

CAPE MAY COUNTY MUNICIPAL UTILITIES AUTHORITY



**CMCMUA USER CHARGE SYSTEM
RATE SETTING REPORT**

**WASTEWATER MANAGEMENT PROGRAM
USER CHARGES**

**EFFECTIVE JANUARY 1, 2018
(ADOPTED)**

**CAPE MAY COUNTY
MUNICIPAL UTILITIES AUTHORITY
NOTICE OF PUBLIC HEARING
REGARDING PROPOSED SCHEDULE OF ANNUAL
WASTEWATER CHARGES AND SPECIFIC SERVICE CHARGES
FOR FISCAL YEAR 2018**

In accordance with the provisions of Section 401 of the Service Agreement between the Cape May County Municipal Utilities Authority ("CMCMUA" or "Authority") and the various municipalities, municipal utilities authorities and corporations (the "Participants") relating to the treatment of wastewater delivered to Authority facilities, and in accordance with N.J.S.A. 40:14B-1 et seq., as amended, the CMCMUA hereby gives notice that a public hearing will be held at the date, time and location noted below:

***Wednesday, December 6, 2017 at 4:00 p.m. in the Public Meeting Room
at the offices of the Cape May County Municipal Utilities Authority
located at 1523 U.S. Route 9 North, in Swainton, Middle Township, NJ***

At the hearing, the CMCMUA shall describe its proposed schedule of rates applicable with respect to services rendered by the Authority with regard to receipt, treatment and disposal of sewage received from Participants, and septage received from septage haulers during Fiscal Year 2018. The CMCMUA shall provide evidence at such public hearing in support of the proposed schedule of rates for Fiscal Year 2018, and shall provide an opportunity for cross-examination of its representatives. Written comments regarding the Authority's proposed schedule of rates for Fiscal Year 2018 can be submitted to the Authority at P.O. Box 610, Cape May Court House, NJ 08210 at, or any time prior to, the December 6, 2017 public hearing.

The CMCMUA's proposed schedule of wastewater rates proposed for Fiscal Year 2018, with any modifications deemed appropriate by the Members of the Authority following consideration of any comments received in response to this notice, are expected to be considered for adoption by the Members of the Authority, at the December 20, 2017 regularly scheduled meeting of the CMCMUA and shall become effective on January 1, 2018.

Beginning November 16, 2017, a copy of the proposed schedule of rates will be available for public inspection at the principal office of each Participant (in the case of municipalities, in the office of the Municipal Clerk), the Lower Township and Middle Township Branches of the Cape May County Library, and also at the above noted offices of the CMCMUA, during normal business hours. A copy of this document is also available for downloading at the CMCMUA's website at www.cmcmua.com.

A transcript of the public hearing shall be made and a copy thereof shall be available upon request to any interested party for a reasonable fee.

**BY: CAPE MAY COUNTY
MUNICIPAL UTILITIES AUTHORITY**


Joshua Palombo
Wastewater Program Manager

DATED: November 16, 2017

**CMCMUA USER CHARGE SYSTEM
RATE SETTING REPORT**

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Section I. Introduction

I. Introduction

The primary purpose of this Rate Setting Report is to present information to Participants of the Cape May County Municipal Utilities Authority's (hereinafter referred to as Authority or CMCMUA) Wastewater Management Program and the general public regarding the user charges which are proposed to go into effect commencing on January 1, 2018, for Fiscal Year 2018 (i.e. calendar year 2018).

The charges for wastewater conveyance and treatment services in Ocean City will be billed to New Jersey American Water which provides local sewage collection service within the City of Ocean City. In turn, New Jersey American Water will pass these costs onto the individual users of the system, along with New Jersey American Water's own cost for the operation of the local sewage collection system.

The charges for wastewater conveyance and treatment services in the City of Cape May, Borough of West Cape May, Borough of Cape May Point, Borough of Stone Harbor, City of Sea Isle City, Borough of Avalon, Township of Middle (including areas in Cape May Court House, Mayville, Burleigh, Rio Grande, Avalon Manor, Stone Harbor Manor/Blvd. and Harbor Bay Center), City of North Wildwood, City of Wildwood, Borough of Wildwood Crest, Borough of West Wildwood, and the Shawcrest Area of the Township of Lower, will be billed by the CMCMUA directly to each Participant municipality or local sewerage agency, as appropriate. In turn, each Participant will pass the cost for regional service on to the individual users of the system, along with the Participant's own costs for the operation of the local sewage collection system.

The County of Cape May will be billed for the sewage received from the County Complex at Crest Haven. Likewise, the New Jersey Turnpike Authority will be billed for the sewage received from the Garden State Parkway's Ocean View Service Area and Swainton Maintenance Yard and Avalon State Police Barracks.

The CMCMUA has, historically, not received any high strength waste from its Participants, and the proposed Fiscal Year 2018 Budget does not anticipate receiving any additional revenue from such waste. However, in order to accommodate the receipt of any high strength wastes from any sources within any of the Service Regions, as in past

years, this Report also proposes rates for a surcharge on high strength wastes for Fiscal Year 2018.

Due to damages incurred by a fire in one of the two reactors at the County-Wide Sludge Composting Facility in November 2015, the County-Wide Sludge Composting Facility is not currently in operation while the Authority is evaluating its long term sludge management options.

Considering that the reactor not impacted by the November 2015 fire at the County-Wide Sludge Composting Facility can commence operation at any time, this report proposes rates for the disposal of non-CMCMUA generated sewage sludge at the County-Wide Sludge Composting Facility, since excess processing capacity is available during the non-peak months.

In addition, rates are proposed for the receipt and treatment of septage and landfill leachate at the Seven Mile Beach/Middle Regional Wastewater Treatment Facility during Fiscal Year 2018. Also proposed is the rate for "CAPEORGANIC", a specialty fertilizer produced by composting biosolids, should the County-Wide Sludge Composting Facility recommence operation.

Rates are herein proposed for the conveyance and disposal of the treated effluent from the Lower Township Municipal Utilities Authority's Wastewater Treatment Facility. This rate has been calculated in accordance with the Service Agreement between the Authority and Lower Township Municipal Utilities Authority (LTMUA).

The CMCMUA plans to conduct a public hearing on December 6, 2017 to present the information contained within this Report relative to its proposed revisions to the current rates. The public hearing will provide an opportunity for the receipt of comments from Participants and the general public regarding these proposed rates and also an opportunity for the Authority to respond to questions regarding the proposed rates for Fiscal Year 2018.

The Authority's proposed schedule of wastewater charges/rates proposed for Fiscal Year 2018, with any modifications deemed appropriate by the Members of the Authority following consideration of any comments received at, or prior to, the public hearing, are

expected to be considered for adoption by the Members of the Authority, at a regularly scheduled meeting of the CMCMUA during the month of December 2017 and shall become effective on January 1, 2018.

Section II. Background

II. Background

Created by resolution of the Board of Chosen Freeholders of Cape May County in 1972, the Cape May County Municipal Utilities Authority ("CMCMUA" or the "Authority") was formed specifically for the purposes of planning, designing and implementing wastewater and solid waste management programs for the improvement, preservation, and protection of the natural and socio-economic environments of Cape May County.

A. Regional Service Areas

The CMCMUA, on November 16, 1977, officially adopted the "County-Wide Selected Plan", which established regional wastewater planning areas throughout Cape May County. This plan has been approved by the United States Environmental Protection Agency (USEPA) and New Jersey Department of Environmental Protection (NJDEP). The four (4) Regional Planning Areas delineated by this Selected Plan, for which facilities have been provided during the initial planning phase, are: the Ocean City, Cape May, Seven Mile Beach/Middle and Wildwood/Lower Service Regions. The general area of each region has been identified geographically, as shown in Figure 1, while Figure 2 lists the Participants within each Service Region currently serviced by the Regional Wastewater System. The Service Regions delineated in Figure 1 represent the study areas which were evaluated during the facilities planning process. Therefore, it should be recognized that large portions of the study areas, particularly on the mainland, are not slated to receive regional wastewater treatment services.

Wastewater collection, transmission, treatment and disposal facilities have been separately provided for in each of the four (4) Service Areas.

All Service Areas are currently operational. Management and administration of these regional facilities are centralized under the coordinated control of the CMCMUA. Within each Service Area, or Region, staffing is provided as necessary to operate and maintain the Wastewater Treatment Facilities. In addition, a centralized Sludge Composting Facility, located adjacent to the Seven Mile Beach/Middle Region Wastewater Treatment Facility, receives the sludge which is generated at the four (4) Regional Wastewater Treatment Plants. Descriptions of the CMCMUA's Wastewater and Sludge Treatment Facilities are briefly presented below:

Figure 1

**CMCMUA User Charge System
Location of Participants by Region**

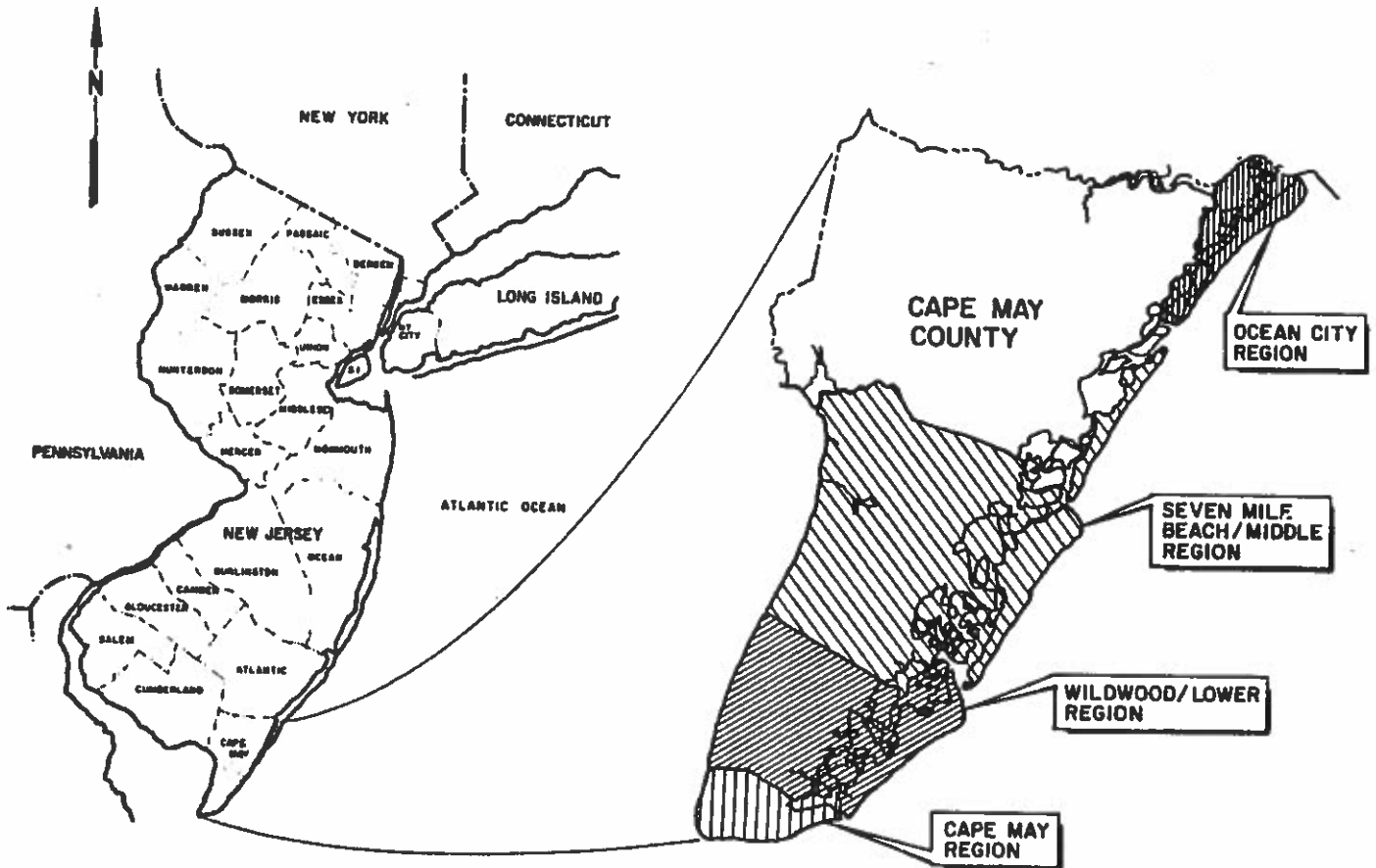


Figure 2
CMCMUA USER CHARGE SYSTEM
LIST OF PARTICIPANTS BY REGION

<u>Region</u>	<u>Participant</u>
Ocean City	<ul style="list-style-type: none"> - Ocean City - New Jersey-American Water Company
Cape May	<ul style="list-style-type: none"> - West Cape May - Cape May Point - Cape May City (Includes the U.S. Coast Guard Base)
Seven Mile Beach/Middle	<ul style="list-style-type: none"> - Stone Harbor - Sea Isle City - Avalon - Cape May County (Crest Haven Complex) - Middle Township - (Cape May Court House) - Middle Township - (Avalon Manor) - Middle Township - (Stone Harbor Manor/Stone Harbor Blvd.) - Middle Township - (Court House South) - Middle Township - (Harbor Bay Center) - New Jersey Turnpike Authority (Ocean View Service Area/Swainton Maintenance Yard and Avalon State Police Barracks)
Wildwood/Lower	<ul style="list-style-type: none"> - Wildwood - Wildwood Crest - West Wildwood - North Wildwood - Middle Township - (Rio Grande) - Lower Township Municipal Utilities Authority (Shawcrest)

1. Ocean City Region

A 6.3 million gallons per day (MGD) capacity Secondary Wastewater Treatment Facility for Ocean City has been in operation since February 1982. The facility was re-rated at 7.3 MGD by the NJDEP in the summer of 1994. Effective with the reissuance of the NJPDES permit renewal on April 1, 2001, the facility was again re-rated by the NJDEP at 8.24 MGD. Transmission facilities consist of four (4) regional pumping stations and approximately 52,000 lineal feet of force mains. These Transmission Facilities terminate at the Regional Wastewater Treatment Facility located at the western end of 45th Street. Treated effluent is discharged through an outfall and diffuser system which extends approximately 6,000 lineal feet from the shoreline into the Atlantic Ocean, east of the treatment facility site.

2. Cape May Region

A 3.0 MGD capacity Secondary Wastewater Treatment Facility, located at the site of the former Cape May City Treatment Plant, began operation in February, 1984. Regional transmission facilities consist of three (3) pumping stations and approximately 20,000 lineal feet of force mains. The treated effluent is conveyed by force main to the Authority's Effluent Disposal Facility adjunct to the Lower Township Municipal Utilities Authority's Wastewater Treatment Facility, where it is combined with the effluent from the Lower Township Municipal Utilities Authority's Wastewater Treatment Facility and re-pumped to the effluent pumping station at the Wildwood/Lower Regional Wastewater Treatment Facility. The combined effluent from all three treatment plants is discharged into the Atlantic Ocean via the Wildwood/Lower Regional Ocean Outfall and diffuser system.

3. Seven Mile Beach/Middle Region

A 7.67 MGD capacity Secondary Wastewater Treatment Facility, located near the County Complex at Crest Haven in Middle Township, began operation in August, 1987. Transmission facilities include ten (10) pumping stations and approximately 84,000 lineal feet of force main pipelines. Treated effluent is discharged into the Atlantic Ocean through an outfall and diffuser system consisting of 30,000 lineal feet of land-based pipeline and 5,200 lineal feet of marine outfall line.

In addition, facilities have been provided at the Seven Mile Beach/Middle Regional Wastewater Treatment Facility to receive and treat all of the septage waste, leachates and liquid sludges generated in Cape May County.

4. Wildwood/Lower Region

A 14.2 MGD capacity Secondary Wastewater Treatment Facility located on Route 47 east of Rio Grande, began operation in April, 1988. Transmission facilities include seven (7) pumping stations and approximately 52,900 lineal feet of force mains. Effluent is discharged into the Atlantic Ocean through an ocean outfall and diffuser system.

The Wildwood/Lower's effluent disposal system also conveys the treated effluent from the Cape May Region and the Lower Township Municipal Utilities Authority Wastewater Treatment Facilities for discharge through the common ocean outfall and diffuser system into the Atlantic Ocean.

5. County-Wide Sludge Composting Facility

A centralized Sludge Composting Facility utilizing an in-vessel mechanical composting process followed by aerated windrows to stabilize sludges generated at the various Regional Wastewater Treatment Facilities is located adjacent to the Seven Mile Beach/Middle Treatment Plant. The resulting stabilized product, known as "CAPEORGANIC", is marketed for use as a specialty fertilizer.

The County-Wide Sludge Composting Facility was initially placed in operation in late 1985. Due to damages incurred by a fire in one of the two reactors at the County-Wide Sludge Composting Facility in November 2015, the facility is not currently in operation and the Authority is evaluating its long term sludge management options.

Prior to the fire, the County-Wide Sludge Composting Facility had a capacity to handle 140 dry tons per week of sewage sludge from the CMCMUA's regional facilities. If the Authority should decide to recommence composting operations in the unaffected reactor the facility would have a capacity of 40 dry tons per week of sewage sludge which provides for excess processing capacity during the non-peak months.

Currently, the sewage sludges generated by the Authority are transported by the Authority to the Atlantic County Utilities Authority at a rate of 50 dry tons per week during non-peak months and 84 dry tons per week during peak months. During peak months, the Authority currently relies upon a contract with an outside contractor to transport and dispose approximately 56 dry tons per week of excess sewage sludge generated by its facilities.

Section III. Factors Affecting User Charge System

III. Factors Affecting User Charge System

The terms of executed service agreements and bond covenants, as well as regulatory requirements and grant conditions, affect a user charge system. A discussion of each of these factors as they affect the CMCMUA user charge system is presented in the following subsections.

A. Service Agreement

A Service Agreement with the CMCMUA was entered into by participant Cities, Boroughs, Townships, Sewerage Districts, and the New Jersey American Water (herein collectively referred to as "Participants") in order to identify applicable responsibilities and/or procedures regarding items such as:

1. The construction and operation of the Regional System
2. Connection to the Regional System
3. Charges and establishment of rates by the CMCMUA, and payments by Participants
4. Meters, records and local operations
5. Payment for abandoned Wastewater Treatment Facilities and their demolition

With respect to charges for wastewater treatment and disposal under Item 3, Section 401 of the Service Agreement states that the sum of annual charges to Participants "shall at all times be sufficient to pay or provide for the expenses of operation, repair and maintenance of the Regional System, including (without limitation of the foregoing) insurance, renewals and replacements, and the cost of all extensions and alterations of the Regional System not otherwise provided for, the principal of and interest on any and all bonds or other obligations of the Authority as the same become due, and to provide for any deficits of the Authority resulting from failure to receive sums payable to the Authority by any Participant or any other person, partnership, firm or corporation, or from any other cause, and to provide and maintain such reserves or sinking funds for any of the foregoing purposes as may be required by the terms of any contract or other obligation of the Authority."

In addition, Section 402 of the Service Agreement states that the annual charge "shall be computed and established by the Authority on the basis of the quantity, quality and other characteristics of the sewage so delivered as shown by the records of the Authority, at the rate or rates prescribed by the Authority in accordance with this Article ..."

B. CMCMUA Bond Covenants

Bond covenants associated with the CMCMUA's issuance of revenue bonds used to finance the construction of the Authority's regional wastewater facilities also affect the user charge system, as each of the following items are addressed: obligation for and payment of bonds, establishment and application of reserve funds, rate stabilization funds, investment of funds, the rate covenant, annual budget responsibilities, audits, insurance and arbitrage.

The CMCMUA user charge system's debt service for construction of facilities, beginning with the Ocean City Region, was set forth by the 1979 bond covenant, as contained in the "Official Statement Relating to \$17,000,000 CMCMUA County Agreement Sewer Revenue Bonds, Series 1979." These revenue bonds were structured to recover construction costs and the portion of the project development costs (i.e., regional planning, design and financing costs) attributable to these projects.

Similarly, additional financing for the Cape May Region, County-Wide Sludge Composting Facility, Seven Mile Beach/Middle Region, and Wildwood/Lower Region (with the exception of the Cape May Region/Lower Township Effluent Disposal System) was obtained through the issuance of additional Sewer Revenue Bonds.

Each series of sewer revenue bonds initially issued by the CMCMUA for the construction of the Authority's regional wastewater facilities was subsequently refunded by the Authority in order to take advantage of more favorable bond market conditions (i.e. lower interest rates).

In May 1999, through a competitive bidding process, the Authority sold its option to recall up to \$85,195,000 of the then currently outstanding Series 1992-A Sewer Revenue Refunding Bonds and to reissue/resell these bonds should lower interest rates become available at some point in the future. In return for surrendering the Authority's right to

recall the bonds for a two-year period, between the Fall of 2002 and the Fall of 2005, the Authority received an upfront payment of \$3,830,000 from Lehman Brothers, Inc. In accordance with the terms of this Forward Bond Sale, in November 2002, the CMCMUA Series 1992-A Bonds were recalled and reissued as the Authority's Series 2002-A Sewer Revenue Refunding Bonds at the same rates and terms as the Series 1992A Bonds.

The Authority has invested the \$3.83 Million in proceeds from the above noted Forward Bond Sale and has utilized the interest income and a portion of the proceeds over a multi-year period to offset its User Charges to Participants as part of a Rate Stabilization strategy. In an additional effort to stabilize User Rates, in October 2002, the Authority approved the refunding of the Series 1992 and 1993-B Sewer Revenue Refunding Bonds through the issuance of the Series 2002-B and Series 2002-C Sewer Revenue Refunding Bonds. This refinancing scheme took advantage of low interest rates and restructured the schedule for debt service payments.

The Authority's currently outstanding sewer revenue bond issues are described in detail in the following documents:

Official Statement: The Cape May County Municipal Utilities Authority, Sewer Revenue Refunding Bonds, Series 2011; dated November 3, 2011. These bonds retired the then-outstanding Sewer Revenue Refunding Bonds, Series, 2002-C, at a significant savings in interest costs.

Financing for portions of the CMCMUA's regional conveyance and treatment system was also provided through low interest loans obtained from the New Jersey Department of Environmental Protection acting on behalf of the State of New Jersey, and the New Jersey Wastewater Treatment Trust. The Cape May Region/Lower Township Effluent Disposal System was financed through this low interest loan program. Agreements setting forth the terms for this loan were finalized and executed in October, 1987.

During 1994, the New Jersey Wastewater Treatment Trust issued refunding bonds for the interest bearing loans. This refinancing provided significant short term savings during Fiscal Years 1994 and 1995 with stable annual debt payments thereafter.

Similarly, the Court House South Project, which consisted of the construction of two (2) pump stations and connecting force mains to extend wastewater treatment services

to the Burleigh and Mayville sections of Middle Township, was also funded through the NJDEP/NJ Wastewater Treatment Trust Loan Program. The interest bearing portion of this loan was refunded by the New Jersey Wastewater Treatment Trust in May of 2004.

In 2010, the Authority obtained low (2010 (A) Series) and (2010 (B) Series) interest loans from the New Jersey Environmental Infrastructure Trust (NJEIT) Loan Program. The proceeds from these loans financed the refurbishment of the Authority's force main in West Wildwood and other various projects.

Also, in 2010, the Authority obtained additional low interest and zero interest loans from the NJEIT (2010 (C) Series) for refurbishment of the force mains along Avalon Boulevard and other projects.

In 2012, the Authority obtained low (2012 (A-1) Series) and zero (2012 (A-2) Series) interest loans from the NJEIT Loan Program. The proceeds from these loans financed the purchase of replacement emergency generators, pumps, valving, control systems, property improvements, and heavy equipment.

In 2016, the Authority obtained a low (2016A) interest loan from the NJEIT Loan Program. The proceeds from this loan financed the construction of bypass pumping around the Authority's pumping stations for emergency pumping situations and for maintenance purposes.

C. Regulatory Requirements

All requirements of the USEPA and the NJDEP imposed as a result of grant conditions associated with the receipt of Federal and State grant funds for the construction of the CMCMUA's Regional Wastewater Program have been considered in design of the CMCMUA user charge system, including the adoption of a system of charges which ensures that each user (or class of users) pays its proportionate share of the Regional Facilities' construction, operation, maintenance and replacement costs. Proportionality encompasses such user characteristics as volume, strength and rate of flow. The concept of proportionality also includes all debt and administrative costs incurred by the CMCMUA as a result of the Cape May County regional planning, design and construction process. Additional regulatory requirements have been met with regards to potential customers subject to high strength wastewater surcharges and specific service charges.

Section IV. The Regional Rate Setting Concept

IV. The Regional Rate Setting Concept

In accordance with the requirements of N.J.S.A. 40:14B-22 and the terms of the Service Agreement with its Participants, the CMCMUA user charges will be uniform with respect to wastewater conveyance, treatment and disposal services.

The CMCMUA user charge system provides a rate structure and a methodology through which the actual rates can be adjusted periodically to ensure continued coverage of all wastewater, conveyance, treatment and disposal costs by revenue generated throughout the four (4) Regional Systems as each system or system extension is placed into operation.

It should be noted that the user charge system developed in this Report only addresses direct CMCMUA charges to the Participants. These projected annual charges, therefore, do not include any administrative, billing, or collection costs which will be incurred and passed along by the local Participants, as they distribute the cost for the Authority's regional wastewater conveyance and treatment services along with their own charges for the operation and maintenance of their local collection systems, to the individual customers receiving local sewage service.

Section V. Methodology for User Charge Cost Determinations

V. Methodology for User Charge Cost Determinations

Costs to be recovered from Participants through user charges include: debt service, operation, maintenance, replacement, and CMCMUA administrative cost. Each of these cost items is discussed in the following paragraphs.

The CMCMUA debt service costs are composed of several annual cost components. The major cost item is the debt service payments made on bonds issued for facilities' construction and refurbishing. The sale of these bonds provided the local share of the total capital requirement for planning, design, construction, and project financing activities. The term "local share" refers to the balance remaining after all Federal and State grants have been applied to the total capital cost.

Annual operation and maintenance (O & M) cost attributable to the conveyance systems, treatment facilities, solids handling facilities and effluent disposal systems maintained by the CMCMUA have been estimated for each Region. Upon examination, it has been found that many of these costs are essentially fixed in nature, in that they are not dependent on the total annual flow transmitted to the treatment plant. Examples of such costs include most of the wages and salaries of the permanent (i.e., year round) employees, heating costs, and general upkeep of the facility sites. These costs have been referred to as fixed O & M costs. The Authority's annual debt service obligations also represent a fixed cost.

Other costs, which vary with the actual volume of wastewater transported and treated, include electrical costs for pumping and aeration, chemical costs for flocculation and disinfection, and for various sludge handling, treatment and disposal costs. These costs have been referred to as variable O & M costs.

USEPA regulations require that the Grantee establish a provision for replacing large capital items whose service life falls short of the life expectancy of the treatment plant itself. An annual contribution to a replacement fund has been established to meet this requirement.

Annual costs associated with administration of the CMCMUA Regional Wastewater Treatment System have been incorporated into the rate projections.

The CMCMUA user charge rate structure consists of three (3) basic types of charges: A) specific service charges; B) high strength surcharges and; C) charges to Participants. Each of these charges is described as follows:

A. Specific Service Charges

These charges recover the costs which benefit a specific customer or class of customers (e.g. septage haulers). These specific services are charged directly to the customer(s) receiving the service in proportion to the estimated costs of providing these services.

For septage disposal, the projected service charge consists of the actual cost to treat the Biochemical Oxygen Demand (BOD) and Suspended Solids (SS) concentrations contained in the septage, based on sample test data acquired since 1982. To conform with the NJDEP's practice of categorizing septage tank pumpage as "sludge", the CMCMUA will apply the same charge for domestic septage, approved septage sludge, or raw wastewater originating from outside the regional sewerage system area in Cape May County. Likewise, specific service charges for landfill leachate disposal have also been calculated.

For non-CMCMUA generated sewage sludge received at the County-Wide Sludge Composting Facility, the projected service charge was calculated based on the estimated operating costs associated with the processing of the sewage sludge.

The selling price of "CapeOrganic" specialty fertilizer is based on existing market conditions for the sale of this type of product. The CMCMUA reserves the right to offer price discounts and other seasonal incentives to promote the sale of "CapeOrganic".

For the conveyance and disposal of the effluent from the LTMUA's Wastewater Treatment Facility, the Specific Service Charge is calculated in accordance with the existing Service Agreement between the two Authorities, utilizing the actual debt service

and estimated operating and maintenance costs attributable to the Effluent Disposal System.

B. High-Strength Surcharges

High-strength surcharges, also referred to as specific surcharges, recover the costs for treatment of high-strength wastewaters. High-strength wastewaters are defined as discharges whose polluting characteristics; in terms of BOD and SS are greater than those associated with domestic wastewater from residential customers. The concentration limits, beyond which surcharges will be assessed, have been set at 350 milligrams per liter (mg/l) BOD, and 300 milligrams per liter (mg/l) SS, as per the Service Agreement. No income revenue from high-strength surcharges is envisioned at this time and, therefore, no costs and/or incomes have been included in the projected User Rates.

C. Charges to Participants

The annual charge per Participant receiving wastewater treatment services recovers all costs for debt service, operations, maintenance and equipment replacement costs, and administrative services remaining after the collection of specific service charges, surcharges for high-strength wastes, grants, interest income and other revenues. Allocation of these costs among the Participants is based upon the projected volume and rate of flow from each Participant, expressed as a percentage of the total flow from all Participants. The costs which are fixed in nature (debt service plus fixed O&M costs) are allocated on the basis of the projected summer flow from each Participant. This methodology is used in an attempt to equitably distribute the fixed costs associated with the additional conveyance and treatment capacity necessitated by the increased flow rates resulting from the seasonal increase in population during the summer months in Cape May County.

The projected Fiscal Year 2018 annual charges per Participant developed herein do not include the recovery of any costs for wastewater collection and/or treatment services beyond the responsibility of the CMCMUA.

**Section VI. Methodology For Determination Of
Projected Annual Charges By Participants**

VI. Methodology for Determination of Projected Annual Charges by Participant

In order to determine the annual charges projected for each Participant, estimates for summer and non-summer flow rates were developed from actual CMCMUA flow measurements from each of the four Regional Systems. As discussed previously, fixed charges (debt service plus fixed operating costs) were allocated based upon a proportioning of the total summer flow received from all Participants receiving regional sewerage service. Total summer flow is represented by the total flow received in the 90-day period from mid-June through mid-September.

The estimated "total summer flows" were tabulated with each Participant's contribution expressed as a percentage of the total of all of the "total summer flows" to be received from all Participant service areas during the Fiscal Year. The projected annual fixed charge for each Participant receiving service was then calculated by multiplying each Participant's percentage of the "total summer flow" by the total fixed costs to be recovered.

The determination of the projected annual charge to each Participant for the variable (or flow related) portion of the cost was based upon each Participant's percentage contribution to the total annual flow projected to be received from all Participants.

The total annual user charge, which will be billed to each Participant receiving service from the CMCMUA within any given fiscal year, combines the fixed and variable components of the user charge as described above. Table 1, contained in Section VII of this Report, presents the total annual user charge for each Participant projected to receive Regional wastewater conveyance, treatment, and disposal service during Fiscal Year 2018.

Section VII. Basis For Proposed Fiscal Year 2018 User Charges

VII. Basis for Proposed Fiscal Year 2018 User Charges

As noted earlier, the purpose of this Report is to prescribe the proposed rates for wastewater conveyance, treatment, and disposal services in the CMCMUA's Ocean City, Cape May, Seven Mile Beach/Middle, and Wildwood/Lower Service Regions which will become effective for Fiscal Year 2018. A surcharge is also being proposed for the treatment of high-strength wastes at the Authority's treatment plants, and for the handling and treatment of septage and landfill leachate at these facilities during Fiscal Year 2018. In addition, a sales price for CAPEORGANIC specialty fertilizer, a specific service charge for processing non-CMCMUA generated sewage sludge at the County-Wide Sludge Composting Facility, and a specific service charge for the Lower Township Municipal Utilities Authority's use of the Effluent Disposal System is proposed.

The rates adopted for Fiscal Year 2018, shall remain in effect until such time as the schedule of rates is proposed for further modification. Prior to any modification of the rates adopted by the CMCMUA for Fiscal Year 2018, the Authority will provide adequate public notice and conduct a public hearing for the purpose of receiving comments relative to any proposed modifications under consideration at that time.

Included within this section are the user charges proposed to go into effect in Fiscal Year 2018. They are presented in Table 1 of this section. Supplemental tables providing a further breakdown of the proposed user charges are also presented in this section of the Report. The Participants to be serviced in Fiscal Year 2018 will be billed in accordance with the executed Service Agreements.

The following factors were considered in the preparation of the projected user charges for Fiscal Year 2018:

- Projected year 2018 flow rates for most Participants are based on actual wastewater flows as measured by the Authority during the previous six (6) year period (with the exception of extreme storm flows or known groundwater pumping events). Projected flows from the New Jersey Turnpike Authority's Service Area and the Swainton Maintenance Yard and Avalon State Police Barracks are based on flows from the site since the full service restaurant facility was closed.

- The actual flow from each Participant will be measured during calendar year 2018 and any adjustments to the fees collected from each Participant, based on these actual flow records, will be made as necessary after final audit of the Fiscal Year 2018 operating expenses.
- O & M costs for the Regional Wastewater System and the proportioning of these costs into fixed or variable components were budgeted based upon actual experience in the four operating Service Regions.
- The O & M costs for the Regional Wastewater System have increased 1.59% from Fiscal Year 2017. These increases are primarily attributable to increases in labor related costs, chemical costs, and utility costs.
- It is estimated that essentially all sewage sludge generated by the four (4) wastewater treatment facilities during calendar year 2018 will be processed at either the Atlantic County Utilities Authority or through an existing contract with Environmental Protection & Improvement Company, Inc. (EPIC)
- Allocation of projected costs to treatment parameters (i.e., flow, BOD and SS) are based upon actual past experience.
- For those funds not in long-term investments, projected interest income was estimated by the CMCMUA's Chief Financial Officer, based on an average 0.70% rate of return on investments. Total estimated interest income for Fiscal Year 2018 is \$94,938.
- All interest income anticipated for Fiscal Year 2018, including the interest income from the Wastewater Program's Construction Fund and the Rate Stabilization Fund, will be used to offset operating/debt service costs in Fiscal Year 2018 and is included in the above total.
- The projected Administrative Costs for Fiscal Year 2018 are based upon actual post-audited figures for Fiscal Year 2016.
- The specific service charge for the conveyance and disposal of the effluent from the LTMUA has been calculated in accordance with the existing Service Agreement between the LTMUA and CMCMUA utilizing the actual debt service and estimated operation and maintenance costs attributable to the CMCMUA's Effluent Disposal System. The proposed specific service charge for the

LTMUA's use of the Effluent Disposal System in Fiscal year 2018 is in the amount of \$470,145.

- The projected volume of septage and landfill leachate for Fiscal Year 2018 is based on actual quantities received during the last several years.
- The quality of septage and leachate is based upon average values obtained from laboratory analyses for BOD and SS.
- The septage disposal charge is based upon an analysis of septage quality, the projected average cost to treat a pound of BOD, a pound of SS, and to handle 1,000 gallons of septage.
- No Revenues have been anticipated in this year's budget for the sale of compost product during calendar year 2018.
- Miscellaneous revenues in the amount of \$20,000 have been included in anticipation of insurance premium rebates and the sale of surplus equipment.
- The projected revenues from communication tower leases for Fiscal Year 2018 and \$105,000.

CAPE MAY COUNTY MUNICIPAL UTILITIES AUTHORITY
 USER CHARGE SYSTEM - RATE SETTING REPORT - FISCAL YEAR 2018

TABLE 1 - USER CHARGES INCLUDING SPECIFIC SERVICE CHARGES

	FIXED CHARGES:		VARIABLE CHARGES:		TOTAL:
	PERCENT (1)	DOLLARS	PERCENT (1)	DOLLARS	
OCEAN CITY	25.97%	\$7,492,995	25.53%	\$1,339,134	\$8,781,119
CITY OF CAPE MAY	9.38%	\$2,672,123	8.99%	\$278,483	\$2,950,606
WEST CAPE MAY	0.76%	\$219,454	1.12%	\$38,611	\$278,066
CAPE MAY POINT	0.64%	\$185,246	0.20%	\$32,931	\$218,177
STONE HARBOR	4.51%	\$1,396,431	4.80%	\$211,280	\$1,597,644
SEA ISLE CITY	9.83%	\$2,812,341	8.89%	\$461,816	\$3,283,357
AVALON	10.49%	\$3,044,913	11.18%	\$585,721	\$3,630,633
CREST HAVEN	0.59%	\$164,737	0.65%	\$44,718	\$213,455
RIO GRANDE	2.38%	\$687,311	2.15%	\$162,146	\$852,477
C.N. COURT HOUSE	2.15%	\$617,332	3.49%	\$182,798	\$800,136
AVALON MANOR	0.38%	\$58,125	0.21%	\$11,812	\$57,137
S. H. BOULEVARD	0.22%	\$64,351	0.25%	\$13,183	\$79,534
COURT HOUSE SOUTH	0.97%	\$278,742	1.58%	\$78,354	\$357,106
HARBOR BAY CENTER	0.80%	\$23,927	0.84%	\$23,227	\$47,154
MIDDLE TWP. TOTAL		\$1,713,813		\$452,241	\$2,166,054
NJ TURNPIKE AUTHORITY	0.82%	\$5,355	0.82%	\$852	\$6,113
WILDWOOD	10.31%	\$2,988,726	10.02%	\$321,819	\$3,310,544
WILDWOOD CREST	9.48%	\$2,716,164	8.29%	\$434,881	\$3,151,045
WEST WILDWOOD	1.22%	\$352,316	1.49%	\$78,888	\$431,204
NORTH WILDWOOD	10.22%	\$2,924,168	9.78%	\$312,281	\$3,236,449
SHAWCREST (LTMUAV)	0.49%	\$141,495	0.59%	\$19,732	\$172,227
TOTALS (2):	100.00%	\$24,728,378	100.00%	\$5,237,105	\$30,965,483

NOTES: (1) From TABLE 7
 (2) From TABLE 6
 (3) From TABLE 5
 (4) From TABLE 4

SPECIFIC SERVICE CHARGES:

L.T.M.U.A EFFLUENT DISPOSAL (1):	\$470,145
HIGH STRENGTH SURCHARGES (4):	\$0.63
HIGH STRENGTH B.L.O.D. (50b)	\$0.93
HIGH STRENGTH S.S. (45b)	\$57.08
SEPTAGE/SLUDGE/RAW WASTE DISPOSAL (3)(1000 gallons) (3):	\$15.61
LANDFILL LEACHATE DISPOSAL (3)(1000 gallons) (3):	\$5.80
"CAPROG/AVNC" SPECIALTY FERTILIZER (Streak 3) (4b):	\$3.80
Screened	\$3.00
Un-Screened	\$2.00
PROCESSING OF DEWATERED SLUDGE CAKE (5 / wet ton)	\$75.00

CAPE MAY COUNTY MUNICIPAL UTILITIES AUTHORITY
 USER CHARGE SYSTEM - RATE SETTING REPORT - FISCAL YEAR 2018

TABLE 2 - OPERATING EXPENSE BUDGET BY FACILITY

	CONVEYANCE SYSTEM:			WASTEWATER TREATMENT:			SOLIDS HANDLING:			EFFLUENT DISPOSAL:			TOTAL:		
	TOTAL	FIXED	VAR.	TOTAL	FIXED	VAR.	TOTAL	FIXED	VAR.	TOTAL	FIXED	VAR.	TOTAL	FIXED	VAR.
OCEAN CITY REGION:															
TOTAL SALARIES AND WAGES	216,364	214,439	1,924	703,236	740,815	(37,579)	53,719	53,279	440	15,423	15,383	40	1,049,204	1,073,455	(24,251)
TOTAL FRINGE BENEFITS	102,177	111,138	(8,961)	295,713	303,464	(7,751)	27,856	27,631	225	7,996	7,933	63	543,936	538,487	5,449
TOTAL MISC. EXPENSES	1,800	1,800	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL SUPPLIES	53,000	53,000	0	39,200	39,200	0	17,000	17,000	0	7,600	7,600	0	153,600	153,600	0
TOTAL PARTS	13,000	13,000	0	57,200	57,200	0	2,000	2,000	0	0	0	0	72,200	72,200	0
TOTAL FUELS/OILS/GREASES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL MATERIALS	0	0	0	91,000	164,000	(73,000)	14,200	0	14,200	0	0	0	208,200	164,000	144,200
TOTAL CHEMICALS	104,500	1,500	103,000	17,000	18,000	(1,000)	12,000	0	12,000	64,000	0	64,000	381,500	374,500	34,200
TOTAL UTILITIES	0	0	0	3,000	3,000	0	0	0	0	0	0	0	3,000	3,000	0
TOTAL RENTALS	13,100	13,100	0	39,500	39,500	0	1,100	1,100	0	1,100	1,100	0	54,800	54,800	0
TOTAL EQUIPMENT	12,200	12,200	0	43,000	43,000	0	69,000	500	68,500	220	220	0	124,770	55,870	68,900
TOTAL OUTSIDE SERVICES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCEAN CITY REGION TOTALS	574,793	438,876	135,917	1,494,949	1,482,540	12,409	196,949	181,500	15,449	373,339	32,156	341,183	2,794,810	1,966,112	831,878
CAPE MAY REGION:															
TOTAL SALARIES AND WAGES	164,833	143,315	21,518	855,733	513,857	341,876	7,188	7,128	60	5,501	5,459	42	733,474	709,759	23,715
TOTAL FRINGE BENEFITS	78,656	77,832	824	264,800	254,444	10,356	3,435	3,293	142	2,632	2,682	(50)	349,564	338,277	11,287
TOTAL MISC. EXPENSES	2,500	2,500	0	19,400	19,400	0	0	0	0	0	0	0	0	0	0
TOTAL SUPPLIES	28,200	28,200	0	49,700	49,700	0	5,000	5,000	0	5,500	5,500	0	88,400	88,400	0
TOTAL PARTS	12,000	12,000	0	34,550	34,550	0	0	0	0	0	0	0	44,550	44,550	0
TOTAL FUELS/OILS/GREASES	0	0	0	500	500	0	0	0	0	0	0	0	500	500	0
TOTAL MATERIALS	0	0	0	18,000	1,200	16,800	1,200	0	1,200	78,000	0	78,000	81,200	0	81,200
TOTAL CHEMICALS	54,100	1,800	52,300	113,800	1,200	112,600	400	400	0	35,000	0	35,000	243,200	2,600	240,600
TOTAL UTILITIES	0	0	0	3,000	3,000	0	1,500	1,500	0	1,500	1,500	0	3,000	3,000	0
TOTAL RENTALS	14,700	14,700	0	44,000	44,000	0	1,500	1,500	0	500	500	0	61,700	61,700	0
TOTAL EQUIPMENT	9,550	9,550	0	18,500	18,500	0	53,500	500	53,000	0	0	0	84,850	31,850	53,000
TOTAL OUTSIDE SERVICES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAPE MAY REGION TOTALS	364,738	290,104	74,634	1,116,083	961,150	154,933	72,314	67,913	4,401	128,833	15,548	108,043	1,872,658	1,248,727	369,931

CAPE MAY COUNTY MUNICIPAL UTILITIES AUTHORITY
 USER CHANGE SYSTEM - RATE SETTING REPORT - FISCAL YEAR 2018

TABLE 2 -- OPERATING EXPENSE BUDGET BY FACILITY

	CONVEYANCE SYSTEM:			WASTEWATER TREATMENT:			SOLIDS HANDLING:			EFFLUENT DISPOSAL:			TOTAL:		
	TOTAL	FIXED	VAR.	TOTAL	FIXED	VAR.	TOTAL	FIXED	VAR.	TOTAL	FIXED	VAR.	TOTAL	FIXED	VAR.
TOTAL SALARIES AND WAGES	44,133	440,841	3,332	1,790,894	1,482,813	16,821	84,932	84,336	595	24,546	24,448	128	2,397,235	2,275,316	21,975
TOTAL FRINGE BENEFITS	185,179	193,852	1,317	685,576	678,131	7,245	35,849	35,838	11	9,912	9,854	58	924,336	917,477	6,859
TOTAL MISC. EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL SUPPLIES	2,250	2,250	0	87,706	87,706	0	0	0	0	5,000	5,000	0	91,706	91,706	0
TOTAL PARTS	44,000	48,000	0	118,200	118,200	0	11,000	11,000	0	11,000	11,000	0	174,200	174,200	0
TOTAL FUELS/OILS/GREASES	51,000	51,000	0	24,250	24,250	0	75,000	75,000	0	11,000	11,000	0	171,250	171,250	0
TOTAL MATERIALS	500	500	0	35,000	0	0	112,000	0	112,000	0	0	228,000	370,000	500	
TOTAL CHEMICALS	3,000	6,000	3,000	484,000	24,000	444,000	37,000	4,748	28,252	228,000	4,578	113,420	831,000	57,318	
TOTAL UTILITIES	218,000	0	0	4,800	4,800	0	16,500	0	16,500	0	0	0	4,800	4,800	0
TOTAL RENTALS	33,000	33,000	0	136,000	136,000	0	16,500	0	16,500	0	0	0	184,000	184,000	0
TOTAL EQUIPMENT	29,000	29,000	0	89,100	89,100	0	24,000	4,000	20,000	0	0	0	182,100	182,100	20,000
TOTAL OUTSIDE SERVICES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEVEN HILL/MIDDLE REGION TOTAL	1,955,812	844,171	311,419	2,367,740	2,859,454	506,204	482,372	241,283	160,988	390,978	57,376	333,603	5,316,823	4,982,384	1,214,517
WILDWOOD/OVER REGION:															
TOTAL SALARIES AND WAGES	289,272	257,431	1,241	592,876	578,545	22,352	109,116	108,635	491	24,546	24,475	1,278	1,287,219	1,181,877	25,943
TOTAL FRINGE BENEFITS	143,519	182,784	735	234,735	227,800	6,935	43,587	43,371	196	9,812	9,618	510	481,932	471,546	10,386
TOTAL MISC. EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL SUPPLIES	2,250	2,250	0	29,150	29,150	0	0	0	0	1,800	1,800	0	33,200	33,200	0
TOTAL PARTS	47,000	47,000	0	65,100	65,100	0	34,100	34,100	0	24,500	24,500	0	173,450	173,450	0
TOTAL FUELS/OILS/GREASES	24,000	24,000	0	90,000	90,000	0	17,000	0	17,000	1,000	1,000	0	184,000	87,000	17,000
TOTAL MATERIALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CHEMICALS	0	0	0	25,000	25,000	0	81,500	0	81,500	50,000	0	50,000	154,500	25,000	
TOTAL UTILITIES	287,000	5,000	282,000	172,200	4,200	164,000	51,100	200	51,000	391,000	13,000	280,000	721,500	22,500	
TOTAL RENTALS	0	0	0	3,000	3,000	0	0	0	0	0	0	0	3,000	3,000	0
TOTAL EQUIPMENT	27,700	27,700	0	40,800	40,800	0	31,500	31,500	0	6,500	0	0	107,700	107,700	0
TOTAL OUTSIDE SERVICES	22,000	22,000	0	54,500	54,500	0	18,000	4,000	4,000	14,100	14,100	0	107,600	94,600	4,000
WILDWOOD/OVER REGION TOTAL	677,441	492,545	284,576	1,376,573	1,877,236	199,277	378,983	221,874	154,187	741,124	489,236	331,784	3,097,921	2,281,493	871,213

CAPE MAY COUNTY MUNICIPAL UTILITIES AUTHORITY
 USER CHARGE SYSTEM - RATE SETTING REPORT - FISCAL YEAR 2018

TABLE 2 - OPERATING EXPENSE BUDGET BY FACILITY

	CONVEYANCE SYSTEM:			WASTEWATER TREATMENT:			SOLIDS HANDLING:			EFFLUENT DISPOSAL:		
	TOTAL	FIXED	VAR.	TOTAL	FIXED	VAR.	TOTAL	FIXED	VAR.	TOTAL	FIXED	VAR.
SLUDGE COMPOSTING FACILITY:												
TOTAL SALARIES AND WAGES							236,640	222,182	8,498			
TOTAL FRINGE BENEFITS				289,417	282,864	5,233	0	0	0			
TOTAL MISC. EXPENSES				0	0	0	11,000	4,979	4,921			
TOTAL SUPPLIES				24,450	24,450	0	25,500	0	25,500			
TOTAL PARTS				0	0	0	11,000	0	11,000			
TOTAL FUELS/OILS/GREASES				0	0	0	3,000	0	3,000			
TOTAL MATERIALS				0	0	0	0	0	0			
TOTAL CHEMICALS				500	0	500	0	0	0			
TOTAL UTILITIES				1,500	0	1,500	4,500	0	4,500			
TOTAL RENTALS				4,500	0	4,500	0	0	0			
TOTAL EQUIPMENT				39,000	0	39,000	0	0	0			
TOTAL OUTSIDE SERVICES				0	0	0	0	0	0			
COMPOSTING FACILITY TOTALS				636,127	512,324	161,263						
ADMINISTRATIVE:												
TOTAL SALARIES AND WAGES	785,474	785,474	0									
TOTAL MISC. EXPENSES	61,000	61,000	0									
TOTAL SUPPLIES	2,450	2,450	0									
TOTAL PARTS	0	0	0									
TOTAL FUELS/OILS/GREASES	0	0	0									
TOTAL MATERIALS	0	0	0									
TOTAL CHEMICALS	0	0	0									
TOTAL UTILITIES	60,000	60,000	0									
TOTAL RENTALS	0	0	0									
TOTAL EQUIPMENT	30,000	30,000	0									
TOTAL TOWER SHARED SERVICES	40,000	40,000	0									
TOTAL OUTSIDE SERVICES	50,000	50,000	0									
TOTAL FRINGE BENEFITS	419,237	419,237	0									
TOTAL INSURANCE	392,245	392,245	0									
TOTAL PROFESSIONAL SERVICES	113,000	113,000	0									
TOTAL FINANCIAL SERVICES	34,182	34,182	0									
ADMINISTRATIVE OVERHEAD	1,432,000	1,113,240	314,160									
PERMITS AND FEES	252,000	252,000	0									
SLUDGE DISPOSAL	1,400,000	0	1,400,000									
ADMINISTRATIVE TOTALS	5,045,588	3,251,428	1,714,160									

CAPE MAY COUNTY MUNICIPAL UTILITIES AUTHORITY
 USER CHARGE SYSTEM - RATE SETTING REPORT - FISCAL YEAR 2018

TABLE 2 - OPERATING EXPENSE BUDGET BY FACILITY

	CONVEYANCE SYSTEM:		VAR.	WASTEWATER TREATMENT:		VAR.	SOLIDS HANDLING:		VAR.	EFFLUENT DISPOSAL:		VAR.	TOTAL:		VAR.
	TOTAL	FIXED		TOTAL	FIXED		TOTAL	FIXED		TOTAL	FIXED		TOTAL	FIXED	
TOTAL-ALL WASTEWATER FACILITIES:															
TOTAL SALARIES AND WAGES	1,123,202	1,116,445	6,757	4,397,515	4,311,944	85,570	599,636	579,403	18,023	301,243	289,485	1,578	6,481,066	6,377,678	103,388
TOTAL MISC. EXPENSES	0	0	0	61,200	61,200	0	0	0	0	0	0	0	61,200	61,200	0
TOTAL SUPPLIES	8,250	8,250	0	165,200	165,200	0	11,200	6,079	4,931	1,200	1,600	0	191,250	184,319	6,931
TOTAL PARTS	176,600	176,600	0	361,200	361,200	0	94,600	64,100	22,500	44,500	44,500	0	617,150	597,450	20,000
TOTAL FUELS/OILS/GREASES	184,200	184,200	0	184,200	184,200	0	185,200	77,000	12,000	12,000	12,000	0	405,000	377,000	28,000
TOTAL MATERIALS	500	500	0	500	500	0	3,000	0	3,000	0	0	0	4,000	1,000	3,000
TOTAL CHEMICALS	3,000	3,000	0	141,000	41,000	100,000	209,000	0	309,000	615,000	19,570	615,000	988,000	41,000	4,000
TOTAL UTILITIES	577,400	13,200	564,200	1,827,000	119,400	907,600	181,200	9,445	91,532	514,000	19,570	494,430	2,219,200	161,918	1,057,282
TOTAL RENTALS	0	0	0	13,000	13,000	0	1,500	0	1,500	0	0	0	14,500	13,000	1,500
TOTAL EQUIPMENT	88,200	88,200	0	289,500	289,500	0	55,100	58,600	4,500	11,600	11,600	0	444,700	440,100	4,600
TOTAL TOWER SHARED SERVICES	0	0	0	40,000	40,000	0	0	0	0	0	0	0	40,000	40,000	0
TOTAL OUTSIDE SERVICES	72,000	72,000	0	245,100	245,100	0	195,200	9,000	186,500	14,870	16,830	0	550,230	363,720	186,500
TOTAL FRINGE BENEFITS	489,732	485,002	4,730	2,001,931	1,963,256	38,675	370,138	314,087	6,051	118,631	118,003	628	2,594,672	2,481,288	1,133,384
TOTAL INSURANCE	0	0	0	393,245	393,245	0	0	0	0	0	0	0	393,245	393,245	0
TOTAL PROFESSIONAL SERVICES	0	0	0	113,200	113,200	0	0	0	0	0	0	0	113,200	113,200	0
TOTAL FINANCIAL SERVICES	0	0	0	24,182	24,182	0	0	0	0	0	0	0	24,182	24,182	0
ADMINISTRATIVE OVERHEAD	0	0	0	1,418,000	1,413,240	314,160	0	0	0	0	0	0	1,272,000	1,113,240	158,760
PERMITS AND FEES	0	0	0	252,000	252,000	0	0	0	0	0	0	0	252,000	252,000	0
SLUDGE DISPOSAL	0	0	0	1,400,000	0	1,400,000	0	0	0	0	0	0	1,400,000	0	1,400,000
GRAND TOTALS	2,646,444	2,064,734	579,736	12,570,893	9,654,087	2,964,006	1,685,644	1,114,917	578,748	1,636,004	574,470	1,111,657	18,079,035	13,359,979	5,118,136

CAPE MAY COUNTY MUNICIPAL UTILITIES AUTHORITY
 USER CHARGE SYSTEM – RATE SETTING REPORT – FISCAL YEAR 2018

TABLE 3 – DEBT SERVICE REQUIREMENTS

	PRINCIPAL	INTEREST	TOTAL	ALLOCATION		DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS
				CNCNVA PORTION	LTMVA PORTION					
				PERCENT	(see calculation of percentages at bottom of page)					
2010(A) SERIES (1)	\$11,558	\$1,456	\$13,014	100.00%		\$13,014	0.00%	\$0		\$0
2010(B) SERIES (2)	\$31,474	\$13,968	\$45,442	99.93%		\$45,410	0.07%	\$32		\$32
2010(C) SERIES (2)	\$434,530	\$146,453	\$580,983	100.00%		\$580,983	0.00%	\$0		\$0
2011 SERIES (3)	\$2,395,000	\$384,125	\$2,779,125	98.37%		\$2,930,565	1.63%	\$48,560		\$48,560
2012(A-1) SERIES (4)	\$35,908	\$12,081	\$47,989	100.00%		\$47,989	0.00%	\$0		\$0
2012(A-2) SERIES (4)	\$40,635	\$6,478	\$47,113	100.00%		\$47,113	0.00%	\$0		\$0
2016(A) SERIES (9)	\$151,500	\$15,275	\$176,775	100.00%		\$176,775	0.00%	\$0		\$0
SUBTOTAL	\$3,300,605	\$589,836	\$3,890,441			\$3,841,849		\$48,592		\$48,592
ABANDONED FACILITIES	\$0	\$0	\$0			\$0		\$0		\$0
TOTALS	\$3,300,605	\$589,836	\$3,890,441	98.75%		\$3,841,849	1.25%	\$48,592		\$48,592

For Subsystem 'C', (2011 SERIES) financed through CMCMVA regular bond issues:
 LTMVA percentage equals 15.8% (from Service Agreement) of debt service attributable to Subsystem 'C' (10.32% of total debt service);
 =15.8% x 10.32% = 1.63%

Bond issues 2010(B) include the cost of installing five 450 HP variable speed drives on the effluent pumps at the WW/L WTF, which is part of Subsystem 'C'. This part of the project represents \$32,808 / \$7,667,900 = 0.4% of the debt service.
 LTMVA share of the use of Subsystem 'C' averages 15.8%
 =15.8% x 0.4% = 0.07%

CAPE MAY COUNTY MUNICIPAL UTILITIES AUTHORITY
 USER CHARGE SYSTEM - RATE SETTING REPORT - FISCAL YEAR 2018

TABLE 4 - CALCULATION OF SPECIFIC COSTS

	PROJECTED FLOW (thousands of gallons)	AVERAGE STRENGTH (1)		TOTAL QUANTITY (2)	
		BOD (mg/l)	SS (mg/l)	BOD (lbs)	SS (lbs)
WASTEWATER FROM USERS	4,089,845	205	205	6,992,476	6,992,476
SEPTAGE	7,200	3,600	4,200	216,173	252,202
LANDFILL LEACHATE	16,590	1,200	500	165,132	68,895
TOTALS	4,113,585			7,373,781	7,313,483

NOTES:
 (1) From Laboratory Data
 (2) A/G ± mph ± R/34 lbs/gal
 (3) Percent of construction cost
 attributed to each component
 (4) Total Debt + Project RR Contribution
 - Use of Bond Reserve"
 (5) From Table 2

COSTS TO BE RECOVERED

	TOTAL	VOLUME	BOD	SS
DEBT SERVICE: (4)				
CONVEYANCE	23.65% (3)	\$3,638,719	0.00%	\$0
WASTEWATER TREATMENT	24.89%	\$3,824,869	58.00%	\$658,925
SOLIDS HANDLING	28.50%	\$3,152,972	0.00%	\$0
EFFLUENT DISPOSAL	38.96%	\$4,782,366	100.00%	\$788,243
TOTAL	100.00%	\$15,383,924 (4)	\$18,621,887	\$1,439,168

OPERATING COSTS: (5)

CONVEYANCE	\$1,646,484	100.00%	\$1,646,484	0.00%	\$0
WASTEWATER TREATMENT	\$12,520,893	64.00%	\$7,512,536	20.80%	\$2,504,179
SOLIDS HANDLING	\$1,685,664	0.00%	\$0	40.00%	\$674,266
EFFLUENT DISPOSAL	\$1,626,084	100.00%	\$1,626,084	0.00%	\$0
TOTALS:	\$18,479,125		\$11,785,104		\$3,178,444

COST PER 1000 GALLONS
 COST PER POUND OF BOD
 COST PER POUND OF SS

\$5.45 per 1000 gallons
 \$8.63 per lb BOD
 \$0.93 per lb SS

TOTALS:	\$33,862,149	\$22,486,990	\$4,617,612	\$6,837,549
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CAPE MAY COUNTY MUNICIPAL UTILITIES AUTHORITY
 USER CHARGE SYSTEM - RATE SETTING REPORT - FISCAL YEAR 2018

TABLE 5 - CALCULATION OF SPECIFIC SERVICE CHARGES

WASTEWATER TREATMENT PARAMETER	(1) CHARACTERISTICS	UNITS PER 1000 GAL	UNIT COSTS	COST PER 1000 GAL
SEPTAGE:				
VOLUME	1,000 GALLONS	1.00	\$5.45	\$5.45
BOD	3,600 MG/L	30.02	\$0.63	\$18.80
SS	4,200 MG/L	35.03	\$0.93	\$32.75
PROPOSED SEPTAGE DISPOSAL FEE (\$/1000 GAL)				
				\$57.00

NOTES: (1) From Table 4
 (2) From Table 3
 (3) Calculated per Service Agreement

LANDFILL LEACHATE:

VOLUME	1,000 GALLONS	1.00	\$5.45	\$5.45
BOD	1,200 MG/L	10.01	\$0.63	\$6.27
SS	500 MG/L	4.17	\$0.93	\$3.90
PROPOSED LEACHATE DISPOSAL FEE (\$/1000 GALLONS)				
				\$15.61

LOWER TOWNSHIP M.U.A. EFFLUENT DISPOSAL CHARGE:

TOTAL	
DEBT SERVICE (2):	\$48,592
OPERATING COSTS (3):	\$421,553
TOTAL EFFLUENT DISPOSAL CHARGE:	\$470,145

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TABLE 6 - DETERMINATION OF TOTAL USER CHARGES

EXPENSES AND COSTS:	TOTAL	FIXED	VARIABLE
TOTAL OPERATING COSTS (1)	\$18,479,125	\$13,350,989	\$5,128,136
TOTAL DEBT SERVICE(2)	\$3,890,441	\$3,890,441	\$0
RENEWAL AND REPLACEMENT CONTRIBUTION	\$13,258,008	12,899,830	358,178
TOTAL EXPENSES AND COSTS	\$35,627,566	\$30,140,261	\$5,487,105
REVENUES AND INCOMES:			
INTEREST ON INVESTMENTS AND DEPOSITS:	\$94,938	\$94,938	\$0
SEPTAGE DISPOSAL FEES:	\$580,000	\$180,000	\$100,000
LANDFILL LEACHATE DISPOSAL FEES:	\$300,000	\$260,000	\$40,000
COMPOST PRODUCT SALES:	\$0	\$0	\$0
PROCESSING OF "OUTSIDE" SLUDGE	\$100,000	\$0	\$100,000
LOWER TOWNSHIP M.U.A. EFFLUENT DISPOSAL FEES(3):	\$470,145	\$470,145	\$0
TOWER RENTAL INCOME	\$105,000	\$105,000	\$0
MISCELLANEOUS REVENUES (INSURANCE REBATE, ETC)	\$20,000	\$10,000	\$10,000
WITHDRAWAL FROM RATE STABILIZATION FUND:	\$0	\$0	\$0
USE OF BOND RESERVE	\$0	\$0	\$0
TOTAL REVENUES AND INCOMES:	\$1,670,083	\$1,470,083	\$200,000
AMOUNT TO BE COLLECTED FROM USERS: (EXPENSES LESS REVENUES)	\$33,957,483	\$28,726,378	\$5,237,105

NOTES:
 (1) From Table 2
 (2) From Table 3
 (3) From Table 5

CAPE MAY COUNTY MUNICIPAL UTILITIES AUTHORITY
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TABLE 7 – ESTIMATED FLOWS (ON ANNUAL BASIS)

DAILY FLOWS:

	SUMMER NON-SUMMER (Million Gallons / Day)		TOTAL SUMMER FLOW (1): (Thousands of Gallons)		TOTAL NON-SUMMER FLOW: (Thousands of Gallons)		TOTAL YEARLY FLOW (2): (Thousands of Gallons)	
	gallons	% of Total Flow	gallons	% of Total Flow	gallons	% of Total Flow	gallons	% of Total Flow
OCEAN CITY	4,689	2.26%	422,000	25.92%	623,000	25.31%	1,045,000	25.55%
CITY OF CAPE MAY	1,683	0.78%	151,503	9.30%	216,230	8.78%	367,733	8.99%
WEST CAPE MAY	0.138	0.12%	12,443	0.76%	33,329	1.35%	45,772	1.13%
CAPE MAY POINT	0.117	0.05%	10,503	0.64%	15,214	0.61%	25,717	0.63%
STONE HARBOR	0.817	0.33%	73,500	4.51%	91,500	3.72%	165,000	4.03%
SEA ISLE CITY	1.778	0.72%	160,020	9.83%	200,008	8.13%	360,028	8.80%
AVALON	1.933	1.03%	174,000	10.69%	283,415	11.51%	457,415	11.18%
CREST HAVEN	0.106	0.09%	9,567	0.59%	25,355	1.03%	34,922	0.85%
RIO GRANDE	0.433	0.21%	38,970	2.39%	90,000	3.66%	128,970	3.15%
C. M. COURT HOUSE	0.389	0.39%	35,001	2.15%	107,754	4.38%	142,755	3.49%
AVALON MANOR	0.035	0.02%	3,182	0.20%	5,418	0.22%	8,600	0.21%
S. H. BOULEVARD	0.042	0.02%	3,762	0.23%	6,533	0.27%	10,295	0.25%
COURT HOUSE SOUTH	0.176	0.16%	15,804	0.97%	45,994	1.84%	61,198	1.50%
HARBOR BAY CENTER	0.005	0.00%	450	0.03%	1,325	0.06%	1,825	0.04%
TOTAL MIDDLE TWP.	1.155	0.53%	97,169	5.97%	256,974	10.42%	353,643	8.65%
NJ TURNPIKE AUTHORITY	0.003	0.00%	298	0.02%	372	0.02%	670	0.02%
WILDWOOD	1,878	0.87%	169,000	10.38%	241,010	9.79%	410,010	10.02%
WILDWOOD CREST	1,711	0.67%	154,000	9.46%	184,993	7.52%	338,993	8.29%
WEST WILDWOOD	0.222	0.14%	19,900	1.23%	41,003	1.67%	60,903	1.49%
NORTH WILDWOOD	1,848	0.85%	166,360	10.22%	233,640	9.49%	400,000	9.78%
SHAWCREST (LTMVA)	0.089	0.05%	8,034	0.49%	15,966	0.65%	24,000	0.59%
TOTALS	18,0931	8.9509	1,628,377	100%	2,461,508	100%	4,089,885	100%

NOTES:

- All flows projected from past actual data.
- (1) Used for Fixed Charges
- (2) Used for Variable Charges

Section VIII. Future Projections Of User Charges

VIII. Future Projections of User Charges

Previously, during the public hearings on Proposed User Rates, the CMCMUA was asked to forecast user rates further into the future.

The following table shows the previously adopted 2015 through 2017 Budgeted Expenses and Revenues, the Fiscal Year 2018 Proposed Expenses and Revenues, and estimated expenses and revenues through 2021. The following assumptions were made:

- Debt service includes all principal and interest due under the various bond issues.
- The Renewal and Replacement Contribution will be escalated in future years to provide adequate funds for the replacement of equipment and infrastructure beyond its designed useful life.
- Operational, Maintenance and Administration Costs have been escalated at the rate of 2.50% per year from 2018 through 2021. Revenues from Septage and Leachate Disposal are projected to be \$880,000 between 2018 and 2021.
- Interest Revenues will increase as the principal amounts in the various funds increase. Short-term interest rates have been estimated at 0.70% for the period between 2018 and 2021. Anticipated income from fixed rate long-term investments have also been included.
- It should be pointed out that the projected increases are based upon an estimated total amount to be collected from all Participants. The actual User Rate billed to each individual Participant in each year will be based upon actual recorded sewage flow rates.

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COMPARISON - 2015 through 2021 USER RATES

	2015 BUDGET	2016 BUDGET	2017 BUDGET	2018 PROPOSED	2019 PROJECTED	2020 PROJECTED	2021 PROJECTED
EXPENSES							
Debt Service	\$15,462,310	\$3,727,474	\$3,881,914	\$3,890,411	\$3,877,399	\$3,862,253	\$385,716
Increase/(Decrease) in Debt	(13,164)	(911,735,346)	\$153,596	\$9,417	(513,842)	(515,146)	(\$1,976,517)
Operations & Maintenance	\$17,390,283	\$18,162,289	\$18,189,375	\$18,479,125	\$18,941,163	\$19,414,631	\$19,899,996
Increase/(Decrease) in O&M	\$435,403	\$312,006	\$24,986	\$28,250	\$461,978	\$473,528	\$485,851
	2.58%	4.80%	0.15%	1.59%	2.90%	2.50%	2.50%
Renewal and Replacement Project Overhead	\$1,000,000	\$1,124,200	\$1,375,000	\$1,391,000	\$1,400,000	\$1,415,000	\$1,450,375
Renewal and Replacement Projects	\$12,020,000	\$18,014,000	\$11,507,000	\$11,887,000	\$12,102,000	\$15,317,000	\$15,555,000
Total Renewal & Replacement	\$13,020,000	\$19,138,200	\$12,884,000	\$13,278,000	\$13,502,000	\$16,732,000	\$17,005,375
Contribution	\$13,020,000	\$12,018,000	\$12,877,000	\$13,258,000	\$13,592,000	\$16,732,000	\$17,791,887
TOTAL EXPENSES	\$45,813,103	\$33,977,763	\$34,947,399	\$35,627,566	\$37,320,502	\$48,086,884	\$37,791,887
REVENUES							
Annual Interest Income	\$45,588	\$87,218	\$88,988	\$94,938	\$100,188	\$105,438	\$149,188
Increase/(Decrease) in Int. Income	(\$4,651)	\$71,450	\$1,750	\$5,950	\$5,250	\$5,250	\$43,750
Spillage/Lacharic Disposal	\$700,000	\$500,000	\$300,000	\$800,000	\$800,000	\$800,000	\$800,000
Compost Product Sales	\$35,000	\$15,000	\$0	\$0	\$0	\$0	\$0
Lower Temp. Ethanol Disposal	\$655,812	\$451,889	\$468,937	\$470,145	\$479,548	\$489,139	\$498,922
Lower Temp. MUA Settlement	\$30,000	\$30,000	\$0	\$0	\$0	\$0	\$0
Processing of "Outside" Sludge	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Tower Rental	\$111,296	\$54,000	\$105,000	\$105,000	\$105,000	\$105,000	\$105,000
Miscellaneous	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Withdrawal from Rate Stab. Fund (1)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Use of Bond Reserve	\$11,900,192	\$0	\$0	\$0	\$0	\$2,919,375	\$0
TOTAL REVENUES	\$13,628,108	\$12,881,137	\$13,654,915	\$14,570,083	\$14,841,736	\$46,678,952	\$17,753,109
NET FROM USERS	\$32,184,995	\$33,639,636	\$33,292,384	\$33,957,483	\$34,635,766	\$33,339,932	\$36,837,978
INCREASE/DECREASE	\$271,913	\$454,641	\$652,788	\$665,099	\$478,283	\$694,166	\$708,016
PERCENTAGE	0.85%	1.41%	2.00%	2.00%	2.00%	2.00%	2.00%