

Application Type Renewal
Wastewater Type Sewage
Facility Type SFTF

**NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP**

Application No. PA0260797
APS ID 611568
Authorization ID 1220336

Applicant, Facility and Project Information

Applicant Name	<u>Clappertown Cma Church</u>	Facility Name	<u>Clappertown Cma Church Properties</u>
Applicant Address	<u>3239 Piney Creek Road</u> <u>Williamsburg, PA 16693-8800</u>	Facility Address	<u>3239 Piney Creek Road</u> <u>Williamsburg, PA 16693-8800</u>
Applicant Contact	<u>Ronald Gunnett</u>	Facility Contact	<u>Dorothy Stahl</u>
Applicant Phone	<u>(814) 793-2411</u>	Facility Phone	<u>(814) 793-9820</u>
Client ID	<u>255065</u>	Site ID	<u>632109</u>
SIC Code	<u>8661</u>	Municipality	<u>Huston Township</u>
SIC Description	<u>Services - Religious Organizations</u>	County	<u>Blair</u>
Date Application Received	<u>January 31, 2018</u>	WQM Required	<u></u>
Date Application Accepted	<u>March 26, 2018</u>	WQM App. No.	<u></u>



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Project Description This is an application for NPDES renewal.

Summary of Review

Approve	Deny	Signatures	Date
X		Nicholas Hong, P.E. / Environmental Engineering Specialist	October 23, 2019
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria Bebenek, P.E. / Environmental Program Manager	

Summary of Review

The application submitted by the applicant requests a NPDES renewal permit for the Clappertown CMA Church located at 3239 Piney Creek Road, Williamsburg, PA 16693 in Blair County, municipality of Huston Township. The NPDES expired on July 31, 2018. The application for renewal was received by DEP Southcentral Regional Office (SCRO) on January 31, 2018.

The purpose of this Fact Sheet is to present the basis of information used for establishing the proposed NPDES permit effluent limitations. The Fact Sheet includes a description of the facility, a description of the facility's receiving waters, a description of the facility's receiving waters attainment/non-attainment assessment status, and a description of any changes to the proposed monitoring/sampling frequency. Section 6 provides the justification for the proposed NPDES effluent limits derived from technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), total maximum daily loading (TMDL), antidegradation, anti-backsliding, and/or whole effluent toxicity (WET). A brief summary of the outlined descriptions has been included in the Summary of Review section.

The subject facility is a 0.0005 MGD (500 GPD) treatment facility. The applicant does not anticipate any proposed upgrades to the treatment facility in the next five years. The NPDES application has been processed as a Small Treatment Facility due to the type of sewage and the design flow rate for the facility. The applicant disclosed the Act 14 requirement to Blair County Commissioners and the Huston Township and the notice was received by the parties on February 2, 2018 and May 10, 2018. A planning approval letter was not necessary as the facility is neither new or expanding.

Utilizing the DEP's web-based Emap-PA information system, the receiving waters has been determined to be Tributary 16222 to Piney Creek. The sequence of receiving streams that Tributary 16222 to Piney Creek discharges into are the Piney Creek, the Frankstown Juniata River, the Juniata River, and the Susquehanna River which eventually drains into the Chesapeake Bay. Due to the flow rate generated by the facility, the subject site is not subject to the Chesapeake Bay implementation requirements. The receiving water has protected water usage for cold water fishes (CWF) and migratory fishes (MF). No Class A Wild Trout fisheries are impacted by this discharge. The receiving stream is designated as a high quality surface waters which triggers the need for an additional evaluation of anti-degradation requirements.

Tributary 16222 to Piney Creek is Category 5 stream listed in the 2016 Integrated List of All Waters (formerly 303d Listed Streams). This stream is impaired for siltation due to agriculture. The receiving waters is not subject to a total maximum daily load (TMDL) plan to improve water quality in the subject facility's watershed.

The existing permit and proposed permit differ as follows:

- There are no changes in monitoring frequency or performance effluent for the proposed renewal.

The proposed permit will expire five (5) years from the effective date.

Based on the review in this report, it is recommended that the permit be drafted. DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Any additional information or public review of documents associated with the discharge or facility may be available at PA DEP Southcentral Regional Office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file review, contact the SCRO File Review Coordinator at 717.705.4700.

1.0 Applicant

1.1 General Information

This fact sheet summarizes PA Department of Environmental Protection's review for the NPDES renewal for the following subject facility.

Facility Name: Clappertown CMA Church

NPDES Permit # PA0260797

Physical Address: 3239 Piney Creek Road
Williamsburg, PA 16693

Mailing Address: 3239 Piney Creek Road
Williamsburg, PA 16693

Contact: Ronald Gunnett
Trustee/Operator

Consultant: There was not a consultant utilized for this NPDES renewal.

1.2 Permit History

Based upon the fact sheet dated for July 10, 2013, the facility was required to submit sampling data as DMR.

2.0 Treatment Facility Summary

2.1 Site location

The physical address for the facility is 3239 Piney Creek Road, Williamsburg, PA 16693. A topographical and an aerial photograph of the facility are depicted as Figure 1 and Figure 2.

Figure 1: Topographical map of the subject facility

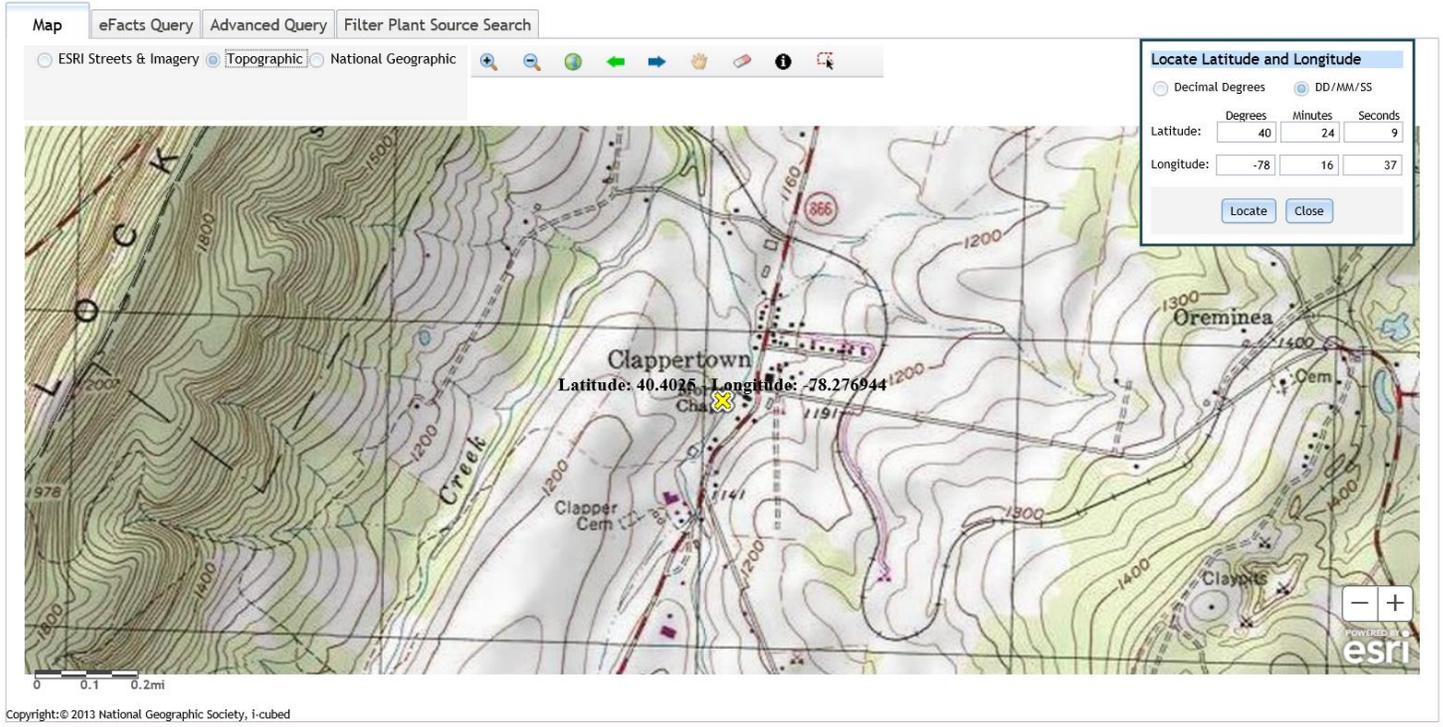
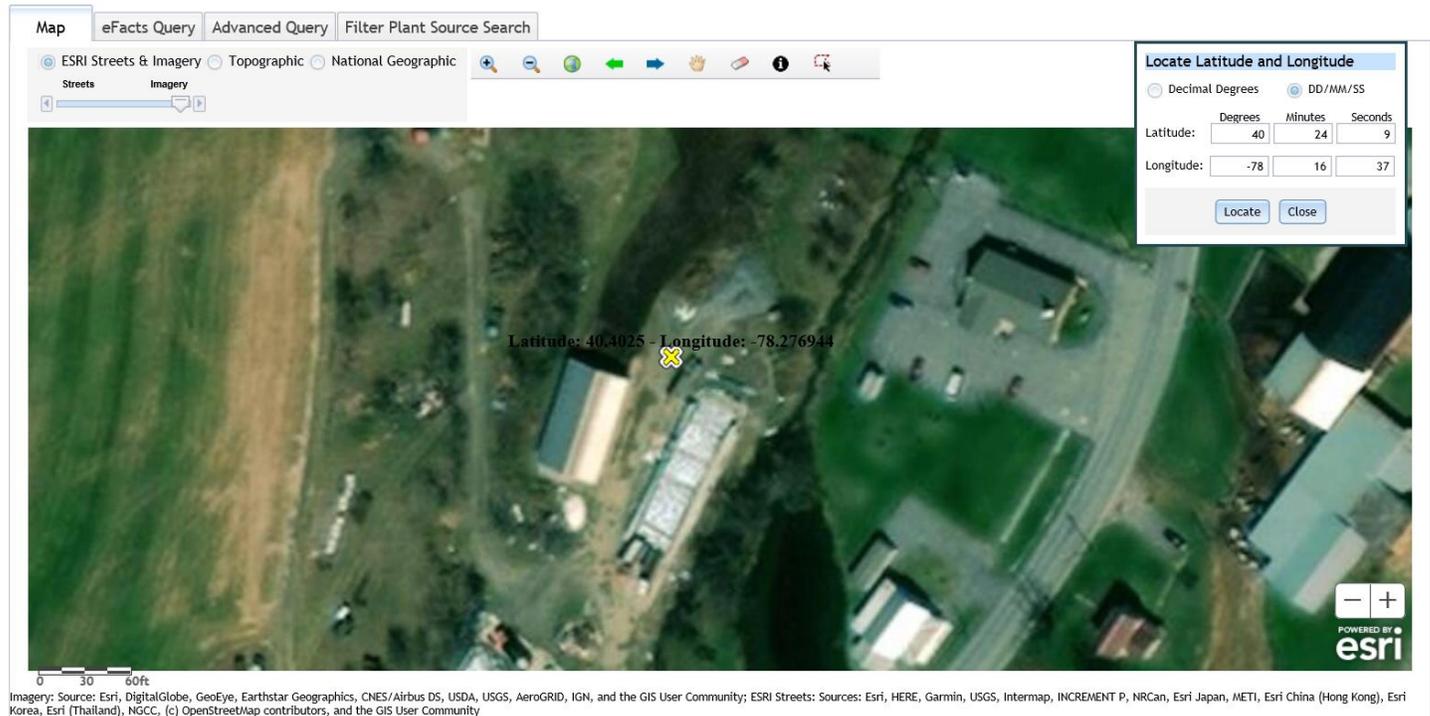


Figure 2: Aerial Photograph of the subject facility



2.2 Description of Wastewater Treatment Process

The subject facility is a 0.0005 MGD (500 GPD) design flow facility. The subject facility treats wastewater using a 2000-gallon dual compartment septic tank with grease trap and effluent filter, an 1,800-gallon equalization tank, two (2) Premier Tech Ecoflo STB-650 units, and a chlorination/dechlorination unit(s) prior to discharge through the outfall. The facility is being evaluated for flow, CBOD5, TRC, TSS, fecal coliform, and ammonia-nitrogen. The existing permits limits for the facility is summarized in Section 2.4.

2.3 Facility Outfall Information

The facility has the following outfall information.

Outfall No.	001	Design Flow (MGD)	.0005
Latitude	40° 24' 9.50"	Longitude	-78° 16' 37.00"
Wastewater Description:	Sewage Effluent		

2.3.1 Operational Considerations- Chemical Additives

Chemical additives are chemical products introduced into a waste stream that is used for cleaning, disinfecting, or maintenance and which may be detected in effluent discharged to waters of the Commonwealth. Chemicals excluded are those used for neutralization of waste streams, the production of goods, and treatment of wastewater.

The subject facility utilizes the following chemicals as part of their treatment process.

- Chlorine for disinfection
- Sodium Sulfite for dechlorination

2.4 Existing NPDES Permits Limits

The existing NPDES permit limits are summarized in the table.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001, Latitude 40° 24' 9.50", Longitude 78° 16' 37.00", River Mile Index 0.5, Stream Code 16222
 Receiving Waters: Unnamed Tributary to Piney Creek
 Type of Effluent: Treated Sewage

1. The permittee is authorized to discharge during the period from August 1, 2013 through July 31, 2018
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly		Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/month	Estimate
Total Residual Chlorine	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
CBOD5	XXX	XXX	XXX	10	XXX	20	1/month	Grab
Total Suspended Solids	XXX	XXX	XXX	20	XXX	40	1/month	Grab
Fecal Coliform (CFU/100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	XXX	1/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	5	XXX	10	1/month	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	15	XXX	30	1/month	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at Outfall 001

3.0 Facility NPDES Compliance History

3.1 Summary of Inspections

A summary of the most recent inspections during the existing permit review cycle is as follows.

The DEP inspector noted the following during the inspection.

10/09/2013:

- The facility was advised that they are required to collect samples per the NPDES permit.
- DMR's submitted must be in ink and not pencil.
- The facility was advised to complete supplemental forms on forms that are current and not outdated.

11/12/2014:

- There was nothing significant to report during the inspection.

06/16/2016:

- The facility serves wastewater generated for the church and one residence.
- The facility stated that the pastor no longer resides at the residence and that the residence is now used as a fellowship hall.
- The operator stated that dechlorination tablets were discontinued from use since the chlorine check was near zero mg/l. The DEP inspector advised the facility to continue using dechlorination tablets.
- The facility stated that the peat filters were being maintained annually.
- The facility was advised to report sample collection dates on the day the sample was collected. The facility had been using the laboratory analysis date as the collection date.

3.2 Summary of DMR Data

A review of approximately 1-year of DMR data shows that the monthly average flow data for the facility below the design capacity of the treatment system. The maximum average flow data for the DMR reviewed was 0.000497 MGD (497 GPD). The design capacity of the treatment system is 0.0005 MGD (500 GPD).

Summary of Monitoring Data for 2018							
Sample Collection Date	Flow	TRC	CBOD (mg/l)	TSS (mg/l)	Fecal (#/100 mL)	NH3-N (May 1-Oct 31) (mg/l)	NH3-N (Nov 1-Apr 31) (mg/l)
Existing NPDES permit	Report	Ave 0.5	Ave 10	Ave 20	200	5	15
October	0.000464	0.50	3	1.6	59.2	0.1	0.1
November	0.000485	0.50	4.7	1.6	12.4	0.1	0.1
December	0.000489	0.50	3	1.6	34	0.1	0.1

Notes:
- Exceedances are highlighted

Summary of Monitoring Data for 2019							
Sample Collection Date	Flow	TRC	CBOD (mg/l)	TSS (mg/l)	Fecal (#/100 mL)	NH3-N (May 1-Oct 31) (mg/l)	NH3-N (Nov 1-Apr 31) (mg/l)
Existing NPDES permit	Report	Report	Ave 10	Ave 20	200	5	15
January	0.000462	0.50	3	1.4	34.4	0.1	0.529
February	0.000492	0.50	3	1	4	0.1	0.1
March	0.000479	0.60	3	1.4	4	0.1	0.1
April	0.000482	0.50	3	0.8	4	0.1	0.1
May	0.000488	0.60	3	1.6	4	0.1	0.1
June	0.000487	0.50	3	1.8	4	0.1	0.1
July	0.000495	0.50	3	2.4	461.2	0.1	0.1
August	0.000475	0.50	3	3.2	4	0.1	0.1
September	0.000497	1.00	3	1.4	4	0.351	0.1

Notes:
- Exceedances are highlighted

3.3 Non-Compliance

3.3.1 Non-Compliance- NPDES Effluent

A summary of the non-compliance to the permit limits for the existing permit cycle is as follows.

A review of non-compliance with NPDES permit limits was completed for the 12 months beginning on October 2018 to September 2019. An exceedance of fecal coliform was detected in July 2019.

3.3.2 Non-Compliance- Enforcement Actions

A summary of the non-compliance enforcement actions for the current permit cycle is as follows:

**Summary of Enforcement Actions
Beginning 8/1/2013 and Ending September 30, 2019**

ENF ID	ENF TYPE	ENF TYPE DESC	ENF CREATION DATE	EXECUTED DATE	INITIATED DATE	VIOLATIONS	ENF FINALSTATUS	ENF CLOSED DATE
361195	NOV	Notice of Violation	02/01/2018	02/01/2018	02/01/2018	92A.21(B)	Comply/Closed	02/12/2018

3.4 Summary of Biosolids Disposal

A summary of the biosolids disposed of from the facility is as follows.

The facility submitted documentation of septic solids pumping on May 12, 2017 by Ken Wertz Hauling and Septic Service, Inc.

3.5 Open Violations

No open violations existed as of October 2019.

4.0 Receiving Waters and Water Supply Information Detail Summary

4.1 Receiving Waters

The receiving waters has been determined to be Tributary 16222 to Piney Creek. The sequence of receiving streams that Tributary 16222 to Piney Creek discharges into are the Piney Creek, the Frankstown Juniata River, the Juniata River, and the Susquehanna River which eventually drains into the Chesapeake Bay.

4.2 Public Water Supply (PWS) Intake

The closest PWS to the subject facility is Mifflintown Municipal Authority (PWS ID #4340008) located approximately 92 miles downstream of the subject facility on the Juniata River. Based upon the distance and the flow rate of the facility, the PWS should not be impacted.

4.3 Class A Wild Trout Streams:

Class A Wild Trout Streams are waters that support a population of naturally produced trout of sufficient size and abundance to support long-term and rewarding sport fishery. DEP classifies these waters as high-quality coldwater fisheries.

The information obtained from EMAP suggests that no Class A Wild Trout Fishery will be impacted by this discharge.

4.4 2016 Integrated List of All Waters (303d Listed Streams):

Section 303(d) of the Clean Water Act requires States to list all impaired surface waters not supporting uses even after appropriate and required water pollution control technologies have been applied. The 303(d) list includes the reason for impairment which may be one or more point sources (i.e. industrial or sewage discharges) or non-point sources (i.e. abandoned mine lands or agricultural runoff and the pollutant causing the impairment such as metals, pH, mercury or siltation).

States or the U.S. Environmental Protection Agency (EPA) must determine the conditions that would return the water to a condition that meets water quality standards. As a follow-up to listing, the state or EPA must develop a Total Maximum Daily Load (TMDL) for each waterbody on the list. A TMDL identifies allowable pollutant loads to a waterbody from both point and non-point sources that will prevent a violation of water quality standards. A TMDL also includes a margin of safety to ensure protection of the water.

The water quality status of Pennsylvania's waters uses a five-part categorization (lists) of waters per their attainment use status. The categories represent varying levels of attainment, ranging from Category 1, where all designated water uses are met to Category 5 where impairment by pollutants requires a TMDL for water quality protection.

The receiving waters is listed in the 2016 Pennsylvania Integrated Water Quality Monitoring and Assessment Report as a Category 5 waterbody. The surface waters is an impaired stream due to siltation from agriculture. The designated use has been classified as protected waters for cold water fishes (CWF) and migratory fishes (MF).

4.5 Low Flow Stream Conditions

Water quality modeling estimates are based upon conservative data inputs. The data are typically estimated using either a stream gauge or through USGS web based StreamStats program. The NPDES effluent limits are based upon the combined flows from both the stream and the facility discharge.

A conservative approach to estimate the impact of the facility discharge using values which minimize the total combined volume of the stream and the facility discharge. The volumetric flow rate for the stream is based upon the seven-day, 10-year low flow (Q710) which is the lowest estimated flow rate of the stream during a 7 consecutive day period that occurs once in 10 year time period. The facility discharge is based upon a known design capacity of the subject facility.

The closest WQN and gauge stations to the subject facility is the Frankstown Branch Juniata River station at Williamsburg, PA (WQN224 or USGS station number 1556000). This WQN station is located approximately 11 miles downstream of the subject facility while the gauge station is located 9 miles downstream of the subject facility.

The low flow yield and the Q710 for the subject facility was estimated as shown below.

Gauge Station Data		
USGS Station Number	01556000	
Station Name	Frankstown Branch Juniata River at Williamsburg, PA	
Q710	47.8	ft ³ /sec
Drainage Area (DA)	291	mi ²
Calculations		
The low flow yield of the gauge station is:		
Low Flow Yield (LFY) = Q710 / DA		
LFY = (47.8 ft ³ /sec / 291 mi ²)		
LFY =	0.1643	ft ³ /sec/mi ²
The low flow at the subject site is based upon the DA of		
	5.38	mi ²
Q710 = (LFY@gauge station)(DA@Subject Site)		
Q710 = (0.1643 ft ³ /sec/mi ²)(5.38 mi ²)		
Q710 =	0.884	ft ³ /sec

4.6 Summary of Discharge, Receiving Waters and Water Supply Information

Outfall No.	<u>001</u>	Design Flow (MGD)	<u>.0005</u>
Latitude	<u>40° 24' 8.88"</u>	Longitude	<u>-78° 16' 36.28"</u>
Quad Name	<u></u>	Quad Code	<u></u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>Unnamed Tributary to Piney Creek (HQ-CWF)</u>	Stream Code	<u>16222</u>
NHD Com ID	<u>65609040</u>	RMI	<u>0.53</u>
Drainage Area	<u>5.38</u>	Yield (cfs/mi ²)	<u>0.1643</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.884</u>	Q ₇₋₁₀ Basis	<u>StreamStats/StreamGauge</u>
Elevation (ft)	<u>1124</u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>11A</u>	Chapter 93 Class.	<u>High Quality Waters - Cold Water Fishes; Migratory fishes</u>
Existing Use	<u>Same as Chapter 93 class.</u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u></u>	Exceptions to Criteria	<u></u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>Siltation</u>		
Source(s) of Impairment	<u>Agriculture</u>		
TMDL Status	<u>Not appl.</u>	Name	<u></u>
Background/Ambient Data		Data Source	
pH (SU)	<u>7.84</u>		<u>WQN224; median July to Sept</u>
Temperature (°C)	<u>22.0</u>		<u>WQN224; median July to Sept</u>
Hardness (mg/L)	<u></u>		<u></u>
Other:	<u></u>		<u></u>
Nearest Downstream Public Water Supply Intake	<u></u>	<u>Mifflintown Municipal Authority</u>	
PWS Waters	<u>Juniata River</u>	Flow at Intake (cfs)	<u></u>
PWS RMI	<u>37</u>	Distance from Outfall (mi)	<u>92</u>

5.0: Overview of Presiding Water Quality Standards

5.1 General

There are at least six (6) different policies which determines the effluent performance limits for the NPDES permit. The policies are technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), antidegradation, total maximum daily loading (TMDL), anti-backsliding, and whole effluent toxicity (WET). The effluent performance limitations enforced are the selected permit limits that is most protective to the designated use of the receiving waters. An overview of each of the policies that are applicable to the subject facility has been presented in Section 6.

5.2 Technology-Based Limitations

TBEL treatment requirements under section 301(b) of the Act represent the minimum level of control that must be imposed in a permit issued under section 402 of the Act (40 CFR 125.3).

Small flow treatment facilities are confined to permit limitations promulgated by the Small Flow Treatment Facilities Manual (Document # 36-0300-002) and the SOP- New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Application (Revised January 13, 2015). The limits are summarized in the table below.

Parameter	Avg Mo	IMAX	Sample Type	Frequency: SFTFs
Flow (GPD)	Report	XXX	Measured	1/month
BOD5 (mg/l)	10	20	Grab	1/month
TSS (mg/l)	10	20	Grab	1/month
Fecal Coliform (No/100 ml)	200 Geometric Mean		Grab	1/month

For facilities that discharge into special protection watersheds, the permit limitations are confined by Appendix B of the Water Quality Antidegradation Implementation Guidance.

Parameter	Avg Mo (mg/l)
CBOD (May 1 - Oct 31)	10
CBOD (Nov 1 to Apr 30)	20
TSS	20
Ammonia (May 1 - Oct 31)	5
Ammonia (Nov 1 - Apr 31)	15
Effective Disinfection	See Note
Notes:	
Disinfection should be accomplished using a method that leaves no detectable residual.	
Water Quality Antidegradation Implementation Guidance (Document # 391-0300-002) Revised November 29, 2003	

Limits are the more stringent of either the small flow treatment facilities manual, the SOP- New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Application, or the Water Quality Antidegradation Implementation Guidance.

5.3 Water Quality-Based Limitations

WQBEL is not applicable to the subject facility.

5.3.1 Water Quality Modeling 7.0

The subject facility is not subject to WQM modeling.

5.3.2 PENTOXSD Modeling

The subject facility is not subject to PENTOXSD modeling.

5.3.3 Whole Effluent Toxicity (WET)

The subject facility is not subject to WET.

5.4 Total Maximum Daily Loading (TMDL)

5.4.1 TMDL

The goal of the Clean Water Act (CWA), which governs water pollution, is to ensure that all of the Nation's waters are clean and healthy enough to support aquatic life and recreation. To achieve this goal, the CWA created programs designed to regulate and reduce the amount of pollution entering United States waters. Section 303(d) of the CWA requires states to assess their waterbodies to identify those not meeting water quality standards. If a waterbody is not meeting standards, it is listed as impaired and reported to the U.S. Environmental Protection Agency. The state then develops a plan to clean up the impaired waterbody. This plan includes the development of a Total Maximum Daily Load (TMDL) for the pollutant(s) that were found to be the cause of the water quality violations. A Total Maximum Daily Load (tmdl) calculates the maximum amount of a specific pollutant that a waterbody can receive and still meet water quality standards.

Pennsylvania has committed to restoring all impaired waters by developing TMDLs and TMDL alternatives for all impaired waterbodies. The TMDL serves as the starting point or planning tool for restoring water quality.

5.4.1.1 Local TMDL

The subject facility does not discharge into a local TMDL.

5.4.1.2 Chesapeake Bay TMDL Requirement

The Chesapeake Bay Watershed is a large ecosystem that encompasses approximately 64,000 square miles in Maryland, Delaware, Virginia, West Virginia, Pennsylvania, New York and the District of Columbia. An ecosystem is composed of interrelated parts that interact with each other to form a whole. All of the plants and animals in an ecosystem depend on each other in some way. Every living thing needs a healthy ecosystem to survive. Human activities affect the Chesapeake Bay ecosystem by adding pollution, using resources and changing the character of the land.

Most of the Chesapeake Bay and many of its tidal tributaries have been listed as impaired under Section 303(d) of the federal Water Pollution Control Act ("Clean Water Act"), 33 U.S.C. § 1313(d). While the Chesapeake Bay is outside the boundaries of Pennsylvania, more than half of the State lies within the watershed. Two major rivers in Pennsylvania are part of the Chesapeake Bay Watershed. They are (a) the Susquehanna River and (b) the Potomac River. These two rivers total 40 percent of the entire Chesapeake Bay watershed.

The overall management approach needed for reducing nitrogen, phosphorus and sediment are provided in the Bay TMDL document and the Phase I and II WIPs which is described in the Bay TMDL document and Executive Order 13508.

The Bay TMDL is a comprehensive pollution reduction effort in the Chesapeake Bay watershed identifying the necessary pollution reductions of nitrogen, phosphorus and sediment across the seven Bay watershed jurisdictions of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia to meet applicable water quality standards in the Bay and its tidal waters.

The Watershed Implementation Plans (WIPs) provides objectives for how the jurisdictions in partnership with federal and local governments will achieve the Bay TMDL's nutrient and sediment allocations. The jurisdictions have developed or will develop WIPs over three Phases.

Phase I and Phase II WIPs were developed and submitted to EPA in 2010 and 2012 for objectives to be implemented by 2017 and 2025 to achieve applicable water quality standards. The Phase II WIPs build on the initial Phase I WIPs platform by providing more specific local actions. In 2018, Phase III WIPs will be developed to include further actions for jurisdictions to implement between 2018 and 2025.

Section 7 of the Phase II WIP describes Pennsylvania's strategy for reducing nutrients to the Chesapeake Bay from wastewater facilities. The supplement to Section 7 of the Phase II WIP provides an update on Chesapeake Bay TMDL implementation activities for point sources and DEP's current implementation strategy for wastewater. The supplement is updated periodically to reflect changes due to PA DEP's permit actions as well as changes to strategies in managing the wastewater sector's allocated loads under the TMDL. The latest revision of the supplement was October 14, 2016.

The Chesapeake Bay TMDL (Appendix Q) categorizes point sources into four sectors

- Sector A- significant sewage dischargers;
- Sector B- significant industrial waste (IW) dischargers;
- Sector C- non-significant dischargers (both sewage and IW facilities); and
- Sector D- combined sewer overflows (CSOs).

All sectors contain a listing of individual facilities with NPDES permits that were believed to be discharging at the time the TMDL was published (2010). All sectors with the exception of the non-significant dischargers have individual wasteload allocations (WLAs) for TN and TP assigned to specific facilities. Non-significant dischargers have a bulk or aggregate allocation for TN and TP based on the facilities in that sector that were believed to be discharging at that time and their estimated nutrient loads.

Based upon the supplement the subject facility has been categorized as a Sector C discharger. The supplement defines Sector C as a sewage facility that is considered non-significant dischargers if it is a Phase 4 facility or Phase 5 facility having a specified flow rate (i.e. Phase 4 facility ≥ 0.2 MGD and < 0.4 MGD, Phase 5 facility > 0.002 MGD and < 0.2 MGD), a small flow/single residence sewage treatment facilities (≤ 0.002 MGD), or a non-significant IW facilities. These facilities may be covered by statewide general permits or may have individual NPDES permits.

A list of non-significant sewage and industrial waste dischargers with Cap Loads in NPDES permits is presented in Attachment B of the Phase 2 WIP.

Due to the flow rate generated by the facility, the facility is not subject to Sector C monitoring requirements. The facility is not listed in Attachment B of the Phase 2 WIP.

5.5 Anti-Degradation Requirement

Chapter 93.4a of the PA regulations requires that surface water of the Commonwealth of Pennsylvania may not be degraded below levels that protect the existing uses. The regulations specifically state that *Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected*. Antidegradation requirements are implemented through DEP's guidance manual entitled Water Quality Antidegradation Implementation Guidance (Document #391-0300-02).

The policy requires DEP to protect the existing uses of all surface waters and the existing quality of High Quality (HQ) and Exceptional Value (EV) Waters. Existing uses are protected when DEP makes a final decision on any permit or approval for an activity that may affect a protected use. Existing uses are protected based upon DEP's evaluation of the best available information (which satisfies DEP protocols and Quality Assurance/Quality Control (QA/QC) procedures) that indicates the protected use of the waterbody.

For a new, additional, or increased point source discharge to an HQ or EV water, the person proposing the discharge is required to utilize a nondischarge alternative that is cost-effective and environmentally sound when compared with the cost of the proposed discharge. If a nondischarge alternative is not cost-effective and environmentally sound, the person must use the best available combination of treatment, pollution prevention, and wastewater reuse technologies and assure that any discharge is nondegrading. In the case of HQ waters, DEP may find that after satisfaction of intergovernmental coordination and public participation requirements lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In addition, DEP will assure that cost-effective and reasonable best management practices for nonpoint source control in HQ and EV waters are achieved.

The subject facility's discharge will be to a special protection waters. The permit conditions are imposed to protect existing instream water quality and uses. The facility will be required to meet limits provided by the Water Quality Antidegradation Implementation Guidance (Document # 391-0300-002). The discharge is not expected to impact the high quality special protection waters.

5.6 Anti-Backsliding

Anti-backsliding is a federal regulation which prohibits a permit from being renewed, reissued, or modified containing effluent limitations which are less stringent than the comparable effluent limitations in the previous permit (40 CFR 122.1.1 and 40 CFR 122.1.2). A review of the existing permit limitations with the proposed permit limitations confirm that the facility is consistent with anti-backsliding requirements. The facility has proposed effluent limitations that are as stringent as the existing permit.

6.0 NPDES Parameter Details

The basis for the proposed sampling and their monitoring frequency that will appear in the permit for each individual parameter are itemized in this Section. The final limits are the more stringent of technology based effluent treatment (TBEL) requirements, water quality based (WQBEL) limits, TMDL, antidegradation, anti-degradation, or WET.

The reader will find in this section:

- a) a justification of recommended permit monitoring requirements and limitations for each parameter in the proposed NPDES permit;
- b) a summary of changes from the existing NPDES permit to the proposed permit; and
- c) a summary of the proposed NPDES effluent limits.

6.1 Recommended Monitoring Requirements and Effluent Limitations

A summary of the recommended monitoring requirements and effluent limitations are itemized in the tables. The tables are categorized by (a) Conventional Pollutants and Disinfection and (b) Nitrogen Species.

6.1.1 Conventional Pollutants and Disinfection

Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection			
Clappertown CMA Church STP, PA0260797			
Parameter	Permit Limitation Required by ¹ :	Recommendation	
CBOD	ABACT/TBEL	Monitoring:	The monitoring frequency shall be on a 1x/mo basis as a grab sample (SOP).
		Effluent Limit:	Effluent limits shall not exceed 10 mg/l as an average monthly.
		Rationale:	The monitoring frequency has been assigned in accordance with SOP. Since the facility discharges to a high quality stream, the effluent limit is restricted to Antidegradation Best Available Combination of Technologies for Wastewater Discharges (ABACT), Appendix B..
TSS	ABACT/TBEL	Monitoring:	The monitoring frequency shall be on a 1x/mo basis as a grab sample (SOP).
		Effluent Limit:	Effluent limits shall not exceed 20 mg/l as an average monthly.
		Rationale:	Since the facility discharges to a high quality stream, the effluent limit is restricted to Antidegradation Best Available Combination of Technologies for Wastewater Discharges (ABACT), Appendix B.
TRC	ABACT/TBEL	Monitoring:	The monitoring frequency shall be on a 1x/mo basis as a grab sample (SOP).
		Effluent Limit:	There are no performance effluent limits.
		Rationale:	Chlorine in both combined (chloramine) and free form is extremely toxic to freshwater fish and other forms of aquatic life (Implementation Guidance Total Residual Chlorine 1). For special protection watersheds, Disinfection should be accomplished using a method that leaves no detectable residual.
Fecal Coliform	TBEL	Monitoring:	The monitoring frequency shall be on a 1x/mo basis as a grab sample (SOP).
		Effluent Limit:	Effluent limits shall not exceed 200 mg/l as a geometric mean.
		Rationale:	The monitoring frequency has been assigned in accordance with the SOP and the effluent limits assigned by the SOP.
Notes:			
1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other			
2 Monitoring frequency based on flow rate of 0.0005 MGD.			
3 New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications, Revised January 13, 2015.			
4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)			
5 Phase 2 Watershed Implementation Plan Wastewater Supplement, Revised September 6, 2017			
6 Water Quality Antidegradation Implementation Guidance (Document #391-0300-002) Revised November 29, 2003.			

6.1.2 Nitrogen Species and Phosphorus

Summary of Proposed NPDES Parameter Details for Nitrogen Species and Phosphorus			
Clappertown CMA Church STP, PA0260797			
Parameter	Permit Limitation Required by ¹ :	Recommendation	
Ammonia-Nitrogen	ABACT/TBEL	Monitoring:	The monitoring frequency shall be on a 1x/mo basis as a grab sample (SOP).
		Effluent Limit:	The performance effluent requirements will be 5 mg/l from May 1 to October 31 and 15 mg/l from November 1 to April 30.
		Rationale:	Since the facility discharges to a high quality stream, the effluent limit is restricted to Antidegradation Best Available Combination of Technologies for Wastewater Discharges (ABACT), Appendix B.
Notes:			
1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other			
2 Monitoring frequency based on flow rate of 0.0005 MGD.			
3 New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications, Revised January 13, 2015.			
4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)			
5 Phase 2 Watershed Implementation Plan Wastewater Supplement, Revised September 6, 2017			
6 Water Quality Antidegradation Implementation Guidance (Document #391-0300-002) Revised November 29, 2003.			

6.2 Summary of Changes From Existing Permit to Proposed Permit

A summary of how the proposed NPDES permit differs from the existing NPDES permit is summarized as follows.

- There are no changes in monitoring frequency or performance effluent for the proposed renewal.

6.3 Summary of Proposed NPDES Effluent Limits

The proposed NPDES effluent limitations are summarized in the table below.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001, Latitude 40° 24' 9.50", Longitude 78° 16' 37.00", River Mile Index 0.53, Stream Code 16222

Receiving Waters: Unnamed Tributary to Piney Creek (HQ-CWF)

Type of Effluent: Sewage Effluent

1. The permittee is authorized to discharge during the period from **Permit Effective Date** through **Permit Expiration Date**.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/month	Estimate
TRC	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
CBOD5	XXX	XXX	XXX	10	XXX	20	1/month	Grab
TSS	XXX	XXX	XXX	20	XXX	40	1/month	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	XXX	1/month	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	15	XXX	30	1/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	5	XXX	10	1/month	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

Attachment A

Stream Stats/Gauge Data

Table 1. List of U.S. Geological Survey streamgauge locations in and near Pennsylvania with updated streamflow statistics.—Continued
[Latitude and Longitude in decimal degrees; mi², square miles]

Streamgauge number	Streamgauge name	Latitude	Longitude	Drainage area (mi ²)	Regulated ¹
01541303	West Branch Susquehanna River at Hyde, Pa.	41.005	-78.457	474	Y
01541308	Bradley Run near Ashville, Pa.	40.509	-78.584	6.77	N
01541500	Clearfield Creek at Dimeling, Pa.	40.972	-78.406	371	Y
01542000	Moshannon Creek at Osceola Mills, Pa.	40.850	-78.268	68.8	N
01542500	WB Susquehanna River at Karthaus, Pa.	41.118	-78.109	1,462	Y
01542810	Waldy Run near Emporium, Pa.	41.579	-78.293	5.24	N
01543000	Driftwood Branch Sinnemahoning Creek at Sterling Run, Pa.	41.413	-78.197	272	N
01543500	Sinnemahoning Creek at Sinnemahoning, Pa.	41.317	-78.103	685	N
01544000	First Fork Sinnemahoning Creek near Sinnemahoning, Pa.	41.402	-78.024	245	Y
01544500	Kettle Creek at Cross Fork, Pa.	41.476	-77.826	136	N
01545000	Kettle Creek near Westport, Pa.	41.320	-77.874	233	Y
01545500	West Branch Susquehanna River at Renovo, Pa.	41.325	-77.751	2,975	Y
01545600	Young Womans Creek near Renovo, Pa.	41.390	-77.691	46.2	N
01546000	North Bald Eagle Creek at Milesburg, Pa.	40.942	-77.794	119	N
01546400	Spring Creek at Houserville, Pa.	40.834	-77.828	58.5	N
01546500	Spring Creek near Axemann, Pa.	40.890	-77.794	87.2	N
01547100	Spring Creek at Milesburg, Pa.	40.932	-77.786	142	N
01547200	Bald Eagle Creek below Spring Creek at Milesburg, Pa.	40.943	-77.786	265	N
01547500	Bald Eagle Creek at Blanchard, Pa.	41.052	-77.604	339	Y
01547700	Marsh Creek at Blanchard, Pa.	41.060	-77.606	44.1	N
01547800	South Fork Beech Creek near Snow Shoe, Pa.	41.024	-77.904	12.2	N
01547950	Beech Creek at Monument, Pa.	41.112	-77.702	152	N
01548005	Bald Eagle Creek near Beech Creek Station, Pa.	41.081	-77.549	562	Y
01548500	Pine Creek at Cedar Run, Pa.	41.522	-77.447	604	N
01549000	Pine Creek near Waterville, Pa.	41.313	-77.379	750	N
01549500	Blockhouse Creek near English Center, Pa.	41.474	-77.231	37.7	N
01549700	Pine Creek below Little Pine Creek near Waterville, Pa.	41.274	-77.324	944	Y
01550000	Lycoming Creek near Trout Run, Pa.	41.418	-77.033	173	N
01551500	WB Susquehanna River at Williamsport, Pa.	41.236	-76.997	5,682	Y
01552000	Loyalsock Creek at Loyalsockville, Pa.	41.325	-76.912	435	N
01552500	Muncy Creek near Sonestown, Pa.	41.357	-76.535	23.8	N
01553130	Sand Spring Run near White Deer, Pa.	41.059	-77.077	4.93	N
01553500	West Branch Susquehanna River at Lewisburg, Pa.	40.968	-76.876	6,847	Y
01553700	Chillisquaque Creek at Washingtonville, Pa.	41.062	-76.680	51.3	N
01554000	Susquehanna River at Sunbury, Pa.	40.835	-76.827	18,300	Y
01554500	Shamokin Creek near Shamokin, Pa.	40.810	-76.584	54.2	N
01555000	Penns Creek at Penns Creek, Pa.	40.867	-77.048	301	N
01555500	East Mahantango Creek near Dalmatia, Pa.	40.611	-76.912	162	N
01556000	Frankstown Branch Juniata River at Williamsburg, Pa.	40.463	-78.200	291	N
01557500	Bald Eagle Creek at Tyrone, Pa.	40.684	-78.234	44.1	N
01558000	Little Juniata River at Spruce Creek, Pa.	40.613	-78.141	220	N
01559000	Juniata River at Huntingdon, Pa.	40.485	-78.019	816	LF
01559500	Standing Stone Creek near Huntingdon, Pa.	40.524	-77.971	128	N
01559700	Sulphur Springs Creek near Manns Choice, Pa.	39.978	-78.619	5.28	N
01560000	Dunning Creek at Belden, Pa.	40.072	-78.493	172	N

Table 2. Selected low-flow statistics for streamgage locations in and near Pennsylvania.—Continued

[ft³/s; cubic feet per second; —, statistic not computed; <, less than]

Streamgage number	Period of record used in analysis ¹	Number of years used in analysis	1-day, 10-year (ft ³ /s)	7-day, 10-year (ft ³ /s)	7-day, 2-year (ft ³ /s)	30-day, 10-year (ft ³ /s)	30-day, 2-year (ft ³ /s)	90-day, 10-year (ft ³ /s)
01546000	1912–1934	17	1.8	2.2	6.8	3.7	12.1	11.2
01546400	1986–2008	23	13.5	14.0	19.6	15.4	22.3	18.7
01546500	1942–2008	67	26.8	29.0	41.3	31.2	44.2	33.7
01547100	1969–2008	40	102	105	128	111	133	117
01547200	1957–2008	52	99.4	101	132	106	142	115
01547500	² 1971–2008	38	28.2	109	151	131	172	153
01547500	³ 1956–1969	14	90.0	94.9	123	98.1	131	105
01547700	1957–2008	52	.5	.6	2.7	1.1	3.9	2.2
01547800	1971–1981	11	1.6	1.8	2.4	2.1	2.9	3.5
01547950	1970–2008	39	12.1	13.6	28.2	17.3	36.4	23.8
01548005	² 1971–2000	25	142	151	206	178	241	223
01548005	³ 1912–1969	58	105	114	147	125	165	140
01548500	1920–2008	89	21.2	24.2	50.1	33.6	68.6	49.3
01549000	1910–1920	11	26.0	32.9	78.0	46.4	106	89.8
01549500	1942–2008	67	.6	.8	2.5	1.4	3.9	2.6
01549700	1959–2008	50	33.3	37.2	83.8	51.2	117	78.4
01550000	1915–2008	94	6.6	7.6	16.8	11.2	24.6	18.6
01551500	² 1963–2008	46	520	578	1,020	678	1,330	919
01551500	³ 1901–1961	61	400	439	742	523	943	752
01552000	1927–2008	80	20.5	22.2	49.5	29.2	69.8	49.6
01552500	1942–2008	67	.9	1.2	3.1	1.7	4.4	3.3
01553130	1969–1981	13	1.0	1.1	1.5	1.3	1.8	1.7
01553500	² 1968–2008	41	760	838	1,440	1,000	1,850	1,470
01553500	³ 1941–1966	26	562	619	880	690	1,090	881
01553700	1981–2008	28	9.1	10.9	15.0	12.6	17.1	15.2
01554000	² 1981–2008	28	1,830	1,990	3,270	2,320	4,210	3,160
01554000	³ 1939–1979	41	1,560	1,630	2,870	1,880	3,620	2,570
01554500	1941–1993	53	16.2	22.0	31.2	25.9	35.7	31.4
01555000	1931–2008	78	33.5	37.6	58.8	43.4	69.6	54.6
01555500	1931–2008	78	4.0	6.5	18.0	9.4	24.3	16.6
01556000	1918–2008	91	43.3	47.8	66.0	55.1	75.0	63.7
01557500	1946–2008	63	2.8	3.2	6.3	4.2	8.1	5.8
01558000	1940–2008	69	56.3	59.0	79.8	65.7	86.2	73.7
01559000	1943–2008	66	104	177	249	198	279	227
01559500	1931–1958	28	9.3	10.5	15.0	12.4	17.8	15.8
01559700	1963–1978	16	.1	.1	.2	.1	.3	.2
01560000	1941–2008	68	8.5	9.4	15.6	12.0	20.2	16.2
01561000	1932–1958	27	.4	.5	1.6	.8	2.5	1.7
01562000	1913–2008	96	64.1	67.1	106	77.4	122	94.5
01562500	1931–1957	27	1.1	1.6	3.8	2.3	5.4	3.7
01563200	² 1974–2008	35	—	—	—	112	266	129
01563200	³ 1948–1972	25	10.3	28.2	86.1	64.5	113	95.5
01563500	² 1974–2008	35	384	415	519	441	580	493
01563500	³ 1939–1972	34	153	242	343	278	399	333
01564500	1940–2008	69	3.6	4.2	10.0	6.2	14.4	10.6