that manages the limitation and/or control of new connections. Until a CAP is approved by DEP, new connections to the overloaded facility shall be prohibited by the permittee. Since not all connections have the same impact on the facility or on the public health, some exceptions may be granted to this prohibition, including:

- A discharge from a structure for which a valid building permit had been issued within one year prior to the date of imposition of the prohibition.
- A new source of discharge that replaces a former source of discharge which has been permanently eliminated, but only if the new source is 1) discharged from a structure located on the same property of which it has replaced and 2) has a discharge volume that will not exceed the volume of the former discharge.
- Connections that would eliminate a threat to public health, or for facilities of public need, such as: hospitals, health clinics, nursing care facilities, primary and secondary education facilities, fire and police stations, and correctional institutions.

If any of these exceptions are granted, the facility owners must retain records of the exceptions granted and make them available to DEP upon request.

Furthermore, the owners of the facility must start work on the planning, designing, construction and operation of the sewerage facilities which may be necessary to eliminate the overload condition and meet the anticipated demands in the future. Any and all project activities must comply with state regulations including the requirements of the official plan set forth in the Pennsylvania Sewerage Facility Act (Act 537) and be consistent with the policies of DEP.

What is a Prohibition?

A prohibition is a restriction placed by a permittee on additional connections to an overloaded sewer system or a sewer system tributary to an overloaded plant. A prohibition is required by Chapter 94, Section 94.21(a)(1) from the time an existing overload is identified to the time that DEP approves the permittee's CAP.

Who is Responsible for Enforcing a Prohibition?

The permittee of the sewerage facility is responsible for enforcing a prohibition.

What is a Ban?

A ban is a restriction placed by DEP on additional connections to an overloaded sewer system or a sewer system tributary to an overloaded treatment plant. Bans are rare and are issued only in cases where the plant or sewer system is hydraulically or organically overloaded, and at least one of the following:

- DEP determines that a ban is necessary to prevent or alleviate endangerment of public health.
- The permittee has failed to submit a satisfactory plan, or has failed to implement the program as required by the regulation.

Can a Ban or Prohibition be Modified?

Once DEP has reviewed the CAP and determined it to be acceptable, DEP may amend the prohibition requirement on new connections and the issuance of building permits. Factors considered in determining the lift on new connections and building permits include:

- The extent to which the facility plans to limit new connections;
- The timing for provisions of additional capacity and reduction of existing overload;

- The impact of the overload on treatment processes;
- The impact of the overload on water quality degradation; and
- The impact of the overload on public health.

In addition, DEP may allow for permits on extensions to overloaded facilities if the proposal is consistent with conditions of the CAP, the official plan requirements of Act 537, and will not adversely affect the water quality of the receiving waters and other applicable requirements of state regulations.

To ensure that these steps are being followed, DEP may require periodic reports on the progress of the program. Often, these reports are required quarterly.

What Steps Must Municipalities Take to Address Projected Overloads?

Chapter 94 places the responsibility of preventing overloads on the permittee of the system. If the data and/or graphical analysis in the Chapter 94 Report reveal that a sewerage facility is projected to become either hydraulically or organically overloaded, the regulation requires the owners of the facility to take immediate and appropriate measures to prevent the overload at the facility.

When a facility is projected to become overloaded, the first step that must be taken by a permittee is to submit a CAP to DEP. The CAP addresses the measures that will be undertaken to prevent the facility from becoming overloaded and provide adequate capacity for future demands, and it must include a timeline for complying with these requirements. The CAP is submitted with the Chapter 94 Report (or within 90 days of notification that the facility is overloaded) to the appropriate regional office of DEP.

The measures to be undertaken are:

- Submit a CAP to the regional office of DEP with the Chapter 94 Report or within 90 days of identifying the projected overload addressing the appropriate measures that will be undertaken to prevent the overload and provide adequate capacity for future demands. The CAP must include a program that manages the limitation and/or control of new connections and a timetable for complying with the requirements.
- Ensure that any project or land development activity is consistent with the official plan set forth in Act 537 and is consistent with DEP policies.
- Limit new connections and extensions to the facility referenced to the remaining available capacity.

To ensure that these steps are being followed, DEP may require periodic reports on the progress of the program. Often, these reports are required quarterly.