# Quality Assurance Project Plan for Technical Support for the Enhanced Nutrient Reduction (ENR) Program

Maryland Department of the Environment
Science Service Administration
1800 Washington Blvd Baltimore, MD 21230

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## – Introduction

The 1987 Chesapeake Bay Agreement was reached jointly by the Chesapeake Bay Commission, the U.S. EPA, the District lumbia, and The States of Virginia, Maryland and Pennsylvania to restore and protect the Chesapeake Bay. This agreement was ewed in 2000. It was agreed to set the goal of reducing Nutrient loads (i.e., nitrogen and phosphorous) entering the main stem o Chesapeake Bay (Figure 1) by at least 40% by the year 2010. To achieve this goal, several programs were established including nt source nutrient control programs in all of the participant jurisdictions.

The State of Maryland keeps track of its point source loadings through the Maryland Point Source (MDPS) database. The te has approximately 1400 municipal and industrial facilities regulated under the Pollution Control Program. About a third of se facilities are municipal wastewater treatment plants while the rest are industrial plants. The MDPS database only considers face water discharging municipal and industrial plants that contribute significantly to nutrient point source pollution in the ryland portion of the Bay. As such, only 242 municipal wastewater treatment plants and 9 industrial plants are included in the tewide MDPS database (Appendix B). The MDPS database builds on historical point source discharge monitoring data. The abase enables the state to closely track nutrient pollution from major Point Sources, i.e., 81 major ,significant sewage treatment nts and 9 industrial plants, which together produce over 90 percent of the total nutrient loads discharged to Maryland's ten majo utaries (Figure 2) and the Chesapeake Bay.

The charge of maintaining the state's point source database rests on the Maryland Department of the Environment's Scienc rvices Administration (MDE SSA), with the help of another MDE administration, the Water Management Administration MA). SSA has so far compiled nutrient point source concentration and loadings data for the period, 1984 to FY11.

## – Objectives

The purpose of this report is to provide a documentation of the MDPS database. In particular, the report aims to document data sources, structure, compilation and storage procedures, and other aspects of point source data management. For example, t ort lists all major, minor and industrial facilities included in the database. It includes descriptive information about these faciliti h as status, type, latitude, longitude, basin code, and county. The report also provides a catalog of the database's record formats d designations, objects subsumed under each field, and lengths of the fields. It also presents a documentation of the mprehensive data quality control procedures used to identify and correct mistakes such as duplicates, missing data, inaccuracies data, etc. These quality control procedures allow the verification of facility-reported values for the purpose of database mpilation. When errors or suspicious data are detected in the facility reported data, the matter is conveyed to the concerned MD ice.

This documentation serves as an important tool for ensuring MDPS database project continuity since it puts together ormation needed for database maintenance and update. Likewise, this database documentation is important to its users (MDE sta side researchers, etc.) as it provides the necessary information for accessing, retrieving and reviewing of data from the MDPS.

The database is compiled and updated annually. Monthly values are provided for each discharge point or each facility luded i n the database. All final annual MDPS data sets are developed in SAS version 9.1. They are located on MDE's Window Server in the directory, \\MDENT12\sasdata\pointsource. Each data set contains 50 variables.

## – Data Sources

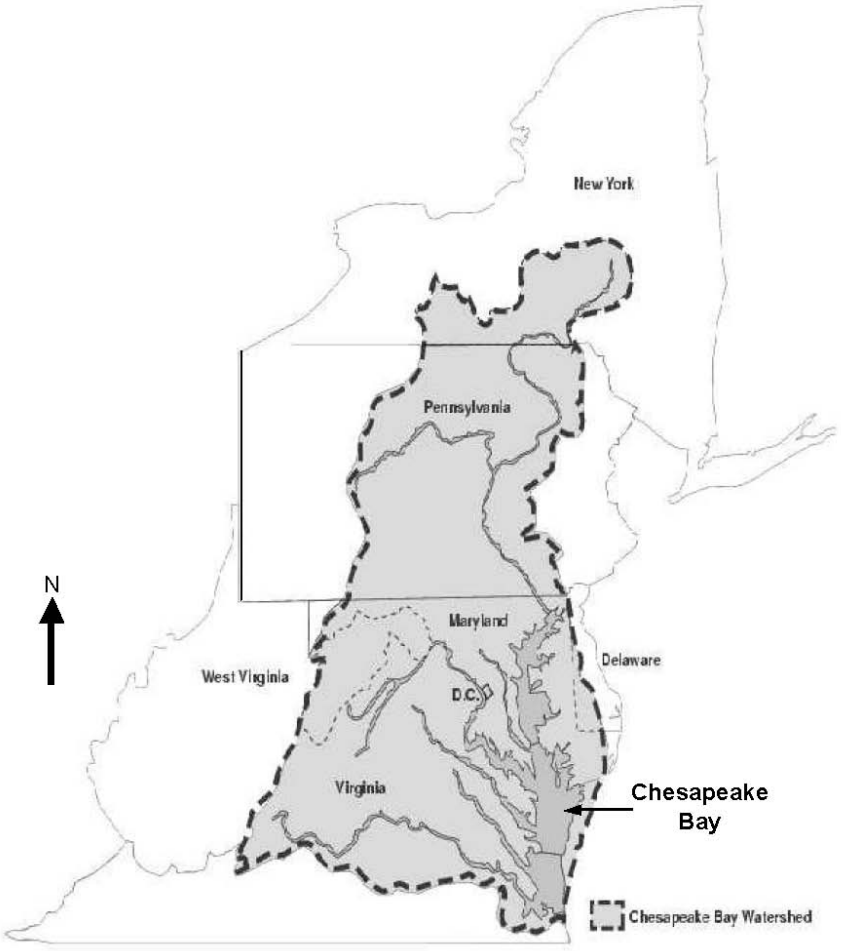
The primary sources of data are the Inspection and Compliance Division, Municipal Discharge Permit Division and Industr

scharge Permit Division of WMA. These divisions receive and review applications pertaining to the design, construction and tallation of Municipal wastewater and industrial facilities releasing effluents to the state's waterways.

The municipal and industrial effluent data are obtained from Discharge Monitoring Reports (DMRs). Data is also taken fro nthly Operating Reports (MORs). For major and some minor wastewater treatment plants (WWTP). These reports contain ility – reported results of water quality analyses of effluent samples collected at each plant. DMRs are submitted monthly by ive municipal and industrial discharge facilities or the state.

The inspection and Compliance Division of WMA is responsible for entering the DMR Data into the U.S. Environment otection Agency's Permit Compliance System (ICIS). Integrated Compliance Information System contains all data related to ilities, permits, discharges, inspection and enforcement activities of the administration.

**gure 1. Chesapeake Bay Watershed**



## – Data Compilation and Storage

The first step to compiling point source data is separating out facilities that are required to report information on effluent rient loads or concentration, or not. The following are the types of plants not included in the database:

- Ground water dischargers (GP)
- Water treatment plants (WTP)
- Municipal facilities that became industrial plants

The facilities included in the database are classified into three categories, as follows:

- Major WWTPs: Municipal facilities with discharge rates greater than 0.5 MGD
- Minor WWTPs: Municipal facilities with discharge rates less than 0.5 MGD
- Industrial Facilities: 10 industrial facilities considered to be the most the significant nutrient point source contributors i Maryland

A initially takes data from EPA's ICIS, and then verifies these data for completeness and corrections by running QA/QC grams. Hard copies of the DMRs, MORs, permit files and attachment sheets are consulted to verify the data. When necessary, litional information is collected by contacting the plant managers and engineers, as well as other knowledgeable staff in WMA. A uses the Windows NT server and SAS software for data processing and data storage.

## – Database Development

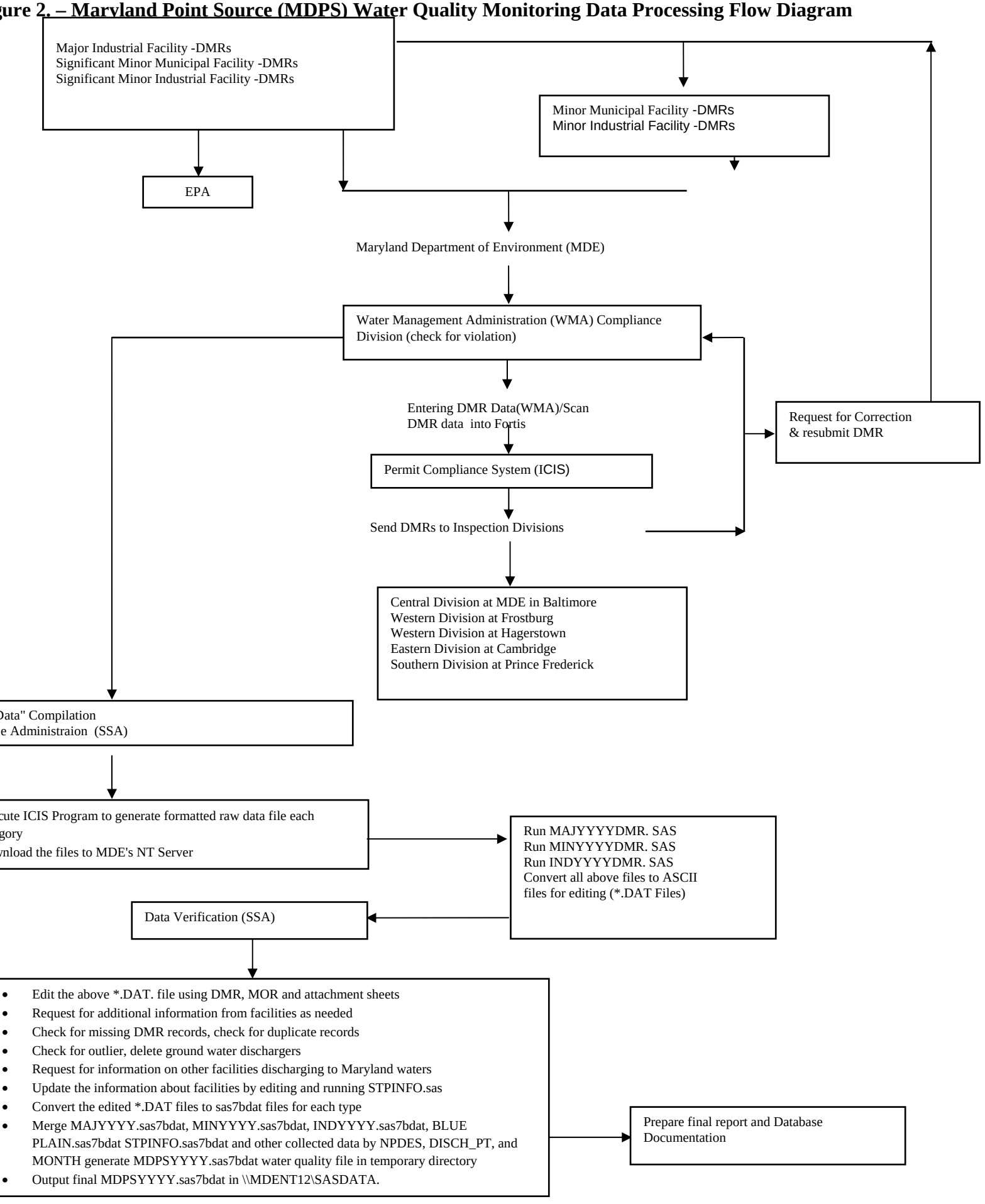
Figure 3 shows the Maryland point source water quality monitoring elements and data processing flow diagram. Table 1 vides the names, acronyms and code numbers of corresponding data in the database. The equations for the calculation of variab listed in Table 2.

## – Integrated Compliance Information System (ICIS)

This section gives a detailed description of the ICIS elements that are contained in Maryland's point source database. The S is a database management system that supports The National Pollutant Discharge Elimination System (NPDES) regulations. e ICIS database Resides at the National Computer Center (NCC), Research Triangle Park, North Carolina. ICIS can be used for cking permit compliance and enforcement status for the NPDES. The ICIS is available to all registered users to generate reports available data in the system.

Unless otherwise approved by the Environmental Protection Agency (EPA), ICIS is a read only database. Access of any kir eds EPA approval. ICIS and MDPS common fields and their general descriptions are provided in Table 3.

**gure 2. – Maryland Point Source (MDPS) Water Quality Monitoring Data Processing Flow Diagram**



**able 1. Common Parameter Names, Acronyms and Codes**

| ata Element | Acronym | Code |
|---|---|---|
| ow, in conduit or through treatment plant | FLOW | 50050 |
| otal Suspended Solids, mg/l | TSS | 00530 |
| H | pH | 00400 |
| issolved Oxygen, mg/l | DO | 00300 |
| iochemical Oxygen Demand (5 days - 20⁰ C.), mg/l | BOD5 | 00310 |
| hemical Oxygen Demand, mg/l | COD | 00340 |
| otal Nitrogen (mg/l as N) | TN | 00600 |
| articulate Nitrogen (mg/l as N) | PN | 00601 |
| otal Dissolved Nitrogen (mg/l as N) | TDN | 00602 |
| rganic Nitrogen, Total (mg/l as N) | TON | 00605 |
| issolved Organic Nitrogen (mg/l as N) | DON | 00607 |
| itrogen Ammonia, Total (mg/l as N) | NH3 | 00610 |
| itrogen Kjeldahl, Total Filtered, (mg/l as N) | TKNF | 00623 |
| itrogen Kjeldahl, Total Whole, (mg/l as N) | TKNW | 00625 |
| itrite Nitrogen, Total (mg/l as N) | NO2 | 00615 |
| itrate Nitrogen, Total (mg/l as N) | NO3 | 00620 |
| itrite Plus Nitrate, Total (mg/l as N) | NO23 | 00630 |
| issolved Inorganic Nitrogen, (mg/l as N) | DIN | 00640 |
| rthophosphate (mg/l as P) | PO4 | 70507 |
| otal Phosphorus (mg/l as P) | TP | 00665 |
| otal Dissolved Phosphorus (mg/l as P) | TDP | 00666 |
| articulate Phosphorus (mg/l as P) | PP | 00667 |
| issolved Organic Phosphorus (mg/l as P) | DOP | 00673 |
| otal Organic Carbon (mg/l as C) | TOC | 00680 |
| issolved Organic Carbon (mg/l as C) | DOC | 00681 |
| articulate Carbon (mg/l as C) | PC | 00689 |

**ble 2. Equations for Calculation of Water Quality Elements**

| | | |
|---|---|---|
| NW | = | NH4 + TON |
| 03 | = | NO23 – NO2 |
| ON | = | TDN – (NH4 + NO23) |
| ON | = | TKNF – NH4 |
| DP | = | TDP – PO4 |
| C | = | PC + DOC |
| | = | TKNW – TKNF |
| | = | PN + TDN |
| | = | TKNW + NO23 |
| | = | TP - TDP |
| N | = | NH4 + NO23 |
| N | = | TN - DIN |

**ble 3. ICIS and MDPS Database Common Features**

### .1 How to access the ICIS database

to https://icis.epa.gov/icis/
ter login ID
ssword

#### .1.1 Accessing the ICIS database using the website

tional Pollunant Discharge Elimination system
arch facilities
arch DMR
arch Reports

### .2 Logoff Procedure

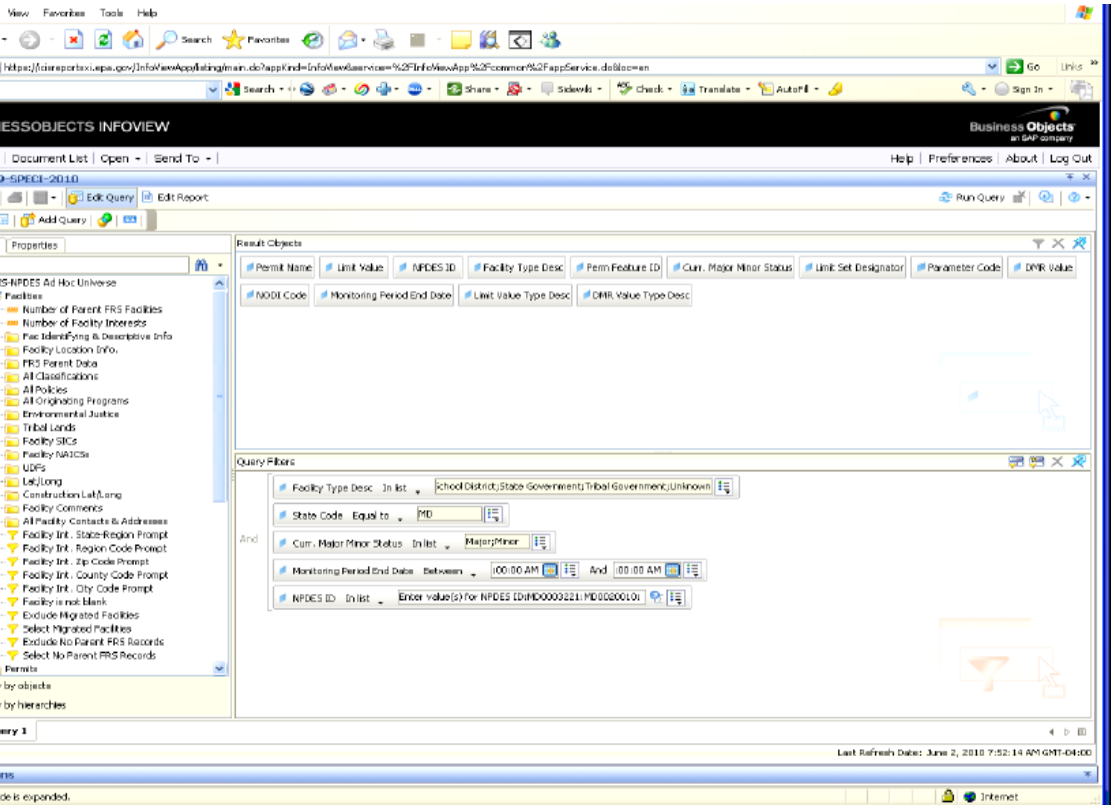
Click on logout to exit completely from the system

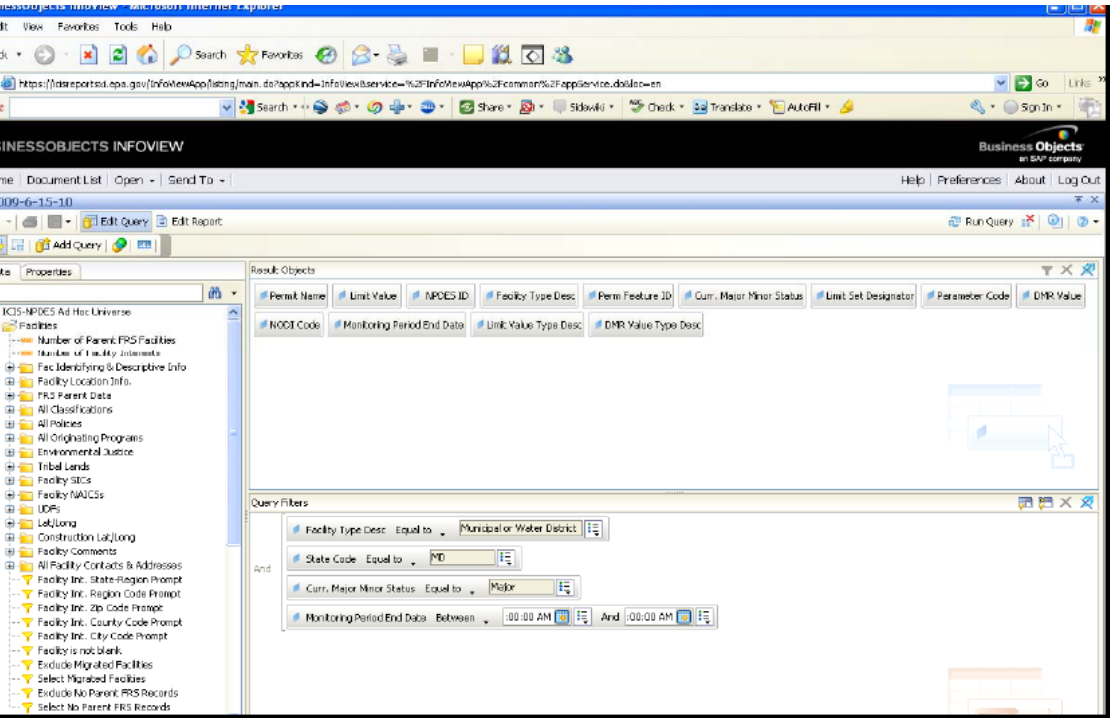
## Report Creation and Processing

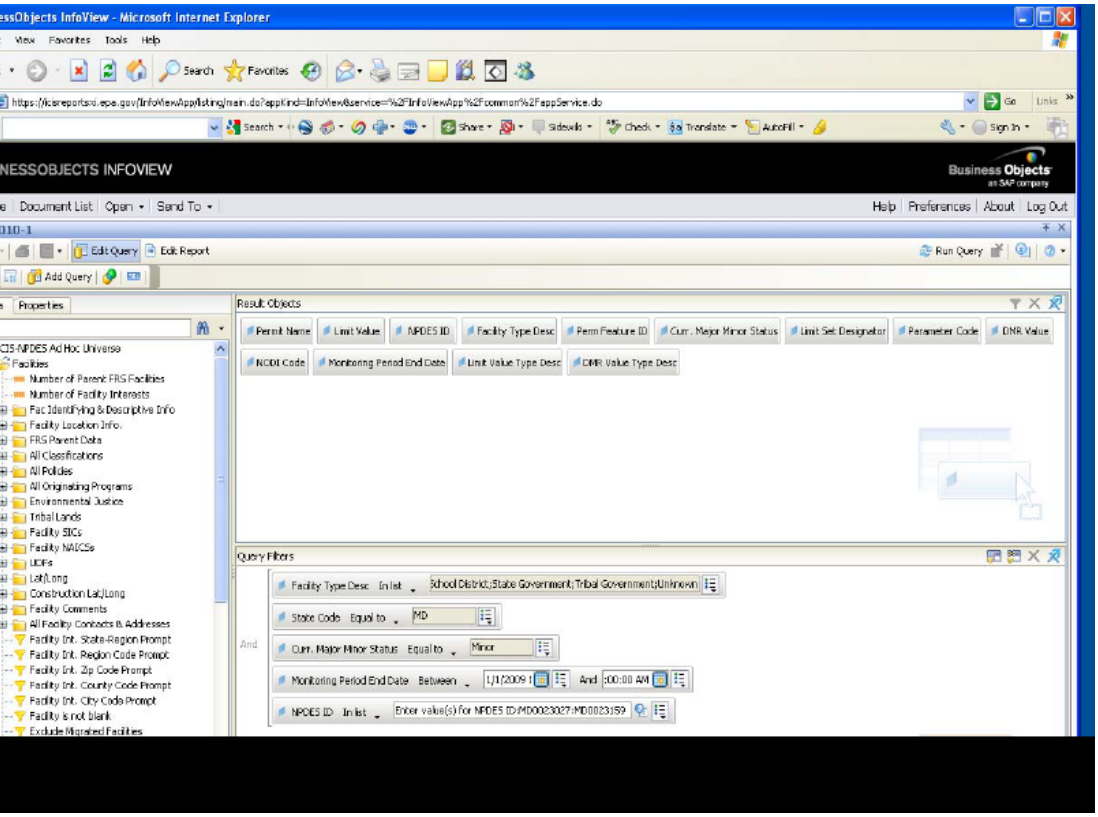
tructions for processing data retrieval from the ICIS are giving in the “Generalized trieval Queriesl “under the following sections

How to format and order the retrieval Reports
The special processing steps involved with DMR data

### .1 Create queries




INESSOBJECTS INFOVIEW
Business Objects
an SAP company
Document List | Open | Send To
Help | Preferences | About | Log Out
Edit Query | Edit Report
Run Query
Add Query
Result Objects
Permit Name | Limit Value | NPDES ID | Facility Type Desc | Perm Feature ID | Curr. Major Minor Status | Limit Set Designator | Parameter Code | DMR Value
NODI Code | Monitoring Period End Date | Limit Value Type Desc | DMR Value Type Desc
Query Filters
Facility Type Desc Equal to Municipal or Water District
State Code Equal to MD
Curr. Major Minor Status Equal to Major
Monitoring Period End Date Between 00:00 AM And 00:00 AM
And


ssObjects InfoView - Microsoft Internet Explorer
NESSOBJECTS INFOVIEW
Business Objects
an SAP company
Document List | Open | Send To
Help | Preferences | About | Log Out
Edit Query | Edit Report
Run Query
Add Query
Result Objects
Permit Name | Limit Value | NPDES ID | Facility Type Desc | Perm Feature ID | Curr. Major Minor Status | Limit Set Designator | Parameter Code | DMR Value
NODI Code | Monitoring Period End Date | Limit Value Type Desc | DMR Value Type Desc
Query Filters
Facility Type Desc In list School District;State Government;Tribal Government;Unknown
State Code Equal to MD
Curr. Major Minor Status Equal to Minor
Monitoring Period End Date Between 1/1/2009 And 00:00 AM
NPDES ID In list Enter value(s) for NPDES ID:MD0023027;MD0023159
And

## – Editing the Data Retrieved From ICIS

The task of editing text point source data from ICIS requires that you create a SAS data set of these data that is sorted by DES (National Pollutant Discharge Elimination System) number, year and month. (Use the SAS programs given in Appendix C nvert the text file to a SAS data set). Once this is done you can begin the point source data file. The first step to take is to delete y groundwater discharges (the NPDES number for groundwater discharge begins with GR). Then delete water treatment plants a er facilities, which have been converted to industrial or underground discharges.

Editing the point source data requires a lot of patience and a conscientious effort in looking out for errors. Almost all of the a entered into the ICIS are from DMRs. These are federal documents that are filled out by a representative of the WWTP each nth and sent to the Division of Municipal Compliance at MDE. The problem with the DMRs is they are sometimes filled out orrectly or incompletely. There are also times when the data entry clerks make typographical or arithmetic errors (i.e., unit nversion) when entering the data. There are also duplicate entries or seasonal reporting without indicating the code on DMRs.

## – Data Verification

The best way of verifying the data for major WWTPs and large minor WWTPs is to compare the DMRs with the monthly erating reports (MORs). They contain a daily log of plant operations for each month, including nutrient monitoring in most cases e MORs and their attachments are the best source of point source data available. There are some minor WWTPs that require trient monitoring and this data should also be verified using the MORs. A simple SAS program will be used to determine which minors have some nutrient information. If a plant was on line for entire year, normally there should be 12 months data (DMR). art of QA/QC procedures to find and try to complete the non-submittal DMR report. Also during a year if a new facility start to charge or for any reason existing plant went out of service it should be properly documented.

After data verification is complete for each category, the appropriate SAS program is run to convert the SAS data set to a DAT file. This *.DAT file will be edited. When all corrections have been made to the *.DAT file, the file is then converted back AS data set.

To document where the data came from, data flags have been used. If the Data were verified using the MOR, the data flag uld be ‘M’. If the data value were taken directly from the DMR, the data flag would be ‘D’. If the data point is generated for tance, by taking an annual average of real data values to fill in for one or two missing values. The data flag would be left blank. data value were taken from permit file the data flag would be ‘P’.
the past, Compliance Monitoring Reports (CMRs) have been used when no nutrient data were available in the DMRs or MORs. MRs are records of state administered testing of WWTP effluent. At this time, however, most major WWTPs have some nutrient nitoring.

trient data for minors also needs to be verified using the MOR. Data flags are then set accordingly (Appendix D shows most of data verifications and editing for 2010 Maryland point source data).

When the municipal WWTP data have all been collected, you will now have to compile the industrial point source database l then merge it with the municipal point source database. The industrial data will require building a similar database. Be sure to cument where the data came from, a DMR, a MOR, or a permit application.

## – Final Location for Maryland Point Source Data

Once the data editing and verification is complete, the data set will have to be merged with a WWTP inventory updated file TPINFO.SASDATASET) that contains information such as county location, basin code, basin name, sub-basin name, discharge e and the latitude and longitude of each WWTP discharge point. Every year when this has been complete, the final data set (i.e. DPS00.SAS7BDAT) should be copied into the Maryland point source database located at Technical and Regulatory Services ministration under '\\MDENT12\sasdata\point source' directory on the Windows NT server for further uses. The nutrient loads o will be estimated by running SAS programs for each facility and also for ten tributaries within the State of Maryland.

**– Load Estimation Procedures**

Calculation of the amount of nutrient load, which enters the Bay, is not a simple process. There are numerous transformatic cesses that may occur within waterways, streams, rivers, and estuaries. Final loading to the Bay is also affected by in-stream ization of nitrogen or phosphorus within riverine tributaries, prior to these tributaries emptying into the tidal waters. The flow l concentration of the nutrients are the two specific effluent characteristics of each plant. To calculate nutrient loads, daily erage effluent flow (MGD) and average concentration (mg/l) of the nutrient values were used. The following equation was olied to calculate monthly load.

Monthly load = Average flow * Average concentration * 8.344 * Number of days in month
(pounds) (MGD) (mg/l) (conversion f actor)

# APPENDIX A

## Inspection Program for MD's WWTP Laboratories

Performance The Compliance Program of the Water Management Administration of MDE conducts multimedia pections to determine compliance with various water pollution control and resource protection laws and regulations, Including DES and State Groundwater discharge permits, erosion and sediment controls, tidal and nontidal wetlands permits and terway construction permits . The multimedia inspections are conducted by Environmental Compliance Specialists, Sanitarians Engineers, with each being assigned an area of duty. NPDES inspections are performed in accordance with MDE's 106 Grant rkplan under its delegation by EPA.

NPDES inspections of municipal and industrial wastewater treatment plants are designated as a Compliance Sampling pection (CSI) or Compliance Evaluation Inspection (CEI). Program inspectors also periodically conduct inspections at the ntract laboratories for municipal and industrial permittees to verify proper analytical methods are being followed. These pections are noted as Performance Audit Inspections (PAIs).

The Performance Audit Inspections are conducted with detailed emphasis on the laboratory and the self-monitoring progra e inspectors evaluate the analytical performance of the laboratory/laboratories and the integrity and quality of the analytical dat nerated for reporting under the Clean Water Act.. The permit is reviewed for all aspects of self-monitoring. Proper sampling hniques are reviewed, sample preservation, proper holding times for testing, appropriate methodology, record keeping, flow nitoring, proper sample type and frequency, and calculations for Discharge Monitoring Reporting. This process takes the samp m the point and manner of collection, through the preservation, testing and documentation to determine that appropriate data is ng conveyed to MDE. Further, this process allows data audits to be monitored for those falsifying data with referrals to the Offi the Attorney General for investigation and appropriate enforcement action.

MDE also reviews and tracks annual laboratory proficiency testing under the USEPA DMR/QA Program. In this program laboratories of all Major and select Minor NPDES permit holders in Maryland are required to analyze unknown proficiency t (PT) samples provided by an EPA approved external vendor. The participating permittees are required to have their testing oratories obtain and analyze a PT sample for all NPDES permit- specified constituents, including whole effluent toxicity ET) PT samples. The vendors or PT Providers grade and report the final results to the laboratory and to the state coordinator. e Compliance Program also reviews and approves the biomonitoring study plans and reviews the data from the subsequent ting to verify compliance with aquatic toxicity standards established by NPDES permits and Maryland law and regulation.

# APPENDIX B

# General Information for the Facilities in the MDPS Database

## WASTE WATER TREATMENT PLANTS (MUNICIPAL&MAJOR INDUSTRIAL) - UPDATED 2012

| DES | NAME | BASIN | CODE | COUNTY | TYPE |
|---|---|---|---|---|---|
| 0000311 | W R GRACE | PATAPSCO RIVER | 02-13-09-03 | BALT | IND |
| 0000469 | MD & VA MILK PRODUCERS | PATUXENT RIVER | 02-13-11-05 | HOWA | IND |
| 0001201 | BETHELEHEM STEEL | PATAPSCO RIVER | 02-13-09-03 | BALT | IND |
| 0001384 | CONGOLEUM | PATAPSCO RIVER | 02-13-09-07 | CARR | IND |
| 0001422 | WESTVACO | NORTH BRANCH POTOMAC | 02-14-10-05 | GARR | IND |
| 0001775 | CHEMETALS | PATAPSCO RIVER | 02-13-09-03 | ANNE | IND |
| 0003158 | INDIAN HEAD NOS | LOWER POTOMAC RIVER | 02-14-01-02 | CHAR | IND |
| 0021687 | UPPER POTOMAC RIVER COMMISSION | NORTH BRANCH POTOMAC | 02-14-10-01 | ALLE | IND |
| 0067857 | ALLEN FAMILY FOODS | CHOPTANK RIVER | 02-13-04-05 | TALB | IND |
| 0021199 | BLUE PLAINS | WASHINGTON METRO AREA | 02-14-02-01 | D.C. | MAJ |
| 0003221 | C. WM. WINEBRNNER | UPPER POTOMAC RIVER | 02-14-05-02 | WASH | MAJ |
| 0020001 | CRISFIELD | POCOMOKE RIVER | 02-13-02-06 | SOME | MAJ |
| 0020010 | CHESTERTOWN | CHESTER RIVER | 02-13-05-09 | KENT | MAJ |
| 0020044 | OCEAN CITY | COASTAL AREA | 02-13-01-03 | WORC | MAJ |
| 0020052 | INDIAN HEAD | LOWER POTOMAC RIVER | 02-14-01-11 | CHAR | MAJ |
| 0020249 | FEDERALSBURG | NANTICOKE RIVER | 02-13-03-06 | CARO | MAJ |
| 0020257 | EMMITSBURG | MIDDLE POTOMAC RIVER | 02-14-03-03 | FRED | MAJ |
| 0020273 | EASTON | CHOPTANK RIVER | 02-13-04-04 | TALB | MAJ |
| 0020281 | CHESAPEAKE BEACH | CHESAPEAKE BAY PROPER | 02-13-99-98 | CALV | MAJ |
| 0020494 | DENTON | CHOPTANK RIVER | 02-13-04-04 | CARO | MAJ |
| 0020524 | LA PLATA | LOWER POTOMAC RIVER | 02-14-01-09 | CHAR | MAJ |
| 0020532 | DELMAR | NATICOKE RIVER | 02-13-03-04 | WICO | MAJ |
| 0020613 | PERRYVILLE | ELK RIVER | 02-13-06-09 | CECI | MAJ |
| 0020648 | OAKLAND | YOUGHIOGHENY RIVER | 05-02-02-01 | GARR | MAJ |
| 0020656 | PRINCESS ANNE | POCOMOKE RIVER | 02-13-02-08 | SOME | MAJ |
| 0020672 | TANEYTOWN | MIDDLE POTOMAC RIVER | 02-14-03-03 | CARR | MAJ |
| 0020681 | ELKTON | ELK RIVER | 02-13-06-03 | CECI | MAJ |
| 0020834 | CENTREVILLE | CHESTER RIVER | 02-13-05-07 | QUEE | MAJ |
| 0020877 | FORT DETRICK | MIDDLE POTOMAC RIVER | 02-14-03-02 | FRED | MAJ |
| 0020958 | BRUNSWICK | MIDDLE POTOMAC RIVER | 02-14-03-01 | FRED | MAJ |
| 0020982 | DAMASCUS | WASHINGTON METRO AREA | 02-14-02-08 | MONT | MAJ |
| 0021121 | THURMONT | MIDDLE POTOMAC RIVER | 02-14-03-03 | FRED | MAJ |
| 0021229 | APG - EDGEWOOD | BUSH RIVER | 02-13-07-01 | HARF | MAJ |
| 0021237 | APG - ABERDEEN | BUSH RIVER | 02-13-07-05 | HARF | MAJ |
| 0021491 | SENECA CREEK | WASHINGTON METRO AREA | 02-14-02-08 | MONT | MAJ |

| | | | | | |
|---|---|---|---|---|---|
| 0021512 | FREEDOM DISTRICT | PATAPSCO RIVER | 02-13-09-08 | CARR | MAJ |
| 0021539 | PISCATAWAY | WASHINGTON METRO AREA | 02-14-02-01 | PRIN | MAJ |
| 0021555 | BACK RIVER | PATAPSCO RIVER | 02-13-09-01 | BALT | MAJ |
| 0021563 | ABERDEEN | BUSH RIVER | 02-13-07-06 | HARF | MAJ |
| 0021571 | SALISBURY | NANTICOKE RIVER | 02-13-03-01 | WICO | MAJ |
| 0021598 | CUMBERLAND | NORTH BRANCH POTOMAC | 02-14-10-01 | ALLE | MAJ |
| 0021601 | PATAPSCO | PATAPSCO RIVER | 02-13-09-03 | BALT | MAJ |
| 0021610 | FREDERICK | MIDDLE POTOMAC RIVER | 02-14-03-02 | FRED | MAJ |
| 0021628 | BOWIE | PATUXENT RIVER | 02-13-11-04 | PRIN | MAJ |
| 0021636 | CAMBRIDGE | CHOPTANK RIVER | 02-13-04-03 | DORC | MAJ |
| 0021644 | BROADNECK | CHESAPEAKE BAY PROPER | 02-13-99-98 | ANNE | MAJ |
| 0021652 | PATUXENT | PATUXENT RIVER | 02-13-11-05 | ANNE | MAJ |
| 0021661 | COX CREEK | PATAPSCO RIVER | 02-13-09-03 | ANNE | MAJ |
| 0021679 | PINE HILL RUN | CHESAPEAKE BAY PROPER | 02-13-99-98 | ST M | MAJ |
| 0021717 | FORT MEADE | PATUXENT RIVER | 02-13-11-05 | ANNE | MAJ |
| 0021725 | PARKWAY | PATUXENT RIVER | 02-13-11-04 | PRIN | MAJ |
| 0021741 | WESTERN BRANCH | PATUXENT RIVER | 02-13-11-03 | PRIN | MAJ |
| 0021750 | HAVRE DE GRACE | CHESAPEAKE BAY PROPER | 02-13-99-96 | HARF | MAJ |
| 0021776 | HAGERSTOWN | UPPER POTOMAC RIVER | 02-14-05-02 | WASH | MAJ |
| 0021814 | ANNAPOLIS | CHESAPEAKE BAY PROPER | 02-13-99-98 | ANNE | MAJ |
| 0021822 | BALLENGER CREEK | MIDDLE POTOMAC RIVER | 02-14-03-02 | FRED | MAJ |
| 0021831 | WESTMINSTER | MIDDLE POTOMAC RIVER | 02-14-03-04 | CARR | MAJ |
| 0021865 | MATTAWOMAN | LOWER POTOMAC RIVER | 02-14-01-02 | CHAR | MAJ |
| 0022527 | MT AIRY | PATAPSCO RIVER | 02-13-09-08 | CARR | MAJ |
| 0022535 | JOPPATOWNE | GUNPOWDER RIVER | 02-13-08-04 | HARF | MAJ |
| 0022551 | POCOMOKE CITY | POCOMOKE RIVER | 02-13-02-02 | WORC | MAJ |
| 0022730 | HURLOCK | NATICOKE RIVER | 02-13-03-06 | DORC | MAJ |
| 0022764 | SNOW HILL | POCOMOKE RIVER | 02-13-02-02 | WORC | MAJ |
| 0023001 | POOLESVILLE | WASHINGTON METRO AREA | 02-14-02-08 | MONT | MAJ |
| 0023477 | OCEAN PINES SERVICE AREA | COASTAL AREA | 02-13-01-02 | WORC | MAJ |
| 0023485 | KENT ISLAND | CHESAPEAKE BAY PROPER | 02-13-99-97 | QUEE | MAJ |
| 0023604 | TALBOT COUNTY REGION II | CHESTER RIVER | 02-13-05-02 | TALB | MAJ |
| 0023957 | MARYLAND CORRECTIONAL INSTITUT | UPPER POTOMAC RIVER | 02-14-05-02 | WASH | MAJ |
| 0024350 | BROADWATER | CHESAPEAKE BAY PROPER | 02-13-99-98 | ANNE | MAJ |
| 0024767 | LEONARDTOWN | LOWER POTOMAC RIVER | 02-14-01-04 | ST M | MAJ |
| 0051497 | TROUT RUN | YOUGHIOGHENY RIVER | 05-02-02-02 | GARR | MAJ |
| 0052027 | NORTHEAST RIVER | ELK RIVER | 02-13-06-08 | CECI | MAJ |
| 0052990 | FRUITLAND | NANTICOKE RIVER | 02-13-03-01 | WICO | MAJ |
| 0055174 | LITTLE  PATUXENT | PATUXENT RIVER | 02-13-11-05 | HOWA | MAJ |
| 0056545 | SOD RUN | BUSH RIVER | 02-13-07-01 | HARF | MAJ |
| 0057525 | SWAN POINT | LOWER POTOMAC RIVER | 02-14-01-01 | CHAR | MAJ |
| 0060071 | GEORGES CREEK | NORTH BRANCH POTOMAC | 02-14-10-04 | ALLE | MAJ |
| 0061794 | MAYO LARGE COMMUNAL | WEST CHESAPEAKE BAY | 02-13-10-04 | ANNE | MAJ |
| 0062596 | MARYLAND CITY | PATUXENT RIVER | 02-13-11-04 | ANNE | MAJ |
| 0063207 | DORSEY RUN | PATUXENT RIVER | 02-13-11-05 | ANNE | MAJ |
| 0063509 | CONOCOCHEAGUE | UPPER POTOMAC RIVER | 02-14-05-04 | WASH | MAJ |
| 0063878 | CELANESE | NORTH BRANCH POTOMAC | 02-14-10-01 | ALLE | MAJ |
| 0020095 | NAS-PATUXENT | LOWER POTOMAC RIVER | 02-14-01-03 | ST M | MIN |

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|---|---|---|---|---|---|
| 0020168 | NAVAL RESEARCH LAB | CHESAPEAKE BAY PROPER | 02-13-99-98 | CALV | MIN |
| 0020206 | US ARMY - CHESAPEAKE CITY | ELK RIVER | 02-13-06-04 | CECI | MIN |
| 0020231 | BOONSBORO | UPPER POTOMAC RIVER | 02-14-05-02 | WASH | MIN |
| 0020265 | RISING SUN | SUSQUEHANNA RIVER | 02-12-02-03 | CECI | MIN |
| 0020290 | GREENSBORO | CHOPTANK RIVER | 02-13-04-04 | CARO | MIN |
| 0020303 | ROCK HALL | CHESTER RIVER | 02-13-05-05 | KENT | MIN |
| 0020362 | FUNKSTOWN | UPPER POTOMAC RIVER | 02-14-05-02 | WASH | MIN |
| 0020397 | CHESAPEAKE CITY SOUTH | ELK RIVER | 02-13-06-04 | CECI | MIN |
| 0020401 | CHESAPEAKE CITY NORTH | ELK RIVER | 02-13-06-04 | CECI | MIN |
| 0020427 | RIDGELY WWTP | CHOPTANK | 02-13-04-04 | COROLINE | MIN |
| 0020435 | MILLINGTON | CHESTER RIVER | 02-13-05-10 | KENT | MIN |
| 0020443 | CECILTON | ELK RIVER | 02-13-06-02 | CECI | MIN |
| 0020486 | TRAPPE | CHOPTANK RIVER | 02-13-04-03 | TALB | MIN |
| 0020559 | SUDLERSVILLE | CHESTER RIVER | 02-13-05-10 | QUEE | MIN |
| 0020575 | BETTERTON | ELK RIVER | 02-13-06-10 | KENT | MIN |
| 0020605 | GALENA | ELK RIVER | 02-13-06-10 | KENT | MIN |
| 0020621 | PRESTON | CHOPTANK RIVER | 02-13-04-03 | CARO | MIN |
| 0020630 | NEWARK | COASTAL AREA | 02-13-01-05 | WORC | MIN |
| 0020664 | VIENNA | NANTICOKE RIVER | 02-13-03-05 | DORC | MIN |
| 0020699 | MYERSVILLE | MIDDLE POTOMAC RIVER | 02-14-03-05 | FRED | MIN |
| 0020729 | NEW MARKET | MIDDLE POTOMAC RIVER | 02-14-03-02 | FRED | MIN |
| 0020737 | JEFFERSON | MIDDLE POTOMAC RIVER | 02-14-03-05 | FRED | MIN |
| 0020761 | GRANTSVILLE | YOUGHIOGHENY RIVER | 05-02-02-04 | GARR | MIN |
| 0020796 | PORT DEPOSIT | SUSQUEHANNA RIVER | 02-12-02-01 | CECI | MIN |
| 0020800 | POINT OF ROCKS | MIDDLE POTOMAC RIVER | 02-14-03-01 | FRED | MIN |
| 0020842 | BELTSVILLE USDA EAST | WASHINGTON METRO AREA | 02-14-02-05 | PRIN | MIN |
| 0020851 | BELTSVILLE USDA WEST | WASHINGTON METRO AREA | 02-14-02-05 | PRIN | MIN |
| 0020885 | INDIAN HEAD NAVAL ORDINANCE | LOWER POTOMAC RIVER | 02-14-01-02 | CHAR | MIN |
| 0020931 | NIH | WASHINGTON METRO AREA | 02-14-02-02 | MONT | MIN |
| 0021083 | FRIENDSVILLE | YOUGHIOGHENY RIVER | 05-02-02-01 | GARR | MIN |
| 0021091 | ASSATEAGUE ISLAND NATIONAL SEA | COASTAL AREA | 02-13-01-04 | WORC | MIN |
| 0022446 | HAMPSTEAD | GUNPOWDER RIVER | 02-13-08-05 | CARR | MIN |
| 0022454 | UNION BRIDGE | MIDDLE POTOMAC RIVER | 02-14-03-04 | CARR | MIN |
| 0022543 | OXFORD | CHOPTANK RIVER | 02-13-04-03 | TALB | MIN |
| 0022578 | MANCHESTER | GUNPOWDER RIVER | 02-13-08-06 | CARR | MIN |
| 0022586 | NEW WINDSOR | MIDDLE POTOMAC RIVER | 02-14-03-04 | CARR | MIN |
| 0022632 | BERLIN | COASTAL AREA | 02-13-01-05 | WORC | MIN |
| 0022641 | MEADOWVIEW | ELK RIVER | 02-13-06-07 | CECI | MIN |
| 0022683 | CRESTVIEW | MIDDLE POTOMAC RIVER | 02-14-03-02 | FRED | MIN |
| 0022713 | RICHLYN MANOR | GUNPOWDER RIVER | 02-13-08-02 | BALT | MIN |
| 0022721 | FOUNTAINDALE | MIDDLE POTOMAC RIVER | 02-14-03-05 | FRED | MIN |
| 0022748 | MARYLAND WATER SERVICE | NORTH BRANCH POTOMAC | 02-14-10-01 | ALLE | MIN |
| 0022781 | MARLBORO MEADOWS | PATUXENT RIVER | 02-13-11-02 | PRIN | MIN |
| 0022845 | GAITHER MANOR | PATAPSCO RIVER | 02-13-09-08 | CARR | MIN |
| 0022870 | SPRINGVIEW ESTATES | MIDDLE POTOMAC RIVER | 02-14-03-02 | FRED | MIN |
| 0022900 | LEWISTOWN ELEMENTARY | MIDDLE POTOMAC RIVER | 02-14-03-03 | FRED | MIN |
| 0022926 | HUNTER HILL APARTMENTS | UPPER POTOMAC RIVER | 02-14-05-02 | WASH | MIN |
| 0022951 | GLEN MEADOWS | GUNPOWDER RIVER | 02-13-08-02 | BALT | MIN |

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| 00023043 | SWAN HARBOR PARK | BUSH RIVER | 02-13-07-06 | HARF | MIN |
| 00023060 | CONCORD TRAILER PARK | MIDDLE POTOMAC RIVER | 02-14-03-02 | FRED | MIN |
| 00023108 | MANCHESTER PARK | ELK RIVER | 02-13-06-05 | CECI | MIN |
| 00023213 | RAWLINGS HEIGHTS | NORTH BRANCH POTOMAC | 02-14-10-01 | ALLE | MIN |
| 00023230 | MT ST MARYS COLLEGE | MIDDLE POTOMAC RIVER | 02-14-03-03 | FRED | MIN |
| 00023272 | SUMMER HILL TRAILER PARK | WEST CHESAPEAKE BAY | 02-13-10-03 | ANNE | MIN |
| 00023281 | N HARFORD JR&SR HIGH | SUSQUEHANNA RIVER | 02-12-02-05 | HARF | MIN |
| 00023337 | WOODLAWN MOBILE HOME PARK | ELK RIVER | 02-13-06-09 | CECI | MIN |
| 00023370 | QUEENSTOWN | CHESTER RIVER | 02-13-05-05 | QUEE | MIN |
| 00023451 | PICCOWAXIN MIDDLE | LOWER POTOMAC RIVER | 02-14-01-01 | CHAR | MIN |
| 00023469 | BOHEMIA MANOR HIGH | ELK RIVER | 02-13-06-01 | CECI | MIN |
| 00023523 | US NAVAL ACADEMY | WEST CHESAPEAKE BAY | 02-13-10-02 | ANNE | MIN |
| 00023621 | N CAROLINE HIGH | CHOPTANK RIVER | 02-13-04-04 | CARO | MIN |
| 00023647 | WAYSONS MOBILE | PATUXENT RIVER | 02-13-11-02 | ANNE | MIN |
| 00023680 | I-70 REST AREA | MIDDLE POTOMAC RIVER | 02-14-03-05 | FRED | MIN |
| 00023710 | DAN-DEE, INC | MIDDLE POTOMAC RIVER | 02-14-03-02 | FRED | MIN |
| 00023728 | SOUTHERN SENIOR HIGH SCHOOL | PATUXENT RIVER | 02-13-11-02 | ANNE | MIN |
| 00023833 | ELK NECK STATE PARK | ELK RIVER | 02-13-06-01 | CECI | MIN |
| 00023868 | GREENBRIAR STATE PARK | UPPER POTOMAC RIVER | 02-14-05-02 | WASH | MIN |
| 00023876 | EASTERN CORRECTIONAL CAMP | CHESTER RIVER | 02-13-05-08 | QUEE | MIN |
| 00023906 | WOODSTOCK TRAINING CENTER | PATAPSCO RIVER | 02-13-09-06 | BALT | MIN |
| 00023914 | SOUTHERN CORRECTIONAL CAMP | LOWER POTOMAC RIVER | 02-14-01-07 | CHAR | MIN |
| 00023922 | VICTOR CULLEN CENTER | MIDDLE POTOMAC RIVER | 02-14-03-03 | FRED | MIN |
| 00023931 | CHELTENHAM BOYS VILLAGE | WASHINGTON METRO AREA | 02-14-02-03 | PRIN | MIN |
| 00023949 | POINT LOOKOUT STATE PARK | CHESAPEAKE BAY PROPER | 02-13-99-98 | ST M | MIN |
| 00023981 | NEW GERMANY STATE PARK | NORTH BRANCH POTOMAC | 02-14-10-06 | GARR | MIN |
| 00024023 | HARBOUR VIEW | ELK RIVER | 02-13-06-01 | CECI | MIN |
| 00024279 | MARDELA HIGH | NANTICOKE RIVER | 02-13-03-05 | WICO | MIN |
| 00024317 | SMITHSBURG | UPPER POTOMAC RIVER | 02-14-05-02 | WASH | MIN |
| 00024333 | MARYLAND MANOR MOBILE | PATUXENT RIVER | 02-13-11-02 | ANNE | MIN |
| 00024384 | CHESAPEAKE COLLEGE | CHESTER RIVER | 02-13-05-03 | QUEE | MIN |
| 00024406 | MIDDLETOWN | MIDDLE POTOMAC RIVER | 02-14-03-05 | FRED | MIN |
| 00024449 | NORTHERN MS/HS | YOUGHIOGHENY RIVER | 05-02-02-01 | GARR | MIN |
| 00024546 | PHEASANT RIDGE | PATAPSCO RIVER | 02-13-09-08 | CARR | MIN |
| 00024562 | HANCOCK | UPPER POTOMAC RIVER | 02-14-05-07 | WASH | MIN |
| 00024589 | S CARROLL HIGH | PATAPSCO RIVER | 02-13-09-08 | CARR | MIN |
| 00024627 | HIGHLAND VIEW | UPPER POTOMAC RIVER | 02-14-05-02 | WASH | MIN |
| 00024635 | UNITED CONTAINER | GUNPOWDER RIVER | 02-13-08-02 | BALT | MIN |
| 00024694 | PATUXENT MOBILE | PATUXENT RIVER | 02-13-11-02 | ANNE | MIN |
| 00024759 | OLDTOWN | NORTH BRANCH POTOMAC | 02-14-10-01 | ALLE | MIN |
| 00024929 | TRIUMPH INDUSTRIAL PARK | ELK RIVER | 02-13-06-05 | CECI | MIN |
| 00024945 | GREAT OAKS LANDING | ELK RIVER | 02-13-06-11 | KENT | MIN |
| 00024953 | SPRING MEADOWS | SUSQUEHANNA RIVER | 02-12-02-02 | HARF | MIN |
| 00024961 | BENJAMINS TRAILER PARK | SUSQUEHANNA RIVER | 02-12-02-01 | CECI | MIN |
| 00024988 | GREEN RIDGE FORESTRY CAMP | UPPER POTOMAC RIVER | 02-14-05-11 | ALLE | MIN |
| 00025089 | WHITE ROCK | MIDDLE POTOMAC RIVER | 02-14-03-03 | FRED | MIN |
| 00025119 | FOXVILLE US NAVAL SUPPORT | MIDDLE POTOMAC RIVER | 02-14-03-03 | FRED | MIN |
| 00025666 | EMERGENCY MANAGEMENT | PATUXENT RIVER | 02-13-11-07 | MONT | MIN |

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|---|---|---|---|---|---|
| 00050016 | CHURCH HILL | CHESTER RIVER | 02-13-05-08 | QUEE | MIN |
| 00050334 | THUNDERBIRD APARTMENTS | LOWER POTOMAC RIVER | 02-14-01-09 | CHAR | MIN |
| 00050903 | BOONES MOBILE | PATUXENT RIVER | 02-13-11-02 | ANNE | MIN |
| 00051373 | BROADFORDING | UPPER POTOMAC RIVER | 02-14-05-04 | WASH | MIN |
| 00051632 | WILLARDS | POCOMOKE RIVER | 02-13-02-03 | WICO | MIN |
| 00051667 | ROCKY GAP STATE PARK | NORTH BRANCH POTOMAC | 02-14-10-02 | ALLE | MIN |
| 00051721 | ACCIDENT | YOUGHIOGHENY RIVER | 05-02-02-01 | GARR | MIN |
| 00051918 | CHOPTICAN HIGH | LOWER POTOMAC RIVER | 02-14-01-05 | ST M | MIN |
| 00052167 | NORTHERN HIGH | PATUXENT RIVER | 02-13-11-01 | CALV | MIN |
| 00052175 | SHARPTOWN | NANTICOKE RIVER | 02-13-03-05 | WICO | MIN |
| 00052230 | EWELL | CHESAPEAKE BAY PROPER | 02-13-99-98 | SOME | MIN |
| 00052248 | TYLERTON | CHESAPEAKE BAY PROPER | 02-13-99-98 | SOME | MIN |
| 00052256 | FAIRMOUNT | POCOMOKE RIVER | 02-13-02-07 | SOME | MIN |
| 00052281 | CRELLIN | YOUGHIOGHENY RIVER | 05-02-02-01 | GARR | MIN |
| 00052299 | MORNING CHEER | ELK RIVER | 02-13-06-08 | CECI | MIN |
| 00052311 | CHARLES COUNTY COMM COLLEGE | LOWER POTOMAC RIVER | 02-14-01-09 | CHAR | MIN |
| 00052671 | KENNEDYVILLE | CHESTER RIVER | 02-13-05-09 | KENT | MIN |
| 00052680 | EDGEMEADE RES SITE | PATUXENT RIVER | 02-13-11-02 | PRIN | MIN |
| 00052825 | CHERRY HILL | ELK RIVER | 02-13-06-05 | CECI | MIN |
| 00052850 | SWALLOW FALLS STATE PARK | YOUGHIOGHENY RIVER | 05-02-02-01 | GARR | MIN |
| 00053066 | FAHRNEY-KEEDY | UPPER POTOMAC RIVER | 02-14-05-02 | WASH | MIN |
| 00053074 | CAMP SUNRISE | YOUGHIOGHENY RIVER | 05-02-02-01 | GARR | MIN |
| 00053082 | HOLIDAY MOBILE ESTATES | PATAPSCO RIVER | 02-13-09-06 | ANNE | MIN |
| 00053139 | CAMP SHADOWBROOK | SUSQUEHANNA RIVER | 02-12-02-04 | CECI | MIN |
| 00053155 | THUNDERBIRD MOTEL | LOWER POTOMAC RIVER | 02-14-01-06 | CHAR | MIN |
| 00053171 | MAPLE HILL PARK | SUSQUEHANNA RIVER | 02-12-02-03 | CECI | MIN |
| 00053198 | BROOK LANE | UPPER POTOMAC RIVER | 02-14-05-02 | WASH | MIN |
| 00053201 | RELAX INN | LOWER POTOMAC RIVER | 02-14-01-08 | CHAR | MIN |
| 00053228 | MT CARMEL WOODS | LOWER POTOMAC RIVER | 02-14-01-09 | CHAR | MIN |
| 00053279 | FOREST GREEN | ELK RIVER | 02-13-06-05 | CECI | MIN |
| 00053325 | CLEARSPRING | UPPER POTOMAC RIVER | 02-14-05-05 | WASH | MIN |
| 00053511 | LYONS CREEK MOBILE | PATUXENT RIVER | 02-13-11-02 | ANNE | MIN |
| 00054348 | DEEP CREEK LAKE | YOUGHIOGHENY RIVER | 05-02-02-01 | GARR | MIN |
| 00054950 | DONALDSON BROWN COOTER | SUSQUEHANNA RIVER | 02-12-02-01 | CECI | MIN |
| 00055352 | TWIN CITIES | CHOPTANK RIVER | 02-13-04-03 | DORC | MIN |
| 00055425 | OLD SOUTH MOUNTAIN INN | MIDDLE POTOMAC RIVER | 02-14-03-05 | FRED | MIN |
| 00055522 | COLONEL RICHARDSON MIDDLE&HIGH | NANTICOKE RIVER | 02-13-03-06 | CARO | MIN |
| 00055557 | CLIFFTON ON THE POTOMAC | LOWER POTOMAC RIVER | 02-14-01-01 | CHAR | MIN |
| 00055620 | FLINTSTONE | UPPER POTOMAC RIVER | 02-14-05-12 | ALLE | MIN |
| 00056481 | KEMPTOWN SCHOOL | MIDDLE POTOMAC RIVER | 02-14-03-02 | FRED | MIN |
| 00056553 | SHINE INN | LOWER POTOMAC RIVER | 02-14-01-06 | CHAR | MIN |
| 00057100 | NEW LIFE FOURSQUARE CHURCH | MIDDLE POTOMAC RIVER | 02-14-03-02 | FRED | MIN |
| 00057487 | WALKERS TRAILER PARK | CHOPTANK RIVER | 02-13-04-04 | CARO | MIN |
| 00057606 | WINTERS APARTMENTS | LOWER POTOMAC RIVER | 02-14-01-03 | ST M | MIN |
| 00058050 | SHAMROCK RESTAURANT | MIDDLE POTOMAC RIVER | 02-14-03-03 | FRED | MIN |
| 00058661 | WOODSBORO | MIDDLE POTOMAC RIVER | 02-14-03-02 | FRED | MIN |
| 00059145 | PINEY ORCHARD | PATUXENT RIVER | 02-13-11-05 | ANNE | MIN |
| 00059463 | TALBOT COUNTY REGION V | CHESAPEAKE BAY PROPER | 02-13-99-98 | TALB | MIN |

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|---|---|---|---|---|---|
| 00059609 | MONROVIA | UPPER POTOMAC RIVER | 02-14-03-02 | FRED | MIN |
| 00059617 | HEBRON | NANTICOKE RIVER | 02-13-03-05 | WICO | MIN |
| 00060348 | PITTSVILLE | POCOMOKE RIVER | 02-13-02-03 | WICO | MIN |
| 00060577 | LIBERTYTOWN | MIDDLE POTOMAC RIVER | 02-14-03-02 | FRED | MIN |
| 00060585 | WORTON-BUTLERTON | CHESTER RIVER | 02-13-05-10 | KENT | MIN |
| 00060933 | BLOOMINGTON | NORTH BRANCH POTOMAC | 02-14-10-05 | GARR | MIN |
| 00060941 | KITZMILLER | NORTH BRANCH POTOMAC | 02-14-10-05 | GARR | MIN |
| 00060950 | GORMAN | NORTH BRANCH POTOMAC | 02-14-10-05 | GARR | MIN |
| 00062308 | ANTIETAM | UPPER POTOMAC RIVER | 02-14-05-02 | WASH | MIN |
| 00062375 | LITTLE ORLEANS CAMP | UPPER POTOMAC RIVER | 02-14-05-11 | ALLEGANY | MIN |
| 00062821 | SIDELING HILL REST AREA | UPPER POTOMAC RIVER | 02-14-05-09 | WASH | MIN |
| 00063282 | HEARNE-MEADOWS LLC | LOWER EASTERN | 02-13-03-01 | WICO | MIN |
| 00064530 | SANDY HOOK | MIDDLE POTOMAC RIVER | 02-14-03-01 | WASH | MIN |
| 00064777 | BRETTON WOODS | WASHINGTON METRO AREA | 02-14-02-08 | MONT | MIN |
| 00065145 | HIGHLANDS | ELK RIVER | 02-13-06-07 | CECI | MIN |
| 00065234 | BFS TRUCK STOP | YOUGHIOGHENY RIVER | 05-02-02-01 | GARR | MIN |
| 00065269 | PLEASANT BRANCH | MIDDLE POTOMAC RIVER | 02-14-03-02 | FRED | MIN |
| 00065358 | NATIONAL WILDLIFE VISITOR CENT | PATUXENT RIVER | 02-13-11-04 | PRIN | MIN |
| 00065439 | MILL BOTTOM | MONOCACY RIVER | 02-14-03-03 | FRED | MIN |
| 00065749 | BIERS LANE | POTOMAC RIVER | 02-14-00-02 | ALLE | MIN |
| 00065757 | HAPPY TRAILS CAMPGROUND | UPPER POTOMAC RIVER | 02-14-05-08 | WASH | MIN |
| 00065927 | RUNNYMEADE SCHOOL | MIDDLE POTOMAC RIVER | 02-14-03-04 | CARR | MIN |
| 00066001 | VILLA JULIE COLLEGE | JONES FALLS | 02-13-09-04 | BALT | MIN |
| 00066613 | EASTERN CORRECTIONALINSTITUTIO | TANGIER SOUND | 02-13-02-06 | SOME | MIN |
| 00066745 | PLESANT VALLEY | UPPER POTOMAC RIVER | 02-14-03-04 | CARR | MIN |
| 00067202 | TOLCHESTER | ELK RIVER | 02-13-06-11 | KENT | MIN |
| 00067521 | SHEPPARD PRATT WESTERN MIDDLE | CATOCTIN CREEK | 02-14-03-05 | FRED | MIN |
| 00067539 | KUNZANG ODSAL PALGUL BHANGCHUB | MIDDLE POTOMAC RIVER | 02-14-02-02 | MONT | MIN |
| 00067571 | BOWLING BROOK PREPARATORY SCHO | UPPER POTOMAC RIVER | 02-14-03-04 | CARR | MIN |
| 00067628 | MIDDLETOWN WWTP | CATOCTIN CREEK | 02-14-03-05 | FRED | MIN |
| 00067768 | HYATTSTOWN WWTP | UPPER POTOMAC RIVER | 02-14-03-02 | MONT | MIN |
| 00067881 | CEDAR RIDGE | UPPER POTOMAC RIVER | 02-14-05-04 | WASH | MIN |
| 00067903 | GLEN ARM MAINTENANCE WWTP | GUNPOWDER RIVER | 02-13-08-02 | BALT | MIN |
| 00068101 | 33 STAHL POINT LLC | PATAPSCO RIVER | 02-13-09-03 | ANNE | MIN |
| 00068896 | BARTON BUSINESS CENTER WWTP | LOWER POTOMAC RIVER | 02-14-10-01 | ALLEGANY | MIN |
| 00069582 | TRACEY'S ELEMENTARY SCHOOL | PATUXENT RIVER | 02-13-11-02 | ANNE | MIN |
| 00069949 | CINNAMON WOODS WWTP | SUSQUEHANNA RIVER | 02-12-02-04 | CECI | MIN |

# PERMIT STATUS OF WWTP (MUNCIPAL & MAJOR INDUSTRIAL)

| FAC_NAME | PERMIT_NUM | NPDES_NUM | APP_DESC | PTYPE | CUR_STATUS | LST_ISSU | EXP_DATE |
|---|---|---|---|---|---|---|---|
| GRACE DAVISON - BALTIMORE | 06DP0099 | MD0000311 | FOR RENEWAL | Industrial-Major | IR | 01-Sep-10 | 31-Aug-14 |
| MARYLAND & VIRGINIA MILK PRODUCERS ASSOCIATION | 08DP0033 | MD0000469 | FOR RENEWAL, FROM POWDERED MILK, CONDENSED MILK AND BUTTER PRODUCTION FACILITY | Industrial-Major | IR | 01-Sep-10 | 31-Aug-15 |
| RG STEELE - SPARROWS POINT LLC | 05DP0064 | MD0001201 | FOR RENEWAL | Industrial-Major | PR | | |
| CONGOLEUM CORPORATION | 07DP0422 | MD0001384 | | Industrial-Major | IF | 01-Feb-10 | 31-Jan-15 |
| NEW PAGE CORPORATION - LUKE | 05DP0300 | MD0001422 | RENEWAL - MAJOR FACILITY | Industrial-Major | IR | 01-Sep-10 | 31-Aug-15 |
| ERACHEM COMILOG, INC | 06DP0272 | MD0001775 | | Industrial-Major | IR | 01-Sep-10 | 31-Aug-15 |
| NAVAL SUPPORT FACILITY INDIAN HEAD | 03DP2515A | MD0003158 | FOR MOD TO ADDRESS DISCHARGES FROM FE REMOVAL FOR HUMIDIFICATION SYSTEMS | Industrial-Major | IE | 02-Aug-07 | 31-Dec-08 |
| WINEBRENNER WATER RECLAMATION FACILITY | 08DP2516 | MD0003221 | 0.6 MGD DESIGN FLOW, 0.195 AVERAGE IN 2007 | Municipal-Minor | IR | 05-Mar-10 | 31-Mar-15 |
| CRISFIELD WWTP | 10DP0688 | MD0020001 | RENEWAL - 1.0 MGD | Municipal-Major | IR | 01-Aug-10 | 31-Jul-15 |
| CHESTERTOWN WWTP | 08DP0592 | MD0020010 | FOR RENEWAL, 900,000 GPD DESIGN FLOW | Municipal-Minor | IR | 01-Sep-09 | 31-Aug-14 |
| OCEAN CITY WWTP | 09DP0596 | MD0020044 | FOR UNILATERAL MOD TO CLARIFY REPORTING REQUIREMENTS ON TKN | Municipal-Major | IR | 01-Jul-11 | 30-Jun-16 |
| INDIAN HEAD WWTP | 10DP0590 | MD0020052 | | Municipal-Minor | IR | 01-Aug-10 | 31-Jul-15 |
| U.S. NAVAL AIR STATION PATUXENT RIVER- WEBSTER FIELD ANNEX | 07DP2523 | MD0020095 | 0.045 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Jan-12 | 31-Dec-16 |
| NAVAL RESEARCH LABORATORY - CHESAPEAKE BAY DETACHMENT | 08DP2519 | MD0020168 | FOR RENEWAL, 0.06 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Aug-11 | 31-Jul-16 |
| CORPS OF ENGINEERS CHESAPEAKE CITY | 07DP2524 | MD0020206 | 400 GPD AVERAGE DISCHARGE | Municipal-Minor | IR | 01-Mar-09 | 28-Feb-14 |
| BOONSBORO WWTP | 09DP0126 | MD0020231 | FOR MOD TO INCREASE FLOW FROM 0.460 MGD TO 0.530 MGD | Municipal-Minor | IR | 01-Jan-11 | 31-Dec-15 |
| FEDERALSBURG WWTP | 08DP0595 | MD0020249 | FOR RENEWAL, 0.750 MGD DESIGN FLOW, 0.333 AVG | Municipal-Minor | IR | 01-Mar-09 | 28-Feb-14 |
| RISING SUN WWTP | 08DP0107A | MD0020265 | FOR RENEWAL, 0.275 MGD DESIGN FLOW WITH UPGRADE TO 0.670 PLANNED | Municipal-Minor | IM | 01-Feb-11 | 30-Nov-14 |
| EASTON UTILITIES - W.W.T.F. | 07DP0579 | MD0020273 | 4.0 MGD DESIGN FLOW, 2.08 AVG | Municipal-Major | IF | 01-Sep-07 | 31-Aug-12 |
| CHESAPEAKE BEACH WWTP | 05DP0587 | MD0020281 | 1.18 MGD DESIGN FLOW, 0.743 AVERAGE IN 04 | Municipal-Major | IR | 01-Nov-07 | 31-Oct-12 |
| | | | 0.28 MGD DESIGN | | | | |

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| ROCK HALL WWTP | 08DP0575 | MD0020303 | FOR RENEWAL, 505,000 GPD DESIGN FLOW, 300,000 PROJECTED FLOW | Municipal-Minor | IR | 01-Jun-09 | 31-May-14 |
| FUNKSTOWN WWTP | 07DP0169 | MD0020362 | FOR RENEWAL, 0.15 MGD DESIGN FLOW, 0.1026 AVG | Municipal-Minor | IR | 01-Jan-10 | 31-Dec-14 |
| CHESAPEAKE CITY SOUTH WWTP | 06DP0143 | MD0020397 | 0.088 MGD | Municipal-Minor | IR | 01-Mar-09 | 28-Feb-14 |
| CHESAPEAKE CITY NORTH WWTP | 06DP0155 | MD0020401 | 0.075 MGD DESIGN FLOW, 0.07 PROJECTED | Municipal-Minor | IR | 01-Mar-09 | 28-Feb-14 |
| MILLINGTON WWTP | 07DP0166 | MD0020435 | FOR RENEWAL AND MOD TO INCREASE FLOW FROM 0.105 TO 0.140 MGD | Municipal-Minor | IR | 01-May-11 | 30-Apr-16 |
| CECILTON WWTP | 12DP0111 | MD0020443 | 0.05 GPD RENEWAL WITH PLANS FOR NEW PLANT AT 0.1 MGD, SAME LOCATION | Municipal-Minor | PR | 01-May-07 | |
| TRAPPE WWTP | 10DP0104 | MD0020486 | 0.2 MGD DESIGN FLOW, 0.12 AVG. | Municipal-Minor | IR | 01-Dec-11 | 30-Nov-16 |
| DENTON WWTP | 05DP0537 | MD0020494 | 0.8 MGD DESIGN FLOW | Municipal-Minor | IF | 01-Sep-07 | 31-Aug-12 |
| LA PLATA WWTP | 08DP0518 | MD0020524 | FOR RENEWAL, 1.5 MGD DESIGN FLOW, 1.16 AVERAGE | Municipal-Major | IR | 01-Mar-10 | 28-Feb-15 |
| DELMAR WWTP | 05DP0593 | MD0020532 | 0.65 MGD DESIGN FLOW WITH PROVISION FOR EXPANSION TO 0.85 MGD | Municipal-Minor | IF | 01-Jul-07 | 30-Jun-12 |
| SUDLERSVILLE WWTP | 06DP0090A | MD0020559 | FOR RENEWAL, 75000 GPD IN SUMMER, 90000 GPD IN WINTER | Municipal-Minor | IM | 01-Sep-11 | 28-Feb-14 |
| BETTERTON WWTP | 07DP0591 | MD0020575 | FOR RENEWAL, 200,000 GPD DESIGN CAPACITY, 50,000 GPD PROJECTED FLOW | Municipal-Minor | IR | 01-Mar-11 | 29-Feb-16 |
| GALENA WWTP | 09DP0528 | MD0020605 | FOR RENEWAL OF 0.080 MGD SEWAGE TREATMENT PLANT | Municipal-Minor | IR | 01-Jul-10 | 30-Jun-15 |
| MES - PERRYVILLE WWTP | 05DP0572 | MD0020613 | 1.65 MGD DESIGN FLOW | Municipal-Major | IF | 01-Jul-07 | 30-Jun-12 |
| PRESTON WWTP | 10DP0525 | MD0020621 | FOR RENEWAL - 0.115 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Dec-10 | 30-Nov-15 |
| NEWARK WWTP | 11DP0141 | MD0020630 | 0.07 MGD DESIGN FLOW, 0.0505 AVG. | Municipal-Minor | IR | 01-Jan-12 | 31-Dec-16 |
| OAKLAND WWTP | 01DP0716A | MD0020648 | MINOR MOD TO CORRECT PERMITTEE ADDRESS, CHANGE BIOMONITORING | Municipal-Minor | IF | 01-Nov-04 | 31-Oct-09 |
| PRINCESS ANNE WWTP | 08DP0486 | MD0020656 | 1.26 MGD DESIGN | Municipal-Major | IR | 01-Nov-09 | 31-Oct-15 |

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| VIENNA WWTP | 09DP0110 | MD0020664 | PERMITTED FLOW | Municipal-Minor | IR | 01-Nov-10 | 31-Oct-15 |
| TANEYTOWN WWTP | 07DP0687 | MD0020672 | FOR RENEWAL, 1.1 MGD DESIGN FLOW, 0.85 AVERAGE | Municipal-Major | IR | 01-Aug-08 | 31-Jul-13 |
| ELKTON WWTP | 06DP0671 | MD0020681 | FOR RENEWAL, 2.7 MGD DESIGN FLOW, INCREASE TO 3.2 BY 1/1/09 | Municipal-Major | IR | 01-Mar-08 | 28-Feb-13 |
| MYERSVILLE WWTP | 08DP0124 | MD0020699 | 0.3 MGD DESIGN FLOW | Municipal-Minor | IR | 01-May-11 | 30-Apr-16 |
| NEW MARKET WWTP | 07DP0478 | MD0020729 | RENEWAL - 0.24 MGD DESIGN FLOW, 0.079 AVG, 0.177 MAX IN '07 | Municipal-Minor | IR | 01-Sep-08 | 31-Aug-13 |
| JEFFERSON WWTP | 03DP0097A | MD0020737 | MINOR MOD TO DELETE BENZIDINE MONITORING, CU FOR 1 YEAR, ADD PROGRESS REPORTING ON CU ELIMINATION | Municipal-Minor | IM | 01-Dec-05 | 30-Sep-09 |
| GRANTSVILLE WWTP | 10DP0598 | MD0020761 | FOR RENEWAL, 600,000 GPD | Municipal-Minor | IR | 01-Dec-11 | 30-Nov-16 |
| PORT DEPOSIT WWTP | 07DP0114 | MD0020796 | FOR RENEWAL, 0.150 MGD DESIGN FLOW, 0.1135 AVERAGE, UPGRADE TO 0.7 MGD | Municipal-Minor | IR | 01-Apr-08 | 31-Mar-13 |
| FREDERICK COUNTY - POINT OF ROCKS WWTP | 08DP0482 | MD0020800 | 0.230 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Nov-10 | 31-Oct-15 |
| MES - CENTREVILLE WASTEWATER TREATMENT | 06DP0116 | MD0020834 | 0.5 MGD DESIGN FLOW | Municipal-Minor | IF | 01-Jul-08 | 30-Jun-13 |
| USDA EAST-SIDE WWTP | 05DP2525 | MD0020842 | 0.62 MGD DESIGN FLOW 0.1815 AVG | Municipal-Minor | IR | 01-Mar-10 | 28-Feb-15 |
| USDA WEST-SIDE WWTP | 05DP2787 | MD0020851 | 0.2 MGD DESIGN FLOW, 0.0928 AVG | Municipal-Minor | IF | 01-Sep-06 | 31-Aug-11 |
| USDA WEST-SIDE WWTP | 11DP2787 | MD0020851 | 0.2 MGD DESIGN FLOW, 0.0928 AVG | Municipal-Minor | PR | | |
| FORT DETRICK WWTP | 08DP2527 | MD0020877 | 2.0 MGD PERMITTED FLOW | Municipal-Major | IR | 01-Jan-10 | 31-Dec-14 |
| NAVAL SUPPORT FACILITY INDIAN HEAD | 06DP2528 | MD0020885 | 0.5 MGD DESIGN FLOW, 0.42 AVG TO POTOMAC RIVER - PLANT AT BLDG 1703 | Municipal-Major | IR | 01-Sep-08 | 31-Aug-13 |
| NIH ANIMAL CENTER | 09DP2529 | MD0020931 | 0.1 MGD DESIGN FLOW, 0.08 PROJECTED | Municipal-Minor | IR | 01-Nov-10 | 31-Oct-15 |
| BRUNSWICK WWTP | 07DP0106 | MD0020958 | RENEWAL, 1.4 MGD DESIGN FLOW, 0.532 AGG, 2.211 MAX | Municipal-Major | IR | 01-Sep-10 | 31-Aug-15 |
| WSSC - DAMASCUS WASTEWATER TREATMENT PLANT | 09DP0162 | MD0020982 | FOR RENEWAL, 1.5 MGD DESIGN FLOW, 0.75 MGD AVERAGE | Municipal-Major | IR | 01-Sep-10 | 31-Aug-15 |
| FRIENDSVILLE WWTP | 08DP0514 | MD0021083 | 0.125 MGD DESIGN FLOW | Municipal-Minor | IR | 01-May-10 | 30-Apr-15 |
| ASSATEAGUE ISLAND NATIONAL SEASHORE WWTP | 10DP2530 | MD0021091 | 0.012 MGD DESIGN FLOW, 0.008 AVERAGE | Municipal-Minor | IR | 01-Oct-11 | 30-Sep-16 |
| | | | 1.0 MGD DESIGN | | | | |

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| U.S. ARMY ABERDEEN PROVING GROUND-EDGEWOOD AREA | 08DP2531 | MD0021229 | 2.8 MGD DESIGN FLOW, 0.89 AVERAGE IN 2007 | Municipal-Major | IR | 01-Jun-09 | 31-May-14 |
| CITY OF ABERDEEN - ABERDEEN AREA WWTP | 09DP2532 | MD0021237 | 2.8 MGD DESIGN FLOW, 0.828 AVERAGE | Municipal-Major | IR | 01-Jun-10 | 31-May-15 |
| WSSC - SENECA WASTEWATER TREATMENT PLANT | 09DP0156 | MD0021491 | FOR MOD TO ALLOW UV DISINFECTION | Municipal-Major | IR | 01-Oct-10 | 30-Sep-15 |
| MES - FREEDOM DISTRICT WWTP | 10DP0670 | MD0021512 | 3.5 MGD DESIGN FLOW | Municipal-Major | IR | 01-Oct-10 | 30-Sep-15 |
| WSSC - PISCATAWAY WASTEWATER TREATMENT PLANT | 07DP0667 | MD0021539 | FOR RENEWAL, 30 MDG DESIGN FLOW, 21.507 AVG | Municipal-Major | IR | 01-May-10 | 30-Apr-15 |
| BACK RIVER WWTP | 10DP0581 | MD0021555 | FOR RENEWAL, 130 MGD DESIGN FLOW | Municipal-Major | IR | 01-May-11 | 30-Apr-16 |
| ABERDEEN ADVANCED WASTEWATER TREATMENT PLANT | 07DP0128 | MD0021563 | FOR RENEWAL, FROM 4.0 MGD DESIGN FLOW, 2.02 AVG | Municipal-Major | IR | 01-Sep-08 | 31-Aug-13 |
| CITY OF SALISBURY - SALISBURY WWTP | 08DP0696 | MD0021571 | 6.8.MGD PERMITTED FLOW, INCLUDES 2 CSO OUTFALLS | Municipal-Major | IR | 01-Oct-10 | 30-Sep-15 |
| CUMBERLAND WWTP | 06DP0567 | MD0021598 | RENEWAL - 15 MGD DESIGN FLOW, 14 MGD AVERAGE | Municipal-Major | IR | 01-Mar-09 | 28-Feb-14 |
| PATAPSCO WWTP | 10DP0580 | MD0021601 | 73 MGD DESIGN FLOW | Municipal-Major | IR | 01-Oct-10 | 30-Sep-15 |
| FREDERICK CITY WWTP | 06DP0801A | MD0021610 | MOD TO APPLY E. COLI LIMITATION | Municipal-Major | IM | 01-Mar-08 | 31-Jan-13 |
| BOWIE CITY OF - WASTEWATER TREATMENT PLANT | 10DP0697 | MD0021628 | 3.3 MGD DESIGN FLOW, 2.24 AVG. | Municipal-Major | IR | 01-Aug-10 | 31-Jul-15 |
| MES - CAMBRIDGE WASTEWATER TREATMENT PLANT | 10DP0676 | MD0021636 | 8.1 MGD | Municipal-Major | IR | 01-Sep-10 | 31-Aug-15 |
| ANNE ARUNDEL COUNTY - BROADNECK WATER RECLAMATION FACILITY | 06DP0677 | MD0021644 | 6 MGD DESIGN FLOW, 5.19 AVG | Municipal-Major | IR | 01-Jun-10 | 31-May-15 |
| PATUXENT WATER RECLAMATION FACILITY | 02DP0132 | MD0021652 | FOR RENEWAL, 7.5 MGD DESIGN FLOW, 4.98 MGD AVERAGE FLOW | Municipal-Major | IF | 01-Aug-08 | 31-Jul-13 |
| ANNE ARUNDEL COUNTY - COX CREEK WATER RECLAMATION FACILITY | 07DP0698 | MD0021661 | FOR RENEWAL, 15 MGD DESIGN FLOW, 10.92 AVG | Municipal-Major | IR | 01-Jan-10 | 31-Dec-14 |
| MARLAY-TAYLOR WWTP | 07DP0711 | MD0021679 | FOR RENEWAL, 6 MGD DESIGN CAPACITY, 3.99 MGD AVERAGE FLOW | Municipal-Major | IR | 01-Feb-08 | 31-Jan-13 |
| UPPER POTOMAC RIVER COMMISSION | 95DP0230 | MD0021687 | RENEWAL - 19.23 MGD - MAJOR FACILITY | Industrial-Major | IE | 01-May-01 | 30-Apr-06 |
| UPPER POTOMAC RIVER COMMISSION | 05DP0230 | MD0021687 | RENEWAL - 19.23 MGD - MAJOR FACILITY | Industrial-Major | PR | | |
| U.S. ARMY - FORT GEORGE G. MEADE | 07DP2533 | MD0021717 | 4.5.MGD DESIGN FLOW - AT BLDG 9581 | Municipal-Major | IR | 01-Apr-08 | 31-Mar-13 |
| U.S. ARMY - FORT GEORGE G. MEADE | 12DP2533 | MD0021717 | 4.5.MGD DESIGN FLOW - AT BLDG 9581 | Municipal-Major | PR | 01-Apr-08 | |
| WSSC - PARKWAY WASTEWATER | | | FOR RENEWAL, 7.5 MGD DESIGN FLOW, 6.3 | | | | |

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| WSSC - WESTERN BRANCH WWTP | 08DP0632 | MD0021741 | AVERAGE IN 2007 | Municipal-Major | IR | 01-Oct-10 | 30-Sep-15 |
| HAVRE DE GRACE - WASTEWATER TREATMENT PLANT | 06DP0673 | MD0021750 | FOR RENEWAL WITH EXPANSION TO 2.3 MGD | Municipal-Major | IF | 01-Jan-07 | 31-Dec-11 |
| HAGERSTOWN WWTP | 05DP0788 | MD0021776 | 8 MGD DESIGN FLOW, 9.4 AVG. IN 2004 | Municipal-Major | IR | 01-Jul-08 | 30-Jun-13 |
| ANNE ARUNDEL COUNTY - ANNAPOLIS WATER RECLAMATION FACILITY | 07DP0838 | MD0021814 | FOR RENEWAL, 13 MGD DESIGN FLOW, 8.14 AVG IN 2006 | Municipal-Major | IR | 01-Aug-09 | 31-Jul-14 |
| FREDERICK COUNTY - BALLENGER CREEK WWTP | 09DP0809 | MD0021822 | FOR RENEWAL, 6.0 MGD DESIGN FLOW, 15 MGD EXPANSION PLANNED 2010. | Municipal-Major | IR | 01-Nov-11 | 31-Oct-16 |
| WESTMINSTER WWTP | 09DP0837 | MD0021831 | 5 MGD | Municipal-Major | IR | 01-Jul-10 | 30-Jun-15 |
| CHARLES COUNTY - MATTAWOMAN WWTP | 08DP0472 | MD0021865 | FOR RENEWAL, 20 MGD DESIGN FLOW, 10.63 AVERAGE | Municipal-Major | IR | 01-Feb-10 | 31-Jan-15 |
| HAMPSTEAD WWTP | 88DP0594C | MD0022446 | FOR MOD TO ADD TEMP LIMITS , INCREASE FLOW FROM 0.5 TO 0.9 MGD | Municipal-Minor | IE | 01-Feb-04 | 28-Feb-95 |
| UNION BRIDGE WWTP | 07DP0774 | MD0022454 | FOR RENEWAL, 0.2 MGD DESIGN FLOW, 0.178 AVERAGE | Municipal-Minor | IR | 01-Dec-09 | 30-Nov-14 |
| MOUNT AIRY WWTP | 10DP0641 | MD0022527 | 1.2 MGD DESIGN FLOW, 0.78 AVERAGE | Municipal-Major | IR | 01-Aug-10 | 31-Jul-15 |
| JOPPATOWNE WWTP | 08DP0675 | MD0022535 | 0.950 DESIGN FLOW | Municipal-Minor | IR | 01-Feb-09 | 31-Jan-14 |
| OXFORD WWTP | 00DP0644 | MD0022543 | FOR RENEWAL, 0.104 MGD DESIGN FLOW | Municipal-Minor | IF | 01-Jul-05 | 30-Jun-10 |
| POCOMOKE CITY WWTP | 09DP0674 | MD0022551 | FOR RENEWAL, 1.47 MGD DESIGN FLOW, 1.2 PROJECTED | Municipal-Major | IR | 01-Jan-10 | 31-Dec-14 |
| MES - NEW WINDSOR WWTP | 05DP0640 | MD0022586 | 0.094 MGD DESIGN FLOW | Municipal-Minor | IF | 01-May-07 | 30-Apr-12 |
| BERLIN WWTP | 08DP0669 | MD0022632 | FOR RENEWAL, 0.6 MGD DESIGN FLOW, 0.4 AVERAGE | Municipal-Minor | IR | 01-Feb-10 | 18-Dec-12 |
| MEADOWVIEW WWTP | 08DP0643 | MD0022641 | FOR RENEWAL | Municipal-Minor | IR | 01-Nov-08 | 31-Oct-13 |
| CRESTVIEW ESTATES WWTP | 08DP0672 | MD0022683 | FOR RENEWAL, 0.036 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Jul-09 | 30-Jun-14 |
| RICHLYN MANOR WWTP | 07DP0778 | MD0022713 | FOR RENEWAL, 90,000 GPD DESIGN FLOW | Municipal-Minor | IR | 01-Jan-09 | 31-Dec-13 |
| FREDERICK COUNTY - FOUNTAINDALE WWTP | 08DP0668 | MD0022721 | FOR RENEWAL, 0.2 MGD | Municipal-Minor | IR | 01-May-10 | 30-Apr-15 |
| HURLOCK WWTP | 06DP0645 | MD0022730 | 1.65 MGD DESIGN FLOW, 1.05 AVG | Municipal-Major | IF | 01-May-07 | 30-Apr-12 |
| MARYLAND WATER SERVICE, INC. WWTP | 07DP0713 | MD0022748 | 0.450 MGD DESIGN FLOW, .281 AVERAGE, .543 MAX - POPULATION 980? | Municipal-Minor | IR | 01-Feb-09 | 31-Jan-14 |

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| MARLBORO MEADOWS WWTP | 05DP0686A | MD0022781 | MOD TO APPLY E. COLI LIMITATION | Municipal-Minor | IM | 01-May-08 | 31-Jan-13 |
| GAITHER MANOR APARTMENTS WWTP | 07DP0779 | MD0022845 | FOR RENEWAL, 0.045 MGD DESIGN FLOW, 22000 GPD PROJECTED | Municipal-Minor | IR | 01-Jul-09 | 30-Jun-14 |
| SPRINGVIEW MOBILE HOME PARK | 10DP1036 | MD0022870 | 7000 GPD | Municipal-Minor | IR | 01-Oct-11 | 30-Sep-16 |
| LEWISTOWN SCHOOL WWTP | 08DP0730 | MD0022900 | 0.022 MGD DESIGN FLOW, 3000 GPD PROJECTED | Municipal-Minor | IR | 01-Nov-10 | 31-Oct-15 |
| HUNTER HILL APARTMENTS WWTP | 09DP0610 | MD0022926 | 0.014 MGD | Municipal-Minor | IR | 01-Oct-10 | 30-Sep-15 |
| GLEN MEADOWS RETIREMENT COMMUNITY | 08DP0792 | MD0022951 | FOR RENEWAL, 0.05 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Jan-09 | 31-Dec-13 |
| POOLESVILLE WWTP | 08DP0781 | MD0023001 | FOR RENEWAL, 0.750 MGD DESIGN FLOW, 0.609 AVERAGE | Municipal-Minor | IF | 01-Jun-09 | 31-May-14 |
| SWAN HARBOR DELL MOBILE HOME PARK | 08DP0654 | MD0023043 | FOR RENEWAL, 50,000 GPD DESIGN FLOW | Municipal-Minor | IR | 01-Sep-09 | 31-Aug-14 |
| CONCORD TRAILER PARK | 09DP0784 | MD0023060 | FOR RENEWAL, 15,000 GPD DESIGN FLOW | Municipal-Minor | IR | 03-Mar-09 | 01-Feb-14 |
| CECO UTILITIES WWTP | 08DP0783 | MD0023108 | 0.035 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Mar-09 | 28-Feb-14 |
| RAWLINGS WWTP | 07DP0739 | MD0023213 | FOR RENEWAL, 143,000 GPD DESIGN FLOW 70700 AVG | Municipal-Minor | IR | 01-Dec-07 | 30-Nov-12 |
| MOUNT SAINT MARY'S UNIVERSITY | 07DP0690 | MD0023230 | FOR RENEWAL, 0.16 MGD DESIGN FLOW, 0.084 AVG, 0.171 MAX | Municipal-Minor | IR | 01-Sep-09 | 31-Aug-14 |
| SUMMERHILL MOBILE HOME PARK WWTP | 09DP0734 | MD0023272 | FOR RENEWAL, 19000 GPD DESIGN & PROJECTED FLOW | Municipal-Minor | IR | 01-Jan-10 | 31-Dec-14 |
| NORTH HARFORD HIGH SCHOOL WWTP | 06DP0884 | MD0023281 | FOR RENEWAL, 20,000 GPD DESIGN FLOW | Municipal-Minor | IR | 01-Sep-08 | 31-Aug-13 |
| QUEENSTOWN WWTP #2 | 11DP0737 | MD0023370 | FOR NEW PLANT USING EXISTING OUTFALL, 0.6 MGD | Municipal-Minor | IR | 01-Jan-12 | 31-Dec-16 |
| PICCOWAXEN MIDDLE SCHOOL WWTP | 03DP0636 | MD0023451 | 0.0025 MGD DESIGN FLOW | Municipal-Minor | IF | 01-Jan-07 | 31-Dec-11 |
| BOHEMIA MANOR HIGH SCHOOL WWTP | 06DP0802 | MD0023469 | FOR RENEWAL, 8000 GPD DESIGN FLOW, WITH UPGRADE TO15000 | Municipal-Minor | IR | 01-Nov-08 | 31-Oct-13 |
| OCEAN PINES WASTEWATER TREATMENT PLANT | 10DP0708 | MD0023477 | 1.5 MGD PERMITTED FLOW WITH UPGRADE TO 2.3 | Municipal-Major | IR | 01-Jan-12 | 31-Dec-15 |
| QUEEN ANNE'S COUNTY - KENT NARROWS/STEVENSVILLE/GRASONVILLE WWTP | 06DP0547 | MD0023485 | 3 MGD DESIGN FLOW | Municipal-Major | IF | 01-Jun-08 | 30-May-13 |
| NAVAL SUPPORT ACTIVITY ANNAPOLIS WWTP | 07DP2534 | MD0023523 | FOR RENEWAL, 1 MGD DESIGN FLOW, 0.11 AVG | Municipal-Minor | IR | 01-Feb-10 | 31-Jan-15 |
| MES - ST. MICHAEL'S WASTEWATER | 09DP0623 | MD0023604 | FOR RENEWAL, 500,000 GPD DESIGN & PROJECTED FLOW | Municipal-Minor | IR | 01-Jun-11 | 31-Dec-15 |
| | | | 0.017 MGD DESIGN | | | | |

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| WAYSONS MOBILE COURT WWTP | 09DP0566 | MD0023647 | FLOW, 50160 PROJECTED | Municipal-Minor | IR | 01-Apr-11 | 31-Mar-16 |
| I-70 REST STOP WWTP | 07DP0650 | MD0023680 | 0.028 MGD DESIGN FLOW WITH 0.05 MGD EXPANSION ANTICIPATED IN 2008 | Municipal-Minor | IF | 01-Jul-07 | 30-Jun-12 |
| DAN-DEE MOTEL & COUNTRY INN | 08DP0607 | MD0023710 | 0.012 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Oct-09 | 30-Sep-14 |
| SOUTHERN SENIOR HIGH SCHOOL | 09DP1040 | MD0023728 | FOR RENEWAL, 6,000 GALLONS PER DAY AVERAGE PROJECTED FLOW | Municipal-Minor | IR | 01-Jun-11 | 31-May-16 |
| ELK NECK STATE PARK | 06DP0749 | MD0023833 | 0.060 MGD DESIGN FLOW | Municipal-Minor | IF | 01-Dec-07 | 30-Nov-12 |
| GREENBRIER STATE PARK | 07DP0753 | MD0023868 | FOR RENEWAL, 50000 GPD DESIGN FLOW, 25000 PROJECTED | Municipal-Minor | IR | 01-Sep-09 | 31-Aug-14 |
| EASTERN PRE-RELEASE UNIT | 05DP0764 | MD0023876 | 20,000 GPD DESIGN FLOW | Municipal-Minor | IR | 01-Aug-08 | 31-Jul-13 |
| MES - WOODSTOCK JOB CORPS WASTEWATER | 07DP0756 | MD0023906 | FOR RENEWAL, 0.05 MGD DESIGN FLOW, 0.02 PROJECTED | Municipal-Minor | IR | 01-Apr-09 | 31-Mar-14 |
| SOUTHERN MARYLAND PRE-RELEASE UNIT | 09DP0750 | MD0023914 | FOR RENEWAL, 0.02 MGD DESIGN FLOW (DEC. - FEB. ONLY) | Municipal-Minor | IR | 01-Oct-11 | 30-Sep-16 |
| VICTOR CULLEN CENTER WWTP | 07DP0752 | MD0023922 | 0.05 MGD DESIGN FLOW, .02 MGD PROJECTED | Municipal-Minor | IR | 01-Feb-11 | 31-Jan-16 |
| CHELTENHAM BOY'S VILLAGE WWTP & WTP | 08DP0755 | MD0023931 | 0.07 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Jun-10 | 31-May-15 |
| POINT LOOKOUT STATE PARK WWTP | 07DP0757 | MD0023949 | 90,000 GPD DESIGN FLOW, 20,000 GPD PROJECTED FLOW | Municipal-Minor | IR | 01-Sep-08 | 31-Aug-13 |
| MES - MARYLAND CORRECTIONAL INSTITUTE WWTP | 04DP0759 | MD0023957 | 1.6 MGD DESIGN FLOW, 1 MGD AVERAGE | Municipal-Major | IF | 01-Jan-07 | 31-Dec-11 |
| NEW GERMANY STATE PARK | 06DP0765 | MD0023981 | 0.016 MGD DESIGN FLOW, 0.005 PROJECTED | Municipal-Minor | IR | 01-Mar-08 | 28-Feb-13 |
| HARBOUR VIEW WWTP | 06DP0496 | MD0024023 | FOR RENEWAL, 65,000 GPD DESIGN FLOW | Municipal-Minor | IR | 01-May-10 | 30-Apr-15 |
| MARDELA HIGH SCHOOL WWTP | 05DP1105 | MD0024279 | FOR RENEWAL, 0.014 MGD DESIGN FLOW | Municipal-Minor | IF | 01-Sep-06 | 31-Aug-11 |
| SMITHSBURG WWTP | 03DP1029A | MD0024317 | MOD TO CHANGE FROM FECAL COLIFORM TO E. COLI METHOD | Municipal-Minor | IF | 01-Apr-06 | 31-Oct-10 |
| MARYLAND MANOR WWTP | 07DP0811 | MD0024333 | 0.090 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Jun-08 | 31-May-13 |
| ANNE ARUNDEL COUNTY - BROADWATER WATER RECLAMATION FACILITY | 06DP0813 | MD0024350 | 2 MGD DESIGN FLOW, 1.1 MGD AVG | Municipal-Major | IR | 01-Mar-10 | 28-Feb-15 |
| CHESAPEAKE COLLEGE | 05DP1064 | MD0024384 | 0.015 MGD DESIGN FLOW, 0.005 PROJECTED | Municipal-Minor | IF | 01-Nov-07 | 31-Oct-10 |
| MIDDLETOWN WWTP | 07DP0462 | MD0024406 | FOR RENEWAL, 0.250 MGD DESIGN FLOW, 0.183 AVG | Municipal-Minor | IR | 01-May-08 | 30-Apr-13 |

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| PHEASANT RIDGE MOBILE HOME PARK | 07DP1016 | MD0024546 | FOR RENEWAL. 0.1125 MGD DESIGN FLOW. 0.049 AVG | Municipal-Minor | IR | 01-Jul-09 | 30-Jun-14 |
| HANCOCK WASTEWATER LAGOON | 10DP0832 | MD0024562 | 0.380 MGD DESIGN FLOW, .359 AVERAGE | Municipal-Minor | IR | 01-Jun-11 | 31-May-16 |
| SOUTH CARROLL HIGH SCHOOL WWTP | 10DP1028 | MD0024589 | FOR RENEWAL, 0.05 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Sep-11 | 31-Aug-16 |
| HIGHLAND VIEW ACADEMY WWTP | 07DP1034 | MD0024627 | FOR RENEWAL, 0.03 MGD DESIGN FLOW, 0.008 PROJECTED | Municipal-Minor | IR | 01-May-10 | 30-Apr-15 |
| MARQUIPWARDUNITED, INC. | 06DP0346 | MD0024635 | 0.014 MGD | Municipal-Minor | IR | 01-Nov-07 | 31-Oct-12 |
| PATUXENT MOBILE ESTATES | 09DP0664 | MD0024694 | 35000 GPD | Municipal-Minor | IR | 01-Apr-11 | 31-Mar-16 |
| OLDTOWN WWTP | 07DP1004 | MD0024759 | RENEWAL, 0.04 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Sep-08 | 31-Aug-13 |
| LEONARDTOWN WWTP | 09DP0434 | MD0024767 | FOR RENEWAL, 680,000 GPD DESIGN FLOW | Municipal-Minor | IR | 01-Jan-11 | 31-Dec-15 |
| TRIUMPH INDUSTRIAL PARK WWTP | 08DP0233 | MD0024929 | FOR RENEWAL, 0.0625 MGD DESIGN FLOW, 50,000 GPD PROJECTED FLOW | Municipal-Minor | IR | 01-Mar-09 | 28-Feb-14 |
| MEARS GREAT OAK LANDING MARINA | 09DP1035 | MD0024945 | FOR RENEWAL, 14,000 GPD DESIGN & PROJECTED FLOW | Municipal-Minor | IR | 01-Feb-12 | 31-Jan-17 |
| SPRING MEADOWS WWTP | 06DP0870 | MD0024953 | 0.01 MGD DESIGN FLOW | Municipal-Minor | IF | 01-May-07 | 30-Apr-12 |
| HOMESTEAD BENJAMIN'S MOBILE ESTATES WWTP | 06DP1033 | MD0024961 | 0.040 MGD DESIGN FLOW, 0.04 PROJECTED | Municipal-Minor | IR | 01-Jun-09 | 31-May-14 |
| GREENRIDGE YOUTH CAMP | 04DP0857 | MD0024988 | 0.008 MGD DESIGN FLOW | Municipal-Minor | IF | 01-Dec-06 | 30-Nov-11 |
| WHITE ROCK WWTP | 07DP0278 | MD0025089 | 0.05 MGD DESIGN FLOW, 0.025 PROJECTED | Municipal-Minor | IR | 01-Nov-08 | 31-Jan-13 |
| FOXVILLE WWTP | 06DP2535 | MD0025119 | FOR RENEWAL, 0.045 MGD | Municipal-Minor | IF | 01-Jun-08 | 31-May-13 |
| FEDERAL SUPPORT CENTER WWTP | 06DP2542 | MD0025666 | FOR RENEWAL, 10000 GPD DESIGN FLOW, 2000 PROJECTED | Municipal-Minor | IR | 01-Jun-08 | 31-May-13 |
| MES - CHURCH HILL WASTEWATER | 04DP0869 | MD0050016 | 0.075 MGD DESIGN FLOW, 0.08 PROJECTED | Municipal-Minor | IR | 01-Aug-08 | 31-Jul-13 |
| CHARLES COUNTY - BEL ALTON WWTP | 07DP0431 | MD0050334 | FOR RENEWAL, 0.032 MGD DESIGN FLOW, 0.0226 AVG | Municipal-Minor | IR | 01-Sep-11 | 31-Aug-16 |
| BOONES MOBILE ESTATES WWTP | 06DP0191 | MD0050903 | 80,000 GPD DESIGN AND PROJECTED FLOW | Municipal-Minor | IF | 01-Feb-07 | 31-Jan-12 |
| BROADFORDING BIBLE CHURCH WWTP | 05DP1006 | MD0051373 | FOR RENEWAL, 2500 GPD DESIGN FLOW | Municipal-Minor | IF | 01-Jul-07 | 30-Jun-12 |
| TROUT RUN WWTP | 08DP1046 | MD0051497 | 0.9 MGD | Municipal-Minor | IR | 01-Oct-11 | 30-Sep-16 |
| WILLARDS WWTP | 04DP1058 | MD0051632 | 0.080 MGD DESIGN FLOW, WITH 0.2 MGD UPGRADE | Municipal-Minor | IF | 01-Feb-06 | 31-Jan-11 |
| | | | 0.08 MGD DESIGN | | | | |

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|---|---|---|---|---|---|---|---|
| ACCIDENT WWTP | 00DP1068 | MD0051721 | PER DAY PROJECTED FLOW | Municipal-Minor | IE | 01-Jan-01 | 31-Dec-05 |
| CHOPTICON HIGH SCHOOL | 09DP1077 | MD0051918 | RENEWAL - 20,000 GPD | Municipal-Minor | IR | 24-May-11 | 31-May-16 |
| NORTHEAST RIVER ADVANCED WWTP | 09DP1082 | MD0052027 | 2.0 MGD DESIGN FLOW, 0.654 AVERAGE | Municipal-Major | IR | 01-Oct-10 | 30-Sep-15 |
| NORTHERN HIGH SCHOOL - CALVERT | 10DP1092 | MD0052167 | FOR RENEWAL, 40000 GPD DESIGN FLOW, 25000 PROJECTED | Municipal-Minor | IR | 01-Aug-11 | 31-Jul-16 |
| SHARPTOWN WWTP | 10DP1093 | MD0052175 | FOR RENEWAL, 0.15 MGD MUNICIPAL WWTP | Municipal-Minor | IR | 01-Jan-12 | 31-Dec-16 |
| EWELL WWTP | 09DP1099 | MD0052230 | FOR RENEWAL, 0.065 MGD WWTP | Municipal-Minor | IR | 01-Dec-11 | 30-Nov-16 |
| TYLERTON WWTP | 09DP1100 | MD0052248 | FOR RENEWAL, 0.02 MGD WWTP | Municipal-Minor | IR | 01-Dec-11 | 30-Nov-16 |
| FAIRMOUNT WWTP | 09DP1101 | MD0052256 | 40,000 GPD DESIGN FLOW | Municipal-Minor | IR | 01-Dec-10 | 30-Nov-15 |
| CRELLIN WWTP | 10DP1106 | MD0052281 | 0.028 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Dec-11 | 30-Nov-16 |
| MORNING CHEER | 07DP1108 | MD0052299 | 0.055 MGD DESIGN FLOW WITH UPGRADE TO 0.1 | Municipal-Minor | IR | 01-Mar-08 | 28-Feb-13 |
| COLLEGE OF SOUTHERN MARYLAND | 10DP1107 | MD0052311 | FOR RENEWAL, 60,000 GPD DESIGN FLOW | Municipal-Minor | IR | 01-Apr-11 | 31-Mar-16 |
| KENNEDYVILLE WWTP | 11DP1142 | MD0052671 | 0.03 MGD WITH PROVISIONS FOR EXPANSION TO 0.06 | Municipal-Minor | IR | 01-Dec-11 | 30-Nov-16 |
| HENSON VALLEY MONTESSORI SCHOOL WWTP | 08DP1143 | MD0052680 | 0.01 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Mar-09 | 28-Feb-14 |
| CHERRY HILL WWTP | 07DP1206 | MD0052825 | 0.250 MGD DESIGN FLOW, 0.12 AVG | Municipal-Minor | IF | 01-Mar-08 | 28-Feb-13 |
| SWALLOW FALLS STATE PARK WWTP | 09DP1209 | MD0052850 | FOR RENEWAL, 0.062 MGD PERMITTED FLOW | Municipal-Minor | IR | 01-Nov-10 | 31-Oct-15 |
| FRUITLAND WWTP | 08DP1223 | MD0052990 | FOR RENEWAL, 0.8 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Jan-11 | 31-Dec-15 |
| FAHRNEY-KEEDY MEMORIAL HOME | 09DP1229 | MD0053066 | 0.05 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Aug-10 | 31-Jul-15 |
| CAMP SONRISE MOUNTAIN | 06DP1230 | MD0053074 | 7000 GPD DESIGN FLOW, 5000 GPD PROJECTED FLOW | Municipal-Minor | IR | 01-Mar-08 | 28-Feb-13 |
| MES - HOLIDAY MOBILE ESTATES WWTP | 06DP1231 | MD0053082 | 0.125 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Sep-07 | 31-Jul-12 |
| MES - HOLIDAY MOBILE ESTATES WWTP | 12DP1231 | MD0053082 | 0.125 MGD DESIGN FLOW | Municipal-Minor | PR | 01-Sep-07 | |
| CAMP SHADOWBROOK | 07DP1237 | MD0053139 | FOR RENEWAL, 4000 GPD | Municipal-Minor | IF | 01-Nov-08 | 31-Oct-13 |
| THUNDERBIRD MOTEL WWTP | 07DP1239 | MD0053155 | FOR RENEWAL, 5000 GPD DESIGN FLOW | Municipal-Minor | IR | 01-Aug-09 | 31-Jul-14 |
| MAPLE HILL WASTEWATER TREATMENT PLANT | 09DP1241 | MD0053171 | FOR RENEWAL UNDER NEW OWNER, JOHN BENJAMIN - 28,000 GPD | Municipal-Minor | IR | 01-Nov-10 | 31-Oct-15 |
| BROOK LANE PSYCHIACTRIC CENTER WWTP | 08DP1243 | MD0053198 | RENEWAL, 0.010 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Sep-11 | 31-Aug-16 |
| | | | 5000 GPD DESIGN | | | | |

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|---|---|---|---|---|---|---|---|
| FOREST GREEN COURT MOBILE HOME PARK | 06DP1252 | MD0053279 | FOR RENEWAL, 27,000 GPD | Municipal-Minor | IR | 01-Nov-07 | 31-Oct-12 |
| CLEAR SPRING WWTP | 04DP1254 | MD0053325 | 0.2 MGD DESIGN FLOW, 0.073 AVERAGE | Municipal-Minor | IF | 01-Jan-07 | 31-Dec-11 |
| LYONS CREEK MOBILE HOME ESTATE | 09DP1275 | MD0053511 | FOR RENEWAL, 70,000 GPD DESIGN FLOW | Municipal-Minor | IR | 01-Sep-09 | 31-Aug-14 |
| DEEP CREEK LAKE WWTP | 09DP1357 | MD0054348 | 1.5 MGD DESIGN FLOW | Municipal-Major | IR | 01-Jun-10 | 31-May-15 |
| DONALDSON BROWN CENTER WWTP | 07DP0251 | MD0054950 | FOR RENEWAL, 0.005 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Sep-08 | 31-Aug-13 |
| LITTLE PATUXENT WATER RECLAMATION PLANT | 06DP1421 | MD0055174 | FOR RENEWAL, 25 MGD DESIGN FLOW WITH UPGRADE TO 29 MGD BY 2/28/12 | Municipal-Major | IR | 01-Mar-08 | 28-Feb-13 |
| TWIN CITIES WWTP | 09DP1438 | MD0055352 | 0.281 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Mar-10 | 28-Feb-15 |
| OLD SOUTH MOUNTAIN INN | 08DP1440 | MD0055425 | 0.018 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Dec-09 | 30-Nov-14 |
| COLONEL RICHARDSON MIDDLE & HIGH SCHOOL WWTP | 06DP1455 | MD0055522 | FOR RENEWAL, 0.011 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Jan-09 | 31-Dec-13 |
| CHARLES COUNTY - CLIFFTON WWTP | 08DP1457 | MD0055557 | 0.07 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Jul-11 | 30-Jun-16 |
| FLINTSTONE WWTP | 07DP1465 | MD0055620 | RENEWAL, 0.045 MGD DESIGN FLOW, 0.07 PROJECTED | Municipal-Minor | IR | 01-Dec-08 | 30-Nov-13 |
| KEMPTOWN SCHOOL WWTP | 03DP1574 | MD0056481 | FOR RENEWAL, 5,000 GPD DESIGN FLOW, 2000 PROJECTED | Municipal-Minor | IR | 01-Sep-07 | 31-Aug-12 |
| KEMPTOWN SCHOOL WWTP | 10DP1574 | MD0056481 | FOR RENEWAL, 5,000 GPD DESIGN FLOW, 2000 PROJECTED | Municipal-Minor | PR | 01-Sep-07 | |
| HARFORD COUNTY - SOD RUN WASTEWATER TREATMENT PLANT | 10DP1580 | MD0056545 | 20 MGD DESIGN FLOW | Municipal-Major | IR | 01-Sep-10 | 31-Aug-15 |
| SHINE INN WWTP | 07DP1582 | MD0056553 | 5000 GPD DESIGN FLOW | Municipal-Minor | IR | 01-Apr-09 | 31-Mar-14 |
| NEW LIFE FOURSQUARE CHURCH AND SCHOOL | 08DP1633 | MD0057100 | FOR RENEWAL, 0.005 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Sep-09 | 31-Aug-14 |
| CEDAR MOBILE HOME PARK WWTP | 04DP1669 | MD0057487 | 0.015 MDG DESIGN FLOW | Municipal-Minor | IR | 01-Sep-09 | 31-Aug-13 |
| CHARLES COUNTY - SWAN POINT WWTP | 08DP1674 | MD0057525 | 0.3 MGD DESIGN FLOW 0.0618 AVERAGE IN 2007 | Municipal-Minor | IR | 01-Jan-11 | 31-Dec-15 |
| WINTERS' APARTMENTS WWTP | 05DP1683 | MD0057606 | 0.0013 MGD FROM APARTMENT DWELLINGS | Municipal-Minor | IR | 01-May-08 | 30-Apr-13 |
| JUDE HOUSE | 03DP1684 | MD0057614 | 10000 GPD DESIGN FLOW - TO REACTIVATE EXPIRED PERMIT | Municipal-Minor | HN | | |
| SHAMROCK RESTAURANT | 05DP1780 | MD0058050 | 0.01 MGD | Municipal-Minor | IR | 01-Sep-08 | 31-Aug-13 |
| WOODSBORO WWTP | 07DP1855 | MD0058661 | FOR RENEWAL, 0.250 MGD DESIGN FLOW, 0.064 AVG | Municipal-Minor | IR | 01-Dec-08 | 30-Nov-13 |
| PINEY ORCHARD WWTP | 07DP1936 | MD0059145 | 1.2 MGD DESIGN FLOW, 0.487 AVERAGE | Municipal-Minor | IR | 01-Apr-11 | 31-Mar-16 |

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|---|---|---|---|---|---|---|---|
| MONROVIA WWTP | 07DP1990 | MD0059609 | FOR RENEWAL, 0.2 MPD DESIGN FLOW, 0.085 AVG | Municipal-Minor | IR | 01-Sep-08 | 31-Aug-13 |
| HEBRON WWTP | 05DP1999 | MD0059617 | FOR RENEWAL - 0.101 MGD DESIGN FLOW, .057 AVERAGE | Municipal-Minor | IF | 01-Apr-07 | 31-Mar-12 |
| GEORGE'S CREEK WWTP | 07DP2048 | MD0060071 | 0.6 MGD DESIGN FLOW, 0.741 AVERAGE | Municipal-Minor | IR | 01-Oct-09 | 30-Sep-14 |
| PITTSVILLE WWTP | 05DP2085 | MD0060348 | 0.115 MGD DESIGN FLOW, 0.083 AVERAGE | Municipal-Minor | IF | 01-Feb-06 | 31-Jan-11 |
| LIBERTYTOWN WWTP | 08DP2108 | MD0060577 | FOR RENEWAL, 0.05 MGD DESIGN FLOW, 0.039 PROJECTED | Municipal-Minor | IR | 01-Apr-09 | 31-Mar-14 |
| BLOOMINGTON WWTP | 08DP2175 | MD0060933 | FOR MOD TO REVISE FLOW MEASUREMENT METHOD | Municipal-Minor | IR | 01-Jun-10 | 31-May-15 |
| KITZMILLER WWTP | 08DP2176 | MD0060941 | FOR RENEWAL, 0.040 MGD PERMITTED FLOW | Municipal-Minor | IR | 01-Feb-11 | 31-Jan-16 |
| GORMAN WWTP | 08DP2177 | MD0060950 | 8500 GPD PERMITTED FLOW | Municipal-Minor | IR | 01-Feb-11 | 31-Jan-16 |
| ANNE ARUNDEL COUNTY - MAYO WATER RECLAMATION FACILITY | 98DP2291 | MD0061794 | FOR RENEWAL, FROM WASTEWATER TREATMENT PLANT, 0.615 MGD DISCHARGE | Municipal-Minor | IE | 01-Apr-00 | 31-Mar-05 |
| ANTIETAM WWTP | 09DP2354 | MD0062308 | FOR RENEWAL, 0.163 MGD DESIGN FLOW, .111 MGD AVERAGE, UV DISINFECTION | Municipal-Minor | IR | 01-Dec-09 | 30-Nov-14 |
| LITTLE ORLEANS CAMPGROUND | 05DP2362 | MD0062375 | 0.02 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Sep-08 | 31-Aug-13 |
| ANNE ARUNDEL COUNTY - MARYLAND CITY WATER RECLAMATION FACILITY | 02DP2393 | MD0062596 | FOR RENEWAL, 2.5 MGD DESIGN FLOW, 1.14 MGD AVERAGE FLOW | Municipal-Major | IF | 01-Aug-08 | 31-Jul-13 |
| SHA - SIDELING HILL REST AREA WWTP & WTP | 09DP2434 | MD0062821 | 0.0125 MGD PERMITTED FLOW | Municipal-Minor | IR | 01-Jan-12 | 31-Dec-16 |
| DORSEY RUN ADVANCED WASTEWATER TREATMENT PLANT | 07DP2488 | MD0063207 | 2.0 MGD DESIGN FLOW, 1.498 MGD AVERAGE | Municipal-Major | IR | 01-Apr-09 | 31-Mar-14 |
| CROWN SPRORTS CENTER | 10DP2503 | MD0063282 | | Municipal-Minor | IR | 01-Feb-12 | 31-Jan-17 |
| CONOCOCHEAGUE WWTP | 03DP2563 | MD0063509 | FOR RENEWAL, 4.1 MGD DESIGN FLOW, 1.5 AVG | Municipal-Major | IF | 01-Jan-07 | 31-Dec-11 |
| CELANESE WWTP | 09DP2625 | MD0063878 | FOR MOD TO CHANGE FROM FECAL COLIFORM TO E-COLI TESTING | Municipal-Major | IR | 01-Sep-10 | 31-Aug-15 |
| SANDY HOOK WWTP | 07DP2728 | MD0064530 | RENEWAL, 0.021 MGD | Municipal-Minor | IR | 01-Sep-09 | 31-Aug-14 |
| BRETTON WOODS RECREATION CENTER | 09DP2754 | MD0064777 | NPDES | Municipal-Minor | IR | 01-Feb-12 | 31-Jan-17 |
| HIGHLANDS WWTP | 08DP2797 | MD0065145 | 0.037 MGD DESIGN FLOW, 0.04 PROJECTED | Municipal-Minor | IF | 01-Nov-08 | 31-Oct-13 |
| B F S TRUCKSTOP | 09DP2807 | MD0065234 | | Municipal-Minor | IR | 01-Aug-11 | 31-Jul-16 |

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|---|---|---|---|---|---|---|---|
| NATIONAL WILDLIFE VISITOR CENTER | 02DP2831 | MD0065358 | FOR RENEWAL, 6700 GPD DESIGN FLOW, 300 GPD PROJECTED | Municipal-Minor | IF | 01-Oct-04 | 30-Sep-09 |
| MILL BOTTOM WWTP | 08DP2841 | MD0065439 | 0.10 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Nov-10 | 31-Oct-15 |
| BIERS LANE WWTP | 04DP2883A | MD0065749 | FOR MOD TO CHANGE FROM FECAL COLIFORM TO E-COLI MONITORING | Municipal-Minor | IF | 01-Apr-06 | 30-Sep-10 |
| HAPPY HILLS CAMPGROUND WWTP | 09DP2886 | MD0065757 | FOR RENEWAL | Municipal-Minor | IR | 01-May-10 | 30-Apr-15 |
| RUNNYMEDE WWTP | 08DP2912 | MD0065927 | FOR RENEWAL, 0.02 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Jul-10 | 30-Jun-15 |
| STEVENSON UNIVERSITY WASTEWATER TREATMENT PLANT | 10DP2921 | MD0066001 | FOR RENEWAL, 0.0071 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Mar-11 | 29-Feb-16 |
| MES - EASTERN CORRECTIONAL INSTITUTION WTP & WWTP | 09DP3027 | MD0066613 | FOR WWTP, 0.48 MGD DESIGN FLOW, 0.448 AVERAGE | Municipal-Minor | IR | 01-Mar-12 | 28-Feb-17 |
| PLEASANT VALLEY WWTP | 09DP3044 | MD0066745 | FOR RENEWAL, 0.019 MGD DISCHARGE VOLUME | Municipal-Minor | IR | 01-Oct-09 | 30-Sep-14 |
| TOLCHESTER WWTP | 06DP3105 | MD0067202 | 0.265 MGD DESIGN FLOW, 0.105 AVG | Municipal-Minor | IR | 01-Apr-08 | 31-Mar-13 |
| THE JEFFERSON SCHOOL | 07DP3160 | MD0067521 | FOR RENEWAL, 0.018 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Dec-08 | 30-Nov-13 |
| KUNZANG ODSAL PALYUL CHANGCHUB CHOLING | 06DP3163 | MD0067539 | 3100 GPD DESIGN FLOW, 2500 GPD PROJECTED TO CONSTRUCTED WETLAND | Municipal-Minor | IR | 01-Dec-07 | 30-Nov-12 |
| SILVER OAK ACADEMY | 06DP3172 | MD0067571 | 0.025 MGD DESIGN FLOW | Municipal-Minor | IF | 01-Dec-06 | 30-Nov-11 |
| MIDDLETOWN EAST WWTP | 08DP3182 | MD0067628 | 0.350 MGD DESIGN FLOW, 0.155 AVERAGE IN 2007 | Municipal-Minor | IR | 01-May-10 | 30-Apr-15 |
| HYATTSTOWN WWTP | 01DP3200 | MD0067768 | FOR RENEWAL, 20000 GPD DESIGN & PROJECTED FLOW | Municipal-Minor | IE | 01-Sep-04 | 31-Aug-09 |
| CEDAR RIDGE CHILDREN'S HOME & SCHOOL | 08DP3229 | MD0067881 | RENEWAL, .010 MGD | Municipal-Minor | IR | 01-Jun-09 | 31-May-14 |
| GLEN ARM WWTP | 11DP3235 | MD0067903 | 0.005 MGD | Municipal-Minor | IR | 01-Jan-12 | |
| BARTON BUSINESS PARK WWTP | 08DP3402 | MD0068896 | 0.05 MGD DESIGN FLOW | Municipal-Minor | IR | 01-Jun-11 | 31-Mar-14 |
| TRACEY'S ELEMENTARY SCHOOL | 06DP3535 | MD0069582 | 4000 GPD | Municipal-Minor | IF | 01-Jan-07 | 31-Dec-11 |
| CINNAMON WOODS WWTP | 07DP2599 | MD0069949 | 0.099 MGD DESIGN FLOW, 0.040 PROJECTED | Municipal-Minor | IR | 01-Dec-08 | 30-Nov-13 |
| TRI-TOWNS INDUSTRIAL PARK WWTP | 07DP2131 | MD0070530 | FOR RENEWAL - 0.003 MGD PLANT IS ON STANDBY STATUS | Municipal-Minor | IR | 01-Sep-08 | 31-Aug-13 |
| 33 STAHL POINT, LLC | 09DP3278 | MD0068101 | RENEWAL UNDER NEW OWNER, 2000 GPD PLANT ON STANDBY | WMA2 | NR | 01-Mar-12 | |
| WORTON - BUTLERTOWN WWTP | 00DP2109 | MD0060585 | FOR RENEWAL, 150,000 GPD | WMA2 | XR | 01-Mar-04 | 28-Feb-09 |

# APPENDIX C

## SAS Programs Used to Compile, Verify, and Edit the MDPS Data

**MDPSYYYY.SAS**

```
*******************************************************************************
LIBNAME PS  'H:\USERS\PPAPALI\MDPS';
LIBNAME IND 'H:\USERS\PPAPALI\MDPS2011\IND2011';
LIBNAME MIN 'H:\USERS\PPAPALI\MDPS2011\min2011';
LIBNAME MAJ 'H:\USERS\PPAPALI\MDPS2011\MAJ2011';
LIBNAME STP 'H:\USERS\PPAPALI\mdps02\STP';

/*OPTIONS CC=FORTRAN;*/

DATA munFY11;
SET  MAJ.majFY11 MAJ.BminFY11 min.minFY11;

IF MONTH=1 OR MONTH=3 OR MONTH=5 OR MONTH=7 OR MONTH=8 OR MONTH=10 OR MONTH=12
THEN TFLOW=FLOW*31;
IF MONTH=4 OR MONTH=6 OR MONTH=9 OR MONTH=11 THEN TFLOW=FLOW*30;
IF MONTH=2 THEN TFLOW=FLOW*28;
/*
IF NPDES='MD0020842' AND DISCH_PT='002A' THEN DISCH_PT='001A';
IF NPDES= 'MD0020851' AND DISCH_PT='002A' THEN DISCH_PT='001A';
IF NPDES='MD0023477' AND DISCH_PT='001B' THEN DISCH_PT='001A';
*/
PROC SORT;
BY NPDES DISCH_PT;

PROC MEANS NOPRINT SUM;
VAR TFLOW;
BY NPDES DISCH_PT;
OUTPUT OUT=SUMS SUM=;

DATA TYPE(KEEP=NPDES DISCH_PT TFLOW);
SET SUMS;

PROC SORT;
BY NPDES DISCH_PT;


DATA munFY11;
MERGE munFY11 TYPE;
BY NPDES DISCH_PT;


******** ONLY 10 MOST SIGNIFICANT INDUSTRIAL PLANTS CONTRIBUTOR WERE INCLUDED;
```

```
DATA indFY11;
SET IND.indFY11;



*TYPE='IND';

PROC SORT;
BY NPDES DISCH_PT;



DATA MDPSFY11;
SET munFY11 indFY11 ;

PROC SORT;
BY NPDES DISCH_PT;


DATA MDPS;
SET MDPSFY11;

/*IF NPDES='DC0021199' THEN DO;
BASIN='WASHINGTON METRO AREA';
CODE ='02-14-02-00';
SUBASIN='UPPER TIDAL AREA';
COUNTY='D.C.';
FALLINE='B';
TYPE='MAJ';
END;
*/
PROC SORT;
BY NPDES DISCH_PT;


DATA CHECK;
SET  MDPS;

PROC MEANS NOPRINT SUM;
BY NPDES DISCH_PT;
OUTPUT OUT=SUMS SUM=;

DATA PRINT;
SET SUMS;

IF _FREQ_ NE 12 THEN OUTPUT;
ELSE DELETE;

PROC PRINT NOOBS;
VAR NPDES DISCH_PT  _FREQ_;
  TITLE    'MIssing or duplicated records to be verified';
  Title2  '  ';


DATA STP1;
SET  STP.STPINFOT;
```

```
*IF NPDES = 'MD0000981' THEN DISCH_PT='001A';
*IF NPDES = 'MD0003221' THEN DISCH_PT='001A';

PROC SORT;
BY NPDES;

DATA MDPS0(KEEP=NPDES DISCH_PT NAME YEAR MONTH FLOW FL_F BOD5 BO_F TSS TS_F
          DO DO_F COD COD_F TOC TOC_F NH3 NH_F TON ON_F TKN TK_F
          NO23 NO_F TN TN_F PO4 PO_F TP TP_F CODE COUNTY FALLINE
          TYPE N_COORD LAT_D LAT_M LAT_S E_COORD LONG_D LONG_M
          LONG_S CODE BASIN SUBASIN STREAM TR_PROC);

MERGE MDPS STP1;
BY NPDES ;

PROC SORT;
BY NPDES DISCH_PT MONTH;


DATA MDPSFY11A(DROP=COMN COMD COUNTYD FALLINED
          TYPED N_COORDD LAT_DD LAT_MD LAT_SD E_COORDD LONG_DD LONG_MD
          LONG_SD CODED BASIND SUBASIND STREAMD TR_PROCD);
RETAIN COMN COMD COUNTYD FALLINED
          TYPED N_COORDD LAT_DD LAT_MD LAT_SD E_COORDD LONG_DD LONG_MD
          LONG_SD CODED BASIND SUBASIND STREAMD TR_PROCD;
SET MDPS0;

IF NPDES = COMN AND DISCH_PT = COMD THEN DO;
COUNTY = COUNTYD;
FALLINE = FALLINED;
TYPE = TYPED;
N_COORD = N_COORD ;
LAT_D = LAT_DD ;
LAT_M = LAT_MD;
LAT_S = LAT_SD;
E_COORD =E_COORD ;
LONG_D =LONG_DD;
LONG_M =LONG_MD;
LONG_S = LONG_SD ;
CODE = CODED;
BASIN = BASIND;
SUBASIN = SUBASIND;
STREAM = STREAMD;
TR_PROC =TR_PROCD;
END;
ELSE DO;

COMN=NPDES;
COMD=DISCH_PT;
COUNTYD = COUNTY;
FALLINED = FALLINE;
TYPED = TYPE;
N_COORDD = N_COORD ;
LAT_DD = LAT_D ;
LAT_MD = LAT_M;
```

```
LAT_SD = LAT_S;
E_COORDD =E_COORD ;
LONG_DD =LONG_D;
LONG_MD =LONG_M;
LONG_SD = LONG_S ;
CODED = CODE;
BASIND = BASIN;
SUBASIND = SUBASIN;
STREAMD = STREAM;
TR_PROCD =TR_PROC;
END;

/*IF YEAR=. THEN OUTPUT;*/

IF YEAR=. THEN DELETE;

DATA MDPSFY11(DROP=CHAR);
SET MDPSFY11A;

CHAR=SUBSTR(CODE,1,8);
IF CHAR='00-02-02' OR CHAR='00-13-01' THEN DELETE;
/* IF WE WANT TO EXCLUDE TWO MD'S SUBASINS NOT DRAIN TO THE BAY WE SHOULD
 SUBSTITUDE 00 TO 05 AND SECOND 00 TO 02 */

**********************************************************************
THIS PART OF THE PROGRAM ADDED TO PERFORM A FEW EDITING AND/OR
CORRECTION RELATED TO THE RECORDS WITH ERROR FOR EXAMPLE WHEN PO4 > TP....
**********************************************************************;

DATA EDIT1;
SET  MDPSFY11;


IF NPDES='MD0065439' AND DISCH_PT='001A' THEN DO;
TYPE='MIN';
BASIN='MONOCACY RIVER';
SUBASIN='MIDDLE POTOMAC RIVER AREA';
STREAM='BUSH CREEK';
CODE='02-14-03-03';
COUNTY='FRED';
LAT_D=39;
LAT_M=12;
LAT_S=36;
LONG_D=77;
LONG_M=06;
LONG_S=36;
E_COORD='390525';
N_COORD='171336';
FALLINE='A';
NAME='MILL BOTTOM';

TR_PROC='NEW@1998';
END;


IF NPDES='MD0066613' AND DISCH_PT='001A' THEN DO;
```

```
TYPE='MIN';
BASIN='TANGIER SOUND';
SUBASIN='POCOMOKE RIVER AREA';
STREAM='MANOKIN RIVER';
CODE='02-13-02-06';
COUNTY='SOME';
E_COORD='538635';
N_COORD='48205';
LAT_D=38;
LAT_M=05;
LAT_S=24;
LONG_D=75;
LONG_M=25;
LONG_S=12;
FALLINE='B';
NAME='EASTERN CORRECTIONALINSTITUTION';
TR_PROC='NEW@1998';
END;


IF NPDES='MD0067521' AND DISCH_PT='001A' THEN DO;
TYPE='MIN';
BASIN='CATOCTIN CREEK';
SUBASIN='MIDDLE POTOMAC RIVER AREA';
STREAM='MIDDLE POTOMAC RIVER';
CODE='02-14-03-05';
COUNTY='FRED';
E_COORD='370656';
N_COORD='170275';
LAT_D=39;
LAT_M=12;
LAT_S=00;
LONG_D=77;
LONG_M=20;
LONG_S=24;
FALLINE='A';
NAME='SHEPPARD PRATT WESTERN MIDDLE SCHOOL';
TR_PROC='NEW@1998';
END;


IF NPDES='MD0066001' AND DISCH_PT='001A' THEN DO;
TYPE='MIN';
BASIN='JONES FALLS';
SUBASIN='PATAPSCO RIVER AREA';
STREAM='PATAPSCO RIVER';
CODE='02-13-09-04';
COUNTY='BALT';
E_COORD='450091';
N_COORD='175930';
LAT_D=39;
LAT_M=15;
LAT_S=00;
LONG_D=76;
LONG_M=25;
LONG_S=12;
```

```
FALLINE='B';
NAME='VILLA JULIE COLLEGE';

TR_PROC='NEW@1998';
END;

IF NPDES='MD0065749' AND DISCH_PT='001A' THEN DO;
TYPE='MIN';
BASIN='POTOMAC RIVER';
SUBASIN='LOWER POTOMAC RIVER AREA';
STREAM='NORTH BRANCH';
CODE='02-14-00-02';
COUNTY='ALLE';
E_COORD='270643';
N_COORD='182384';
LAT_D=39;
LAT_M=18;
LAT_S=00;
LONG_D=78;
LONG_M=30;
LONG_S=00;
FALLINE='A';
NAME='BIERS LANE';

TR_PROC='NEW@1998';
END;

IF NPDES='MD0003158' AND DISCH_PT='008A' OR DISCH_PT='021A' OR DISCH_PT='025A' OR
DISCH_PT='028A' OR DISCH_PT='040A' OR DISCH_PT='077A' OR DISCH_PT='055A' OR DISCH_PT='079A' OR DISCH_PT='084A' OR
DISCH_PT='090A'
OR DISCH_PT='080A' THEN DO;

TYPE='IND';
BASIN='LOWER POTOMAC RIVER';
SUBASIN='MIDDLE TIDAL AREA';
STREAM='POTOMAC R/MATTAWOMAN';
CODE='02-14-00-02';
COUNTY='CHAR';
E_COORD='746400';
N_COORD='273186';
LAT_D=38;
LAT_M=35;
LAT_S=00;
LONG_D=78;
LONG_M=30;
LONG_S=00;
FALLINE='B';
NAME='INDIAN HEAD NOS';
END;

/* New facilities added in 2000 for 1999 data*/
IF NPDES='MD0065757' AND DISCH_PT='001A' THEN DO;
TYPE='MIN';
BASIN='UPPER POTOMAC RIVER';
SUBASIN='POTOMAC RIVER';
STREAM='UT-POTOMAC RIVER';
```

```
CODE='02-14-05-08';
COUNTY='WASH';
E_COORD='293088';
N_COORD='222132';
LAT_D=39;
LAT_M=39;
LAT_S=40;
LONG_D=78;
LONG_M=14;
LONG_S=45;
FALLINE='A';
NAME='HAPPY TRAILS CAMPGROUND';

TR_PROC='NEW@1999';
END;

IF NPDES='MD0066745' AND DISCH_PT='001A' THEN DO;
TYPE='MIN';
BASIN='UPPER POTOMAC RIVER';
SUBASIN='DOUBLE PIPE CREEK';
STREAM='BEAR BRANCH';
CODE='02-14-03-04';
COUNTY='CARR';
E_COORD='395898';
N_COORD='218720';
LAT_D=39;
LAT_M=38;
LAT_S=13;
LONG_D=77;
LONG_M=02;
LONG_S=52;
FALLINE='A';
NAME='PLESANT VALLEY';

TR_PROC='NEW@1999';
END;

IF NPDES='MD0067571' AND DISCH_PT='001A' THEN DO;
TYPE='MIN';
BASIN='UPPER POTOMAC RIVER';
SUBASIN='DOUBLE PIPE CREEK';
STREAM='UT-BEAR BRANCH';
CODE='02-14-03-04';
COUNTY='CARR';
E_COORD='382512';
N_COORD='215377';
LAT_D=39;
LAT_M=36;
LAT_S=24;
LONG_D=77;
LONG_M=12;
LONG_S=13;
FALLINE='A';
NAME='BOWLING BROOK PREPARATORY SCHOOL';

TR_PROC='NEW@1999';
```

```
END;

IF NPDES='MD0067539' AND DISCH_PT='001A' THEN DO;
TYPE='MIN';
BASIN='MIDDLE POTOMAC RIVER';
SUBASIN='POTOMAC RIVER';
STREAM='BROAD RUN';
CODE='02-14-02-02';
COUNTY='MONT';
E_COORD='366112';
N_COORD='157329';
LAT_D=39;
LAT_M=05;
LAT_S=00;
LONG_D=77;
LONG_M=23;
LONG_S=30;
FALLINE='A';
NAME='KUNZANG ODSAL PALGUL BHANGCHUB CHOLING';

TR_PROC='NEW@1999';
END;

IF NPDES='MD0065358' AND DISCH_PT='001A' THEN DO;
TYPE='MIN';
BASIN='PATUXENT RIVER';
SUBASIN='LITTLE PATUXENT RIVER';
STREAM='BROAD RUN';
CODE='02-13-11-04';
COUNTY='PRIN';
E_COORD='419393';
N_COORD='158051';
LAT_D=39;
LAT_M=05;
LAT_S=25;
LONG_D=76;
LONG_M=46;
LONG_S=33;
 FALLINE='A';
NAME='NATIONAL WILDLIFE VISTOR CENTER';

TR_PROC='NEW@1999';
END;

IF NPDES='MD0067857' AND DISCH_PT='002A' THEN DO;
TYPE='IND';
BASIN='CHOPTANK RIVER';
SUBASIN='TUCKAHOE CREEK';
STREAM='';
CODE='02-13-04-05';
COUNTY='TALB';
E_COORD='';
N_COORD='';
LAT_D=38;
LAT_M=52;
LAT_S=47;
```

```
LONG_D=75;
LONG_M=59;
LONG_S=27;
FALLINE='B';
NAME='ALLEN FAMILY FOODS';

TR_PROC='NEW@1999';
END;

 IF NPDES='MD0059609'  THEN DO;
TYPE='MIN';
BASIN=' ';
SUBASIN='LOWER MONOCACY RIVER';
STREAM='';
CODE='02-14-03-02';
COUNTY='FRED';
E_COORD='';
N_COORD='';
LAT_D=39;
LAT_M=22;
LAT_S=15;
LONG_D=77;
LONG_M=17;
LONG_S=00;
FALLINE='';
NAME='MONROVIA';

TR_PROC='NEW@2000';
END;

IF NPDES='MD0067628' AND DISCH_PT='001A' THEN DO;
TYPE='MIN';
BASIN='';
SUBASIN='CATOCTIN CREEK';
STREAM='CATOCTIN CREEK';
CODE='02-14-03-05';
COUNTY='FRED';
E_COORD='';
N_COORD='';
LAT_D=39;
LAT_M=26;
LAT_S=15;
LONG_D=77;
LONG_M=31;
LONG_S=14;
FALLINE='';
NAME='MIDDLETOWN-EAST';

TR_PROC='NEW@2001';
END;

IF NPDES='MD0001201' AND DISCH_PT='002' OR NPDES='MD0001201' AND
DISCH_PT='012' THEN DO;

TYPE='IND';
BASIN='PATAPSCO RIVER';
```

```
SUBASIN='BEAR CREEK';
STREAM=' BALTIMORE HARBOR';
CODE='02-13-09-03';
COUNTY='BALT';
E_COORD='942.2';
N_COORD='591.8';
LAT_D=39;
LAT_M=21;
LAT_S=33;
LONG_D=76;
LONG_M=22;
LONG_S=14;
FALLINE='B';
NAME='BETHELEHEM STEEL';
TR_PROC='';
END;


IF NPDES='MD0020231' THEN DO;

TYPE='MIN';
BASIN='UPPER POTOMAC RIVER';
SUBASIN='ANIETAM CREEK';
STREAM='UT-LITTLE ANTIETAM CR';
CODE='02-14-05-02';
COUNTY='WASH';
E_COORD='609500';
N_COORD='607900';
LAT_D=39;
LAT_M=30;
LAT_S=02;
LONG_D=76;
LONG_M=40;
LONG_S=30;
FALLINE='A';
NAME='BOONSBORO';
TR_PROC='LG ';
END;

IF NPDES='MD0020532' THEN DO;

TYPE='MAJ';
BASIN='NATICOKE RIVER';
SUBASIN='WICOMICO HEADWATER';
STREAM='WOOD CREEK';
CODE='02-13-03-04';
COUNTY='WICO';
E_COORD='1209400';
N_COORD='219900';
LAT_D=38;
LAT_M=25;
LAT_S=42;
LONG_D=75;
LONG_M=34;
LONG_S=15;
FALLINE='B';
```

```
NAME='DELMAR';
TR_PROC='TF+C/F';
END;


IF NPDES='MD0022730' THEN DO;

TYPE='MAJ';
BASIN='NATICOKE RIVER';
SUBASIN='MARSHYHOPE CREEK';
STREAM='WRIGHTS BRANCH';
CODE='02-13-03-06';
COUNTY='DORC';
E_COORD='1131200';
N_COORD='288000';
LAT_D=38;
LAT_M=40;
LAT_S=07;
LONG_D=75;
LONG_M=50;
LONG_S=0;
FALLINE='B';
NAME='HURLOCK';
TR_PROC='LG';
END;
IF NPDES='MD0022748' THEN DO;

TYPE='MIN';
BASIN='NORTH BRANCH POTOMAC';
SUBASIN='LOWER NORTH BRANCH';
STREAM='UT-N.BRANCH POTOMAC';
CODE='02-14-10-01';
COUNTY='ALLE';
E_COORD='280700';
N_COORD='637100';
LAT_D=39;
LAT_M=34;
LAT_S=6;
LONG_D=78;
LONG_M=50;
LONG_S=31;
FALLINE='B';
NAME='MARYLAND WATER SERVICE';
TR_PROC='LG';
END;

IF NPDES='MD0052825' THEN DO;
TYPE='MIN';
BASIN='ELK RIVER';
SUBASIN='LITTLE ELK CREEK';
STREAM='UT-LITTLE ELK CREEK';
CODE='02-13-06-05';
COUNTY='CECI';
E_COORD='1121700';
N_COORD='668700';
LAT_D=39;
```

```
LAT_M=39;
LAT_S=50;
LONG_D=75;
LONG_M=51;
LONG_S=27;
FALLINE='B';
NAME='CHERRY HILL';
TR_PROC='S/SF';
END;

IF NPDES='MD0063509' THEN DO;
TYPE='MAJ';
BASIN='UPPER POTOMAC RIVER';
SUBASIN='CONOCOCHEAGUE CREEK';
STREAM='CONOCOCHEAGUE CREEK';
CODE='02-14-05-04';
COUNTY='WASH';
E_COORD='570100';
N_COORD='652200';
LAT_D=39;
LAT_M=37;
LAT_S=17;
LONG_D=77;
LONG_M=48;
LONG_S=58;
FALLINE='A';
NAME='CONOCOCHEAGUE';
TR_PROC='';
END;

IF NPDES='MD0065358' THEN DO;
TYPE='MIN';
BASIN='PATUXENT RIVER';
SUBASIN='LITTLE PATUXENT RIVER';
STREAM='BROAD RUN';
CODE='02-13-11-04';
COUNTY='PRIN';
E_COORD='39525';
N_COORD='764633';
LAT_D=39;
LAT_M=52;
LAT_S=5;
LONG_D=76;
LONG_M=46;
LONG_S=33;
FALLINE='A';
NAME='NATIONAL WILDLIFE VISITOR CENTER';
TR_PROC='NEW@1999';
END;

IF NPDES='MD0067628' THEN DO;
TYPE='MIN';
BASIN='CATOCTIN CREEK';
SUBASIN='CONE BRANCH';
STREAM='HOLLOW ROAD CREEK';
CODE='02-14-03-05';
```

```
COUNTY='';
E_COORD='';
N_COORD='';
LAT_D=39;
LAT_M=26;
LAT_S=15;
LONG_D=77;
LONG_M=31;
LONG_S=14;
FALLINE='';
NAME='MIDDLETOWN WWTP';
TR_PROC='';
END;

IF NPDES='MD0067903' THEN DO;
TYPE='MIN';
BASIN='GUNPOWDER RIVER';
SUBASIN='LOWER GUNPOWDER FALLS';
STREAM='UN-TRIB TO LONG GREEN CREEK';
CODE='02-13-08-02';
COUNTY='BALT';
E_COORD='';
N_COORD='';
LAT_D=39;
LAT_M=27;
LAT_S=35;
LONG_D=76;
LONG_M=29;
LONG_S=45;
FALLINE='';
NAME='GLEN ARM MAINTENANCE WWTP';
TR_PROC='';
END;


IF NPDES='MD0023361' THEN DO;
TYPE='MIN';
BASIN='';
SUBASIN='';
STREAM='';
CODE='02-14-01-01';
COUNTY='';
E_COORD='';
N_COORD='';
LAT_D=38;
LAT_M=26;
LAT_S=02;
LONG_D=76;
LONG_M=58;
LONG_S=58;
FALLINE='';
NAME='AT&T FAULKNER';
TR_PROC='';
END;

IF NPDES='MD0067881' THEN DO;
```

```
TYPE='MIN';
BASIN='';
SUBASIN='';
STREAM='';
CODE='02-14-05-04';
COUNTY='';
E_COORD='';
N_COORD='';
LAT_D=38;
LAT_M=10;
LAT_S=48;
LONG_D=76;
LONG_M=31;
LONG_S=25;
FALLINE='';
NAME='CEDAR RIDGE';
TR_PROC='';
END;

IF NPDES='MD0060739' THEN DO;
TYPE='MIN';
BASIN='';
SUBASIN='';
STREAM='';
CODE='02-14-10-01';
COUNTY='';
E_COORD='';
N_COORD='';
LAT_D=39;
LAT_M=27;
LAT_S=39;
LONG_D=76;
LONG_M=00;
LONG_S=20;
FALLINE='';
NAME='TRI-TOWNS INDUSTRIAL PARK';
TR_PROC='';
END;

IF NPDES='MD0053201' THEN DO;
TYPE='MIN';
BASIN='';
SUBASIN='';
STREAM='';
CODE='02-14-01-08';
COUNTY='';
E_COORD='';
N_COORD='';
LAT_D=38;
LAT_M=27;
LAT_S=01;
LONG_D=76;
LONG_M=59;
LONG_S=25;
FALLINE='';
NAME='RELAX INN';
```

```
TR_PROC='';
END;

IF NPDES='MD0056553' THEN DO;
TYPE='MIN';
BASIN='';
SUBASIN='';
STREAM='';
CODE='02-14-01-06';
COUNTY='';
E_COORD='';
N_COORD='';
LAT_D=38;
LAT_M=24;
LAT_S=23;
LONG_D=76;
LONG_M=57;
LONG_S=07;
FALLINE='';
NAME='SHINE INN';
TR_PROC='';
END;

IF NPDES='MD0062375' THEN DO;
TYPE='MIN';
BASIN='';
SUBASIN='';
STREAM='';
CODE='02-14-05-11';
COUNTY='';
E_COORD='';
N_COORD='';
LAT_D=39;
LAT_M=37;
LAT_S=40;
LONG_D=78;
LONG_M=23;
LONG_S=34;
FALLINE='';
NAME='LITTLE ORLEANS CAMP';
TR_PROC='';
END;

 IF NPDES='MD0063282' THEN DO;
TYPE='MIN';
BASIN='';
SUBASIN='';
STREAM='';
CODE='02-13-03-01';
COUNTY='';
E_COORD='';
N_COORD='';
LAT_D=38;
LAT_M=18;
LAT_S=07;
LONG_D=75;
```

```
LONG_M=37;
LONG_S=40;
FALLINE='';
NAME='HEARNE-MEADOWS LLC';
TR_PROC='';
END;

IF PO4>TP THEN PO4=TP;



DATA  EDIT2;
 SET  EDIT1;

RENAME TOC_F=TC_F COD_F=CO_F;



DATA  PS.FY11ALL;
 SET  EDIT2;
if flow ne 0 then do;

 /*if NPDES='MD0020044' OR NPDES='MD0020362' OR NPDES='MD0020427' OR NPDES='MD0020435'
 OR NPDES='MD0023043' OR NPDES='MD0020449' THEN DO;*/

/*
IF NH3=. AND TKN=. AND TN=. THEN DO;
NH3=13.51; TON=2.96; TKN=16.47; NO23=1.53; TN=18.00; END;
IF PO4=. AND TP=. THEN DO;
PO4=2.52; TP=3.00; END;*/


END;

*end;



 /*EDIT DONE FOR 2001DATA*/
/*
if npdes='MD0003158' AND DISCH_PT='025A' THEN DO;
NH3=.;TON=.;TKN=.;NO23=.; TN=.; PO4=.; TP=.;
END;
IF NPDES='MD0003158' AND DISCH_PT='082A' THEN DO;
NH3=.; TON=.;TKN=.;NO23=.;TN=.;PO4=.;TP=.;  END;
IF NPDES='MD0003158' AND DISCH_PT='010A' THEN DO;
NH3=.; TON=.;TKN=.;NO23=.;TN=.;PO4=.;TP=.;  END;
 IF NPDES='MD0003158' AND DISCH_PT='018A' THEN DO;
PO4=.;TP=.;  END;
IF NPDES='MD0003158' AND DISCH_PT='021A' THEN DO;
PO4=.;TP=.;  END;
IF NPDES='MD0003158' AND DISCH_PT='085A' THEN DO;
;PO4=.;TP=.;  END;
IF NPDES='MD0003158' AND DISCH_PT='086A' THEN DO;
PO4=.;TP=.;  END;*/
```

```
/*
if NPDES='MD0021831' AND TP=21.42 THEN DO;
TP=.89;END; */



/*
IF NPDES='MD0020842' AND DISCH_PT='001A' THEN DISCH_PT='002A';
IF NPDES= 'MD0020851' AND DISCH_PT='001A' THEN DISCH_PT='002A';
IF NPDES='MD0023477' AND DISCH_PT='001A' THEN DISCH_PT='001B';*/
/*if npdes='MD0022608' AND DISCH_PT='001A' THEN DELETE;
if npdes='MD0021679' AND MONTH=7 THEN TP=1.26;*/

/*CHANGE TO GROUND WATER FROM 1992 */
/*ABOVE EDIT DONE IN 1999 FOR 1998 DATA BY PRIYA*/

PROC CONTENTS;
PROC PRINT;
 *VAR NPDES DISCH_PT YEAR MONTH FLOW BOD5 TSS DO NH3 TON TKN NO23 TN PO4 TP COD TOC
 *FL_F BO_F TS_F DO_F NH_F ON_F TK_F NO_F TN_F PO_F TP_F;

 TITLE1 '  ';
 TITLE2  'MARYLAND ACTIVE WWTP PLANTS IN 2010';


 RUN;
```

## MAJYYYY.SAS

```
*******************************************************************************
LIBNAME PS  'H:\users\ppapali\mdps2011\maj2011';
/*FILENAME MAJ  'H:\users\ppapali\mdps09\marya\majfy11edit4T.prn';*/


Proc Import Datafile = "\\mdent12\USERS\ppapali\mdps2011\maj2011\majfy11edit5.xls"
Out = majfy11 Replace;
Mixed = Yes;
Sheet = 'majfy11';
Run; Quit;




data majfy11;
set majfy11;

IF TKN=. AND NH3 NE . AND TON NE . THEN TKN=NH3+TON;
IF NH3=. AND TKN NE . AND TON NE . THEN NH3=TKN-TON;
IF TON=. AND NH3 NE . AND TKN NE . THEN TON=TKN-NH3;
IF TKN=. AND TN NE . AND NO23 NE . THEN TKN=TN-NO23;
IF NO23=. AND TKN NE . AND TN NE . THEN NO23=TN-TKN;
IF TN=. AND TKN NE . AND NO23 NE . THEN TN=TKN+NO23;
```

```
PROC SORT;
BY NPDES DISCH_PT;

DATA NITRO1;
SET majfy11;

IF TKN NE . AND TN NE . THEN OUTPUT;
ELSE DELETE;

PROC SORT;
BY NPDES DISCH_PT;

PROC MEANS NOPRINT MEAN;
VAR TKN TN;
BY NPDES DISCH_PT;
OUTPUT OUT=NMEANS1 MEAN=TKN_M1 TN_M;

DATA NITRO2;
SET majfy11;

IF NH3 NE . AND TKN NE . THEN OUTPUT;
ELSE DELETE;

PROC SORT;
BY NPDES DISCH_PT;

PROC MEANS NOPRINT MEAN;
VAR NH3 TKN;
BY NPDES DISCH_PT;
OUTPUT OUT=NMEANS2 MEAN=NH3_M TKN_M2;

DATA PHOS;
SET majfy11;

IF TP NE . AND PO4 NE . THEN OUTPUT;
ELSE DELETE;

PROC MEANS NOPRINT MEAN;
VAR PO4 TP;
BY NPDES DISCH_PT;
OUTPUT OUT=PMEANS MEAN=PO4_M TP_M;

DATA majfy11;
MERGE majfy11 NMEANS1 NMEANS2 PMEANS;
BY NPDES DISCH_PT;


IF FLOW GT 0 THEN DO;
IF NH3 NE . AND TKN=. THEN TKN=NH3*TKN_M2/NH3_M;
IF TKN NE . AND NH3=. THEN NH3=TKN*NH3_M/TKN_M2;
IF NO23=. AND TN NE . AND TKN NE . THEN NO23=TN-TKN;
IF TN NE . AND TKN=. THEN TKN=TN*TKN_M1/TN_M;
IF TP NE . AND PO4=. THEN PO4=TP*PO4_M/TP_M;
```

```
IF TKN=. AND NH3 NE . AND TON NE . THEN TKN=NH3+TON;
IF NH3=. AND TKN NE . AND TON NE . THEN NH3=TKN-TON;
IF TON=. AND NH3 NE . AND TKN NE . THEN TON=TKN-NH3;
IF TKN=. AND TN NE . AND NO23 NE . THEN TKN=TN-NO23;
IF NO23=. AND TKN NE . AND TN NE . THEN NO23=TN-TKN;
IF TN=. AND TKN NE . AND NO23 NE . THEN TN=TKN+NO23;
END;

PROC MEANS NOPRINT MEAN;
VAR BOD5 TSS DO NH3 TKN TN PO4 TP COD TOC;
BY NPDES DISCH_PT;
OUTPUT OUT=MEANS_YR MEAN=BOD_Y TSS_Y DO_Y  NH3_Y TKN_Y TN_Y PO4_Y TP_Y cod_y toc_y;

DATA maj02T(KEEP= NPDES DISCH_PT YEAR MONTH FLOW FL_F BOD5 BO_F TSS TS_F
                  DO DO_F COD COD_F TOC TOC_F NH3 NH_F TON ON_F TKN TK_F NO23
                  NO_F TN TN_F PO4 PO_F TP TP_F COD COD_F TOC TOC_F);
MERGE majfy11 MEANS_YR;
BY NPDES DISCH_PT;

IF FLOW GT 0 THEN DO;
IF BOD5=. THEN BOD5=BOD_Y;
IF TSS=. THEN TSS=TSS_Y;
IF DO=. THEN DO=DO_Y;
IF COD=. THEN COD=COD_Y;
IF TOC=. THEN TOC=TOC_Y;
IF NH3=. THEN NH3=NH3_Y;
IF TKN=. THEN TKN=TKN_Y;
IF TN=. THEN TN=TN_Y;
IF PO4=. THEN PO4=PO4_Y;
IF TP=. THEN TP=TP_Y;
END;



IF FLOW NE 0 THEN DO;



IF TKN=. AND NH3 NE . AND TON NE . THEN TKN=NH3+TON;
IF NH3=. AND TKN NE . AND TON NE . THEN NH3=TKN-TON;
IF TON=. AND NH3 NE . AND TKN NE . THEN TON=TKN-NH3;
IF TKN=. AND TN NE . AND NO23 NE . THEN TKN=TN-NO23;
IF NO23=. AND TKN NE . AND TN NE . THEN NO23=TN-TKN;
IF TN=. AND TKN NE . AND NO23 NE . THEN TN=TKN+NO23;
end;

IF ( NH3 NE . AND TON NE . AND (NH3+TON) NE TKN) THEN DO;
TKN=NH3+TON; END;
IF TKN NE . AND TKN LE NH3 THEN DO; TKN=NH3; TON=0.00; END;

IF ( TKN NE . AND NO23 NE . AND TKN+NO23 NE TN ) THEN DO;
TN=TKN+NO23; END;
IF TN  NE . AND TN LE TKN THEN DO; TN=TKN ; NO23=0.00; END;
```

```
FLOW=ROUND(FLOW,.0001);
BOD5=ROUND(BOD5,.01);
TSS=ROUND(TSS,.01);
DO=ROUND(DO,.01);
COD=ROUND(COD,.1);
toc=round(toc,.1);
NH3=ROUND(NH3,.01);
TON=ROUND(TON,.01);
TKN=ROUND(TKN,.01);
NO23=ROUND(NO23,.01);
TN=ROUND(TN,.01);
PO4=ROUND(PO4,.01);
TP=ROUND(TP,.01);



DATA  MAJOR;
SET maj02T;


PROC SORT NODUPKEY;
BY NPDES DISCH_PT MONTH ;

DATA  PS.majfy11;
SET MAJOR;
proc sort;
by npdes disch_pt month year;


PROC CONTENTS;
PROC PRINT;run;


/*VAR NPDES DISCH_PT year MONTH FLOW BOD5 TSS DO NH3 TON TKN NO23 TN PO4 TP COD TOC FL_F BO_F
TS_F DO_F NH_F ON_F TK_F NO23_F TN_F PO_F TP_F COD_F TOC_F;
RUN;*/
```

## MINYYYY.SAS

```
LIBNAME ps 'H:\USERS\ppapali\mdps2011\min2011';
libname point 'H:\users\ppapali\mdps';



Proc Import Datafile = "\\mdent12\USERS\ppapali\mdps2011\min2011\MINFY11EDIT10.XLS"
Out = MINFY11 Replace;
Mixed = Yes;
Sheet = 'MINFY11';
```

```
Run; Quit;




data minFY11;
set minFY11;

IF NH3=. AND TON NE . AND TKN NE . THEN NH3=TKN-TON;
IF TON=. AND NH3 NE . AND TKN NE . THEN TON=TKN-NH3;
IF TKN=. AND NH3 NE . AND TON NE . THEN TKN=NH3+TON;
IF NO23=. AND TN NE . AND TKN NE . THEN NO23=TN-TKN;
IF TN=. AND TKN NE . AND NO23 NE . THEN TN=TKN+NO23;
IF TKN=. AND NO23 NE . AND TN NE .  THEN TKN=TN-NO23;

*IF TP NE . THEN TP_F='D';

PROC SORT;
BY NPDES DISCH_PT;



PROC MEANS NOPRINT DATA=minFY11 MEAN;
VAR FLOW BOD5 TSS DO;
BY NPDES DISCH_PT;
OUTPUT OUT=MEANS1 MEAN=FLOW_M BOD5_M TSS_M DO_M;

DATA NITRO1;
SET minFY11;

IF TKN NE . AND TN NE . THEN OUTPUT;
ELSE DELETE;

PROC SORT;
BY NPDES DISCH_PT;

PROC MEANS NOPRINT DATA=NITRO1 MEAN;
VAR TKN TN;
BY NPDES DISCH_PT;
OUTPUT OUT=MEANS2 MEAN=TKN_M1 TN_M;

DATA NITRO2;
SET minFY11;

IF NH3 NE . AND TKN NE . THEN OUTPUT;
ELSE DELETE;

PROC SORT;
BY NPDES DISCH_PT;

PROC MEANS NOPRINT DATA=NITRO2 MEAN;
VAR NH3 TKN;
BY NPDES DISCH_PT;
OUTPUT OUT=MEANS3 MEAN=NH3_M TKN_M2;
```

```
DATA PHOS;
SET minFY11;

IF PO4 NE . AND TP NE . THEN OUTPUT;
ELSE DELETE;

PROC SORT;
BY NPDES DISCH_PT;

PROC MEANS NOPRINT DATA=PHOS MEAN;
VAR PO4 TP;
BY NPDES DISCH_PT;
OUTPUT OUT=MEANS4 MEAN=PO4_M TP_M;

DATA DO;
SET minFY11;

IF DO NE . THEN OUTPUT;
ELSE DELETE;

PROC SORT;
BY NPDES DISCH_PT;

PROC MEANS NOPRINT DATA=DO MEAN;
VAR DO;
BY NPDES DISCH_PT;
OUTPUT OUT=MEANS5 MEAN=DO_M;



DATA FILL;
MERGE minFY11 MEANS1 MEANS2 MEANS3 MEANS4 MEANS5;
BY NPDES DISCH_PT;


IF FLOW EQ . THEN FLOW=FLOW_M;



IF FLOW NE . AND FLOW NE 0.00 THEN DO;

IF BOD5=. THEN BOD5=BOD5_M;
IF TSS=. THEN TSS=TSS_M;
IF TP=. THEN TP=TP_M;
IF PO4=. THEN PO4=PO4_M;
*IF TKN=. THEN TKN=TKN_M;

IF DO=.  THEN DO=DO_M;

IF TKN=. AND TN NE . THEN TKN=TN*TKN_M1/TN_M;
IF NH3=. AND TKN NE . THEN NH3=TKN*NH3_M/TKN_M2;
IF TN=. AND TKN=. AND NH3 NE . THEN TKN=NH3*TKN_M2/NH3_M;
IF PO4=. AND TP NE . THEN PO4=TP*PO4_M/TP_M;
IF TP=. AND PO4 NE . THEN TP=PO4*TP_M/PO4_M;
```

```
IF NH3=. AND TON NE . AND TKN NE . THEN NH3=TKN-TON;
IF TON=. AND NH3 NE . AND TKN NE . THEN TON=TKN-NH3;
IF TKN=. AND NH3 NE . AND TON NE . THEN TKN=NH3+TON;
IF NO23=. AND TN NE . AND TKN NE . THEN NO23=TN-TKN;
IF TN=. AND TKN NE . AND NO23 NE . THEN TN=TKN+NO23;
IF TKN=. AND NO23 NE . AND TN NE .  THEN TKN=TN-NO23;
END;

PROC SORT;
BY NPDES DISCH_PT YEAR MONTH;




PROC MEANS NOPRINT DATA=FILL MEAN;
VAR NH3 TON TKN NO23 TN PO4 TP DO;
BY NPDES DISCH_PT;
OUTPUT OUT=MEANS MEAN=NH3_Y TON_Y TKN_Y NO23_Y TN_Y PO4_Y TP_Y DO_Y;

DATA MIN;
MERGE FILL MEANS;
BY NPDES DISCH_PT;


IF FLOW NE . AND FLOW NE 0.000 THEN DO;

IF NH3=. THEN NH3=NH3_Y;
IF TON=. THEN TON=TON_Y;
IF TKN=. THEN TKN=TKN_Y;
IF NO23=. THEN NO23=NO23_Y;
IF TN=. THEN TN=TN_Y;
IF PO4=. THEN PO4=PO4_Y;
IF TP=. THEN TP=TP_Y;



   IF NH3=. AND TON NE . AND TKN NE . THEN NH3=TKN-TON;
IF TON=. AND NH3 NE . AND TKN NE . THEN TON=TKN-NH3;
IF TKN=. AND NH3 NE . AND TON NE . THEN TKN=NH3+TON;
IF NO23=. AND TN NE . AND TKN NE . THEN NO23=TN-TKN;
IF TN=. AND TKN NE . AND NO23 NE . THEN TN=TKN+NO23;
IF TKN=. AND NO23 NE . AND TN NE .  THEN TKN=TN-NO23;
END;


PROC SORT;
BY NPDES DISCH_PT;

/*PROC PRINT;
VAR NPDES DISCH_PT MONTH FLOW BOD5 TSS NH3 TON TKN NO23 TN PO4 TP DO;*/
```

```
/* 1006 data will be used here to fill the values for those
 plants with missing DMRS for most of the months in year 1010
*/
DATA MEAN10;
SET POINT.mdpsCY10;

PROC SORT;
BY NPDES DISCH_PT;

PROC MEANS NOPRINT MEAN;
VAR NH3 TKN TN PO4 TP;
BY NPDES ;
OUTPUT OUT=MEAN10 MEAN=NH3_10 TKN_10 TN_10 PO4_10 TP_10;

DATA MIN2(KEEP=NPDES DISCH_PT YEAR MONTH FLOW FL_F BOD5 BO_F TSS
              TS_F DO DO_F COD COD_F TOC TOC_F NH3 NH_F TON ON_F TKN
              TK_F NO23 NO_F TN TN_F PO4 PO_F TP TP_F);
MERGE MIN MEAN10;
BY NPDES;



IF flow NE . and FLOW NE 0.000 THEN DO;

IF NH3=. AND TKN=. AND TN=. THEN DO;
IF NH3_10 NE . THEN NH3=NH3_10;
IF TKN_10 NE . THEN TKN=TKN_10;
IF TN_10 NE . THEN TN=TN_10;
END;

IF NH3=. AND TKN=. AND TN=. THEN DO;
NH3=13.51; TKN=16.47; TN=18.00; END;

IF PO4=. AND TP=. THEN DO;
IF PO4_10 NE . THEN PO4=PO4_10;
IF TP_10 NE . THEN TP=TP_10; END;

IF PO4=. AND TP=. THEN DO;
PO4=2.52; TP=3.00; END;

IF TP NE . AND PO4=. AND PO4_10 NE . AND TP_10 NE . THEN PO4=TP*PO4_10/TP_10;
IF PO4=. THEN PO4=TP*2.52/3;


IF TN=. THEN TN=TN_10;

IF TKN=. AND NH3 NE . AND TKN_10 NE . AND NH3_10 NE .
THEN TKN=NH3*TKN_10/NH3_10;
IF NH3=. AND TKN NE . AND TKN_10 NE . AND NH3_10 NE .
THEN NH3=TKN*NH3_10/TKN_10;

IF TN=. THEN DO;
IF NH3=. AND TKN NE . THEN NH3=TKN*13.51/16.47;
IF TKN=. AND NH3 NE . THEN TKN=NH3*16.47/13.51;
```

```
END;



IF NH3=. AND TON NE . AND TKN NE . THEN NH3=TKN-TON;
IF TON=. AND NH3 NE . AND TKN NE . THEN TON=TKN-NH3;
IF TKN=. AND NH3 NE . AND TON NE . THEN TKN=NH3+TON;
IF NO23=. AND TN NE . AND TKN NE . THEN NO23=TN-TKN;
IF TN=. AND TKN NE . AND NO23 NE . THEN TN=TKN+NO23;
IF TKN=. AND NO23 NE . AND TN NE .  THEN TKN=TN-NO23;



/*This modification done for 1010 data*/

if tkn gt tn then do;
tn=tkn;no23=0;


end;

if nh3>tkn then DO;
tkn=nh3; ton=0;
END;


IF PO4 GT TP THEN PO4=TP;
IF DO=. THEN DO=5;
IF TSS=. THEN TSS=15;

end;

DATA minFY11;
SET MIN2;

IF ( NH3 NE . AND TON NE . AND (NH3+TON) NE TKN) THEN DO;
TKN=NH3+TON; END;
IF TKN NE . AND TKN LE NH3 THEN DO; TKN=NH3; TON=0.00; END;

IF ( TKN NE . AND NO23 NE . AND TKN+NO23 NE TN ) THEN DO;
TN=TKN+NO23; END;
IF TN  NE . AND TN LE TKN THEN DO; TN=TKN ; NO23=0.00; END;


/*   New calculations added to the program on nov 4th 2005.used for facility they
report only TN values*/
DATA minFY11;
SET minFY11;

IF NH3=. AND TON NE . AND TKN NE . THEN NH3=TKN-TON;
IF TON=. AND NH3 NE . AND TKN NE . THEN TON=TKN-NH3;
IF TKN=. AND NH3 NE . AND TON NE . THEN TKN=NH3+TON;
IF NO23=. AND TN NE . AND TKN NE . THEN NO23=TN-TKN;
IF TN=. AND TKN NE . AND NO23 NE . THEN TN=TKN+NO23;
IF TKN=. AND NO23 NE . AND TN NE .  THEN TKN=TN-NO23;
```

```
If NH3=. AND TON=. AND NO23=. AND TN NE . THEN DO;
NH3=TN*.8; TON=TN*.15; NO23=TN*.05; END;

IF TP NE . AND PO4=. THEN DO;
PO4=TP*.71; END;
IF TP=. AND PO4 NE . THEN DO;

TP=PO4/.71;END;

IF ( NH3 NE . AND TON NE . AND (NH3+TON) NE TKN) THEN DO;
TKN=NH3+TON; END;
IF TKN NE . AND TKN LE NH3 THEN DO; TKN=NH3; TON=0.00; END;

IF ( TKN NE . AND NO23 NE . AND TKN+NO23 NE TN ) THEN DO;
TN=TKN+NO23; END;
IF TN  NE . AND TN LE TKN THEN DO; TN=TKN ; NO23=0.00; END;



DATA minFY11;SET minFY11;

IF FLOW=0.000 THEN DO;
  BOD5=.; TSS=.; COD=.; DO=.; TOC=.; NH3=.; TON=.; TKN=.; NO23=.; TN=.;
  PO4=.; TP=.; BO_F=' '; TS_F=' '; COD_F=' '; DO_F=' '; TOC_F=' ';
  NH_F=' '; ON_F=' '; TK_F=' '; NO_F=' '; TN_F=' '; PO_F=' '; TP_F=' ';
  END;

FLOW=ROUND(FLOW,.00001);
BOD5=ROUND(BOD5,.1);
TSS=ROUND(TSS,.1);
DO=ROUND(DO,.1);
COD=ROUND(COD,.01);
TOC=ROUND(TOC,.01);
NH3=ROUND(NH3,.01);
TON=ROUND(TON,.01);
TKN=ROUND(TKN,.01);
NO23=ROUND(NO23,.01);
TN=ROUND(TN,.01);
PO4=ROUND(PO4,.01);
TP=ROUND(TP,.01);

IF MONTH=. THEN DELETE;
/*if flow=. then flow=0; */


PROC SORT nodupkey;
BY NPDES disch_pt year month ;

DATA ps.minFY11;
SET minFY11;



PROC CONTENTS;
PROC PRINT ;
```

```
VAR NPDES DISCH_PT year MONTH FLOW BOD5 TSS DO NH3 TON TKN NO23 TN PO4 TP COD TOC FL_F BO_F
TS_F DO_F NH_F ON_F TK_F NO_F TN_F PO_F TP_F COD_F TOC_F;
RUN;
```

# INDYYYY.SAS

```
PROGRAM TO READ EDITED .DAT FILE, PERFORM ADDITINAL EDITING              *
* FILL IN THE MISSING VALUES WITH ANNUAL MEANS, OR PREVIOUSE YEAR ASSIGN    *
* PROPER FLAG TO EDITED                                                    *
* VALUES AND FIALLY CONVER THE THE FILE BACK TO SSD FILE                   *
*************************************************************************** ;

LIBNAME pp 'H:\users\ppapali\mdps2011\ind2011';
/*filename temp  'H:\users\ppapali\mdps08\ind08\ind08edit3l.prn';*/

/*DATA EDIT;
INFILE temp MISSOVER;

INPUT NPDES $1-10 DISCH_PT $11-15 YEAR 16-20 MONTH 21-23 FLOW 24-32
     BOD5 33-39 TSS 40-46 DO 47-51 NH3 52-59 TON 60-67 TKN 68-75
     NO23 76-83 TN 84-91 PO4 92-97 TP 98-103 COD 104-109 TOC 110-113 FL_F $114-115
     BO_F $116-117 TS_F $118-119  DO_F $120-121 NH_F $122-123 ON_F $124-125
     TK_F $126-126 NO_F $127-127 TN_F $128-128 PO_F $129-129 TP_F $130-130 COD_F $131-131
     TOC_F$132-132;*/




Proc Import Datafile = "\\mdent12\USERS\ppapali\mdps2011\ind2011\indfy11edit2.xls"
Out = indfy11 Replace;
Mixed = Yes;
Sheet = 'indfy11';
Run; Quit;



DATA indfy11;
SET  indfy11;


IF TKN=. AND NH3 NE . AND TON NE . THEN TKN=NH3+TON;
IF NH3=. AND TKN NE . AND TON NE . THEN NH3=TKN-TON;
IF TON=. AND NH3 NE . AND TKN NE . THEN TON=TKN-NH3;
IF TKN=. AND TN NE . AND NO23 NE . THEN TKN=TN-NO23;
IF NO23=. AND TKN NE . AND TN NE . THEN NO23=TN-TKN;
IF TN=. AND TKN NE . AND NO23 NE . THEN TN=TKN+NO23;

PROC SORT;
BY NPDES DISCH_PT;

DATA indfy11;SET indfy11;
DO=INPUT(DOX,3.2);


PROC MEANS NOPRINT DATA=indfy11 MEAN;
VAR FLOW BOD5 TSS DO COD TOC ;
```

```
BY NPDES DISCH_PT;
OUTPUT OUT=MEANS1 MEAN=FLOW_M BOD5_M TSS_M DO_M COD_M TOC_M ;



DATA NITRO1;
SET  indfy11;

IF TKN NE . AND TN NE . THEN OUTPUT;
ELSE DELETE;

PROC SORT;
BY NPDES DISCH_PT;

PROC MEANS NOPRINT DATA=NITRO1 MEAN;
VAR TKN TN;
BY NPDES DISCH_PT;

OUTPUT OUT=MEANS2 MEAN=TKN_M TN_M;

DATA NITRO2;
SET  indfy11;

IF NH3 NE . AND TKN NE . THEN OUTPUT;
ELSE DELETE;

PROC SORT;
BY NPDES DISCH_PT;

PROC MEANS NOPRINT DATA=NITRO2 MEAN;
VAR NH3 TKN TON;
BY NPDES DISCH_PT;
OUTPUT OUT=MEANS3 MEAN=NH3_M TKN_M TON_M;

DATA PHOS;
SET  indfy11;

IF TP NE . AND PO4 NE . THEN OUTPUT;
ELSE DELETE;

PROC MEANS NOPRINT MEAN;
VAR PO4 TP;

BY NPDES DISCH_PT;
OUTPUT OUT=MEANS4 MEAN=PO4_M TP_M;



DATA FILL;
 MERGE indfy11 MEANS1 MEANS2 MEANS3 MEANS4;
BY NPDES DISCH_PT;


IF FLOW=. THEN FLOW=FLOW_M;

IF FLOW NE . AND FLOW NE 0.00 THEN DO;
```

```
IF BOD5=. THEN BOD5=BOD5_M;
IF TSS=.  THEN TSS=TSS_M;
IF TP=.   THEN TP=TP_M;
IF PO4=.  THEN PO4=PO4_M;
IF TKN=.  THEN TKN=TKN_M;
IF TON=. THEN TON=TON_M;
IF DO=.   THEN DO=DO_M;
IF COD=.  THEN COD=COD_M;
IF TOC=.  THEN TOC=TOC_M;
IF NH3=. THEN NH3=NH3_M;
IF TN=. THEN TN=TN_M;
END;

IF TKN=. AND NH3 NE . AND TON NE . THEN TKN=NH3+TON;
IF NH3=. AND TKN NE . AND TON NE . THEN NH3=TKN-TON;
IF TON=. AND NH3 NE . AND TKN NE . THEN TON=TKN-NH3;
IF TKN=. AND TN NE . AND NO23 NE . THEN TKN=TN-NO23;
IF NO23=. AND TKN NE . AND TN NE . THEN NO23=TN-TKN;
IF TN=. AND TKN NE . AND NO23 NE . THEN TN=TKN+NO23;

PROC SORT;
BY NPDES DISCH_PT;



DATA EDIT2;
SET  FILL;


IF NPDES='MD0000311' THEN DO;
* TSS=15.0;DO=5;
COD=58.0; TOC=3.0; TS_F='P'; COD_F='P'; TOC_F='P';
/*IF PO4 EQ . THEN PO4=TP*.71;*/

END;

IF NPDES='MD0001775' THEN DO;
BOD5=2.0; COD=7.0; TOC=1.2; DO=5;
TP=.065; PO4=.046;  /* VALUES ENTERED FOR FY2011*/
BO_F='P'; COD_F='P'; TOC_F='P';
END;
IF NPDES='MD0001775' AND PO4=. THEN DO; PO4=TP*.71;  END;



IF NPDES='MD0021687' THEN DO;
COD=400.0; TOC=110.0; COD_F='P'; TOC_F='P';END;
IF NPDES='MD0021687' AND PO4=. THEN DO;
PO4=TP*.71;END;
 /*PO4=TP*0.44/0.79;*/

IF NPDES='MD0000469' THEN DO;
COD=76.0; TOC=42.4; END;
```

```
IF NPDES='MD0000469' AND BOD5=.  THEN DO;
BOD5=.5;END;

IF NPDES='MD0000469' AND TN=. THEN DO;
TN=5.36;END;
IF NPDES='MD0000469' AND TP=. THEN DO;
TP=0; END;
IF NPDES='MD0000469' AND TSS=. THEN DO;
TSS=5.35; END; /* THESE VALUES USED FOR FY11 DATA.AVG VALUE OF THE REPORTED VALUES.*/

IF NPDES='MD0000469' AND PO4 EQ . AND TP NE . THEN DO; PO4=TP*.71;
END;
IF NPDES='MD0000469' AND NH3=. AND  TON=. AND TKN=. AND NO23=. AND TN NE . THEN DO;
NH3=TN*.07; NO23=TN*.85; TON=TN*.08; END;
/*USED THE RATIO CALCU */

/* this facility monotoring only flow values starting from sept 2010*/



IF NPDES='MD0001384' AND TP NE . THEN DO; PO4=TP*.71; PO4_F='C'; END;


IF NPDES='MD0001422' THEN DO;
BOD5=2.0; COD=5.0; TOC=1.0; DO=5; NH3=0.10; TKN=1.50; NO23=0.42; TP=0.09;PO4=TP*.71;
BO_F='P'; COD_F='P'; TOC_F='P'; NH_F='P'; TK_F='P'; NO_F='P'; TP_F='P';
END;



IF NPDES='MD0003158' THEN DO;
IF TN NE . AND TKN NE . OR NO23 NE . THEN DO NO23=' '; END;

IF NPDES='MD0003158' AND DISCH_PT='080' THEN DO; TN=1.73; TN_F='P'; END;
IF NPDES='MD0003158' AND DISCH_PT='081' THEN DO; TN=1.24; TP=0.50; TN_F='P'; TP_F='P';
END;

END;

IF NPDES='MD0003158' AND PO4=. THEN DO; PO4=TP*.71;  END;
IF NPDES='MD0003158' AND  DISCH_PT='010' AND TN NE .  THEN DO; NH3=TN*.07;NO23=TN*.85;TON=TN*.08;  END;
IF NPDES='MD0003158' AND  DISCH_PT='021' AND TN NE .  THEN DO; NH3=TN*.07;NO23=TN*.85;TON=TN*.08;  END;

/* USED THESE RATIO CALCU IN 2009 TO FILL THE MISSING NUMBERS*/
IF NPDES='MD0067857' AND PO4 EQ . AND TP NE .  THEN DO ; PO4=TP*.71; END;
IF NPDES='MD0067857' AND PO4 NE . AND TP EQ . THEN DO ; TP=PO4/.71;END;


if npdes='MD0001201' AND DISCH_PT='101' THEN DO;
BOD5=28; TSS=18.15; NH3=9.41; TON=0; TN=9.41; TP=.068; NH3_F='C'; TN_F='C';
END;



IF NPDES='MD0001201' AND PO4 EQ . AND TP NE . THEN DO;
PO4=TP*.71;END;
```

```
DATA indfy11;
SET EDIT2;


/* PO4=TP*.71 USED FOR 2006 DATA.THIS IS FROM BAY PROGRAM DOCU ATTACHMENT #3*/

 /* USED NEW DEFAULT VALUES FOR TON AND TN */

IF TKN=. AND NH3 NE . AND TON NE . THEN TKN=NH3+TON;
IF NH3=. AND TKN NE . AND TON NE . THEN NH3=TKN-TON;
IF TON=. AND NH3 NE . AND TKN NE . THEN TON=TKN-NH3;
IF TKN=. AND TN NE . AND NO23 NE . THEN TKN=TN-NO23;
IF NO23=. AND TKN NE . AND TN NE . THEN NO23=TN-TKN;
IF TN=. AND TKN NE . AND NO23 NE . THEN TN=TKN+NO23;




IF PO4 GT TP THEN PO4=TP;
IF TSS=. THEN TSS=15;
IF DO=. THEN DO=5.0;



DATA indfy11;
SET indfy11;


IF ( NH3 NE . AND TON NE . AND (NH3+TON) NE TKN) THEN DO;
TKN=NH3+TON; END;
IF TKN NE . AND TKN LE NH3 THEN DO; TKN=NH3; TON=0.00; END;

IF ( TKN NE . AND NO23 NE . AND TKN+NO23 NE TN ) THEN DO;
TN=TKN+NO23; END;

IF TN  NE . AND TN LE TKN THEN DO; TN=TKN ; NO23=0.00; END;



IF FLOW=0 THEN DO;
BOD5=.; TSS=.; COD=.; TOC=.; DO=.; NH3=.; TON=.; NO23=.; TKN=.; TN=.; TP=.;
PO4=. ; BO_F=' ' ; TS_F= ' '; DO_F=' '; COD_F=' '; TOC_F=' '; NH_F=' ';
ON_F=' '; NO_F=' '; TK_F=' '; TN_F=' '; PO_F=' '; TP_F=' ';
END;

IF FLOW=. THEN DELETE;

FLOW=ROUND(FLOW,.0001);
BOD5=ROUND(BOD5,.01);
```

```
TSS=ROUND(TSS,.01);
DO=ROUND(DO,.01);
COD=ROUND(COD,.01);
NH3=ROUND(NH3,.01);
TON=ROUND(TON,.01);
TKN=ROUND(TKN,.01);
NO23=ROUND(NO23,.01);
TN=ROUND(TN,.01);
PO4=ROUND(PO4,.001);
TP=ROUND(TP,.001);



PROC SORT;
BY NPDES DISCH_PT;

DATA pp.indfy11(KEEP= NPDES DISCH_PT YEAR MONTH FLOW BOD5 TSS DO NH3 TON
    TKN NO23 TN PO4 TP COD TOC FL_F BO_F TS_F DO_F COD_F TOC_F NH_F ON_F
    TK_F NO_F TN_F PO_F TP_F);

SET  indfy11;

PROC CONTENTS;
proc print;

run;
```

# MAJYYYYDMR.SAS

```
LIBNAME pr V8 "\\MDENT12\USERS\PPAPALI\mdps2011\maj2011" ;
DATA maj2011;
/*LENGTH NPDES $ 12;*/


/*INFILE "\\MDENT12\USERS\PPAPALI\mdps09\maj2011\maj11new1.CSV" LRECL = 150
DELIMITER = ',' DSD MISSOVER; */



  INFILE "\\MDENT12\USERS\PPAPALI\mdps2011\maj2011\maj11NEW4.PRN" MISSOVER ;



INPUT NPDES $ 1-10 MLOC $ 11-12 MONTH  13-14 YEAR  19-20  R_LDAVG $ 21-28
R_LDMAX $ 29-36 R_CNCMIN $ 37-44 R_CNCAVG $ 45-52
R_CNCMAX $ 53-60  nodi $ 61-62 type $ 63-64  disch_pt $ 65-68 CODE $ 69-73;



PROC SORT;
```

```
BY NPDES disch_pt MONTH YEAR;



DATA FLOW(KEEP=NPDES DISCH_PT MONTH YEAR FLOW);
LENGTH FLOW 7.3;
SET maj2011;

IF CODE='50050' THEN FLOW=R_LDAVG;
IF (R_LDAVG EQ . ) THEN  FLOW=R_LDMX;

IF CODE='50050' THEN OUTPUT;
ELSE DELETE;


DATA NODI (KEEP=NPDES DISCH_PT MONTH YEAR NODI);
LENGTH NODI $1 ;
SET maj2011;

IF NODI NE ' '  THEN OUTPUT;
ELSE DELETE;


DATA BOD5(KEEP=NPDES DISCH_PT MONTH YEAR BOD5);
LENGTH BOD5 6.1;
SET maj2011;

IF CODE='00310' THEN DO;

IF R_CNCAVG NE . THEN BOD5=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND R_CNCMIN NE . AND R_CNCMAX NE . THEN BOD5=(R_CNCMIN+R_CNCMAX)/2 ;
END;

IF CODE='00310' THEN OUTPUT;
ELSE DELETE;

DATA TSS(KEEP=NPDES DISCH_PT MONTH YEAR TSS);
LENGTH TSS 6.1;
SET maj2011;

IF CODE='00530' THEN DO;
IF R_CNCAVG NE . THEN TSS=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND R_CNCMIN NE . AND R_CNCMAX NE . THEN TSS=(R_CNCMIN+R_CNCMAX)/2;
END;

IF CODE='00530' THEN OUTPUT;
ELSE DELETE ;

DATA NH3(KEEP=NPDES DISCH_PT MONTH YEAR NH3);
LENGTH NH3 7.2;
SET maj2011;

IF (CODE='00610') THEN DO;
```

```
IF R_CNCAVG NE . THEN NH3=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN NH3=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND  R_CNCMAX NE . THEN NH3=R_CNCMAX;
END;
IF CODE='00610' THEN OUTPUT;
ELSE DELETE;

DATA TKN(KEEP=NPDES DISCH_PT MONTH YEAR TKN);
LENGTH TKN 7.2;
SET maj2011;

IF CODE='00625' THEN DO;
IF R_CNCAVG NE . THEN TKN=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND R_CNCMIN NE . AND R_CNCMAX NE . THEN  TKN=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND R_CNCMAX NE . THEN  TKN=R_CNCMAX;
END;
IF CODE='00625' THEN OUTPUT;
ELSE DELETE;


DATA ON(KEEP=NPDES DISCH_PT MONTH YEAR  ON);
LENGTH ON 7.2;
SET maj2011;

IF CODE='00605' THEN DO;
IF R_CNCAVG NE . THEN  ON=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND R_CNCMIN NE . AND R_CNCMAX NE . THEN  ON=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND  R_CNCMAX NE . THEN  ON=R_CNCMAX;
 END;
IF CODE='00605' THEN OUTPUT;
ELSE DELETE;


DATA NO3(KEEP=NPDES DISCH_PT MONTH YEAR NO3);
LENGTH NO3 7.3;
SET maj2011;

IF CODE='00615' THEN DO;
IF R_CNCAVG NE . THEN  NO3=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND R_CNCMIN NE . AND R_CNCMAX NE . THEN  NO3=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND  R_CNCMAX NE . THEN  NO3=R_CNCMAX;
 END;
IF CODE='00615' THEN OUTPUT;
ELSE DELETE;


/* code=00615 is a new code added into the program for this year*/
DATA NO2(KEEP=NPDES DISCH_PT MONTH YEAR NO2);
```

```
LENGTH NO2 7.3;
SET maj2011;

IF CODE='00620' THEN DO;
IF R_CNCAVG NE . THEN  NO2=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  NO2=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND  R_CNCMAX NE . THEN NO2=R_CNCMAX;
END;

IF CODE='00620' THEN OUTPUT;
ELSE DELETE;



DATA NO23(KEEP=NPDES DISCH_PT MONTH YEAR NO23);
LENGTH NO23 7.2;
SET maj2011;

IF CODE='00630' THEN DO;
IF R_CNCAVG NE . THEN  NO23=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  NO23=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF  R_CNCMIN EQ . AND R_CNCMAX NE . THEN NO23=R_CNCMAX;
END;
IF CODE='00630' THEN OUTPUT;
ELSE DELETE;

DATA TN(KEEP=NPDES DISCH_PT MONTH YEAR TN );
LENGTH TN 7.2;
SET maj2011;

IF CODE='00600' THEN DO;
IF R_CNCAVG NE . THEN TN=R_CNCAVG;

ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  TN=(R_CNCMIN+R_CNCMAX)/2;

ELSE
IF  R_CNCMIN EQ . AND R_CNCMAX NE . THEN  TN=R_CNCMAX;
END;

IF CODE='00600' THEN OUTPUT;
ELSE DELETE;

DATA PO4(KEEP=NPDES DISCH_PT MONTH YEAR PO4 );
LENGTH PO4 5.2;
SET maj2011;

IF CODE='70507' THEN  DO;
IF R_CNCAVG NE . THEN  PO4=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  PO4=(R_CNCMIN+R_CNCMAX)/2;
ELSE
```

```
IF R_CNCMIN EQ . AND R_CNCMAX NE . THEN  PO4=R_CNCMAX;
END;

IF CODE='70507' THEN OUTPUT;
ELSE DELETE;

DATA TP(KEEP=NPDES DISCH_PT MONTH YEAR TP );
LENGTH TP 5.2;
SET maj2011;

IF CODE='00665' THEN DO;
IF R_CNCAVG NE . THEN  TP=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  TP=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND  R_CNCMAX NE . THEN  TP=R_CNCMAX;
END;

IF CODE='00665' THEN OUTPUT;
ELSE DELETE;

DATA DOX(KEEP=NPDES DISCH_PT MONTH YEAR DOX );
LENGTH DOX 5.2;
SET maj2011;

IF CODE='00300' THEN DO;
IF R_CNCAVG NE . THEN  DOX=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  DOX=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN NE . AND  R_CNCMAX EQ . THEN DOX=R_CNCMIN;
END;

IF CODE='00300' THEN OUTPUT;
ELSE DELETE;


DATA TOC(KEEP=NPDES DISCH_PT MONTH YEAR TOC );
LENGTH TOC 5.2;
SET maj2011;

IF CODE='00680' THEN DO;
IF R_CNCAVG NE . THEN  TOC=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  TOC=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND  R_CNCMAX NE . THEN TOC=R_CNCMAX;
END;

IF CODE='00680' THEN OUTPUT;
ELSE DELETE;



DATA COD(KEEP=NPDES DISCH_PT MONTH YEAR COD);
LENGTH COD 5.2;
```

```
SET maj2011;

IF (CODE='00341') THEN  COD=R_CNCAVG;

IF (R_CNCAVG EQ .) THEN COD=R_CNCMAX;

IF CODE='00341' THEN OUTPUT;
ELSE DELETE;



DATA maj2011;
MERGE FLOW BOD5 TSS DOX NH3 ON TKN NO3 NO2 NO23 TN PO4 TP TOC COD nodi;
BY NPDES DISCH_PT MONTH YEAR;



DATA maj2011r2;
SET maj2011;

LENGTH FL_F $1;
LENGTH BO_F $1;
LENGTH TS_F $1;
LENGTH DO_F $1;
LENGTH NH_F $1;
LENGTH ON_F $1;
LENGTH TK_F $1;
LENGTH NO_F $1;
LENGTH TN_F $1;
LENGTH PO_F $1;
LENGTH TP_F $1;
LENGTH TOC_F $1;
LENGTH COD_F $1;
LENGTH TOC  5.2;
LENGTH COD  5.2;
LENGTH NODI $1;



IF FLOW NE . THEN FL_F='D';
IF BOD5 NE . THEN BO_F='D';
IF TSS  NE . THEN TS_F='D';
IF DOX  NE . THEN DO_F='D';
IF NH3  NE . THEN NH_F='D';
IF ON   NE . THEN ON_F='D';
IF TKN  NE . THEN TK_F='D';
IF NO23 NE . THEN NO_F='D';
IF TN   NE . THEN TN_F='D';
IF PO4  NE . THEN PO_F='D';
IF TP   NE . THEN TP_F='D';
IF TOC  NE . THEN TOC_F='D';
IF COD  NE . THEN COD_F='D';

FLOW=ROUND(FLOW,.0001);
BOD5=ROUND(BOD5,.01);
```

```
TSS=ROUND(TSS,.01);
DOX=ROUND(DOX,.01);
COD=ROUND(COD,.01);
TOC=ROUND(TOC,.01);
NH3=ROUND(NH3,.01);
TKN=ROUND(TKN,.01);
ON=ROUND(ON,.01);
NO23=ROUND(NO23,.01);
TN=ROUND(TN,.01);
PO4=ROUND(PO4,.01);
TP=ROUND(TP,.01);

*if nodi='C' then flow=0;


PROC SORT NODUPKEY;
BY NPDES DISCH_PT MONTH YEAR ;




data PR.maj2011R2;
SET maj2011R2;

PROC PRINT DATA=maj2011R2;
   VAR NPDES DISCH_PT MONTH YEAR FLOW NODI BOD5 TSS DOX NH3
   ON TKN NO2 NO3 NO23 TN PO4 TP  COD TOC FL_F BO_F TS_F DO_F
   COD_F TOC_F NH_F ON_F TK_F NO_F TN_F PO_F TP_F ;

      TITLE    ' 2005 MAJOR MUNICIPAL (WWTP) PLANTS';
      TITLE2  '  ';

DATA pr.maj2011R3;
SET  maj2011R2;


PROC MEANS NOPRINT SUM;
BY NPDES DISCH_PT ;
OUTPUT OUT=SUMS SUM=;

DATA PRINT;
SET SUMS;
IF _FREQ_ NE 12 THEN OUTPUT;
ELSE DELETE;



PROC PRINT NOOBS;

VAR NPDES DISCH_PT flow  _FREQ_;
  TITLE    'Missing or duplicated records to be verified';
  Title2  '  ';
run;

data pr.maj11freq;
set maj2011R2;
```

```
proc format;
 value $miss " "="missing"
 other="nomissing";



data pr.freqout;
set maj11freq;
proc freq npdes flow;
run;




/*
PROC EXPORT DATA = maj2011or2 OUTFILE = 'F:\users\ppapali\mdps05\maj2011\maj2011new2.txt'
 REPLACE;
 RUN; QUIT;*/
```

## MINYYYYDMR.SAS

```
LIBNAME pr V8 "\\MDENT12\USERS\PPAPALI\mdps2011\min2011" ;
DATA min2011;
/*LENGTH NPDES $ 12;*/


/*INFILE "\\MDENT12\USERS\PPAPALI\mdps09\min2011\min2011new3.CSV" LRECL = 150
DELIMITER = ',' DSD MISSOVER; */



  INFILE "\\MDENT12\USERS\PPAPALI\mdps2011\min2011\min11new6.PRN" MISSOVER ;



INPUT NPDES $ 1-10 MLOC $ 11-12 MONTH  13-14 YEAR  19-20  R_LDAVG $ 21-28
R_LDMAX $ 29-36 R_CNCMIN $ 37-44 R_CNCAVG $ 45-52
R_CNCMAX $ 53-60  nodi $ 61-62 type $ 63-64  disch_pt $ 65-68 CODE $ 69-73;



PROC SORT;
BY NPDES disch_pt MONTH YEAR;
```

```
DATA FLOW(KEEP=NPDES DISCH_PT MONTH YEAR FLOW);
LENGTH FLOW 7.3;
SET min2011;

IF CODE='50050' THEN FLOW=R_LDAVG;
IF (R_LDAVG EQ . ) THEN  FLOW=R_LDMX;

IF CODE='50050' THEN OUTPUT;
ELSE DELETE;


DATA NODI (KEEP=NPDES DISCH_PT MONTH YEAR NODI);
LENGTH NODI $1 ;
SET min2011;

IF NODI NE ' '  THEN OUTPUT;
ELSE DELETE;


DATA BOD5(KEEP=NPDES DISCH_PT MONTH YEAR BOD5);
LENGTH BOD5 6.1;
SET min2011;

IF CODE='00310' THEN DO;

IF R_CNCAVG NE . THEN BOD5=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND R_CNCMIN NE . AND R_CNCMAX NE . THEN BOD5=(R_CNCMIN+R_CNCMAX)/2 ;
END;

IF CODE='00310' THEN OUTPUT;
ELSE DELETE;

DATA TSS(KEEP=NPDES DISCH_PT MONTH YEAR TSS);
LENGTH TSS 6.1;
SET min2011;

IF CODE='00530' THEN DO;
IF R_CNCAVG NE . THEN TSS=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND R_CNCMIN NE . AND R_CNCMAX NE . THEN TSS=(R_CNCMIN+R_CNCMAX)/2;
END;

IF CODE='00530' THEN OUTPUT;
ELSE DELETE ;

DATA NH3(KEEP=NPDES DISCH_PT MONTH YEAR NH3);
LENGTH NH3 7.2;
SET min2011;

IF (CODE='00610') THEN DO;
IF R_CNCAVG NE . THEN NH3=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN NH3=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND  R_CNCMAX NE . THEN NH3=R_CNCMAX;
```

```
END;
IF CODE='00610' THEN OUTPUT;
ELSE DELETE;

DATA TKN(KEEP=NPDES DISCH_PT MONTH YEAR TKN);
LENGTH TKN 7.2;
SET min2011;

IF CODE='00625' THEN DO;
IF R_CNCAVG NE . THEN TKN=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND R_CNCMIN NE . AND R_CNCMAX NE . THEN  TKN=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND R_CNCMAX NE . THEN  TKN=R_CNCMAX;
END;
IF CODE='00625' THEN OUTPUT;
ELSE DELETE;


DATA ON(KEEP=NPDES DISCH_PT MONTH YEAR  ON);
LENGTH ON 7.2;
SET min2011;

IF CODE='00605' THEN DO;
IF R_CNCAVG NE . THEN  ON=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND R_CNCMIN NE . AND R_CNCMAX NE . THEN  ON=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND  R_CNCMAX NE . THEN  ON=R_CNCMAX;
 END;
IF CODE='00605' THEN OUTPUT;
ELSE DELETE;


DATA NO3(KEEP=NPDES DISCH_PT MONTH YEAR NO3);
LENGTH NO3 7.3;
SET min2011;

IF CODE='00615' THEN DO;
IF R_CNCAVG NE . THEN  NO3=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND R_CNCMIN NE . AND R_CNCMAX NE . THEN  NO3=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND  R_CNCMAX NE . THEN  NO3=R_CNCMAX;
 END;
IF CODE='00615' THEN OUTPUT;
ELSE DELETE;


/* code=00615 is a new code added into the program for this year*/
DATA NO2(KEEP=NPDES DISCH_PT MONTH YEAR NO2);
LENGTH NO2 7.3;
SET min2011;

IF CODE='00620' THEN DO;
IF R_CNCAVG NE . THEN  NO2=R_CNCAVG;
```

```
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  NO2=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND  R_CNCMAX NE . THEN NO2=R_CNCMAX;
END;

IF CODE='00620' THEN OUTPUT;
ELSE DELETE;



DATA NO23(KEEP=NPDES DISCH_PT MONTH YEAR NO23);
LENGTH NO23 7.2;
SET min2011;

IF CODE='00630' THEN DO;
IF R_CNCAVG NE . THEN  NO23=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  NO23=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF  R_CNCMIN EQ . AND R_CNCMAX NE . THEN NO23=R_CNCMAX;
END;
IF CODE='00630' THEN OUTPUT;
ELSE DELETE;

DATA TN(KEEP=NPDES DISCH_PT MONTH YEAR TN );
LENGTH TN 7.2;
SET min2011;

IF CODE='00600' THEN DO;
IF R_CNCAVG NE . THEN TN=R_CNCAVG;

ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  TN=(R_CNCMIN+R_CNCMAX)/2;

ELSE
IF  R_CNCMIN EQ . AND R_CNCMAX NE . THEN  TN=R_CNCMAX;
END;

IF CODE='00600' THEN OUTPUT;
ELSE DELETE;

DATA PO4(KEEP=NPDES DISCH_PT MONTH YEAR PO4 );
LENGTH PO4 5.2;
SET min2011;

IF CODE='70507' THEN  DO;
IF R_CNCAVG NE . THEN  PO4=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  PO4=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND R_CNCMAX NE . THEN  PO4=R_CNCMAX;
END;

IF CODE='70507' THEN OUTPUT;
ELSE DELETE;
```

```
DATA TP(KEEP=NPDES DISCH_PT MONTH YEAR TP );
LENGTH TP 5.2;
SET min2011;

IF CODE='00665' THEN DO;
IF R_CNCAVG NE . THEN  TP=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  TP=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND  R_CNCMAX NE . THEN  TP=R_CNCMAX;
END;

IF CODE='00665' THEN OUTPUT;
ELSE DELETE;

DATA DOX(KEEP=NPDES DISCH_PT MONTH YEAR DOX );
LENGTH DOX 5.2;
SET min2011;

IF CODE='00300' THEN DO;
IF R_CNCAVG NE . THEN  DOX=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  DOX=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN NE . AND  R_CNCMAX EQ . THEN DOX=R_CNCMIN;
END;

IF CODE='00300' THEN OUTPUT;
ELSE DELETE;


DATA TOC(KEEP=NPDES DISCH_PT MONTH YEAR TOC );
LENGTH TOC 5.2;
SET min2011;

IF CODE='00680' THEN DO;
IF R_CNCAVG NE . THEN  TOC=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  TOC=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND  R_CNCMAX NE . THEN TOC=R_CNCMAX;
END;

IF CODE='00680' THEN OUTPUT;
ELSE DELETE;



DATA COD(KEEP=NPDES DISCH_PT MONTH YEAR COD);
LENGTH COD 5.2;
SET min2011;

IF (CODE='00341') THEN  COD=R_CNCAVG;

IF (R_CNCAVG EQ .) THEN COD=R_CNCMAX;
```

```
IF CODE='00341' THEN OUTPUT;
ELSE DELETE;



DATA min2011;
MERGE FLOW BOD5 TSS DOX NH3 ON TKN NO3 NO2 NO23 TN PO4 TP TOC COD nodi;
BY NPDES DISCH_PT MONTH YEAR;



DATA min2011r2;
SET min2011;

LENGTH FL_F $1;
LENGTH BO_F $1;
LENGTH TS_F $1;
LENGTH DO_F $1;
LENGTH NH_F $1;
LENGTH ON_F $1;
LENGTH TK_F $1;
LENGTH NO_F $1;
LENGTH TN_F $1;
LENGTH PO_F $1;
LENGTH TP_F $1;
LENGTH TOC_F $1;
LENGTH COD_F $1;
LENGTH TOC  5.2;
LENGTH COD  5.2;
LENGTH NODI $1;



IF FLOW NE . THEN FL_F='D';
IF BOD5 NE . THEN BO_F='D';
IF TSS  NE . THEN TS_F='D';
IF DOX  NE . THEN DO_F='D';
IF NH3  NE . THEN NH_F='D';
IF ON   NE . THEN ON_F='D';
IF TKN  NE . THEN TK_F='D';
IF NO23 NE . THEN NO_F='D';
IF TN   NE . THEN TN_F='D';
IF PO4  NE . THEN PO_F='D';
IF TP   NE . THEN TP_F='D';
IF TOC  NE . THEN TOC_F='D';
IF COD  NE . THEN COD_F='D';

FLOW=ROUND(FLOW,.0001);
BOD5=ROUND(BOD5,.01);
TSS=ROUND(TSS,.01);
DOX=ROUND(DOX,.01);
COD=ROUND(COD,.01);
TOC=ROUND(TOC,.01);
NH3=ROUND(NH3,.01);
```

```
TKN=ROUND(TKN,.01);
ON=ROUND(ON,.01);
NO23=ROUND(NO23,.01);
TN=ROUND(TN,.01);
PO4=ROUND(PO4,.01);
TP=ROUND(TP,.01);

*if nodi='C' then flow=0;


PROC SORT NODUPKEY;
BY NPDES DISCH_PT MONTH YEAR ;




data PR.min2011R2;
SET min2011R2;

PROC PRINT DATA=min2011R2;
   VAR NPDES DISCH_PT MONTH YEAR FLOW NODI BOD5 TSS DOX NH3
   ON TKN NO2 NO3 NO23 TN PO4 TP  COD TOC FL_F BO_F TS_F DO_F
   COD_F TOC_F NH_F ON_F TK_F NO_F TN_F PO_F TP_F ;

      TITLE    ' 2005 MAJOR MUNICIPAL (WWTP) PLANTS';
      TITLE2  '  ';

DATA pr.min2011R4;
SET  min2011R2;


PROC MEANS NOPRINT SUM;
BY NPDES DISCH_PT ;
OUTPUT OUT=SUMS SUM=;

DATA PRINT;
SET SUMS;
IF _FREQ_ NE 12 THEN OUTPUT;
ELSE DELETE;



PROC PRINT NOOBS;

VAR NPDES DISCH_PT  _FREQ_;
  TITLE    'Missing or duplicated records to be verified';
  Title2  '  ';
run;
/*
PROC EXPORT DATA = min2011or2 OUTFILE = 'F:\users\ppapali\mdps05\min2011\min2011new2.txt'
 REPLACE;
 RUN; QUIT;*/
```

## INDYYYEMR.SAS

```
LIBNAME pr V8 "\\MDENT12\USERS\PPAPALI\mdps2011\ind2011" ;
DATA ind10;
/*LENGTH NPDES $ 12;*/


/*INFILE "\\MDENT12\USERS\PPAPALI\MDPS06\ind10\ind10new1.CSV" LRECL = 150
DELIMITER = ',' DSD MISSOVER; */



  INFILE "\\MDENT12\USERS\PPAPALI\mdps2011\ind2011\ind11new1.PRN" MISSOVER ;



INPUT NPDES $ 1-10 MLOC $ 11-12 MONTH  13-14 YEAR  19-20  R_LDAVG $ 21-28
R_LDMAX $ 29-36 R_CNCMIN $ 37-44 R_CNCAVG $ 45-52
R_CNCMAX $ 53-60  nodi $ 61-62 type $ 63-64  disch_pt $ 65-68 CODE $ 69-73;



PROC SORT;
BY NPDES disch_pt year MONTH;



 /*   DATA ind10;
SET ind10;

PROC PRINT;
RUN;*/



DATA FLOW(KEEP=NPDES DISCH_PT MONTH YEAR FLOW) ;
LENGTH FLOW 7.3;
SET ind10;

IF CODE='50050' THEN FLOW=R_LDAVG;
ELSE FLOW='.';
IF CODE='50050' THEN OUTPUT;
ELSE DELETE;


DATA NODI(KEEP=NPDES DISCH_PT YEAR MONTH NODI);
LENGTH NODI $1;
SET ind10;

IF NODI NE '.' THEN OUTPUT;
ELSE DELETE;
```

```
DATA BOD5(KEEP=NPDES DISCH_PT MONTH YEAR BOD5);
LENGTH BOD5 6.1;
SET ind10;

IF CODE='00310' THEN BOD5=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND R_CNCMIN NE . AND R_CNCMAX NE . THEN BOD5=(R_CNCMIN+R_CNCMAX)/2 ;
ELSE
BOD5=R_CNCMAX;


IF CODE='00310' THEN OUTPUT;
ELSE DELETE;


DATA TSS(KEEP=NPDES DISCH_PT MONTH YEAR TSS);
LENGTH TSS 6.1;
SET ind10;

IF CODE='00530' THEN TSS=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND R_CNCMIN NE . AND R_CNCMAX NE . THEN TSS=(R_CNCMIN+R_CNCMAX)/2;
ELSE
TSS=R_CNCMAX;

IF CODE='00530' THEN OUTPUT;
ELSE DELETE ;

DATA NH3(KEEP=NPDES DISCH_PT MONTH YEAR NH3);
LENGTH NH3 7.2;
SET ind10;

IF (CODE='00610') THEN NH3=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN NH3=(R_CNCMIN+R_CNCMAX)/2;
ELSE
NH3=R_CNCMAX;

IF CODE='00610' THEN OUTPUT;
ELSE DELETE;

DATA TKN(KEEP=NPDES DISCH_PT MONTH YEAR TKN);
LENGTH TKN 7.2;
SET ind10;

IF CODE='00625' THEN TKN=R_CNCAVG;

ELSE
IF R_CNCAVG EQ . AND R_CNCMIN NE . AND R_CNCMAX NE . THEN  TKN=(R_CNCMIN+R_CNCMAX)/2;

ELSE
TKN=R_CNCMAX;


IF CODE='00625' THEN OUTPUT;
ELSE DELETE;
```

```
DATA ON(KEEP=NPDES DISCH_PT MONTH YEAR ON);
LENGTH ON 7.2;
SET ind10;

IF CODE='00605' THEN  ON=R_CNCAVG;

ELSE
IF R_CNCAVG EQ . AND R_CNCMIN NE . AND R_CNCMAX NE . THEN  ON=(R_CNCMIN+R_CNCMAX)/2;
ELSE
ON=R_CNCMAX;

IF CODE='00605' THEN OUTPUT;
ELSE DELETE;


DATA NO3(KEEP=NPDES DISCH_PT YEAR MONTH NO3);
LENGTH NO3 7.3;
SET ind10;
IF CODE='00615' THEN  NO3=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  NO3=(R_CNCMIN+R_CNCMAX)/2;
ELSE
NO3=R_CNCMAX;
IF CODE='00615' THEN OUTPUT;
ELSE DELETE;
/* code=00615 is a new code added into the program for this year*/
DATA NO2(KEEP=NPDES DISCH_PT YEAR MONTH NO2);
LENGTH NO2 7.3;
SET ind10;
IF CODE='00620' THEN NO2=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  NO2=(R_CNCMIN+R_CNCMAX)/2;
ELSE
NO2=R_CNCMAX;
IF CODE='00620' THEN OUTPUT;
ELSE DELETE;

DATA NO23(KEEP=NPDES DISCH_PT MONTH YEAR NO23);
LENGTH NO23 7.2;
SET ind10;

IF CODE='00630' THEN NO23=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  NO23=(R_CNCMIN+R_CNCMAX)/2;
ELSE
 NO23=R_CNCMAX;

IF CODE='00630' THEN OUTPUT;
ELSE DELETE;

DATA TN(KEEP=NPDES DISCH_PT MONTH YEAR TN );
LENGTH TN 7.2;
SET ind10;
```

```
IF CODE='00600' THEN TN=R_CNCAVG;

ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  TN=(R_CNCMIN+R_CNCMAX)/2;

ELSE
TN=R_CNCMAX;


IF CODE='00600' THEN OUTPUT;
ELSE DELETE;

DATA PO4(KEEP=NPDES DISCH_PT MONTH YEAR PO4 );
LENGTH PO4 5.2;
SET ind10;

IF CODE='70507' THEN  PO4=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  PO4=(R_CNCMIN+R_CNCMAX)/2;
ELSE
IF R_CNCMIN EQ . AND R_CNCMAX NE . THEN  PO4=R_CNCMAX;

IF CODE='70507' THEN OUTPUT;
ELSE DELETE;

DATA TP(KEEP=NPDES DISCH_PT MONTH YEAR TP );
LENGTH TP 5.2;
SET ind10;

IF CODE='00665' or code='04175' THEN  TP=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  TP=(R_CNCMIN+R_CNCMAX)/2;
ELSE
TP=R_CNCMAX;


IF CODE='00665' or code='04175' THEN OUTPUT;
ELSE DELETE;

DATA DO(KEEP=NPDES DISCH_PT MONTH YEAR DO );
LENGTH DO 5.2;
SET ind10;

IF CODE='00300' THEN  DO=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  DO=(R_CNCMIN+R_CNCMAX)/2;
ELSE
DO=R_CNCMIN;

IF CODE='00300' THEN OUTPUT;
ELSE DELETE;


DATA TOC(KEEP=NPDES DISCH_PT MONTH YEAR TOC);
LENGTH TOC 5.2;
```

```
SET ind10;

IF CODE='00680' THEN  TOC=R_CNCAVG;
ELSE
IF R_CNCAVG EQ . AND  R_CNCMIN NE . AND R_CNCMAX NE . THEN  TOC=(R_CNCMIN+R_CNCMAX)/2;
ELSE
TOC=R_CNCMAX;


IF CODE='00680' THEN OUTPUT;
ELSE DELETE;

DATA COD(KEEP=NPDES DISCH_PT MONTH YEAR COD);
LENGTH COD 5.2;
SET ind10;

IF (CODE='00341' OR COD='00340' OR CODE='00335') THEN  COD=R_CNCAVG;
IF (R_CNCAVG EQ .) THEN COD=R_CNCMIN;

IF (CODE='00341' OR CODE='00340' OR CODE='00335') THEN OUTPUT;
ELSE DELETE;


DATA ind10;
MERGE FLOW BOD5 TSS DO NH3 ON TKN NO3 NO2 NO23 TN PO4 TP TOC COD nodi;
BY NPDES DISCH_PT MONTH YEAR;


/*data maj06t2;
set ind10;
proc sort nodupkey data=maj06t2;
by npdes disch_pt month year ;

data temp;
set maj06t2;

proc print;
run;  */




DATA ind10r2;
SET ind10;

LENGTH FL_F $1;
LENGTH BO_F $1;
LENGTH TS_F $1;
LENGTH DO_F $1;
LENGTH NH_F $1;
LENGTH ON_F $1;
LENGTH TK_F $1;
LENGTH NO_F $1;
LENGTH TN_F $1;
LENGTH PO_F $1;
LENGTH TP_F $1;
```

```
LENGTH TOC_F $1;
LENGTH COD_F $1;
LENGTH TOC  5.2;
LENGTH COD  5.2;
LENGTH NODI $1;



IF FLOW NE . THEN FL_F='D';
IF BOD5 NE . THEN BO_F='D';
IF TSS  NE . THEN TS_F='D';
IF DO   NE . THEN DO_F='D';
IF NH3  NE . THEN NH_F='D';
IF ON   NE . THEN ON_F='D';
IF TKN  NE . THEN TK_F='D';
IF NO23 NE . THEN NO_F='D';
IF TN   NE . THEN TN_F='D';
IF PO4  NE . THEN PO_F='D';
IF TP   NE . THEN TP_F='D';
IF TOC  NE . THEN TOC_F='D';
IF COD  NE . THEN COD_F='D';

FLOW=ROUND(FLOW,.0001);
BOD5=ROUND(BOD5,.01);
TSS=ROUND(TSS,.01);
DO=ROUND(DO,.01);
COD=ROUND(COD,.01);
TOC=ROUND(TOC,.01);
NH3=ROUND(NH3,.01);
TKN=ROUND(TKN,.01);
ON=ROUND(ON,.01);
NO23=ROUND(NO23,.01);
TN=ROUND(TN,.01);
PO4=ROUND(PO4,.01);
TP=ROUND(TP,.01);

*if nodi='C' then flow=0;


PROC SORT NODUPKEY;
BY NPDES DISCH_PT MONTH YEAR ;



/*data ind10r2;
set ind10r2;

PROC SORT NODUPKEY;
BY NPDES DISCH_PT YEAR MONTH; */


DATA  PR.ind10R2;
SET ind10R2;

PROC PRINT DATA=ind10R2;
   VAR NPDES DISCH_PT MONTH YEAR FLOW NODI BOD5 TSS DO NH3
```

```
  ON TKN NO2 NO3 NO23 TN PO4 TP  COD TOC FL_F BO_F TS_F DO_F
  COD_F TOC_F NH_F ON_F TK_F NO_F TN_F PO_F TP_F ;

     TITLE    ' 2005 MAJOR MUNICIPAL (WWTP) PLANTS';
     TITLE2  '  ';

DATA pr.ind10R3;
SET  ind10R2;


PROC MEANS NOPRINT SUM;
BY NPDES DISCH_PT ;
OUTPUT OUT=SUMS SUM=;

DATA PRINT;
SET SUMS;
IF _FREQ_ NE 12 THEN OUTPUT;
ELSE DELETE;



PROC PRINT NOOBS;

VAR NPDES DISCH_PT  _FREQ_;
  TITLE    'Missing or duplicated records to be verified';
  Title2  '  ';
run;
/*
PROC EXPORT DATA = ind10or2 OUTFILE = 'F:\users\ppapali\mdps05\ind10\ind10new2.txt'
 REPLACE;
 RUN; QUIT;*/
```

# MAJYYYYTRANSPOSE.SAS

```
LIBNAME pr V8 "\\MDENT12\USERS\PPAPALI\mdps2011\maj2011" ;
DATA maj2011; LENGTH NPDES $ 12;
INFILE "\\MDENT12\USERS\PPAPALI\mdps2011\maj2011\maj11d12.CSV" LRECL = 150
DELIMITER = ',' DSD MISSOVER;

INPUT NPDES $ MLOC $ DATE1 $ DMRCODE $ DMRVALUE   nodi $ type $  disch_pt $ CODE $ ;

MTH = SUBSTR(DATE1,1,2);   DY = SUBSTR(DATE1,4,2);  YR = SUBSTR(DATE1,7,2);
MONTH = MTH + 0;   DAY = DY + 0;   YEAR = YR + 0;
DATE = MDY(MONTH,DAY,YEAR);

/*TIME1  = RIGHT(TIME1);  DEPTH = DEPTH;
HR    = SUBSTR(TIME1,1,2);  HOUR   = HR  + 0;   SEC = 0;
MIN   = SUBSTR(TIME1,4,2);  MINUTE = MIN + 0;
TIME = HMS(HOUR,MINUTE,SEC);  FORMAT TIME HHMM.;*/
```

```
FORMAT DATE MMDDYY8.;
N = _N_;



DROP DATE1 MTH MONTH DY DAY YR YEAR;
PROC SORT; BY N NPDES DATE DISCH_PT;


PROC TRANSPOSE OUT=TRANSDATA;
  ID DMRCODE;
 BY N NPDES mloc DATE nodi DISCH_PT type CODE;

VAR DMRVALUE ;

data pr.maj2011trn4;
set transdata;
proc print;run;
```

## MINYYYYTRANSPOSE.SAS

```
LIBNAME pr V8 "\\MDENT12\USERS\PPAPALI\mdps2011\min2011" ;
DATA min2011; LENGTH NPDES $ 12;
INFILE "\\MDENT12\USERS\PPAPALI\mdps2011\min2011\min11d23.CSV" LRECL = 150
DELIMITER = ',' DSD MISSOVER;

INPUT NPDES $ MLOC $ DATE1 $ DMRCODE $ DMRVALUE   nodi $ type $  disch_pt $ CODE $ ;

MTH = SUBSTR(DATE1,1,2);   DY = SUBSTR(DATE1,4,2);  YR = SUBSTR(DATE1,7,2);
MONTH = MTH + 0;   DAY = DY + 0;   YEAR = YR + 0;
DATE = MDY(MONTH,DAY,YEAR);
/*TIME1  = RIGHT(TIME1);  DEPTH = DEPTH;
HR    = SUBSTR(TIME1,1,2);  HOUR   = HR  + 0;   SEC = 0;
MIN   = SUBSTR(TIME1,4,2);  MINUTE = MIN + 0;
TIME = HMS(HOUR,MINUTE,SEC);  FORMAT TIME HHMM.;*/

FORMAT DATE MMDDYY8.;
N = _N_;


DROP DATE1 MTH MONTH DY DAY YR YEAR;
PROC SORT; BY N NPDES DATE DISCH_PT;


PROC TRANSPOSE OUT=TRANSDATA;
  ID DMRCODE;
 BY N NPDES mloc DATE nodi DISCH_PT type CODE;

VAR DMRVALUE ;

data pr.min11trn6;
```

```
set transdata;
proc print;run;
```

## INDYYYYTRANSPOSE.SAS

```
LIBNAME pr V8 "\\MDENT12\USERS\PPAPALI\mdps2011\ind2011" ;
DATA ind11; LENGTH NPDES $ 12;
INFILE "\\MDENT12\USERS\PPAPALI\mdps2011\ind2011\ind11d1.CSV" LRECL = 150
DELIMITER = ',' DSD MISSOVER;

INPUT NPDES $ MLOC $ DATE1 $ DMRCODE $ DMRVALUE   nodi $ type $  disch_pt $ CODE $ ;



MTH = SUBSTR(DATE1,1,2);   DY = SUBSTR(DATE1,4,2);  YR = SUBSTR(DATE1,7,2);
MONTH = MTH + 0;   DAY = DY + 0;   YEAR = YR + 0;
DATE = MDY(MONTH,DAY,YEAR);
/*TIME1  = RIGHT(TIME1);  DEPTH = DEPTH;
HR    = SUBSTR(TIME1,1,2);  HOUR   = HR  + 0;   SEC = 0;
MIN   = SUBSTR(TIME1,4,2);  MINUTE = MIN + 0;
TIME = HMS(HOUR,MINUTE,SEC);  FORMAT TIME HHMM.;*/


FORMAT DATE MMDDYY8.;
N = _N_;



DROP DATE1 MTH MONTH DY DAY YR YEAR;
PROC SORT; BY N NPDES DATE DISCH_PT;


PROC TRANSPOSE OUT=TRANSDATA;
  ID DMRCODE;
 BY N NPDES mloc DATE nodi DISCH_PT type CODE;

VAR DMRVALUE ;

data pr.ind10trn1;
set transdata;
proc print;run;
```

## PSHORZYY.SAS

---

```
LIBNAME FINAL 'H:\users\PPAPALI\mdps2010\BNR';


%MACRO HORIZON(DS1,DS2,DS3);

DATA ALL;
    SET FINAL.&DS1;
```

```
    KEEP YEAR BASIN NPDES NAME TN TP TNL TPL FLOW
        FALLINE CODE TYPE COUNTY;




PROC SORT NODUPS;
    BY BASIN;

 %MACRO TOPRINT(DS);

DATA &DS;
    SET ALL;
    KEEP YEAR BASIN NPDES NAME FALLINE CODE COUNTY TYPE &DS;

PROC SORT;
    BY BASIN COUNTY TYPE CODE FALLINE NPDES NAME;

PROC TRANSPOSE DATA=&DS OUT=PSALL NAME=PARMETER PREFIX=&DS;
    ID YEAR;
    BY BASIN COUNTY TYPE CODE FALLINE NPDES NAME;

DATA &DS;
    SET PSALL;
    DROP PARMETER;

PROC DATASETS NOLIST; DELETE PSALL;

 %MEND TOPRINT;

%TOPRINT(FLOW)
      /*  %TOPRINT(AFLOW)  */
%TOPRINT(TN)
%TOPRINT(TP)
%TOPRINT(TNL)
%TOPRINT(TPL)

PROC DATASETS NOLIST; DELETE ALL;

DATA FINAL.&DS2;
    MERGE FLOW TN TP TNL TPL;
    BY BASIN COUNTY TYPE CODE FALLINE NPDES NAME;

PROC SORT;
    BY BASIN NPDES;



PROC PRINT;
    BY BASIN;
    VAR BASIN NPDES NAME TYPE CODE FALLINE COUNTY
```

FLOW2000 FLOW2001 FLOW2002
FLOW2003 FLOW2004 FLOW2005 FLOW2006 FLOW2007 FLOW2008 FLOW2009 FLOW2010

TN2000
TN2001 TN2002 TN2003 TN2004 TN2005 TN2006 TN2007 TN2008 TN2009 TN2010

TP2000
TP2001 TP2002 TP2003 TP2004 TP2005 TP2006 TP2007 TP2008 TP2009 TP2010

TNL2000 TNL2001 TNL2002 TNL2003 TNL2004 TNL2005 TNL2006 TNL2007 TNL2008 TNL2009 TNL2010

TPL2000
TPL2001 TPL2002 TPL2003 TPL2004 TPL2005 TPL2006 TPL2007 TPL2008 TPL2009 TPL2010;

SUM

FLOW2000
FLOW2001 FLOW2002 FLOW2003 FLOW2004 FLOW2005 FLOW2006 FLOW2007 FLOW2008 FLOW2009 FLOW2010

TN2000 TN2001 TN2002 TN2003
TN2004 TN2005 TN2006 TN2007 TN2008 TN2009 TN2010

TP2000 TP2001 TP2002
TP2003 TP2004 TP2005 TP2006 TP2007 TP2008 TP2009 TP2010

TNL2000 TNL2001 TNL2002 TNL2003 TNL2004 TNL2005 TNL2006 TNL2007 TNL2008 TNL2009 TNL2010

TPL2000 TPL2001 TPL2002 TPL2003 TPL2004 TPL2005 TPL2006 TPL2007 TPL2008 TPL2009 TPL2010;

PAGEBY BASIN;

**%MEND** HORIZON;

%***HORIZON***(md0010V, md0010H);
**RUN**;

**********

## PSVERTYY.SAS

**********
IMPORTANT NOTICE

THIS IS THE FINAL SAS PROGRAM FOR GENERATING THE PERMANENT SAS DATA SETS PS8798_V AND PS8798DR_V. DO NOT CHANGE IT IN ANY WAY WITHOUT CONSULTING PRIYA FIRST. NO EXCEPTIONS! PS8598_V IS WITHOUT DELIVERY RATIOS. PS8598DR_V IS WITH DELIVERY RATIOS (DR). THE _V MEANS "IN VERTICAL FORMAT". BOTH PS97_V AND PS97DR_V ARE IN THE FINAL SSD.DIR. THEY CONTAIN DMR DATA FROM 1984 TO PRESENT.

THIS PROGRAM SHOULD NOT BE USED TO CREATE THE 1997 DMR DATA SET. USE APPEND_V.SAS INSTEAD. IT IS MUCH QUICKER TO APPEND THE 97 DATASET TO THE ABOVE SSD FILES THAN TO RECREATE THE WHOLE THING AGAIN FROM SCRATCH. WE ARE TALKING ABOUT MORE THAN TEN YEARS OF DATA HERE!

DO NOT RUN THIS PROGRAM IF YOUR INTENTION IS TO RETRIEVE DMR DATA FOR ONE OR MORE BASINS OR WWTPS. WRITE A SIMPLE SAS PROGRAM INSTEAD TO RETRIEVE THE DESIRED DATA FROM THE SSD FILES PS97_V OR PS97DR_V, WHICH CAN BE FOUND ON MDENT12.

```
**************************************************************************;

libname ps 'H:\users\ppapali\mdps';
libname final 'H:\users\ppapali\mdps2011\BNR';
/*FILENAME TYPECOR 'H:\users\PPAPALI\INC\TYPECOR.TXT';*/


FILENAME BASIN 'H:\users\PPAPALI\INC\BASIN.TXT';

FILENAME DELRATIO 'H:\users\PPAPALI\INC\DELRAT2.INC';
FILENAME COUNTY 'H:\users\PPAPALI\INC\NPDES_CO.INC';*/


**************************************************************************;


%macro toset(ds,ps,ns);

DATA &ds (KEEP=YEAR CODE TYPE FALLINE NAME NPDES FLOW MFLOW MONTH
          DISCH_PT DAY TN TP MTNL MTPL);
SET ps.&ds;

*%INCLUDE TYPECOR;

IF MONTH=1 OR MONTH=3 OR MONTH=5 OR MONTH=7 OR MONTH=8 OR MONTH=10 OR MONTH=12
THEN DO;
      DAY=31;
      MFLOW=FLOW*DAY;
      MTNL=MFLOW*TN*8.344;
      MTPL=MFLOW*TP*8.344;
END;

IF MONTH=4 OR MONTH=6 OR MONTH=9 OR MONTH=11
THEN DO;
      DAY=30;
      MFLOW=FLOW*DAY;
```

```
      MTNL=MFLOW*TN*8.344;
      MTPL=MFLOW*TP*8.344;
END;

IF MONTH=2 THEN DO;

      IF YEAR=1984 OR YEAR=1988 OR YEAR=1992 OR YEAR=1996 OR YEAR=2000 OR year=2004
      THEN DAY=29;
      ELSE DAY=28;
      MFLOW=FLOW*DAY;
      MTNL=MFLOW*TN*8.344;
      MTPL=MFLOW*TP*8.344;

END;

PROC SORT;
BY NPDES DISCH_PT;

PROC MEANS NOPRINT SUM DATA=&ds;
VAR DAY MFLOW MTPL MTNL;
BY NPDES DISCH_PT;
ID NAME CODE TYPE FALLINE;
OUTPUT OUT=&ds SUM= ADAY AFLOW ATPL ATNL;

DATA &ps;
SET &ds;

IF YEAR=2004 OR YEAR=2000 OR YEAR=1996 OR YEAR=1992 OR YEAR=1988 OR YEAR=1984

      THEN FLOW=AFLOW/366;

      ELSE FLOW=AFLOW/365;

PROC MEANS NOPRINT SUM DATA=&ps;
VAR FLOW AFLOW ATPL ATNL;
BY NPDES;
ID NAME CODE TYPE FALLINE;
OUTPUT OUT=&ns SUM=FLOW_FY11 AFLOW_FY11 ATPL_FY11 ATNL_FY11;

PROC DATASETS NOLIST; DELETE &ds &ps;

 %mend toset;


%toset(FY11ALL,p11,n11)

DATA PS_V;
LENGTH BASIN $25.;
SET n11;

TP_FY11=ATPL_FY11/AFLOW_FY11/8.344;
TN_FY11=ATNL_FY11/AFLOW_FY11/8.344;

NUM=1;

TPL_FY11=ATPL_FY11/NUM;
```

```
TNL_FY11=ATNL_FY11/NUM;

CHAR=SUBSTR(CODE,1,8);
SUB=SUBSTR(CODE,10,2);

%INCLUDE BASIN;
%INCLUDE COUNTY;

NAME = UPCASE(NAME);
BASIN = UPCASE(BASIN);
TYPE = UPCASE(TYPE);
FALLINE = UPCASE(FALLINE);
COUNTY = UPCASE(COUNTY);

PROC SORT;
BY NPDES ;

PROC DATASETS NOLIST;
DELETE  n11;


DATA final.MDFY11V (DROP=_TYPE_ _FREQ_ SUB CHAR NUM AFLOW_FY11 ATNL_FY11 ATPL_FY11);
SET PS_V;

*%INCLUDE DELRATIO;



PROC CONTENTS;


PROC PRINT;
run;
```

# APPENDIX D

# Data Editing/Verification Remarks for the MDPS Database Compilation

| | | | |
|---|---|---|---|
| DC0021199 | BLUE PLAINS | MAJ | All values verified / entered from the load allocation table sent from Bay Program |
| MD0000311 | W R GRACE | IND | Verified all values with DMRS. |
| MD0000469 | MD & VA MILK PRODUCERS | IND | Data has been verified with dmr/mors |
| MD0001201 | BETHELEHEM STEEL | IND | Data has been verified with dmr/mors |
| MD0001384 | CONGOLEUM | IND | Data has been verified with dmr/mors |
| MD0001422 | WESTVACO | IND | Data has been verified with dmr/mors |
| MD0001775 | CHEMETALS | IND | Called facility and verified some numbers. |
| MD0003158 | INDIAN HEAD NOS | IND | Data has been verified with dmr/mors |
| MD0003221 | C. WM. WINEBRNNER | MAJ | Data has been verified with dmr/mors |
| MD0020001 | CRISFIELD | MAJ | NITROGEN VALUES ENTERED FRON MORS. DECIMAL PLACE DIFF SHOWS IN THE MOR. NOT MAJOR DIRRERENCE. |
| MD0020010 | CHESTERTOWN | MAJ | For the month of julyTSS value changed from 17.81 to 14.81, from Fortis |
| MD0020044 | OCEAN CITY | MAJ | For the month of august no data present (will check with ICIS) |
| MD0020052 | INDIAN HEAD | MAJ | For the month of august no data in Fortis but data present (will recheck with ICIS) |
| MD0020095 | NAS-PATUXENT | MIN | Data has been verified with dmr/mors |
| MD0020168 | NAVAL RESEARCH LAB | MIN | Data has been verified with dmr/mors |
| MD0020206 | US ARMY - CHESAPEAKE CITY | MIN | Data has been verified with dmr/mors |
| MD0020231 | BOONSBORO | MIN | FEBURARY FLOW DATA CORRECTED TO .256 |
| MD0020249 | FEDERALSBURG | MAJ | TN values were entered from Fortis for july and august |
| MD0020257 | EMMITSBURG | MAJ | No discharge but will double check ICIS for July and august |
| MD0020265 | RISING SUN | MIN | Dmr data reported from the facility was wrong. Redirected to WMA for correction.2010 and 2011 will be corrected. |
| MD0020273 | EASTON | MAJ | Values entered for TN and TP for July and august |
| MD0020281 | CHESAPEAKE BEACH | MAJ | Could not find several values that were provided by downloaded for July and august |
| MD0020290 | GREENSBORO | MIN | Data has been verified with dmr/mors |
| MD0020303 | ROCK HALL | MIN | values updated. Orange highlithted are the new values received fro m fac on 2/12 |
| MD0020362 | FUNKSTOWN | MIN | Data has been verified with dmr/mors |
| MD0020397 | CHESAPEAKE CITY SOUTH | MIN | FLOW value double checked with ICIS and was invalid for the month of feb 2011 |
| MD0020401 | CHESAPEAKE CITY NORTH | MIN | Data has been verified with dmr/mors |
| MD0020427 | RIDGELY WWTP | MIN | Data has been verified with dmr/mors |
| MD0020435 | MILLINGTON | MIN | January 2011 was Verified with ICIS, FLOW VALUE HAD STAMP OVER IT |

| | | | |
|---|---|---|---|
| MD0020443 | CECILTON | MIN | Data has been verified with dmr/mors |
| MD0020486 | TRAPPE | MIN | Data has been verified with dmr/mors |
| MD0020494 | DENTON | MAJ | Data has been verified with dmr/mors |
| MD0020524 | LA PLATA | MAJ | Data has been verified with dmr/mors |
| MD0020532 | DELMAR | MAJ | Data has been verified with dmr/mors |
| MD0020559 | SUDLERSVILLE | MIN | March 2011 and June2011 FLOW value represented influent instead of effluent.corrected |
| MD0020575 | BETTERTON | MIN | Data has been verified with dmr/mors |
| MD0020605 | GALENA | MIN | Some nh3 value reported high around 25mg/l. so tn calculated to 54. WMA gave the information that this facility has 70mg/l maximum limit. |
| MD0020613 | PERRYVILLE | MAJ | Data has been verified with dmr/mors |
| MD0020621 | PRESTON | MIN | Data has been verified with dmr/mors |
| MD0020630 | NEWARK | MIN | Data has been verified with dmr/mors |
| MD0020648 | OAKLAND | MAJ | Data has been verified with dmr/mors |
| MD0020656 | PRINCESS ANNE | MAJ | Data has been verified with dmr/mors |
| MD0020664 | VIENNA | MIN | Data has been verified with dmr/mors |
| MD0020672 | TANEYTOWN | MAJ | Flow value changed from .481 to .496 from DMR Fortis for the month of august |
| MD0020681 | ELKTON | MAJ | Values entered for TN, OP, and TP from Fortis for the month of July |
| MD0020699 | MYERSVILLE | MIN | tn values diff in 2010 because nitrogen values available in 2011 for the month 5,6 |
| MD0020729 | NEW MARKET | MIN | Data has been verified with dmr/mors |
| MD0020737 | JEFFERSON | MIN | Data has been verified with dmr/mors |
| MD0020761 | GRANTSVILLE | MIN | Data has been verified with dmr/mors |
| MD0020761 | Town of Grantsville | | nh3 values available |
| MD0020796 | PORT DEPOSIT | MIN | Data has been verified with dmr/mors |
| MD0020800 | POINT OF ROCKS | MIN | MONTH 7 NITROGEN VALUES ENTERED FOR JULY2010 |
| MD0020834 | CENTREVILLE | MAJ | Data has been verified with dmr/mors |
| MD0020842 | BELTSVILLE USDA EAST | MIN | Data has been verified with dmr/mors |
| MD0020851 | BELTSVILLE USDA WEST | MIN | Data has been verified with dmr/mors |
| MD0020877 | FORT DETRICK | MAJ | Data has been verified with dmr/mors |
| MD0020885 | INDIAN HEAD NAVAL ORDINANCE | MIN | Data has been verified with dmr/mors |
| MD0020931 | NIH | MIN | Data has been verified with dmr/mors |
| MD0020958 | BRUNSWICK | MAJ | Values for TSS, TN, and OP from Fortis for July and august |
| MD0020982 | DAMASCUS | MAJ | VERIFIED. NH3 VALUE WAS 0 FOR 2011. |
| MD0021083 | FRIENDSVILLE | MIN | Data has been verified with dmr/mors |
| MD0021091 | ASSATEAGUE ISLAND NATIONAL SEA | MIN | Data has been verified with dmr/mors |
| MD0021121 | THURMONT | MAJ | FLOW VALUES MISSING IN ICIS.DMR REPORTED AVERGE VALUE<br>IN THE MAXIMUM COULMN. |
| MD0021229 | APG - EDGEWOOD | MAJ | PO4 VALUE MISSING IN THE SPREADSHEET. ENTERED FROM DMR.<br>VERIFIED WITH MOR July/August All values entered from Fortis |

| | | | |
|---|---|---|---|
| MD0021237 | APG - ABERDEEN | MAJ | month 7 ton was entered .64 changed to 1.31July/August All values entered from Fortis |
| MD0021491 | SENECA CREEK | MAJ | All values entered from Fortis for the month of august |
| MD0021512 | FREEDOM DISTRICT | MAJ | VEIFIED WITH MORS.NH3 VALUES ENTERED FROM MORS. PO4 ENTERED FROM MORS. SOME NITROGEN VALUES CHANGED.FLAGED AS M |
| MD0021539 | PISCATAWAY | MAJ | All values entered from Fortis for the month of august |
| MD0021555 | BACK RIVER | MAJ | Data has been verified with dmr/mors |
| MD0021563 | ABERDEEN | MAJ | Data has been verified with dmr/mors |
| MD0021571 | SALISBURY | MAJ | Data has been verified with dmr/mors |
| MD0021598 | CUMBERLAND | MAJ | Data has been verified with dmr/mors |
| MD0021601 | PATAPSCO | MAJ | Data has been verified with dmr/mors |
| MD0021610 | FREDERICK | MAJ | Data has been verified with dmr/mors |
| MD0021628 | BOWIE | MAJ | MONTH 11 WAS MISSING . ENTERED. MOR/DMR |
| MD0021636 | CAMBRIDGE | MAJ | Data has been verified with dmr/mors |
| MD0021644 | BROADNECK | MAJ | Data has been verified with dmr/mors |
| MD0021652 | PATUXENT | MAJ | Data has been verified with dmr/mors |
| MD0021661 | COX CREEK | MAJ | FLOW VALUES CORRECTED ON NOV 2011. THREE OUTFALL FLOW REPORTED.<br>001B IS FINAL EFFLUENT DATA,WHICH IS DIFF OF OTHER TWO OUTFALLS |
| MD0021679 | PINE HILL RUN | MAJ | Data has been verified with dmr/mors |
| MD0021687 | UPPER POTOMAC RIVER COMMISSION | IND | Data has been verified with dmr/mors |
| MD0021717 | FORT MEADE | MAJ | Data has been verified with dmr/mors |
| MD0021725 | PARKWAY | MAJ | Data has been verified with dmr/mors |
| MD0021741 | WESTERN BRANCH | MAJ | Data has been verified with dmr/mors |
| MD0021750 | HAVRE DE GRACE | MAJ | Data has been verified with dmr/mors |
| MD0021776 | HAGERSTOWN | MAJ | Data has been verified with dmr/mors |
| MD0021814 | ANNAPOLIS | MAJ | Data has been verified with dmr/mors |
| MD0021822 | BALLENGER CREEK | MAJ | Data has been verified with dmr/mors |
| MD0021831 | WESTMINSTER | MAJ | Data has been verified with dmr/mors |
| MD0021865 | MATTAWOMAN | MAJ | Data has been verified with dmr/mors |
| MD0022446 | HAMPSTEAD | MIN | VERIFIED TKN. |
| MD0022454 | UNION BRIDGE | MIN | Data has been verified with dmr/mors |
| MD0022527 | MT AIRY | MAJ | Data has been verified with dmr/mors |
| MD0022535 | JOPPATOWNE | MAJ | Data has been verified with dmr/mors |
| MD0022543 | OXFORD | MIN | FLOW value and Ammonia had to be entered from Fortis for the month of<br>Jan and Feb 2011.For the month of March flow, Ammonia, Op and TP values entered from Fortis. |
| MD0022551 | POCOMOKE CITY | MAJ | Month of Jan TKN=2,Feb TKN=1,March Nh3=1,tkn=2,may tkn=3 June tkn=5.values were corrected. |
| MD0022578 | MANCHESTER | MIN | Data has been verified with dmr/mors |
| MD0022586 | NEW WINDSOR | MIN | Total Nitrogen value entered from Fortis for the month of June 2011, Ammonia and Total Phosphorous from Fortis for the month January, Ammonia data taken from Fortis for th e month of March 2011 |
| MD0022632 | BERLIN | MIN | Data has been verified with dmr/mors |

| | | | |
|---|---|---|---|
| MD0022641 | MEADOWVIEW | MIN | Data has been verified with dmr/mors |
| MD0022683 | CRESTVIEW | MIN | Data has been verified with dmr/mors |
| MD0022713 | RICHLYN MANOR | MIN | Data has been verified with dmr/mors |
| MD0022721 | FOUNTAINDALE | MIN | Data has been verified with dmr/mors |
| MD0022730 | HURLOCK | MAJ | Month of Jan TP=.05,Feb TP=.05,March TP=.07, April TP=.06,May TN=2.01<br>June TN=2.36=5.values were corrected. |
| MD0022748 | MARYLAND WATER SERVICE | MIN | Data has been verified with dmr/mors |
| MD0022756 | ROSE HEAVEN WWTP | | OFFLINE |
| MD0022764 | SNOW HILL | MAJ | |
| MD0022781 | MARLBORO MEADOWS | MIN | Data has been verified with dmr/mors |
| MD0022845 | GAITHER MANOR | MIN | Data has been verified with dmr/mors |
| MD0022870 | SPRINGVIEW ESTATES | MIN | Data has been verified with dmr/mors |
| MD0022900 | LEWISTOWN ELEMENTARY | MIN | Data has been verified with dmr/mors |
| MD0022926 | HUNTER HILL APARTMENTS | MIN | Data has been verified with dmr/mors |
| MD0022951 | GLEN MEADOWS | MIN | Data has been verified with dmr/mors |
| MD0022993 | TAWES VACCATIONAL CENTER | | OFFLINE |
| MD0023001 | POOLESVILLE | MAJ | Entered/changed Jan 2011 tkn=1.09, FLOW was changed from .144 to .411,March tkn=.63<br>April tkn=4.5 |
| MD0023027 | POCOMOKE INN | | OFFLINE |
| MD0023043 | SWAN HARBOR PARK | MIN | Data has been verified with dmr/mors |
| MD0023060 | CONCORD TRAILER PARK | MIN | high value reported for no23 and tn |
| md0023060 | CONCORD MOBILE PARK | | high value reported for no23 and tn |
| MD0023108 | MANCHESTER PARK | MIN | Missing data in icis . CECO UTILITIES. DON'T CALL DIRECTLY. EED TO REQUEST DMR THRU WMA |
| MD0023159 | LACKEY HIGH SCHOOL | | OFFLINE |
| MD0023213 | RAWLINGS HEIGHTS | MIN | MONTH 6 FLOW CORRECTED TO .068. FROM MOR |
| MD0023230 | MT ST MARYS COLLEGE | MIN | Data has been verified with dmr/mors |
| MD0023272 | SUMMER HILL TRAILER PARK | MIN | Data has been verified with dmr/mors |
| MD0023281 | N HARFORD JR&SR HIGH | MIN | Data has been verified with dmr/mors |
| MD0023337 | WOODLAWN MOBILE HOME PARK | MIN | Data has been verified with dmr/mors |
| MD0023361 | AT& T CORPORATION | | OFFLINE |
| MD0023370 | QUEENSTOWN | MIN | Data has been verified with dmr/mors |
| MD0023451 | PICCOWAXIN MIDDLE | MIN | Data has been verified with dmr/mors |
| MD0023469 | BOHEMIA MANOR HIGH | MIN | nitrogen reported high .no23 and tn reported high. |
| MD0023477 | OCEAN PINES SERVICE AREA | MAJ | NOV 2010 FLOW VALUE MISSING. ENTERED |
| MD0023485 | KENT ISLAND | MAJ | Data has been verified with dmr/mors |
| MD0023523 | US NAVAL ACADEMY | MIN | Data has been verified with dmr/mors |
| MD0023604 | TALBOT COUNTY REGION II | MAJ | Data has been verified with dmr/mors |
| MD0023621 | N CAROLINE HIGH | MIN | Data has been verified with dmr/mors |
| MD0023647 | WAYSONS MOBILE | MIN | Data has been verified with dmr/mors |
| MD0023680 | I-70 REST AREA | MIN | High values reported for all nitroen species |
| MD0023710 | DAN-DEE, INC | MIN | Data has been verified with dmr/mors |
| MD0023728 | SOUTHERN SENIOR HIGH SCHOOL | MIN | Data has been verified with dmr/mors |

| | | | |
|---|---|---|---|
| MD0023833 | ELK NECK STATE PARK | MIN | High values reported for some nitrogen species, nh4 and tn and no23. |
| MD0023868 | GREENBRIAR STATE PARK | MIN | Data has been verified with dmr/mors |
| MD0023876 | EASTERN CORRECTIONAL CAMP | MIN | Data has been verified with dmr/mors |
| MD0023906 | WOODSTOCK TRAINING CENTER | MIN | Data has been verified with dmr/mors |
| MD0023914 | SOUTHERN CORRECTIONAL CAMP | MIN | Data has been verified with dmr/mors |
| MD0023922 | VICTOR CULLEN CENTER | MIN | Data has been verified with dmr/mors |
| MD0023931 | CHELTENHAM BOYS VILLAGE | MIN | Data has been verified with dmr/mors |
| MD0023949 | POINT LOOKOUT STATE PARK | MIN | Data has been verified with dmr/mors |
| MD0023957 | MARYLAND CORRECTIONAL INSTITUT | MAJ | Data has been verified with dmr/mors |
| MD0023981 | NEW GERMANY STATE PARK | MIN | Data has been verified with dmr/mors |
| MD0024023 | HARBOUR VIEW | MIN | Data has been verified with dmr/mors |
| MD0024244 | CRACKED CLAW | | OFFLINE |
| MD0024279 | MARDELA HIGH | MIN | Data has been verified with dmr/mors |
| MD0024317 | SMITHSBURG | MIN | Data has been verified with dmr/mors |
| MD0024333 | MARYLAND MANOR MOBILE | MIN | Data has been verified with dmr/mors |
| MD0024350 | BROADWATER | MAJ | Data has been verified with dmr/mors |
| MD0024384 | CHESAPEAKE COLLEGE | MIN | Data has been verified with dmr/mors |
| MD0024406 | MIDDLETOWN | MIN | Data has been verified with dmr/mors |
| MD0024449 | NORTHERN MS/HS | MIN | Data has been verified with dmr/mors |
| MD0024546 | PHEASANT RIDGE | MIN | Data has been verified with dmr/mors |
| MD0024562 | HANCOCK | MIN | Data has been verified with dmr/mors |
| MD0024589 | S CARROLL HIGH | MIN | Data has been verified with dmr/mors |
| MD0024627 | HIGHLAND VIEW | MIN | Data has been verified with dmr/mors |
| MD0024635 | UNITED CONTAINER | MIN | Data has been verified with dmr/mors |
| MD0024694 | PATUXENT MOBILE | MIN | Data has been verified with dmr/mors |
| MD0024759 | OLDTOWN | MIN | Data has been verified with dmr/mors |
| MD0024767 | LEONARDTOWN | MAJ | Data has been verified with dmr/mors |
| MD0024929 | TRIUMPH INDUSTRIAL PARK | MIN | Data has been verified with dmr/mors |
| MD0024937 | Q-CITY COURTS | | OFFLINE |
| MD0024945 | GREAT OAKS LANDING | MIN | Data has been verified with dmr/mors |
| MD0024953 | SPRING MEADOWS | MIN | Data has been verified with dmr/mors |
| MD0024961 | BENJAMINS TRAILER PARK | MIN | Data has been verified with dmr/mors |
| MD0024970 | MAPLE RUN FORESTY CAMP | | OFFLINE |
| MD0024988 | GREEN RIDGE FORESTRY CAMP | MIN | Data has been verified with dmr/mors |
| MD0025089 | WHITE ROCK | MIN | Data has been verified with dmr/mors |
| MD0025119 | FOXVILLE US NAVAL SUPPORT | MIN | Data has been verified with dmr/mors |
| MD0025623 | PATUXENT WILD LIFE | | OFFLINE |
| MD0025631 | TERRAPIN UTILITY | | OFFLINE |
| MD0025640 | BRANDYWINE FAMILY HOUSING | | OFFLINE |
| MD0025658 | BRANDYWINE FAMILY RECEIVER SITE | | OFFLINE |
| MD0025666 | EMERGENCY MANAGEMENT | MIN | Data has been verified with dmr/mors |
| MD0050016 | CHURCH HILL | MIN | Data has been verified with dmr/mors |
| MD0050334 | THUNDERBIRD APARTMENTS | MIN | Data has been verified with dmr/mors |
| MD0050903 | BOONES MOBILE | MIN | Data has been verified with dmr/mors |
| MD0051373 | BROADFORDING | MIN | Data has been verified with dmr/mors |
| MD0051497 | TROUT RUN | MAJ | FLOW VALUES REPORTED ON THE DMR IS NOT SAME AS MOR.<br>SED MOR VALUES.CONTACT ICIS TO CORRECT |
| MD0051632 | WILLARDS | MIN | SOME NITRGEN VALUES ENTERED FROM THE LAB SAMPLE |

| | | | |
|---|---|---|---|
| MD0051667 | ROCKY GAP STATE PARK | MIN | Data has been verified with dmr/mors |
| MD0051721 | ACCIDENT | MIN | Data has been verified with dmr/mors |
| MD0051918 | CHOPTICAN HIGH | MIN | USED THE VALUES FROM PREVIOUS YEAR. 2008 AND 2009 ARE<br><br>HIGH NH3 REPORTED.nh3 values have been dropped from 2010 onwards.<br><br>calculated tn value using previous year (2008 nh3 was reported very high)<br><br>Need lab/grab sample to calculate tn. Requested to WMA. This facility has<br><br>has some issues. so you are not able request for sample now. |
| MD0052027 | NORTHEAST RIVER | MAJ | Data has been verified with dmr/mors |
| MD0052167 | NORTHERN HIGH | MIN | Data has been verified with dmr/mors |
| MD0052175 | SHARPTOWN | MIN | Data has been verified with dmr/mors |
| MD0052230 | EWELL | MIN | Data has been verified with dmr/mors |
| MD0052248 | TYLERTON | MIN | Data has been verified with dmr/mors |
| MD0052256 | FAIRMOUNT | MIN | Data has been verified with dmr/mors |
| MD0052281 | CRELLIN | MIN | Data has been verified with dmr/mors |
| MD0052299 | MORNING CHEER | MIN | STARTED TO REPORT NITROGEN IN 2011 |
| MD0052311 | CHARLES COUNTY COMM COLLEGE | MIN | NITROGEN VALUES ENTERED FROM MOR |
| MD0052329 | PARKWAY INN | | OFFLINE |
| MD0052671 | KENNEDYVILLE | | ENTERED NITRGEN VALUES FROM MORS. |
| MD0052680 | EDGEMEADE RES SITE | MIN | Data has been verified with dmr/mors |
| MD0052825 | CHERRY HILL | MIN | high values reported for some nitrogen species tn and no23. |
| MD0052850 | SWALLOW FALLS STATE PARK | MIN | Data has been verified with dmr/mors |
| MD0052868 | DREAM LANDING | | OFFLINE TERMINATED 2/2007 |
| MD0052990 | FRUITLAND | MAJ | ENTER THE FLOW VALUES INTO THE DATABASE FROM MORS. |
| MD0053066 | FAHRNEY-KEEDY | MIN | Data has been verified with dmr/mors |
| MD0053074 | CAMP SUNRISE | MIN | Data has been verified with dmr/mors |
| MD0053082 | HOLIDAY MOBILE ESTATES | MIN | Data has been verified with dmr/mors |
| MD0053104 | WESTOVER GOOSE CREEK | | OFFLINE |
| MD0053139 | CAMP SHADOWBROOK | MIN | Data has been verified with dmr/mors |
| MD0053155 | THUNDERBIRD MOTEL | MIN | Data has been verified with dmr/mors |
| MD0053171 | MAPLE HILL PARK | MIN | Data has been verified with dmr/mors |
| MD0053198 | BROOK LANE | MIN | HIGH VALUES REPORTED FOR NITROGEN IN THE MORS.C ALL FACIL TO VERIFY.<br>no23 value reported very high. So calculated tn will be 35. |
| MD0053201 | RELAX INN | MIN | NH3 FOR MONTH 9 CHANGE FROM 22 TO 2.2 .FROM MORS |

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|---|---|---|---|
| MD0053228 | MT CARMEL WOODS | MIN | Data has been verified with dmr/mors |
| MD0053279 | FOREST GREEN | MIN | Data has been verified with dmr/mors |
| MD0053325 | CLEARSPRING | MIN | Data has been verified with dmr/mors |
| MD0053511 | LYONS CREEK MOBILE | MIN | Data has been verified with dmr/mors |
| MD0054330 | POKOMOKE TRUCK STOP | | OFFLINE |
| MD0054348 | DEEP CREEK LAKE | MIN | Data has been verified with dmr/mors |
| MD0054542 | BALTIMORE YATCH CLUB | | OFFLINE |
| MD0054950 | DONALDSON BROWN COOTER | MIN | Data has been verified with dmr/mors |
| MD0055174 | LITTLE PATUXENT | MAJ | Data has been verified with dmr/mors |
| MD0055352 | TWIN CITIES | MIN | Data has been verified with dmr/mors |
| MD0055425 | OLD SOUTH MOUNTAIN INN | MIN | dmr is not available for the month 2-6 2011. use the avg value to fill in |
| MD0055522 | COLONEL RICHARDSON MIDDLE&HIGH | MIN | ammonia reported for 2011 high verified with mor |
| MD0055557 | CLIFFTON ON THE POTOMAC | MIN | Data has been verified with dmr/mors |
| MD0055620 | FLINTSTONE | MIN | Data has been verified with dmr/mors |
| MD0056103 | ST.TIMOTHY SCHOOL | | OFFLINE |
| MD0056464 | FAIRVIEW BEACH | | OFFLINE |
| MD0056481 | KEMPTOWN SCHOOL | MIN | Data has been verified with dmr/mors |
| MD0056545 | SOD RUN | MAJ | Data has been verified with dmr/mors |
| MD0056553 | SHINE INN | MIN | DMR NOT SUBMITTED. ENTERED ZERO FLOW FOR THE MONTHS 1-6 |
| MD0057100 | NEW LIFE FOURSQUARE CHURCH | MIN | Data has been verified with dmr/mors |
| MD0057487 | WALKERS TRAILER PARK | MIN | nh3 values has been dropped from 2009 onwards.calculated tn value using previous year (2007 nh3 was reported very high)used that value to calculate the TN.The value 34 dropped to 10mg/l from 2009 onwards |
| MD0057525 | SWAN POINT | MAJ | FLOW WERE MISSING IN THE SPREASHEET. ENTERED FROM MOR. |
| MD0057606 | WINTERS APARTMENTS | MIN | Data has been verified with dmr/mors |
| MD0057614 | JUDE HOUSE | | OFFLINE |
| MD0058050 | SHAMROCK RESTAURANT | MIN | Data has been verified with dmr/mors |
| MD0058661 | WOODSBORO | MIN | Data has been verified with dmr/mors |
| MD0058807 | BOWLEYS QUARTER | | OFFLINE |
| MD0059145 | PINEY ORCHARD | MIN | NOV NOTROGEN VALUES WERE MISSING ENTERED FROM MOR |
| MD0059463 | TALBOT COUNTY REGION V | MIN | Data has been verified with dmr/mors |
| MD0059609 | MONROVIA | MIN | Data has been verified with dmr/mors |
| MD0059617 | HEBRON | MIN | MONTH 4 FLOW CORRECTED TO .064.FROM MOR |
| MD0060071 | GEORGES CREEK | MAJ | Data has been verified with dmr/mors |
| MD0060348 | PITTSVILLE | MIN | Data has been verified with dmr/mors |
| MD0060577 | LIBERTYTOWN | MIN | Data has been verified with dmr/mors |
| MD0060585 | WORTON-BUTLERTON | MIN | FEB,JAN JUNE FLOW HAS BEEN CHANGED TO .094. FROM MOR |
| MD0060585 | WORTON-BUTLERTON | | FEB,JAN JUNE FLOW HAS BEEN CHANGED TO .094. FROM MOR |
| MD0060739 | TRI-TOWN INDUSTRIAL | | Checked Fortis and returned only values from 2008, ICIS had no data whatsoever listed |
| MD0060933 | BLOOMINGTON | MIN | Data has been verified with dmr/mors |
| MD0060941 | KITZMILLER | MIN | Data has been verified with dmr/mors |
| MD0060950 | GORMAN | MIN | Data has been verified with dmr/mors |

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|---|---|---|---|
| MD0061794 | MAYO LARGE COMMUNAL | MAJ | NO23 value changed from 19 to 23.8 via Fortis for the month of august |
| MD0062308 | ANTIETAM | MIN | reported nh3 and no23 very high |
| MD0062375 | LITTLE ORLEANS CAMP | MIN | Data has been verified with dmr/mors |
| MD0062596 | MARYLAND CITY | MAJ | Data has been verified with dmr/mors |
| MD0062821 | SIDELING HILL REST AREA | MIN | Data has been verified with dmr/mors |
| MD0063207 | DORSEY RUN | MAJ | Data has been verified with dmr/mors |
| MD0063282 | HEARNE-MEADOWS LLC | MIN | reported tn very high |
| MD0063509 | CONOCOCHEAGUE | MAJ | Data has been verified with dmr/mors |
| MD0063878 | CELANESE | MAJ | Data has been verified with dmr/mors |
| MD0063967 | CROOM MANOR HOUSING | | OFFLINE |
| MD0064530 | SANDY HOOK | MIN | Data has been verified with dmr/mors |
| MD0064777 | BRETTON WOODS | MIN | Data has been verified with dmr/mors |
| MD0065145 | HIGHLANDS | MIN | Data has been verified with dmr/mors |
| MD0065234 | BFS TRUCK STOP | MIN | Data has been verified with dmr/mors |
| MD0065269 | PLEASANT BRANCH | MIN | Data has been verified with dmr/mors |
| MD0065358 | NATIONAL WILDLIFE VISITOR CENT | MIN | Data has been verified with dmr/mors |
| MD0065439 | MILL BOTTOM | MIN | Data has been verified with dmr/mors |
| MD0065536 | ST.JAMES SCHOOL | | OFFLINE |
| MD0065749 | BIERS LANE | MIN | Data has been verified with dmr/mors |
| MD0065757 | HAPPY TRAILS CAMPGROUND | MIN | Data has been verified with dmr/mors |
| MD0065927 | RUNNYMEADE SCHOOL | MIN | Data has been verified with dmr/mors |
| MD0066001 | VILLA JULIE COLLEGE | MIN | Data has been verified with dmr/mors |
| MD0066184 | LEESBURG | | OFFLINE |
| MD0066613 | EASTERN CORRECTIONALINSTITUTIO | MIN | Data has been verified with dmr/mors |
| MD0066745 | PLESANT VALLEY | MIN | Data has been verified with dmr/mors |
| MD0066940 | URBANA HIGH SCHOOL | | OFFLINE |
| MD0067202 | TOLCHESTER | MIN | Data has been verified with dmr/mors |
| MD0067237 | LEWISTOWN-MILLS | | OFFLINE |
| MD0067521 | SHEPPARD PRATT WESTERN MIDDLE | MIN | Data has been verified with dmr/mors |
| MD0067539 | KUNZANG ODSAL PALGUL BHANGCHUB | MIN | Data has been verified with dmr/mors |
| MD0067571 | BOWLING BROOK PREPARATORY SCHO | MIN | Data has been verified with dmr/mors |
| MD0067628 | MIDDLETOWN WWTP | MIN | Data has been verified with dmr/mors |
| MD0067768 | HYATTSTOWN WWTP | MIN | Data has been verified with dmr/mors |
| MD0067857 | ALLEN FAMILY FOODS | IND | Data has been verified with dmr/mors |
| MD0067881 | CEDAR RIDGE | MIN | Data has been verified with dmr/mors |
| MD0067903 | GLEN ARM MAINTENANCE WWTP | MIN | Data has been verified with dmr/mors |
| MD0067989 | LEWISTOWNMILLS WWTP 2 | | OFFLINE |
| MD0068101 | 33 STAHL POINT LLC | MIN | Data has been verified with dmr/mors |
| MD0068705 | BP AMACO | | OFFLINE |
| MD0068896 | BARTON BUSINESS CENTER WWTP | MIN | Data has been verified with dmr/mors |
| MD0069078 | REHOBATH CHRUCH | | OFFLINE |
| MD0069116 | WOODMONT | | OFFLINE |
| MD0069582 | TRACEY'S ELEMENTARY SCHOOL | MIN | Data has been verified with dmr/mors |
| MD0069949 | CINNAMON WOODS WWTP | MIN | Data has been verified with dmr/mors |
| MD0070530 | TRI-TOWN INDUSTRIAL PARK | | ACTIVE PERMIT-NO FLOW |
| | | | |

# APPENDIX E

# Glossary

SOURCE: WPC, APHA, AWWA, ASCE, 1969. Glossary- Water and Wastewater Control Engineering.

and

EPA, 1997. Terms of Environment Glossary, Abbreviations and Acronyms

**Activated Sludge:** Product that results when primary effluent is mixed with bacteria-laden sludge and then agitated and aerated to promote biological treatment, speeding the breakdown of organic matter in raw sewage undergoing secondary waste treatment.

**Aeration:** A process that promotes biological degradation of organic matter in water. The process may be passive (as when waste is exposed to air), or active (as when a mixing or bubbling device introduces air).

**Ammonia:** A chemical combination of hydrogen (H) and nitrogen (N) occurring extensively in nature. The combination used in water and wastewater engineering is expressed as NH3.

**Basin:** (1) The surface area within a given drainage system. (2) An area upstream from a subsurface or surface obstruction to the flow of water.

**Basin Code:** An eight-digit field used to identify the river basin where the facility lies (including stream segment). A code assigned by the USGS to identify drainage basins for facilities by their location.

**Biological Oxygen Demand (BOD):** An indirect measure of the concentration of biologically degradable material present in organic wastes. It usually reflects the amount of oxygen consumed in five days by biological processes breaking down organic wastes.

**Biological Purification:** The process whereby living organisms convert the organic matter contained in wastewater into a more stable or a mineral form.

**BOD5:** The amount of dissolved oxygen consumed in five days by biological processes breaking down organic matter.

**Bypass:** An arrangement of pipes; conduits, gates, and valves whereby the flow may be passed around a hydraulic structure or appurtenance.

**Chemical Oxygen Demand (COD):** A measure of oxygen required to oxidize all compounds, both organic and inorganic, in water.

**Chemical Sludge:** Sludge obtained by treatment of wastewater with chemicals.

**Chlorination:** The application of chlorine to drinking water, sewage, or industrial waste to disinfect or to oxidize undesirable compounds.

**Concentration:** The relative amount of a substance mixed with another substance.

**Conduit:** Any artificial or natural duct, either open or closed, for conveying liquids or possibly other fluids.
**Contact Filter:** A filter used in a water treatment plant for the partial removal of turbidity before final filtration.

**Contamination:** Introduction into water, air, and soil of microorganisms, chemicals, toxic substances, wastes, or wastewater in a concentration that makes the medium unfit for its next intended use. Also applies to surfaces of objects, buildings, and various household and agricultural use products.

**Creek:** (1) A small stream of water that serves as the natural drainage course for a drainage basin of small size. The term is a relative one as to size; some creeks in a humid region would be called rivers if they occurred in an arid region. (2)

A small tidal channel through a coastal marsh. (3) The short arm of a stream.

**Crude Wastewater:** Wastewater before it receives any treatment. Also called raw wastewater.

**Data:** Records of observations and measurements of physical facts, occurrences, and conditions, reduced to written, graphical, or tabular form.

**Data Flag:** A one-character indicator identifying whether the value's source in database is DMR (D), MOR (M), permit application (P), calculated, or used default value ().

**Debris:** Any material, including floating trash, suspended sediment, or bed load, moved by a flowing stream.

**Degradation:** The breakdown of substances by biological action.

**Detention Dam:** A dam, usually small, constructed to impound or retard surface runoff temporarily. Also used to bring about deposition of soil being carried away by runoff of surface water.

**Digester:** In wastewater treatment, a closed tank; in solid-waste conversion, a unit in which bacterial action is induced and accelerated in order to break down organic matter and establish the proper carbon to nitrogen ratio

**Direct Discharger:** A municipal or industrial facility that introduces pollution through a defined conveyance or system such as outlet pipes; a point source.

**Direct Filtration:** A method of treating water that consists of the addition of coagulant chemicals, flash mixing, coagulation, minimal flocculation, and filtration. Sedimentation is not uses.

**Discharge:** Flow of surface water in a stream or canal or the outflow of ground water from a flowing artesian well, ditch, or spring. Can also apply to discharge of
liquid effluent from a facility or to chemical emissions into the air through designated venting mechanisms.

**Dissolved Oxygen (DO):** The oxygen freely available in water, vital to fish and other aquatic life and for the prevention of odors. DO levels are considered a most important indicator of a water body's ability to support desirable aquatic life. Secondary and advanced waste treatments are generally designed to ensure adequate DO in waste-receiving waters.

**Ditch:** An artificial open channel or waterway constructed through earth or rock to conve y water. A ditch is smaller than a canal, although the line of demarcation between the two is indefinite.

**Drainage:** Improving the productivity of agricultural land by removing excess water from the soil by such means as ditches or subsurface drainage tiles.

**Drainage Basin:** The area of land that drains water, sediment, and dissolved materials to a common outlet at some point along a stream channel.

**Effluent:** Wastewater--treated or untreated--that flows out of a treatment plant, sewer, or industrial outfall. Generally refers to wastes discharged into surface waters.

**Effluent Limitation:** Restrictions established by a state or EPA on quantities, rates, and concentrations in wastewater discharges.

**Exceedance:** Violation of the pollutant levels permitted by environmental protection standards.

**Excess Activated Sludge:** The quantity of activated sludge surpassing that needed for process operation that is removed from the activated sludge system for ultimate disposal.

**Extended Aeration:** A modification of the activated sludge process that provides for aerobic sludge digestion within the aeration system. The concept envisages the stabilization of organic matter under aerobic conditions and disposal of the end products into the air as gases and with the pla nt effluent as finely divided suspended matter and soluble matter.

**Filtration:** A treatment process, under the control of qualified operators, for removing solid (particulate) matter from water by means of porous media such as sand or a man-made filter; often used to remove particles that contain pathogens.

**Final Effluent:** The effluent from the final treatment unit of a wastewater treatment plant.

**Finished Water:** Water is "finished" when it has passed through all the processes in a water treatment plant and is ready to be delivered to consumers.

**Floc:** A clump of solids formed in sewage by biological or chemical action.

**Flocculation:** Process by which clumps of solids in water or sewage aggregate through biological or chemical action so they can be separated from water or sewage.

**Flow Rate:** The rate, expressed in gallons -or liters-per-hour, at which a fluid escapes from a hole or fissure in a tank. Such measurements are also made of liquid waste, effluent, and surface water movement.

**Grab Sample:** A single sample collected at a particular time and place that represents the composition of the water, air, or soil only at that time and place.

**Ground-Water Discharge:** Ground water entering near coastal waters that has been contaminated by landfill leachate, deep well injection of hazardous wastes, septic tanks, etc.

**Indirect Discharge:** Introduction of pollutants from a non-domestic source into a publicly owned waste-treatment system. Indirect dischargers can be commercial or industrial facilities whose wastes enter local sewers.

**Industrial Process Waste:** Residues produced during manufacturing operations.

**Industrial Sludge:** Semi-liquid residue or slurry remaining from treatment of industrial water and wastewater.

**Industrial Source Reduction:** Practices that reduce the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment. Also reduces the threat to public health and the environment associated with such releases. Term includes equipment or technology modifications, substitution of raw materials, and improvements in housekeeping, maintenance, training or inventory control.

**Industrial Waste:** Unwanted materials from an industrial operation; may be liquid, sludge, solid, or hazardous waste.

**Infiltration:** (1) The penetration of water through the ground surface into sub-surface soil or the penetration of water from the soil into sewer or other pipes through defective joints, connections, or manhole walls. (2) The technique o f applying large volumes of wastewater to land to penetrate the surface and percolate through the underlying soil.

**Infiltration Gallery:** A sub-surface groundwater collection system, typically shallow in depth, constructed with open-jointed or perforated pipes that discharge collected water into a watertight chamber from which the water is pumped to treatment facilities and into the distribution system. Usually located close to streams or ponds.

**Infiltration Rate:** The quantity of water that can enter the soil in a specified time interval.

**Influent:** Water, wastewater, or other liquid flowing into a reservoir, basin, or treatment plant.

**In-Line Filtration:** Pre-treatment method in which chemicals are mixed by the flowing water; commonly used in pressure filtration installations. Eliminates need for flocculation and sedimentation.

**Lagoon:** (1) A shallow pond where sunlight, bacterial action, and oxygen work to purify wastewater; also used for storage of wastewater or spent nuclear fuel rods. (2) Shallow body of water, often separated from the sea by coral reefs or sandbars.

**Land Application:** Discharge of wastewater onto the ground for treatment or reuse.

**Lateral Sewers:** Pipes that run under city streets and receive the sewage from homes and businesses, as opposed to domestic feeders and main trunk lines.

**Majors:** Larger publicly owned treatment works (POTWs) with flows equal to at least one million gallons per day (MGD) or servicing a population equivalent to 10,000 persons; certain other POTWs having significant water quality impacts.

**Manufacturing Waste:** The liquid wastes from industrial processes, as distinct from domestic or sanitary waste. Also called industrial wastes.

**Maximum Discharge:** The maximum rate of flow that a stream conduit, channel, pipe, pump, or other hydraulic structure is capable of passing.

**Mean Flow:** The arithmetic average of the discharge at a given point or station on the line of flow for some specific period of time.

**Mechanical Aerator:** A mechanical device for the introduction of atmospheric oxygen into a liquid.

**Minors:** Publicly owned treatment works with flows less than 1 million gallons per day.

**Modified Aeration:** A modification of the activated sludge process in which a shortened period of aeration is used with a reduced quantity of suspended solids in the mixed liquor.

**Municipal Discharge:** Discharge of effluent from wastewater treatment plants that receive wastewater from households, commercial establishments, and industries in the coastal drainage basin. Combined sewer/separate storm overflows are included in this category.

**Municipal Sewage:** Wastes (mostly liquid) originating from a community; may be composed of domestic wastewaters and/or industrial discharges.

**Municipal Sludge:** Semi-liquid residue remaining from the treatment of municipal water and wastewater.

**National Pollutant Discharge Elimination System (NPDES):** A provision of the Clean Water Act which prohibits discharge of pollutants into waters of the United States unless a special permit is issued by EPA, a state, or, where delegated, a tribal government on an Indian reservation.

**Nitrate:** A compound containing nitrogen that can exist in the atmosphere or as a dissolved gas in water and which can have harmful effects on humans and animals. Nitrates in water can cause severe illness in infants and domestic animals. A plant nutrient and inorganic fertilizer, nitrate is found in septic systems, animal feed lots, agricultural fertilizers, manure, industrial wastewaters, sanitary landfills, and garbage dumps.

**Nitrite:** (1) An intermediate in the process of nitrification. (2) Nitrous oxide salts used in food preservation.

**Non-Point Sources:** Diffuse pollution sources (i.e., without a single point of origin or not introduced into a receiving stream from a specific outlet). The pollutants are generally carried off the land by storm water. Common non-point sources are agriculture, forestry, urban, mining, construction, dams, channels, land disposal, saltwater intrusion, and city streets.

**Nutrient:** Any substance assimilated by living things that promotes growth. The term is generally applied to nitrogen and phosphorus in wastewater, but is also applied to other essential and trace elements.

**Nutrient Pollution:** Contamination of water resources b y excessive inputs of nutrients. In surface waters, excess algal production is a major concern.

**Organic:** (1) Referring to or derived from living organisms. (2) In chemistry, any compound containing carbon.

**Organic Chemicals/Compounds:** Naturally occurring (animal or plant-produced or synthetic) substances containing mainly carbon, hydrogen, nitrogen, and oxygen.

**Organic Matter:** Carbonaceous waste contained in plant or animal matter and originating from domestic or industrial sources.

**Organic Nitrogen:** Nitrogen combined in organic molecules such as proteins, amines, and amino acids.

**Oxidation:** The chemical addition of oxygen to break down pollutants or organic waste; e.g., destruction of chemicals such as cyanides, phenols, and organic sulfur compounds in sewage by bacterial and chemical means.

**Particulates:** (1) Fine liquid or solid particles such as dust, smoke, mist, fumes, or smog, found in air or emissions. (2) Very small solids suspended in water; they can vary in size, shape, density and electrical charge and can be gathered together by coagulation and flocculation.

**Permit:** An authorization, license, or equivalent control document issued by EPA or an approved state agency to implement the requirements of an environmental regulation; e.g., a permit to operate a wastewater treatment plant or to operate a facility that may generate harmful emissions.

**pH:** An expression of the intensity of the basic or acid condition of a liquid; may range from 0 to 14, where 0 is the most acid and 7 is neutral. Natural waters usually have a pH between 6.5 and 8.5.

**Phosphorus:** An essential chemical food element that can contribute to the eutrophication of lakes and other water bodies. Increased phosphorus levels result from discharge of phosphorus-containing materials into surface waters.

**Physical and Chemical Treatment:** Processes generally used in large-scale wastewater treatment facilities. Physical processes may include air stripping or filtration. Chemical treatment includes coagulation, chlorination, or ozonation. The term can also refer to treatment of toxic materials in surface and ground waters, oil spills, and some methods of dealing with hazardous materials on or in the ground.

**Point Source:** A stationary location or fixed facility from which pollutants are discharged; any single identifiable source of pollution; e.g., a pipe, ditch, ship, ore pit, factory smokestack.

**Pollutant:** Generally, any substance introduced into the environment that adversely affects the usefulness of a resource or the health of humans, animals, or ecosystems.

**Pollution:** Generally, the presence of a substance in the environment that because of its chemical composition or quantity prevents the functioning of natural processes and produces undesirable environmental and health effects. Under the Clean Water Act, for example, the term has been defined as the man-made or man-induced alteration of the physical, biological, chemical, and radiological integrity of water and other media.

**Prechlorination:** The addition of chlo rine at the headworks of a treatment plant prior to other treatment processes. Done mainly for disinfection and control of tastes, odors, and aquatic growths, and to aid in coagulation and settling,

**Preliminary Treatment:** (1) The conditioning of a waste at its source before discharge, to remove or to neutralize substances injurious to sewers and treatment processes or to effect a partial reduction in load on the treatment process. (2) In the treatment process, unit operations, such as screening and comminuting, that prepare the liquor for subsequent major operations.

**Pretreatment:** Processes used to reduce, eliminate, or alter the nature of wastewater pollutants from non-domestic sources before they are discharged into publicly owned treatment works (POTWs).

**Primary Settling Tank:** The first settling tank for the removal of settleable soils through which wastewater is passed in a treatment works.

**Public Sewer:** A common sewer controlled by a governmental agency or public utility.

**Public Water System:** A system that provides piped water for human consumption to at least 15 service connections or regularly serves 25 individuals.

**Publicly Owned Treatment Works (POTWs):** A waste-treatment works owned by a state, unit of local government, or Indian tribe, usually designed to treat domestic wastewaters.

**Pumping Station:** Mechanical device installed in sewer or water system or other liquid-carrying pipelines to move the liquids to a higher level.

**Purification:** The removal of objectionable matter from water by natural or artificial methods.

**Quality Assurance/Quality Control:** A system of procedures, checks, audits, and corrective actions to ensure that all

EPA research design and performance, environmental monitoring and sampling, and other technical and reporting activities are of the highest achievable quality.

**Raw Sewage:** Untreated wastewater and its contents.

**Raw Water:** Intake water prior to any treatment or use.

**Receiving Waters:** A river, lake, ocean, stream or other watercourse into which wastewa ter or treated effluent is discharged.

**Release:** Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of a hazardous or toxic chemical or extremely hazardous substance.

**Sand Filters:** Devices that remove some suspended solids from sewage. Air and bacteria decompose additional wastes filtering through the sand so that cleaner water drains from the bed.

**Sanitary Sewers:** Underground pipes that carry off only domestic or industrial waste, not storm water.

**Secondary Treatment:** The second step in most publicly owned waste treatment systems in which bacteria consume the organic parts of the waste. It is accomplished by bringing together waste, bacteria, and oxygen in trickling filters or in the activated sludge process. This treatment removes floating and settleable solids and about 90 percent of the oxygen-demanding substances and suspended solids. Disinfection is the final stage of secondary treatment.

**Sedimentation:** Letting solids settle out of wastewater by gravity during treatment.

**Sedimentation Tanks:** Wastewater tanks in which floating wastes are skimmed off and settled solids are removed for disposal.

**Sediments:** Soil, sand, and minerals washed from la nd into water, usually after rain. They pile up in reservoirs, rivers and harbors, destroying fish and wildlife habitat, and clouding the water so that sunlight cannot reach aquatic plants. Careless farming, mining, and building activities will expose sediment materials, allowing them to wash off the land after rainfall.

**Settleable Solids:** Material heavy enough to sink to the bottom of a wastewater treatment tank.

**Settling Tank:** A holding area for wastewater, where heavier particles sink to the bottom for removal and disposal.

**Sewage:** The waste and wastewater produced by residential and commercial sources and discharged into sewers.

**Sewage Sludge:** Sludge produced at a Publicly Owned Treatment Works, the disposal of which is regulated under the Clean Water Act.

**Sewer:** A channel or conduit that carries wastewater and storm-water runoff from the source to a treatment plant or receiving stream. "Sanitary" sewers carry
household, industrial, and commercial waste. "Storm" sewers carry runoff from rain or snow. "Combined" sewers handle both.

**Sewerage:** The entire system of sewage collection, treatment, and disposal.

**Significant Municipal Facilities:** Those publicly owned sewage treatment plants that discharge a million gallons per day or more and are therefore considered by states to have the potential to substantially affect the quality of receiving waters.

**Significant Potential Source Of Contamination:** A facility or activity that stores, uses, or produces compounds with potential for significant contaminating impact if released into the source water of a public water supply.

**Significant Violations:** Violations by point source dischargers of sufficient magnitude or duration to be a regulatory priority.

**Slow Sand Filtration:** Passage of raw water through a bed of sand at low velocity, resulting in substantial removal of chemical and biological contaminants.

**Sludge:** A semi-solid residue from any of a number of air or water treatment processes; can be a hazardous waste.

**Sludge Digester:** Tank in which complex organic substances like sewage sludge are biologically dredged. During these reactions, energy is released and much of the sewage is converted to methane, carbon dioxide, and water.

**Slurry:** A watery mixture of insoluble matter resulting from some pollution control techniques.

**Spray Irrigation:** A method for disposing of some organic wastewaters by spraying them on land, usually from pipes equipped with spray nozzles. This has proved to be an effective way to dispose of wastes from the canning, meatpacking, and sulfite pulp industries where suitable land is available.

**Stage Treatment:** (1) Any treatment in which similar processes are used in series or stages. (2) In the activated sludge process, two or more stages consisting of a clarifying state and a biological state, or two biological states. (3) In anaerobic digestion, an operation in which sludge is completely mixed in the first tank and pumped to a second tank for separation of the supernatant liquor from the solids.

**Step Aeration:** A procedure for adding increments of settled wastewater along the line of flow in the aeration tanks of an activated sludge plant.

**Stilling Basin:** A structure or excavation that reduces velocity or turbulence of flowing or falling water.

**Storm Wastewater:** (1) That portion of liquid, resulting from precipitation runoff, flowing in combined sewers during or after a period of rainfall. (2) Water resulting from precipitation runoff carried in a storm drain.

**Tertiary Treatment:** Advanced cleaning of wastewater that goes beyond the secondary or biological stage, removing nutrients such as phosphorus, nitrogen, and most BOD and suspended solids.

**Total Dissolved Phosphorous:** The total phosphorous content of all material that will pass through a filter, which is determined as orthophosphate without prior digestion or hydrolysis. Also called soluble P or ortho P.

**Total Suspended Solids (TSS):** A measure of the suspended solids in wastewater, effluent, or water bodies, determined by tests for "total suspended non-filterable solids. "

**Treated Wastewater:** Wastewater that has been subjected to one or more physical, chemical, and biological processes to reduce its potential of being health hazard.

**Treatment:** (1) Any method, technique, or process designed to remove solids and/or pollutants from solid waste, waste-streams, effluents, and air emissions. (2) Methods used to change the biological character or composition of any regulated medical waste so as to substantially reduce or eliminate its potential for causing disease.

**Treatment Plant:** A structure built to treat wastewater before discharging it into the environment.

**Trickling Filter:** A coarse treatment system in which wastewater is trickled over a bed of stones or other material covered with bacteria tha t break down the organic waste and produce clean water.

**Turbidimeter:** A device that measures the cloudiness of suspended solids in a liquid; a measure of the quantity of suspended solids.

**Turbidity:** (1) Haziness in air caused by the presence of particles and pollutants. (2) A cloudy condition in water due to suspended silt or organic matter.

**Wastewater:** The spent or used water from a home, community, farm, or industry that contains dissolved or suspended matter.

**Wastewater Infrastructure:** The plan or network for the collection, treatment, and disposal of sewage in a community. The level of treatment will depend on the size of the community, the type of discharge, and/or the designated use of the receiving water.