EXHIBIT C

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June 13, 2008

Ms. Meridith Timony
Environmental Scientist
U.S. Environmental Protection Agency – Region 1
One Congress Street, Suite 1100 (CMP)
Boston, MA 02144

Subject: Wastewater Treatment Facility Replacement Project – Lee MA
CWSRF-2787 – Draft NPDES Permit No. MA0100153

Dear Ms. Timony:

We are writing at the request of the Town of Lee pursuant to your March 31, 2008 transmittal of the draft NPDES Permit No. MA0100153, our meeting at the WWTF site with Town officials (Robert Nason, Chris Pompi, and Al Zerbato) and the DEP (Paul Hogan and Paul Nietupski) on April 9, 2008, and subsequent discussions with Mr. Hogan. The Town has a number of concerns over some of the provisions of the draft permit; the purpose of this letter is to raise those concerns and to highlight supporting arguments and rationale for proposing alternative provisions. The concerns that were discussed at our meeting can topically be identified as follows:

- Changes to the Total Phosphorus Effluent Limit
- Dissolved Oxygen Effluent Limit
- Redundancy in Effluent Disinfection Parameters (E. Coli, Fecal Coliform)
- Local Political Climate – Issues of Fairness

A discussion of each of these issues is presented herein along with a concluding recommendation.

Background

The new WWTF is the product of a lengthy planning, design, and construction process that commenced with an Administrative Consent Order issued in August, 1998 and a Project Evaluation Report prepared by another consultant in 2001.

The current activity began after the failure of a design/build project delivery approach that collapsed due to insufficient local support in the fall of 2004. At that time it was determined that a conventional design/bid/build project delivery method would be most suitable to the Town's needs. After procurement of M&E as consultant in late 2004/early 2005, work progressed rapidly through completion of design in January 2006. Following advertisement and bidding, the construction Contract was awarded and Notice to Proceed was issued on June 27, 2006. Construction is at completion with 2.55% change orders and zero claims by the Contractor and the Town.

Changes to the Total Phosphorus Effluent Limit

As part of M&E's scope of services in the project development phase, a facilities plan update (Supplemental Project Evaluation Form (PEF)) was prepared and issued by M&E. Below is a timeline of some of the key communications with and submittals to MADEP that relate to effluent permit limits:

- Guidance from MADEP to M&E – February 2005 (e.g. e-mail from M. Schleeweiss to B. Daly. ..."build something that reasonably stands a chance to meet NPDES limits for the foreseeable future. ...plan on Phosphorus limit of 0.2 mg/L"...)
- Letter from M&E to MADEP – Projected Wastewater Flows and Effluent Discharge Limits – April 4, 2005 (**including justification for a future TP limit of 0.8 mg/L**).
- NPDES Permit Application – August/September 2005
- Application for Financial Assistance – October 14, 2005
- Letter from EPA dated November 4, 2005
- Final Supplemental Project Evaluation Report (PER) – October 28, 2005
- Request for Authorization to Award (Part B) – May 26, 2006
- Draft WWTF O&M Manual – May 18, 2007
- Final Draft WWTF O&M Manual – November 16, 2007

It should be noted that this is not an all-inclusive list. The April 4, 2005 letter from M&E to MADEP became the basis for the finalization of the Supplemental PER and the detailed design work that followed. From this interaction with MADEP we maintain that all parties involved understood that the basis of design of the new WWTF would consider the following:

- At the first renewal of the Permit, the TP limit would be 0.8 mg/L (seasonal – May 1 – October 31)
- MADEP advised the Town to plan for the possibility of a future TP limit of 0.2 mg/L - "Future" understood to mean no earlier than the second or third Permit renewal cycle after construction of the new WWTF.
- Continue with reporting for "N"
- No DO limit (as there was no mention of any pending DO limit in any correspondence from MADEP).

This understanding is evident by the content of the various submittals to MADEP that were the basis of design and development of the O&M Manual. To address a "future" TP limit as low as 0.2 mg/L, certain provisions were included in the WWTF design; these are:

- Space allocated in the Headworks building for a future polymer storage/blend/feed system.
- An in-line static mixer (and associated additional polymer dosing point) located in the main process line between the post equalization tank and the effluent disk filters.

Any other required provisions would need to be reviewed in the context of the operating WWTF – e.g. considering operating history with the new SBR process.

Our concerns with process issues/implementation of a lower TP limit in the near-term include:

- Impact on chemical consumption – Alum: perhaps 70% more Alum required.
- Impact on chemical consumption – Polymer: new equipment required, added O&M costs (polymer, power, maintenance).
- Impact on sludge production: much higher Alum sludge production; perhaps 10% overall increase in sludge production.

- Insufficient operating history with the new WWTF to properly optimize the design of the additional process equipment.

Recommended Action: It is recommended that the EPA/DEP relieve the Town of the strict numerical limit of 0.2 mg/L in the near term and revert back to our previous understanding that lower TP effluent limits would be implemented over time in successive Permit renewal periods. Attached is a series of calculations in spreadsheet format that show two such scenarios for your consideration.

Dissolved Oxygen Effluent Limit

The draft permit contains a new discharge limit for dissolved oxygen (DO) of 5 mg/L (minimum) at all times.

The Town has been monitoring effluent DO on occasion since startup of the new WWTF in mid-March, 2008. As you witnessed during the tour of the facility on April 9th, the plant effluent is discharged over sharp-crested weirs from the AquaDisk Filters, then flows through a narrow UV disinfection channel, over another fixed weir, and into a headbox prior to flowing through a 24-inch discharge pipe to the Housatonic River. Measured DO from grab samples ranges from a low of 2.7 mg/L to more typical values of 4 to 6.5 mg/L - somewhat lower than the EPA/DEP proposed minimum requirement of 5.0 mg/L at all times. [It should be stressed that these results are based on limited data collected over the first couple months of operation.] To rectify this arguably minor shortcoming, the Town would be required to take the following action: design the necessary equipment modifications (e.g. aeration blower, air piping and diffuser, and associated electrical and controls), procure the equipment and material, and construct the modifications. In addition to the capital cost of these modifications, there would be an incremental increase in O&M costs at the WWTF. The cost of the modifications and the continuing O&M requirements are not commensurate with the marginal gain in effluent DO.

Recommended Action: From the performance of the recently completed existing facilities, it is apparent that the effluent DO may routinely be expected to reach say a minimum of about 3 mg/L. This is significant in terms of a percentage of the 5.0 mg/L standard and we feel justifies the deletion of the strict numerical limit in favor of daily monitoring (grab sample). With continued monitoring, we may find that the typical performance is closer to 5 mg/L.

Redundancy in Effluent Disinfection Parameters (E. Coli, Fecal Coliform)

The draft Permit requires seasonal effluent disinfection with two bacteriological parameters – E. Coli and Fecal Coliform Bacteria. It was noted by DEP at our meeting that this is a redundant sampling and analysis scheme – the elimination of which would help the Town optimize use of O&M resources in this area.

Recommended Action: We understand from our discussions with Mr. Hogan that some communities have opted/been granted the opportunity to conduct E. Coli sampling and analysis as the sole basis for measuring effectiveness of the bactericidal efficiency of their disinfection systems. We recommend that the Town be granted this same flexibility for the sake of optimization

Local Political Climate – Issues of Fairness

As was discussed at length during our meeting at the site, there are a number of issues that make implementation of the new provisions of the NPDES Permit especially problematic. We do not want to belabor the points raised at our meeting but we do wish to state these items for the record:

1. The new $19 Million (construction cost only) WWTF is completed with the exception of punch-list items which are being addressed expeditiously. Implementation of new provisions of the Permit that require additional capital expenditures for additional equipment will be costly - requiring additional design services, procurement of a contactor, and local financing (as these items will not be part of the now completed SRF-financed project). In addition, it would be preferable to gain operating experience with the new facilities before "jumping ahead" with modifications so that such modifications could be optimized.
2. It is noted that EPA and MADEP are motivated in their actions solely by the findings of the Housatonic River Watershed – 2002 Water Quality Assessment Report (issued September 2007) and that the downward pressure on effluent parameters such as TP is "technology-based". However there is a perception by some that the Town is being treated unfairly by the regulatory community with the expectation that the new limits and/or parameters are to be implemented immediately in this new Permit cycle. In contrast, some other communities with recent Permit renewals such as Great Barrington WWTF (March 13, 2007) and Lenox WWTP (September 12, 2007) still are operating under a TP limit of 1.0 mg/L. Lee's existing Permit was set for renewal on September 22, 2005. This in and of itself we feel justifies a phased implementation of any new standard for the Town of Lee.

Recommended Action: Based on the foregoing discussion, we recommend adopting the recommendations described herein. We see such an approach as a "win-win" for the regulatory community and the local constituency who is already demonstrably committed to its role as steward for the Housatonic watershed area. By virtue of its flexibility in this matter, the EPA and MADEP would be put in a more favorable light.

On behalf of the Town we wish to express our thanks for your constructive participation at our meeting on April 9 with the Town and DEP. We look forward to a favorable resolution of this matter for the benefit of all involved parties. Should you have any questions or require additional information, please feel free to contact me at (781) 224-6098.

Very truly yours,

Kenneth A. Andrea FOR,

Bob Scherpf, P.E.
Vice President
Metcalf & Eddy, Inc.

Attachments:

1. Letter from M&E to DEP (B. Daly to M. Schleeweis) dated April 4, 2005; Subject: Projected Wastewater Flows and Effluent Discharge Limits.
2. Series of Spreadsheets by M&E with Various Mass Loading Scenarios, dated June, 2008.

cc: R. Nason, Town Administrator, Town of Lee
C. Pompi, P.E., Director of Public Works, Town of Lee
A. Zerbato, WWTF Operations Manager, Town of Lee
P. Hogan, MADEP, Worcester
File 601.5

Attachment 1

Basis of Design Letter to DEP

10-Jun-08

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April 4, 2005

Mr. Mark Schleeweis
Bureau of Resource Protection
Western Regional Office
Department of Environmental Protection
43 Dwight Street
Springfield, MA 01103

Subject: Lee, Massachusetts WWTF Replacement Project – Projected Wastewater Flows and Effluent Discharge Limits

Dear Mr. Schleeweis:

Pursuant to our telephone discussion on Friday March 18, 2005 the purpose of this letter is to present the projected wastewater flows and effluent discharge limits for the subject project.

Background

The existing wastewater treatment facility (WWTF) was designed to treat an average daily flow of 1.0 million gallons per day (mgd) and a peak flow of 2.5 mgd. The WWTF periodically experiences excessive hydraulic loads resulting from both wet weather events and high groundwater. These hydraulic surges have historically created operational problems at the WWTF. Furthermore, since the mid to late 1990's, the annualized average daily flow exceeded 80-percent of the design average daily flow for a period of greater than 90 days. The DEP issued an Administrative Consent Order in 1998 to, among other things, begin facilities planning. The purpose of facilities planning was to prepare a plan to best address the hydraulic and treatment capacity at the WWTF. The Town has significantly improved compliance with its NPDES discharge permit. The improved compliance is due to operational changes implemented by plant staff and also by a change in the methodology used by the Department of Environmental Protection (DEP) to calculate the average daily flow. This change in methodology occurred in September 2000. Prior to September 2000, the permitted flow for the WWTF was 1.0 mgd expressed as an average monthly value. A permit violation would occur if the influent flow to the WWTF over a month averaged more that 1.0 mgd. The NPDES permit (#MA0100153) issued in September 2000 changed the method used to calculate the flow limit to an annual average. The annual average flow is reported each month and is calculated by using the monthly average flow from the reporting month and the monthly average flows from the preceding eleven (11) months. This allowed the annual average flow during wet weather and high groundwater months to be somewhat dampened by the months that were not wet and/or experienced low groundwater. Since this change in methodology, there have been no violations (i.e., WWTF experience 80-percent of the ADF for a consecutive 90-day period).

As a result of planning conducted by SEA Consultants (SEA) and as presented in the July 2001 Project Evaluation Report (PER), the proposed average design flow and maximum daily flow increased to 1.5 mgd and 2.7mgd, respectively. Based on our review of the PER, we believe SEA values for the proposed ADF (1.5mgd) are not substantiated since the ADF was probably adopted to ensure the Town's future flow needs would be accommodated. This approach may not be in the best financial interest of the Town due to the higher related costs for larger tankange and equipment capacities. Furthermore, there is a direct link between the ADF and future effluent limits which will be discussed later in this letter. M&E has approached the future flow projections from a "bottoms-up" analysis.

Existing Wastewater Flows

To determine existing wastewater flows M&E analyzed influent flow data for the period from July 2001 through December 2004, not including November 2004 since data was not available. Flow records are generated by a magnetic flow meter located on the discharge side of the influent pumps. The average daily flow for this period was estimated to be about 0.83 mgd.

Current Residential Flow

According to the most recent US Census (2000), the population for the Town of Lee in 2000 was 5,985. Based upon conversations with Town Officials, approximately 85% of the population is sewered, thus resulting in an estimated current sewered population of approximately 5,087. This includes single and multi-family dwellings, apartments, and trailer parks. SEA's 2001 Preliminary Engineering Report, assumed wastewater generation rate of 65 gallons per capita per day (gpcd) for the population of Lee. Since the source of this value is not documented, we have elected to use 70 gpcd according to the "Guidelines for the Design of Wastewater Treatment Works," Technical Report No. 16, 1998 Edition (TR-16). This generation rate was used for calculating the current residential flow rate. Based on a sewered population of 5,087 and a 70 gpcd rate, the current residential flow was estimated as 356,090 gpd or 0.36 mgd.

Projected Residential Flow

The future residential flows were estimated by projecting the future sewered population in Lee and applying a residential flow allowance of 70 gpcd to this population.

To determine the future Lee populations, the following sources of population projections were evaluated: US Census Bureau (1940 – 2000); The Massachusetts Institute of Social and Economic Research (MISER); the Regional Economic Models, Inc. (REMi); and the Berkshire Regional Planning Commission (BRPC).

The US Census provides recorded population, but no projections at the City level. Projections based on US Census data were estimated by plotting a linear trend of the Lee populations from 1940 to 2000. MISER provides population projections for the county and city level, based from the most recent US Census recorded data. REMi provides population projections for the county level only, based from the US Census recorded data. The BRPC uses the REMi projections and their own developed formulas to project at the city level. The total population projection from these sources for the Town of Lee is presented in Table 1 and Figure 1.

TABLE 1. POPULATION PROJECTIONS FOR THE TOWN OF LEE

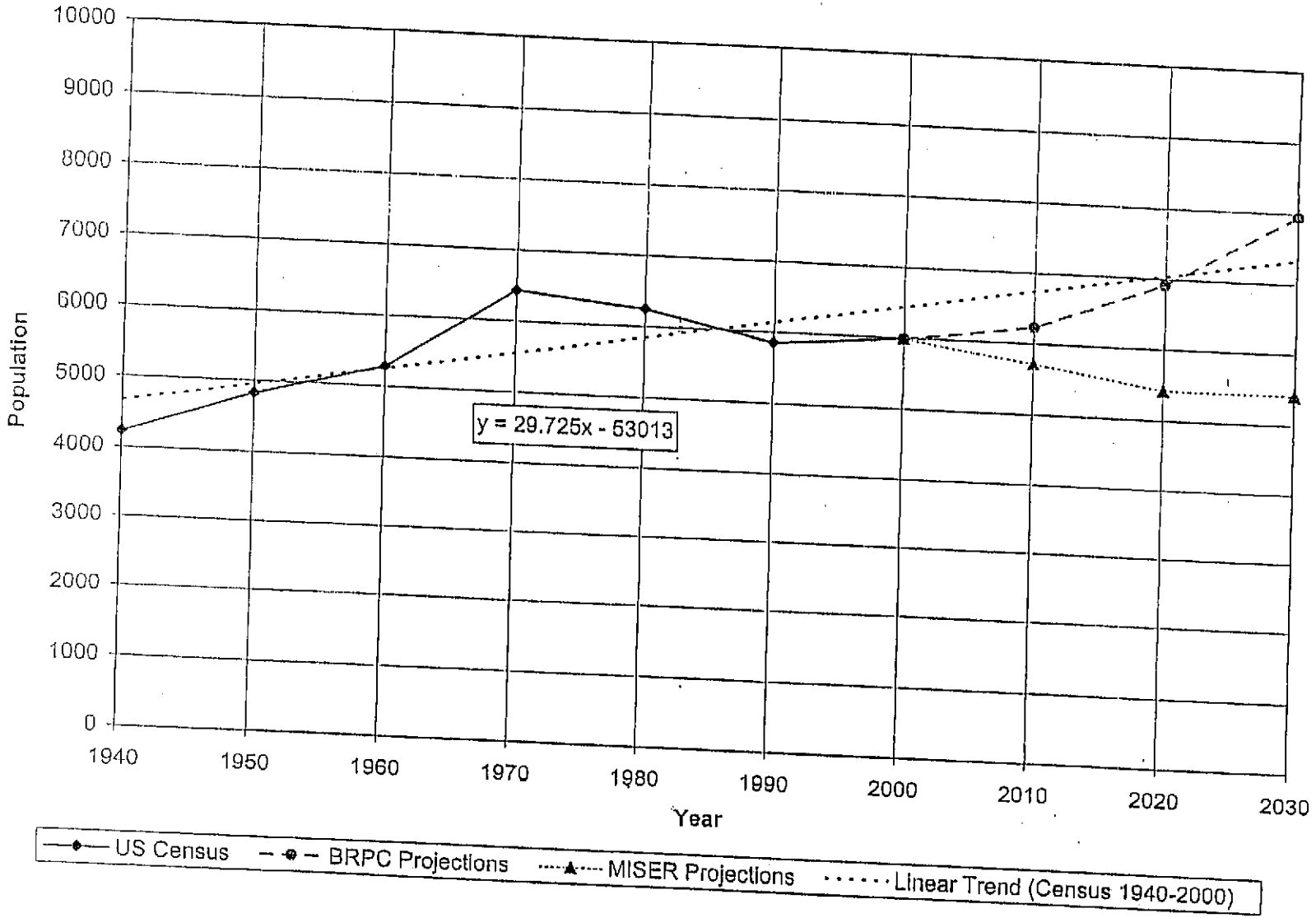
Source	2000	2007[1]	2010	2020	2027[1]	2030
US Census[2]	5,985	*6,645*	*6,734*	*7,032*	*7,240*	*7,329*
MISER	5,985	5,796	5,714	5,414	5,414	5,414
BRPC	5,985	6,153	6,225	6,910	7,633	7,943

(1) Projections for initial year 2007 and design 2027 completed by linear interpolation.

(2) Projections for US Census populations beyond 2000 estimated by linear trending of previous 60 years data (1940 – 2000) and shown in italics.

Discussions with the Town resulted in agreement that increasing growth projections of the BRPC are more in line with what is expected for Lee versus the projections of declining growth from MISER. Also, though the projected data shows US Census figures greater than the BRPC projections for the initial year of 2007, the BRPC design year 2027 projections are greater than the estimated 2027 US Census projection. This analysis used the projections of the BRPC due to the more conservative value in the design year.

Fig. 1. Lee Population Projections



For future growth, it was assumed that most of the new homes would be connected to the collection system, and that some existing homes using on-site disposal would convert to connection to the collection system. Although it may not be practical for the Town to connect all homes to the collection system, for this analysis, it was assumed that the current 85% sewered population ratio would remain for the initial year 2007, but would increase to 90% sewered population by the design year 2027. Using a wastewater generation allowance of 70 gpcd for projected residential flow, the projected design year residential flow is 483,000 gpd (7,633 x 0.90 x 70).

Current Commercial Flow

Per the SEA 2001 PER and based on discussions with the Town, the current commercial flow to the plant was estimated at approximately 100,000 gpd.

Projected Commercial Flow

The projected commercial flows were estimated based upon review of the Town's 2000 Master Plan and discussions with the Town that resulted in the assumption that a doubling of commercial flow by the design year 2027 is a reasonable value. Using the current commercial flow of 100,000 gpd, the projected design year commercial flow was estimated to be 200,000 gpd.

Septage Flow

Wastewater collected in on-lot systems (septic tanks) are collected by septage truck haulers and brought to the Lee WWTF and deposited directly into the headworks/comminutor basin. This source of wastewater flow is identified as septage flow.

Current Septage Flow

Currently, the WWTF accepts a maximum of 6,000 gpd of septage. Based on conversations with plant personnel it was estimated that the average daily septage flow was 5,000 gpd. It was assumed that the maximum of 6,000 gpd is accepted during the summer months and less during the off-summer months.

Projected Septage Flow

Local septage haulers were contacted and a survey was conducted to determine whether a demand existed for septage receiving that could prove to be a constant source of septage flow for the Lee WWTF. Based upon this telephone survey, it was concluded that if Lee decided to construct a separate septage receiving facility, the WWTF could see as much as 25,000 gpd of septage during the summer months, and about 5,000 gpd during the off months, for an average daily estimate of approximately 10,000 gpd. For this evaluation, it was considered that this 10,000 gpd of septage was the projected design year septage flow.

Current Infiltration

For this analysis, the current year average infiltration was determined by examining the daily flow data between July 2001 and December 2004. Additionally, M&E evaluated several of the daily flow strip charts produced by the plant to evaluate the base infiltration during the early morning hours and found the flow to be approximated 0.40 mgd. To estimate the average infiltration over the data set, the average domestic wastewater flow of 0.44 mgd (0.36 residential, 0.10 commercial) was subtracted from the ADF of 0.83 mgd, resulting in an estimation of the current average infiltration of 0.37 mgd. This value is comparable to the range of infiltration noted in the SEA 2001 PER of 0.23 to 0.48 mgd.

To estimate the projected average infiltration for the design years, it was assumed that although the Town may make efforts to remove infiltration from the system, M&E's experience is that at best only about 10 to 20% of the total infiltration can be cost-effectively removed from a sewer system of this age. Since at the present time the Town does not have an infiltration reduction program, for this analysis, it was assumed that infiltration would increase over the planning period particularly since much of the system has already been in service for several

decades. We assumed that there would be a 30 to 50-percent increase in average infiltration. We used 50-percent in our calculation. Therefore, the projected average infiltration for the design year is 0.56 mgd.

Inflow

Inflow is typically determined by examining flow data that has continuous (hourly or more frequent if available) flow data for a length of time to capture normal dry weather flow to the plant as well as wet weather flow events. With this type of record information, the inflow would be estimated by taking the peak flow recorded during the wet weather event and subtracting the peak flow normally occurring during the dry weather time frame.

For this analysis, the flow monitoring that produced the data set between July 2001 and December 2004 was only capable of providing daily wastewater flow totals, and not more frequent data such as hourly data, which is typically used to determine the inflow. Therefore, in order to estimate the effects of inflow on projected flows to the plant, observed peaking factors were used to develop the inflow related flow estimations for the initial and design years. These peaking factors, which account for the expected inflow, are presented in this Section. Furthermore, we reviewed the peak inflow rates estimated by other (e.g., T&B 1987, T&B 1991, SEA 2001) and concluded that the estimates could not be reliably used for this analysis since the rates varied significantly. For example, as part of the 1991 SSES (Tighe & Bond) a peak inflow value of 2.25 mgd was estimated and 1.5 mgd of peak inflow was removed as a result of disconnecting a cross connection. However, as part of the 2001 PER SEA measured an inflow value of 2.02 mgd or about the same value that was measured before a peak inflow of 1.5 mgd was removed from the system.

Peaking Factors and Design Flows

The designed capacity sizing of treatment facility processes and equipment are based on a variety of flow estimations, and each estimation used for different processes and equipment. These flow estimations are average daily flow (ADF), maximum monthly flow (MMF), peak daily flow (PDF), and peak hourly flow (PHF). Peaking factors are often used to associate the flow estimations between each other.

Average Daily Flow

The average daily flow (ADF) is defined as the average flow occurring over 24-hours based on annual flow rate data. The components of the ADF are the average domestic wastewater flow (residential, commercial, and septage) and the average infiltration. For this analysis, the ADF for the current year was determined by examining the daily flow data between July 2001 and December 2004. The projected ADF for the design year was determined by adding the projected domestic wastewater flow to the projected average infiltration for each year. This results in a design year 2027 ADF of 1.25gd (0.69 domestic + 0.56 infiltration).

Maximum Monthly Flow

The maximum monthly flow (MMF) is defined as the maximum daily flows sustained for a period of one month in the record set examined. The components of the MMF include the average domestic wastewater flow (residential, commercial, and septage) as well as infiltration and inflow occurring during the month. For this analysis, the MMF for the current year was determined by examining the daily flow data between July 2001 and December 2004. The month with the maximum flow recorded was December 2003, having 39.26 mgd of flow over 31 days. This results in the current MMF of 1.27 mgd.

The projected MMF for the design year was determined by applying the observed peaking factor between the current year ADF and current year MMF. The current year peaking factor is 1.53 (1.27 mgd/0.83 mgd). This results in a design year 2027 MMF of 1.9 mgd (1.25 mgd x 1.53).

Peak Daily Flow

The peak daily flow (PDF) is defined as the highest daily flow sustained during the record set examined. The components of the PDF include the average domestic wastewater flow (residential, commercial, and septage) as

well as infiltration and inflow occurring during the day. For this analysis, the PDF for the current year was determined by examining the daily flow data between July 2001 and December 2004. The day with the maximum flow recorded was December 25, 2003, having recorded 2.37 mgd. It was observed that this value was exceeded in data reviewed between 1996 and 2001. Therefore, to account for the possibility of a higher PDF than recorded in the recent data set, an estimation for the current PDF was determined by doubling the current MMF of 1.27 mgd. This results in the current PDF of 2.54 mgd.

The projected PDF for the design year was determined by applying the peaking factor. The current year peaking factor between the ADF and PDF is 3.06 (2.54 mgd/0.83 mgd). This results in a design year 2027 PDF of 3.83 mgd (1.25 mgd x 3.06).

Peak Hourly Flow

The peak hourly flow (PHF) is defined as the peak flow sustained for a period of one hour in the record set examined, usually based on 10-minute increments. For this analysis, the data set examined from July 2001 to December 2004 was in daily increments, and more frequent interval data was not available. Per the SEA 2001 PER, it was noted that prior to 2001, a peak of 3.7 mgd was observed. The PER did not extrapolate as to whether this peak observed was an instantaneous peak or an hourly peak. Plant strip charts, which indicate when each pump activates during the day, were examined from July 2001 to December 2004. It was noted that the maximum pump flow rate of 3.24 mgd was observed. However, this was not sustained over an hour period. This suggests that the 3.7 mgd observed may have in fact been an instantaneous peak.

To estimate the hourly peak to the plant, it was assumed that while the instantaneous peak is higher than the maximum pump capacity of 3.24 mgd, this peak flow does not sustain higher than 3.24 mgd for an hour. Therefore, this analysis assumed that a current PHF of 3.24 mgd would reasonably estimate the total volume of flow processed by the plant during a peak hour interval.

The projected PHF for the design year was determined by applying the observed peaking factor. The current year peaking factor between the ADF and PHF is 3.9 (3.24 mgd/0.83 mgd). This results in a design year 2027 PDF of 4.88 mgd (1.25 mgd x 3.9).

Table 2 presents a summary of the current and projected flows, with a breakdown of the component flows and peaking factors.

TABLE 2. CURRENT AND PROJECTED WASTEWATER FLOWS TO THE LEE WWTF

Flow Component	Current Year 2005 (mgd)	Design Year 2027 (mgd)
1) Average daily residential flow	0.36	0.48
2) Average daily commercial flow	0.10	0.20
3) Average daily septage flow	Included in Line #1	0.010
Average Daily Domestic Wastewater [1]	0.46	**0.69**
Average Daily Infiltration	0.37	0.56
Average Daily Flow (ADF) [2]	**0.83**[3]	**1.25**
Peaking Factor of ADF to MMF	1.53	1.53
Maximum Monthly Flow (MMF) [4]	1.27	**1.90**
Peaking Factor of ADF to PDF	3.06	3.05
Maximum 24 Hour Flow (PDF) [5]	2.54	**3.83**
Peaking Factor of ADF to PHF	3.9	3.9
Peak Hourly Flow (PHF) [6]	3.24	**4.88**

(1) Sum of components 1 through 3

(2) Average daily wastewater plus average daily infiltration

(3) Observed from flow records between July 2001 and December 2004

(4) Average daily flow multiplied by peaking factor to MMF

(5) Average daily flow multiplied by peaking factor PDF

(6) Average daily flow multiplied by peaking factor to PHF

Effluent Requirements

Presently, the Town is authorized to discharge treated effluent to the Housatonic River (NPDES Permit No. 0100153). The current permit expires on September 22, 2005. We assume that the same effluent requirements will be enforced throughout construction of the new facility which at this time is proposed to be on line in the fall of 2007. The current NPDES limits are summarized in Table 3.

TABLE 3. CURRENT NPDES PERMIT REQUIREMENTS

Parameter	Existing NPDES Permit Limits Permit No. 0100153
Flow	1.0 mgd Monthly Average[1]
pH	6.3 - 8.3 s.u.
BOD_5	30 mg/l Monthly Average
Total Suspended Solids	30 mg/l Monthly Average
Total Phosphorus[2]	1.0 mg/l
Ammonia[2]	Report
TKN	Report
Total Nitrate	Report
Total Nitrite	Report
Settleable Solids	0.1 ml/l Weekly Average
Chlorine Residual[2]	0.3 mg/l Monthly Average
Fecal Coliform[2]	200 #/100 ml
LC_{50}	100%

Notes: [1]Annual Average flow calculated using the monthly averages
[2]Season limitations spring through fall of each year

It is our understanding that in the fall of 2000, the EPA issued a draft NPDES permit that for the first time contained effluent limits for phosphorus and for a future increase in flow from 1.0 mgd to 1.5 mgd. Since the MEPA review process had not been completed prior to requesting the increase in future flow, the draft permit was withdrawn and the Town's current permit was issued with a flow limit of 1.0 mgd. Although the Fact Sheet that accompanied the 2000 NPDES permit contained no justification, a total phosphorus seasonal (May 1 to October 31) limit of 1.0 mg/l was included in the permit. As part of SEA's planning, it was further assumed that to comply with 40 CFR 122.44 (federal anti-backsliding requirements) and 314 CMR 4.04 (Commonwealth's anti-degradation requirements) the total phosphorus limit would be decreased from 1.0 mg/l to 0.7 mg/l (existing design flow of 1.0 mgd divided by previously proposed permitted design flow of 1.5 multiplied by 1.0 mg/l P). Simply stated, we understand the anti-backsliding/anti-degradation require the mass pollutant loading to remain consistent. That is, a 50-percent increase in flow would require a 50-percent decrease in pollutant concentration (e.g., TSS: 30 mgl x 1.0 mgd/1.25 mgd = 24 mg/l). For this reason, and since we are unaware of documented evidence of eutrophic conditions existing downstream of the discharge, we propose a seasonal total phosphorus limit of 0.8 mg/l (1.0 mgd/1.25 mgd x 1.0 mg/l = 0.8 mg/l). Proposed effluent requirements are shown in Table 4. Please note that the dilution factor will decrease from 27 to 22 (sum of instream 7Q10 of 26 mgd plus design flow of 1.25 mgd divided by the design flow of 1.25 mgd).

TABLE 4. PROPOSED NPDES PERMIT LIMITS

Parameter	Existing NPDES Permit Limits Permit No. 0100153	Assumed Future NPDES Permit Limits
Flow	1.0 mgd Monthly Average	1.3 mgd Monthly Average
pH	6.3 - 8.3 s.u.	6.3 - 8.3 s.u.
BOD_5	30 mg/l Monthly Average	24 mg/l Monthly Average
Total Suspended Solids	30 mg/l Monthly Average	24 mg/l Monthly Average
Total Phosphorus	1.0 mg/l	0.8 mg/l
Ammonia	Report	Report
TKN	Report	Report
Total Nitrate	Report	Report
Total Nitrite	Report	Report
Settleable Solids	0.1 ml/l Weekly Average	0.1 ml/l Weekly Average
Chlorine Residual	0.3 mg/l Monthly Average	0.23 mg/l Monthly Average
Fecal Coliform	200 #/100 ml	200 #/100 ml
LC_{50}	100%	100%

Nitrification and denitrification are not required under the existing permit. However, it is anticipated with WWTF expansion and future TMDL analysis of the Housatonic River, limitations may be added, further regulating the discharge of nitrogenous compounds and nutrients. NPDES requirements for sludge analysis are included in the newly issued permit. Annual monitoring of the sludge is required. Sampling and analysis procedures are as specified in 40 CFR 503 and an annual report is required as well.

The information provided within this letter will be further documented in the Supplemental PER which will be forwarded to your office during the month of April. Should you have any comments or questions regarding the information presented herein, please feel free to contact me at (781) 224-6003.

Very truly yours,

METCALF & EDDY, INC.

Brian W. Daly

Brian W. Daly
Project Manager

Cc: File
R. Scherpf; C. Schmitt; B. Harrington (M&E)
C. Pompi; R. Nason; Wastewater Oversight Committee (Town of Lee)

Attachment 2

Spreadsheet Calculations

10-Jun-08

METCALF & EDDY

Town of Lee, MA
Draft NPDES Renewal - TP Limit Scenario - Alternative No. 1
June 9, 2008

Per MADEP and EPA - Proposed P Limit:

Duration	Months	Days	Avg. Daily Flow, mgd	P limit mg/l	Stream Loading, #	5-year Duration	20-year Duration
April 1 - Oct. 31	7	213	1.5	0.2	534	2,669	10,675
Nov. 1 - March 31	5	152	1.5	1.0	1,897	9,487	37,947
					2,431	12,156	48,622

Alternate Proposal for P Limit Considering Phased Implementation Down to 0.4 mg/L:

Start of Year 1

Duration	Months	Days	Avg. Daily Flow, mgd	P limit mg/l	Stream Loading, #	Cumulative
April 1 - Oct. 31	7	213	0.85	0.8	1,210	
Nov. 1 - March 31	5	152	0.85	1.0	1,075	
					2,285	

Start of Year 6 — 12,097

Duration	Months	Days	Avg. Daily Flow, mgd	P limit mg/l	Stream Loading, #
April 1 - Oct. 31	7	213	0.95	0.6	1,014
Nov. 1 - March 31	5	152	0.95	1.0	1,202
					2,216

Start of Year 11 — 11,662

Duration	Months	Days	Avg. Daily Flow, mgd	P limit mg/l	Stream Loading, #
April 1 - Oct. 31	7	213	1.05	0.4	747
Nov. 1 - March 31	5	152	1.05	1.0	1,328
					2,075

Start of Year 16 — 10,871

Duration	Months	Days	Avg. Daily Flow, mgd	P limit mg/l	Stream Loading, #
April 1 - Oct. 31	7	213	1.15	0.4	818
Nov. 1 - March 31	5	152	1.15	1.0	1,455
					2,273

Start of Year 21 — 11,859

Duration	Months	Days	Avg. Daily Flow, mgd	P limit mg/l	Stream Loading, #
April 1 - Oct. 31	7	213	1.25	0.4	890
Nov. 1 - March 31	5	152	1.25	1.0	1,581
					2,471

46,490

Prepared by: Bob Scherpf
Revised by: Kevin Anderson

:\Lee WWTP - Con Serv\NPDES Permit\NPDES Lin\[P loading_r1_9Jun08.xls]0.4 mg per L
9/2008 15:37

Town of Lee, MA
Draft NPDES Renewal - TP Limit Scenario - Alternative No. 2
June 9, 2008

Per MADEP and EPA - Proposed P Limit:

Duration	Months	Days	Avg. Daily Flow, mgd	P limit mg/l	Stream Loading, #	5-year Duration	20-year Duration
April 1 - Oct. 31	7	213	1.5	0.2	534	2,669	10,675
Nov. 1 - March 31	5	152	1.5	1.0	1,897	9,487	37,947
					2,431	12,156	48,622

Alternate Proposal for P Limit Considering Phased Implementation Down to 0.2 mg/L:

Start of Year 1

Duration	Months	Days	Avg. Daily Flow, mgd	P limit mg/l	Stream Loading, #	Cumulative
April 1 - Oct. 31	7	213	0.85	0.8	1,210	
Nov. 1 - March 31	5	152	0.85	1.0	1,075	
					2,285	

Start of Year 6

12,097

Duration	Months	Days	Avg. Daily Flow, mgd	P limit mg/l	Stream Loading, #
April 1 - Oct. 31	7	213	0.95	0.6	1,014
Nov. 1 - March 31	5	152	0.95	1.0	1,202
					2,216

Start of Year 11

11,662

Duration	Months	Days	Avg. Daily Flow, mgd	P limit mg/l	Stream Loading, #
April 1 - Oct. 31	7	213	1.05	0.4	747
Nov. 1 - March 31	5	152	1.05	1.0	1,328
					2,075

Start of Year 16

10,871

Duration	Months	Days	Avg. Daily Flow, mgd	P limit mg/l	Stream Loading, #
April 1 - Oct. 31	7	213	1.15	0.2	409
Nov. 1 - March 31	5	152	1.15	1.0	1,455
					1,864

Start of Year 21

9,724

Duration	Months	Days	Avg. Daily Flow, mgd	P limit mg/l	Stream Loading, #
April 1 - Oct. 31	7	213	1.25	0.2	445
Nov. 1 - March 31	5	152	1.25	1.0	1,581
					2,026

44,355

Prepared by: Bob Scherpf
Reviewed by: Kevin Anderson